

ONTARIO NORTHLAND
TRANSPORTATION COMMISSION

Request for Proposals No. RFP 2024 006

For

**Joint Elimination Program
and Electric Flash-Butt Welding**

REPLY BY DATE: 2:00:00 p.m. Friday, March 15, 2024

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Table of Contents

PART 1 REQUEST FOR PROPOSALS	1
SECTION 1 - INTRODUCTION.....	2
1.1 General	2
1.2 Ontario Northland Transportation Commission	3
SECTION 2 - THE RFP DOCUMENTS	4
2.1 Request for Proposals Documents	4
2.2 Priority of Documents	5
2.3 Distribution of Documents – Electronic Distribution.....	5
2.4 Information Provided by ONTC.....	5
SECTION 3 – THE RFP PROCESS.....	6
3.1 RFP Process	6
3.2 Questions and Communications Related to the RFP Documents	6
3.3 Addenda/Changes to the RFP Documents	7
3.4 Respondents’ Meeting.....	7
3.5 Prohibited Contacts	8
3.6 Media Releases, Public Disclosures, Public Announcements and Copyright.....	9
3.7 Confidentiality and Disclosure Issues – Respondent Information.....	9
3.8 Confidential Information.....	10
3.9 Governing Laws and Attornment	11
3.10 Licenses and Permits	12
3.11 Respondents’ Costs	12
3.12 Delay and Costs of Delay	12
3.13 Clarification and Verification of Respondent’s Proposal.....	13
3.14 Two-Envelope Process.....	13
SECTION 4 - PROPOSAL CONTENT AND FORMAT	14
4.1 Format and Content of Proposal.....	14
4.2 Proposal Submission Form.....	15
4.3 References and Past Performance Issues.....	15
4.4 Conflict of Interest	16
SECTION 5 - PROPOSAL SUBMISSION, WITHDRAWAL, MODIFICATION.....	17
5.1 Submission of Proposals and Late Proposals.....	17
5.2 Late Proposals	18
5.3 Withdrawal of Proposals.....	19
5.4 Amendment of Proposals	19
5.5 Proposal Irrevocability	19
5.6 One Proposal per Person or Entity	19

SECTION 6 - PROPOSAL EVALUATION	20
6.1 Evaluation Team	20
6.2 Evaluation of Proposals.....	20
6.3 Short-Listing	21
6.4 Interviews, Site Visits, Demonstrations and Presentations.....	21
SECTION 7 - GENERAL EVALUATION AND DISQUALIFICATION PROVISIONS	21
7.1 ONTC’s Discretion.....	21
7.2 Disqualification	22
7.3 General Rights of ONTC	22
SECTION 8 – AGREEMENT FINALIZATION AND DEBRIEFING AND SUCCESSFUL RESPONDENT	24
8.1 Finalization of the Agreement.....	24
8.2 Notification If Successful or Not.....	25
8.3 Debriefing.....	25
SECTION 9 - LEGAL MATTERS AND RIGHTS OF ONTC	25
9.1 Limit on Liability.....	25
9.2 Power of Legislative Assembly	26
9.3 RFP Not a “Bidding Contract” or a Tender.....	26
SECTION 10 – VENDOR PERFORMANCE	27
10.1 General	27
10.2 Vendor Performance Evaluation.....	27
10.3 Vendor Ratings for Proposal Evaluation Purposes	27
SECTION 11 – TRANSPARENCY AND FAIRNESS	27
11.1 General	27
SECTION 12 – INTERPRETATION	27
12.1 General	27
PART 2 REQUEST FOR PROPOSALS SUMMARY OF REQUIREMENTS	1
SCHEDULE 2-A RFP DATA SHEET.....	2
SCHEDULE 2-B PARTICIPATION REGISTRATION FORM.....	7
PART 3 REQUEST FOR PROPOSALS SPECIFICATIONS.....	1
SCHEDULE 3-A SCOPE OF WORK.....	2
SCHEDULE 3-A-1 ONTC MAP.....	8
SCHEDULE 3-A-2 INDUSTRIAL OPERATIONS FIRE PREVENTION AND PREPAREDNESS PLAN.....	10
SCHEDULE 3-A-3 TRAIN SERVICE PLAN.....	40
SCHEDULE 3-A-4 SECTIONS OF ONTC’S MANUAL OF TRACK REQUIREMENTS (MTR)....	41
PART 4 REQUEST FOR PROPOSALS FORM OF PROPOSAL	1
PART 5 REQUEST FOR PROPOSALS DRAFT AGREEMENT	1



PART 1

REQUEST FOR PROPOSALS

SECTION 1 - INTRODUCTION

1.1 General

(1) Ontario Northland Transportation Commission (“ONTC”) is issuing this Request for Proposals (“**RFP**”) to obtain proposals from a vendor/service provider(s) for the provision of the goods and/or services described in the RFP Specifications (the “**Goods and/or Services**”).

(2) In this RFP:

“Applicable Laws” means the statutes, regulations, orders, by-laws and other laws of Ontario, Quebec, Manitoba, Canada and any municipal government relevant to the RFP and the subject matter of the RFP;

“Addendum” means the written supplementary information provided to potential Respondents prior to the Submission Deadline, which information becomes part of the RFP Documents;

“Business Day” means any day except Saturday, Sunday or a statutory holiday;

“Final Agreement” means the agreement for the supply of the Goods and/or Services entered into by ONTC and the Successful Respondent;

“Material” means a document or information that must be included in the Proposal including without limitation the information requested in the RFP Data Sheet, and is essential to allow ONTC to evaluate a Proposal and that if not included will result in the disqualification of the Proposal;

“Non-compliant” means the Proposal or the Respondent does not meet a requirement of the RFP Documents;

“Proposal” means the response to the RFP submitted by a Respondent to ONTC;

“Respondent(s)” means the entity submitting a Proposal and includes prospective respondents, whether or not that entity submits a Proposal. If the context requires it, “Respondent” includes any of the Respondent’s respective shareholders, owners, officers, agents, consultants, partners, contractors, subcontractors, advisors, employees, or representatives;

“RFP Data Sheet” means the information and requirements contained in Schedule 2-A of Part 2;

“RFP Documents” means the documents listed in RFP Section 2.1 (1) and any additional documents issued through Addenda;

“Short-listed Respondent” means a Respondent selected to proceed to the next step in the evaluation process pursuant to section 6.2 (2) of the RFP;

“Substantially Compliant” means Proposal does not meet the requirements of the RFP Documents; however, the Proposal includes all of the Material items, as identified in the RFP Data Sheet;

“Successful Respondent” means the Respondent selected by ONTC to enter into the Final Agreement.

- (3) The process to select the Short-listed Respondents for the supply of the Goods and/or Services (the “**RFP Process**”) will commence with the issuance of these RFP Documents and will terminate at the earlier of:
- (a) when ONTC and the Successful Respondent execute the Final Agreement; or,
 - (b) upon the termination of the RFP Process in accordance with the terms and conditions of this RFP.

1.2 Ontario Northland Transportation Commission

The Ontario Northland Transportation Commission (ONTC) is an agency of the Province of Ontario that provides reliable and efficient transportation services to northern and rural communities. For over 120 years, the company has provided integrated and impactful transportation services including rail freight, passenger rail, motor coach transportation, rail repair, and remanufacturing services.

ONTC’s rail services are vital in maintaining a reliable supply chain in Northern Ontario by connecting freight customers to global economies. The forestry industry, mining operations, farming communities, and manufacturers count on ONTC’s services to deliver large volumes across vast distances. The company’s 675 miles of mainline track span throughout northeastern Ontario and northwestern Quebec.

ONTC motor coaches connect rural Ontario to major centers providing access to education, medical appointments, shopping, and seamless connections to other transportation providers. The Polar Bear Express passenger train connects Moosonee and Cochrane, Ontario, providing an all-season land link for Indigenous communities on the James Bay Coast.

Improving and repairing transportation equipment is also a large part of ONTC’s service offering. We remanufacture and repair locomotives, passenger rail cars, freight cars, and more. ONTC’s unique mechanical skillset attracts new business and secures skilled trades jobs in Northern Ontario.

ONTC makes provincial dollars reach further by creating innovative solutions that help drive economic growth sustainably, responsibly, and with future generation’s top of mind. Throughout the agency, modernization is underway with many exciting projects that will improve how we operate. ONTC employs over 900 people including Locomotive Engineers, Motor Coach Operators, skilled tradespeople, and business professionals. Employees work together to improve and deliver services that provide value to the regions served.

SECTION 2 - THE RFP DOCUMENTS

2.1 Request for Proposals Documents

(1) The Request for Proposals documents consist of:

Part 1 – Request for Proposals

Part 2 – Requests for Proposals Summary of Requirements

- (a) Schedule 2-A – RFP Data Sheet
- (b) Schedule 2-B – Participation Registration Form

Part 3 – RFP Specifications

- (a) Schedule 3-A – Scope of Work
- (b) Schedule 3-A-1 – ONTC Map
- (c) Schedule 3-A-2 – Industrial Operations Fire Prevention and Preparedness Plan
- (d) Schedule 3-A-3 – Train Service Plan
- (e) Schedule 3-A-4 – Sections of ONTC’s Manual of Track Requirements (MTR).

Part 4 – Form of Proposal

- (a) Proposal Form 1 – Proposal Submission Form
- (b) Proposal Form 1-A – Proposal Submission Form
- (c) Proposal Form 2 – Respondent’s General Information
- (d) Proposal Form 3 – Acknowledgment to Comply with Part 3 – Request for Proposals Specifications
- (e) Proposal Form 4 – References
- (f) Proposal Form 5 – Compliance with Contract Documents
- (g) Proposal Form 6 – Health, Safety and Environment
- (h) Proposal Form 7 - Schedule of Materials
- (i) Proposal Form 8 – List of Equipment
- (j) Proposal Form 9 – Schedule and Proposed Approach
- (k) Proposal Form 10 – Schedule of Progress Payments
- (l) Proposal Form 11 – List of Personnel and Resumes
- (m) Proposal Form 12 – Current Labour Agreements
- (n) Proposal Form 13 – Contractor’s Qualification Statement
- (o) Proposal Form 14 – Claims

Part 5 – Draft Agreement **[The draft agreement will be issued by way of Addendum in accordance with these RFP Documents.]**

(2) The RFP Documents shall be read as a whole. The Schedules and Addenda, if any, constitute an integral part of this RFP and are incorporated by reference.

(3) Each Respondent shall verify the RFP Documents for completeness upon receipt and shall inform the Contact Person (identified in RFP Section 3.2(7)), immediately:

- (a) should any documents be missing or incomplete; or,

- (b) upon finding any discrepancies or omissions.
- (4) Complete sets of the RFP Documents are available at our company website at www.ontarionorthland.ca and MERX.
- (5) The RFP Documents are made available only for the purpose of Respondents submitting Proposals. Availability and/or use of the RFP Documents do not confer a license or grant for any other purpose.

2.2 Priority of Documents

- (1) If there are any inconsistencies between the terms, conditions or other provisions of the RFP Documents, the order of priority of RFP Documents, from highest to lowest, shall be:
 - (a) Any Addenda modifying the RFP Documents issued during the RFP Process;
 - (b) The RFP Data Sheet;
 - (c) Part 1 – Request for Proposals;
 - (d) Part 3 – Specifications; and,
 - (e) Any other RFP Documents.

2.3 Distribution of Documents – Electronic Distribution

- (1) ONTC will use an online electronic distribution system to distribute all RFP Documents.
- (2) Each Respondent is solely responsible for making appropriate arrangements to receive and access the RFP Documents through that electronic distribution system.

2.4 Information Provided by ONTC

- (1) Each Respondent is solely responsible for conducting its own independent research, due diligence, and any other work or investigations and seeking any other independent advice necessary for the preparation of its Proposal, negotiation or finalization of the Final Agreement and the subsequent delivery of all the Goods and/or Services to be provided by the Successful Respondent. Nothing in the RFP Documents is intended to relieve the Respondents from forming their own opinions and conclusions with respect to the matters addressed in this RFP.
- (2) No guarantee, representation or warranty, express or implied, is made and no responsibility of any kind is accepted by ONTC or its representatives for the completeness or accuracy of any information presented in the RFP Documents, if any, during the RFP Process or during the term of the Final Agreement. By submitting a Proposal, each Respondent agrees that ONTC and its representatives shall not be liable to any person or entity as a result of the use of any information contained in the RFP Documents or otherwise provided by ONTC or its representatives during the RFP Process or during the term of the Final Agreement.

SECTION 3 – THE RFP PROCESS

3.1 RFP Process

- (1) The deadline for the submission of Proposals (the “**Submission Deadline**”) is set out in the RFP Data Sheet.
- (2) ONTC may amend, extend or shorten any of the dates and/or times prescribed in this RFP, at any time, at its sole discretion, including without limitation the Submission Deadline. If ONTC extends the Submission Deadline, all requirements applicable to Respondents will thereafter be subject to the new, extended Submission Deadline.

3.2 Questions and Communications Related to the RFP Documents

- (1) Respondents shall submit all questions, requests for clarifications, and other communications regarding the RFP Documents and the RFP Process by email to the Contact Person set out in section 3.2(7) no later than four (4) full Business Days before the Submission Deadline.
- (2) ONTC will endeavor to provide the Respondents with written responses to questions that are submitted in accordance with this RFP Section 3.2, by no later than two (2) full Business Days before the Submission Deadline. Responses to any questions or requests for clarifications, will be collected and distributed with answers to be delivered to all Respondents who have submitted the Participation Registration Form by way of emailed addenda from ONTC in accordance with the timeline set out in this Section 3.2(2).
- (3) The responses to questions form part of the RFP Documents.
- (4) ONTC may, in its sole discretion:
 - (a) answer questions that ONTC deems to be similar from various Respondents only once;
 - (b) edit any question(s) for the purpose of clarity;
 - (c) respond to questions submitted after the deadline for submission of questions if ONTC believes that such responses would be of assistance to the Respondents generally; and,
 - (d) exclude any questions that, in the sole opinion of ONTC, are ambiguous, incomprehensible, or are deemed by ONTC to be immaterial to the RFP Process, the RFP Documents, or the Goods and/or Services.
- (5) If Respondents find discrepancies, omissions, errors, departures from laws, by-laws, codes or good practice, or information considered to be ambiguous or conflicting, they shall bring them to the attention of the Contact Person in writing, and not less than four

- (4) full Business Days before the Submission Deadline, so that ONTC may, if ONTC deems it necessary, issue instructions, clarifications or amendments by addendum to all Respondents prior to the Submission Deadline. ONTC will endeavor to, but is not required to, issue such Addenda at least two (2) full Business Days prior to the Submission Deadline. It is each Respondent's responsibility to seek clarification from ONTC of any matter it considers to be unclear in the RFP Documents or the description of the Goods and/or Services and the Respondent may seek clarification in accordance with this Section 3.2. Neither ONTC nor the Government of Ontario shall be responsible for any misunderstanding by a Respondent of the RFP Documents, the RFP Process or the Goods and/or Services.
- (6) If ONTC gives oral answers to questions at any meeting (Section 3.4), these answers will not be considered final, and may not be relied upon by any of the Respondents, unless and until such answers are provided by way of an addendum in accordance with this Section 3.2.
- (7) The Contact Person designated by ONTC for this RFP is **Ashley Commanda, Manager, Public Procurement, 555 Oak Street East, North Bay, Ontario P1B 8L3 (705) 472-4500 ext. 398, Ashley.Commanda@ontarionorthland.ca** (the "Contact Person"). The above Contact Person is the sole contact for this RFP. A Respondent may be disqualified where contact is made with any person other than the Contact Person.
- (8) ONTC will not be responsible for statements, instructions, clarifications, notices or amendments communicated orally by ONTC to one or more of the Respondents. Statements, instructions, clarifications, notices or amendments by ONTC, which affect the RFP Documents, may only be made by addendum.

3.3 Addenda/Changes to the RFP Documents

- (1) ONTC may, in its sole discretion, amend, supplement, or change the RFP Documents prior to the Submission Deadline. ONTC shall issue amendments, supplements, or changes to the RFP Documents by Addendum only. No other statement or response(s) to questions, whether oral or written, made by ONTC or any ONTC advisors, employees or representatives, including, for clarity, the Contact Person, or any other person, shall amend, supplement or change the RFP Documents. Addenda will be distributed in the same manner as the RFP and shall become part of the RFP Documents.
- (2) Each Respondent is solely responsible for ensuring that it has received all Addenda issued by ONTC. Respondents may, in writing by email to the Contact Person, seek confirmation of the number of Addenda, issued under this RFP.

3.4 Respondents' Meeting

- (1) To assist Respondents in understanding the RFP Documents, and the RFP Process, ONTC may conduct an information meeting (the "**Respondents' Meeting**") for all Respondents. Whether or not ONTC will conduct a Respondents' Meeting is set out in the

RFP Data Sheet. If ONTC is conducting a Respondents' Meeting, the meeting will be held on the date and at the time and location set out in the RFP Data Sheet.

- (2) Attendance by Respondents at a Respondents' Meeting may not be mandatory but, if one is held, Respondents are strongly encouraged to attend. Whether or not the Respondents' Meeting is mandatory will be identified on the RFP Data Sheet. When a Respondents' meeting is mandatory, all attending persons or entities will be required to sign the "Site Meeting Log" to confirm their attendance and provide a valid email address for purpose of receiving information.
- (3) If ONTC gives oral answers to questions at the Respondents' Meeting, these answers will not be considered final, and may not be relied upon by any of the Respondents, unless and until such answers are provided by way of an Addendum in accordance with Section 3.2.
- (4) If pre-registration for the Respondents' Meeting is necessary, the deadline for registration will be set out in the RFP Data Sheet and details regarding the registration process will be set out in the RFP Data Sheet.

3.5 Prohibited Contacts

- (1) Respondents and their respective advisors, employees and representatives are prohibited from engaging in any form of political or other lobbying, of any kind whatsoever, to influence the outcome of the RFP Process.
- (2) Without limiting the generality of Section 3.5(1) above, neither Respondents nor any of their respective advisors, employees or representatives shall contact or attempt to contact, either directly or indirectly, at any time during the RFP Process, any of the following persons or organizations on matters related to the RFP Process, the RFP Documents, or their Proposals:
 - (a) any member of the Evaluation Team (as defined in Section 6.1), except the Contact Person;
 - (b) any advisor to ONTC or the Evaluation Team, except the Contact Person; or,
 - (c) any directors, officers, employees, agents, representatives or consultants of:
 - (i) ONTC, except the Contact Person;
 - (ii) Ontario Ministry of Transportation;
 - (iii) The Premier of Ontario's office or the Ontario Cabinet office;
 - (iv) A Member of Provincial Parliament (including the Premier); or,
 - (v) Any other person or entity listed in the RFP Data Sheet.
- (3) If a Respondent or any of their respective shareholders, owners, officers, agents, consultants, partners, contractors, subcontractors, advisors, employees, representatives, or other third parties acting on behalf or with the knowledge of the Respondent; in the

opinion of ONTC, contravenes RFP Section 3.5(1) or 3.5(2), ONTC may, but is not obliged to, in its sole discretion:

- (a) take any action in accordance with RFP Section 7.2; or
- (b) impose conditions on the Respondent's continued participation in the RFP Process that ONTC considers, in its sole discretion, to be appropriate.

3.6 Media Releases, Public Disclosures, Public Announcements and Copyright

- (1) A Respondent shall not, and shall ensure that its shareholders, owners, officers, agents, consultants, partners, contractors, subcontractors, advisors, employees, representatives, or other third parties acting on behalf or with the knowledge of the Respondent do not, issue or disseminate any media release, social media or Internet post, public announcement or public disclosure (whether for publication in the press, on the radio, television, internet or any other medium) that relates to the RFP Process, the RFP Documents or the Goods and/or Services or any matters related thereto, without the prior written consent of ONTC.
- (2) Neither the Respondents or any of their respective shareholders, owners, officers, agents, consultants, partners, contractors, subcontractors, advisors, employees, representatives, or other third parties acting on behalf or with the knowledge of the Respondent shall make any public comment, respond to questions in a public forum, or carry out any activities to either criticize another Respondent or Proposal or to publicly promote or advertise their own qualifications, interest in or participation in the RFP Process without ONTC's prior written consent, which consent may be withheld, conditioned or delayed in ONTC's sole discretion. Respondents, and their respective advisors, employees and representatives are permitted to state publicly that they are participating in the RFP Process but shall not publicly identify other Respondents without the prior written consent of ONTC.
- (3) Respondents shall not use the name of ONTC or any of ONTC's logos, designs, colours or registered trademarks and names used, owned or registered by ONTC, during the RFP Process, if selected as the Successful Respondent, or at any time prior to, during, or following the supply of the Goods and/or Services, except with the prior written consent of ONTC.

3.7 Confidentiality and Disclosure Issues – Respondent Information

- (1) Respondents are advised that ONTC may be required to disclose the RFP Documents, any other documentation related to the RFP Process and a part or parts of any Proposal pursuant to the *Freedom of Information and Protection of Privacy Act* (Ontario) ("FIPPA"). Respondents are also advised that FIPPA does provide protection for confidential and proprietary business information. Respondents are strongly advised to consult their own legal advisors as to the appropriate way in which confidential or proprietary business information should be marked as such in their Proposals. Subject to the provisions of FIPPA, ONTC will use reasonable commercial efforts to safeguard the confidentiality of

any information identified by the Respondent as confidential but shall not be liable in any way whatsoever to any Respondent if such information is disclosed based on an order or decision of the Information and Privacy Commissioner or otherwise as required under the Applicable Laws.

- (2) The Respondent agrees that ONTC may disclose Proposals, and all information submitted in or related to the Proposals, to the Government of Ontario.
- (3) ONTC may provide the Proposals to any person involved in the review and/or evaluation of the Proposals on behalf of ONTC and ONTC may:
 - (a) make copies of the Proposal; and/or,
 - (b) retain the Proposal.
- (4) ONTC may disclose any information with respect to the Respondents, the Proposals and the RFP Process as required by the Applicable Laws.
- (5) The Respondent shall not require ONTC or any of its representatives to sign a non-disclosure agreement in respect of any step taken or information provided as part of this RFP Process, provided that if the nature of the subject matter of the RFP is such that, in the opinion of ONTC, it would be appropriate to enter into a non-disclosure agreement with a Respondent or Respondents, ONTC and/or the Respondent shall enter into such agreement in a form and with the content satisfactory to ONTC.

3.8 Confidential Information

- (1) In this RFP, “**RFP Information**” shall mean all material, data, information or any item in any form, whether oral or written, including in electronic or hard-copy format, supplied by, obtained from or otherwise procured in any way, whether before or after the RFP Process, from ONTC or any Ministry or Agency of the Government of Ontario, in connection with the RFP Documents or the Goods and/or Services excluding any item which:
 - (a) is or becomes generally available to the public other than as a result of a disclosure resulting from a breach of this RFP Section 3.8;
 - (b) becomes available to the Respondent on a non-confidential basis from a source other than ONTC, so long as that source is not bound by a non-disclosure agreement with respect to the information or otherwise prohibited from transmitting the information to the Respondent by a contractual, legal or fiduciary obligation; or,
 - (c) The Respondent is able to demonstrate was known to it on a non-confidential basis before it was disclosed to the Respondent by ONTC.
- (2) RFP Information:

- (a) shall remain the sole property of ONTC or the Government of Ontario, as applicable, and the Respondent shall maintain the confidentiality of such information except as required by law;
 - (b) shall not be used by the Respondent for any other purpose other than submitting a Proposal or performing obligations under any subsequent agreement with ONTC relating to the Goods and/or Services;
 - (c) shall not be disclosed by the Respondent to any person who is not involved in the Respondent's preparation of its Proposal or in the performance of any subsequent agreement relating to ONTC, or the Government of Ontario, as applicable, without prior written authorization from ONTC;
 - (d) shall not be used in any way detrimental to ONTC or the Government of Ontario; and,
 - (e) if requested by ONTC, shall be returned to the Contact Person or destroyed by the Respondent no later than ten (10) calendar days after such request is received in writing by the Respondent.
- (3) Each Respondent shall be responsible for any breach of the provisions of this RFP Section 3.8 by any person to whom it discloses the RFP Information.
- (4) Each Respondent or Short-listed Respondent acknowledges and agrees that a breach of the provisions of this RFP Section 3.8 would cause ONTC, the Government of Ontario and/or their related entities to suffer loss which could not be adequately compensated by damages, and that ONTC, the Government of Ontario and/or any related entity may, in addition to any other remedy or relief, enforce any of the provisions of this RFP Section 3.8 upon application to a court of competent jurisdiction without proof of actual damage to ONTC, the Government of Ontario or any related entity.
- (5) Notwithstanding RFP Section 9.3, the provisions of this RFP Section 3.8 shall be binding and shall survive any cancellation or termination of this RFP and the conclusion of the RFP Process.
- (6) ONTC may, in its sole discretion, require that Respondents execute a legally binding non-disclosure agreement in a form and substance satisfactory to ONTC prior to receiving the RFP Information.

3.9 Governing Laws and Attornment

- (1) This RFP Process and the Final Agreement entered into pursuant to this RFP Process shall be governed and construed in accordance with the laws of Ontario, the laws of Quebec, the laws of Manitoba, if relevant to the subject matter of this RFP, and the applicable laws of Canada, excluding any conflict of laws principles.

- (2) Each Respondent agrees that the courts of the Province of Ontario shall have exclusive jurisdiction to entertain any action or proceeding based on, relating to or arising from this RFP process.

3.10 Licenses and Permits

- (1) If a Respondent is required by the Applicable Laws to hold or obtain a license, permit, consent or authorization to carry on an activity contemplated in its Proposal, neither acceptance of the Proposal nor execution of the Final Agreement shall be considered to be approval by ONTC of carrying on such activity without the requisite license, permit, consent or authorization.

3.11 Respondents' Costs

- (1) The Respondent shall bear all costs and expenses incurred by the Respondent relating to any aspect of its participation in this RFP Process, including, without limitation, all costs and expenses related to the Respondent's involvement in:
 - (a) the preparation, presentation and submission of its Proposal;
 - (b) due diligence and information gathering processes;
 - (c) attendance at any Respondents' Meeting(s) or presentations;
 - (d) preparation of responses to questions or requests for clarification from ONTC;
 - (e) preparation of the Respondent's own questions during the clarification process;
 - (f) preparation of prototypes, proof of concept and/or demonstrations; and,
 - (g) any discussions or negotiations with ONTC regarding the Final Agreement.
- (2) Without limiting the generality of Section 9.1(2) of this RFP, in no event shall ONTC or the Government of Ontario be liable to pay any costs or expenses or to reimburse or compensate a Respondent under any circumstances for the costs or expenses set out in Section 3.11(1), regardless of the conduct or outcome of the RFP Process.

3.12 Delay and Costs of Delay

- (1) By submitting a Proposal, the Respondent waives all claims against ONTC and the Government of Ontario including any claims arising from any error or omission in any part of the RFP Documents or RFP Information or any delay, or costs associated with delays, in the RFP Process.

3.13 Clarification and Verification of Respondent's Proposal

- (1) Following submission of a Proposal, ONTC may:
 - (a) request a Respondent to clarify or verify the contents of its Proposal, including by submitting supplementary documents; and/or,
 - (b) request a Respondent to confirm an ONTC interpretation of the Respondent's Proposal.
- (2) Any information received by ONTC from a Respondent pursuant to a request for clarification or verification from ONTC as part of the RFP Process may, in ONTC's discretion, be considered as an integral part of the Proposal even if such information should have been submitted as part of the Respondent's Proposal and may, in ONTC's discretion, be considered in the evaluation of the Respondent's Proposal.
- (3) ONTC may, in its sole discretion, verify or clarify any statement or claim contained in any Proposal or made subsequently in any interview, presentation, or discussion. That verification or clarification may be made by whatever means that ONTC deems appropriate which may include contacting the persons identified in the contact information provided by the Respondent and contacting persons or entities other than those identified by any Respondent.
- (4) By submitting a Proposal, the Respondent is deemed to consent to ONTC verifying or clarifying any information and requesting additional information from third parties regarding the Respondent) and its directors, officers, shareholders or owners and any other person associated with the Respondent as ONTC may determine is appropriate.
- (5) ONTC is not obliged to seek clarification or verification of any aspect of a Proposal, or any statement or claim made by a Respondent.
- (6) Requests for clarifications shall not be construed as acceptance by ONTC of a Proposal.

3.14 Two-Envelope Process

- (1) ONTC may elect to complete a Two-Envelope Process. Whether Respondents will be required to submit their Proposals using a Two-Envelope Process will be identified on the RFP Data Sheet.
- (2) If ONTC elects to complete a Two-Envelope Process, the Proposal shall be broken down into two components; a technical submission and a financial submission.
- (3) If ONTC elects to complete a Two-Envelope Process, ONTC will identify a minimum score that must be attained on the technical submission on the RFP Data Sheet. Proposals that do not meet the minimum score for the technical submission following evaluation of the technical submission, will not proceed further in the evaluation process, provided that ONTC may, in its sole discretion, based on the overall scores of all the technical

submissions, revise the minimum score required to proceed further in the evaluation process. Financial submissions will only be opened and evaluated for the Proposals that meet the minimum score for the technical submission.

SECTION 4 - PROPOSAL CONTENT AND FORMAT

4.1 Format and Content of Proposal

- (1) Respondents shall submit their Proposal in one envelope or, if submitting electronically, one electronic folder. Where required by the RFP Data Sheet to follow the two-envelope process, Respondents shall submit the technical submission and the financial submission in two separate envelopes or, if submitting electronically, two separate electronic folders.
- (2) Unless otherwise specified in the RFP Data Sheet, Respondents shall not submit pre-printed literature with their Proposals. Any unsolicited pre-printed literature submitted as part of a Proposal will not be reviewed by the Evaluation Team.
- (3) Each Respondent will:
 - (a) in a clear, concise and legible manner, complete and submit all documentation and information required by Part 2, Part 3, and Part 4 to the RFP;
 - (b) for a hard copy submission, complete any handwritten portions of the proposal forms in ink;
 - (c) provide all information requested and ensure that an authorized person or persons sign all forms where indicated. Failure to provide all requested information on the proposal forms and failure to fill in all blank spaces may result in a Proposal being determined to be non-compliant; and,
 - (d) use only the proposal forms issued as part of the RFP documents unless otherwise indicated.
- (4) Information provided by Respondents on hard copy proposal forms may be amended prior to the Proposal submission, provided the amendments are initialed by an authorized representative of the Respondent. Un-initialed pre-submission amendments may result in the Proposal being declared non-compliant.
- (5) Proposals that are not originals (if hard copy), are unsigned, improperly signed, incomplete, conditional or illegible, may be declared non-compliant.
- (6) The Harmonized Sales Tax (HST) shall not be included in the price. Any taxes or increases to taxes announced prior to the date of the issuance of the RFP Documents and scheduled to come into effect subsequent to it shall be taken into consideration at time of invoicing.
- (7) Price:

- (a) Price shall be an all-inclusive lump sum price (excluding HST), unless otherwise indicated in the RFP Documents; and,
- (b) Where the RFP requires the Respondent to provide a breakdown of the price in Proposal Form 1-A, the price as stated in Proposal Form 1 shall govern in the case of conflict or ambiguity between the price and the sum of the breakdown of the price.

(8) Listing of Subcontractors

Each Respondent shall complete the “Subcontractors” section of Proposal Form 2 – Respondent’s General Information, naming the Subcontractors which the Respondent will employ to perform an item of the work called for by the RFP Documents. Failure of the Respondent to list Subcontractors where required, may result in the Proposal being declared non-compliant.

4.2 Proposal Submission Form

- (1) Each Respondent will complete and submit the forms included in Part 4 – Form of Proposal. Failure of the Respondent to complete and submit one or more of the forms included in Part 4 – Form of Proposal, may result in the Proposal being declared non-compliant.
- (2) Respondents shall execute the Proposal Submission Form as follows:
 - (a) in the case of a sole proprietorship, the sole proprietor will sign the Proposal Submission Form and have the signature witnessed;
 - (b) in the case of a corporation, an authorized signing officer will sign the Proposal Submission Form; or,
 - (c) in the case of a partnership, a partner or partners authorized to bind the partnership will sign the Proposal Submission Form and have their signatures witnessed.

4.3 References and Past Performance Issues

- (1) If specified in the RFP Data Sheet, Respondents shall provide reference information. Unless otherwise set out in the RFP Data Sheet, all references shall be, where possible, with respect to similar goods and/or services, as applicable, during the five (5) years immediately prior to the Submission Deadline. Unless otherwise set out in the RFP Data Sheet, the Respondent shall provide a minimum of three (3) references.
- (2) ONTC may, in its sole discretion, confirm the Respondent’s experience and ability to provide the Goods and/or Services by contacting the Respondent’s references. However, ONTC is under no obligation to contact references submitted by any Respondent.

References and information received from references, if contacted, will be taken into account in the evaluation process as identified in the RFP Data Sheet.

- (3) ONTC may take into account in the evaluation process reliable information received from the Government of Ontario or its Agencies regarding past performance of a Respondent, provided information evidencing past poor performance by a Respondent is provided to the Respondent (subject to any restrictions or disclosure imposed by applicable law) and the Respondent is afforded an opportunity to respond to the information.
- (4) If ONTC receives information from referees of a Respondent's past poor performance, ONTC shall advise the Respondent (subject to any restrictions on disclosure imposed by applicable law) and afford the Respondent an opportunity to respond to the information prior to considering this information as part of the evaluation process.

4.4 Conflict of Interest

- (1) For the purposes of this Section 4.5, the term "**Conflict of Interest**" includes, but is not limited to, any situation or circumstance where the interests, conduct, other commitments or relationships of a Respondent, a Respondent's family member or an officer, director or employee of the Respondent could or could be perceived to, directly or indirectly, compromise, impair or be in conflict with the integrity of the RFP Process, the subject matter of the RFP or ONTC.
- (2) Each Respondent shall promptly disclose any potential, perceived or actual Conflict of Interest of the Respondent to the Contact Person in writing. If ONTC discovers a Respondent's failure to disclose a Conflict of Interest, ONTC may, in its sole and absolute discretion disqualify the Respondent or terminate the Final Agreement if such Respondent is the Successful Respondent.
- (3) ONTC may, in its sole discretion, and in addition to any other remedy available at law or in equity:
 - (a) waive any Conflict of Interest;
 - (b) impose conditions on a Respondent that require the management, mitigation and/or minimization of the Conflict of Interest; or,
 - (c) disqualify the Respondent from the RFP Process if, in the sole and absolute opinion of ONTC, the Conflict of Interest cannot be managed, mitigated or minimized.

SECTION 5 - PROPOSAL SUBMISSION, WITHDRAWAL, MODIFICATION

5.1 Submission of Proposals and Late Proposals

- (1) Each Respondent shall submit their proposal in the format prescribed in the RFP Data Sheet. ONTC will not accept any proposal submission that is not submitted in the format prescribed in the RFP Data Sheet.

ONTC may elect to accept Electronic Bid Submissions, Physical Bid Submissions or a combination of both.

- (a) If ONTC elects to use Electronic Bid Submissions, submissions shall be submitted on, and in accordance with, forms supplied by ONTC. **All responses are to be submitted to ONTC through the use of MERX Electronic Bid Submission (EBS).** Respondents shall be solely responsible for the delivery of their Proposals in the manner and time prescribed in the RFP Data Sheet.

Questions concerning submitting through MERX should be addressed to:

- MERX Customer Support
- Phone 1-800-964-6379
- Email merx@merx.com

Any Proposal from a Respondent whose name does not appear on the official MERX document request list (i.e., who has not downloaded the documents themselves) will be declared invalid, and the Proposal will not be considered.

MERX EBS does not allow submissions to be uploaded after the bid submission deadline; therefore, the Respondent should ensure they allow plenty of time to upload the documents.

Where required by the RFP Data Sheet to use a two-envelope process, Respondents shall include two separate and clearly identifiable attachments: 1) Technical and, 2) Financial. The file names for the technical and financial attachments should be sufficiently distinguishable such that ONTC does not need to open the attachments to differentiate between them.

