Manitoba-Minnesota Transmission Project

Transmission Line Construction Emergency Response Plan for the Dorsey International Power Line

May 2019

Prepared by:

Licensing and Environmental Assessment Department



Document Owner Transmission Line and Civil Construction Department Transmission Construction and Line Maintenance Division Transmission Business Unit Manitoba Hydro

Final 1.0

List of Revisions

Number	Nature of revision	Section(s)	Revised by	Date

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Preface

This document presents the Transmission Line Construction Emergency Response Plan (the Plan) for the construction of the Dorsey International Power Line (Dorsey IPL) component of the Manitoba-Minnesota Transmission Project (MMTP or the Project). This Plan is intended to provide information and instruction to Manitoba Hydro employees, and guidance for contractors to follow when developing plans for their specific work. Contractors selected to undertake the work will submit their emergency response plans to Manitoba Hydro for review and approval, in keeping with the guidance of this document, and must include additional detail and direction to further supplement this Plan. The Plan outlines how Manitoba Hydro and its contractors will respond in the event of an emergency during the construction phase of the Dorsey IPL, in the Project area within Manitoba.

Manitoba Hydro employees and contractors are encouraged to contact the onsite Manitoba Hydro safety officer if they require information, clarification or support.

Indigenous communities, regulators, and the public are to direct any inquiries about this Plan to:

Manitoba Hydro Licensing and Environmental Assessment Department 360 Portage Avenue Winnipeg, MB Canada R3C 0G8 1-877-343-1631 mmtp@hydro.mb.ca

1.0 Purpose

The purpose of this document is to outline requirements to be implemented by all contractors hired to construct the Dorsey International Power Line (Dorsey IPL). These requirements are not all-inclusive and are provided to set a minimum level of adherence for the contractor(s).

1.1 Contractor responsibilities

The successful contractor(s) is responsible for developing specific emergency response plans and administering an emergency response system which covers all work to be performed onsite¹. The emergency response plans will include:

- a) a response plan for spills of fuels and fluids associated with construction
- b) a response plan for medical incidents that includes provision for 24-hour emergency transport to hospital
- c) a plan for fire response and evacuation
- d) a security plan; and
- e) an emergency contact list and emergency notification plan for government and response agencies and communities (including Indigenous and Metis) adjacent to the right-of-way and/or impacted work sites

The contractor must at all times take all precautions appropriate to maintain the health and safety of the contractors' personnel and all others on site. The contractor is responsible for the adequacy, stability and safety of all site operations and construction methods and must comply with workplace safety and health laws. The contractor must comply with all applicable Federal and Provincial Legislation and Regulations respecting workplace safety, wherever work is performed.

¹Specific contractor emergency response plans can be provided upon request.

2.0 Project description

The component/activities of the Manitoba Minnesota Transmission Project that this plan refers to is the construction of a 500 kilovolt AC transmission line in southeastern Manitoba known as the Dorsey IPL. The Dorsey IPL originates at the Dorsey Converter Station northwest of Winnipeg, continues south around Winnipeg and within the Existing Transmission Corridor, the Southern Loop Transmission Corridor and the Riel–Vivian Transmission Corridor, to just east of Provincial Trunk Highway 12. The transmission line then continues southward on a new right-of-way across the rural municipalities of Springfield, Tache, Ste. Anne, La Broquerie, Stuartburn and Piney to the Manitoba– Minnesota border crossing south of the community of Piney.

3.0 Emergency response plans

3.1 Emergency response plan requirements

The Contractor must submit an emergency response plan (ERP) as part of their safety management plan to Manitoba Hydro for review and approval. This Plan must include the following items without limitation:

- a) Detailed emergency response information for all areas of the Project
 - i. Including Project site, storage areas, site office and camps where required
- b) Sufficient measures to remove all personnel in the event of an emergency
- c) List of medical facilities
- d) Transportation methods
- e) Site access points
- f) Muster points

The ERP must be tested before commencement of work.

3.2 Spill response plan

The contractors are required to develop a Spill Response Plan and submit for Manitoba Hydro review and approval prior to the commencement of construction activities. The Spill Response Plan must include sufficient detail and response procedures so environmental emergencies are addressed in a safe and timely manner to minimize the impact on the surrounding environment. Submitted Spill Response plans must meet the requirements laid out in Manitoba Hydro's Spill Response Plan.

All contractor employees on the project must be trained and aware of their responsibilities in the prevention of spill and in the event of a spill.

All spills and/or releases to the environment must be reported to the required level of authorities within the timeframes specific to those reporting requirements.

See attached Manitoba Hydro Transmission Spill Response Plan in Appendix B.

3.3 First aid, emergency response and rescue

3.3.1 First aid

The contractor must ensure that required number of employees are trained in the required level of First Aid for each work location to meet or exceed the requirements of the Manitoba Workplace Safety and Health Act and Regulations. The contractor must maintain an up to date list of First Aid training and ensure all trained employees and first aid kits are identified at all work locations.

3.3.2 Emergency response

The contractor must have in place a process to identify existing and potential dangers to contractor's personnel at site and the measures that will be taken to reduce, eliminate or control those dangers, including procedures to be followed in an emergency.

The contractor must have in place a process to identify internal and external resources that may be required to respond to an emergency at site.

The contractor will develop an Emergency Response Plan for all physical areas of its performance of the work at site as well as its site office and storage areas. As part of the plan, the contractor must include plans outlining how it will communicate to remove its work force from the site if an emergency event requires the removal of the contractor's work force from the site.

The contactor Emergency Response Plan must also include; a communication process, a list of medical facilities, transportation method, site access points and muster point locations. The contractor must test its Emergency Response Plans prior to commencing the work and at a minimum annually throughout the performance of the work. All persons working or visiting the project site must receive a copy and orientation of the contractor Emergency Response Plan before entering any project site locations.

The Medical Transportation Coordination Centre (MTCC), is the primary contact point for the 24 hours a day, 7 days a week 911 emergency response system for the dispatch of ground and air ambulances as well as medical first response in Manitoba. Where cellular phone capabilities may be limited (southern portion of project), MTCC can be contacted directly at 204 425-3222 (Vita Exchange) using satellite phone or other compatible device.

The project must be registered with the MTCC with established locations for access points for emergency response. These locations must be affixed with GPS coordinates to determine the best transportation method to a medical facility. Contractors must develop their specific site Emergency Response Plan using the provided access points that are registered with MTCC.

3.3.3 Rescue

The contractor must include rescue plans for all areas of work in the Emergency Response Plan. Rescue plans must include training requirements, procedures and Rescue equipment locations. Rescue equipment must meet the requirements of Manitoba Workplace Safety and Health Act and Regulations and be on site and readily available.

3.4 Fire Response and evacuation plan

The contractor must take all necessary steps to prevent and extinguish all fires, and promptly report the occurrence of all fires to Manitoba Hydro. The contractors are required to develop an evacuation plan for emergencies included in the emergency response plans.

The contractor is responsible for providing suitable fire control equipment for the protection of equipment, the portions of the work being constructed or installed and the materials. All fire protection equipment required by legislation and relevant work permits will be kept on site and maintained in serviceable condition. The contractor must properly train their personnel to operate the fire suppression systems provided.

Burning of materials is not permitted without a burn permit from Manitoba Sustainable Development and approval by Manitoba Hydro. In order to mitigate the risk of fire on the project, the Clearing Management Plan does not prescribe the burning of slash as an acceptable method for vegetation management.

3.5 Site security

The contractors are required to develop site security measures to protect the public from the hazards present on the project. The contractors will be required to barricade work areas which contain hazards to the public, post the required signage to inform the public of the hazards present, maintain good housekeeping and provide overnight security as required. The contractor must keep unauthorized persons off the Site, and authorized persons are limited to:

- a) the contractor's personnel,
- b) MB Hydro's personnel; and
- c) any other personnel notified to the contractor by MB Hydro as authorized personnel on the site.

4.0 Responsibilities, compliance and communication

4.1 Roles and responsibilities

Prime contractors must at all times take all precautions appropriate to maintain the health and safety of the contractors' personnel and all others on site. The contractor is responsible for the adequacy, stability and safety of all site operations and construction methods and must comply with workplace safety and health laws.

Before commencing the work, the contractor must identify its dedicated on site safety supervisor, who must attend a pre-job meeting at Manitoba Hydro's office to review safety matters for the work and be approved by the Manitoba Hydro's safety representative. This person must have no other duties assigned. The dedicated on site safety supervisor is responsible for, but not limited to, the identification and control of potential safety hazards at the work sites.

All contractor employees on the project must be trained and aware of their responsibilities in preventing spills and in the event of a spill.

4.2 Ensuring compliance

This Plan will be incorporated into the Project-specific construction environmental protection plan. Furthermore, the contractor must prepare and submit to Manitoba Hydro weekly progress reports that include safety information and statistics as well as environmental information and statistics including information on spills. The weekly health and safety performance report must include safety information and statistics for the contractor's site activities, including, but not limited to, First Aid cases; medical treatment cases; and fire incident reports.

4.3 Notification of reportable incidents

In addition to satisfying the applicable regulatory requirements the contractor must notify Manitoba Hydro of reportable incidents.