- (b) If ONTC elects to use Physical Bid Submissions, Respondents shall submit one original and the number of copies of its Proposal (in hard copy) specified in the RFP Data Sheet and the number of electronic copies of its Proposal (on a properly labelled CD or USB key in PDF format) specified in the RFP Data Sheet, at the correct location for submission and on or before the Submission Deadline. If there is any difference whatsoever between the electronic copy of the Proposal and the original hard copy, the original hard copy of the Proposal, as submitted, will govern. The electronic copy of the Proposal is solely for the convenience of ONTC.

Respondents shall submit their Proposals to the attention of the Senior Manager of Strategic Procurement by prepaid courier or personal delivery at the following address:

Jason Baker
Senior Manager, Strategic Procurement
Ontario Northland Transportation Commission
555 Oak Street East
North Bay, Ontario P1B 8E3

The Respondent shall place their Proposal Submission in a sealed envelope or package with the Respondent's full legal name and return address, the RFP Number, the Submission Deadline and the label "Proposal Submission" clearly displayed on the outside of the envelope.

Where required by the RFP Data Sheet to use a two-envelope process, Respondents shall have one sealed envelope as prescribed above that contains two individual sealed envelopes inside that are clearly marked "Technical Submission" and "Financial Submission".

- (c) For the convenience of the Respondents, and only when identified in the RFP Data Sheet, ONTC may allow either an Electronic Bid Submission through MERX or a Physical Bid Submission. The Respondent shall only use one method and follow the same procedure prescribed above.
- (2) Proposals must be received before the time noted in the RFP Data Sheet.
- (3) Proposals will be date and time stamped at the place receiving the Proposals. Late Proposals will be returned unopened.
- (4) Proposals which are submitted by facsimile transmission, email, or by electronic means other than MERX will NOT be considered.
- (5) Respondents are solely responsible for the method and timing of delivery of their Proposals.
- (6) ONTC reserves the right to make copies of the Respondent's Proposals as it may be required for the purpose of conducting a full evaluation of the Proposal submitted.
- (7) The Respondent should identify and mark any trade secret or proprietary intellectual property in its Proposal.

5.2 Late Proposals

- (1) ONTC will reject Proposals that are received after the Submission Deadline.

5.3 Withdrawal of Proposals

- (1) When submitting a Physical Bid Submission, a Respondent may withdraw its Proposal at any time before the Submission Deadline by notifying the Contact Person in writing. ONTC shall return, unopened, a Proposal that has been withdrawn.
- (2) When submitting an Electronic Bid Submission, MERX will allow withdrawal of Proposals up to the Submission Deadline.

5.4 Amendment of Proposals

- (1) When submitting a Physical Bid Submission, Respondents may amend their Proposals after submission but only if the original Proposal is withdrawn and the amended Proposal is submitted before the Submission Deadline.
- (2) Electronic Bid Submissions through MERX will allow amendments up to the closing date and time; however, **Respondents are responsible for ensuring they allow sufficient time to upload the amended documents.**
- (3) If more than one Proposal is received from the same Respondent before the Submission Deadline, only the last Proposal received before the Submission Deadline will be considered.

5.5 Proposal Irrevocability

- (1) Subject to the Respondent's right to withdraw or amend the Proposal before the Submission Deadline, the Respondent's Proposal is irrevocable and shall remain in effect and open for acceptance for ninety (90) days after the Submission Deadline.

5.6 One Proposal per Person or Entity

- (1) Except as set out in the RFP Data Sheet or with ONTC's approval:
 - (a) a person or entity shall submit or participate in only one Proposal either individually or as a Respondent team member; and,
 - (b) a person or entity shall not be a subcontractor of a Respondent and also submit a Proposal individually or as a Respondent team member in the same RFP Process.
- (2) If a person or entity submits or participates in more than one Proposal in contravention of RFP Section 5.6(1), ONTC may, in its sole discretion, disqualify any or all of the Proposals submitted by that person or entity or in which that person or entity is a participant.

SECTION 6 - PROPOSAL EVALUATION

6.1 Evaluation Team

- (1) ONTC will establish an evaluation team for the purpose of evaluating Proposals (the “**Evaluation Team**”).
- (2) The Evaluation Team may, in its sole discretion, delegate certain administrative functions related to the evaluation of Proposals to a separate team of individuals who are not members of the Evaluation Team, who will be supervised by the Evaluation Team. Without limiting the generality of the foregoing, but for greater particularity, the Evaluation Team may seek the advice and assistance of third-party consultants and the Government of Ontario. Each Respondent acknowledges that the RFP documents may have been prepared with the assistance of a third-party consultant and that the consultant may participate in the evaluation of the Proposals.

6.2 Evaluation of Proposals

- (1) The Respondents’ Proposals will be reviewed and evaluated by the Evaluation Team on the basis of the evaluation criteria set out in the RFP Data Sheet (the “**Evaluation Criteria**”).
- (2) After selection of the Short-listed Respondent(s), ONTC may, in its sole discretion, negotiate changes, amendments or modifications to the Short-listed Respondent’s Proposal or the Final Agreement.
- (3) If ONTC is of the opinion that any of the following apply, then ONTC may, in ONTC’s sole discretion, decline to select that Respondent to be a Short-listed Respondent:
 - (a) a Respondent has submitted a price that is clearly insufficient to perform the supply of Goods and/or Services;
 - (b) a Respondent has previously provided poor performance to ONTC or a subsidiary of ONTC;
 - (c) a Respondent is disqualified from participating in the RFP Process per RFP Section 7.2 (1)(i);
 - (d) ONTC cannot, to ONTC’s satisfaction, prior to the conclusion of the RFP Process, verify independently or through a third party or parties any and/or all information, statements, representations and/or warranties contained in the Proposal;
 - (e) a Respondent or any subcontractor of the Respondent is not financially sound, or ONTC is unable to obtain from the Respondent or third-party sources reasonable assurances of the financial position of the Respondent or any of its subcontractors;

- (f) the overall cost to ONTC would be significantly increased with that Respondent;
- (g) the Respondent failed to meet the mandatory requirements specified in the RFP Data Sheet; or,
- (h) the Respondent failed to attain the minimum score required for the Technical Submission, where the RFP Data Sheet called for a two-envelope process.

6.3 Short-Listing

- (1) The Evaluation Team will establish the list of Short-listed Respondents based on the Evaluation Criteria.
- (2) The number of Respondents short-listed is in the sole discretion of ONTC.

6.4 Interviews, Site Visits, Demonstrations and Presentations

- (1) ONTC may, in its sole discretion, conduct interviews, demonstrations, site visits or presentations as part of the evaluation process if set out in the RFP Data Sheet.
- (2) The evaluation of any interviews, demonstrations, site visits or presentations will be conducted in accordance with the process set out in the RFP Data Sheet.
- (3) ONTC may conduct interviews, demonstrations, site visits or presentations with some or all Respondents, or may restrict participation to only the Short-listed Respondent(s).

SECTION 7 - GENERAL EVALUATION AND DISQUALIFICATION PROVISIONS

7.1 ONTC's Discretion

- (1) ONTC may determine, in its sole discretion:
 - (a) the membership of the Evaluation Team;
 - (b) if a Proposal is compliant with the RFP Documents;
 - (c) if a failure to comply is material;
 - (d) if a Proposal or a Respondent is disqualified;
 - (e) the evaluation results and ranking for each Respondent; and,
 - (f) which Respondent, if any, and how many Respondents, based on the evaluation process, will be Short-listed Respondents.

7.2 Disqualification

- (1) ONTC may, in its sole discretion, disqualify a Respondent or a Respondent's Proposal or cancel its decision to identify a Respondent as a Short-listed Respondent or a Successful Respondent, at any time prior to the execution of the Final Agreement by ONTC, if:
 - (a) The Respondent fails to cooperate in any attempt by ONTC to clarify or verify any information provided by the Respondent in its Proposal;
 - (b) The Respondent contravenes RFP Section 3.5, RFP Section 3.6 or RFP Section 5.6(2);
 - (c) The Respondent fails to comply with the Applicable Laws;
 - (d) The Proposal contains false or misleading information, or the Respondent provides false or misleading information in any part of the RFP Process;
 - (e) The Proposal, in the sole discretion of ONTC, reveals a Conflict of Interest that cannot be managed, mitigated or minimized;
 - (f) There is evidence that the Respondent colluded with one or more other Respondents in the preparation or submission of Proposals;
 - (g) The Respondent has previously breached or been in default of compliance with any term of any agreement with ONTC and such breach or default has not been waived by ONTC or the Respondent has not cured the default;
 - (h) The Respondent has been convicted of an offence in connection with any services rendered by the Respondent to ONTC, or to any Ministry, Agency, Board or Commission of the Government of Ontario or the Government of Canada;
 - (i) The Respondent, at the time of issuance of this RFP or any time during the RFP Process, has an outstanding claim or is engaged in an ongoing legal dispute with ONTC, other than an adjudication under the Construction Act;
 - (j) The Proposal is not Substantially Compliant;
 - (k) The Respondent has failed to notify ONTC of, or ONTC has not approved, a post-submission change in the control of the Respondent or in the circumstances of the Respondent that may materially negatively impact the Respondent's ability to perform its obligations if selected as the Successful Respondent; or,
 - (l) The Respondent has received a Vendor Performance Evaluation as part of ONTC's Vendor Performance Policy, and received a total rating on the Final Performance Form that disqualifies the Respondent from participating in the RFP Process.

- (2) Notwithstanding Section 7.2 (1), ONTC shall retain the right to select as the Successful Respondent, any Respondent(s) which, in ONTC's sole and absolute discretion, has submitted a substantially compliant Proposal(s).

7.3 General Rights of ONTC

- (1) ONTC may, in its sole discretion and at any time during the RFP process:
 - (a) reject any or all of the Proposals;
 - (b) accept any Proposal or any portions of any Proposals for any reason whatsoever;
 - (c) reject any Proposals or any portions of Proposals for any reason whatsoever,
 - (d) if only one Proposal is received, elect to either accept it, reject it, or enter into negotiations with the applicable Respondent;
 - (e) elect not to proceed with, cancel, or terminate the RFP;
 - (f) alter the Submission Deadline or any other deadlines associated with the RFP Process;
 - (g) change the RFP Process or any other aspect of the RFP Documents; or,
 - (h) cancel this RFP Process and subsequently conduct another competitive process for the same Goods and/or Services that are the subject matter of this RFP or subsequently enter into negotiations with any person or persons with respect to the Goods and/or Services that are the subject matter of this RFP.
- (2) If ONTC, in its sole discretion, is of the opinion that all of Proposals submitted are not substantially compliant, ONTC may:
 - (a) take any action in accordance with Section 7.3. (1);
 - (b) carry out a process whereby all Respondents are directed to correct the deficiencies in their Proposals for re-submission; or,
 - (c) negotiate an agreement for the whole or any part of the Goods and/or Services with a Respondent which has submitted a Non-compliant Proposal.

SECTION 8 – AGREEMENT FINALIZATION AND DEBRIEFING AND SUCCESSFUL RESPONDENT

8.1 Finalization of the Agreement

- (1) ONTC may, in its sole discretion, retain more than one Respondent to provide the Goods and/or Services.
- (2) ONTC reserves the right in its sole discretion to sub-divide and/or bundle the Goods and/or Services which are the subject of this RFP and award one or any number of separate contracts for the Goods and/or Services.
- (3) ONTC may, in its sole discretion, enter into negotiations with one or more Respondent(s) for the purpose of selecting a Successful Respondent(s) and finalizing an agreement.
- (4) Either ONTC or a Respondent may withdraw from negotiations at any time prior to the Successful Respondent(s) being identified.
- (5) The Successful Respondent is expected to enter into the relevant draft form of agreement in Part 5. Proposal Form 5 – Compliance with Contract Documents allows a Respondent to submit suggested changes to the draft agreement. ONTC does not have any obligation to accept any proposed changes to the draft agreement and will do so in its sole discretion. ONTC may, in ONTC's sole discretion; (i) consider only a minimal number of changes to the draft agreement; (ii) consider significant material proposed changes to negatively impact the evaluation of the Respondent's proposal; or (ii) disqualify any Respondent where the changes or the number of changes made by the Respondent to the draft agreement would be, in ONTC's sole discretion, too onerous to successfully negotiate within the timeframe set out in Section 8.1 (7) below or are unacceptable to ONTC. **In any event, ONTC will not accept any material changes to the clauses in the draft agreement relating to the Confidentiality, Personal Information, Intellectual Property ownership and infringement, Indemnification, Limitation of Liability or rights of ONTC on termination. ONTC, as an Ontario Crown corporation, is unable to provide indemnities pursuant to s.28 of the *Financial Administration Act* (Ontario).**

If a Respondent does not submit any proposed amendments in Proposal Form 5, it will be deemed to have accepted and will be required to execute the Final Agreement in the form attached to this RFP. If a Respondent has submitted proposed amendments to the Final Agreement, negotiations respecting those amendments shall be conducted within the timeframe set out in Section 8.1(7).

- (6) If a Successful Respondent fails or refuses to enter into and execute the Final Agreement within ten (10) Business Days of being notified they are the Successful Respondent

(ONTC may extend such period of time in ONTC's sole discretion), or a Successful Respondent fails or refuses to provide the documentation in accordance with Section 8.1(7), ONTC may, in its sole discretion, take any one of the following actions:

- (a) terminate all negotiations and cancel its identification of that Respondent as a Successful Respondent;
 - (b) select another Respondent or Short-Listed Respondent as the Successful Respondent;
 - (c) take any other action in accordance with Section 7.3; or,
 - (d) pursue any other remedy available to ONTC at law.
- (7) Prior to supplying any Goods and/or Services pursuant to the Contract, the Successful Respondent shall deliver to ONTC:
- (a) certificates of insurance as specified in the draft Agreement;
 - (b) executed Contractors Health and Safety Responsibility Agreement;
 - (c) Respondent's Health and Safety, and Environmental Policies; and,
 - (d) a current Clearance Certificate issued by the Workplace Safety and Insurance Board, if applicable.

8.2 Notification If Successful or Not

- (1) The Successful Respondent and unsuccessful Respondents will be notified by ONTC in writing regarding their success or failure in the RFP Process.

8.3 Debriefing

- (1) Respondents may request a debriefing after receipt of a notification pursuant to RFP Section 8.2. All Respondent requests should be in writing to the Contact Person no later than 60 calendar days after receipt of the notification. ONTC will conduct debriefings in the format prescribed by the OPS Procurement Directive.

SECTION 9 - LEGAL MATTERS AND RIGHTS OF ONTC

9.1 Limit on Liability

- (1) The total liability of the Respondent to ONTC for loss and damage arising from the Respondent who is selected as the Successful Respondent but then fails to deliver the evidence of insurance or other documents required under Section 8.1(8) within the time period specified in Section 8.1 or fails to execute the Final Agreement shall be limited to

ten (10) percent of the value of the proposal. The liability of the Respondents for any other loss or damage suffered by ONTC as part of this RFP Process shall be without limit.

(2) By submitting a Proposal,

- (a) each Respondent acknowledges ONTC's rights as stated herein and absolutely waives any right of action against ONTC for ONTC's failure to accept the Respondent's Proposal whether such right of action arises in contract, negligence, bad faith, or any other cause of action;
- (b) each Respondent covenants and agrees that, under no circumstances, shall ONTC, or any of its employees, officers, representatives, agents or advisors, be liable to any Respondent, whether in contract, tort, restitution, or pursuant to any other legal theory, for any claim, action, loss, damage, cost, expense or liability whatsoever and howsoever arising from this RFP Process, a Respondent's Proposal in response to this RFP Process, or due to the acceptance or non-acceptance of any Proposal, or as a result of any act or omission by ONTC and/or its employees, officers, representatives, agents or advisors, including any information or advice or any errors or omissions that may be contained in the RFP Documents, or any other documents or information provided to a Respondent, or arising with respect to the rejection or evaluation of any or all of the Proposals, any negotiations with any of the Respondents, or the selection of any Respondent as a Short-listed Respondent or the Successful Respondent; and,
- (c) each Respondent shall indemnify and hold harmless ONTC, its employees, officers, representatives, agents and advisors, from and against any and all claims, demands, actions or proceedings brought by third parties, including but not limited to the Respondent's subcontractors or suppliers, in relation to this RFP Process.

9.2 Power of Legislative Assembly

- (1) No provision of the RFP Documents (including a provision stating the intention of ONTC) is intended to operate, nor shall any such provision have the effect of operating, in any way, that would interfere with or otherwise fetter the discretion of the Legislative Assembly of Ontario in the exercise of its legislative powers.

9.3 RFP Not a "Bidding Contract" or a Tender

- (1) Notwithstanding any other provision of this RFP, this RFP is not a tender call, ONTC does not intend to create any contractual relations or obligations with any of the Respondents by virtue of issuing this RFP, and this RFP is not an offer to enter into a contract (often referred to as "Contract A"). Except as provided in RFP Section 3.8 and 9.1, neither this RFP nor the submission of a Proposal by a Respondent shall create any legal or contractual rights or obligations whatsoever on any of the Respondent, ONTC, the Government of Ontario or any Ministry of the Government of Ontario.

SECTION 10 – VENDOR PERFORMANCE

10.1 General

- (1) ONTC has established a Vendor Performance Policy, which provides a framework for ONTC to maximize the value for money of its Vendors by:
 - (a) proactively managing the performance of Vendors in accordance with ONTC's Purchasing Policy; and,
 - (b) creating a record of past performance for use by ONTC when selecting Vendors for the supply of goods and services.

10.2 Vendor Performance Evaluation

- (1) Successful Respondents who enter into a Final Agreement with ONTC may be required to participate in the Vendor Performance Evaluation process.

10.3 Vendor Ratings for Proposal Evaluation Purposes

- (1) ONTC may access a Respondent's Vendor Performance Evaluations for previous contracts as part of the Evaluation Process. The manner in which the Respondent's ratings will be used will be identified in the Evaluation Criteria of the RFP Data Sheet.

SECTION 11 – TRANSPARENCY AND FAIRNESS

11.1 General

- (1) ONTC is committed to procuring goods and services through a process that is conducted in a fair and transparent manner, providing equal opportunity to vendors.
- (2) ONTC endeavors to provide specifications that meet the requirements of the procurement without naming specific brands. However, there may be instances where a third-party consultant prepares a specification on behalf of ONTC, and a specific brand is named. In these instances, alternate materials or products may be used if ONTC determines the proposed materials or products are equivalent to the materials or products in the specifications. Respondents shall submit proposed alternate materials or products with their Proposal submission to be considered.

SECTION 12 – INTERPRETATION

12.1 General

- (1) In this RFP, the singular shall include the plural and the plural shall include the singular, except where the context otherwise requires.

- (2) All references in this RFP to “discretion” or “sole discretion” means in the sole and absolute discretion of the party exercising the discretion.
- (3) For clarity, where the expression “Government of Ontario” is used in this RFP, it includes all Ministries and Agencies of the Government of Ontario.



PART 2

**REQUEST FOR PROPOSALS
SUMMARY OF REQUIREMENTS**

**PART 2 – REQUEST FOR PROPOSALS
 SUMMARY OF REQUIREMENTS
 SCHEDULE 2-A
 RFP DATA SHEET**

RFP 2024 006 Joint Elimination Program and Electric Flash-Butt Welding	
Contact Details	
Contact Person	Ashley Commanda, Manager, Public Procurement
Contact Information	555 Oak Street East North Bay, Ontario, P1B 8L3 Ashley.commanda@ontarionorthland.ca (705) 472-4500 ext. 398
Proposal Detail	
Respondents' Meeting	There will not be a Respondents' Meeting. Respondents shall seek any clarifications up to four (4) Business Days prior to the Submission Deadline Date and Time.
Validity of Proposals	90 days following the Submission Deadline
Format of Submission	Respondents shall submit their Proposal through MERX Electronic Bid Submissions (EBS). Refer to Part 1, Request for Proposals, Section 5.1 (1) (a). MERX EBS does not allow Proposals to be uploaded after the Submission Deadline; therefore, Respondents shall ensure they allow sufficient time to upload the documents. Proposals which are submitted by facsimile transmission, email or by electronic means other than MERX <u>will NOT</u> be considered.
Two-Envelope Process	This procurement will not be a two-envelope process.
Distribution Method	The RFP Documents will be posted on the ONTC website and MERX. Any addenda to the RFP will be posted in these locations.

**PART 2 – REQUEST FOR PROPOSALS
 SUMMARY OF REQUIREMENTS
 SCHEDULE 2-A
 RFP DATA SHEET *continued***

RFP 2024 006 Joint Elimination Program and Electric Flash-Butt Welding			
Proposal Detail <i>continued</i> – <u>Note the requirements below are new to ONTC</u>			
Submission Requirements	Respondents are required to submit all of the documents listed below as part of their Proposal. Respondents shall confirm they have included the documents listed below with their Proposal by placing a checkmark in the column “Included in Proposal”. If the Respondent fails to include a document listed below as being “Material”, the respondent may be disqualified in accordance with section 6.2 (3) of the RFP.		
	Item	Included in Proposal (indicate with ✓)	Item is classified as Material
	This checklist		
	Proposal Form 1 - Proposal Submission Form		Material
	Proposal Form 1-A - Proposal Submission Form		Material
	Proposal Form 2 - Respondent’s General Information		Material
	Proposal Form 3 - Acknowledgment to Comply with Part 3 – Request for Proposals Specifications		Material
	Proposal Form 4 - References		Material
	Proposal Form 5 - Compliance with Contract Documents		
	Proposal Form 6 - Health, Safety and Environment		Material
	Proposal Form 7 - Schedule of Materials		
	Proposal Form 8 - List of Equipment		
	Proposal Form 9 - Schedule and Proposed Approach <u>Include Construction Schedule in Gantt chart format and Written Narrative Proposed Approach</u>		Material
	Proposal Form 10 - Schedule of Progress Payments		
	Proposal Form 11 - List of Personnel and Resumes		Material
	Proposal Form 12 - Current Labour Agreements		
Proposal Form 13 - Contractor’s Qualification Statement <u>Include Company Profile and 3 Project Descriptions</u>		Material	
Proposal Form 14 - Claims			

PART 2 – REQUEST FOR PROPOSALS

**SUMMARY OF REQUIREMENTS
 SCHEDULE 2-A *continued*
 RFP DATA SHEET**

RFP 2024 006 Joint Elimination Program and Electric Flash-Butt Welding			
Important Dates			
Publication Date	Wednesday, February 14, 2024		
Participation Registration Form	Complete and submit to the Contact Person as soon as possible		
Deadline for Additional Information Request	Four (4) full Business Days prior to the Submission Deadline		
Submission Deadline Date and Time	Friday, March 15, 2024 at 2:00:00 p.m. (EST)		
Target Completion Date	Spring 2024		
Notes Pertaining to Final Agreement			
Term	ONTC will enter into a three (3) year contract with the Successful Respondent. ONTC may, in its sole discretion, extend this contract for an optional fourth (4 th) year and optional fifth (5 th) year.		
Procedure of Selection			
Mandatory Requirements	Respondents must first satisfy that all of the Mandatory Requirements listed below have been met. Respondents will receive a pass/fail for each Mandatory Requirement. Respondents who fail any of the Mandatory Requirements will be disqualified from the RFP Process.		
	Mandatory Requirement	Pass	Fail
	Respondent has submitted all of the documents as specified in the Submission Requirements listed in Part 2, Request for Proposals, Summary of Requirements, RFP Data Sheet		
	Respondent has provided sufficient evidence to pass the Contractor Safety Pre-Qualification (Part 4 – Form of Proposal, Proposal Form 7, Health, Safety and Environment)		
	Respondent has achieved a minimum score of 6 under Experience and Qualifications		
	Respondent has achieved a minimum score of 21 under Schedule and Proposed Approach		

**PART 2 – REQUEST FOR PROPOSALS
 SUMMARY OF REQUIREMENTS
 SCHEDULE 2-A *continued*
 RFP DATA SHEET**

RFP 2024 006 Joint Elimination Program and Electric Flash-Butt Welding		
Procedure of Selection <i>continued</i>		
Evaluation General Procedure	ONTC will proceed with an evaluation of the Proposals. The evaluation will be based on the following criteria:	
Evaluation Criteria	Description	Weight
	<p>Price ONTC will use the following to calculate the initial score for price: Lowest price of all Proposals / price of Respondent x 30 = Score <i>ONTC reserves the right in its sole discretion to consider the best overall value when evaluating price and adjust the score accordingly. If ONTC, in its sole discretion, is of the opinion that the Respondent has submitted a price that is too low to adequately complete the scope of work, then ONTC reserves the right not to use that price as the "Lowers price of all Proposals".</i></p>	30
	<p>Experience and Qualifications ONTC will assess Respondents' experience and qualifications using the information supplied as part of Part 4 of this RFP. The following sub-weights will apply: Company Profile and Resumes of Key Personnel – 5 points Project Profile 1,2,3 – 5 points (ONTC may or may not contact references as part of the evaluation and may use this information as part of this score)</p>	10
	<p>Schedule and Proposed Approach ONTC will be looking for the Contractor to fully demonstrate the following: Is the Schedule provided in the proper format and is it logical? – 5 points Detail your ability and experience in joint elimination, electric flash-butt welding, and destressing the rail behind the flash-butt welding operation. Provide an example of your daily work report, and daily rail destressing report – 15 points Detail your ability and plan to remove all surplus OTM and scrap rail ends from ONTC property – 5 points Does the proposed approach prove to ONTC that you are capable of completing 10,000 rail joints per year in priority order and has a contingency been built in to the proposed approach? Does it provide enough detail to demonstrate how you plan to deliver the required services per the critical delivery schedule and locations specified in the RFP – 10 points</p>	35

**PART 2 – REQUEST FOR PROPOSALS
 SUMMARY OF REQUIREMENTS
 SCHEDULE 2-A *continued*
 RFP DATA SHEET**

RFP 2024 006 Joint Elimination Program and Electric Flash-Butt Welding		
Procedure of Selection <i>continued</i>		
Evaluation Criteria	Local Knowledge Describe your experience with the climatic and environmental requirements in Northern Ontario – 10 points	10
	Local Benefit Describe how and when you will use local workforce, local vendors, local manufacturers, local contractors, and local apprentices/trainees to achieve the project goals and provide the requested services – 5 points Describe your organization’s diversity programs – 5 points	10
	Environmental and Sustainability Provide evidence of compliance to Ontario’s environmental requirements (e.g. recycling, waste management, etc.) – 5 points	5
	Total	100

**PART 2 – REQUEST FOR PROPOSALS
SUMMARY OF REQUIREMENTS
SCHEDULE 2-B
PARTICIPATION REGISTRATION FORM**

Required in order to register and receive any communications in relation to the requirement referenced below.

Date: _____
Reference Number: RFP 2024 006
Description of Requirement: Joint Elimination Program and Electric Flash-Butt Welding

I, the undersigned, am registering to participate in the above referenced requirement and will be the primary contact for any communications in relation to this process and project until further advised.

Company Name: _____
Address: _____

Name of person registering to represent company referenced above (please print): _____
Email Address: _____
Phone Number: (Main Office Number) _____
Cell Number: _____

Signature of Primary Contact: _____

Return form to the Contact Person as referenced below via email as an attachment:

Thank you.

Ashley Commanda
Manager, Public Procurement
Ontario Northland Transportation Commission
Phone: 705-472-4500 Ext. 398
Email: ashley.commanda@ontarionorthland.ca
Website: www.ontarionorthland.ca



PART 3
REQUEST FOR PROPOSALS
SPECIFICATIONS

**PART 3 – RFP SPECIFICATIONS
SCHEDULE 3-A
SCOPE OF WORK**

1. Introduction

Ontario Northland Transportation Commission (ONTC) undertakes rail infrastructure upgrade programs annually in order to provide a safe and reliable train service across northeastern Ontario and northwestern Quebec. One of ONTC's upgrade programs is to eliminate rail joints by welding a mixture of bolted rail lengths into continuous welded rail (CWR). This program will require the services of a qualified Electric Flash-Butt Welding contractor.

ONTC will enter into a three (3) year contract with the Successful Respondent. ONTC may, in its sole discretion, extend this contract for an optional fourth (4th) year and optional fifth (5th) year.

ONTC has divided the work into priorities, namely Priority 1 (crossings), Priority 2 (Temagami and Ramore Subdivision), Priority 3 (Devonshire Subdivision) and Priority 4 (Kirkland Lake Subdivision). Please note that Priority 4 is an *optional* item. It will be up to ONTC's sole discretion as to whether or not we proceed with the Kirkland Lake Subdivision.

A summary of these projects has been provided below:

Joint Elimination Program

ONTC's joint elimination program includes the electric flash-butt welding on 4 subdivisions:

1. Temagami Subdivision (North Bay to Englehart, 138.5 miles);
2. Ramore Subdivision (Englehart to Porcupine, 109.4 miles);
3. Devonshire Subdivision (Porquis Junction to Cochrane, 28.05 miles); and,
4. Kirkland Lake Subdivision - Optional (Swastika Junction to Noranda, 60.04miles).

The contractor shall demonstrate their ability to eliminate a minimum of 10,000 Rail joints per year.

The number of welds per subdivision is estimated at:

Subdivision	Estimated Welds
Temagami	7,676
Ramore	15,975
Devonshire	4,795
Kirkland Lake (Optional)	10,264

These numbers are estimates only and are subject to change.

All rail, spikes, anchors, plates, joint bars, bolts and washers required are to be supplied by ONTC. The work is scheduled to commence as soon as field conditions permit, and materials are in place. It is anticipated that this work will take place year-round as weather permits. All joints shall be welded as per the priority list below.

2. Conditions of the Place of Work

The Place of the Work is located anywhere along the Temagami, Ramore, Devonshire and Kirkland Lake Subdivisions.

Each Respondent must form its own opinions and conclusions with respect to the Work locations in the RFP Documents. Before submitting a Proposal, investigate the Place of the Work to fully ascertain existing conditions, circumstances and limitations affecting the Work. No allowances will be made for additional costs and no claims will be entertained in connection with conditions which could reasonably have been ascertained by such investigation or other due diligence prior to submitting a Proposal.

3. Scope of Work – Joint Elimination Program

ONTC wishes to remove all rail joints on its Temagami Subdivision, Ramore Subdivision, Devonshire Subdivision, and Kirkland Lake Subdivision (Optional).

As this program will generate a large amount of surplus OTM and scrap rail ends, the following work will be added to the Joint Elimination Program:

- Removal of surplus OTM and scrap rail ends from ONTC property and provide credit to ONTC for such.
- Distribution of rails and OTM as required for the Joint Elimination Program.

The Contractor will also be responsible for destressing the rail behind the flash-butt welding operation. This work must occur in conjunction with the flash-butt welding operation as to limit the risk of track buckles.

The priority locations are as follows:

Priority 1 (Rail Joints in Crossing Circuits)

Subdivision	Mileage	Location / Street	Suggested MP for Joint Elimination
Devonshire	0.78	Highway 67	0.0 - 2.5
Devonshire	1.78	Hopkins Rd	
Devonshire	5.08	Jacobs Hill Rd	
Ramore	14.52	Highway 564 - Boston Creek	13.5 - 15.5

Ramore	20.88	Highway 650 - Jardine	20 - 21.5
Ramore	57.82	Highway 572 - Holtyre	57 - 58.5
Ramore	66.36	4th Avenue	65.5 - 67
Ramore	67.37	Burton Rd North	67.5 - 68
Ramore	79.33	Monteith Road	78.5 - 78
Ramore	86.37	Highway 11 - Porquis Junction	85.5 - 87
Ramore	94.08	Frederickhouse Lake Road - Barber's Bay	93.5 - 95
Ramore	97.73	Frederickhouse Lake Rd - Connaught	97 - 98.5
Ramore	100.44	Frederickhouse Lake Rd - Dugwall	99.7 - 101
Ramore	103.49	Frederickhouse Lake Rd - Hoyle	102.2 - 105
Ramore	104.32	Kidd Creek Metallurgical Site Road	
Ramore	108.28	Hallnor Road	107.5 - 110
Ramore	109.3	Falcon Street	107.5 - 110
Temagami	1.21	Franklin Street	00.0 - 6
Temagami	1.36	Highway 11 & 17	00.0 - 6 10.5 - 12.5
Temagami	3.93	Lees Road	
Temagami	4.87	Hydro Station Road	
Temagami	11.7	Widdifield Station Road	
Temagami	71.82	O'Connor Drive	
Temagami	76.2	Spruce Drive	75.2 - 77
Temagami	99.78	Bass Lake Road	98.9 - 100.7
Temagami	106.19	Niven Street	105 - 108
Temagami	106.95	Albert Street	105 - 108
Temagami	111.56	Radley Hill Road	110.5 - 116
Temagami	112.43	Broadwood Avenue	110.5 - 116 123.5 - 125.8
Temagami	112.65	Whitewood Avenue	
Temagami	113.41	Highway 11 - New Liskeard	
Temagami	114.96	Golf Course Road	
Temagami	124.68	Highway 562 - Thornloe	
Temagami	128.66	10th St	127.8 - 129.8
Temagami	134.99	Highway 569 - Heaslip	134-138
Temagami	135.91	Highway 624 - Larder Highway	134-138

Priority 2 – Temagami and Ramore Subdivision

Priority 3 – Devonshire Subdivision

Priority 4 – Kirkland Lake Subdivision (Optional)

3.1 Obligations of the Contractor

- (1) Mobilize and demobilize equipment to and from ONTC railway.
- (2) Complete priorities in order. Priority 1 shall be completed prior to Priority 2. Priority 2 shall be completed prior to priority 3. Priority 3 shall be completed prior to Priority 4. Priority 4 shall be completed last.
- (3) Unload rail and OTM from rail cars and distribute. Install closure rails when required.
- (4) Spike holes shall be plugged chemically. In special circumstances, wood plugs may be used but will require pre-approval from the Manager, Track Programs.
- (5) Adhere to all fire protection protocols as detailed in the most recent version of the Industrial Operations Fire Prevention and Preparedness Plan (see Schedule 3-A-2).
- (6) Load/Unload rail from rail cars as required. The contractor will be able to move up to five (5) railcars if machinery is adequate to perform such work. Proof to be provided to ONTC.
- (7) Remove from Right of Way surplus spikes, anchors, plates, joint bars and rail ends created by the joint elimination program.
- (8) Provide all-inclusive pricing per weld.
- (9) Provide all-inclusive credit per ton of recovered surplus spikes, anchors, plates, joint bars and rail ends.
- (10) Gage track in all rail installation areas. Track gage is 56½”.
- (11) Place all required slow order flags as instructed by onsite supervisor.
- (12) Provide the ONTC onsite supervisor with a daily work report indicating amount of welds completed. Complete a rail destressing report daily. Report is to include time worked by all employees and must be signed daily by Contractor representative and ONTC onsite supervisor. These reports must be submitted with invoice for payment.
- (13) Provide all fuels, lubricants and other consumables.
- (14) Contractor is to arrange workday so that no more than 14 hours/day are worked in conjunction with the ONTC flagman.
- (15) Dismantle and reassemble any crossings as required.
- (16) Contractor is to arrange traffic protection when dismantling and reconstructing a crossing.
- (17) Contractor is expected to work during “naturally” occurring work blocks. See Schedule 3-A-3 for Train Service Plan. Contractor will be given a guaranteed minimum 8-hour work block per day (uninterrupted or in two different blocs). A standby rate will

apply when this minimum guarantee (i.e., a work block totaling 8 hours per day in one continuous work block or two different blocks) is not obtained.

- (18) Contractor shall request, in writing, the need of a work train to move loaded/empty railcars. The written request shall be made to ONTC, 7 days prior to the work train move being required. The written request shall be made to the Track Programs Supervisor and the Manager, Track Programs.
- (19) Contractor shall register their CVOR vehicles to travel by road to Quebec.
- (20) Contractor shall provide a qualified signal maintainer on an as-required basis. ONTC will inform the contractor 7 days prior to the requirement. The signal maintainer must have experience maintaining and repairing track circuit and motion sensor Grande Crossing Warning Systems on Class 1 railways. Pricing for this work must be outlined on Proposal Form 1-A, as optional work.

3.2 Item Specific Obligations

Contractor must be able to eliminate a minimum 10,000 Rail Joints per year in priority order indicated and demonstrate in their work methodology and schedule how they propose to achieve this required target.

- (1) Work in Priority 1 shall occur with a signal maintainer on-site.
- (2) Rail Expansion is to be achieved through heating, not pulling.
- (3) When heating the rail to the PRLT ensure even distribution of heat over the entire length of the rail.
- (4) Box anchor according to ONTC's Manual of Track Requirements (MTR).
- (5) Every weld shall be ground to ensure proper mismatch.
- (6) Every Weld shall be warrantied for a period of one year.

3.3 Obligations of ONTC

- (1) Provide flagging protection.
- (2) Supply rail, spikes, anchors, plates, joint bars (compromised and regular), bolts and washers via nearest available siding/spur/yard. Spikes and plates will be loose in gondola/air dumps.
- (3) Provide flat cars for rail loading as required via nearest available siding/spur/yard.
- (4) Following proper written work train request indicated in section 3.1 (21), move boarding car consist, loaded/empty tie cars, loaded/empty rail cars and box cars.

3.4 Boarding Cars

No boarding cars will be available for the duration of this project.

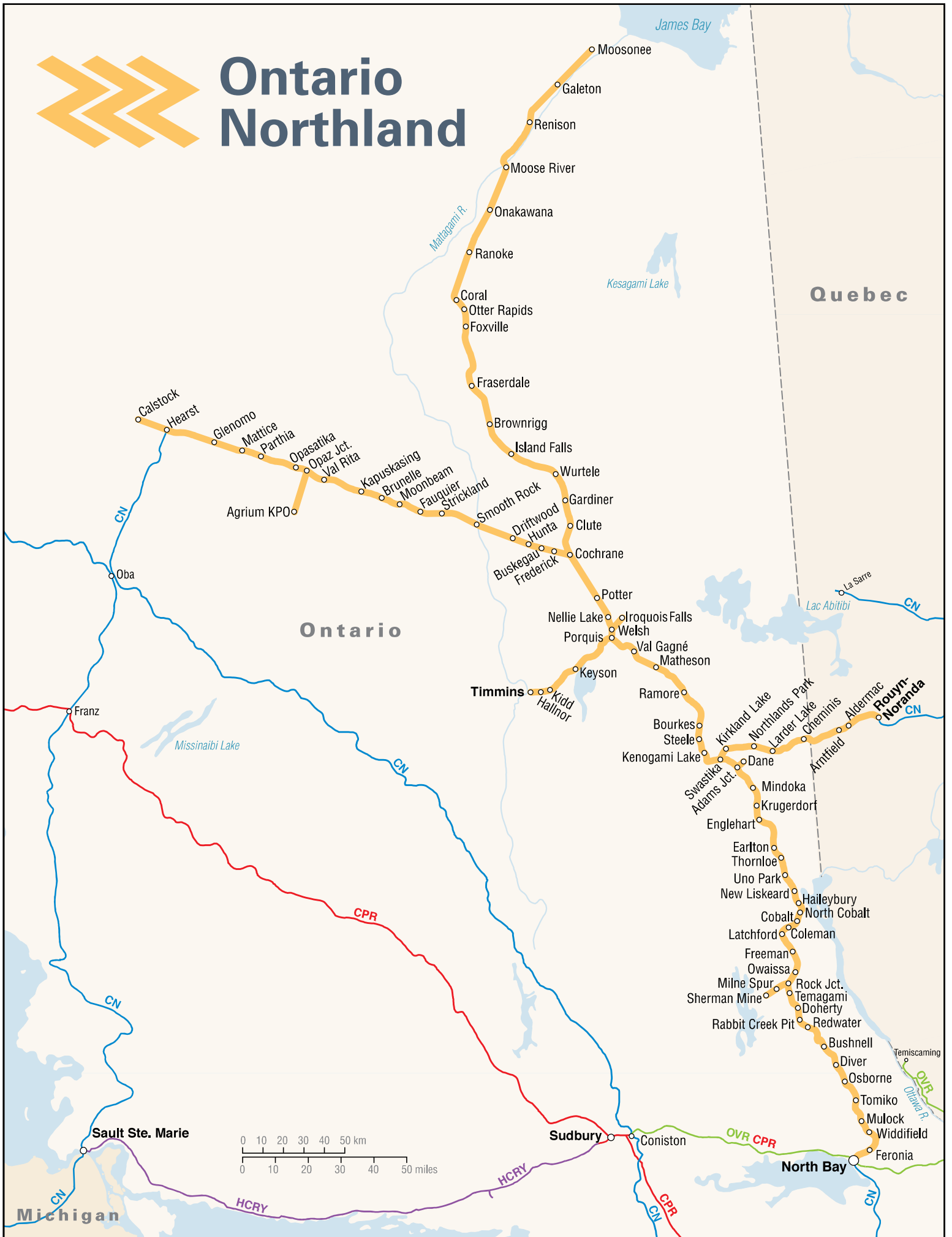
3.5 Operational Procedures and Requirements

The Contractor shall be responsible for complying with the operational procedures and requirements set out in Schedule 3-A-2. The Contractor will also be required to adhere to the requirements set out in the Contractor Handbook. The Contractor Handbook will be issued to the Successful Respondent upon award and reviewed at the project kick-off/orientation.

PART 3 – RFP SPECIFICATIONS
SCHEDULE 3-A-1
ONTC MAP



Ontario Northland



PART 3 – RFP SPECIFICATIONS
SCHEDULE 3-A-2
INDUSTRIAL OPERATIONS FIRE PREVENTION AND PREPAREDNESS PLAN

INDUSTRIAL OPERATIONS FIRE PREVENTION AND PREPAREDNESS PLAN

April 1, 2023 – March 31, 2028

Ontario Northland

This plan has been prepared for submission to the Ministry of Northern Development, Mines, Natural Resources and Forestry (MNDMNR), Aviation, Forest Fire and Emergency Services (AFFES) in accordance with the requirement under section 21 of the Outdoor Fires Regulation.

Company Representative: Paul-Andre Lajeunesse

Updated: April 6., 2023

Table of Contents

1.0 General.....	3
2.0 Fire Prevention Planning	3
3.0 Fire Preparedness.....	8
4.0 Communications.....	10
4.1 Positive Protection.....	10
4.2 Notification and Requests for Information	10
5.0 Annual Fire Prevention and Preparedness Plan Update.....	10
5.1 Annual Operations.....	10
5.2 Wildland Fire Reporting	10
5.3 Company and MNDMNRF Contacts	11
5.4 Contacts for Notification and Requests for Information	14
6.0 Fibre Optic Locations	15
Appendix I – “Notification and Request for Information for a Fire on Railway Property Form” ...	24
Appendix II – MNDMNRF Process for Securing Positive Protection	26
Appendix III – Railway Positive Protection Request Form.....	27

1.0 General

Company: Ontario Northland Transportation Commission

Main focus of operations: Railroad

General location of operations: North Bay to Moosonee with connections to Swastika east to Rouyn-Noranda, Porquis Jct. west to South Porcupine, and Cochrane west to Hearst and Calstock

Operations by risk category:

Risk category	Operations
Very high fire risk	Operations that use heavy machinery equipped with metal parts that may come into contact with rocks or similar material in the course of normal operations and cause sparks.
High fire risk	Hot Work; welding, torch or saw cutting of metal and grinding, operations involving open flame. Thermite welding. Rail production grinding. Switch cross grinding.
Moderate fire risk	
Low fire risk	Surfacing, tie installation, under-cutting, gauging, spiking, gophering

2.0 Fire Prevention Planning

The following measures will be undertaken to ensure compliance with the *Forest Fires Prevention Act*:

- All camps, mines mills and dumps will have the area surrounding the camp, mine, mill and dump cleared of flammable debris for a distance of at least 30 metres.
- All brush, debris, non-merchantable timber and other flammable material resulting from land clearing will be safely disposed of through piling and burning, chipping or other fire safe method.
- Any fire started by the operation will be reported to the MNDMNR without undue delay.
- Staff will be instructed on the rules around smoking during the fire season and the proper disposal of smoking materials.
- All burners, chimneys, engines, incinerators and other spark-emitting outlets will be equipped with an adequate device for arresting sparks.

The following measures will be undertaken to ensure compliance with the *Outdoor Fires Regulation*.

- No fire will be started outdoors unless the conditions will allow the fire to burn safely from start to extinguishment.
- Fires started outdoors will be monitored until extinguished.
- Brush and debris will be burned in accordance with section 2 of Ontario Regulation 207/96 or any issued fire permit.
- Fires burned in an incinerator will comply with section 3 of Ontario Regulation 2017/96.

- Grass and leaf litter will be burned in accordance with section 4 of Ontario Regulation 207/96 or any issued fire permit.
- Burning will cease when fire permits are suspended or during restricted fire zone periods.
- Equipment or machinery being operated for industrial purposes within a forest area will be equipped with a serviceable fire extinguisher rated at least 6A80BC.
- Staff operating chainsaws or brush saws will do so in accordance with section 10 of Ontario Regulation 207/96.
- Staff operating equipment or machinery in a forest area during the fire season will do so in accordance with section 11 of Ontario Regulation 207/96.
- Filled back pack pumps will be carried on or located within 30 metres of every piece of heavy equipment, and whatever else required by Table 1 of the IOP.
- Our operations do not require additional fire suppression equipment.

The following are additional measures that will be undertaken to prevent wildland fires:

Prior to the next day's operation supervisors / employees will:

- Determine the minimum fire suppression equipment needed based on the type of operation they are conducting.
- Determine the fire risk category / operational risk.
- Determine the initial forest fire fuel group that they will be working in.
- Determine "leaf on / leaf off" conditions from Fire Intensity Code Reports.
 - Adjust Fuel Group based on "leaf on / leaf off" and other modifications.
- Determine the closest weather station to the area they will be working in.
- Access the MNDMNR Fire intensity Code Report for the closest weather station for the work location.
 - via the internet @ <https://www.ontario.ca/page/fire-intensity-codes> or;
 - by telephone through the corresponding Fire Management Headquarters responsible for the weather station.
- Determine the fire intensity code for the worksite fuel group they will be working in.
- Determine the work modifications for the next day.
- Modify or mitigate operations as necessary.

Refer to the Field Guide to the Industrial Operations Protocol and Regulation.

Note:

- If the work scheduled for the day will involve several different forest fire fuel groups the highest hazard forest fire fuel group will be utilized.
- If the work for the day will transition across several different weather station areas. The fire intensity codes for the highest reporting weather station will be utilized.

Rail cutting, Welding or Grinding, Thermite Welding: High Fire Risk Category

- A Minimum of 1 filled back pack pump will be located within 3 metres of each individual operation.
- If the fire intensity code for the work site is A, B or C a water delivery system with a minimum of 340 litres of water will be on site.
- Vehicles are equipped with fire extinguishers.

The operations will be considered a **MODERATE FIRE RISK** if in addition to the above the following are in place at the time of the operation.

- Prior to operations the worksite will be soaked with water or a fire suppression foam mixture before the operation begins and after the operation are completed for the day and will kept the worksite in a wet condition during the operation.

- At least one worker will be assigned to monitor the worksite while the operation is being carried out to watch for sparks or other signs that a fire has been ignited and to take immediate action to halt the spread of fire if it is safe to do so.
- At least one worker will be employed to actively patrol the worksite for at least one hour after the operation is completed for the day and extinguish any fires they may find if it is safe to do so.
- Workers engaged in monitoring or patrolling will be equipped with a device capable of immediate two way communication with the local fire management headquarters and ensure that any fires that may occur are immediately reported to the Ministry.
- Workers will put in place non-combustible screens designed and able to catch any and all material capable of producing fire ignition.

Switch Cross Grinding: High Fire Risk Category

- A minimum of 1 filled back pack pump will be located within 3 metres of each individual operation.
- If the fire intensity code for the work site is A, B or C a water delivery system with a minimum of 340 litres of water will be on site.
- Vehicles are equipped with fire extinguishers.

The operations will be considered a **MODERATE FIRE RISK** if in addition to the above the following are in place at the time of the operation.

- Prior to operations the worksite will be soaked with water or a fire suppression foam mixture before the operation begins and after the operation are completed for the day and will kept the worksite in a wet condition during the operation.
- At least one worker will be assigned to monitor the worksite while the operation is being carried out to watch for sparks or other signs that a fire has been ignited and to take immediate action to halt the spread of fire if it is safe to do so.
- At least one worker will be employed to actively patrol the worksite for at least one hour after the operation is completed for the day and extinguish any fires they may find if it is safe to do so.
- Workers engaged in monitoring or patrolling will be equipped with a device capable of immediate two way communication with the local fire management headquarters and ensure that any fires that may occur are immediately reported to the Ministry.
- Workers will put in place non-combustible screens designed and able to catch any and all material capable of producing fire ignition.

Rail Production Grinding: High Fire Risk Category

- A minimum of 4 backpack pumps will be located on site where the production grinder is operating.
- A water delivery system with a minimum of 3,750 litres of water will be on site where the production grinder is operating.
- The production grinding supervisor will notify the administrative Fire Management Headquarters and Regional Prevention Compliance Specialist of its intention to conduct Rail Production Grinding a minimum of 24 hours in advance of the operation taking place. This notification will include;
 - Contact information
 - The hours of operation of the grinding operation.
 - Suppression equipment and manpower resources on hand.
 - Ease of ignition associated with the operation and fire starts during the last operating period.
- At the end of each shift the production grinding supervisor will notify the administrative Fire Management Headquarters and the Regional Fire Prevention Specialist of their;
 - Progress during the last shift

- Any operational concerns that they may have including ease of ignition and fire starts during the last operating period.
- Where they expect to be grinding within the next operational period.

Mechanical Brushing: Very High Fire Risk Category

- A minimum of 1 back pack pump will be located within 30 metres of each machine.

Other:

- Local assigned high rails are equipped with a minimum of back pack pumps, foaming agent, pails, shovels, and a fire extinguisher.

In addition to the suppression equipment requirements above;

- A fuel performance catalyst (FPC) is added to the locomotives fuel year round for the purpose of reducing emissions.
- Ongoing locomotive exhaust screen inspections to be completed prior to and during the fire season each year.

Emergencies Due to Exigent circumstances:

As per section 23(2) of Ontario Regulation 207/96 if operations are immediately necessary to ensure public safety or due to exigent circumstances the and company must complete industrial operations outside the provisions of “Part II, Industrial Operations” the company will;

- Immediately notify the appropriate Fire Management Headquarters of the location and type of work being completed as well as the suppression resources on hand.
- Ensure that a “pumping unit” with a minimum of 800 feet of hose is on site.
 - The amount of hose on site must be sufficient to reach and cover the work area.
- Identify a water source of sufficient quantity or ensure that there is enough water on site to meet the requirements of the work being completed.
- Ensure that a minimum 4 person, trained crew is available on site during operations to wet the work site down or take immediate action should a fire start.
- Ensure that at least one individual with two way communications is available to monitor operations for fire and immediately report the fire without delay.

Note: Depending on the circumstances a Ministry of Northern Development, Mines, Natural Resources and Forestry Fire Officer may request that additional resources or actions be taken to ensure that all wildland fire concerns are addressed.

Definitions of Operational Modifications:

P = Prevention (Normal Operations)

Wildfire prevention is a part of normal operations and at a minimum, the requirements identified in the *Forest Fires Prevention Act* and Outdoor Fires Regulation must be followed. These should be identified in the operation’s fire plan if one is required.

SS = Short Shift

Operations are **not** permitted between 1200 and 1900 hrs local daylight savings time. Prevention measures still apply and a dedicated patrol* of the area must be carried out for one hour after operations shut down. Workers conducting the dedicated patrol must immediately report fires that are detected.

RS = Restricted Shift

Operations are **not** permitted between 0800 and 2200 hrs local daylight savings time. Prevention measures still apply and a dedicated patrol* of the area must be carried out for one hour after operations shut down. Workers conducting the dedicated patrol must immediately

report fires that are detected. Water sources close to operations should be identified prior to commencing any operations.

SD = Shutdown

Operations are **not** permitted starting at 0600 hrs local daylight savings time on the first day of shutdown. Operations will remain suspended until conditions change and Prevention, Short Shift or Restricted Shift is indicated. Prevention measures still apply and a dedicated patrol* of the area must be carried out for one hour after operations cease. Workers conducting the dedicated patrol must immediately report fires that are detected. Once this initial patrol is complete, lower risk operations working in the vicinity can offer dedicated fire patrols during the shutdown period.

*Personnel assigned to patrol a worksite are expected to move as much as required to continually assess the entire worksite for fires. If a fire is discovered, they are required to first notify MNDMNR of the fire and its location and then, if it is safe to do so, try to extinguish the fire.

For the purposes of this plan Railway Subdivisions will be aligned with the following MNDMNR

Fire Weather Stations:

On an annual basis the weather stations and subdivision alignment will be reviewed with MNDMNR to ensure they are correct.

Subdivision	Mileage Range	Station	Station Full Name	Fire Management Headquarters
Temagami Sub	0 - 35	TRM	Trout Mills	North Bay
	35 - 78	MTN	Marten River	North Bay
	78 - 134	LOO	Loon Lake	North Bay
	134 – end of sub	KLK	Kirkland Lake	Timmins
Kirkland Lake Sub	0 - 33	KLK	Kirkland Lake	Timmins
Ramore Sub	0 - 51	KLK	Kirkland Lake	Timmins
	51 - 79	ABL	Abitibi Lake	Timmins
	79 – end of sub	TIM	Timmins	Timmins
Iroquois Falls Sub	0 - 2	TIM	Timmins	Timmins
	2 – end of sub	COC	Cochrane	Cochrane
Devonshire Sub	0 – 2	TIM	Timmins	Timmins
	2 – end of sub	COC	Cochrane	Cochrane
Kapuskaing Sub	0 - 25	COC	Cochrane	Cochrane
	25 - 47	OKE	Oke	Cochrane
	47 - 101	KAP	Kapuskaing	Cochrane
	101 – end of sub	HEA	Hearst	Cochrane
Kapuskaing Sub - AGR	0 - 11	KAP	Kapuskaing	Cochrane
	11 – end of sub	RUF	Rufus Lake	Cochrane
Island Falls Sub	0 - 22	COC	Cochrane	Cochrane
	22 - 75	ILF	Island Falls	Cochrane
	75 - 121	SMO	Smokey Falls	Cochrane
	121 - 187	STG	Stringer Lake	Cochrane

3.0 Fire Preparedness

Our operations are to be considered trained and capable.

80% of our field staff are trained and proficient to the pertinent fire suppression level.

Training is delivered by in house trainers.

In addition to the backpack bumps and equipment caches identified in section 2.0 we have the following equipment available for fire suppression:

ONTC LOCATION OF FIRE FIGHTING EQUIPMENT – 2023

LOCATIONS	<i>Shovels</i>	<i>Pails</i>	<i>Crew Cab Hi-Rail</i>	<i>Back Pack Pumps</i>	<i>Foaming Agents</i>	<i>200 Gallons of Water</i>	<i>Spark Shields</i>	<i>Boom Truck Hi-Rail (with 200 gallons of water)</i>	<i>100' Hose</i>	<i>Honda Pump</i>	<i>Wajax Pump (with 800' Hose)</i>
North Bay North Section	X	X	X	X	X		X				
Temagami Section	X	X	X	X	X	X	X		X		
Temagami MP 72											X
Rouyn Section	X	X	X	X	X		X				
Rouyn MP 60											X
Englehart Section	X	X	X	X	X	Boom Truck	X	X	Boom Truck	Boom Truck	
Englehart MP 0											X
Matheson Section	X	X	X	X	X		X				
Porquis Section	X	X	X	X	X		X				
Cochrane Section	X	X	X	X	X	Boom Truck	X	X	Boom Truck	Boom Truck	
Cochrane MP 0											X
Otter Rapids Section	X	X	X	X	X		X				
Otter Rapids MP 93.5											X
Moose River Section	X	X	X	X	X		X				
Moosonee Section	X	X	X	X	X		X				
Kapuskasing Section	X	X	X	X	X		X				
Hearst Section	X	X	X	X	X		X				
2- Welding Trucks	X	X	X	X	X		X				
Gang #94	X	X		X	X		X		X	X	

This equipment will be checked for serviceability on a yearly basis and maintained in serviceable condition throughout the fire season.

The wildland fire hazard will be monitored on a daily basis by accessing forecasted weather conditions, fire indices and the fire intensity codes. Intensity codes representing the operational area will be determined and modification/mitigation will be made as required by the Outdoor Fires Regulation 207/96.

4.0 Communications

The process for field operations to communicate with MNDMNRF staff will be through the RTC's office by radio or telephone. The RTC will contact MNDMNRF. The process for MNDMNRF to contact field operations will be by calling the RTC's office and they will relay the message by radio.

The company will ensure that all employees working in field operations will be aware of the standard fire prevention measures as well as the fire hazard and specific fire prevention processes that may entail. The company will do this by emailing and faxing the information to the locations in the field before the end of the previous business day.

4.1 Positive Protection

When a fire occurs on a railway line works, the Ministry of Northern Development, Mines, Natural Resources and Forestry will request positive protection from the railway following the MNDMNRF Process for Securing Positive Protection along Railway Rights-of-Way which can be found in Appendix I.

To secure positive protection along the right-of-way, the Ministry of Northern Development, Mines, Natural Resources and Forestry Sector Response Officer must contact the RTC office by telephone 705-544-2292 ext. 141.

4.2 Notification and Requests for Information

When a fire occurs on a railway line works the Ministry of Northern Development, Mines, Natural Resources and Forestry will notify the railway of the occurrence using the "**Notification and Request for Information for a Fire on Railway Property**" form found in Appendix II.

5.0 Annual Fire Prevention and Preparedness Plan Update

5.1 Annual Operations

This update applies to the 2023 fire season for **Ontario Northland**

The following shows the operations being undertaken by area this season.

<u>TASK AND LOCATION</u>	<u>TIMEFRAME</u>	<u>Weather Station Code(s)</u>
Temagami Subdivision		
<ul style="list-style-type: none"> • Install 0.36 miles of new 80' bolted rail at the following locations <ul style="list-style-type: none"> ○ Miles 46.6 – 46.96 	May	MTN
<ul style="list-style-type: none"> • Install approximately 12,500 ties between Miles 0 – 25 	May – June	TRM
<ul style="list-style-type: none"> • Complete required tie change outs in switches / sidings as required 		
<ul style="list-style-type: none"> • Anchoring various locations 		
<ul style="list-style-type: none"> • Crop and pull to remove battered joints – various locations 		
<ul style="list-style-type: none"> • Gauging as required 		
<ul style="list-style-type: none"> • Distribute rock from Rabbit Creek Pit to various locations for surfacing 		

<u>TASK AND LOCATION</u>	<u>TIMEFRAME</u>	<u>Weather Station Code</u>
Ramore Subdivision		
<ul style="list-style-type: none"> • Install 4.7 miles of new CWR and 80' bolted rail at the following locations <ul style="list-style-type: none"> ○ Miles 26.1 – 29.7 ○ Miles 58.3 – 58.4 ○ Miles 64.8 – 65.3 ○ Miles 93.1 – 93.3 ○ Miles 99.7 - 100 	June – July	KLK ABL TIM
<ul style="list-style-type: none"> • Install approximately 5,000 ties between Miles 16 – 26 	June - July	KLK
<ul style="list-style-type: none"> • Anchoring various locations 		
<ul style="list-style-type: none"> • Crop and pull to remove battered joints – various locations 		
<ul style="list-style-type: none"> • Gauging as required 		
<ul style="list-style-type: none"> • Distribute rock from Jardine Pit to various locations for surfacing 		

<u>TASK AND LOCATION</u>	<u>TIMEFRAME</u>	<u>Weather Station Code</u>
Kirkland Lake Subdivision		
<ul style="list-style-type: none"> • Install 5.4 miles of new CWR at the following locations <ul style="list-style-type: none"> ○ Miles 23.7 – 24.9 ○ Miles 40 – 44.2 	July - August	KLK
<ul style="list-style-type: none"> • Anchoring various locations 		
<ul style="list-style-type: none"> • Crop and Pull to remove battered joints – various locations 		
<ul style="list-style-type: none"> • Gauging as required 		
<ul style="list-style-type: none"> • Distribute rock from Jardine Pit to various locations for surfacing 		
Devonshire Subdivision		
<ul style="list-style-type: none"> • Install approximately 6,500 ties between Mile 0 - 13 	July – August	TIM COC
<ul style="list-style-type: none"> • Complete required tie change outs in switches / sidings as required 		
<ul style="list-style-type: none"> • Distribute rock from Potter Pit to various locations for surfacing 		

<u>TASK AND LOCATION</u>	<u>TIMEFRAME</u>	<u>Weather Station Code</u>
Kapuskasing Subdivision		
<ul style="list-style-type: none"> • Install 7 miles of relay rail between Miles 26.9 - 34 	September - October	COC OKE
<ul style="list-style-type: none"> • Install approximately 14,500 ties between Mile 27 – 56 	September - October	OKE KAP
<ul style="list-style-type: none"> • Complete required tie change outs in switches / sidings as required 		
<ul style="list-style-type: none"> • Joint maintenance at various locations 		
<ul style="list-style-type: none"> • Anchoring various locations 		
<ul style="list-style-type: none"> • Crop and pull to remove battered joints – various locations 		
<ul style="list-style-type: none"> • Gauging as required 		
<ul style="list-style-type: none"> • Distribute rock from Val Rita Pit to various locations for surfacing 		

<u>TASK AND LOCATION</u>	<u>TIMEFRAME</u>	<u>Weather Station Code</u>
Island Falls Subdivision		
<ul style="list-style-type: none"> • Install approximately 13,500 ties between Miles 27 – 54 	September – October	ILF
<ul style="list-style-type: none"> • Install approximately 17,000 ties between Miles 105 – 132 	September – October	SMO STG
<ul style="list-style-type: none"> • Complete required tie change outs in switches / sidings as required 		
<ul style="list-style-type: none"> • Anchoring various locations 		
<ul style="list-style-type: none"> • Crop and pull to remove battered joints – various locations 		
<ul style="list-style-type: none"> • Gauging as required 		
<ul style="list-style-type: none"> • Distribute rock from Coral Pit to various locations for surfacing 		

5.2 Wildland Fire Reporting

Ontario Northland is responsible for the suppression of wildland fires originating from company operations if it is safe to do so. All fires will be reported immediately to the local fire service using the appropriate MNDMNRF Wildland Fire Reporting number.

Northwest Region – 310-Fire (3473) or (807) 937-5261 (Fire Reporting only)

Northeast Region – 310-Fire (3473) or (705) 564-0289 (Fire Reporting only)

Southern Region – local municipal fire department (911) or MNDMNRF at (705) 564-0289

5.3 Company and MNDMNR Contact

Provincial Fire Contact	
Prevention & Prescribed Burning Coordinator	<p>Mike Pistilli Address: 922 Scott St, Fort Frances, ON, P9A 1J4 Phone Number: Mobile: 807-275-6767</p>
Fire Prevention & Education Program Advisor	<p>Name: Hillary Winstanley Address: 300 Water Street, 1st Floor-South Tower, Peterborough, ON, K9J 3C7 Phone Number: 705-313-0779</p>
Prevention and Compliance Team Lead	<p>Name: Lori Skitt Address: PO Box 850, 95 Ghost Lake Rd. Dryden , ON P8N 2Z5 Phone Number: 807 937-7410, Mobile: 807-323-1279</p>
NER Regional Fire Contact	
NER Fire Prevention & Compliance Specialist	<p>Name: Jeremy Verdiel Address: 6150 Skyline Drive, Garson, ON, P3L 1W3 Phone Number: 705-564-5389, Mobile: 705-561-6348</p>
NER Fire Intelligence Specialist	<p>Name: Lyle Lacarte/Bill Robinson Address: 6150 Skyline Drive, Garson, ON, P3L 1W3 Phone Number: 705-564-6011/6025 Intel Desk during fire season: 705-564-6075</p>
NER Duty Officer	<p>Dan Leonard/Mike Jackson Address: 6150 Skyline Drive, Garson, ON, P3L 1W3 Phone Number: 705-564-6049/6012 Duty Desk During Fire Season: 705-564-6076</p>
NWR Regional Fire Contact	
NWR Fire Prevention & Compliance Specialist	<p>Paul Chandler Address: PO Box 850, 95 Ghost Lake Rd. Dryden , ON P8N 2Z5 Phone Number: 807 937-7257, Mobile: 807-220-1878</p>
NWR Fire Intelligence Specialist	<p>Barry Graham/Kendra Saville Address: PO Box 850, Ghost Lake Rd. Dryden , ON P8N 2Z5 Phone Number: 807 937-7314/7407 Intel Desk during fire season: 807-937-7219</p>
NWR Duty Officer	<p>Rick Payne/Chris Sakamoto Address: PO Box 850, Ghost Lake Rd. Dryden , ON P8N 2Z5 Phone Number: 807 937-7212/7239 Duty Desk During Fire Season: 807-937-7240</p>

Subdivision and Mileage	MNR Contact Fire Management Supervisor	MNR Contact Sector Response Officer
Temagami Sub Mi 0.0 - 118.3	Name: James Zacher Address: 40 Voodoo Cresent North Bay, ON P1C 0B7 Office: 705-475-5536	Location: North Bay SRO Phone Number: 705-475-5623 <u>Fire Intensity Codes:</u> Phone Number: 705-475-5609 Toll Free: 866-619-5079
Temagami Sub Mi 118.3 - 138.2 Ramore Sub Mi 0.0 - 77.0 Ramore Sub Mi 94.0 - 113.0 Kirkland Lake Sub Mi 0.0 - 33.0	Name: Joel Legasy Address: Ontario Government Complex, Hwy. 101 East, P.O. Bag 3090 South Porcupine, ON P0N 1H0 Office: 705-235-1368	Location: Timmins SRO Phone Number: 705-235-1306 <u>Fire Intensity Codes:</u> Phone Number: 705-235-1374 -
Ramore Sub Mi 77.0 - 94.0 Iroquios Fall Sub Mi 0.0. - 6.0 Devonshire Sub Mi 0.0. - 27.0 Kapusking Sub Mi 0.0. - 128.0 AGR Mi 0.0 - 17 Island Falls Sub 0.0 - 187.0	Name: Richard Perin Address: 3-2 Hwy 11 south, Cochrane, ON P0L 1C0 Office: 705-272-7141	Location: Cochrane SRO Phone Number: 705-272-7135 <u>Fire Intensity Codes:</u> Cochrane - Phone Number: 705-272-7148 Hearst - Phone Number: 705-362-4346 - -

The following lists the **Ontario Northland** contacts:

Name	Position	Location	Phone number
*Railway Traffic Controller		Englehart	1-800-558-4129 (24 hours per day) rtc@ontarionorthland.ca and mrtc@ontarionorthland.ca
Paul-Andre Lajeunesse	Director Infrastructure	Englehart	Office: (705) 472-4500 ext. 124 Cell: (705) 499-7386 Fax: (705) 475-5033 Paul-Andre.Lajeunesse@ontarionorthland.ca
Jeremy Girard	Superintendent Maintenance of Way	Cochrane	Office: (705) 472-4500 ext. 616 Cell: (705) 347-0058 Fax: (705) 272-4802 jeremy.girard@ontarionorthland.ca
Chad Martin	District #1 Manager	Temagami Sub Ramore Sub Kirkland Lake Sub Iroquois Falls Sub Devonshire Sub	Office: (705) 544-2292 ext. 125 Cell: (705) 545-0725 Fax: (705) 544-2297 chad.martin@ontarionorthland.ca
Justin Delarosbel	Track Patrol	Mile 0.0 - 120.52 (Temagami Sub)	Cell: (705) 544-3125 Fax: (705) 472-1890 justin.delarosbel@ontarionorthland.ca
Tyler Chartrand	Track Patrol	Mile 120.52 - 138.5 (Temagami Sub) Mile 0.0 - 26.0 (Ramore Sub) Mile 0.0 - 60.04 (Kirkland Lake Sub)	Office: (705) 544-2292 ext. 122 Cell: (705) 303-7146 Fax: (705) 544-2297 tyler.chartrand@ontarionorthland.ca
Shawn Giroux	Track Patrol	Mile 26.0 – 116.0 (Ramore Sub) Mile 0.0 - 27.18 (Devonshire Sub) Mile 0.0 - 6.41 (Iroquois Falls Sub)	Cell: (249) 313-0189 Fax: (705) 272-4802 shawn.giroux@ontarionorthland.ca
David Lallier	District #2 Manager	Kapuskasing Sub Agrium Sub Pagwa Sub Island Falls Sub	Office: (705) 472-4500 ext. 632 Fax: (705) 272-4802 dave.lallier@ontarionorthland.ca
Pat Duguay	Track Patrol	Mile 42.1 – 129.1 (Kapuskasing Sub) Mile 0.0 - 17.9 (Agrium Sub) Mile 0.0 – 24.0 (Pagwa Spur)	Cell: (705) 272-9445 Fax: (705) 272-4802 patrice.duguay@ontarionorthland.ca
Richard Ferguson	Track Patrol	Mile 27.18 - 28.05 (Devonshire Sub) Mile 0.4 - 42.1 (Kapuskasing Sub) Mile 0.0 - 70.69 (Island Falls Sub)	Cell: (705) 367-6362 Fax: (705) 272-4802 richard.ferguson@ontarionorthland.ca
William Solomon	Track Patrol	Mile 70.69 - 186.2 (Island Falls Sub)	Cell: (705) 336-8412 Fax: (705) 336-2089 william.solomon@ontarionorthland.ca

* Designates the main emergency contact in the company for AFFES.

5.4 Contacts for Notification and Request for Information for a Fire on Railway Property

Ontario Northland requests that the “Notification and Request for Information for a Fire on Railway Property” forms be emailed to the following individuals:

Name	Phone Number	E-mail Address
Rail Traffic Controller	705-544-2292 ext.141	rtc@ontarionorthland.ca
Jeremy Girard	705-347-0058	jeremy.girard@ontarionorthland.ca
Wendy Middaugh	705-544-2292 ext.134	wendy.middaugh@ontarionorthland.ca and mrtc@ontarionorthland.ca

Information requested by the Ministry of Northern Development, Mines, Natural Resources and Forestry will be provided by Jeremy Girard, Superintendent Maintenance of Way to the Ministry of Northern Development, Mines, Natural Resources and Forestry contact identified on the form.

6.0 Fibre Optic Cable Locations

TEMAGAMI SUBDIVISION

Buried Beside Track		
From Mile	To Mile	Track Side
3.06	3.37	West
3.37	46.05	East
46.05	69.9	West
69.9	110.5	East
110.5	112.43	West
112.43	112.65	Both
113.41	113.5	Both
113.5	138.23	Both

RAMORE SUBDIVISION

Buried Beside Track		
From Mile	To Mile	Track Side
0.6 (No 5 track North Yard)	1.88	Both
1.88	25.9	Both
26.33	112.36	Both
112.36	116.0 (end of rail)	Both

KIRKLAND LAKE SUBDIVISION

Buried Beside Track			Aerial	
From Mile	To Mile	Track Side	From Mile	To Mile
North Leg of Wye Switch Swastika	5.19	West		
0.3	5.42	East	5.42	6.31
6.31	10.8	East	10.8	10.9
10.9	35.55	East	35.55	36.05
36.05	56.3	East	56.3	56.35
56.35	57.75	East		

IROQUOIS FALLS SUBDIVISION

Buried Beside Track		
From Mile	To Mile	Track Side
0.08	5.65	West

DEVONSHIRE SUBDIVISION

Buried Beside Track		
From Mile	To Mile	Track Side
Tool house Porquis	0.78	1 on West (between mainline and No1 Track)
End Ramp Porquis	0.78	2 on East (beside Devonshire Sub siding and Town siding)
0.78	5.05	1 on West
0.78	5.05	1 on East
5.05	28.2	1 only West
Note: At Cochrane follows No 5 Track, Ice House Track and Shed Track and crosses under 4 tracks north of the station through a duct.		