Notification of Indigenous Communities and Organizations

Manitoba Hydro will notify the Communications Monitor who will implement a notification process informed by feedback from the MMTP Monitoring Committee² unless a community specifies a preference for Hydro to communicate otherwise.

Incidents that will be reported to Indigenous communities/Organizations include:

- As defined by Manitoba Sustainable Development
- on ESS sites identified by communities and organizations
- other as per preferences obtained through in engagement feedback on this document/process and agreed to by Manitoba Hydro

Manitoba Hydro will also notify government and response agencies. Please refer to Appendix A for the reportable incident contact list.

² Over the course of project planning, Manitoba Hydro communicated with Indigenous communities through the First Nation and Metis Engagement Process, then later formed a Monitoring Committee in response to concerns shared. Both groups invite participation from the same 25 different Indigenous communities and organizations. Manitoba Hydro representatives communicate project information to all 25 groups and, if preferred, bilaterally with individual communities or organizations.

Appendix A: Reportable Incident Contact List

Indigenous community or	Community contact	Phone Number
organization		
Aboriginal Chamber of	Darrell Brown	(204) 237-9359
Commerce		
Animakee Wa Zhing #37 First	Chief Vanessa Powassin	(807) 226-5353
Nation		
Anishinaabeg of Naongashiing	Chief Wesley Big George	(807) 488-5602
Assembly of Manitoba Chiefs	Grand Chief Arlen Dumas	(204) 956-0610
Birdtail Sioux Dakota Nation	Chief Ken Chalmers	(204) 568-4540
Black River First Nation	Chief Sheldon Kent	(204) 367-4411
Brokenhead Ojibway Nation	Chief Deborah Smith	(204) 766-2494
Buffalo Point First Nation	Chief John Thunder	(204) 437-2133
Canupawakpa Dakota First Nation	Chief Viola Eastman	(204) 854-2959
Dakota Ojibway Tribal Council	Maeengun Linklater	(204) 239-8650
Dakota Plains Wahpeton First Nation	Chief Orville Smoke	(204) 252-2300
Dakota Tipi First Nation	Chief Eric Pashe	(204) 857-4381
Iskatewizaagegan No. 39	Chief Gerald Lewis	(807) 733-2560
Independent First Nation		
Long Plain First Nation	Chief Dennis Meeches	(204) 252-2731
Manitoba Metis Federation	President David Chartrand	(204) 586-8474
Northwest Angle No.33 First Nation	Chief Darlene Comegan	(807) 733-2200
Peguis First Nation	Chief Glenn Hudson	(204) 645-2359
Roseau River Anishinabe First Nation	Chief Craig Alexander	(204) 427-2312
Sagkeeng First Nation	Chief Derrick Henderson	(204) 367-2287
Sandy Bay Ojibway First Nation	Chief Lance Roulette	204-843-2462
Shoal Lake No. 40 First Nation	Chief Erwin Redsky	(807) 733-2315
Sioux Valley Dakota Nation	Chief Jennifer Bone	(204) 855-2671
Southern Chiefs Organization	Grand Chief Jerry Daniels	(204) 946-1869
Swan Lake First Nation	Chief Francine Meeches	(204) 836-2101
Waywayseecappo First Nation	Chief Murray Clearsky	(204) 859-2879

Source: Indigenous and Northern Affairs Canada and Internal Manitoba Hydro understanding of contact information for MMTP Monitoring Committee

Please note that Manitoba Hydro will also use email addresses as provided by communities for communication as appropriate.

Emergency response agencies	Address	Contact number	
(RM = Rural Municipality)	*in case of emergency call 911. Other numbers listed are for		
	administrative purposes		
Brandon Fire and Emergency	120 - 19th Street North, Brandon MB	204-729-2400	
Services			
Police / RCMP			
Brandon RCMP detachment	SITE 500, BOX 12, RR5 Brandon, MB	204-726-7522	
(Blue Hills)			
Headingley RCMP Detachment	156 McIntosh Rd, Headingley MB	204-888-0358	
Sprague RCMP	2151 Main St	204-437-2041	
	Sprague MB		
Oakbank RCMP detachment	P.O. Box 309, Oakbank MB	204-444-3847	
Steinbach RCMP detachment	100 PTH 12 N, Steinbach, MB	204-326-4452	
Winnipeg Police Service	PO Box 1680	204-986-6222	
Fire / Paramedic	*in case of emergency call 911. Other numbers listed are for		
	administrative purposes		
RM of Headingley Fire	1-126 Bridge Road, Headingley, MB	204-837-5796	
Department	(Attn: Doug Hansen)		
RM of La Broquerie Fire	Box 130, La Broquerie, MB	204-424-4251	
Department			
RM of Macdonald Fire	P.O. Box 100, Sanford, MB	204-736-2255	
Department			
Ritchot Volunteer Fire	352 Main Street, St. Adolphe MB	204-981-3199	
Department			
RM of Rosser - Fire	PR#221 & 0 077E, Box 131, Rosser MB	204-467-5711	
Department			
RM of Springfield - Fire and	Box 219, 100 Springfield Centre Drive,	204-981-4042	
Rescue Service	Oakbank MB		
RM of Tache Fire Department	PO Box 100	(204) 878-3321	
	28007 Municipal Road 52N., Lorette MB		
RM of Stuartburn – Fire	Box 59, Vita MB 108 Main Street North	204-425-3218	
Department			
RM of Ste Anne Fire	395 Traverse Road	204-422-8882	
Department	Box 6, Grp 50, RR 1		
	Ste. Anne, MB R5H 1R1 (units in Town of		
	Ste. Anne and Richer)		

Fire, First Responders and Police Contact Information

Emergency response agencies	Address	Contact number
Town of Sainte-Anne Police	608 Traverse Road, Sainte Anne MB	204 -422-8209
Department		
Town of Sainte Anne – Fire	736 Traverse Road, Sainte Anne, MB	204-422-5293
Department		
Village of Glenboro – Glenboro	Box 190, Glenboro MB; Attn: Garth	
Fire Department	McIntyre	
Winnipeg Fire Paramedic	2nd Floor - 185 King Street, Winnipeg,	204-986-6380
Service	MB	

Appendix B: Manitoba Hydro Transmission Spill Response Plan

TRANSMISSION SPILL RESPONSE PLAN 2018 – 2019

Reviewed and approved by:

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Daniel Day, Manager Transmission Line Maintenance

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Spill Response Plan Revisions

Revision Date	Review Due	Rev. #	Comments
	Date		
2017/03/10	2017/10/01	0	Retired old SRP and instituted new version
2018/03/18	2019/03/31	1	Adjusted document to reflect Division and
			Department changes.
2018/10/30	2019/04/30	2	 Adjusted document to include Licensing & Environmental Assessment Department Revised Appendix 2 to reflect the most recent list of reportable quantities Included field spill response report forms

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1.0 Introduction

This *Spill Response Plan* (The Plan, SRP) was developed to assist employees with responding to releases). This plan encompasses the following departments:

- Transmission Line & Civil Construction (TLCC)
- Transmission Line Maintenance (TLM)
- Licensing & Environmental Assessment (LEA)

The main release risks for each area are:

- TLCC and LEA the transportation, use, storage and transfer of:
 - hydraulic fluid
 - other mechanical lubricants
 - petroleum fuels
 - anti-freeze
- TLM the transportation, use, storage and transfer of:
 - hydraulic fluid
 - other mechanical lubricants
 - petroleum fuels
 - anti-freeze
 - herbicide/pesticide

The Location of Main Areas containing Hazardous Material Storage can be found in Appendix 1.

2.0 Manitoba Hydro Responsibilities

Manitoba Hydro has the ultimate responsibility for all dangerous goods, hazardous wastes and controlled product releases occurring in their areas of jurisdiction or on Manitoba Hydro projects.

Workers are responsible:

- Revise daily tailboard in the event of a release.
- Follow proper release response protocols located in Section 3.0.
- Notify the Area Spill Response Coordinator (ASRC) (Table 1) and the worker supervisor of the spill
- Minimize the release hazards associated with their work as per applicable training, protocol, Safety Data Sheets (SDS's)
- Cleanup of release and associated disposal of contaminated materials per Manitoba Hydro Hazardous Materials Management Handbook
 - Record all pertinent information on the paper copy found in the spill response kit and submit to the Person in Charge
- Communicate to their supervisor their training needs
- Successfully complete required training for example WHMIS, Spill Awareness CBT, Transportation of Dangerous Goods (TDG), spill training

Supervisors are responsible:

- Ensure staff have support and completed training on WHMIS, TDG, spill training, Spill Response CBT, and staff have reviewed the spill response plan for communicating the Spill Response Plan to the field supervisors
- Ensure that required training is up-to-date and records are kept
- As the Person in Charge, input data from paper report into EHSM system.

Area Spill Response Coordinator (ASRC) is responsible:

- Act as the spill resource for departmental staff which may include being the initial contact person for releases, track releases, providing response guidance, and/or requesting mutual aid from other Manitoba Hydro departments including Emergency Response Crews (ERC's) or other government agencies
- Provide and coordinate training to all departmental personnel in relation to spill management and reporting
- Ensure the Spill Response Plan is reviewed, updated and activated annually
- As the Person in Charge, input data from paper report into EHSM system.