ISLAND FALLS SUBDIVISION

Buried Beside Track		
From Mile	To Mile	Track Side
0.30	0.31	East
0.64	31.5	East
31.5	93.11	West
93.11	94.5	East
94.5	124.0	West
124.0	186.04	East

KAPUSKASING SUBDIVISION

Buried Beside Track		
From Mile	To Mile	Track Side
0.4	27.68	East
27.68	67.98	West
67.98	69.46	East
70.5	126.59	West
126.59	128.3	East

The following changes should be considered as amendments to the fire prevention and preparedness plan:

- Production Grinding and Mechanical Brushing information has been updated
- MNDMNRF and ONTC Contacts have been updated as indicated throughout Plan
- Annual Operations 2022 have been updated to 2023's Annual Operations
- Location of Fire Suppression / Prevention Equipment 2022 has been updated to be 2023's Location of Fire Suppression / Prevention Equipment
- Process for Securing Positive Protection along Railway Right of Way is in place as shown in the Appendices
- Notification and Request for Information for Fire on Railway Property is in place as shown in the Appendices

APPENDICES

Appendix I

Notification and Request for Information for Fire on Railway Property Form

1. Fire Information

MNDMNRF District: MNDMNRF Fire Number:
Railway Company: Subdivision: Mileage:
Date and Time Fire Reported to MNDMNRF:
Detected by:

2. Notification

This is to advise you that the Ministry of Northern Development, Mines, Natural Resources and Forestry is taking action to suppress a fire which occurred along the railway right-of-way. The information is as follows:

Fire Burning on: North South West East Side of track

Present Fire Condition: Not Under Control Present Fire Size: ha

Out Date (if known): Final Size (if known): ha

MNDMNRF Resources Used: Yes No Railway Resources Used: Yes No

Personnel: Personnel:
Equipment: Equipment:
Aircraft: Other:
Other:

General Comments/ Recommendations:

3. Information Request

To aid in our investigation of a fire which occurred along the railway right-of-way, please provide the following information to the MNDMNRF Official identified below:

- 1) Identification number of the last 3 trains that passed the above mileage before the fire was reported.
- 2) Direction of travel of each train
- 3) Identification of the locomotive(s) operating under power in each train

Train ID Number	Time	Locomotive(s) under power	Dir. of travel	Video (saved/retained)
_____	_____	_____	_____	<input type="checkbox"/> Y <input type="checkbox"/> N
_____	_____	_____	_____	<input type="checkbox"/> Y <input type="checkbox"/> N
_____	_____	_____	_____	<input type="checkbox"/> Y <input type="checkbox"/> N

4) Identification number of the first train to pass the above mileage **after** the fire was reported.

Train ID Number	Time	Locomotive(s) under power	Dir. of travel	Video (saved/retained)
_____	_____	_____	_____	<input type="checkbox"/> Y <input type="checkbox"/> N

Name of Railway Company Official:

Title:
 Email:
 P.O. Box or Street Address:
 City: _____, ON
 Postal Code:
 Telephone Number:

Completed information request should be directed to:

Name of MNDMNR Official:

Title:
 Email:
 P.O. Box or Street Address:
 City: _____, ON
 Postal Code:
 Telephone Number:

Date and Time:

cc. chelsea.osesky@ontario.ca, jeremy.verdiel@ontario.ca and paul.chandler@ontario.ca

Appendix II

Ministry of Northern Development, Mines, Natural Resources and Forestry (MNDMNRFF) Process for Securing Positive Protection along Railway Rights of Way

In order to provide direction to MNDMNRFF staff and ensure a consistent approach to engaging in fire suppression activities along railway rights of ways, the following process will be followed by MNDMNRFF staff.

Upon the report and confirmation of a fire along a railway right of way the MNDMNRFF Sector Response Officer (SRO) for the Sector responsible for the fire will;

- 1) Confirm the location of the fire with the MNDMNRFF Incident Commander.
- 2) Contact the railway (RTC / Railway contact) as per the direction provided in the Railway Fire Prevention and Preparedness Plans.
- 3) Advise of a fire on the right of way, location and condition.
- 4) Verbally request Positive Protection.
- 5) Request that (RTC / Railway contact) contact the SRO directly when a TOP / OCS Authority has been issued and be provided with the following information:
 - a. Permit / Authority Reference #;
 - b. Foreman (Permit / Authority Holder) Name;
 - c. Foreman Contact Phone #;
 - d. Location where positive protection has been put in place;
- 6) The SRO will also request that the Foreman (Permit / Authority holder) contact him / her directly to confirm that;
 - a. Positive Protection is in place
 - b. Positive protection is in the correct location.
- 7) Once Positive Protection has been confirmed with the Foreman (Permit / Authority holder) the Sector Response Officer will;
 - a. Contact the Incident Commander (MNDMNRFF) onsite.
 - b. Advise that positive protection is in place and location.
 - c. Provide the Incident Commander the contact information for the Foreman (Permit / Authority holder).
- 8) The SRO will document the request on the MNDMNRFF "Positive Protection Request form".
- 9) MNDMNRFF (Sector Response Officer / Incident Commander) will notify the Foreman (Permit / Authority holder) when positive protection is no longer required.

Note:

1. Until such time that the Sector Response Officer (MNDMNRFF) has confirmation from the Foreman (Permit / Authority holder) that positive protection is in place, MNDMNRFF Fire Personnel will remain a distance of 15 metres (50 ft.) back from the edge of the ties along the rail line. This includes the landing of a helicopter on railway tracks or rights of ways.
2. During this time water bombing / bucketing operations may take place on the ROW, if deemed necessary and safe to do so by the Air Attack Officer or Pilot in Command as per MNDMNRFF guidelines.
3. MNDMNRFF Staff will abide by standard railway safety procedures and maintain situational awareness even when positive protection is in place.
4. Once the Foreman (authority / permit holder) is on site and has been in contact with the Incident Commander and it is determined safe to do so, trains may be able to access the working area under the protection of the Foreman (authority / permit) holder.

Appendix III

Railway Positive Protection Request Form

Railway Company Name: _____ Fire #: _____

Railway Contact # (RTC – CP Police): _____

Positive Protection Request (Time / Date): _____

Location of Positive Protection Request (Sub / Mile): _____

TOP / OCS (Permit / Authority) reference #: _____

Foreman Name: _____ **Contact #:** _____

Location of TOP / OCS in place: From Mile: _____ **to Mile:** _____

Subdivision: _____

Confirmed with Foreman TOP/OCS in place & location (Time / Date): _____

Incident Commander (IC) Name: _____

Confirmation with I.C. that Positive Protection in place (Time / Date) _____

Request for Positive Protection removal by (MNDMNRF) name: _____

Cancellation (Date /Time / Foreman): _____

Personnel must remain clear of the tracks a distance of 15 meter (50 feet) from the edge of the railway ties until the Sector Response Officer receives confirmation from the Foreman that Positive Protection (TOP / OCS) has been issued and in place. This includes the landing of a helicopter on railway tracks or rights of way.

Steps for SROs to follow:

- 1) Verbally notify the designated railway company contact as per fire plan (RTC / CP Police) of the location, track mileage, and condition of the fire occurrence and request Positive Protection.
 - 2) Verbally request to be contacted by (RTC / CP Police) when TOP / OCS Authority has been issued to get Authority #, Foreman name and contact info and where positive protection will be in place.
 - 3) Verbally request that the Foreman issued the (Permit / Authority) contact you directly.
 - 4) **“SRO’s must communicate directly with the Foreman who holds the permit / authority and confirm that Positive Protection is in place and confirm location.”**
 - 5) Once confirmed by the foreman, contact the Incident Commander, advise that positive protection is in place and where, and provide IC with Foreman contact information.
 - 6) Only after Positive Protection is confirmed with the Foreman can crews work closer to the tracks. (Standard rail safety measures must be adhered to by all personnel.)
- Positive Protection Request Form(s) should be completed as required and appended to the Notification of Fires on Railway Rights of Way when submitted to railway.

- When no longer required a request to the foreman should be made to remove positive protection and documented on request form.

Terms and Definitions

Positive Protection: A term used by the railway industry to identify that protection is in place for track work or a track condition. Positive protection is provided by a Foreman who has been issued a TOP/OCS Clearance for a specific area of the track and who, once issued a TOP / OSC has complete control of that section of track.

Track Occupancy Permit (TOP) / Occupancy Control System Clearance (OCS) is issued by the RTC to an employee of the railway qualified under the Canadian Rail Operation Rules to hold such authority. The authority ensures the limits and tracks identified in the permit are positively protected from allowing train movements to enter the affected limits. In certain circumstances train movements may be allowed into the affected limits ONLY under the direction of the foreman named in the permit. TOP / OSC authority numbers will end with the initial of the RTC who issued the authority.

Occupancy Control System (OCS) is a method of control used to move train traffic over a territory. OCS territory uses clearances (permission) issued by the RTC to trains and foreman (usually between whole miles) to allow occupancy of a section of track. Unlike CTC which uses signals.

Centralized Traffic Control System (CTC) is a method of control used to move train traffic by the use signal indication and routing. CTC uses signal blocking by ways of a TOP issued by the RTC to protect track work and track machines. Signal indication is the authority required by train into a control block. TOP's are issued mostly between controlled block signals.

Permit/Authority Holder (Foreman) – is an individual who works for a railway company and who has/given authority over a specific section or area of a rail line through the issuance of a TOP or OCS. The occupancy holder should be onsite and is a supervisor or foreman.

RTC: Rail Traffic Controller.

Controlled Block Signal is a signal capable of displaying stop indication.

**PART 3 – RFP SPECIFICATIONS
 SCHEDULE 3-A-3
 TRAIN SERVICE PLAN**

Train Service Plan

**Effective on or about
 Apr 30th, 2023**

revision to 214 ord time - 313/514 - 419 ord time

Northward Direction

Southward Direction

No 451 SMTWTFS		Toronto (Mac Yard)		No 450 SMTWTFS
?	Dpt	Toronto (Mac Yard)	Arr	?
11:30	Arr	North Bay	Dpt	21:00

No 113 --TWTF--		North Bay		No 214 --TWTF--
13:00	Dpt	North Bay	Arr	11:30
17:00	Arr	Englehart	Dpt	07:00
			Ord	06:30

No 211 SMTWTF-		No 213 -M-W-F-		No 207 S-T-T--		No 308 S-T-T--		No 414 -M-W-F-		No 512 SMTWTF-
13:00		12:30		04:30	Ord	14:00		21:30		22:30
13:30		13:00		05:00	Dpt					
					Arr					
16:30				08:30	Arr	10:30				19:30
					Arr			17:30		
		16:45			Arr					

No 313 S-T-T--		Cochrane		No 514 -M-W-F-
13:00	Ord	Cochrane	Arr	12:00
13:30	Dpt			
		Kapuskasing	Dpt	09:00
16:30	Arr		Arr	08:30
17:00	Dpt			
		Hearst	Dpt	06:30
19:00	Arr		Ord	06:00

not to be ordered before 0600

Polar Bear Express

June 25, 2023 to Oct 20, 2023
 Oct 17, 2022 to June 23, 2023

Freight

No 419 -M-W-F-	No 423 SMT-TF-	No 421 -MT-TF-
00:01	08:00	08:00
00:30	09:00	09:00
05:30	14:00	14:00

	Cochrane	
Ord		Arr
Dpt		Dpt
Arr	Moosonee	Ord

Polar Bear Express

Oct 17, 2022 to June 23, 2023
 June 25, 2023 to Oct 20, 2023

Freight

No 622 -MT-TF-	No 624 SMT-TF-	No 620 -M-W-F-
22:00	22:00	23:30
17:00	17:00	18:30
16:15	16:15	18:00

PART 3 – RFP SPECIFICATIONS
SCHEDULE 3-A-4
SECTIONS OF ONTC’S MANUAL OF TRACK REQUIREMENTS (MTR)

SUB-PART C. TRACK GEOMETRY

1. Scope

- a) The following prescribes the requirements for the gauge, alignment, and surface of track and the elevation of the outer rails and speed limitations for curved track.

2. Gauge

- a) Gauge is measured between the heads of the rails at right angles to the rails in a plane 5/8" (16 mm) below the top of the rail head.
- b) Standard gauge is 56 1/2" (1,435 mm).
- c) Gauge must be within the limits prescribed in the following table:

Class of track	The gauge must be at least (inches and millimeters)	But not more than (inches and millimeters)
Excepted track	N/A	58 1/4" (1,480 mm)
1	55 3/4" (1,416 mm)	58" (1,473 mm)
2	55 3/4" (1,416 mm)	57 3/4" (1,467 mm)
3	56" (1,422 mm)	57 3/4" (1,467 mm)
4 and 5	56" (1,422 mm)	57 1/2" (1,461 mm)
Yard Track Category 1 & Category 2	56" (1,422 mm)	57 3/4" (1,467 mm)
Yard Track Category 3 & Category 4	55 3/4" (1,416 mm)	58" (1,473 mm)

Figure SUB-PART C – 1 – Gauge (inches and millimeters)

3. Variation in Gauge

- a) When the gauge is less than 56 inches (1,422 mm) and the change in gauge over a distance of 20 feet (6,096 mm) or less on either side of the defective location exceeds 1 1/2 inches (38 mm), train speed must be reduced according to Class 1 track speed.

4. Gauge Rods

- a) Do not use gauge rods as a permanent replacement for ties to correct a gauge problem on main track and main track sidings,
- b) In yards and spurs, gauge rods may be used to assist in maintaining gauge in areas where additional strength is needed (for example, in yard turnouts and in areas of high curvature or wye tracks) but must not be used in lieu of ties,
- c) Gauge rods may be used as a temporary repair on main track and main track sidings when it is impractical to perform a proper repair,
- d) In such cases, 16 inches (406 mm) of the gauge rod will be painted in the center of the track and be highly visible. For gauge rods that are applied on main track, the location and number used are to be recorded on the "Temporary Gauge Rod Report" form, which is to be kept up to date. The date the gauge rods are removed will be recorded on the same form.
- e) The Track Inspector should also record the GPS location of gauge rods whenever possible,
- f) Temporary gauge rods are to be removed as quickly as practical, but in no case shall remain in the Main track for more than one year,
- g) Locations where temporary gauge rods are installed on main track, shall be inspected on foot quarterly.

5. Geometry Standards

- a) All track must meet or exceed the track geometry standards defined in the Canadian Railway Track Safety Rules, for all track in Canada.
- b) Track geometry standards are defined for five classes of track based upon maximum operating speeds for freight trains and passenger trains.
 - i. [Figure Sub-Part A-1](#) in [Part II – 1 – Classes of Track: Operating Speed Limits](#)
- c) The requirements specify limits of certain track conditions existing in isolation. A combination of track conditions, none of which individually amounts to a deviation from the requirements in these standards, may require remedial action to provide for safe operations over the track.
- d) Track geometry can be measured by track geometry vehicles or by hand measurement. When unloaded track is measured to determine compliance, the amount of any rail movement that occurs while the track is loaded must be added to the measurements taken.
 - i. Should any of the following symptoms occur in the track, assume rail movement will occur;
 - Hanging ties
 - Excess adzing
 - Tie plates nose-diving towards the field side
 - Loose or missing bolts
 - High, missing, bent or throat cut spikes
 - Batter or bent rail ends
 - Engine burns
 - Corrugated rail
 - Worn or missing tie plate shoulder, ice built up in plates
 - High water and clogged ditches and
 - Cluster of bad ties

Add to the Unloaded Measurement in a Mainline Outside of Joint				
Measurement	In Tangent		In a Curve	
	No Symptoms	With Symptoms	No Symptoms	With Symptoms
Gauge	1/16" (2 mm)	3/16" (5 mm)	1/8" (3 mm)	1/4" (6 mm)
Crosslevel	1/8" (3 mm)	1/4" (6 mm)	1/8" (3 mm)	1/4" (6 mm)

Figure SUB-PART C – 2 – Static Measurements Outside a Joint (inches and millimetres)

Add to the Unloaded Measurement in a Mainline in Joint Area				
Measurement	In Tangent		In a Curve	
	No Symptoms	With Symptoms	No Symptoms	With Symptoms
Gauge	1/8" (3 mm)	5/16" (8 mm)	5/16" (8 mm)	3/8" (10 mm)
Crosslevel	1/4" (6 mm)	3/8" (10 mm)	1/4" (6 mm)	7/16" (11 mm)

Figure SUB-PART C – 3 – Static Measurements in a Joint (inches and millimetres)

- e) Locations where track measurements do not meet the track geometry standards for the class of track are considered defective. Track defects must be protected by speed restrictions and repaired as soon as possible.

6. Responsibility

- a) The Track Inspector is responsible for:
 - i. Checking deterioration in track geometry between track evaluation car tests,
 - ii. Ensuring that track geometry is maintained within the track geometry standards, or providing appropriate track protection.
- b) Track conditions must equal or exceed the track geometry standards for the class of track as laid out in the [Rules Respecting Track Safety](#). Where conditions on track do not comply with these requirements action must be taken to:
 - i. Bring the track into compliance,
 - ii. Reduce speed to such that is in compliance,
 - iii. Halt operations over the track or,
 - iv. Operate under the authority of a qualified Track Inspector or Manager
 - Notwithstanding the above, in the case of Class 1 track that is not in compliance with these Rules, operation under the authority of a Track Supervisor for not more than 30 days. This does not apply where defective rails are involved.

SUB-PART D. TRACK STRUCTURE

Scope: This subpart prescribes the requirements for ballast, tie, track assembly fittings and the physical conditions of rails.

1. Ballast

1.1 Ballast Conditions

a) Ballast: General

- i. Unless it is otherwise structurally supported, all track must be supported by material which will:
 - Restrain the track laterally, longitudinally, and vertically under dynamic loads imposed by railroad equipment and thermal stress exerted by the rails;
 - Transmit and distribute the load of the track and railroad rolling equipment to the subgrade;
 - Provide adequate drainage for the track; and
 - Maintain proper track cross-level, surface and alignment.

b) Track Construction

- i. For new construction use the Current Specification for Ballast to select and prepare ballast materials.
- ii. For new construction ensure that the ballast section when complete conforms to design specifications.

c) Contaminated Ballast

- i. Areas that have become contaminated so that they no longer allow water to freely drain must be identified so that they can be corrected,
- ii. Each Fall, the District Manager will prepare a list of contaminated ballast areas in his territory. This list is to be forwarded to the Manager, Track Programs who will determine the appropriate corrective action.

1.2 Ballasting Preparation

a) Clearances

- i. Obtain approval from the Engineer, Technical Services for any planned ballasting operation that will reduce line clearances.
- ii. Report to the Engineer, Technical Services all track raises or re-alignments that may affect line clearances.

b) Bridges

- i. If bridges are within the section of track planned for re-ballasting, bridge spans must be raised or plans made to undercut each bridge approach for a sufficient distance to permit a safe, smooth riding run-out. The Manager, Structures Program must approve the course of action.



c) Public Crossings

- i. At public crossings, re-ballasting must be done without risk or major inconvenience to the public. Advise the road authority of the nature and extent of the work to be done. Arrange for the installation of barricades, warning lights, and other safety devices to protect people and vehicles using the crossing. The [Railway Association of Canada \(RAC\) Circular #13](#), at the back of this manual, offers information on the proper steps in providing protection at crossings.

1.3 Ballasting and Undercutting – Special Precautions

a) Track Buckling

- i. Take all necessary precautions to avoid track buckling. Pay close attention to the temperature when planning to use under-track plows, sleds and undercutters. Fill cribs and restore shoulders with new ballast as soon as possible.

b) Transitions / Run-Out Gradients

- i. The transition or run-out gradients must be made on tangent track and must be fully tamped and level to provide a smooth transition from newly ballasted track to old ballast. In no case can the rate of run-out be more than that shown in table below:

MAXIMUM TRANSITION OR RUN-OUT GRADIENT	
Max. Permissible Train Speed	Rate of Run-out
90 miles per hour	One inch in 105 feet
80 miles per hour	One inch in 95 feet
70 miles per hour	One inch in 85 feet
60 miles per hour	One inch in 70 feet
50 miles per hour	One inch in 60 feet
40 miles per hour	One inch in 45 feet
30 miles per hour	One inch in 35 feet
20 miles per hour	One inch in 25 feet
10 miles per hour	One inch in 15 feet

Figure SUB-PART D – 1 – Run-Out Gradient

c) Ballasting Cross Sections

- i. Cribs filled to a minimum of 1" (25 mm) below the top of tie,
- ii. No ballast left on top of ties, spikes and tie plates,
- iii. Shoulder ballast for jointed rail to be minimum of 6" (152 mm) out from end of tie before sloping,
- iv. Shoulder ballast for CWR track to be minimum of 12" (305 mm) out from end of tie before sloping

d) Track Geometry

- i. Throughout the entire process (the unloading of ballast, the first operation of trains, the final raising and tamping of the track, the return of traffic to normal track speed) the following track geometry must be maintained:
 - The maximum cross level on the outside rail of a curve may not be more than 7 inches (178 mm) on any track. Curves exceeding 6 inches (152 mm)

cross level must be monitored and have a remedial action plan to bring it back to 6 inches (*152 mm*) or less cross level.

- The difference in curve elevation between any two points 60 feet (*18,288 mm*) apart must be not be more than 1 ½ inches (*38 mm*), with the tie and rail taken into account.

e) Freshly Dumped Ballast

- i. Take care to ensure that freshly dumped ballast does not extend more than 2-1/2 inches (*64 mm*) above the top of the rail. This will prevent damage to equipment and reduce the risk of derailing light rail cars.

1.4 [Ballasting and Undercutting in CWR Territory](#)

a) Requirements

- i. Work requirements and speed restriction requirements associated with ballasting and undercutting in CWR territory are given in [Sub-Part D – Section 7.8 – Prevention of Track Buckling](#).

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2. Ties

2.1 Ties in Track

- a) Existing tie type, length, and spacing may remain in place until programmed tie replacement or ballast renewal is performed.
- b) Installed centered with the track and square with the rail, with the end of the tie approximately 18 ½ inches from the field edge of the rail base.
- c) Installed in tracks Class 2 and above at 20 3/8" (518 mm) centers
- d) Installed at 21 1/4" (540 mm) centers in Class 1 tracks.

2.2 Tie Spacing during Bridge Work

- a) Maximum clear span of ties on bridges with unsupported running rail*;
 - 115 lb rail – 24" (610 mm)

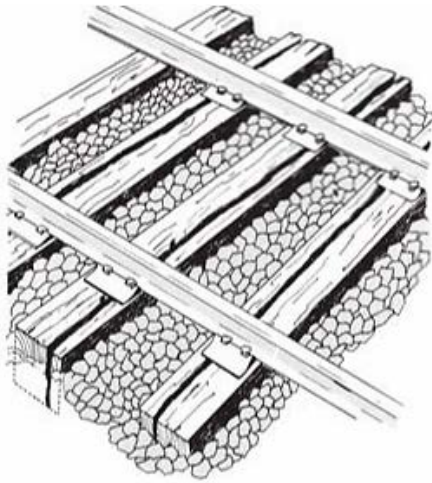
**smaller rail sections must be as per and approved by a Bridge Engineer*

2.3 Tie Defects

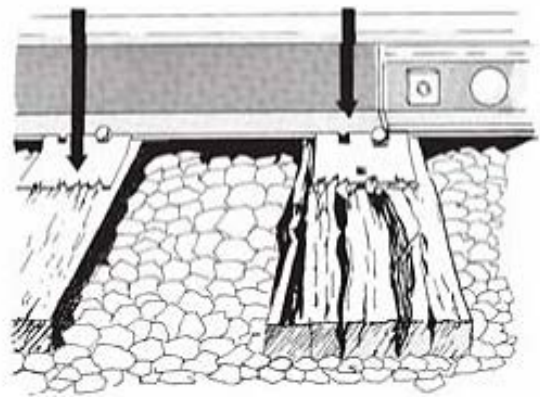
- a) Each 39-foot segment of track must have a sufficient number of cross ties which in combination provide support that will hold gauge, surface, and alignment.
- b) Defective ties are defined as those that are:
 - i. Broken through,
 - ii. Split, or otherwise damaged, to the extent that it will allow the ballast to work through, or will not hold spikes or rail fasteners,
 - iii. Plate cut more than 2" (51 mm) of the tie thickness,
 - iv. Tie cut more than 40% of thickness, or
 - v. So deteriorated that the tie plate or base of rail can move laterally 1/2" (13 mm) relative to the tie.
 - vi. Not holding surface, line, or gauge.

Figure SUB-PART D – 2 – Examples of Tie Damage / Defects

Tie Split End to End
- tie will not hold spikes or rail



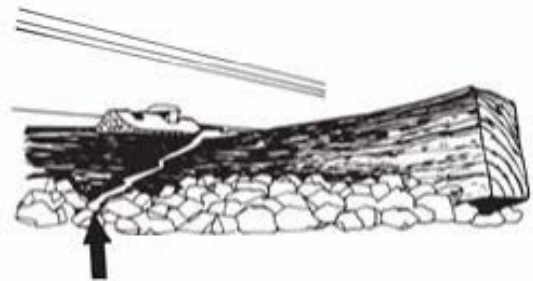
Spike Killed or Crushed
- sign of spreading track



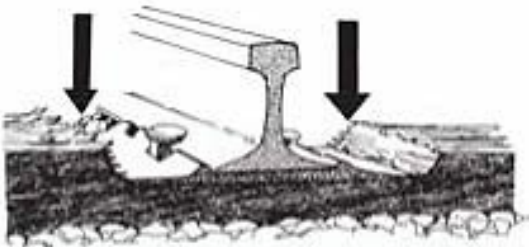
Decayed Tie



Broken Tie Under Rail Base



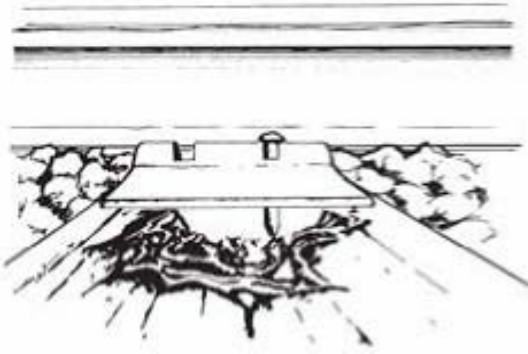
Tie Cut More Than 40% of Thickness



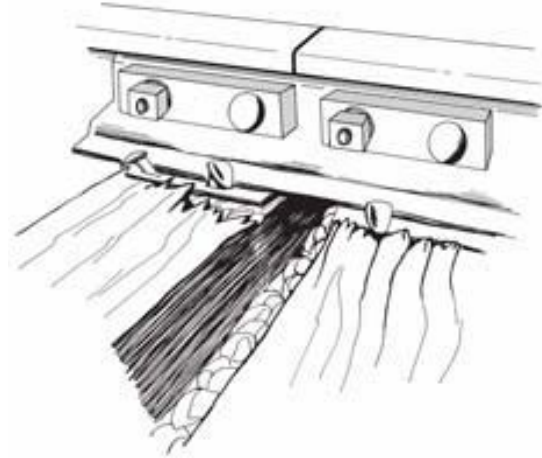
Tie Adzed to a Depth of 2" or Greater



Burnt Tie

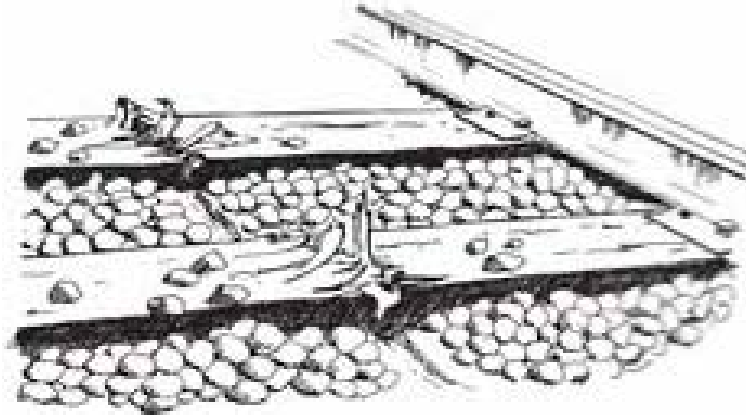


Spike Killed, Crushed or Decayed



Damaged Tie

- Depth of 2" or more due to derailments, dragging equipment or fire



- c) Note that each 39 foot segment has approximately 22 ties. Ensure that at least the number of non-defective ties shown in the following table:

MINIMUM NON-DEFECTIVE TIES PER 39 FT		
CLASS OF TRACK	Tangent track and curves to 2°	Turnouts and curved track over 2°
Class 1	5	6
Class 2	8	9
Class 3	10	10
Class 4, 5	12	14

Figure SUB-PART D – 3 – Minimum Non-Defective Ties per 39'

- d) For Class 1 or Class 2 lines, ensure that each rail joint is supported by at least one non-defective tie, with a tie plate, whose centerline is within 24 inches (610 mm) either side of the rail joint location. Ensure that there are not more than 2 defective ties in adjacent positions in the joint area.

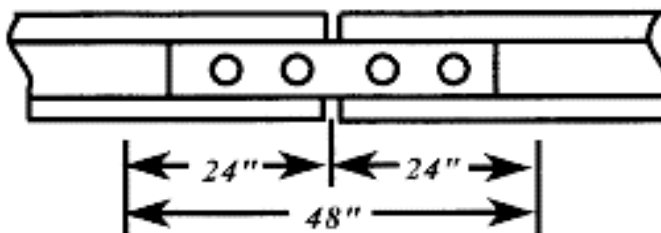


Figure SUB-PART D – 4 – Class 1 and Class 2 - Non-Defective Tie Spacing in a Joint - Within 24"

- e) For Class 3 through Class 5 track, ensure that each rail joint is supported by at least one non-defective tie, with a tie plate, whose centerline is within 18 inches (457 mm) either side of the rail joint location. Ensure that there are not more than 2 defective ties in adjacent positions in the joint area.

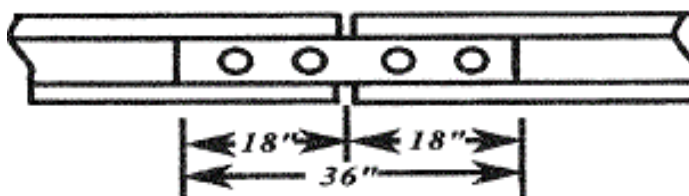


Figure SUB-PART D – 5 – Class 3 through Class 5 - Non-Defective Tie Spacing in a Joint – Within 18"

- f) Where the above tie conditions are not met, local forces must spot in ties or train speeds must be restricted to bring the track into compliance.

2.4 Tie Maintenance

- a) When renewing ties, maintain the surface, line and gauge of the track. Immediately tamp the new tie so as to make its bearing surface match that of the adjacent ties.
- b) Do not insert tie plates after the tie has been tamped.
- c) When a spike is pulled, plug the spike hole in the tie with a wooden tie plug or approved chemical tie compound. When re-spiking, drive the spike into the plug (if possible).
- d) A cluster (or spot renewal) program should be undertaken when there is a high frequency of;
 - i. Four or more consecutive defective ties,
 - ii. Three or more consecutive defective ties in a curve greater than 2°; or
 - iii. Defective ties in the joint area.
- e) When renewing ties, regardless of method of installation;
 - i. Correct gauge where required,
 - ii. Where required, no more ballast than is absolutely necessary should be removed from the crib or shoulder,
 - iii. All ties installed must be spiked and anchored, the ballast shoulders restored, and the ties properly tamped before the close of each day. Any adjacent ties that may be left hanging should also be tamped; and
 - iv. When necessary to allow trains to operate through tie gang renewal areas during working hours, not more than three consecutive ties on tangent track or two consecutive ties on curved track can be left unspiked, ties on either side of all joints must be spiked, and the speed must be limited to a maximum of 10 mph,
 - v. In preparation for the following day tie installation the spiking pattern may be reduced to a minimum of 2 rail holding spikes (one gauge and one field) per plate on each tie to be removed,
 - vi. Hard and softwood ties should not be mixed on the main track except when changing from one category to another (eg. curve to tangent).
- f) When piling ties for pick-up or disposal, place them:
 - i. At a safe distance from the track, clear of the wing of ballast regulators.
 - ii. On the opposite side of the track from any wire line (if possible).
 - iii. Where they will not block key sight lines.
 - iv. Where they will not present a hazard to employees.
 - v. Away from streams, rivers, environmentally sensitive or drainage systems.

2.5 Tie Inspection

- a) Examine ties in track as early as possible each year to determine their condition. Identify and include on a tie count list any ties that are candidates for renewal based on current condition. Include ties that are defective as in [Sub-Part D – Section 2.3 – Tie Defects](#). Also include ties that exhibit the following conditions:
 - i. Split end-to-end,
 - ii. Adzed or plate cut more than 2 inches,
 - iii. Severely crushed,
 - iv. Spike killed, or
 - v. Severely decayed.
- b) Do not use a pick or other sharp instrument on the top of the tie when testing ties.

- c) The Track Inspector must prepare a mile by mile list showing the number of ties that are defective on main tracks, 1/5 of the track miles each year to complete all main tracks every 5 years,
- d) Renewal ties must be marked and recorded for which programmed tie renewal is planned for the following year.

2.6 Installing Track and Switch Ties in CWR Territory

a) Tie Replacement in CWR Territory

- i. No ties will be installed when the rail temperature is above the PRLTR (100°F / 37.8°C) unless directed by the Director, Rail Infrastructure. The Director, Rail Infrastructure must specify all necessary precautions to be taken,
- ii. In CWR territory the maximum number of consecutive track ties that can be renewed in a single pass shall be:

NUMBER OF CONSECUTIVE TIES		
	Tangent track to 2° curves	Greater than 2°
With a Junior or Production Tamper	5	4
With Hand Tamping or Hydraulic Tools	3	2

Figure SUB-PART D – 6 – CWR Territory - Maximum # of Ties Renewed in a Single Pass

- iii. Switch ties in CWR territory may be replaced in a single pass provided the appropriate speed restriction is applied.
- iv. Crossing ties in CWR territory replaced as part of crossing rehabilitation may all be changed in a single pass provided;
 - Crossing surface is replaced immediately following tie renewal,
 - Crossing approaches are restored and are of sound condition; and
 - The appropriate speed restriction is applied.
- v. Hard and softwood ties should not be mixed on the main track except when changing from one category to another (eg. curve to tangent).

b) Speed Restriction Requirements in CWR Territory

- i. Speed restriction requirements associated with installing track and switch ties in CWR territory are given in [Sub-Part D – Section 7.8 – Prevention of Track Buckling](#).

3. Tie Plates

3.1 Second Hand Plates

- a) The use of new or second hand tie plates shall be as directed by the Director, Rail Infrastructure, however;
 - i. Broken or damaged tie plates must not be reused,
 - ii. Tie plates with excessively worn spike holes or shoulders should not be reused.

3.2 Installation of Tie Plates

- a) Tie plates must be installed so that;
 - i. The plates have full, even bearing on the ties,
 - ii. The field side plate should be square against the field side base edge of the rail,
 - iii. The plate is centered on the tie,
 - iv. The rail is canted toward the center of the track (if applicable),
 - v. Each plate has the same cant.
- b) In Classes 3 through 5 track where timber cross-ties are used there shall be tie plates under the running rails on at least (8) eight of any (10) ten consecutive ties,
- c) Ensure that there are no metal objects that cause concentrated loading solely supporting the rail between the rail and the tie plate. This includes the tie plate shoulders and spike heads,
- d) Torch cutting of tie plates is not permitted,
- e) 14 inch tie plates shall be used with 115 lb rail on all main track curves in excess of 3 degrees.

3.3 Tie Plates in Jointed Track

- a) Replace missing or broken tie plates as necessary to effectively maintain gauge.
- b) Existing tie plates may remain in place until a rail relay is performed.

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4. Spiking

4.1 Driving Spikes (spike patterns)

a) Each rail shall be spiked as per the appropriate attached spiking pattern,

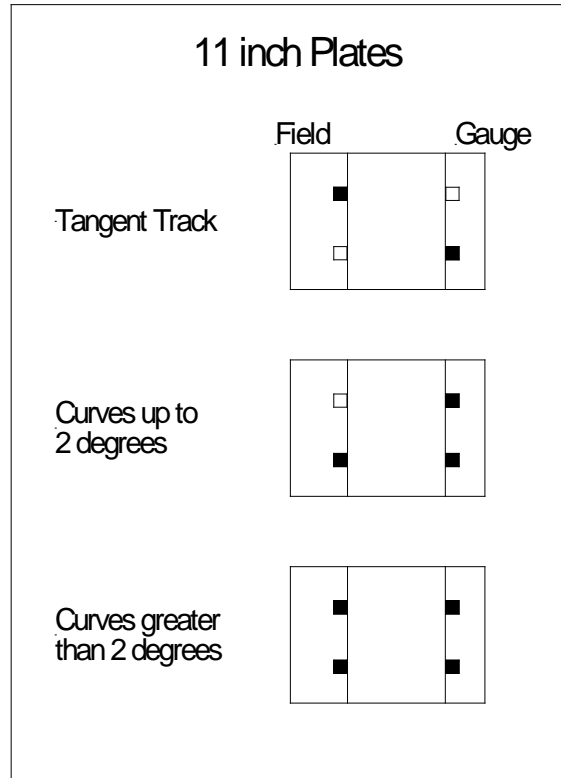


Figure SUB-PART D – 7 – Spiking Patterns – 11" Plates

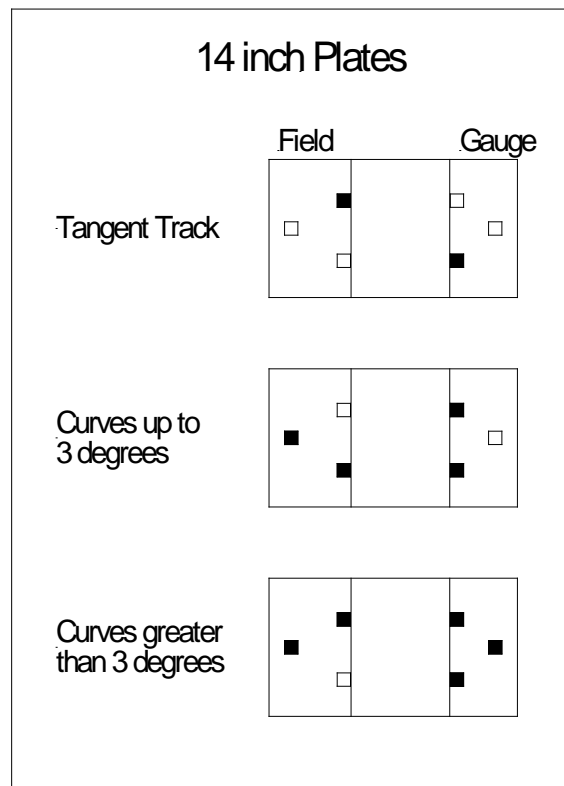


Figure SUB-PART D – 8 – Spiking Patterns - 14" Plates

- b) Drive spikes vertically with the face of the spike in contact with the base edge of the rail, except spikes against insulated joints, which will be installed with heads turned away from the joint bar and not in solid contact with the joint bar. No fastenings may be installed at insulated joints in a manner that may short circuit the track circuit,
- c) Spikes will be driven to a depth such that the spike head is within $3/16''$ (5 mm) of top of the rail base. Every effort should be made not to overdrive spikes,
- d) Spikes should not be driven at the ends of insulated joint bars in any manner that would cause the insulated joint bar to become electrically connected to the rail,
- e) Spikes will be driven only with a standard spike maul, pneumatic or hydraulic spiking hammer or spiking machine,
- f) Spikes will not be driven within 2 inches (51 mm) of the end of, or in the slots of, skirted (slotted) joint bars.

4.2 Pulling Spikes

- a) When pulling spikes, a spike lifter will be used when spikes cannot be loosened with a claw bar,
- b) Spike between the running rail and guard rails, as well as spikes in tight areas around heel blocks and frogs will be removed using a four-ball spike puller and claw bar,
- c) Claw bars will not be struck with mauls or other tools.

4.3 Spiking Considerations in Jointed Track

- a) Use spike lengths and spiking patterns that meet the ONTC standard.
- b) When rails over 39 feet in length are laid on single-shoulder tie plates, use 6 spikes per tie, or preferably, use dual shoulder plates.
- c) Replace missing and broken spikes as necessary to effectively maintain gauge.
- d) Existing spiking patterns may remain in place until a rail relay or tie program is performed.
- e) When broken spikes are found in curves, carry out an inspection of the whole curve and adjacent tangent to ensure that no dangerous spike condition exists. Special attention must also be paid to the condition of tie plates when performing the inspection. Unusual wear patterns and broken plates indicate other problems exist.

4.4 Spike Sizes for Shimming

- a) $6\frac{1}{2}''$ spike for $\frac{1}{2}''$ shims
- b) $7\frac{1}{2}''$ spike for $1\frac{1}{2}''$ shims
- c) $8\frac{1}{2}''$ spike for $2\frac{1}{2}''$ shims
- d) $9\frac{1}{2}''$ spike for $3\frac{1}{2}''$ shims

5. Anchors

A sufficient number of anchoring devices will be applied to provide adequate longitudinal restraint.

5.1 Approved Anchors

- a) Do not substitute alternate types of rail anchors unless the substitution is approved by the Director, Rail Infrastructure,
- b) Only use rail anchors in the rail section for which they are intended. All rail anchor designs must be approved by the Director, Rail Infrastructure,
- c) Use approved rail anchors that are all the same type when installing out-of-face. Anchors used to replace or support existing anchors should also be of the same type as those in the track section, if possible.
- d) In all cases, at locations where track or rail movement occurs due to heavy traffic on grades, to train braking or to soft sub-grade, install additional rail anchors as required to restrict movement of the rail.

5.2 Anchor Application

- a) Anchors should be applied uniformly along the rail against ties,
- b) To avoid tie skewing, anchors must be installed in the same direction against the same tie on the opposite rail. Ties should be at right angles to rail before applying anchors,
- c) Anchors will be applied to the gauge side of the rail when practicable,
- d) When it is necessary to adjust rail anchors by hand and if the anchor is 1 inch or less from its proper position, it can be driven along the rail. Otherwise, you must remove the anchor and reapply it.
- e) When changing rail or renewing ties, all anchors removed must be reapplied,
- f) Sprung or damaged rail anchors will not be installed,
- g) Use only the proper tools or machines when applying or removing anchors in order to avoid damaging the anchor or the risk of injury. The use of spike mauls is prohibited. Anchors should be removed from the rail while the rail is still in track,
- h) When installing anchors, ensure the anchor is fully engaged on the rail base, with the rail base inside the lip of the anchor. Rail anchors must not be overdriven,
- i) Do not install anchors within one inch of a plant or field weld,
- j) Do not install anchors on the rail opposite joints,
- k) Do not install rail anchors where they will contact and damage signal connection wires,
- l) Rail anchors are not to be used on shimmed track. Anchors removed during shimming shall be replaced promptly when shims are removed
- m) In jointed rail, the minimum number of evenly spaced anchors per 39' of track are;

Class of Track	No. of Ties to Box Anchor
1	every 4 th tie
2 and 3	every 3 rd tie
4 and 5	every 2 nd tie

Figure SUB-PART D – 9 – Anchor Application Spacing

- n) On track where 40' or longer rails are laid as bolted rail, box anchor at least every second tie for restraint.

5.3 Anchors in Turnouts

- a) Turnouts should be fully anchored to the extent possible in both jointed and CWR track.

5.4 Anchor Requirements in CWR

- a) In CWR track, rail anchors will be installed in a box pattern on every other tie except;
 - i. At permanent joints within CWR (joints that will not be welded), then every tie will be box anchored for a minimum distance of 200' each direction from the joint,
 - ii. When jointed rail abuts CWR, a minimum of 200' of rail on either side immediately adjacent to the joint will have every tie boxed anchored,
 - iii. At turnouts, non-glued insulated joints and crossing frogs, every tie will be box anchored for a minimum distance of 200' each way from the turnout or joint,
- b) When CWR is installed on a bridge, the Manager, Track Programs will provide an anchor plan for the bridge

5.5 Anchors in Jointed Track

- a) On 39-foot or shorter lengths of rail in Class 2 through Class 5 track, box anchor jointed track at least at every third tie for restraint in both directions. At a joint, box-anchoring spacing may be adjusted to every second tie, or alternatively to every fourth tie, to avoid box anchoring a tie adjacent to the joint.
- b) On track where 40-foot or longer rails are laid as bolted rail, box anchor at least every second tie for restraint in both directions.
- c) When required, install additional anchors on the jointed track to prevent track movement.
- d) When laying bolted rail do not allow trains to pass over unanchored track except in an emergency. Then, the following must be done before allowing a train to pass over the track:
 - i. inspect the track,
 - ii. place a speed restriction of not more than 10 MPH, and
 - iii. advise train crews to not use dynamic braking during movement over the track.
- e) Existing anchor patterns may remain in place until a rail relay or tie program is performed.
- f) Replace missing or broken anchors as necessary to effectively control movement of the rail.
- g) Re-apply or replace anchors removed during track maintenance work upon completion of the work.
- h) Re-apply anchors after shims are removed from track.
- i) At locations where track or rail movement occurs, for example due to heavy traffic on grades, train braking or soft sub-grade, install additional rail anchors to control movement of the rail.

6. Rail

6.1 General Rail Instructions

- a) Do not install rails shorter than 12 feet (*3,658 mm*) in length in main track unless authorized by standard plan.
- b) Do not use rail or joint bars that have been cut with a torch or that has holes that have been made with a torch. Torch cut rail must be clearly marked.
- c) Use a drill to make boltholes in the field. Never use a torch to burn boltholes.
- d) When cutting rail for re-use, make the cut at least 6 inches (*152 mm*) from any torch mark on the rail.
- e) Whenever possible, maintain a minimum stagger of 12 feet (*3,658 mm*) between bolted joints and/or the welds.
- f) Lay rail to the standard gauge as per [Sub-Part C, Section 2 – Gauge](#). In order to maintain correct gauge, at least every fourth tie must be gauged on tangents and every third tie on curves. Plug all spike holes properly.
- g) Rail must not be struck with a spike maul, steel hammer or similar tool.

6.2 Protection of Worn Rail

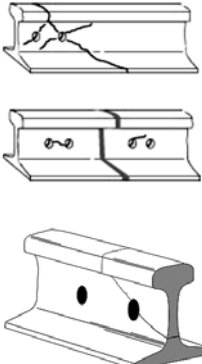
- a) Rail that reaches Line C wear must be removed from track, or train speed must be restricted to a speed as near as possible to equilibrium speed, while not exceeding the maximum allowable speed for the class of track, until the rail can be changed out. Note that if rail change-out cannot be done within 30 days, or within 60 days on Class 2 track that does not carry passenger or dangerous commodity traffic, then a further speed restriction to 10 MPH must be applied. Refer to Line limits in [Appendix A – Rail Wear Limits & Rail Management Decision Zones](#).
- b) Where rail wear has resulted in joint bars being heavily impacted by wheel flanges, the joint must be welded or a high clearance bar or compatible worn bar must be applied. Train speed must be restricted to a speed as near as possible to equilibrium speed until the joint is welded or a high clearance bar is applied. Refer to [Figure Sub-Part C – 55 – Curve Elevation Table - Balanced](#).

6.3 Protection of Defective Rail

- a) All rail defects detected visually or by using rail flaw detector cars, including defects temporarily repaired by the application of joint bars, must be monitored within 30 calendar days of their detection and at least monthly thereafter, until change out of defective rail.

RAIL DEFECT FIGURE KEY			
#	Defect	Designation	Where Found
1	Bolt Hole Crack	BHO or BHJ	FIGURE SUB-PART D - 11
2	Broken Base	BBO or BBJ	FIGURE SUB-PART D - 12
3	Broken Rail or Ordinary Break	BR	FIGURE SUB-PART D - 13
4	Damaged Rail	-	FIGURE SUB-PART D - 14
5	Defective Field Weld or Defective Plant Weld	DWF or DWP	FIGURE SUB-PART D - 15
6	Engine Burn Fracture	EBF	FIGURE SUB-PART D - 16
7	Head and Web Separation	HWO or HWJ	FIGURE SUB-PART D - 17
8	Horizontal Split Head	HSH or HSJ	FIGURE SUB-PART D - 18
9	Piped Rail	PRO or PRJ	FIGURE SUB-PART D - 19
10	Split Web	SWO or SWJ	FIGURE SUB-PART D - 20
11	Transverse Defect or Detailed Fracture	TDD	FIGURE SUB-PART D - 21
12	Transverse Defect Under a Weld Repair	DFW or TDW	FIGURE SUB-PART D - 22
13	Transverse Fissure or Compound Fissure	TDT	FIGURE SUB-PART D - 23
14	Vertical Split Head	VSH or VSJ	FIGURE SUB-PART D - 24

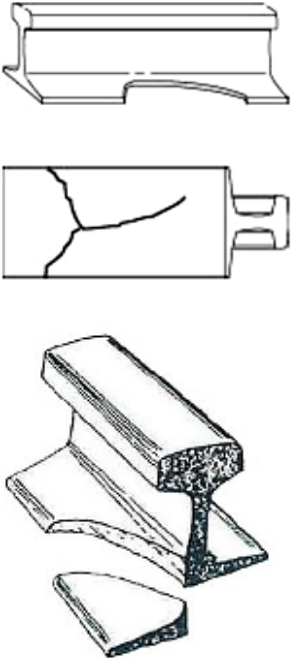
Figure SUB-PART D – 10 – Rail Defect Key

1. Bolt Hole Crack – BHO or BHJ			
Contractor's Designation	Defect Size* (inches and millimeters)	<u>Protection Code</u>	Ways to Reduce Frequency of Defect Occurring
BHO (outside of joint or in joint area)	Cracked Out	1	Joint elimination
	More than 1/2" to more than 1-1/2" <i>(More than 13 mm to more than 38 mm)</i>	4	Keep bolts tightened. Tamp up joints. Build up rail ends by welding.
	1/2" or less <i>(13 mm or less)</i>	8	Use proper drilling fixture. Regularly change drill bits.
Appearance in Track			Defect Cause
	<p>Bolt hole cracks originate at a bolt hole in a joint or at a former joint location (e.g. thermite weld) or any holes drilled in rail for any purpose. These cracks can radiate outwards at an angle towards both head and base. In the past bolt hole cracks have progressed from the first bolt hole from the end of the end of the rail at an angle approximately the 45 degree maximum shear plane. In harder premium rails, bolt hole cracks are not regularly seen growing at a large range of angles, some close to vertical, and to emanate from the 2nd or 3rd drilling.</p>	<p>Loose joint bars, battered rail ends and bad ties in the joint area. Another key initiator is a nick or burr introduced in the drilling of bolt hole by a dull drill bit or an off-center drilling.</p>	

* % of head covered by defect or crack length in inches.

Figure SUB-PART D – 11 – Bolt Hole Crack

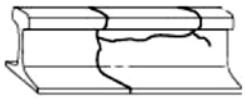
2. Broken Base – BBO or BBJ

Contractor's Designation	Defect Size*	Protection Code	Ways to Reduce Frequency of Defect Occurring
BBO (outside of joint or in a joint)	N/A	9	Avoid mishandling rail, striking rail with sharp tools.
Appearance in Track		Defect Cause	
	<p>Base breaks are also called broken bases or base fractures. Base breaks are rarely found by rail flaw detector cars unless they have progressed under the rail web, as the ultrasonic signal is only transmitted through the rail web. Base breaks can be recognized as a crack starting near the junction between the base and the web, and extending either along the axis parallel to the rail, curving outwards to the base, or as a half-moon shape of break</p>	<p>Base breaks develop outwards under the flexural action of the rail from a seam, segregation or inclusion near the base/web fillet, or inwards from a nick on the edge of the rail. Base breaks also result from derailments or from damaged wheels that have run along the base of the rail, contacting rail anchors.</p>	

* % of head covered by defect or crack length in inches.

Figure SUB-PART D – 12 – Broken Base

3. Broken Rail or Ordinary Break – BR

Contractor's Designation	Defect Size*	<u>Protection Code</u>	Ways to Reduce Frequency of Defect Occurring
BR	N/A	1	Destress Surfacing
Appearance in Track		Defect Cause	
 Ordinary Break No Visible Defect	Partially or completely broken through, without evidence of a fissure or other type of rail defect that may have caused the break.	High tension in rail, skid flats, out of round wheels, shelled wheel treads.	

* % of head covered by defect or crack length in inches.

Figure SUB-PART D – 13 – Broken Rail or Ordinary Break

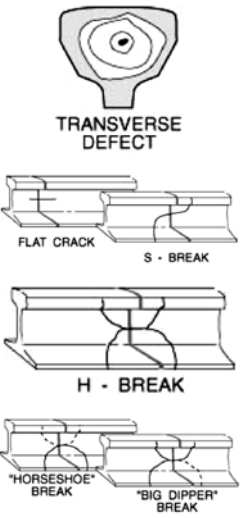
4. Damaged Rail

Contractor's Designation	Defect Size*	<u>Protection Code</u>	Ways to Reduce Frequency of Defect Occurring
N/A	N/A	7	
Appearance in Track		Defect Cause	
	Any rail broken or injured by wrecks, broken, flat, or unbalanced wheels, slipping, or similar causes.		

* % of head covered by defect or crack length in inches.

Figure SUB-PART D – 14 – Damaged Rail

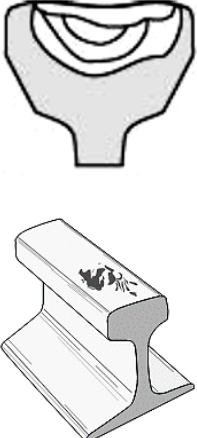
5. Defective Field Weld or Defective Plant Weld – DWF or DWP

Contractor's Designation	Defect Size*	Protection Code	Ways to Reduce Frequency of Defect Occurring
DWF (CO) DWP (CO)	Cracked Out, or 81 – 100%	1 or 10	Destressing. Prevent gouges in finish grinding. Thermite welding crucible must be dry. Use of proper welding kit for metallurgy. Sufficient preheat and cooling time when welding. Avoid use of damaged tools.
DWF (L) DWP (L)	41 – 80%	4 or 7	
DWF (M) DWP (M)	21 – 40 %	4 or 7	
DWF (S) DWP (S)	0 – 20%	4 or 7	
Appearance in Track			Defect Cause
 <p>TRANSVERSE DEFECT</p> <p>FLAT CRACK S - BREAK</p> <p>H - BREAK</p> <p>"HORSESHOE" BREAK "BIG DIPPER" BREAK</p>	<p>Defects in flashbutt or thermite welds may be either a transverse separation in the rail head at the weldment or a fracture in the rail web or base emanating from a poor weld.</p> <p>Weld defects in the rail head are difficult to detect but can be found by rail flaw detector cars. They cannot be inspected visually until the transverse defect has cracked out to show a vertical crack on the side of the rail head.</p> <p>Web fractures may have one of several characteristic shapes, variously referred to as "flat cracks", "horseshoe breaks", "S" breaks, "H" breaks, or "big dipper failures."</p>	<p>In the head of the rail, the origin may be a slag inclusion or oxide entrapment.</p> <p>In the web, fracture may be the result of gouges left from poor finish grinding or from residual stresses in the rail, as in the case of a split web.</p> <p>In many cases, the cause may be poor fusion due to improper preheat or excessively rapid cooling.</p>	

* % of head covered by defect or crack length in inches.

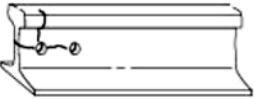
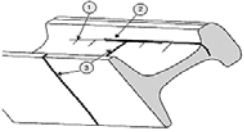
Figure SUB-PART D – 15 – Defective Field Weld or Defective Plant Weld

6. Engine Burn Fracture - EBF

Contractor's Designation	Defect Size*	Protection Code	Ways to Reduce Frequency of Defect Occurring
EBF	100 % (Cracked Out)	1	
	81 – 99%	2	
	21 – 80 %	5	
	0 – 20%	7	
Appearance in Track		Defect Cause	
	<p>Flat spot on rail, a hairline crack on the side of the rail head when the defect cracks out, thermal cracks extending from the burn to the gauge corner and down the side of the head</p>	<p>Engine burn fractures are caused by repeated wheel impacts at the site of an engine burn due to excessive wheel slip. Rail metal under an engine burn is usually thermally damaged and susceptible to fatigue.</p>	

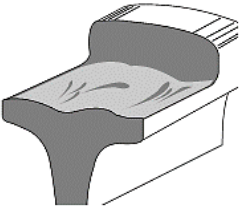
* % of head covered by defect or crack length in inches.

Figure SUB-PART D – 16 – Engine Burn Fracture

7. Head and Web Separation – HWO or HWJ			
Contractor's Designation	Defect Size* (inches and millimeters)	Protection Code	Ways to Reduce Frequency of Defect Occurring
HWO (outside of joint or in joint area)	Cracked Out	1	Keep bolts tightened.
	More than 3" <i>(More than 76 mm)</i>	6	Build up battered rail ends.
	1/2" to 3" <i>(13 mm to 76 mm)</i>	4	Inspect rail when replacing crossing.
	Less than 1/2" <i>(Less than 13 mm)</i>	8	Maintain good joint support.
Appearance in Track			Defect Cause
 	<p>Separation of the head and web of the rail through the fillet area under the head is termed a "Head and Web Separation".</p> <p>Head and web separations may also occur at highway crossings. They are recognized by irregular lines running longitudinally along the fillet or parallel to the head / web fillet. They can also be recognized by a dead sound when tapped with a hammer.</p> <p>In the joint area the crack may be obscured by angle bars.</p>	<p>Head and web separations may occur due to eccentric loading of the rail head, the action of the joint bar in poor rail joints or as a result of corrosion fatigue where the rail head joins the web.</p>	

* % of head covered by defect or crack length in inches.

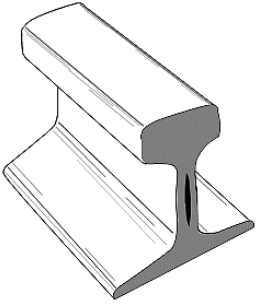
Figure SUB-PART D – 17 – Head and Web Separation

8. Horizontal Split Head – HSH or HSJ			
Contractor's Designation	Defect Size* (inches and millimeters)	<u>Protection Code</u>	Ways to Reduce Frequency of Defect Occurring
HSH (outside of joint or in joint area)	Cracked Out	1	Remove rails with same heat number if defects persist. Slot rail ends.
	More than 12" <i>(More than 305 mm)</i>	3	
	2" to 12" <i>(51 mm to 305 mm)</i>	4	
	Less than 2" <i>(Less than 51 mm)</i>	-	
Appearance in Track		Defect Cause	
	Horizontal split heads can sometimes be detected visually as they can cause a local flattening of the rail head which would cause a dark spot in contrast to the adjacent shiny running band. When it cracks out, it can be seen as a hairline horizontal crack on the way down from the top of the rail.	A horizontal split head is a progressive longitudinal fracture along a plan parallel to the rail surface. The origin is at an internal seam, segregation or inclusion introduced in the steel making. It usually grows rapidly but may stop at the end of the seam or at a weld.	

* % of head covered by defect or crack length in inches.

Figure SUB-PART D – 18 – Horizontal Split Head

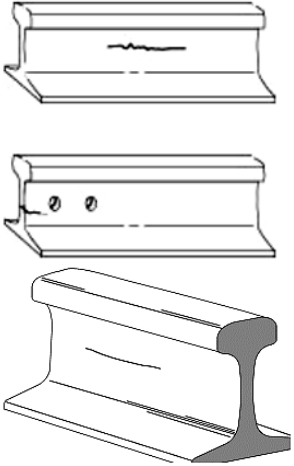
9. Piped Rail – PRO or PRJ

Contractor's Designation	Defect Size* (inches and millimeters)	<u>Protection Code</u>	Ways to Reduce Frequency of Defect Occurring
PRO (outside of joint or in joint area)	Cracked Out	1	Remove rails with same heat number if defects.
	More than 3" <i>(More than 76 mm)</i>	6	
	1/2" to 3" <i>(13 mm to 76 mm)</i>	4	
	Less than 1/2" <i>(Less than 13 mm)</i>	8	
Appearance in Track		Defect Cause	
	<p>Piped rails are seen in older steels. When fully progressed, they can be seen as a bulging of the web on either side or both sides, possibly with shallow cracks on the bulging surface. A slight sinking of the rail head may also be seen.</p>	<p>Piped rails are the result of a longitudinal seam or cavity in the web of the rail, typically found in older rails. Piped rails are generally not a serious defect unless the web has bulged or where the pipe has progressed into a weld.</p>	

* % of head covered by defect or crack length in inches.

Figure SUB-PART D – 19 – Piped Rail



10. Split Web – SWO or SWJ

Contractor's Designation	Defect Size* (inches and millimeters)	Protection Code	Ways to Reduce Frequency of Defect Occurring
SWO (outside of joint in joint area)	Cracked Out	1	Avoid mishandling rail, striking with sharp tools.
	More than 3" <i>(More than 76 mm)</i>	6	
	1/2" to 3" <i>(13 mm to 76 mm)</i>	4	
	Less than 1/2" <i>(Less than 13 mm)</i>	8	
Appearance in Track		Defect Cause	
	<p>Split webs are longitudinal or occasionally transverse cracks along the side of the web and extending into or through it. Often they can be recognized as a "bleeding" crack in the web.</p>	<p>Split webs will occur as a result of a bad stamping of the rail identification numbers or due to a nick or a gouge in the rail. Split webs usually grow rapidly in the joint area.</p>	

* % of head covered by defect or crack length in inches.

Figure SUB-PART D – 20 – Split Web


11. Transverse Defect or Detailed Fracture - TDD

Contractor's Designation	Defect Size*	Protection Code	Ways to Reduce Frequency of Defect Occurring
TDD (CO)	100 % (Cracked Out)	1	Grind gauge corner with production rail grinder to provide relief. Run for a period with lubricators. Destress. Improve tie condition.
TDD (L)	41 – 99%	2 or 9	
TDD (M)	21 – 40%	3 or 9	
TDD (S)	0 – 20%	9	
*See <i>Repair Note 1</i> in addition to the above Protection Codes			
Appearance in Track		Defect Cause	
 <p>Detail Fracture from Shelling</p>	<p>The distinguishing features of a transverse defect are the crystalline centre or nucleus and the nearly smooth surface of the development which surrounds it.</p>	<p>Overloading of gauge corner due to loss of rail, cant, insufficient relief of gauge corner location interfering with throat of wheel.</p> <p>Detail fractures are more common in dirty rail steels and in areas where the rail is in tension.</p>	
 <p>Detail Fracture from Head Check</p>	<p>Transverse defects (TD's) are usually found by ultrasonic or induction testing cars, but will occasionally reach the surface where they can be identified by cracks on the side or corners of the rail head.</p>		

* % of head covered by defect or crack length in inches.

Figure SUB-PART D – 21 – Transverse Defect or Detailed Fracture


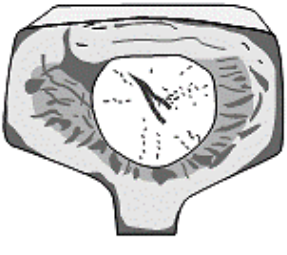

12. Transverse Defect Under a Weld Repair – DFW or TDW

Contractor's Designation	Defect Size*	Protection Code	Ways to Reduce Frequency of Defect Occurring
DFW or TDW (CO)	100 % (Cracked Out)	1	Follow correct preheating instructions prior to welding.
DFW or TDW (L)	41 – 99%	2 or 9	
DFW or TDW (M)	21 – 40%	3 or 9	
DFW or TDW (S)	0 – 20%	9	
*See <i>Repair Note 1</i> in addition to the above Protection Codes			
Appearance in Track		Defect Cause	
 <p>Detail Fracture under Weld</p>	When defect cracks out under a weld repair it can be seen as a hairline crack at right angles to rail running surface.	Inadequate preheating of resurfaced rail end during weld repair.	

* % of head covered by defect or crack length in inches.

Figure SUB-PART D – 22 – Transverse Defect Under a Weld Repair

13. Transverse** Fissure or Compound Fissure - TDT

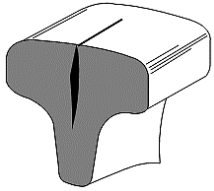
Contractor's Designation	Defect Size*	Protection Code	Ways to Reduce Frequency of Defect Occurring
TDT (CO)	100 % (Cracked Out)	1	Change out non-Mackie or non-control cooled rail.
TDT (L)	41 – 99%	2	
TDT (M)	21 – 40%	7	
TDT (S)	0 – 20%	7	
*See <i>Repair Note 1</i> in addition to the above Protection Codes			
Appearance in Track			Defect Cause
 <p>The term “transverse fissure” describes a transverse defect that has nucleated from a more central location in the railhead.</p> <p>The distinguishing features of a transverse defect are the crystalline centre or nucleus and the nearly smooth surface of the development which surrounds it.</p>			Transverse fissures are usually the result of trapped hydrogen or other imperfections in rail steel and usually not found in modern rails.
 <p>Transverse defects (TD's) are usually found by ultrasonic or induction testing cars, but will occasionally reach the surface where they can be identified by cracks on the side or corners of the rail head.</p>			
 <p>Compound Fissure</p>			

* % of head covered by defect or crack length in inches.

** Transverse defects occurring in non-Mackie and non-control cooled rails are subject to the same rules applying to transverse fissures, except that the entire length of rail must be changed out in all cases.

Figure SUB-PART D – 23 – Transverse Fissure or Compound Fissure

14. Vertical Split Head – VSH or VSJ

Contractor's Designation	Defect Size* (inches and millimeters)	Protection Code	Ways to Reduce Frequency of Defect Occurring
VSH (outside of joint or in joint area)	Cracked Out	1	Grind rail to centre wheel contact band over rail web. Remove rails with same heat number if defects persist.
	More than 12" <i>(More than 305 mm)</i>	3	
	2" to 12" <i>(51 mm to 305 mm)</i>	4	
	Less than 2" <i>(Less than 51 mm)</i>	-	
*See Repair Note 2 in addition to the above Protection Codes			
Appearance in Track		Defect Cause	
 <p>In the field, visual detection is facilitated by the appearance of a dark streak on the running surface, indicating that one side or the other of the rail is dropping. The dark streak may turn in at the originating point of the VSH. A rust streak may then be apparent on the head / web fillet.</p>	<p>Vertical split heads are progressive longitudinal fractures where the head of the rail separates vertically along a seam, segregation, or inclusion in the rail, usually near the middle of the head. The separation may progress rapidly up to the full length of the rail before gradually turning out to field or gauge. Occasionally a vertical split head may also pass through a weld to find the same seam that was rolled into an adjacent rail.</p> <p>Vertical split heads grow because of the shearing action of wheels riding to field or to gauge. Residual tensile stresses may also play a role. Vertical split heads occurring in rails with moderate wear are primarily the result of poor steelmaking.</p> <p>While vertical split heads are usually associated with dirty steel, they will progress faster in heavily worn rails that have flattened in service.</p>		

* % of head covered by defect or crack length in inches.

Figure SUB-PART D – 24 – Vertical Split Head

6.5 Protection Code Description

- a) All rail defects, including those temporarily repaired by the application of joint bars, must be monitored within 30 calendar days of their detection and at least monthly thereafter, until change out of defective rail.
- b) The following lists the specific protection codes used in the column four of the table of Rail Defects and Protection Codes with a description of the protection associated with each code.

PROTECTION CODE DESCRIPTION	
Code	Explanation of Protection Codes
1	Assign a qualified track inspector to visually supervise each operation over defective rail. Apply Movement Over Broken Rails policy
2	Assign a qualified track inspector to visually inspect. Once inspected that person may authorize operation to continue without continuous visual supervision at a maximum of 10 mph for up to 24 hours prior to another such visual inspection or replacement or repair of the rail. After joint bars have been applied, allow trains to operate over this defect at 30 mph.
3	Assign a qualified track inspector to visually inspect. Restrict the operation of trains to not more than 10 mph. Defective rails must be replaced as soon as possible.
4	Limit operating speed over defective rail to that as authorized by a qualified track inspector. The operation of trains must be restricted to not more than 30 mph or maximum allowable speed under the class of track, whichever is lower.
5*	Assign a qualified track inspector to visually inspect. Restrict the operation of trains to not more than 10 mph until weld repair bars applied. Then, limit the operating speed to not more than 40 mph or maximum allowable speed under the class of track, whichever is lower, and if rails are not replaced within 3 days, lower the operating speed to 10 mph.
6	Restrict operation of trains to not more than 30 mph as designated by a qualified track inspector or maximum allowable speed under the class of track, whichever is lower, and visually inspect by a qualified track inspector in not more than 10 days.
7	Restrict the operation of trains to not more than 30 mph apply joint bars within 10 days. Then, limit the operating speed to not more than 40 mph or maximum allowable speed under the class of track, whichever is lower.
8	Restrict operation of trains to not more than 50 mph or maximum allowable speed under the class of track, whichever is lower, and if rails are not replaced within 72 hours, lower the operating speed to 35 mph or maximum allowable speed under the class of track, whichever is lower.
9	Apply joint bars and restrict operation of trains to not more than 30 mph or a maximum allowable speed under the class of track, whichever is lower. As a general note, in applying joint bars, 2 bolts per rail end are to be used in the outer most holes.
10*	Assign a qualified track inspector to visually inspect. Apply joint repair bars and restrict operation of trains to no more than 30 mph or maximum allowable speed under the class of track, whichever is lower, and if rails are not replaced within 24 hours, lower the operating speed to 10 mph.

Figure SUB-PART D – 25 – Description of Protection Codes

*When the rail defect extends through a weld, a section of rail must be cut out when making either emergency or permanent repairs. Note, these repairs must be made in accordance with ONTC Standards.

Code	Action
1	When changing out the defective rail, remove from the track all rail showing gross distortion of the rail section (for example, heavy flow) plus all rail with evidence of rail shelling, occurring in the same rail.
2	When changing out the defect, replace the entire rail and make an inspection to ensure that the defect has not traveled through the weld into an adjacent rail.

Figure SUB-PART D – 26 – Repair Notes

6.6 Authorizing Movement over Rail Breaks

- a) This requirement expands upon practices outlined in [Figure Sub-Part D - 25](#) and has been developed to provide specific criteria for a qualified employee to authorize a train or engine to proceed safely over rail breaks,
- For the purpose of this, a rail break shall be considered a complete break of the rail,
- b) A train or engine must not be permitted to operate over a rail break when any of the following conditions exists:
- The rail break is in a tunnel or on a bridge,
 - For supervised moves, the rail break is within 500 feet (152,400 mm) of a bridge or tunnel,
 - For unsupervised moves, the rail break is within 500 feet (152,400 mm) of a bridge or tunnel,
 - The ties on either side of the break are defective, crushed, or split in the tie plate area,
 - Cracks are observed radiating from the broken rail ends,
 - The rail break occurs in an area of unstable grade,
 - The offset (overhang) is greater than 2 inches (51 mm),
 - The gap is greater than 3 1/2 inches (89 mm),

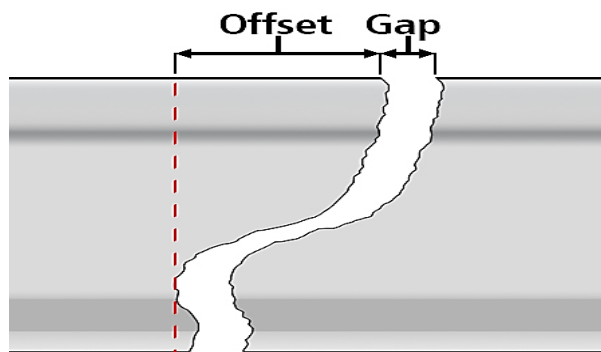


Figure SUB-PART D – 27 – Movement Over a Rail Break - Offset and Gap Measurement Visual

- In the case of a joint area, the break extends beyond the limits of the joint bar, or
 - The break occurs in an area in which the Superintendent, Maintenance of Way has specified that movements over rail breaks are not permitted.
- c) Where none of the above conditions exist and joint bars are installed with at least one bolt through the center of the break, trains or engines are allowed to operate over the break at a speed not exceeding 10 miles per hour,
- d) When none of the conditions outlined in item (b) exist and the gap size is too small to allow for the installation of joint bars with one bolt through the center of the break (less 1 1/8" (29 mm)) trains may be permitted to operate over the broken rail at a speed not exceeding 5 miles per hour, under a supervised movement,
- e) If the break is at a weld location and bolt holes exist, splice bars, or temporary weld bars must be installed with at least one bolt in each rail end,
- f) The condition of the rail break, splice bars, and supporting ties, must be visually observed as the train or engine operates over the break,
- g) The requirement for supervision of the train movement over the rail break may be waived if the rail break is a significant distance from a location where the employees' vehicle can be cleared, for example, where there is no other track, grade crossing or road nearby, or where

access by foot is impeded by adverse weather conditions provided the following regulatory requirements are met:

- The rail break is either,
 - An ordinary break;
 - A complete break in which there is a sign of a transverse fissure or compound fissure; or
 - A complete break at a defective weld,
 - Splice bars must be installed,
 - The condition of the rail break, splice bars and supporting ties must be inspected prior to each movement over the break,
 - Not more than 24 hours has elapsed since the initial inspection of the defect (defects must be repaired within 24 hours of detection), and
- h) A 5 mph speed restriction must be applied in accordance with the applicable operating rules:
- i) The Rail Traffic Controller (RTC) must be notified, in a clear manner, as to how the restriction is to be applied. One of the following methods must be used;
- Flags placed in accordance with CROR Rule 843,
 - By the use of an approved rail break sign, or
 - When flags or an approved rail break sign are not available, restrictions must be applied between two identifiable locations.
- j) Records of these rail breaks must be kept for a period of at least 1 year and include the following information:
- The mileage and subdivision where each rail break occurred,
 - The measured gap and offset at the rail break, and
 - The type of rail defect.
- k) Repairs must be completed within 24 hours from the time the defect is first inspected.