Managers are responsible:

- Providing adequate support to ASRC, field supervisors, and staff to implement the SRP
- Ensure that all requirements of Safety Management System (SMS) Section 3.4 Releases-Response and Prevention are met
- Annual approval of the Spill Response Plan

3.0 Release Response Protocol

In the event of an accidental release of any dangerous goods, hazardous waste, or controlled product, the onsite trained personnel shall:

- Assess the situation hazard identification (safety, product, site, quantity)
- Identify the release material
- Ensure personal safety use PPE as required
- Stop the source
- Contain the release
- Secure the site
- Revise daily tailboard and incorporate changes to accommodate release containment and clean-up
- Notify Area Spill Response Coordinator (Table 1)
- Cleanup release
- If required, sample the site to ensure adequate cleanup
- Dispose of waste according to applicable legislation
- Site restoration

4.0 Manitoba Hydro Contact Information and Reporting Requirements

This section will provide information on reportable spill quantities, Manitoba Hydro contacts, reporting to regulators, incident reporting and other resources.

4.1 Reporting Spill Quantity

All releases, regardless of quantity, must be reported to the ASRC as soon as reasonably practical. Releases as part of Manitoba Hydro work are to be reported through the Environment Health & Safety Management (EHSM) system via Incident Reporting Form. Releases as part of contractor work will be tracked on the spreadsheet maintained by the Environment group. , EHSM forms to be distributed to:

TO: EHSM Incident Management (Default)

CC: Departmental Reporting which includes Immediate Supervisor and ASRC

Please contact the person relevant to your department listed in Table 1 for assistance.

Table 1: Manitoba Hydro SRP Contacts

Department	Position	Name	Office #	Cellular
	Area Spill Response Coordinator (TLM)	Terry Dunlop	(204) 482-2582	(204) 981-4505
Transmission Line	Area Spill Response Coordinator TLM)	Jeffery Champaign	(204) 778-1353	(204) 307-5882
Maintenance	Area Spill Response Coordinator Alternate	Dean Yerama	(204) 629-3128	(204) 572-0540
	Area Spill Response Coordinator Alternate (TLM)	Amber Lahti	(204) 360-7843	(204)330-3535
Transmission Line and Civil Construction	Area Spill Response Coordinator (TLCC)	Ann Melnichuk	(204) 360-7921	(204) 619-1745
Licensing and Environmental Assessment	Area Spill Response Coordinator	Kris Watts	(204) 360-7859	(204) 801-6364
Corporate	Manitoba Hydro Incident Reporting*		(204) 360 (204-360	I

4.2 Reportable Spills to Regulators

Any spill that meets the following criteria must be immediately reported to Manitoba Sustainable Development:

Rule 1: Any volume released to a waterway (i.e. Insulating oil released into a river)

Rule 2: Any volume released to an environmentally sensitive area (e.g. School, playground, hospital, water treatment facilities, agriculture facilities)

Rule 3: Any volume released that poses or may pose a threat to human health or the environment (*i.e. Diesel spill next to drinking water well*)

If no Rules apply, see Appendix 2 for releases which meet or exceed the reportable quantity. As per the Water Protection Act, "riparian area" means an area of land on the banks or in the vicinity of a water body, which due to the presence of water supports, or in the absence of human intervention would naturally support, an ecosystem that is distinctly different from that of adjacent upland areas. (« zone riveraine »)

"water" means all surface water and groundwater, whether in solid or liquid form. (« eaux »)

- "water body" means any body of flowing or standing water, whether naturally or artificially created, and whether the flow or presence of water is continuous, intermittent or occurs only during a flood, including but not limited to a lake, river, creek, stream, slough, marsh, swamp and wetland, including ice on any of them. (« plan d'eau »)
- All releases involving sensitive areas (water treatment facilities, sewer drains, school yard, daycare, hospital, community/First Nation), or other areas accessible to the public. This would include sensitive areas on active construction sites whether rural or urban areas.)

Table 2: Manitoba Sustainable Development Reporting Information*

24-Hour Emergency Line	(204) 944-4888
24-Hour Emergency Line Toll Free	1 (855) 944-4888

* The Sustainable Development on duty officer handling calls to this number is responsible for initiating and reporting to either Transport Canada and/or Environment Canada, where/if required.

5.0 Contractor Responsibilities, Action Plan, and Reporting

This section applies to all contractors and their subcontractors. If a contractor does not have their own Spill Response Plan (SRP) for the project, please refer them to Contractor Spill Response Plan Framework (Appendix 3) to develop their own. The final SRP must be submitted to Manitoba Hydro before work can commence.

Contractors must have their own Spill Response Plans and are responsible for cleaning and remediating sites.

The contractor shall include Appendix 4 in their SRP. This is an action plan for all releases that are their (and their subcontractors) responsibility. Formal documentation (ie investigation/incident report) to be forwarded to MH within 24 hours of the incident or within a reasonable time frame agreed upon by MH contact.

6.0 Release Cleanup, Sampling, and Transportation of Contaminated Materials

Please refer to the Manitoba Hydro Hazardous Materials Management Handbook.

7.0 Administration

7.1 Training

All personnel, whose work provides a reasonable opportunity to be directly involved with, to discover, or to be called upon to help with a spill, require:

- Spill awareness training, such as Spill Awareness CBT, and
- Hands on or table top spill response training and testing as per Section 3.4 of the Safety Management System.

This Spill Response Plan will be reviewed annually, with all employees who may be expected to respond to a release. Documentation of the review will be recorded in the safety meeting minutes and attendance records.

7.2 Plan Review and Revision

This SRP will be reviewed and revised annually by the TLCC, LEA, and TLM Environmental Specialists (ES) and posted on the TC&LM Divisional Website and LEA SharePoint site. Plan review will include:

- Review of high risk activities and frequently spilled products,
- Annual communication by ES's of plan updates, and
- Review of revised SRP annually by field crews and documented in safety meeting minutes.

7.3 Plan Activation

This Spill Response Plan will be activated annually by the ASRC or designate. Activation may be hands on or a table top exercise and must be completed by each department. Activation shall be documented by the Spill Response Coordinator using eForm <u>0285</u> "Activation of Spill Plan/Exercise."

Transmission Line Maintenance		
Location	Hazardous Materials	BMP and Containment
Ashern Tool Crib/Garage	-Herbicide	 Secondary containment Spill kit Sign on door
Transmission Line Mtce-	-Jet B Fuel (25,000 L)	- Spill kits
Thompson	(2 x 2,500 L) -Diesel Fuel -Gasoline -Explosives	 Secondary containment fenced area for 25, 000 L fuel tank Containment ramp
Dauphin Herbicide Storage- 2 nd Street	-Herbicide	 Containment tubs and pallets Sign on door Inventory Spill kit
Brandon Service Centre Line Mtce Shed	-Herbicide	 Containment Tub built into lined concrete floor Pallets Sign on doors Inventory Spill kit
Selkirk S.C. Line Mtce Trailer	-Herbicide	 Containment tubs and pallets Sign on door Inventory Spill kit
Gillam Line Maintenance Building	-Fuel	- Spill kits - Chemical cabinet - Sign
St. Martin Line Maintenance bldg.	-Herbicide	 Secondary containment Sign on door Spill kit
Live Line Crews 2160 Mc Phillips Ave	-Herbicide	 Containment tubs and pallets Sign on door Inventory Spill kit
Lac du Bonnet Line Mtce Patrol Crew	-Various lubricants	- Chemical cabinet - Signs - Spill kit
Devil's Lake Yard	-Diesel Fuel (2,500 L) -Gasoline (2,500 L) -Various lubricants	- Signs - Spill kit - Concrete barriers - Chemical cabinet
Selkirk Line Maintenance Warehouse	-Various lubricants	- Chemical cabinet - Signs - Spill kit

Appendix 1 – Location of Hazardous Material Storage

Transmission Line Civil Construction	on	
Location	Hazardous Materials	BMP and Containment
TLCC Riel Material Yard Gate 6	Hazardous Materials -Diesel Fuel (2500L) Tank -Various lubricants, oils and chemicals -Gasoline -Diesel -Antifreeze -Household cleaners -Paint -Various lubricants, oils and	BMP and Containment - Spill kit - Signs - Impact bollards - Chemical cabinet
TLCC Civil Crew A TLCC Civil Crew B TLCC Civil Crew C TLCC Civil Crew D TLCC Civil Crew E TLCC Civil Crew Office Trailer -Riel	chemicals -Gasoline -Diesel -Antifreeze -Household cleaners -Paint	- Signs - Spill kit
TLCC Bipole S1 (Portage la Prairie)	-Various lubricants, oils and chemicals -Gasoline -Diesel -Antifreeze -Household cleaners -Paint	- Chemical cabinet - Signs - Spill kit
TLCC Riel Surveys Gate 3	-Various lubricants, oils and chemicals -Gasoline -Diesel -Antifreeze -Household cleaners -Paint	- Chemical cabinet - Signs - Spill kit
TLCC Riel House Gate 2	-Various lubricants, oils and chemicals -Gasoline -Diesel -Antifreeze -Household cleaners -Paint	- Chemical cabinet - Signs - Spill kit

Transmission Line Civil Construc	tion	
Location	Hazardous Materials	BMP and Containment
TLCC Soil Remediation 1840 Chevrier	-Various lubricants, oils and chemicals -Gasoline -Diesel -Antifreeze -Household cleaners -Paint	- Chemical cabinet - Signs - Spill kit
TLCC Gillam	-Various lubricants, oils and chemicals -Gasoline -Diesel -Antifreeze -Household cleaners -Paint chemicals -Gasoline -Diesel	- Chemical cabinet - Signs - Spill kit
TLCC T-Line C-Can	-Various lubricants, oils and chemicals -Gasoline -Diesel -Antifreeze -Household cleaners -Paint	- Chemical cabinet - Signs - Spill kit

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Appendix 2 – Externally Reportable Quantities for Releases

Externally Reportable Quantities for Releases				
Hazard	TDG Class (if Applicable)	Reportable Quantity by Regulation	Reportable Quantity for Notification Purposes	
Regulated	Territoria			
Explosives (i.e. Dynamite)	1	Any Quantity	-	
Compressed Gas				
Flammable (i.e. Aerosols, Propane)	2.1	100 L Container Capacity (refers to water capacity)	<u> </u>	
Flammable - Natural Gas Underground Lines	-	5	Any quantity that causes death, injury, fire, explosion, evacuation, threatens safety of public, highly visible and notable, > 2" diameter lines and >550 kPa (80 psig), or has harmed the environment.	
Non-Flammable, Non-Toxic (i.e. Anhydrous Ammonia, Fire Extinguishers)	2.2	100 L Container Capacity (refers to water capacity)	-	
Toxic (i.e. Hydrogen Sulphide; Chlorine)	2.3	Any Quantity	_	
Corrosive (i.e. Hydrogen Chloride)	2.3	Any Quantity	-	
Flammable Liquids (i.e. Gasoline, Acetone, Diesel Fuel, Methanol)	3	100 L	-	
Flammable Solids, Spontaneous Combustible and Water-Reactive Substances (i.e. Sulphur, Zinc Dust)	4	1 kg		
Oxidizing Substances				
Packing Groups I & II (i.e. Sodium Peroxide, Potassium Permanganate)	5.1	1 kg or 1 L	-	
Packing Groups III (i.e. Potassium Nitrate)	5.1	50 kg or 50 L	_ • .	
Organic Peroxides (i.e. Methyl Ethyl Ketone Peroxide)	5.2	1 kg or 1 L		
Toxic Substances				
Packing Group I (i.e. Acrylonitrile, Hydrogen Sulfide)	6.1	1 kg or 1 L		
Packing Group II & III (i.e. Pesticides, Wood Preservative)	6.1	5 kg or 5 L		
nfectious Substances (i.e. Infectious Substances affecting humans)	6.2	Any Quantity	-	
tadioactive Materials (i.e. Nuclear Densometers)	7	Any discharge or radiation exceeding 10 mSv/h at the package surface and 0.2 mSv/h at 1m from the package surface		
(i.e. Hydrofluoric Acid, Battery Fluid, Mercury)	8	5 kg or 5 L	-	

September 2018

2

Hazard	TDG Class (If Applicable)	Reportable Quantity by Regulation	Reportable Quantity for Notification Purposes
Miscellaneous Products, Substances or Organisms (i.e. Lithium Cells & Batterles, Asbestos)	9	50 kg	-
Polychlorinated Biphenyls			
PCB or PCB Contaminated Oil IN USE	9	1 gram	-
PCB Containing Equipment IN STORAGE	9	Any Quantity ≥2 ppm	-
Ozone Depleting Substances (i.e. R-11 Refrigerant) *Report using MOPIA form	-	10 kg	-
Non Regulated			
Petroleum Products			Takan tak
Engine Oil	-		30 L
Insulating Oil	-	-	100 L
Lubricating & Hydraulic Oil	-	-	50 L
Pesticides (Non-TDG Regulated)	13 Mar 14		
Concentrate	-	-	10 L
Solutions, Mixtures		-	100 L
Antifreeze (Non-TDG Regulated) (Propylene & Ethylene Glycol)	-	-	50 L
Sewage (Solid Sludge or Liquid)	-	-	500 kg or 500 L

*Table from Dean Kasur E-mail on Friday August 17,2018 2:55 pm. *Table information valid from September 1st, 2018.

Contact Information:

Dean Kasur Senior Hazardous Materials Specialist Property and Corporate Environment Department

p: (204) 360-3259 | c: (204) 799-3304e: dkasur@hydro.mb.ca

Appendix 3 – Contractor Spill Response Plan Framework

This section applies to all contractors and their sub-contractors. The contractors must have their own Spill Response Plan before commencing field work.

The Spill Response Plan must contain

- 1. The geographic location the plan was developed for.
- 2. The date the plan was developed and issued. The plan should be reviewed and updated annually (within 12 months of initial/last review/revision).
- 3. The roles and responsibilities for management (including off site managers, supervisors, etc) site staff.
- 4. Training for their site staff, including sub-contractors.
- 5. A WHMIS inventory, listing the hazardous materials workers will be exposed to during the work, with identification and access to the related Material Safety Data Sheets/Safety Data Sheet (MSDS/SDS). The ability to determine estimated quantity of released material must also be available.
- 6. A plan of action for workers to follow in the event of a release. The action plan should include:
 - Protocol for activating the plan.
 - Hazard identification and assessment of the situation.
 - Personal Protective Equipment (PPE) accessible to workers.
- 7. A list of containment equipment and materials available for use to control, contain and secure the site.
- 8. An inventory of hazardous materials being stored on site and a list and a map indicating where these storage areas are located.
- 9. The contractors on site must maintain a current copy their SRP, as well as the release reports that are their responsibility.
- 10. It is the contractor's responsibility to monitor, report and maintain a copy of all release reports for their subcontractor(s).
- 11. Contractors are also responsible for providing the Manitoba Hydro ASRC with a signed copy of their SRP.
- 12. If any contractor(s) are adopting the Manitoba Hydro SRP, signed documentation must be provided.

Appendix 4 – Contractor Action Plan

For all hazardous material releases that are the contractor's (or any sub-contractor's) responsibility, the individual responsible for the release or the individual locating the release is accountable for the following:

- 1. The contractor (or any sub-contractor) responsible for the release will have a clearly defined reporting protocol reviewed and authorized by MB Hydro.
- 2. For externally reportable releases, the contractor is to contact Manitoba Hydro immediately by cell phone, sat phone or VHF radio.
- 3. Control, contain and secure the site. Clean up the release in accordance with the contractor protocol. This process must involve:
 - Collecting the contaminated material and storing it in compatible containment systems until it can be shipped to an approved licensed waste management facility or industrial waste landfill site. Permission must be obtained from the operator of the industrial waste landfill site before hazardous waste material will be accepted.
 - Control access to the collected wastes. A lined and tarped containment system shall be in place to ensure waste material is contained and protected from the elements.
 - Maintain an inventory of the collected waste materials.
 - Provide Bill of Lading and Manifests for shipped TDG materials.
 - Potential sampling to prove site does not require further remediation, sampling may be at discretion of Manitoba Hydro
- 4. The formal release report will be completed and submitted by the contractor to Manitoba Hydro.
- 5. The contractor responsible for the release shall transport and dispose of wastes according to regulation. The contractor is also responsible for restoring the site to the satisfaction of Manitoba Hydro.

Appendix C: Summary of consultation

Appendix C: Summary of consultation

Introduction

Below is a summary and evidence of Manitoba Hydro's consultation with potentially affected persons, organizations, Indigenous communities, and federal and provincial authorities regarding the Transmission Line Construction Emergency Response Plan for the Dorsey International Power Line (the Plan), including any concerns that were raised, steps that Manitoba Hydro has taken or will take to address those concerns.

Consultation

Draft environmental protection and management plans, were uploaded to the Project website and a web page was created in October 2018, to which this plan was added in February 2019, including a fillable comment form to provide feedback.

As Manitoba Hydro completed draft plans, Indigenous communities and organizations, landowners, interested parties and the public were notified. Over the course of project planning, Manitoba Hydro communicated with Indigenous communities through the First Nation and Metis Engagement Process, then later formed a Monitoring Committee in response to concerns shared. Both groups invite participation from the same 25 different Indigenous communities and organizations:

- Black River First Nation
- Brokenhead Ojibway Nation
- Buffalo Point First Nation
- Dakota Plains Wahpeton
- Dakota Tipi First Nation
- Long Plain First Nation
- Peguis First Nation
- Roseau River Anishinabe First Nation
- Sagkeeng First Nation
- Sandy Bay Ojibway First Nation
- Swan Lake First Nation
- Iskatewizaagegan 39 Independent First Nation

- Shoal Lake 40 First Nation
- Sioux Valley Dakota Nation
- Waywayseecappo First Nation
- Canupawakpa Dakota Nation
- Birdtail Sioux First Nation
- Animakee Wa Zhing #37
- Anishnaabeg of Naongashiing
- Northwest Angle #33
- Manitoba Metis Federation
- Aboriginal Chamber of Commerce
- Assembly of Manitoba Chiefs
- Dakota Ojibway Tribal Council
- Southern Chiefs Organization

Input was sought between May of 2018 until present. Manitoba Hydro sought feedback on this Plan in February of 2019. This was done through the Project website, MMTP Monitoring Committee website, e-campaign, emails, letters to landowners, and meetings with interested parties. As noted above, the Project website was shared with communities via email and the Plan was also posted on the MMTP Monitoring Committee website.