6.7 Supervised Movements over Rail Breaks

If the condition of the rail break, splice bars, and supporting ties, can be visually observed as the train or engine operates over the break, use the following flow chart to determine the appropriate action:

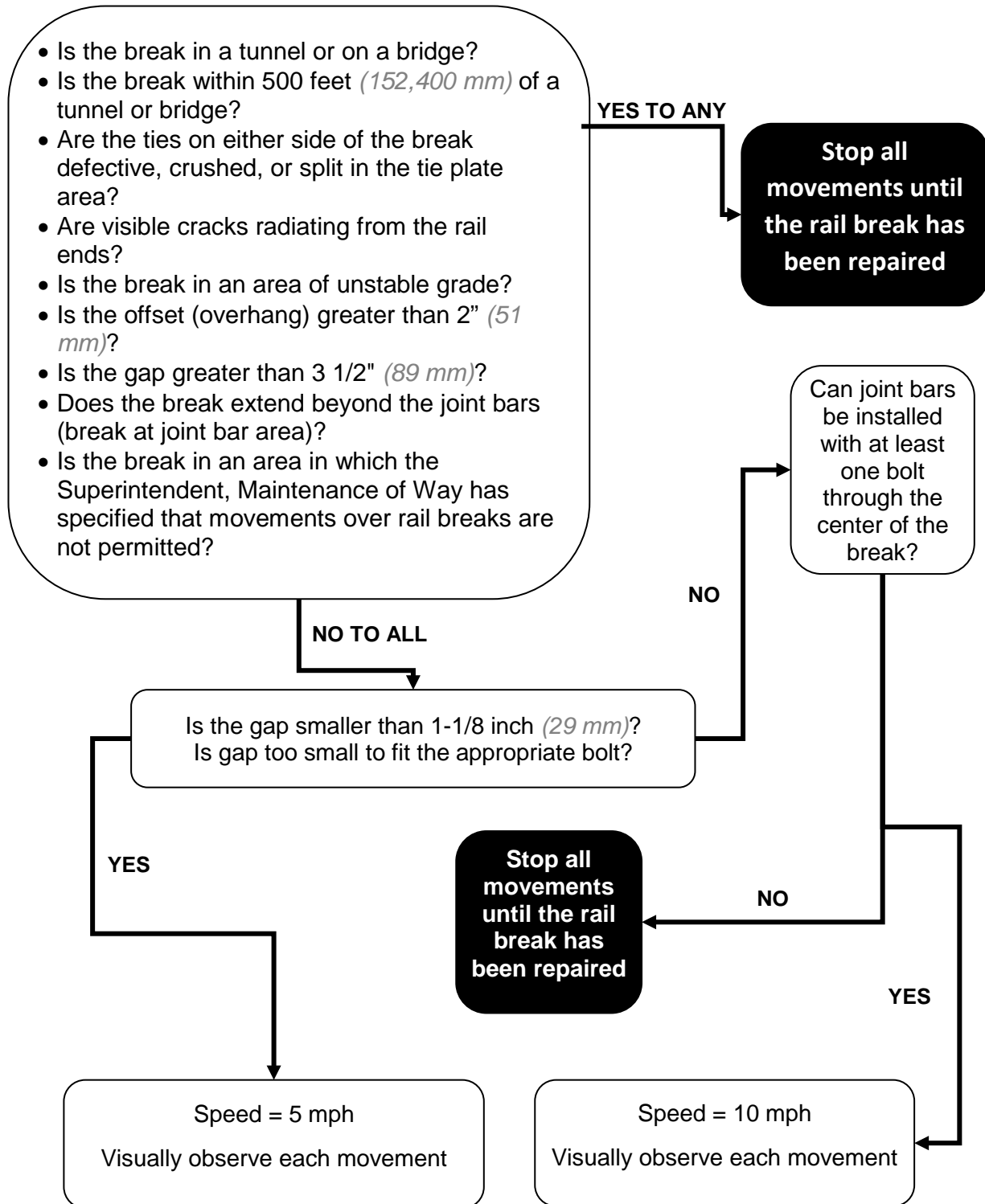


Figure SUB-PART D – 28 – Movement Over Rail Breaks - SUPERVISED

6.8 Unsupervised Movements over Rail Breaks

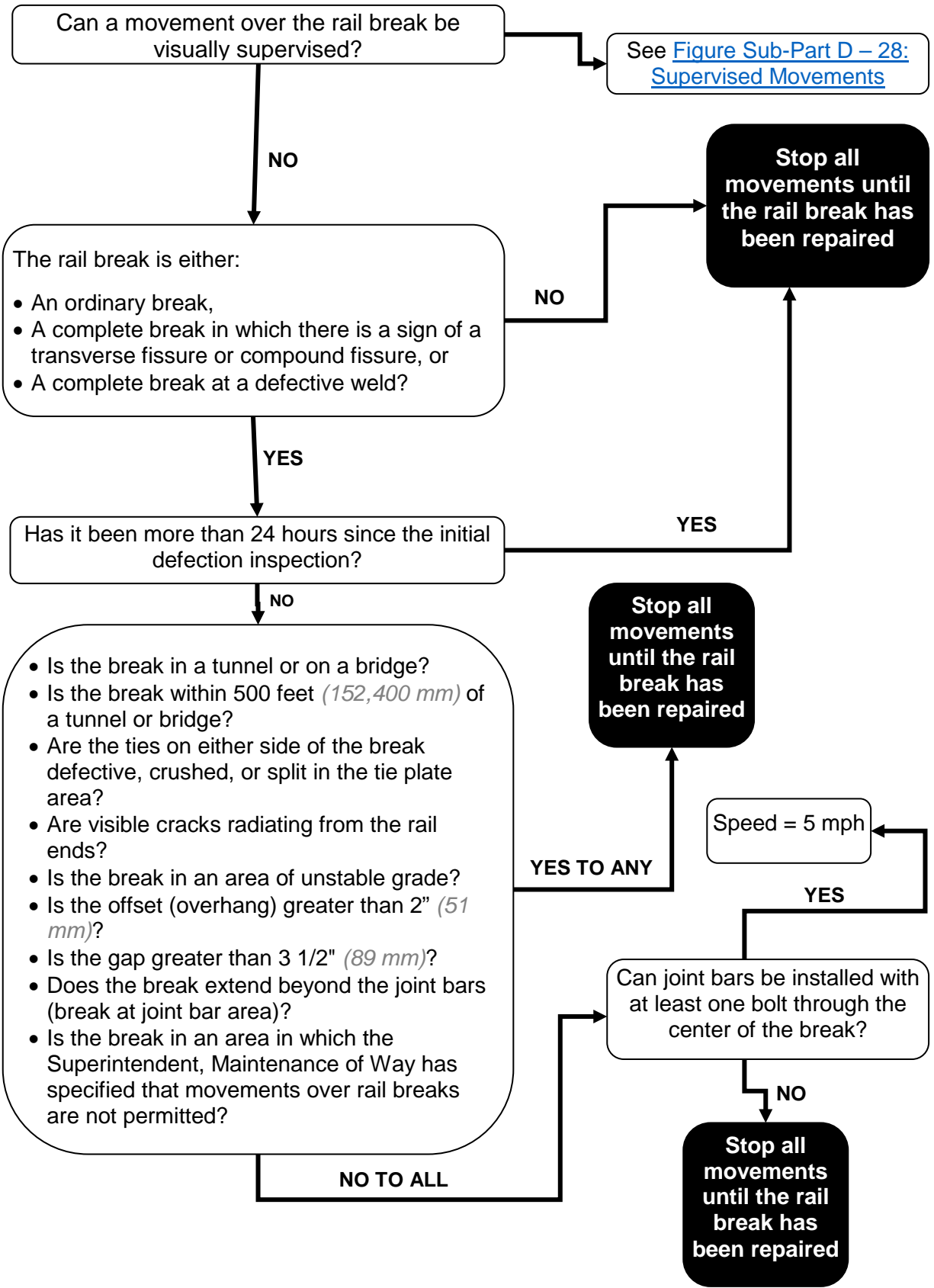


Figure SUB-PART D – 29 – Movement Over Rail Breaks - UNSUPERVISED

6.9 Inspection of Broken Rail

- a) When any broken rail is found on a main track or siding, the Track Maintenance Foreman or whichever employee first arrives at the location, must inspect the track for 300 feet (91,440 mm) in each direction from the break, looking for pieces of equipment and for damage to the rail or track, e.g. wheel marks.

6.10 Crushed Head, Localized Surface Collapse and Rail End Batter

- a) The following criteria shall be used in restricting the operating speed over crushed heads, surface collapse and rail end batter until such time as they can be corrected.

Depth of Defect CH, LSC and REB	Remedial Action
Less 1/8" (3 mm)	Monitor and repair
1/8" to 3/16" (3 mm) to (5 mm)	Limit operating speed to 30 mph and repair or replace
Greater than 3/16" (5 mm)	Limit operating speed to 10 mph and repair or replace

Figure SUB-PART D – 30 – Crushed Heads, Surface Collapse and Rail End Batter (inches and millimetres)

- b) Crushed Heads, Localized Surface Collapse and Rail End batter on Class 3 track and higher, measuring 1/8" (3 mm) or greater will be monitored by local forces monthly until repaired or replaced.
- c) A record of inspection location, date and measurement taken must be maintained.
- d) Depth of crushed heads, localized surface collapse and rail end batter shall be determined using a straight edge and a taper gauge as per the following diagrams:

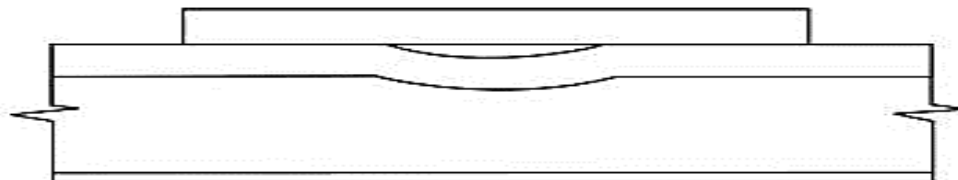


Figure SUB-PART D – 31 – Crushed Head



Figure SUB-PART D – 32 – Localized Surface Collapse

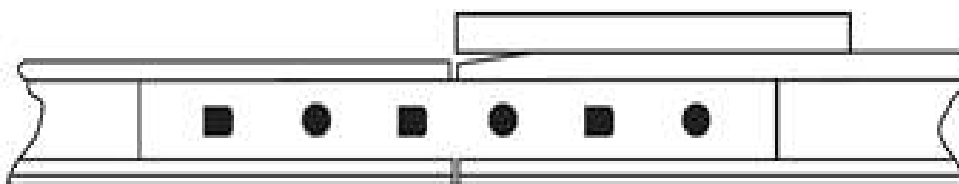


Figure SUB-PART D – 33 – Rail End Batter

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6.11 Rail Identification

- a) Rail branding is the raised letters and numbers along the web of the rail. Rail stamping is on the opposite side of the web and has indented letters and numbers.
- i. Branding identifies:
 - Rail weight or section, manufacturer, manufacturing method, year and month rolled

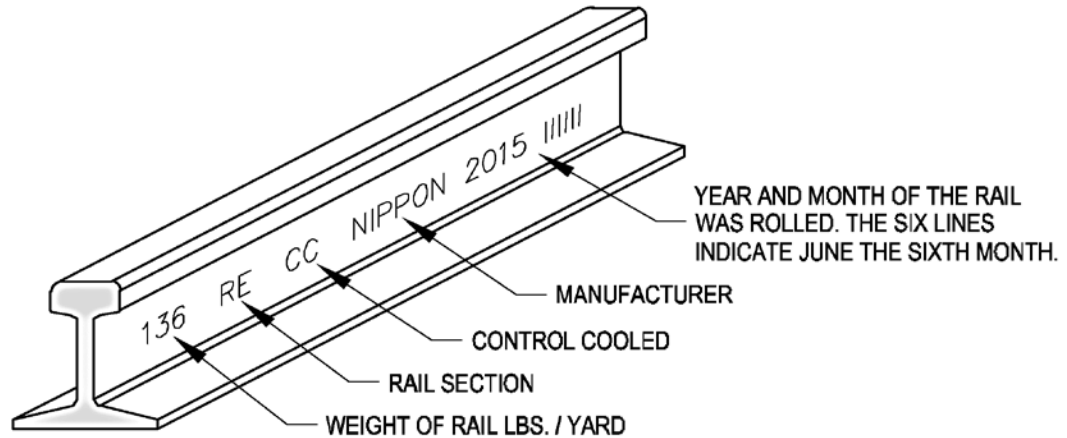


Figure SUB-PART D – 34 – Rail Branding

- ii. Stamping identifies:
 - Heat, ingot and rail sequence in manufacturing process

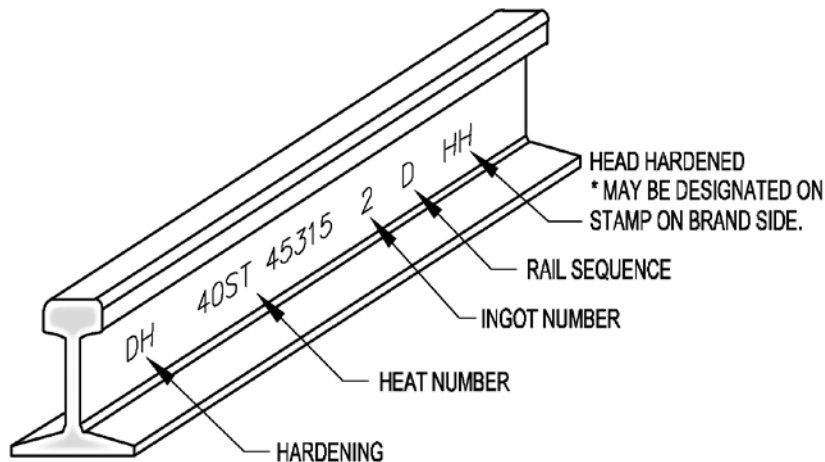


Figure SUB-PART D – 35 – Rail Stamping

6.12 Rail Removal

- a) When removing a defective rail, remove the full length of the rail if the following apply:
- i. Non-Mackie or non-control-cooled rails are being removed from the track because of transverse fissures
 - ii. Mackie or control-cooled rails are being removed from the track because of:
 - vertical split heads outside the joint area
 - transverse fissures or transverse defects accompanied by gross distortion of the rail section (for example, heavy flow or evidence of rail shelling)

- b) In territory laid with Mackie, CC or VT rail keep only rail with the corresponding brands or stamps on the rail racks.
- c) For each rail removed from the main track because it is broken or has a defect, a Mainline Rail Failure Report form must be completed. The exception is rail defects found and reported by the rail flaw detection cars.
- d) Rail removed from track that is defective or that is otherwise unfit for relay in track, and cannot be improved by treatment, must be classified and marked as scrap (XXXX). It must be stored for removal in a location that is apart from the racks where maintenance and relay rail plugs are stored.

6.13 Rail Wear Limits and Rail Management Design Zones

See [Appendix A](#)

6.14 Rail Classification

- a) When released from track, rail must be properly classified to ensure the best possible use with these general rules,
 - New Rail
 - New rail is laid in primary main lines.
 - Premium Rail
 - New Premium Rail is laid where authorized by the Director, Rail Infrastructure,
 - Premium Rail has an increased resistance to wear because of its chemical composition and special hardening process,
 - Premium Rail should not be mixed with Intermediate Rail due to the different wear rate.
 - Intermediate Rail
 - Intermediate Rail is used in the majority of applications at Ontario Northland due to our relatively low annual gross tons of traffic.
- b) The classification, description and marking of rail are as follows;

RAIL		
Classification	Description	Marking
New Rail	Rail not previously used in service, to be laid where allowed	N/A
Main Line Rail	Rail previously in service that is fit for relay in Main Lines	One white spot
Branch Line Rail (Agrium and Iroquois Falls Subdivisions)	Rail previously in service that is fit for relay in main track on Branch Lines	Two white spots
Yard, Siding and Pagwa Spur Rail	Rail previously in service that is fit for relay in subsidiary tracks	Three white spots
Repair Rail	Rail previously in service that is fit for repair of defective rails in Main or Branch Lines	Orange "R"
Scrap Rail	Rail that is unfit for relay due to wear or internal defects	Four "X's" (XXXX)

Figure SUB-PART D – 36 – Marking of Rail Released from Track

- c) Partly worn rail that is intended to be re-used in main track,
 - Be center marked for lifting,
 - Be classified,

- Have the vertical and gauge wear values written on the web of the rail,
- Be neatly stacked, rail section, in identifiable stands for each. For rail stands along the right-of-way, ensure the area allows for accessibility year-round but doesn't interfere with operations,
- Have the latest ultrasonic test information marked on the web of the rail approximately three feet from the end of the rail by minimum of two inch high letters with a paint stick. The marking will indicate "UTT" and the date of the last ultrasonic test.
 - Rail which has not been UTT tested and is to be used in track, shall have a Class 2 speed restriction placed until it has been ultrasonically tested and shall be inspected weekly.

d) Main Line Rail

- Main Line Rail released from track is classified as follows;
 - The rail is a 115 lb or heavier section,
 - The rail is without known defects,
 - The rail's wear is not more than the limits for Main Line rail shown on Figure Sub-Part D - 37,
 - The rail's end batter is 1/16 inch (*2 mm*) or less,
 - For previously worn jointed rail only, the clearance between the back of the new joint bars and the web of the rail is 3/16 inches (*5 mm*) or more – measured at the lower fillet,
 - The rail is 20 feet (*6,096 mm*) or longer unless it has been cut shorter for a special purpose.

RAIL CLASSIFICATION

115 lb. RE Rail

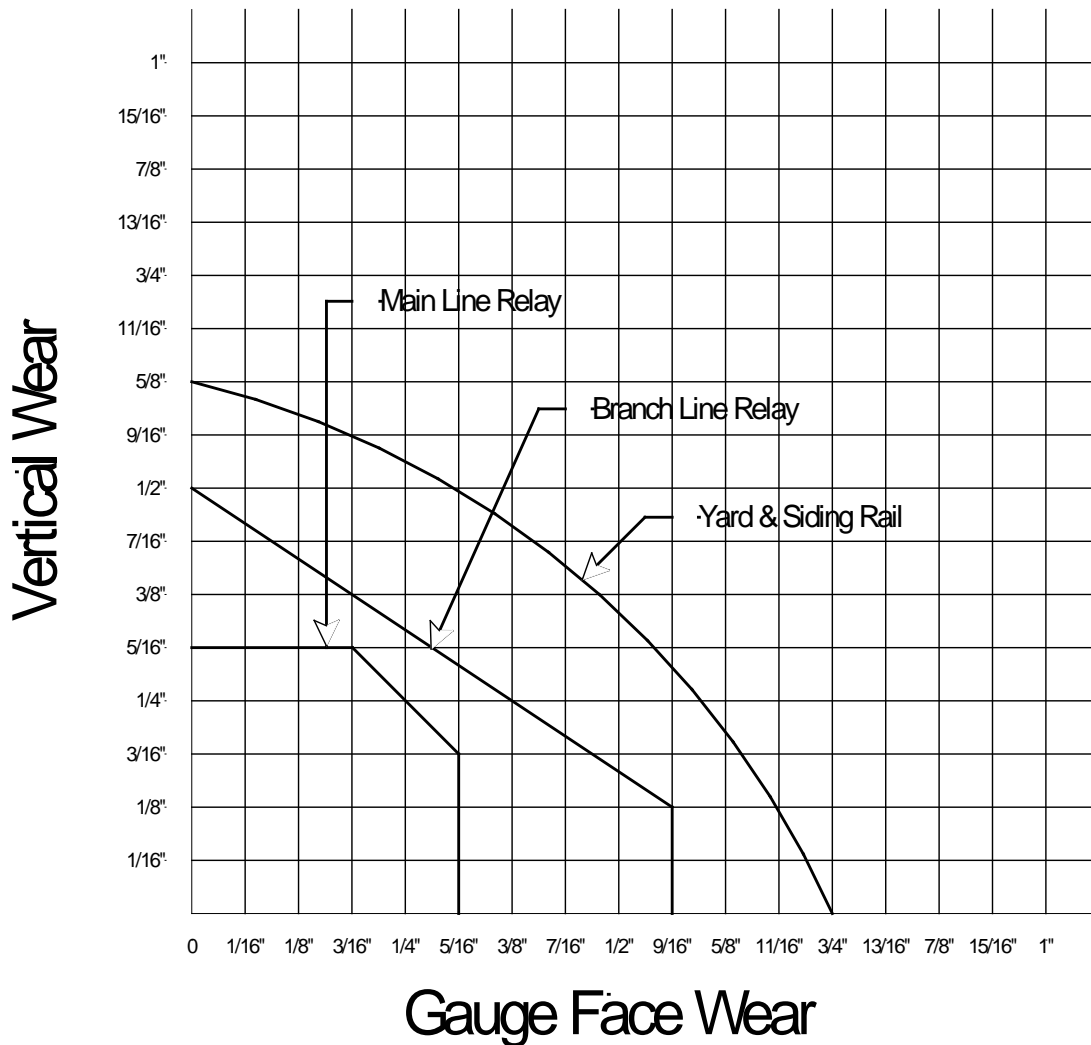


Figure SUB-PART D – 37 – 115 lb RE Rail Wear (Vertical and Gauge)

- Unless authorized by the Director, Rail Infrastructure, only 115lb RE rail will be used for relay rail in Main Line or Branch Line track programs.
- e) Branch Line Rail
- Lighter rail may be used as Repair Rail in Branch Lines when used for repair purposes.
 - Branch Line Rail released from track is classified as follows;
 - The rail is a 115 lb or heavier section (lighter rail may be classified as branch line rail when required for repair purposes on existing branch lines),
 - The rail is without known defects,
 - The rail has only bends that can be straightened easily,
 - The rail wear is not more than the limits identified for Branch Line Rail in Figure Sub-Part D - 37,
 - The rail's end batter is 1/8 inch (3 mm) or less,

- For previously worn jointed rail only, the clearance between the back of the new joint bars and the web of the rail is 1/8 inch (3 mm) or more, measured at the lower fillet,
 - The rail is 20 feet or longer unless it has been cut shorter for a special purpose.
- f) Yard and Siding Rail released from track is classified as follows;
- The rail is an 85lb or heavier section (lighter rail may be classified as siding rail when required for repair of existing sidings or yard tracks),
 - The rail is without known defects, sharp bends or excessive wear which make it unsuitable for use,
 - The rail is 20 feet or longer unless it has been cut shorter for a special purpose,
 - The rail wear is less than the limits shown in Figure B for Yard and Siding Rail.
- g) Repair Rail
- Repair Rail released from track is rail of suitable length and wear condition so that it will fit in curves or tangent track without producing a condition of rail end mismatch. Repair Rail must not exceed limits of Line B wear in [Appendix A](#).
- h) Scrap Rail
- Scrap Rail is any rail with defects that would render it unsuitable for use in track,
 - Rail of any weight with wear exceeding Line C wear is considered Scrap Rail

6.15 Marking Rail Removed from Track

- a) Rail released from track will be marked according to Figure Sub-Part D - 36,
- b) All rail removed from track must be handled in one of the following ways:
- i. If not suitable for re-use (scrap), then the rail must be marked as scrap by marking four X's (e.g. XXXX) on the rail.
 - ii. If suitable for re-use and 10 MGT or less traffic has run over the rail since it was last ultrasonically tested, then the rail must be marked to identify its length and grade classification. If more than 10 MGT of traffic has run over the rail since the last ultrasonic test, it must be retested prior to being identified for re-use. Grade Classifications are contained in [Sub-Part D – Section 6.14](#).
 - iii. If the rail has a detected defect, then the rail must be marked as per rail flaw detector instructions. Defects which are cut out must be marked as scrap.
- c) The classification markings will be placed on the web of the rail approximately four feet from the end,
- d) Rail released that has low head wear but excessive end batter is to be classified to the higher classification and marked for cropping,
- e) Rail to be cropped should be painted on the appropriate end in orange paint for approximately one foot,
- f) Repair Rails should have their head wear measurements marked on the top of the rail, near one end using a permanent paint stick or other device immediately over the “R”.

6.16 Bolted Rail

6.16.1 Rail Expansion

- Make an expansion allowance at each rail joint for the changing length of the rail due to the changing rail temperature.
- No expansion allowances are needed where bolted rail abuts continuous welded rail.
- Measure the rail temperature of each rail laid with an approved thermometer. To measure the rail temperature, place the thermometer on the base of the rail near the web away from the wind and out of the direct rays of the sun. The use of an infrared temperature measurement tool is acceptable.
- Provide the proper space allowance for expansion by placing shims of metal, fiber or wood between the ends of the adjoining rails as each rail is laid, except at insulated joints. These shims must be left in place until the line of rail is fully bolted and spiked. If rail anchors are provided, do not remove the shims until the rail line is anchored at least 10 rail lengths beyond the joint.
- The following figure shows the expansion allowances for various lengths of rail at different rail temperatures (in degrees Fahrenheit):

EXPANSION ALLOWANCE (inches and millimeters)							RAIL TEMPERATURE
LENGTH OF RAIL (FEET)	0" 0 mm	1/16" 2 mm	1/8" 3 mm	3/16" 5 mm	1/4" 6 mm	5/16" 8 mm	
30 – 50	Above 85°F Above 29.4°C	65° - 85°F 18.3 – 29.4°C	40° - 64°F 17.8°C	20° - 39°F 4.4°C	0° - 19°F -7.2°C	Below 0°F Below -17.8°C	
51 – 90	Above 85°F Above 29.4°C	74° - 85°F 23.3 – 29.4°C	61° - 73°F 22.8°C	48° - 60°F 15.6°C	35° - 47°F 8.3°C	Below 35°F Below 1.7°C	

Figure SUB-PART D – 38 – Rail Expansion Allowance

6.16.2 Rail End Mismatch

- Where rail end mismatch exceeds 1/8" (3 mm) on the top or the gauge side of a rail joint, it shall be repaired promptly by grinding, welding or replacement of the rail. Until such time as these repairs are made, movements over the mismatch shall not exceed the speed for the appropriate class of track, as prescribed by the following table:

Class of Track	Maximum Mismatch on Top of Rail	Maximum Mismatch on Gauge Side of Rail
1	1/4" (6 mm)	1/4" (6 mm)
2	3/16" (5 mm)	3/16" (5 mm)
3, 4, and 5	1/8" (3 mm)	1/8" (3 mm)

Figure SUB-PART D – 39 – Rail End Mismatch (inches and millimetres)

6.16.3 Joint Securement

- a) In conventional jointed track, each joint shall have at least 4 bolts and with at least 2 in each abutting rail in Classes 2 through 5 track and with at least 2 bolts in Class 1 track, with at least 1 in each abutting rail.
- b) In the case of CWR track, each rail shall be bolted with at least 4 bolts at each joint and with at least 2 in each abutting rail.
- c) Use standard, compromise or high-relief six-hole joint bars for all rails over 39 feet unless otherwise specified.
- d) When tightening bolts, ensure that the joint bars are seated properly and tighten bolts to proper specification.
- e) Replace missing bolts as soon as conditions permit.
- f) Existing joint bars may remain in place until a rail relay is performed.
- g) Rail bolt holes will be located using the correct indexing bar. The indexing bar will be placed so that the edge of the indexing bar matches the end of the rail,
- h) Only joint bars of the correct design for the rail section, drilling pattern and bolt type will be used,
- i) All joints in must be inspected at a minimum frequency of that shown in [Sub-Part F – Section 10](#),
- j) Joint bars that are cracked or broken must be replaced. On the occasion that the bars cannot be immediately corrected then place a speed restriction of not more than 10 mph under the authority of a qualified person. Except, if a joint bar on Classes 3 through 5 track is cracked, broken, or because of wear allows vertical movement of either rail when all bolts are tight, it must be replaced.
- k) Joint bars that are cracked or broken between the middle two bolt holes regardless of the class of track must be replace immediately, or the [Movement Over Rail Break Policy](#) must be applied.
- l) Rail joints should be slotted to prevent flowed rail and chipped joints,
- m) Where 33 to 39 foot panels are installed and three or more consecutive square joints exist, speed will be limited to that of class 3 track.
- n) Use a drill to make boltholes in the field. Never use a torch to burn boltholes.

6.16.4 Insulated Joints

- a) Defective insulated joints must be repaired or replaced promptly,
- b) Signal forces must report defective insulated joints to track forces promptly,
- c) Signal forces must advise the track forces of the location of insulated joints for proper signal operation. The location must not be changed without the approval of the Superintendent Signals,
- d) Encapsulated (coated) insulated joints are to be used in jointed rail sections,
- e) Fibre bars may be used in light rail sections,
- f) Plates must be used with all insulated joints on wood track ties. Insulated tie plates will be used on ties within 2" (51 mm) of the end post of an insulated joint,
- g) Insulated joints should be suspended, that is, the end post should not be over a tie,
- h) Rail ends where insulated joints are to be installed must conform to the following;
 - i. The end face shall be saw cut and bolt holes drilled to the proper size and location for the rail section,
 - ii. All rough edges and burrs shall be removed from the end face and the bolt holes,

- iii. Batter shall not exceed 1/32 inch (1 mm),
- iv. The heights of the adjacent rails shall not differ by more than 1/16 inch (2 mm).
- i) All rust, scale, dirt or other foreign matter must be removed from the rail joint area and from the joint bars before the joint is installed
- j) If the end post projects above the top of rail, it must be trimmed so that the top is below the top of rail, but not exceeding 1/8 inch (3 mm) below,
- k) Track near insulated joints shall be adequately anchored. Non-glued insulated joints will be considered as joints and will be anchored to the correct standard,
- l) Rail anchors must not be applied on the sides of ties adjacent to bootlegs,
- m) Rail end overflow must be removed at insulated joints by slotting. The gap should be filled with silicone sealer to prevent the influx of dirt and grinding material,
- n) After welding insulation must not be replaced until the rails have cooled,
- o) Insulated joints, no longer required must be removed from track as soon as possible.

6.16.5 Compromise Joints and Rails

- a) Compromise bars connect two rails of different weights together. They are constructed such that the bars align the running surface and gauge sides of different rails' sections.
- b) There are two kinds of compromise joints:
 - Directional (Right or Left hand) compromise bars are used where a difference in the width of the head between two sections requires the offsetting of the rail to align the gauge side of the rail.
 - Non-directional (Gauge or Field Side) compromise bars are used where the difference between sections is only in the heights of the head or where the difference in width of rail head is not more than 0.125" at the gauge point. The gauge point is the point on the gauge side of the rail exactly 0.625" below the top of the rail.
- c) To determine the hand of the joint, face the joint from the center of the track. When the larger rail section is on the left side of the joint, it is left hand joint. When the rail of larger section is on the right, it is a right hand joint,
- d) A compromise joint consists of one gauge side and one field side bar. The rail sections that the compromise bar will fit are indicated at each end of the bar,
- e) Compromise joint bars must not be modified from its initial design to fit a different rail section,
- f) Compromise joints must not be installed in turnouts, or within 20 feet of an open deck bridge, turnout, highway crossing or railroad crossing,
- g) Compromise joint must be painted blue for ease of recognition,
- h) Compromise rails consist of a single piece of rail, with a forged transition from one rail section to another. Compromise rails may be universal or "handed", depending on the rail sections, and are identified just as a joint would be,
- i) Compromise rails will be fully supported and tamped with the correct size tie plates under the corresponding rail section.

6.16.6 Use of Torch-Cut Rail – Emergency Only

- a) If a torch-cut rail is used in the track in an emergency, use it for the passage of emergency equipment only. A slow order of 10 miles per hour must be maintained until the rail is changed. The torch-cut rail must be replaced before regular train operations can continue.

6.16.7 Work in Jointed Rail

- a) To prevent track buckles in Jointed Rail, restrictions laid out in [Sub-Part D – Section 7.9](#) are to be followed upon completion of work.

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6.17 Guard Rails

6.17.1 Installation of Interior Guard Rails

- a) Guard rails must be installed at the following location;
 - i. All bridges that have supporting structure extending above the top of the ties,
 - ii. All bridges that have the underside supporting structure protruding beyond the deck of the bridge,
 - iii. All bridges that cross major roadways (two lane paved highway or greater),
 - iv. All bridges that cross commercially navigable waterways,
 - v. All bridges longer than 100 ft.,
 - vi. All bridges with curves 2 degrees and over,
 - vii. Any other locations designated by the Director, Rail Infrastructure.
- b) Guard rails should be considered, where piers of overhead structures are within 17 feet of centerline of track, there are no crash walls, and the track speed is greater than 10 mph,
- c) Existing guard rails that are not required per the above criteria, may not be removed without notifying the Director, Rail Infrastructure,
- d) Guard rails shall be installed as per Standard Plans,
- e) Guard rails will be spiked with two spikes per tie, without tie plates on every tie.

6.17.2 Temporary Removal of Guard Rails

- a) Whenever guard rails are temporarily removed on main track to accommodate track or bridge work, a temporary speed restriction of 10 mph is required.

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7. Continuous Welded Rail (CWR)

7.1 CWR Responsibilities

- a) All track forces must properly protect and promptly report any unusual conditions observed developing in CWR to the Track Inspector or District Manager.
- b) All supervisory personnel including Track Maintenance Foremen and Track Inspectors, on whose territory CWR is laid, must be familiar with the causes, high-risk conditions, and work as well as slow order requirements to avoid track buckles as summarized in the [Sub-Part D – Section 7.8 – Prevention of Track Buckling](#).
- c) All employees responsible for the maintenance or inspection of CWR must be trained and qualified in the maintenance of CWR.
- d) The current PRLT at Ontario Northland is 85°F and the PRLTR is 85°F plus 15°F (29.4°C plus 8.4°C).

7.2 Handling and Unloading CWR

- a) When unloading CWR;
 - i. Place rail as close to the location of installation as possible.
 - ii. When practicable, unload rail 6 feet or more from the centerline of track
 - iii. Separate and offset rail ends to allow by-pass if the rail expands
 - iv. Minimize the number of cuts in a string
 - v. Secure remaining rail on train prior to moving to a new location
- b) When moving or dragging lengths of CWR;
 - i. Maximize the use of rail dollies to prevent damage to rail and track structure.
 - ii. If dragging on the track;
 - Place blocking to prevent impacting switch components or road crossings.
 - Inspect damage to spikes, anchors or clips behind the movement, especially in curves, caused by the rail
 - Before dragging rail, must follow Industrial Operations Protocol to ensure adequate fire prevention and suppression measures are taken

7.3 Before Laying CWR

Lay CWR only if:

7.3.1 Ballast in CWR

- a) The ballast is of sufficient quantity and quality to restrain the track laterally under dynamic loads imposed by railroad equipment and thermal stress exerted by the rails.

7.3.2 Ties in CWR

- a) The tie condition and spacing is sufficient to ensure that gauge, surface, and alignment can be maintained to within the limits for the specific class of track prescribed by the current [Transport Canada Track Safety Rules](#).