A Manitoba Hydro Environmental Protection Officer and Manitoba Hydro Safety Officer visited RM, RCMP, Sustainable Development and other offices to meet with Emergency Service Provides and coordinating agencies A Project map was provided and discussions involved a general description of the project and what to expect during the various construction activities. Manitoba Hydro staff committed to contacting the Rural Municipalities, RCMP and other offices again prior to or during the early stages of construction as well as prior to activities that may cause disruption and/or questions from the public such as temporary traffic stoppages (with use of traffic control in accordance with provincial requirements), helicopter work, and implodes during stringing. The notification procedures that will be followed for significant incidents were also discussed. Discussions helped increase awareness of the project and initiated open and ongoing communication that will continue for the duration of the project. Table 1 lists the agencies MH staff met with and the updated contact information for the associated emergency response providers. This table has, and will be provided to MH staff and contractors working on the Project.

Concerns raised and steps taken to address concerns

Manitoba Hydro received feedback on this Plan from a MMTP Monitoring Committee Representative Dakota Tipi First Nation (Table 2). Manitoba Hydro reviewed the feedback and provided Dakota Tipi First Nation with a table including their comments and Manitoba Hydro's responses. As a result of this no further feedback has been received from this community with regard to this Plan.

Manitoba Hydro heard from the Rural Municipality of Piney that they prefer to receive communication directly from Manitoba Hydro instead of from contractors working for Manitoba Hydro. Manitoba Hydro noted the Rural Municipality's request and will communicate directly with them and notify the contractors of the request. In cases of emergency however, the contractor may need to contact the RM directly.

Table 1 Agencies (interested parties) visited by Manitoba Hydro staff

A copy of this table has and will be provided to Manitoba Hydro Staff and Contractors working on the Project.

Emergency Response Contacts	Phone	Email	Address	Comments
Canada Border Services- Piney Port of Entry	204-423-2153		Box 150, Piney, MB R0A 1K0	Manitoba Hydro staff discussed project and access notification into border zone on January 21, 2019
United States Border Patrol	1-218-689-4333 1-218-386-1802		502 State Ave, Warroad, MN 56763, USA	The United States Border Patrol is aware of the project and Manitoba Hydro will call both listed numbers to notify of planned activities prior to entering the border zone.
Manitoba Sustainable Development Office- Sprague	204-437-2348	<u>dan.cooper@gov.</u> <u>mb.ca</u>	Box 70, Sprague, MB R0A 1Z0	Manitoba Hydro staff discussed project and provided map to a Natural Resource Officer on January 22, 2019
Manitoba Sustainable Development Office- Winnipeg	204-470-7548	alvin.dyck@gov.m b.ca	1007 Century St, Winnipeg, MB R3H 0W4	Manitoba Hydro staff discussed project with an Environment Officer on March 5, 2019
RCMP Headingley	204-888-0358	<u>toni.zoledowski@</u> <u>rcmp-grc.gc.ca</u>	156 McIntosh Rd, Headingley, MB R4H 1G1	Manitoba Hydro staff discussed project and provided map to a Corporal on April 1, 2019
RCMP Sprague	204-437-2041		Box 29, Sprague, MB R0A 1Z0	Manitoba Hydro staff discussed project and provided map to a Constable on January 22, 2019
RCMP Steinbach	204-326-4452		100 PTH12 North, Steinbach, MB R5G 1T4	Manitoba Hydro staff discussed project and provided map to an Office Clerk on January 22, 2019

Emergency Response Contacts	Phone	Email	Address	Comments
RM of Headingley	204-885-5997	<u>Mecnet@qworks.</u> <u>biz</u>	5204 Roblin Boulevard- Lower Level, Winnipeg, MB R3R 0H1	Manitoba Hydro staff met with Municipal Emergency Coordinator on March 7, email correspondence reply March 12
RM of La Broquerie	204-424-5251	<u>mec@rmlabroqu</u> <u>erie.ca</u>	Box 130 (123 Simard St), La Broquerie, MB R0A 0W0	Manitoba Hydro staff discussed project and provided map to RM office representative on January 22, 2019. Met with the Municipal Emergency Coordinator on April 1,2019
RM of La Broquerie	204-424-5251		Box 130 (123 Simard St), La Broquerie, MB R0A 0W0	Manitoba Hydro staff discussed project and provided map to RM office representative on January 22, 2019
RM of Macdonald	204-954-0010	MEC@altona.ca	Box 1630 (111 Centre Ave), Altona, MB R0G 0B0	Manitoba Hydro staff discussed project with the Municipal Emergency Coordinator on March 7, email pdf map and project website and received reply on March 12
RM of Macdonald	204-736-2255	daryl@rmofmacd onald.com	Box 100 (161 Mandan Drive), Sanford, MB R0G 2J0	Manitoba Hydro staff discussed project and provided map to RM office representative on January 31, 2019
RM of Piney	204-437-2284	<u>martin@rmofpin</u> <u>ey.mb.ca</u>	Box 48 (6092 Boundary St), Vasser, MB R0A 2J0	Manitoba Hydro staff discussed project and provided map to the Municipal Emergency Coordinator on April 16, 2019
RM of Ritchot	204-883-2293	emergencycoord inator@ritchot.c om	352 Main St, St Adolphe, MB R5A 1B9	Manitoba Hydro staff discussed project and provided map to RM office representative on January 31, 2019. Spoke to the Municipal Emergency Coordinator on phone Mar 26, will meet up late May or early June after flood season.

Emergency Response Contacts	Phone	Email	Address	Comments
RM of Ritchot	204-981-3199		352 Main St, St Adolphe, MB R5A 1B9	Manitoba Hydro staff discussed project and provided map to RM office representative on January 31, 2019
RM of Rosser	204-954-0010	MEC@altona.ca	Box 1630 (111 Centre Ave), Altona, MB ROG 0B0	Manitoba Hydro staff met with the Municipal Emergency Coordinator on March 7, email correspondence reply March 12
RM of Rosser	204-467-5711	<u>cao@rmofrosser.</u> <u>com</u>	Box 131, Rosser, MB R0H 1E0	Manitoba Hydro staff discussed project and provided map to the office clerk on January 31, 2019
RM of Springfield	204-444-4308	kbourns@rmofsp ringfield.ca	Box 219 (100 Springfield Centre Drive), Oakbank, MB R0E 1J0	Manitoba Hydro staff discussed project and provided map to the Springfield Police Administrative Assistant on January 31, 2019
RM of St Anne	204-422-8209	<u>marc.robichaud@</u> <u>stannemb.ca</u>	Box 6, Grp 50, RR1 (395 Traverse Road), St Anne, MB R5H 1R1	Manitoba Hydro staff discussed project and provided map to the Municipal Emergency Coordinator on April 16, 2019
RM of Stuartburn	204-425-3218	acao@rmofstuart burn.com	Box 59 (108 Main St N), Vita, MB R0A 2K0	Manitoba Hydro staff discussed project and provided map to the Municipal Emergency Coordinator on April 16, 2019
RM of Tache	204-878-3321		28007 Mun 52N, Dufresne, MB R5K 0N7	Manitoba Hydro staff discussed project and provided map to the Receptionist at RM office representative on April 16, 2019. Emailed the Municipal Emergency Coordinator on April 18, 2019 to see if interested in meeting on May 1, 2019
RM of Tache	204-878-3321 ext 114	<u>monique@rmtac</u> <u>he.ca</u>	28007 Mun 52N, Dufresne, MB R5K 0N7	Manitoba Hydro staff discussed project and provided map to the RM Office Receptionist at RM office representative on April 16, 2019

Table 2 Comments from a MMTP Monitoring Committee Representative from Dakota Tipi First Nation

Section	Comments from Dakota Tipi First Nation	Manitoba Hydro response, steps taken and rationale
Overall	I reviewed the cultural and heritage resources protection plan, I'm very satisfied with hydro respect and transparent aspect to the plan, as well with the other 10 plans, Dakota Tipi first nation and myself look forward to a respectful positive outcome for all living spirits that will be involved in the construction of the MMTP project	Manitoba Hydro also looks forward to continuing to work with Dakota Tipi First Nation and thanks the Committee Representative for their review of the plans

Draft environmental protection and management plans, were uploaded to the Project website and a web page was created in October 2018 and updated in February 2019 with this Plan. A recent screen shot of the Manitoba Hydro Project Website is below (Figure A).

Environmental protection and management - draft plans

The draft plans are used as guides for contractors and field personnel during the construction of MMTP. They ensure environmental legislation requirements are met and the environment is protected.

- Clearing Management Plan (Draft) (PDF, 882 KB)
- NEW Blasting Management Plan (Draft) (PDF, 382 KB)
- Erosion and Sediment Control Plan (Draft) (PDF, 8.8 MB)
- Golden Winged-Warbler Habitat Management Plan (Draft) (PDF, 741 KB)
- Cultural and Heritage Resources Protection Plan (Draft) (PDF, 5.8 MB)
- Navigation and Navigation Safety Plan (Draft) (PDF, 5.5 MB)
- Waste and Recycling Management Plan (Draft) (PDF, 3.2 MB)
- NEW Construction Emergency Response Plan (Draft) (PDF, 1.2 MB)
 - NEW Dorsey Converter Station Emergency Response Plan (Draft) (PDF, 1.7 MB)
 - NEW Glenboro Station Emergency Response Plan (Draft) (PDF, 1.3 MB)
 - NEW Riel Converter Station Emergency Response Plan (Draft) (PDF, 3 MB)
- Rehabilitation and Invasive Species Management Plan (Draft) (PDF, 7.3 MB)
- Biosecurity Management Plan (Draft) (PDF, 2.2 MB)
- Construction Access Management Plan (Draft) (PDF, 86.4 MB)
- Construction Environmental Protection Plan (Draft) (PDF, 55.8 MB)
- Environmental Monitoring Plan (Draft) (PDF, 2 MB)
- Integrated Vegetation Management Plan (Draft) (PDF, 815 KB)

If you would like to provide us with your feedback on these draft plans, complete and submit this form.

If you cannot view these documents or you need accessible formats, contact us.

We will be adding new and updated plans as we incorporate feedback. Sign up to get notified of these changes:

Email

Figure A screen shot of Manitoba Hydro project page website

A fillable comment form to provide feedback was created in October 2018. A screen shot of the fillable comment sheet can be found below (Figure B).

Environmental protection and management – draft plans feedback

First name Last name Address Phone Email Do you represent an Indigenous community or organization? O Yes ○ No Draft plan(s) you reviewed (select all that apply): Access Management Biosecurity Management Blasting Management Clearing Management Construction Emergency Response Construction Environmental Protection Cultural and Heritage Resources Protection Dorsey Converter Station Emergency Response Environmental Monitoring

- Erosion and Sediment Control
- Glenboro Station Emergency Response
- Golden Winged-Warbler Habitat Management
- Integrated Vegetation Management
- Navigation and Navigation Safety
- Rehabilitation and Invasive Species Management
- Riel Converter Station Emergency Response
- Waste and Recycling Management

For each plan you selected above, share your comments, concerns, and suggestions for how your concerns might be addressed.



Figure B Fillable comment form to provide feedback

Draft environmental protection and management plans were uploaded to the MMTP Monitoring Committee website in October 2018, this Plan was added in February 2019. A screen shot of the MMTP Monitoring Committee website is below (Figure C).



Figure C MMTP Monitoring Committee website screenshot

Below is a screen shot of the e-campaign that was sent to 825 recipients (Figure D.)

e-campaign to MMTP Master List (825 recipients)

Manitoba–Minnesota Transmission Project update

Environmental protection and management – draft plans

We are looking for feedback on two new draft environmental protection and management plans for the Manitoba–Minnesota Transmission Project (MMTP). The <u>Blasting plan and Emergency</u> <u>Response Plan are available for your review</u>.

We invite you to share your feedback on these draft plans. To do so, <u>complete and submit this form</u> before February 15, 2019.

We will be adding new and updated plans to the website as we incorporate feedback. <u>Sign up</u> to get notified of these changes.

Contact us

- Email the Manitoba–Minnesota Transmission Project.
- Phone 204-360-7888 or toll-free 1-877-343-1631.
- Visit our project website.

Figure D e-campaign screenshot

Below is the content from the letter sent to landowners (Figure E).



2019 04 04

Dear Landowner:

MANITOBA-MINNESOTA TRANSMISSION PROJECT: ENVIRONMENT ACT LICENCE RECEIVED

Manitoba Sustainable Development has granted a licence for the Manitoba-Minnesota Transmission Project. The licence outlines conditions that Manitoba Hydro must follow for the project and can be found on the Manitoba Sustainable Development Public Registry (https://www.gov.mb.ca/sd/eal/registries/5750mbhydrombminnesota/index.html).

While the Project has received provincial regulatory approval, federal decisions are pending and Manitoba Hydro will not begin construction until it has received all necessary approvals.

The draft environmental protection and management plans for the Project are available on our website and we invite you to provide feedback. The following is a link to the document library that contains these plans https://www.hydro.mb.ca/projects/mb_mn_transmission/document_library.shtml. I encourage you to visit the Project website (www.hydro.mb.ca/projects/mb_mn_transmission/document_library.shtml. I encourage you to visit the Project website (www.hydro.mb.ca/projects/mb_mn_transmission/document_library.shtml. I encourage you to visit the Project website (www.hydro.mb.ca/projects/mb_mn_transmission/document_library.shtml.

At this time we are also seeking to understand whether you have interest in participating in a Landowner Advisory Committee. Please contact me for further information should you be interested.

As your Manitoba Hydro liaison, I welcome discussions with you at any time. I can be reached directly at «Liaison_phone_number». Please let me know if you would prefer correspondence by email.

Yours truly,

«Liaison»

Figure E Content from the letter sent to landowners

Below is a screen shot of an email sent to the MMTP Monitoring Committee (Figure F).

From: Coughlin, Sarah Sent: Monday, February 11, 2019 4:13 PM Subject: RE: MMTP Monitoring Committee AND Review of New EPP Documents

The MMTP Hiring Subcommittee have updated the <u>position descriptions</u> to be discussed at the February 19, 2019 MMTP Monitoring Committee meeting at Riel Station. Reviewing these positions descriptions will be part of the discussion at the Feb 19 meeting. Please RSVP if you plan on attending the meeting so we can make appropriate arrangements with security and food. Thank you to those who have already indicated they can attend.

REVIEWING MORE DRAFT PLANS:

We have more draft environmental management and protection plans ready for review, in addition to the <u>Blasting Management Plan (Draft)</u> and <u>Construction</u> <u>Emergency Response Plan (Draft)</u> sent previously, we also have the:

- Dorsey Converter Station Emergency Response Plan (Draft);
- Glenboro Station Emergency Response Plan (Draft) and the
- Riel Converter Station Emergency Response Plan (Draft).

Each of the draft plans guides contractors and field personnel while constructing the Manitoba-Minnesota Transmission Project in a manner that meets environmental legislation requirements and protects the environment. Please let me know if you would like to review and comment on the plans. We'd like to hear comments or concerns in a manner that works best for you. Please feel free to call me at (204) 360-3016 to share your comments directly or to set up a meeting. You can also visit our project website and fill out the comment form for the plans. These draft plans are also available on the MMTP Monitoring Committee website.

https://www.hydro.mb.ca/projects/mb_mn_transmission/document_library.shtml https://www.mmtpmonitoring.com/epps

Thank you and I look forward to seeing you on February 19, 2019!

Sarah Coughlin Senior Environmental Specialist Licensing & Environmental Assessment Transmission, Manitoba Hydro 360 Portage Ave, Winnipeg, MB w (204) 360-3016 </ COLDER DRAS

Figure F Screen shot of an email sent to the MMTP Monitoring Committee

Below is a screen shot of an email sent to interested parties (Figure H) and a list of the interested parties (Table 2)

From: Bratland, Maggie Sent: Thursday, April 4, 2019 12:36 PM Cc: MMTP; Barker, Trevor Subject: FW: Manitoba Minnesota Transmission Project: Provincial Environment Act Licence Received

Hello,

This email is to inform you that Manitoba Sustainable Development has granted a licence for the Manitoba-Minnesota Transmission Project. The licence outlines conditions that Manitoba Hydro must follow for the project and can be found on the Manitoba Sustainable Development Public Registry (https://www.gov.mb.ca/sd/eal/registries/5750mbhydrombminnesota/index.html).

While the Project has received provincial regulatory approval, federal decisions are pending and Manitoba Hydro will not begin construction until it has received all necessary approvals.

The draft environmental protection and management plans for the Project are available on our website and we invite you to provide feedback. The following is a link to the document library that contains these plans https://www.hydro.mb.ca/projects/mb_mn_transmission/document_library.shtml. I encourage you to visit the Project website (www.hydro.mb.ca/projects/mb_mn_transmission/document_library.shtml. I encourage you to visit the Project website (www.hydro.mb.ca/projects/mb_mn_transmission/document_library.shtml. I encourage you to visit the Project website (www.hydro.mb.ca/projects/mb_mn_transmission/document_library.shtml. I encourage you to visit the Project website (www.hydro.mb.ca/projects/mb_mn_transmission/document_library.shtml. I encourage you to visit the Project website (www.hydro.mb.ca/projects/mb_mn_transmission/document_library.shtml.

Please don't hesitate to call if you have any questions.