7.4 Laying Continuous Welded Rail

7.4.1 Rail Temperature: When Laying CWR

- a) Unless advised otherwise by the Director, Rail Infrastructure, the PRLT (preferred rail laying temperature) at ONTC is 85°F (29.4°C),

- b) Measure the rail temperature of each CWR string laid with an approved thermometer. To measure the rail temperature place the thermometer on the base of the rail near the web away from the wind and out of the direct rays of the sun,
- c) Heat CWR to the preferred laying temperature during installation when the rail temperature is below the minimum preferred rail laying temperature. Ensure even distribution heat over the length of the rail installed.

7.4.2 Joints: When Laying CWR

- a) Bolt each joint in CWR with at least four bolts, and with at least two bolts in each abutting rail.
- b) Use standard, compromise or high relief six-hole joint bars in CWR territory where an approved design exists.
- c) Use six-hole joint bars with at least four bolts installed on standard joints that are planned to be eliminated through field welding. To facilitate welding, the two middle holes of the joint should not be drilled.
- d) Use six bolts per joint on joints located in turnouts, diamonds, crossovers, and bridges, as well as in compromise joints and insulated joints.

7.4.3 Anchoring: When Laying CWR

- a) Box anchor CWR at every second tie for restraint in both directions, this includes where joints are planned to be field welded in Class 3 through Class 5 track.
- b) For Class 3 through Class 5 track, where joints will not be field welded, box anchor every tie for 200 feet in each direction from the joint.
- c) For Class 1 and 2 track, the Manager, Track Programs in consultation with the Director, Rail Infrastructure may exempt the requirement to box anchor every tie for the first and last 200 feet of each CWR string.
- d) Box anchor jointed track connected to CWR strings every tie for 200 ft. When necessary, install additional anchors on the jointed track to prevent track movement.
- e) Anchor rail through turnouts and other special track work connected to CWR according to the applicable Standard.
- f) Box anchor each approach to a turnout and each approach to a track crossing (diamond) at every tie for a distance of 200 feet away from the turnout or track crossing.
- g) Do not allow trains to pass over unanchored CWR except in an emergency. Then, the following must be done:
 - i. inspect the track,
 - ii. place a speed restriction of not more than 10 MPH, and
 - iii. advise train crews to not use dynamic braking during movement over the track.

7.4.4 Tie Plates: When Laying CWR

- a) Use double-shoulder tie plates for rail lengths longer than 90 feet and rail weight 100lb or heavier.

7.4.5 Spiking: When Laying CWR

- a) Use spike lengths and spiking patterns that meet the requirements outlined in [Sub-Part D – Section 4 – Spiking](#).
- b) Each spike hole of the tie will be plugged, preferably with chemical plugging compound



7.5 After Laying Continuous Welded Rail

7.5.1 Documentation of CWR Laid

- a) Prepare and retain for 3 years a record of all CWR strings laid indicating:
 - i. the date,
 - ii. the string number,
 - iii. the weight of rail,
 - iv. the manufacturer,
 - v. the year,
 - vi. the temperature at which the rail was laid,
 - vii. the mileage location, and
 - viii. whether the string was E or W rail.

7.6 CWR and Bridges

7.6.1 Bridge Considerations and CWR

- a) Do not lay CWR on any bridge, unless the Manager, Structures has confirmed the bridge conditions meet the requirement for laying CWR,
- b) Bolted joints in connecting strings of continuous welded rail must not be located on bridges. Also, they must not be located on roadbed approaches within 300 feet of the ballast walls at either end of the bridge.

7.6.2 Anchors for CWR on Bridges

- a) If CWR is to be laid on a bridge, the Manager, Structures will provide an anchor plan for that bridge.
- b) On open deck bridges with CWR on the approaches, box anchor every tie for a distance of at least 200 feet starting 20 feet back from the back wall on each approach.

7.6.3 Fastenings for CWR on Bridges

- a) The installation of all new and replacement decks on open deck bridges is the responsibility of the Manager, Structures and is to be carried out in accordance with applicable standards.

7.7 Maintenance of Continuous Welded Rail

7.7.1 Surfacing and Lining in CWR Territory

- a) Where the track will be surfaced by tamping machine, at a rail temperature of 50°F (10°C) or lower:
 - i. The employee responsible for the surfacing work must set reference stakes over the full length of each curve of 3 degrees or greater before track is surfaced. Set 3 or more stakes no more than 200 feet apart and clear of work activity so they will not be disturbed.
 - ii. The Track Inspector must ensure that reference measurements are taken 1 week after each curve is surfaced.
 - iii. The Track Inspector must ensure that all curves with an average inward movement of 1 inch (25 mm) or more are corrected before hot weather arrives. This is done by restoring the curve to its proper alignment, or by cutting the rail and re-stressing it.

- b) Where it is necessary to surface track when the rail temperature is, or is expected to be, more than 15 F degrees above the preferred rail laying temperature (PRLT) perform additional track inspections while surfacing and behind surfacing work.
- c) Do not spike line in CWR territory if at all possible. Never spike line track when the rail temperature is above the preferred rail laying temperature.

7.7.2 Ballasting and Undercutting in CWR Territory

- a) When track has been skeletonized, take steps to restore the track to its original line as soon as possible.
- b) Where the track will be skeletonized at a rail temperature of 70°F (20°C) or lower:
 - i. The employee responsible for the ballasting or undercutting work must set reference stakes over the full length of each curve before track is surfaced. Set 3 or more stakes no more than 200 feet apart and clear of work gang activity so they will not be disturbed.
 - ii. The Track Inspector or Manager must ensure that reference measurements are taken 1 week after each curve is surfaced.
 - iii. The Track Inspector must ensure that all curves with an average inward movement of 1 inch (25 mm) or more are corrected before hot weather arrives. This is done by restoring the curve to its proper alignment, or by cutting the rail and re-stressing it.
- c) Do not permit the movement of trains over skeleton track, except for work trains unloading ballast. The work train operations may be made at 5 mph and only after ensuring that all ties are spiked and all rail anchors are applied.
- d) When new ties are installed, re-apply anchors in accordance with the ONTC's standard anchor pattern.
- e) As a guideline if the total raise in CWR territory will be more than 4 inches, perform the raise in at least 2 lifts. Allowing enough time between lifts to permit rail traffic to compact the ballast.

7.7.3 Joints for Maintenance of CWR

- a) Bolt each joint in CWR with at least four bolts, and with at least two bolts in each abutting rail.
- b) When tightening bolts, ensure that the joint bars are seated properly and tighten bolts securely.
- c) Replace missing bolts as soon as conditions permit.
- d) Use standard, compromise or high-relief six-hole joint bars in CWR territory unless otherwise specified.

7.7.4 Spikes for Maintenance or Upgrading of CWR

- a) Replace missing and broken spikes as necessary to effectively maintain gauge.
- b) Existing spiking patterns may remain in place until a rail relay is performed.
- c) When broken spikes are found in curves, carry out an inspection of the whole curve and adjacent tangent to ensure that no dangerous spike condition exists. Special attention must also be paid to the condition of tie plates when performing the inspection. Unusual wear patterns and broken plates indicate other problems exist.

7.7.5 Anchors for Maintenance of CWR

- a) Existing anchor patterns may remain in place until a rail relay is performed.
- b) Replace missing or broken anchors as necessary to effectively control movement of the rail.
- c) Re-apply or replace anchors removed during track maintenance work immediately upon completion of the work.
- d) Where replacement rails are installed, re-apply or replace the anchors that were removed. Box anchor every tie on both the repair rail and the adjoining CWR for 200' each direction. Anchors must bear on the same tie when box anchoring on every tie.
- e) At locations where track or rail movement occurs, for example due to heavy traffic on grades, train braking, or soft sub-grade, install additional rail anchors to control movement of the rail. Record these trouble areas and forward the information to the Track Inspector and the District Manager.

7.7.6 Tie Plates for Maintenance of CWR

- a) Replace missing or broken tie plates as necessary to effectively maintain gauge and to ensure proper support of the rail.

7.7.7 Shims for Maintenance of CWR

- a) Do not use shims with total thickness greater than 2-1/2 inches (64 mm) in CWR territory, unless protected by a slow order restricting trains to less than 2/3 the authorized timetable speed.
- b) Further protection may be required when shims are installed in sensitive locations such as at the approaches to bridges, the spirals in curves, at or near turnouts and at road crossings,
- c) Do not remove shims if the rail temperature is more than the preferred rail laying temperature.

7.7.8 Restressing CWR

- a) Restress CWR laid at temperatures below the minimum preferred rail laying temperature range when rail heaters are not available before the rail temperature reaches 40°F above the temperature at which the rail was laid.
- b) Restress CWR laid at temperatures more than 15°F above the maximum preferred rail laying temperature before winter. Where it is not possible to restress CWR laid at temperatures more than 15°F above the maximum preferred rail laying temperature before winter, then take other action such as apply additional rail anchors, fully drill and bolt joints, or apply slow orders to mitigate the risks of pull aparts, of rail string-lining and of rail tipping in plates at low temperatures.
- c) See [Appendix B](#) for restressing instructions

7.7.9 Repair of Pull-Aparts, Broken and Defective Rails in CWR

- a) When repairing pull-aparts, broken or defective rails, to the extent that is practicable, ensure that the amount of rail that is put in the track equals the amount of rail removed.
- b) It is very critical to remove rail added during cold weather repairs before the rail temperature exceeds the adjusted rail laying temperature.

- c) A complete CWR Maintenance Record Form is required for each pull-apart and for each repair of CWR that involves the adding or removing of rail.
- d) Monitor repairs where rail was added or removed as temperatures change and protect track with a slow order if required.
- e) At locations where a pull apart has occurred a second time within the same season, fully drill and bolt the joint and box anchor every tie for a minimum of 200 feet in both directions.

7.7.10 Repairing Pull-Apart of 3 inches or Less – Method 1

At a minimum, include the following steps, or alternatively the steps listed in [Method 2](#) below, for the repair of a pull-apart of 3 inches or less:

- a) Use a rail puller to pull the rail together.
- b) Apply a minimum of 4 bolts (2 bolts in each abutting rail) in each joint.
- c) Re-apply or replace displaced anchors.
- d) Complete a CWR Maintenance Record form.

7.7.11 Repairing Pull-Apart of 3 inches or Less – Method 2

At a minimum, include the following steps, or alternatively the steps listed in [Method 1](#) above, for the repair of a pull-apart of 3 inches or less:

- a) Cut in a permanent replacement rail of a minimum 12 feet in length.
- b) Lay the replacement rail with the maximum allowable joint gap.
- c) Use six-hole joint bars at each joint, where applicable.
- d) Apply a minimum of 4 bolts (2 bolts in each abutting rail) in each joint.
- e) Re-apply or replace displaced anchors.
- f) Complete a CWR Maintenance Record form.

7.7.12 Repairing Pull-Apart of More than 3 inches

At a minimum, include the following steps for the repair of a pull-apart of more than 3 inches:

- a) Cut in a permanent replacement rail of a minimum 12 feet in length.
- b) Lay the replacement rail with the maximum allowable joint gap.
- c) Use six-hole joint bars at each joint, where applicable.
- d) Apply a minimum of 4 bolts (2 bolts in each abutting rail) in each joint.
- e) Re-apply or replace displaced anchors.
- f) Complete a CWR Maintenance Record form.

7.7.13 Repairing Broken Rail in CWR

At a minimum, include the following steps for the repair of a broken rail:

- a) Cut in a permanent replacement rail of a minimum 12 feet in length.
- b) Install proper joint gaps as per [Sub-Part D – Section 6.16.1](#).
- c) Use six-hole joint bars at each joint, where applicable.
- d) Apply a minimum of 4 bolts (2 bolts in each abutting rail) in each joint.
- e) Re-apply or replace displaced anchors.
- f) Fill out a Mainline Rail Failure Report form for the broken rail.
- g) Complete a CWR Maintenance Record form if rail is added or removed.

7.7.14 Repairing Defective Rails (detected by Rail Flaw Detector) with a Replacement Rail in CWR

At a minimum, include the following steps for the repair of a defective rail with a replacement rail:

- a) Cut in a permanent replacement rail of a minimum 12 feet in length.
- b) Install proper joint gaps as per [Sub-Part D – Section 6.16.1](#)
- c) Use six-hole joint bars at each joint, where applicable.
- d) Apply a minimum of 4 bolts (2 bolts in each abutting rail) in each joint.
- e) Re-apply or replace displaced anchors.
- f) Complete a CWR Maintenance Record form if rail is added or removed.

7.7.15 Temporary and Permanent Joints: Maintenance and Inspection in CWR

CWR is defined as any rail with a length of over 400 feet. Where CWR currently exists, or where new or partly worn CWR is being installed, the intent should be to maintain the CWR in existing lengths or to create or increase the length of CWR by eliminating permanent and temporary rail joints. Rail joints within or joining adjacent lengths of CWR that will not be eliminated before November 30th of any given year must comply with and be maintained with the requirements for permanent rail joints in CWR. Rail joints within or joining adjacent lengths of CWR that are intended to be eliminated prior to November 30th of any given year must comply with and be maintained with the requirements for temporary joints in CWR.

- a) Permanent joints in CWR will be fully drilled and bolted, joint bars applied, and the rail fully box anchored 200' (60,960 mm) each side of the joint on every tie. The rail will be spiked in all available holes for 19' 6" (5,944 mm) on both sides of joint.
- b) Temporary joints in CWR must use six-hole joint bars. To facilitate welding, the hole nearest the end of the two abutting rails must not be drilled. A joint gap not exceeding 3/8" (10 mm) is to be left with four bolts installed in the outer most holes of the joint.
- c) All temporary joints must be eliminated or converted to permanent joints by November 30th of any given year.
- d) Records of the location, date of installation, date of inspection, and date of removal of all temporary joints must be maintained by the District Manager.
- e) As per [Sub-Part D Section 10](#), a walking track inspection of all joints will done yearly at a minimum.

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7.8 Buckled Track

7.8.1 Prevention of Track Buckling

This section lists the Requirements for inspection, track work and slow orders to reduce the risk of track buckling in CWR territory. Except in cases of emergencies, no out of face surfacing and lining, rail replacement or tie renewal will be performed if the rail temperature is above the PRLTR (100°F (37.8°C)). As a guideline, rail temperature will be 25 to 30°F above the ambient temperature.

Track buckling is a constant threat during times of high or rapidly rising temperatures. It is of particular concern on CWR territory in the spring and early summer.

7.8.2 Indicators of Potential Track Buckle

- a) Watch for indicators of potential track buckling problems such as:
 - i. Wavy rail.
 - ii. New line deviations, such as short flat spots in curve or kinks in tangent track.
 - iii. Gaps or voids in ballast at end of ties.
 - iv. Rail base not properly seated in the plates.
 - v. Rail running through the anchors that may require restressing, resetting anchors and/or installing additional anchors.
 - vi. Churning of ballast caused by tie movement resulting in gauge and line kinks.
 - vii. Longitudinal movement of switch point in relation to stock rail, resulting in improper switch adjustment.

7.8.3 Locations Prone to Track Buckling

- a) Pay particular attention to the following locations that are more prone to track buckles:
 - i. Curves.
 - ii. Bridge approaches.
 - iii. Grade crossings.
 - iv. Crossings with other railroads (diamonds).
 - v. Bottom of a heavy grade.
 - vi. Spots where the subgrade is soft or wet.
 - vii. Rock cuts where rail temperatures may be extremely high.
 - viii. Areas having a history of lateral instability.
 - ix. Recently disturbed track e.g. tie replacements, surfacing, new turnouts, etc.
 - x. Locations where track work has been undertaken in cold weather and rail has not been adjusted, rail anchors not applied or ballast not restored.
 - xi. Previous track buckle not permanently repaired.

7.8.4 Protection of a Track Buckle or Imminent Track Buckle

- a) A track buckle is an emergency situation. When a track buckle is detected, immediately take the following steps until the condition is corrected:
 - i. Stop all traffic through the area until temporary / permanent repairs are complete, or
 - ii. Have a qualified employee inspect the buckled location, determine that the track is safe for the passage of trains, and then supervise the passage of each train over the location at a maximum of 10 mph until temporary repairs are complete.

- When there are indications that a track buckle may be about to occur (see [Sub-Part D – Section 7.8.2](#)), immediately take the following steps to protect train traffic until the condition is corrected:
 - place a 10 mph slow order, or
 - stop rail traffic if the situation warrants.
- b) Inspect track protected by a heat slow daily while the order is in effect. Conduct inspections during the heat of the day.

7.8.5 Temporary Repair of a Track Buckle

- a) For temporary repairs of track buckles, place the track in the best possible alignment where the track will not move and where it will provide clearance for train operation at 10 mph.
- b) Protect temporary repairs with a 10 mph slow order until permanent repairs are complete.

7.8.6 Permanent Repair of a Track Buckle

- a) For permanent repairs of track buckles, take corrective actions that address the root cause, prevents recurrence, and allows for train operation at authorized timetable speed. Permanent repairs could involve:
 - i. apply new or additional anchors,
 - ii. add ballast to shoulder and cribs,
 - iii. replace defective ties
 - iv. tamp, surface, line and regulate,
 - v. cut out rail and restress.
- b) A qualified Track Inspector must re-inspect permanent repairs to track buckles in the heat of the day and verify the effectiveness of repairs before returning track to authorized timetable speed.
- c) When rail is removed in repairing a track buckle complete a CWR Maintenance Record Form.

7.8.7 Track Buckle Reporting

- a) Fill out a Track Buckle Report for each track buckle. A Track Buckle Report is NOT required if the track buckles while work is being carried out. Send a copy to the District Manager.

7.9 Placing Temporary Speed Restrictions Account Work

7.9.1 General Requirements

- a) Place a temporary speed restriction as per [Figure SUB-PART D – 40 - Temporary Speed Restrictions for Track Work](#). Speed restrictions ensure safe train operations until the affected track stabilizes. Restrictions need to stay in place to allow the ballast to consolidate, rail compressive forces to equalize and the subgrade to compact. Take more restrictive measures when conditions warrant.

7.9.2 Responsibility for Placing Speed Restrictions

- a) During the work or before returning the track to service, the qualified foreman / supervisor in charge must ensure the following:
 - i. Adequate gauge, surface, and alignment have been established.
 - ii. Sufficient crib and shoulder ballast is in place.
 - iii. The rail is properly anchored.
 - iv. Turnout is within standards.

7.9.3 Speed Restrictions Length

- a) To minimize running rail and other dynamic forces, trains must have time to brake and adjust slack before entering the disturbed track. To ensure trains reach the desired speed before entering the affected track, place speed restrictions at least 0.1 mile in each direction from the outside limits of the affected track. For heavy grades, sharp curves or substandard track conditions, extend speed restrictions farther from the work limits, if needed.

7.9.4 Speed Restriction Requirements while Carrying Out Track and Switch Tie Renewals

Apply the following speed restrictions in order to prevent track buckling while carrying out track and switch tie renewals:

- a) When traffic must pass before all ties are fully plated, spiked, and anchored, and before all newly installed ties are tamped, ballast cribs filled and shoulders pulled up the following must be done:
 - i. inspect the track,
 - ii. place a speed restriction of not more than 10 MPH, and
 - iii. advise train crews to not use dynamic braking during movement over the track.

- b) When tie renewals are complete, before traffic can pass ensure that conditions laid out in [Figure SUB-PART D – 40 - Temporary Speed Restrictions for Track Work](#) satisfied and place the associated restrictions:

Temporary Speed Restrictions for Track Work			
Type of Work	Temperature	TSO in CWR	TSO in Jointed Rail
Rail laying, curve and out of face	Any	1 – train at 10 mph then inspect, if ok then, 1 – train at 25 mph then inspect, if ok track speed	1 – train at 25 mph, then inspect, if ok track speed
Spot tie renewal, Spot surfacing	At or above PRLT	2 – trains at 25 mph then inspect, if ok then track speed	1 – train at 25 mph then inspect, if ok track speed
	Below PRLT	Inspect If ok track speed	Inspect If ok track speed
Out of face tie renewal, Out of face surfacing, Turnout replacement, Undercutting, Lining	At or above PRLT	1 – train at 10 mph, then inspect, if ok then, 10 – trains at 25 mph, then inspect, if ok track speed	1 – train at 10 mph, then inspect, if ok, 5 – trains at 25 mph then inspect, if ok track speed
	Between PRLT and 40°F below the PRLT	1 – train at 10 mph, then inspect, if ok then, 5 – trains at 25 mph, then inspect, if ok track speed	1 – train at 10 mph 2 – trains at 25 mph then inspect, if ok track speed
	40°F or more below the PRLT	2 – trains at 25 mph, then inspect If ok track speed	1 – train at 25 mph then inspect, if ok track speed

Note 1: Train is defined as freight or a mixed train; Passenger trains are not to be counted for provisions of this table.

Note 2: Do not remove speed restrictions in the heat of the day

Note 3: In the interpretation of Maximum Speed the Timetable may dictate a more restrictive speed.

Figure SUB-PART D – 40 – Temporary Speed Restrictions for Track Work

- c) Before placing any speed restrictions, a qualified foreman or track Inspector must inspect all track work. Once the required trains have passed over the track, re-inspect the track in the heat of the day before returning the track to authorized timetable speed. The qualified employee will modify / remove the slow orders.

IMPORTANT: There may be conditions where further speed restrictions are required. The person in charge of the work must ensure that field inspections on the completed work are carried out and that areas of concern are identified and protected.

- d) Do not increase speeds in the heat of the day.

- e) For spot tie replacement by hand in CWR territory, it is not necessary to apply a speed restriction if **all** the following conditions are satisfied:

SPEED RESTRICTIONS – SPOT TIES	
CONDITION	MAXIMUM SPEED
<ol style="list-style-type: none"> 1. At most two adjacent ties are replaced; 2. The four ties on each side of the replaced ties are undisturbed; and 3. Installing new ties should disturb the track as little as possible, jacking of track should be to minimum, base of plates on newly installed ties upon completion of install should be even with (0" below or at more 1/4" (6 mm) above) base of plate on adjacent undisturbed tie; 4. The ambient temperature is less than 80°F (27°C) and is expected to stay less than 80°F (27°C) for 48 hours 5. Newly installed ties are fully plated, spiked, anchored and tamped. Cribs are full and shoulders restored. 	<p>Authorized Timetable Speed</p>

Figure SUB-PART D – 41 – Speed Restrictions - Spot Ties

If any of the above 5 conditions are not satisfied, the appropriate speed restrictions as laid out in [Figure SUB-PART D – 40 - Temporary Speed Restrictions for Track Work](#) are to be applied.

7.9.5 Speed Restriction Requirement when Surfacing and Lining in CWR Territory

Apply the following speed restrictions in order to prevent track buckling while surfacing and lining:

- a) When traffic must pass before all ties have been tamped and run-outs made and before all cribs have been filled with ballast and all shoulders have been pulled up the following must be done:
 - i. inspect the track,
 - ii. place a speed restriction of not more than 10 MPH, and
 - iii. advise train crews to not use dynamic braking during movement over the track.
- b) When surfacing and lining, before traffic can pass ensure that the conditions are satisfied and place the associated speed restrictions detailed in [Figure SUB-PART D – 40 - Temporary Speed Restrictions for Track Work](#)
- c) Before placing any speed restrictions, a qualified foreman or track inspector must inspect all track work. Once the required trains have passed over the track, re-inspect the track in the heat of the day before returning the track to timetable speed.

IMPORTANT: There may be conditions where further speed restrictions are required. The person in charge of the work must ensure that field inspections on the completed work are carried out and that areas of concern are identified and protected.
- d) Do not increase speeds in the heat of the day.

- e) When surfacing by hand or by machine in CWR territory, it is not necessary to apply a speed restriction if **all** the following conditions are satisfied:

SPEED RESTRICTIONS – SPOT SURFACING	
CONDITION	MAXIMUM SPEED
<ol style="list-style-type: none"> 1. The surfacing performed is spot surfacing (on the portion of tangent or curve track that is defective is surfaced – out of face surfacing or surfacing of whole curves is not classified as spot surfacing) 2. The lift is 1" (25 mm) or less 3. The track is not identified as a high risk track buckle location; and 4. The track is tangent or of curvature less than 1° 30 min. and the ambient temperature is less than 80°F (27°C) and is expected to stay less than 80°F (27°C) for 48 hours OR The track is of curvature 1° 30 min. or more and the ambient temperature is less than 70°F (21°C) and is expected to stay less than 70°F (21°C) for 48 hours. 	<p>Authorized Timetable Speed</p>

Figure SUB-PART D – 42 – Speed Restrictions - Spot Ties

If any of the above 4 conditions are not satisfied, the appropriate speed restrictions as laid out in [Figure SUB-PART D – 40 - Temporary Speed Restrictions for Track Work](#) are to be applied.

7.9.6 Speed Restriction Requirements when Ballasting and Undercutting in CWR Territory

Apply the following speed restrictions in order to prevent track buckling while ballasting and undercutting:

- a) When traffic must pass before all ties have been spiked, all rail anchors have been applied and all ties on the newly ballasted track and run-outs have been tamped the following must be done:
 - i. inspect the track,
 - ii. place a speed restriction of not more than 10 MPH, and
 - iii. advise train crews to not use dynamic braking during movement over the track.
- b) Where track is re-ballasted by skeletonizing track, before traffic can pass ensure that the conditions are satisfied and place the associated speed restrictions detailed in [Figure SUB-PART D – 40 - Temporary Speed Restrictions for Track Work](#)
- c) Before placing any speed restrictions, a qualified foreman or track inspector must inspect all track work. Once the required trains have passed over the track, re-inspect the track in the heat of the day before returning the track to timetable speed.
IMPORTANT: There may be conditions where further speed restrictions are required. The person in charge of the work must ensure that field inspections on the completed work are carried out and that areas of concern are identified and protected.
- d) Do not increase speeds in the heat of the day.

- ii. The main track switch point is lined and locked against the stock rail. If the points cannot be lined and locked, points must be secured with an approved switch point clamp and spiked. When spiking a point the gauge plate must have an appropriate hole intended for point securement. Also the tie must be sound enough to secure the point.
- d) Switch stand requirements are as follows,
- i. Switch stands should be plumb and be securely spiked, bolted or lagged to the head block ties, Stands on spring switches shall be securely bolted to the head block ties,
 - ii. Main track switch stands shall be of an approved rigid type,
 - iii. On other than main track, approved rigid, or safety stands may be used,
 - iv. Semi-automatic stands of an approved type may be used on yard tracks only where speeds do not exceed 15 MPH,
 - v. Approved rigid stands must be used with spring switches, or where operating stands are used with derails,
 - vi. New and rebuilt switch stands may be supplied with ergonomic switch handles,
 - vii. Switch stands must be located so as to conform to approved plans,
 - viii. Low stands must be used where stands are to be located between tracks having track centres 18' or less,
 - ix. Switch stands and switch machines must be placed, wherever possible, on the closed point side of the track, so the connecting rod is in tension, when the switch is set for the normal position,
 - x. The handles on all high switch stands should be positioned so that when the switch is in the normal position the handle faces away from the frog and away from the track. When the switch is lined over for the diverging route the handle should move in the same direction as the points,
 - xi. When installing parallel or ground throw switch stands, the operating level must point toward the frog for normal position.
 - xii. Switch stands must be equipped with the proper reflectorized target according to CROR and be in an effective condition,
- e) Switch rods and connecting rod bolts must be inserted with the nuts on the top side and secured with cotter pins,
- i. Ensure the connecting rod jaw openings, bolt holes and bolts correctly match the switch rods.
 - ii. The connecting rod bolt under the switch stand must be installed with the head of the bolt on the upper side,
- f) Stock rails and switch points requirements are as follows,
- i. Switch points shall fit snugly against the stock rails for the entire length of the planed portion.
 - ii. Turnout stock rails shall be horizontally bent as shown on the standard plan. An approved rail bender shall be used for bending rails.
 - iii. It is important that stock rails are properly seated in the switch plate having no lateral movement in the plates and that switch plates have no movement on the ties. Care must be taken in adjusting braces to avoid over-driving and rotating the stock rails out of the rail seat of the plate.

- iv. Switch points must be installed directly opposite each other. Adequate rail anchors must be installed to resist rail movement
- v. Switch points should not overhang the gauge plate nor be more than 1" (25 mm) back from the edge of the gauge plate.
- vi. Switch point protectors;
 - Switch point protectors or switch point guards of an approved type may be installed, to protect the switch point where the speed on any route through the turnout does not exceed 15 mph. Care must be taken when installing to ensure that the protector fits properly against the rail and that any flawed metal on the gauge side of the straight stock rail is ground off,
 - Switch point protectors that attach to the tip of the switch point are no longer acceptable for use at ONTC.
- g) Ballast will be cleaned from cribs to a depth adequate to prevent contact with rods and to facilitate winter switch maintenance and drainage.
- h) Locks and keeper requirements are as follows,
 - All main track stands must be equipped with an approved switch lock in good working order and properly chained to the stand on high mast switch stands or to the ties on low mast switch stands. Switch stands on other than main tracks are to be equipped with a hook type keeper unless otherwise directed,
 - On all main track hand operated switches, high security switch locks must be installed,
 - At locations where vandalism is a concern, high security switch locks may also be installed as directed by the Director, Rail Infrastructure on the following,
 - Hand operated switches on other than main tracks,
 - Other devices such as derails, electric switch locks, foot pedals, push button operation panels, etc.
 - Approved switch point locks must be installed on all manually operated main track switches (except spring switches) seen as facing points from a highway crossing at grade where all the following conditions exist;
 - The crossing is not protected by gates, and;
 - The train speed is 50 mph or faster (30 mph where sight lines are poor), and;
 - The switch is within 200 ft of the crossing.
 - Where switch point locks are installed, the switch will be identified by painting the top of the switch stand castings white

8.4 Maintenance of Turnouts

8.4.1 General Maintenance of Turnouts

- a) The Signal Maintainer shall be present when any planned work, which may interfere with the functioning of the signal apparatus, is being performed.
- b) Insulation in switch rods, and gauge plates shall be maintained in good condition at all times.
- c) Switch stands, switch plates, connecting rod bolts, and spring frogs shall be kept properly lubricated to provide easy movement and to protect against excessive wear.
- d) Switch stands, targets, masts, connecting rods and all other component parts must be kept in good operating condition and must have defective parts repaired or replaced immediately.
- e) The application of heat or mechanical methods to repair bent or twisted switch stand masts is not permitted.

8.4.2 Switch Stand

- a) Check the switch lock or keeper.
- b) Check that the stand is securely fastened to the headblock ties.
- c) Ensure that mast bearing areas are well lubricated.

8.4.3 Switch Target

- a) Check the condition of reflectorized targets.

8.4.4 Eyebolt

- a) Check the relative movement between the handle and top casting, and between the top casting and mast. When the relative movement becomes so great as to require excessive extension of the eyebolt from the mast barrel, the switch stand must be replaced.
- b) When excessive eyebolt wear affects the quality of service provided by the switch stand, replace it – return the old one to the Yard for rebuilding.

8.4.5 Connecting Rod

- a) Inspect the connecting rod for excessive wear in bolt holes. Check connecting rod bolts to ensure that the nut and cotter pins are in place.

Near Point	Far Point	Crank Eye on Stand	Clevis on Connecting Rod
Fits Properly	Too Tight	Screw In	Screw In
Fits Properly	Too Loose	Screw Out	Screw Out
Too Tight	Fits Properly	Screw In	Screw Out
Too Loose	Fits Properly	Screw Out	Screw In
Too Tight	Too Tight	Screw In	None
Too Loose	Too Loose	Screw Out	None

Figure SUB-PART D – 44 – Switch Adjustment

8.4.6 Switch Rods

- a) Switch rods and transit clips should have sufficient clearance so as not to contact the side of the tie or the slide plate.
- b) Check switch rods for excessive wear in bolt hole areas. Check insulation in insulated rods. Check for excessive wear on rod clips, rod clip bolts and on the connecting rod bolt.

8.4.7 Switch Points and Stock Rails

- a) Gaps in switch points, regardless of size, are unacceptable. The points must fit tightly against the entire planed portion of the stock rail.
- b) Metal flow on switch points and stock rails shall be kept ground off to maintain proper gauge and to prevent chipping of these parts.
 - Flow should not exceed $1/16''$ (2 mm) on switch point or gauge side of stock rails.
- c) Stock rail on the turnout side must be properly bent to provide a good fit for the switch point.
- d) Chipped or broken switch point tips must not have a thickness greater than $3/16''$ (5 mm),
- e) Switch point tip is not less than $1/2''$ (13 mm) below the top of the stock rail,
- f) Switch points are square to each other and not overhang the gauge plate by more than $1''$ (25 mm).

NOTE: Every effort must be made to replace the defective switch point and stock rail. A mainline switch point will only be welded upon the direction of the Superintendent, Maintenance of Way.

- g) Switch points are manufactured such that the running surface is higher than the stock rail, as measured at the location where the distance between the gauge side of the stock rail and gauge side of the switch point when tight against the stock rail is $4-1/2''$ (114 mm). When this vertical dimension is reduced by wear to $3/16''$ (5 mm), the location must be monitored for signs of wheel contact on the stock rail. Where contact is evident, the switch point must be renewed. In a new installation, the top of the point will be at least $1/4''$ (6 mm) above the top of the stock rail at the $4-1/2''$ (114 mm) point between the switch point and stock rail. To provide the proper vertical clearance when the switch point is worn, it is necessary to use a stock rail that is equally worn.

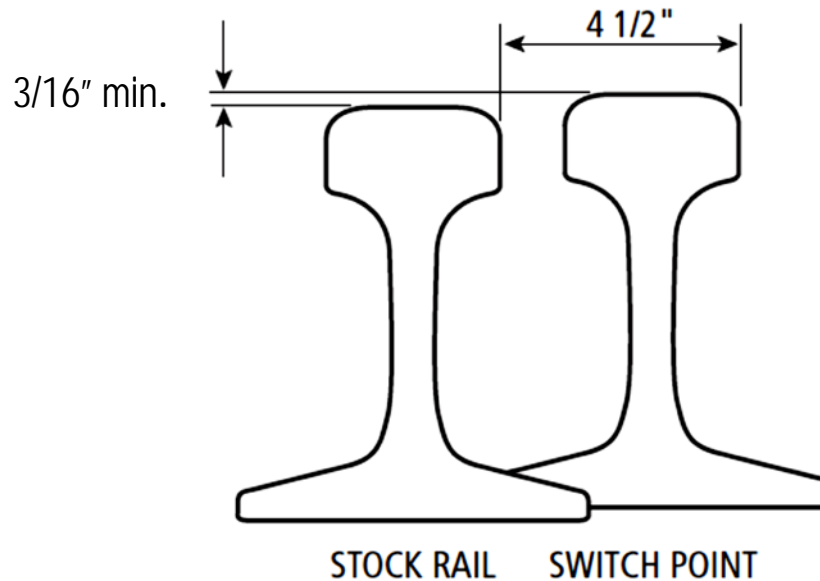


Figure SUB-PART D – 45 – Switch Point / Stock Rail Minimum Clearance

- h) Ensure that points and stock rails are of the same rail section (eg. Samson point with Samson stock rail)

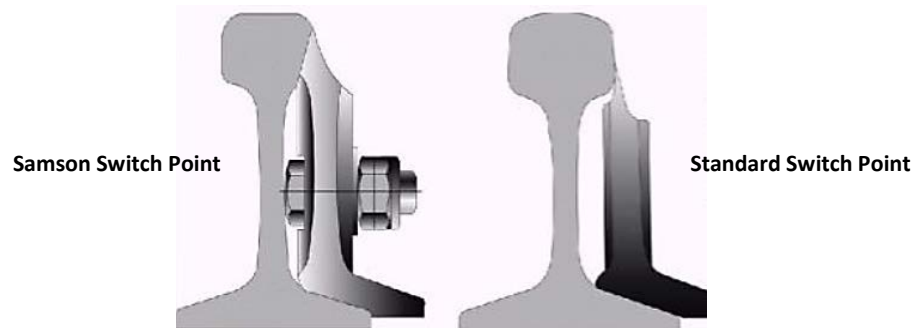


Figure SUB-PART D – 46 – Samson vs. Standard (“knife-edge”) Switch Point and Stock Rail

8.4.8 Ties

- a) Maintain good tie condition under the heel assembly.
- b) Ties must be installed and maintained in accordance with the layout shown on the standard plan. Check the number of ties in the turnout. During major tie renewals, the number must be brought up to standard.
- c) Ties are to be square to the through track in lateral turnouts.
- d) Ties are to be well tamped throughout the turnout.
- e) Ties must hold surface, line and gauge and are no longer useable when they are:
 - i. Broken through,
 - ii. Split, or otherwise damaged, to the extent that it will allow the ballast to work through, or it will not hold spikes or rail fasteners,
 - iii. Plate cut more than 2” of the tie thickness, or
 - iv. So deteriorated that the tie plate or base of rail can move laterally 1/2 inch relative to the tie.