Regards,

Maggie Bratland

Figure G Sample email sent to interested parties

Table 2 Manitoba Hydro's list of interested parties for the Project includes the following organizations

Interested parties list
Cooks Creek Conservation District
Dairy Farmers of Manitoba
DOA Outfitters
Ducks Unlimited
Forest Industry Association of Manitoba
Green Action Centre
HyLife, Land Manager
Integrated Resource Management Team (Eastern Region)
Keystone Agricultural Producers
La Salle Redboine Conservation District
Local Urban District of Richer, Committee Member-Chairperson
Macdonald-Ritchot Planning District
Manitoba Indigenous and Northern Relations
Manitoba Aerial Applicators
Manitoba Agriculture (Land Use)
Manitoba Agriculture (Agri-Resource Branch)
Manitoba Association of Cottage Owners
Manitoba Bass Anglers (MBA)
Manitoba Canoe & Kayak Centre - Winnipeg
Manitoba Chamber of Commerce
Manitoba Chicken Producers
Manitoba Climate Change and Air Quality
Manitoba Crown Lands
Manitoba Fly Fishing Association (MFFA)
Manitoba Forestry Association
Manitoba Groundwater Management
Manitoba Habitat Heritage Corporation
Manitoba Historic Resources Branch

Interested parties list

Manitoba Infrastructure

Manitoba Infrastructure Highway Engineering

Manitoba Infrastructure Highway Regional Operations

Office of Fire Commissioner

Manitoba Lodges and Outfitters Association

Manitoba Paddling Association

Manitoba Parks and Regional Services - Parks and Protected Spaces

Manitoba Petroleum Branch

Manitoba Pork Council (Industry Services Co-ordinator

Manitoba Protected Areas Initiative

Manitoba Public Health

Manitoba Resource Development Division Growth, Enterprise and Trade

Manitoba Sustainable Development

Manitoba Sustainable Development (Aboriginal Relations)

Manitoba Sustainable Development (Office of Drinking Water)

Manitoba Sustainable Development (Water Control Works and Drainage Licensing)

Manitoba Sustainable Development (Water Quality Management)

Manitoba Trails Association

Manitoba Trappers Association

Manitoba Sustainable Development (Fish and Wildlife)

Manitoba Water Use Licensing

Manitoba Woodlot Association

Maple Leaf Agri-Farms

Nature Conservancy of Canada

Organic Producers Association of Manitoba Co-Operatives Inc.

Paddle Manitoba

Portage la Prairie Community Planning Services

Interested parties list
Redboine Boating Club
Rural Municipality of Glenboro South - Cypress
Rural Municipality of Headingley
Rural Municipality of La Broquerie
Rural Municipality of McDonald
Rural Municipality of Piney
Rural Municipality of Ritchot
Rural Municipality of Rosser
Rural Municipality of Springfield
Rural Municipality of Ste. Anne
Rural Municipality of Stuartburn
Rural Municipality of Tache
Ruth Marr Consulting
Save the Seine
Seine-Rat River Conservation District
Sharp-Tails Plus Foundation
Sno-Man Inc
South East Snoriders
Southwood Golf & Country Club
St. Norbert Ward - Winnipeg
St. Vital Ward - Winnipeg
Steinbach Community Planning Services
Steinbach Game & Fish Gun Range Inc
Town of St. Pierre Jolys
Town of Ste. Anne
Trails Manitoba
TransCanada Pipelines Limited
Travel Manitoba

Interested parties list

Village of Glenboro

Wa Ni Ska Tan

Walleye Anglers Association of Manitoba (WAAM)

Wilderness Society

Winnipeg Rowing Club

PART 1b:

Safety Management Plan - Manitoba Minnesota Transmission Line Project (Voltage Power on behalf of the Muskeko Joint Venture)



SAFETY MANAGEMENT PLAN

Manitoba – Minnesota Transmission Line Project

Voltage Power Ltd. www.voltagepower.ca

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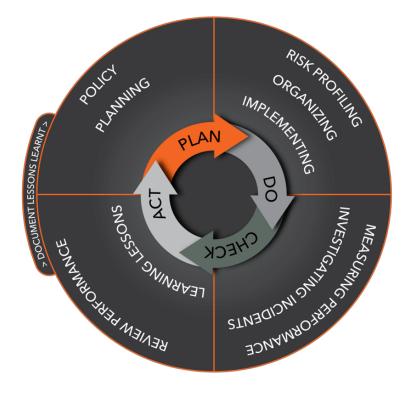
1. Introduction

This Safety Management Plan (SMP) has been prepared for the construction of Manitoba Hydro's Manitoba-Minnesota Transmission Line Project (MMTP). The plan is designed to cover the project specific health and safety requirements, duties, and responsibilities for the full scope of the project as the Prime Contractor.

This document was developed to be aligned with the requirements of Manitoba OH&S Regulations; <u>W210 Workplace Safety and Health Act and Manitoba Regulation, M.R. 217/2006</u> and it shall be used to govern all worksite activities on MMTP.

1.1. Continual Improvement

Voltage Power Ltd. (Voltage) believes that safety management is not a static set of rules, but an ever-changing way of looking after employees and the public to prevent injuries and keep people safe every day. Through a focus on new research, improved regulations, lessons learned, and documentation, our safety program is continually enhanced and made easier for everyone involved. This SMP is a project specific, lower level elaboration of the overarching Voltage's Health, Safety and Environmental Management System (HSEMS). It is envisioned to be a living document and Voltage's Project Manager and Field Safety Manager must approve any recommended improvements, changes or deviations.



1.2. Conflicts

This SMP has been prepared to conform with all applicable aspects of Voltage's Safety Management System, client, and owner requirements, as well as the various local statutory

requirements and regulations. However, where any conflict may exist between these documents, and/or subcontractor standards/practices the more stringent standard will apply.



2. Project Goals and Commitments

2.1. Project Goals

Our goal at Voltage is to exceed the standard of "duly diligent" when it comes to our Health, Safety and Environmental performance. By doing so, we believe we can deliver a project with *Zero Incident* or Injury to individuals by:

- Safety and other project plans are tightly integrated so that together, all functions of the project reinforce each other and embed safety deeply into every action;
- Compliance is achieved by building an empowered, competent and safety motivated workforce;
- Positive reinforcement through intervention for unsafe acts and non-compliance is a norm not an exception
- Respect for each other in our actions and speech, treating everyone as we would like to be treated;
- Recognize and reward good behavior and achievements;
- Minimize the impact on the environment;
- Recognize quality as part of HSE performance and be committed to delivering;
- Assess our performance regularly and take timely actions for improvements.



2.2. Leadership Commitment

All Project Leadership, including, Foreman, Coordinators, Supervisors, Managers, Directors, shall take the lead on the Safety Management Plan implementation to create a culture where:

- Incidents and injuries do not occur;
- Messages and requirements are clear and concise;
- Responsibilities and accountabilities are understood and demonstrated;
- Compliance to all policies, standards, plans, and regulatory requirements is achieved by building an informed, empowered, competent and safety motivated workforce;
- Shared environment of mutual respect, open dialogue, and collaborative problem-solving exists between workers, leadership, subcontractor, and clients;
- Positive reinforcement through intervention for unsafe acts and non-compliance is a norm not an exception;
- Consideration for our environmental impact is part of the day-to-day decision making;
- Regular evaluation and assessment of our Health, Safety & Environmental performance motivates our pursuit of continual performance improvement.

Through their visible, approachable, and demonstrable leadership, all Project Leadership will set clear expectations, reinforced through example and their personal commitment, to ensure our culture of Health, Safety & Environmental Performance Excellence is deeply reached into the workforce.



3. General Project Health and Safety Management

3.1. Right to Refuse

The Occupational Health and Safety Act of every Canadian province provides each worker with the right to refuse work that he or she believes is unsafe to themselves or to another worker.

A worker who believes that they are endangered by workplace violence may also refuse work. This section sets out Voltage's specific procedure that must be followed in any work refusal.

3.1.1. Procedure for a Work Refusal

First stage

- 1. Worker considers work unsafe.
- 2. Worker reports refusal to his/her supervisor. The Worker may also wish to advise a Joint Health and Safety Committee Representative. The Worker shall remain in a safe place.
- 3. The Supervisor shall investigate the conditions and circumstance for the work refusal with the worker, and if practical, a member of the Joint Health and Safety Committee Representative. As a result of the investigation and discussions, either:
- 4. The work refusal issue resolved, and the Worker goes back to work.
- 5. The work refusal issue not resolved. Proceed to the second stage.

Second stage

- 1. With reasonable grounds to believe work is still unsafe, worker continues to refuse and remains in safe place. The Supervisor will inform a member of the HSE Department, who will notify the respective provincial authority, (i.e. MOL, OHS, WSBC, etc.).
- 2. The provincial authority inspector will investigate the work refusal with the worker, supervisor, and if practical, a member of the Joint Health and Safety Committee Representative. *
- 3. As a result of the investigation, the provincial authority inspector will provide a decision to worker and Voltage with respect the conditions and circumstance for the work refusal.
- 4. If required or ordered, once the changes have been made to rectify the work refusal, and the Worker returns to work.