8.4.9 Tie Plates

- a) Broken, bent or missing plates are to be replaced
- b) Shoulder plates, or plates with cut rail seats, worn to the extent that the seat width is more than the nominal design width by 1/8 inch (3 mm) must be replaced.
- c) Gauge plates with defective insulation must be reported to the Signal Maintainer.
- d) Rails are to be properly seated in the gauge and riser slide plates and that rail braces are tight and well driven, but not overdriven to the extent that rail is canted inward.
- e) Riser slide plates and spring frog plates are to be properly lubricated to permit free movement of switch points and spring wing rail.
- f) All other plates are properly seated with shoulders bearing firmly against the rail base.

8.4.10 Heel Blocks

- a) Replace bolts where required and maintain them in a tight condition.

8.4.11 Cotter Pins

- a) All cotter pins are to be in place.

8.4.12 Frogs

- a) The guard rail lateral setting in frogs must be within the limits prescribed in the following table:

Class of Track	Guard Check Gauge MINIMUM	Guard Face Gauge MAXIMUM
1	54 1/8" (1,375 mm)	53 1/4" (1,353 mm)
2	54 1/4" (1,378 mm)	53 1/8" (1,349 mm)
3, 4	54 3/8" (1,381 mm)	53 1/8" (1,349 mm)
5	54 1/2" (1,384 mm)	53" (1,346 mm)

Figure SUB-PART D – 47 – Guard Rail Lateral Limits (inches and millimeters)

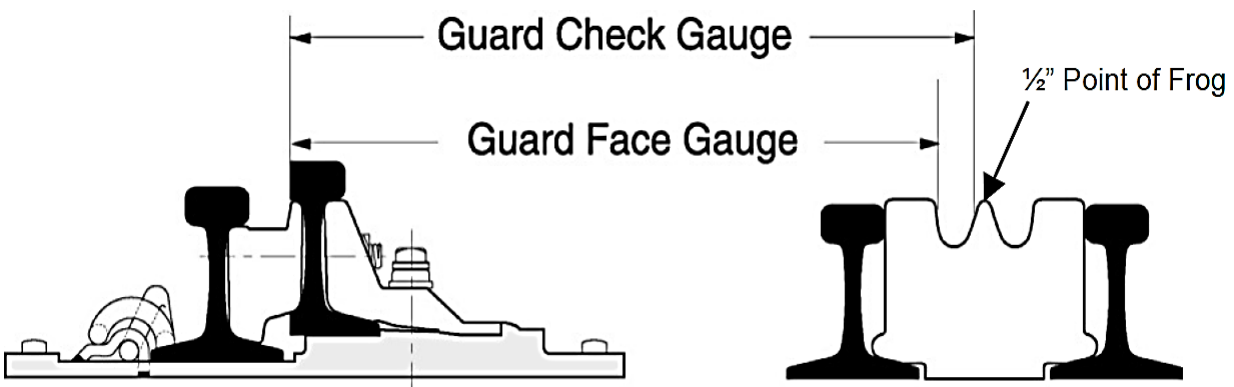


Figure SUB-PART D – 48 – Guard Check Gauge and Guard Face Gauge Measurement Locations

- b) Check the frog for alignment and lateral movement, and check for signs of wheel flange contact on the point.
- c) Ensure that frogs are maintained in accordance with the appropriate standard plan and instructions for frog maintenance.

- d) Check whether the point is worn vertically to the maximum wear limit allowed by standard plan at the actual point of the frog. If the point is worn to the maximum wear limit, the frog should be repaired or removed. The maximum wear limit is $1/2''$ (*13 mm*) from the top of the frog. Measurement is taken by use of a straight edge and a special gauge for point wear.
- e) If the tread portion of the frog casting is worn down $3/8''$ (*10 mm*) or more below the original contour, operating speed must be limited to 10 mph until the frog is repaired or removed.
- f) Check for loose bolts in the frog and in the rail joint connections.
- g) Check flangeways with a check gauge. The flangeway depth must not be less than $1-1/2''$ (*38 mm*). If the check gauge contacts the bottom of the flangeway, worn frog surfaces must be repaired or the frog removed.
- h) If a frog point is chipped, broken, or worn more than $5/8''$ (*16 mm*) down and $6''$ (*152 mm*) back, restrict operating speed over the frog to not more than 10 mph.
- i) Guard rail bolts and fasteners must be intact and tight. Guard rail wear surfaces must not be worn more than $5/8''$ (*16 mm*).
- j) If the frog is removed, you must remove the guard rail as well or protect against it.
- k) Self-Guarded Frogs
 - i. Check that the side wear measurement on raised self-guarded frog does not exceed $3/8''$ (*10 mm*).
 - ii. Self -Guarded Frogs are not permitted in tracks where speeds exceed 15 MPH.
 - iii. If repairs are made to a self-guarded frog without removing it from service, the guarding face must be restored before rebuilding the point.
- l) Spring Frogs
 - i. Check for loose deck bolts on the hold-down housings and brace stops.
 - ii. The toe of each wing rail must be solidly tamped and fully and tightly bolted
 - iii. Ensure that a clearance of $1/16$ inch (*2 mm*) to $1/4$ inch (*6 mm*) is in place between the top of the horn and the hold-down housing. The top of the horn must be parallel to the inside of the top of the housing.
 - iv. Check to see that the spring wing rail bears evenly on all base plates. This can be checked by noting wear marks on the plates.
 - v. When the wing is fully opened, the flangeway opening is at least $1-3/4''$ (*45 mm*) but not more than $1-7/8''$ (*48 mm*).
 - vi. Check the toe block assembly for:
 - Correct bearing of the spring wing rail with respect to the block.
 - Cracks in the toe block.
 - Bolt hole cracks in the spring wing rail (the bent and counter-bored joint bar must be removed).
 - Excessive wear on the shoulder bolts, sleeve or bolt holes in the rail.
 - vii. Check the spring for sufficient tension. The nut on the spring bolt should be adjusted to a torque of not less than 10 lbs. and not more than 15 lbs. The correct assembly housing is shown on the standard plan.
 - viii. Ensure that cotter pins are in place at both ends of the spring bolt.
 - ix. Check that the spring wing rail is in correct contact with the point rail.
 - x. The outer edge of a wheel tread may not contact the gauge side of the spring wing rail.

8.4.13 Bolts

- a) Ensure that the bolts throughout the complete turnout are installed according to Standard Plan. They must be tightened to full specifications approximately 6 weeks after initial installation and annually after installation.
- b) When installing bolts in turnouts, lubricate bolts by completely immersing the threads of bolts in new / used motor oil.
- c) When installing guard rail bolts, the tapered washer should be installed on the guard rail side.
- d) All new special track work 100 lb. or less will be assembled using Grade 5 bolts. All new special track work 115 lb. or greater will be assembled using Grade 8 bolts,
- e) Grade 5 bolts can be identified by three (3) radial lines on the head of the bolt. Grade 8 bolts have six (6) radial lines,
- f) Whenever grade 8 bolts are used, each bolt must be equipped with a hardened steel washer.

Note: All torques listed are for lubricated bolts using a graphite-based lubricant.

Size of Bolt (inches)	1"	1 1/16"	1 1/8"	1 1/4"
Torque – ft - lbs	670	850	1200	1600

Figure SUB-PART D – 49 – Torque to be Applied to Grade 5 Bolts for Special Track Work

Size of Bolt (inches)	1"	1 1/4"	1 3/8"
Torque – ft - lbs	840	1675	2500

Figure SUB-PART D – 50 – Torque to be Applied to Grade 8 Bolts for Special Track Work

8.4.14 Gauge

- a) Measure track gauge throughout the turnout at locations from 4 to 6 ties apart, starting 10 ft ahead of the turnout. This includes the entire siding curve leading from the turnout track. Maintain gauge throughout the balance of the turnout. If there is evidence of movement of the tie plates then consider and calculate the gauge under load.
- b) Gauge is measured between the heads of the rails at right angles to the rails in a plane 5/8 inch (16 mm) below the top of the rail. Standard gauge is 56-1/2 inches (1,435 mm).
- c) Gauge must be within the limits prescribed in the following table:

Class of track	The gauge must be at least (inches and millimeters)	But not more than (inches and millimeters)
Excepted track	N/A	58 1/4" (1,480 mm)
1	55 3/4" (1,416 mm)	58" (1,473 mm)
2	55 3/4" (1,416 mm)	57 3/4" (1,467 mm)
3	56" (1,422 mm)	57 3/4" (1,467 mm)
4 and 5	56" (1,422 mm)	57 1/2" (1,461 mm)
Yard Track Category 1 & Category 2	56" (1,422 mm)	57 3/4" (1,467 mm)
Yard Track Category 3 & Category 4	55 3/4" (1,416 mm)	58" (1,473 mm)

Figure SUB-PART D – 51 – Gauge (inches and millimeters)

- d) Variation in Gauge is when the gauge is less than 56" (1,422 mm) and the change in gauge over a distance of 20' or less on either side of the defective location exceeds 1-1/2 inches (38 mm), train speed must be reduced according to Class 1 track speed.

8.4.15 Rails

- a) Examine rails for surface defects and signs of internal defects.

8.4.16 Rail Anchors

- a) Check that track is properly anchored adjacent to and through turnouts, in accordance with the ONTC standard plan.
- b) Adequate rail anchors must be installed to resist rail movement and / or skewing of switch points.

8.4.17 Ballast

- a) Good ballast and proper drainage are necessary in order to maintain good surface and line through the turnout. Ensure there is even ballast section with tie cribs full, except in the switch point area during the winter.
- b) Ballast section is in accordance with the standard plan.
- c) A good drainage ditch should be present on both sides of the track.

8.4.18 Surface

- a) Observe surface irregularities by sighting along the underside of the head of rail. Start well before the switch points and move ahead as necessary to observe the entire length

of the turnout. Pay special attention to the surface of the turnouts, particularly at the frog, since the surface has a direct effect on service life.

8.4.19 Alignment

- a) Observe irregularities in alignment of turnouts in tangent track by sighting along the gauge side of the rail, on the frog side of the turnout, from a position well before the switch points. Search for irregularities in alignment of turnouts in curved track by observation or by stretching a 62-foot cord along the gauge side of the outer rail of the curve and measuring the offsets at the center of the cord. Also, observe the curved closure rails for uniformity of curvature.

8.4.20 Cross Level

- a) Measure cross level throughout the turnout at locations from 4 to 6 ties apart. Maintain cross level to match the cross level of the track in which the turnout is located.

3. Prevention and Control of Fires on the Right of Way

3.1 General

- a) Transport Canada has issued Rules for the Control and Prevention of Fires on Railway Right-of-Ways. These Rules require all Railways to have methods in place to prevent the starting of fires and to control fires that may be started on the railway right-of-way,
- b) It is the responsibility of the Railway Company to extinguish all fires,
 - i. On the railway right of way irrespective of the manner in which the fires were started, and;
 - ii. Off the railway right of way that were started as a result of railway operations.

3.2 Fire Plan

- a) Under Transport Canada Rules, ONTC has developed a Fire Prevention and Preparedness Plan in consultation with the Ontario Ministry of Natural Resources,
- b) It is the responsibility of the Director, Rail Infrastructure to update the Fire Plan as required and to ensure that all concerned are provided with current copies.

3.3 Working during Fire Season

- a) The Fire Plan outlines precautions and restrictions which must be implemented for work undertaken during the fire season. The precautions are contained in [Appendix "G" Ontario Guidelines for Modifying Railway Operations in response to Fire Danger](#),
- b) It is the responsibility of each Manager, Track Inspector, Foreman and Extra Gang Foreman to know the current hazard level and to apply the proper precautions or restrictions for the work to be carried out,
- c) The Superintendent, Maintenance of Way will ensure that a sufficient number of employees receive the appropriate training required under the Plan,
- d) The Superintendent, Maintenance of Way will ensure that proper equipment in good working order is supplied where required, prior to the start of the fire season

3.4 Reporting of Fires

- a) The individual in charge will immediately report wildfires and suppression of wildfires to the Rail Traffic Controller who will advise fire services using the appropriate number.



PART 4

REQUEST FOR PROPOSALS

FORM OF PROPOSAL

Note: Respondent is required to complete Part 4 in its entirety in order to be considered as having submitted a complete Proposal. Part 4 will be provided in Word format to Respondents who return Schedule 2-B – Participation Registration Form.

**PART 4 – FORM OF PROPOSAL
PROPOSAL FORM 1
PROPOSAL SUBMISSION FORM**

RFP Number: RFP 2024 006

Description: Joint Elimination Program and Electric Flash-Butt Welding

Submitted To: ONTARIO NORTHLAND TRANSPORTATION COMMISSION

We, _____
(Name of Respondent)

having carefully examined, understood, and completed the Request For Proposals Documents as described in Section 2 – The RFP Documents, and Addenda No. __ to No. __ having familiarized ourselves thoroughly with local conditions, hereby propose to supply the services associated with the joint elimination program and electric flash-butt welding as outlined on the following Proposal Form 1-A.

ONTC reserves the right in its sole discretion to sub-divide and/or bundle the Goods and/or Services which are the subject of this RFP and award one or any numbers of separate contracts for the Goods and/or Services.

Purchase is subject to budgetary approval of expenditures.

Proposal Forms:

The information contained in the Proposal Forms, as listed in the Request for Proposals and attached hereto, forms an integral part of this Proposal.

Declarations:

We hereby declare that:

- (a) We will execute the Agreement within ten (10) Working Days of receipt of the Final Agreement;
- (b) We agree to perform and fully complete the Work on or before the agreed upon schedule;
- (c) The Work is to start no later than the agreed upon start date in the schedule;
- (d) The statutory holdback pursuant to the Construction Act will be 10% and a warranty holdback of 2%;
- (e) We will provide the required evidence of insurance, as specified in the Ontario Northland – draft agreement included in Part 5 of the RFP Documents, with our execution of the Agreement;
- (f) For the General Liability Insurance, Ontario Northland Transportation Commission is to be included as an additional insured;
- (g) Coverages and limits of insurances will be provided and maintained by all Subcontractors in accordance with subsection (e) above;

PART 4 – FORM OF PROPOSAL
PROPOSAL FORM 1 *cont'd*
PROPOSAL SUBMISSION FORM

- (h) No person, corporation or other legal entity other than the undersigned has any interest in this Proposal or in the proposed Contract for which this Proposal is made;
- (i) This Proposal is irrevocable for a period of ninety (90) days from the Submission Deadline;
- (j) It is understood and agreed that if this Proposal is accepted, we will not commence the Work until we have executed the Final Agreement and delivered it to ONTC and/or we are advised in writing by ONTC to proceed with the Work;
- (k) All copies of plans and specifications and other said RFP Documents furnished to us for the purpose of this Proposal are the property of ONTC and shall be kept confidential and not divulged in any manner by us. They will not be used on other work by us and will be returned to the issuing office when requested or promptly when not bidding; and
- (l) We have no right to reimbursement by ONTC for expenses, both direct and indirect, which may have been incurred by us in preparing this Proposal or otherwise participating in the RFP Process.

Signed and submitted for and on behalf of:

Contractor:

(Company Name)

(Street Address or Postal Box Number)

(City, Province and Postal Code)

Signature:

I have authority to bind the corporation.

Name and Title:

Email:

Date at _____ this _____ day of _____, 2024

**PART 4 – FORM OF PROPOSAL
PROPOSAL FORM 1-A
PROPOSAL SUBMISSION FORM**

Item No.	Unit	Quantity	2024	2025	2026	Optional 2027	Optional 2028
Mobilization	ea.	1					
Flash-Butt Weld	ea.	1					
Standby Rate	hr	1					
Steel Disposal	Tonne	1					
Demobilization	ea.	1					
Optional Work - Signal Maintainer on an as-is required basis.	hr	1					

**PART 4 – FORM OF PROPOSAL
PROPOSAL FORM 2
RESPONDENT’S GENERAL INFORMATION**

The Respondent must complete this document and submit it as part of his Proposal.

Name <i>Please indicate the complete legal name of the firm</i>	
Tax Registration # (HST)	
Tax Registration # (GST)	
Tax Registration # (QST)	
Address	
Telephone Number	
Fax Number	
Web Address	
Please indicate any other name(s) under which the firm operates <i>(if applicable)</i>	

Owner Partnership Corporation

Relationship *(if applicable)*

Parent Company	
Subsidiaries	
Affiliates	

Ontario Business Yes No

“Ontario Business”: A supplier or manufacturer that has headquarters or a main office in Ontario, and that regularly conduct its activities (i.e., produces manufactured goods, intangible goods, or services) on a permanent basis in Ontario, is clearly identified by name and is accessible during normal business hours.

Canadian Business Yes No

“Canadian Business”: A commercial enterprise that is incorporated pursuant to the laws of Canada and which has ongoing business activities in Canada.

Main Contact Person *(for the purposes of this Proposal)*

Name	
Title	
Telephone #	Fax #
E-mail address	

**PART 4 – FORM OF PROPOSAL
PROPOSAL FORM 2 *cont'd*
RESPONDENT'S GENERAL INFORMATION**

Indicate below your company/business' invoice terms:

Does your company/business have the capability to handle Electronic Funds Transfers?

YES _____ NO _____

If yes, please provide the necessary banking information as part of your submission.

If available, please provide your Dunn & Bradstreet Reference Number:

How many years of experience does your company have in the provision of goods or services proposed herein?

Subcontractors

The Respondent must indicate where they will use subcontractors for specific services.

Description of Services	Subcontractor's Name	% Contract Value	Telephone Number

**PART 4 – FORM OF PROPOSAL
PROPOSAL FORM 3
ACKNOWLEDGMENT TO COMPLY WITH PART 3 - REQUEST FOR PROPOSALS
SPECIFICATIONS**

Respondent acknowledges that they can fully comply with Part 3 – Request for Proposals Specifications.

(Check one) YES _____ NO _____

Respondent to provide details below or include as an attachment to this Proposal Form 3. In particular, if the Respondent will deviate in any way from the requirements identified in Part 3 – Requests for Proposals – Specifications, the Respondent shall provide complete details of how they will deviate, this shall include proposed equivalent alternatives.

**PART 4 – FORM OF PROPOSAL
PROPOSAL FORM 4
REFERENCES**

The Respondent must supply here the reference information of three (3) customers for which they have provided similar services within the last five (5) years. ONTC is **NOT** to be listed as a Reference.

Reference #1

Company name	
Location	
Description of services provided	
Start and end dates	
Value of the contract	
Contact person name and title	
Phone	E-mail

Reference #2

Company name	
Location	
Description of services provided	
Start and end dates	
Value of the contract	
Contact person name and title	
Phone	E-mail

Reference #3

Company name	
Location	
Description of services provided	
Start and end dates	
Value of the contract	
Contact person name and title	
Phone	E-mail

**PART 4 – FORM OF PROPOSAL
PROPOSAL FORM 5
COMPLIANCE WITH CONTRACT DOCUMENTS**

The Respondent may suggest changes to the draft agreement included in Part 5 of this RFP using the table below. ONTC does not have any obligation to accept any proposed changes to the draft agreement and will do so in its sole discretion. Significant material proposed changes to the draft agreement may impact the evaluation of the Respondent’s proposal. ONTC will not accept any material changes to the clauses in the draft agreement relating to Confidentiality, Personal Information, Intellectual Property ownership and infringement, Indemnification, Limitation of Liability or rights of ONTC on termination. ONTC, as an Ontario Crown corporation, is unable to provide indemnities pursuant to s.28 of the *Financial Administration Act* (Ontario).

Exception	Contract, Schedule, Article, or Sub-Clause	Existing Wording	Respondent’s Proposed Wording	Reason for Proposed Change
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				

**PART 4 – FORM OF PROPOSAL
PROPOSAL FORM 6
HEALTH, SAFETY AND ENVIRONMENT**

Respondents shall review the attached Health and Safety Policy Statement and include the following with their Proposal:

1. Submit a copy of the most recent version of your Health, Safety, and Environmental Protection Policy.
2. Submit the attached Contractor Health and Safety Responsibility Agreement.
3. Submit the attached Contractor Safety Pre-Qualification Form and associated supporting documents.

Respondents must pass the Contractor Safety Pre-Qualification. Failure to pass will result in disqualification from the procurement process.

DATE FORMALIZED April 2016 REVISED February 2023	Health and Safety Policy
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POLICY STATEMENT

In keeping with our value of *Safety. Full Stop.* Ontario Northland Transportation Commission (ONTC) / Nipissing Central Railway (NCR) is committed to providing a safe and healthy work environment. Safety is core to everything we do. We don't settle for less, for our people or our customers, even when operating pressures make it difficult to do so.

As part of developing a safety culture, we will collectively strive to prevent accidents and incidents through a risk-based approach with the goal to continuously improve. Employees are required to report safety concerns immediately and can do so without fear of reprisal, while management ensures all employees receive quick follow-up.

We will adopt the latest in systems to improve the reporting, investigation, and implementation of corrective actions, close-out, and trend analysis of accidents and incidents. We will communicate safety and encourage engagement at all levels of the organization, such as during tailgates, briefings, and meetings.

The success of ONTC/NCR safety programs will be ensured through the collective and cooperative efforts of all, including management, employees, unions, and Workplace Health and Safety Committees. All ONTC/NCR members will jointly participate in safety, health and loss prevention initiatives to ensure a safe and healthy workplace for all employees.



Chad Evans
President and CEO

CONTRACTOR HEALTH AND SAFETY RESPONSIBILITY AGREEMENT

In submitting this Proposal, I/We, on behalf of, _____

(legal name of company)

certify the following:

- (a) I/We have a health and safety policy and will maintain a program to implement such policy as required by clause 25(2) (j) of the *Occupational Health and Safety Act*, R.S.O. 1990, c.O.1, as amended, (the "OHSA").

The requirements in (a) do not apply to employers with five (5) or less employees.

- (b) With respect to the Services being offered in this Proposal, I/We and on behalf of our proposed sub-consultants, acknowledge the responsibility to, and shall:

(i) fulfill all of the obligations under the OHSA and ensure that all work is carried out in accordance with the OHSA and its regulations;

(ii) ensure that adequate and competent supervision is provided as required under the OHSA to protect the health and safety of workers; and

(iii) provide information and instruction to all employees to ensure they are informed of the hazards inherent in the work and understand the procedures for minimizing the risk of injury or illness.

- (c) I/We agree to take precautions reasonable in the circumstances for the protection of worker health and safety, as required under the OHSA.

Dated at _____ this _____ day of _____, 202__

An Authorized Signing Officer

(Key Contact)

(Title)

(Telephone Number)

(Firm's Name)

(Firm's Address)

1. Company Identification: Company Name: _____ Telephone: _____ Mailing Address: _____ Fax: _____ _____ E-mail: _____	ONTC Use _____ _____ _____ _____
---	--

2. Form of Business:
 Sole Proprietor Partnership: Corporation

3. Officers:	Years with the Company	
President / CEO _____		
Vice President _____		
Treasurer _____		
Who is the manager most responsible for health and safety?		
Name: _____	Title: _____	

4. How many years has your business operated under its current name? _____	
5. Under Current Management Since (Date) _____	

6. Parent Company Information

Parent Name: _____	
City: _____ Province / State: _____ Postal / Zip Code: _____	
Subsidiaries: _____	

7. Insurance Contact Information	
Title: _____ Telephone: _____ Fax: _____	
Insurance _____	

8. Carriers:	Type of Coverage:	Telephone	
_____	_____	_____	
_____	_____	_____	
_____	_____	_____	
_____	_____	_____	

9. Organization:

Describe the nature of the work your company specialized in:	
<input type="checkbox"/> _____ <input type="checkbox"/> _____	
<input type="checkbox"/> _____ <input type="checkbox"/> _____	
<input type="checkbox"/> _____ <input type="checkbox"/> _____	
<input type="checkbox"/> _____ <input type="checkbox"/> _____	
<input type="checkbox"/> _____ <input type="checkbox"/> _____	

10. Health and Safety Performance

- | | | | |
|---|------------------------------|-----------------------------|--|
| a) Are any of the above services that you perform normally subcontracted to others? | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |
| b) Can you provide a Workplace Safety & Insurance Clearance Certificate? | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |
| c) Is your company experience rated (CAD-7, NEER)? If yes attach CAD-7 reports for the last 3 years and go to item e). If no, complete item d). | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |
| d) Has an employee of your company suffered a fatal accident or "critical injury" as defined by the <u>Ontario Occupational Health & Safety Act</u> ? Please provide for the last 3 years: i) total number of lost time accidents by rate group, ii) total number medical aid accidents, iii) total number of hours worked by each rate group | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |
| e) Has your company ever been subjected to a Workwell Audit? If yes, what was your final score? ____ | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |
| f) Are there judgements, claims or suits pending or outstanding against your company? | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |
| g) Have you received any regulatory (MOL, MOE, etc.) orders and/or prosecutions in the last 3 years? If yes, provide details of all prosecution and fines for the past 3 years on a separate sheet. | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |
| h) Do you have involvement in provincial safety associations such as the Infrastructure Health & Safety Association (IHSA) and/or Workplace Safety & Prevention Services (WSPS)? If yes, please name: | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |

11. Health and Safety Program and Procedures:

- | | | | |
|---|------------------------------|-----------------------------|--|
| a) Do you have a written health and safety policy? If yes, include a copy. | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |
| b) Do you have a written health and safety program? | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |
| c) If so, are the following elements addressed? | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |
| i. Participation by all levels in the organization | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |
| ii. Accountabilities & responsibilities for managers, supervisors and employees | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |
| iii. Adequate resourcing for meeting health and safety requirements | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |
| iv. Hazard identification and control | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |
| v. Health and safety performance measurement and evaluation | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |
| vi. Corrective actions implementation | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |

12. Health and Safety Program: Does the health and safety program include procedures and practice documents such as:

- | | | | |
|---|------------------------------|------------------------------|--|
| a) Hazardous Energy Control, Lock-out – Tag-out | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |
| b) Confined Space Entry | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |
| c) Working at Heights, Fall Protection | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |
| d) Personal Protective Equipment (PPE) | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |
| e) Portable / Electric Power Tools | <input type="checkbox"/> Yes | <input type="checkbox"/> Yes | |

Contractor Safety Pre-Qualification Form

f) Vehicle Safety	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="text"/>
g) Compressed Gas Cylinders	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="text"/>
h) Electrical Equipment Grounding Assurance	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="text"/>
i) Powered Industrial Vehicles (forklifts, cranes, etc.)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="text"/>
j) Heavy Construction Equipment (excavators, backhoes, bulldozers, etc.)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="text"/>
k) Excavation and Trenching	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="text"/>
l) Housekeeping	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="text"/>
m) Accident / Incident Reporting and Investigation	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="text"/>
n) Hazard / Unsafe Condition Identification, Reporting and Communication	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="text"/>
o) Workplace Hazardous Materials information System (WHMIS)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="text"/>
p) Emergency Action Plan / Evacuation Plan	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="text"/>
q) Spill Response / Reporting	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="text"/>
r) Respiratory Protection	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="text"/>
s) Designated Substances Management	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="text"/>
t) Waste Staging / Disposal	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="text"/>
u) Traffic Control	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="text"/>
v) Hearing Conservation	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="text"/>
13. Do you have a policy/procedure for terminating contracts of subcontractors who do not comply with the requirements of the <u>Occupational Health & Safety Act</u> , associated regulations and / or company safety rules?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="text"/>
14. Do your employees read, write and understand English to the degree that they can safely perform their tasks without the aid of an interpreter? (<i>If no, provide a description of your plan to assure that they can safety perform their tasks</i>)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="text"/>
15. Do you have personnel certified in Emergency First Aid and CPR on site? If yes, provide copies of certificates of training for site personnel proposed for the project?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="text"/>
16. Do you have First Aid kits available to your staff?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="text"/>
17. Does your company use a formalized Health and Safety Plan for conducting large projects?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="text"/>
18. Does the company conduct pre-placement medical examinations?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="text"/>
19. Is task-adequate PPE provided to workers?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="text"/>
20. Are employees trained in PPE care, use and maintenance?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="text"/>
21. Do you have a corrective actions process for addressing individual health and safety performance deficiencies	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="text"/>

22. Equipment and Manuals:

- a. Do you conduct inspections on operating equipment (e.g. excavators, cranes, forklifts, vehicles, etc.) as per regulatory requirements? Yes No
- b. Do you maintain operating equipment in compliance with regulatory requirements? Yes No
- c. Do you maintain applicable pre-use inspection and maintenance certification records for operating equipment? Yes No
- d. Are records available upon request Yes No

23. Subcontractors

- a. Do you use health and safety performance criteria in the selection of contractors? Yes No
- b. Do you require your subcontractor to have a written health and safety program? Yes No
- c. Are your subcontractors included in
 - health and safety orientation Yes No
 - health and safety meetings Yes No
 - workplace inspections Yes No
 - health and safety audits Yes No
- d. Does the company have a policy for the termination of contracts of subcontractors who do not comply with the Occupation Health and Safety Act, regulations under the Act, contractor rules, programs, protocols policies or procedures? Yes No
- e. Does the company have a progressive discipline policy for employees and subcontractors? Yes No

24. Health and Safety Training

- a. Are you aware for the regulatory training requirements for your employees? Yes No
- b. Have your employees received the required health and safety training? Yes No
- c. Do you have specific health and safety training for supervisors? Yes No
- d. Do you keep records of health and safety training for employees? Yes No
- e. Are records of health and safety training available on request? Yes No

25. Job Skills

- a. Have employees been trained in appropriate job skills? Yes No
- b. Are employee job skills certified where required by regulation or industry standard? Yes No
- c. Are certificates available upon request? Yes No

26. Health and Safety Supervision

- a. Does the company have a health & safety coordinator? Yes No
- b. Who is the highest ranking safety professional in the company

I agree that the above information is true and correct to the best of my knowledge. I also agree to follow all terms and conditions of the Contractor Safety Program at all times while performing work for ONTC. I understand that supporting documentation may be requested for due diligence verification purposes.

Name: (Please print) _____
 Signature: _____

Title: _____
 Date: _____

**PART 4 – FORM OF PROPOSAL
PROPOSAL FORM 7
SCHEDULE OF MATERIALS**

SCHEDULE OF MATERIALS - VARIATIONS (AND SOURCES)

VARIATIONS:

MATERIALS SOURCES:
(ADD WHERE REQUIRED)

**PART 4 – FORM OF PROPOSAL
PROPOSAL FORM 8
LIST OF EQUIPMENT**

List all Equipment, owned or controlled by the Respondent for use on the Work. Such list shall show for each Unit the description of the Unit, capacity, condition, age, present location, the owner's name and all-inclusive hourly rental rates. Such equipment shall be subject to inspection by ONTC to verify the stated information.

ONTC reserves the right to perform random site inspections in order to ensure the Successful Respondent's equipment used to perform the Work coincides with the information provided below. Any deviations may be subject to the terms of the Final Agreement. Any changes to this proposed list of equipment requires prior approval of ONTC.

<u>Quantity</u>	<u>Description</u>	<u>Capacity</u>	<u>Condition</u>	<u>Age</u>	<u>Location</u>	<u>Owner</u>	<u>Hourly Rental Rate</u>
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**PART 4 – FORM OF PROPOSAL
PROPOSAL FORM 9
SCHEDULE AND PROPOSED APPROACH**

ONTC anticipates that the Work will commence in March of each year and continue for as long as weather permits into the fall/winter months.

The Respondent shall demonstrate how they will achieve completion of the scope of work within this timeframe as an attachment to this proposal form. It is expected that the Respondent will complete 10,000 rail joints per year for the duration of the contract. Please include a schedule in Gantt chart format and a written proposed approach, demonstrating that the Respondent has conducted a thorough review of the RFP documents, and has the necessary resources to complete the work (i.e. workforce/crew and equipment).

The attached documentation should demonstrate that the Respondent is capable of completing 10,000 rail joints per year in priority order and that a contingency has been built-in, to secure meeting the timelines required. Please demonstrate how you plan to deliver the required services per the critical delivery schedule and locations specified in the Scope of Work. Detail your ability and experience in joint elimination, electric flash-butt welding, and destressing the rail behind the flash-butt welding operation. Provide an example of your daily work report, and daily rail destressing report. Detail your ability and plan to remove all surplus OTM and scrap rail ends from ONTC property and your ability and plan to distribute OTM as required during the course of the project.

Respondents must ensure that they will not require more than 2 flagmen.

Respondents may assume any one of the following work rotations but must maintain the same schedule throughout the contract (days on / days off):

- 5/2 : 8 hours
- 4/3 : 10 hours
- 7/7: 11.42 hours
- 8/6: 10 hours
- Contractor may propose an alternative work schedule for review and approval of ONTC

Each day shall not be in excess of 14 hours in conjunction with ONTC's flagman work hours.

Do you agree to complete 10,000 rail joints each year?

Respondent confirms that they will complete 10,000 rail joints per year:

(Check one) YES _____ ; NO _____

Respondent confirms that they will not require more than 2 ONTC flagmen.

(Check one) YES _____ ; NO _____

**PART 4 – FORM OF PROPOSAL
PROPOSAL FORM 10
SCHEDULE OF PROGRESS PAYMENTS**

Indicate below, the estimate of the monthly progress billings (gross before holdback) for the duration of the Agreement.

**PART 4 – FORM OF PROPOSAL
PROPOSAL FORM 11
LIST OF PERSONNEL**

List the names of the Principal Personnel who will be assigned to the Work and **include their resumes.** This information shall be for the use of ONTC in assessing the Proposal. In the event of a Subcontractor(s) being listed as Principal Personnel, the Respondent shall also include their resume(s).

Name

Position

Experience

**PART 4 – FORM OF PROPOSAL
PROPOSAL FORM 12
CURRENT LABOUR AGREEMENTS**

List the current labour agreements the Respondent or each partner in a joint venture has in force covering this type of work in the Province in which the Work is to be performed.

**PART 4 – FORM OF PROPOSAL
PROPOSAL FORM 13
CONTRACTOR’S QUALIFICATION STATEMENT**

1. The Respondent shall include a company profile.

In the event that the Respondent is using a subcontractor(s) for a portion(s) of the scope of work associated with this RFP, they shall also include with this Proposal Form 13, a company profile for each subcontractor.

2. The Respondent shall supply a minimum of three (3) project descriptions for projects of a similar nature and scope. The project descriptions shall include:
 - a) Company/Client
 - b) Name of contact and contact details
 - c) Project Name
 - d) The scheduled project start and end date
 - e) The actual start and end date
 - f) The project value of the Respondent’s scope of work for the project at the beginning of the project
 - g) The project value of the Respondent’s scope of work for the project at the end of the project
 - h) Detailed description of the Respondent’s scope of work for the project. The description should detail if subcontractors were used to complete part of the scope.
 - i) Outcomes of the project (i.e., completed on schedule and on budget etc.)

ONTC may, in its sole discretion, confirm the Respondent’s experience in the projects identified by contacting the named contacts above, in addition to the references provided as part of Proposal Form 4.

3. The Respondent shall describe their experience with the climatic and environmental requirements in Northern Ontario.
4. The Respondent shall describe how and when you will use local workforce, local vendors, local manufacturers, local contractors, and local apprentices/trainees to achieve the project goals and provide the requested services.
5. The Respondent shall describe their organization’s diversity programs.
6. The Respondent shall provide evidence of compliance to Ontario’s environmental requirements (e.g. recycling, waste management, etc.).

ONTC will consider all information submitted in the Respondent’s Proposal when evaluating the Respondent’s experience.

**PART 4 – FORM OF PROPOSAL
PROPOSAL FORM 14
CLAIMS**

Submit an up to date list of outstanding, pending or anticipated claims, proceedings, liens or other legal claims, actions or proceedings.



PART 5
REQUEST FOR PROPOSALS
DRAFT AGREEMENT

Note: The draft agreement will be issued by way of Addendum in accordance with these RFP Documents.