*Pending the Provincial authority investigation:

- The refusing worker may be offered other work;
- Refused work may be offered to another worker, but management must inform the new worker that the offered work is the subject of work refusal. This must be done in the presence of:
- A Worker Representative of the Joint Health and Safety Committee, or
- A Health and Safety Representative.



3.2. Respectful Workplace

Voltage encourages multiculturalism and diversity in the workplace and respects our workforces' rights to choose and practice individual values, beliefs, religion, and culture; their right to privacy and dignity; and their right to live and work free from violence, harassment, retaliation, discrimination, and abuse. Respectful workplace incidents will not be tolerated from any person in our workplace, this includes clients, other workers, subcontractors, supervisors, and members of the public.

Voltage will ensure that when our leadership becomes aware of an incident or receives a complaint regarding Respectful Workplace Violations an investigation appropriate to the circumstances is conducted. These types of investigation will be conducted in accordance with Voltage's Respectful Workplace Policy (Appendix A).

3.3. Project General Safety Rules

During working hours, all project workers are considered representatives of Voltage and the Project, and as such, are required to adhere to Project General Safety Rules. A full list of the Project General Safety Rules can be found in Appendix B.

3.4. Discipline

Voltage will work with employees regarding any workplace issues. We hold our workers to a high standard of accountability, performance, and conduct. Voltage uses a progressive discipline approach to address performance, conduct, policy, and safety violations. Progressive discipline will provide workers an opportunity to correct issues or concerns and reduces the need for termination of employment. Our goal is to retain the investment we have made in our workers by giving them fair opportunities to correct the identified issue or concern. However; where an issue or concern is severe, progressive discipline can be accelerated to correspond with the violation.

Typically, progressive discipline proceeds through these steps:

- Coaching (informal);
- Verbal warning (formal);
- First written warning (formal);
- Final written warning with suspension (formal); and
- Termination.

With each violation or apparent problem, the employee will be

- Provided with a written record alerting them to the problem;
- Provided a copy of the company policy being violated;
- Advised of the consequences for further infractions; and
- Suggested a method for improvement.



3.5. Project Security

3.5.1. General Project Security Measures

To prevent unauthorized entry to the work, security must be established and maintained at each project site area, as well as to help prevent the loss of tools, equipment, and material. The project security measures and precautions will be reviewed with each project work at the time of their project orientation.

The following outlines general project security measures to secure laydown / office site areas and the Right of Way:

- When it is necessary to park vehicles and equipment overnight at a job site or in a construction ROW, every effort to secure those vehicles away from the general public using gates, chains, and other physical barriers.
- When not in use, lock all vehicles and equipment storage bins; remove all keys.
- Where applicable, gates will be opened in the morning and locked at night.
- A bonded security service will be utilized to monitor the yard and laydown area outside of normal working areas.
- Where high security risk exists on the ROW, a bonded security service may be utilized to provide monitoring in the area outside of normal working hours.

3.5.2. Public Security

Project Construction Signs, indicating the Name of the Project, Prime Contractor, Project Owner, Key Contacts, and emergency contact number will be placed at every yard, and major access point to the project. In addition to Project Construction Signs, and as appropriate to the construction activity, signage to warn the public of that hazards to the work will be placed to warn of hazards.



Example Prime Contractor Sign



Where construction activity is immediately adjacent to or crossing over public or private convince or service system, appropriate measures to protect the public from the hazards will be put in place. These activities will require a specific **Safe Job Plan (SJP)**, detailing the specific control measures, i.e. required permits, use of traffic control devices and services, installation of Rider Poles – inclusive of appropriate high visibility markings.

3.6. Housekeeping

Good housekeeping is imperative for incident prevention, worker moral, production, as well as enhancing positive company and project image.

It is expected that through the duration of the project, all project workers will follow excellent housekeeping practices.

These include:

- Providing and maintaining a designated place for each object, i.e. adequate space for materials, tools, and portable equipment;
- Providing adequate receptacles for disposal of scrap, waste, and surplus materials;
- Maintaining sufficient work areas and adequate movement space;
- Ensuring that vehicles and equipment are kept clean:
 - Floorboards within trucks must be kept clean,
 - o Debris must not pile up in the back of trucks,
 - Truck decks regularly swept off,



- Daily removal of excess material and trash from trucks.
- Securing materials and waste to ensure in high winds conditions, material does not become airborne and create hazards.
- Regular and daily worksite clean-up and organization.

3.7. Change Management

Change management is the standardized, control process by which we manage changes of Health and Safety Program elements, so that we may optimize awareness and minimize risks. The process covers all activities from the initial request, implementation, review, and closure of a change. The initial request must be formalized with a detailed description of the change that outlines why it is necessary, the benefits of proceeding with the change, and whether the change poses additional risks. Any proposed changes on the project must be forwarded to the Voltage *Field Safety Manager* or designate, who will then engage the *Project Management Team* for review and approval or disapproval.

The change management process is used for the following categories of Health and Safety change:

- Changes to the SMP, Policies or objectives;
- Operating certification, licenses and permits, legal and regulatory requirements;
- Changes in procedures, practices, and rules;
- Work processes or methods;
- Any change other than exact replacement regarding equipment/processes.

3.8. Breach of Health and Safety Conditions

Voltage will not cause, permit, or tolerate any hazardous, unsafe, unhealthy, or environmentally unsound conditions or activities on the project. If Voltage becomes aware of any hazardous, unsafe, unhealthy, or environmentally unsound conditions, including a violation of any of the health and safety requirements, the Voltage Project Leadership will immediately take the necessary steps to remove, eliminate, terminate, mitigate, and rectify the condition.



4. Prime Contractor Management

On behalf of the Muskeko Joint Venture, Voltage Power Ltd. agrees to fulfill the role and duties of the Prime Contractor as defined in the *Manitoba Workplace Safety and Health Regulations* for the Manitoba – Minnesota Transmission Line Project. As the Prime Contractor, Voltage will assume the overall responsibility for compliance with the *Act*, the *Regulations* and other applicable regulations during the project.

Voltage will undertake the following key responsibilities while performing the duties of the Prime Contractor on the Project:

- Ensure, so far as is reasonably practicable, that every person involved in work on the project complies with Manitoba OH&S Act & Regulations;
- Establish a means of informing workers who the Prime Contractor Site Safety Supervisor is and how to contact that individual;
- Review the scope of work of all Voltage and their subcontract workers where work may adjoin or overlap. These areas must be discussed with all affected work groups at the workplace so that the hazards can be explained to affected workers;
- Review all site-specific work procedures before beginning work. This review ensures that a qualified person has addressed the hazards associated with that specific site and job;
- Conduct and document timely site safety coordination meetings to coordinate safe work activities;
- Conduct regular site inspections, in conjunction with the assigned safety representative, to identify work areas where work activities are overlapping; and
- Inform all MMTP safety representatives of the hazards and risks that arise at the work-site as work is in progress.

To ensure fulfilment of the Prime Contractor duties, Voltage Power will utilize this SMP to outline the foundation of the occupational Health and Safety requirements for the project.

4.1. Site Safety Coordination

Voltage has appointed a person who will act as the qualified Field Safety Manager and carry out the applicable duties. The Field Safety Manager, and / or their designate, will be on-site during most hours of work and will:

- Inform contractors, subcontractors, and workers of known on-site hazards.
- Ensure all hazards are addressed throughout the duration of the work activities.
- Ensure the appropriate level of planning, training, supervision, professionalism/due care, and information sharing between the Prime Contractor and contractors on a regular basis.



4.2. Supervision

MMTP work groups must plan, implement, and maintain effective supervision; this includes daily planning by everyone and effective communication to identify and deal with hazards and issues. Tasks must be monitored to ensure they are performed safely. Plans and procedures must be reviewed and revised to ensure everyone's safety.

4.3. Provision of Names

All MMTP subcontractors must provide Voltage, the Prime Contractor, with the names of their Supervisors and / or Foreman. In addition, each subcontractor on the MMTP are responsible for their own workers, work areas, and how their work activities affect others. They must designate a qualified safety lead, to liaise with the Voltage.

Key Prime Contractor Personnel				
Gerald Budzinski	Project Manager	Gbudzinski@voltagepower.ca		
Floyd Hayward	Construction Superintendent	fhayward@voltagepower.ca		
Hayley McNeil	Dir. HSE	Off - Site Support		
Todd Martin	Field Environmental Manager	Off –Site Support		
Jerry Avery	Safety Coordinator	Tentative		
Justin McKinney	Environment Coordinator	Tentative		
Jaqueline Prefontaine	Safety Coordinator	Tentative		
Josh Lafferty	Safety Coordinator	Tentative		
Naoum Chemaly	Safety Coordinator	Tentative		

Voltage has identified the following Key Prime Contractor Personnel for the Project:

4.4. Site Coordination Meetings

Voltage has appointed a qualified Field Safety Manager to assist in the facilitation of site safety coordination meetings. Voltage and Subcontractor leadership (Project Managers, Supervisors, Safety and Environment representatives) are required to attend these regularly scheduled meetings to review and discuss site safety coordination, work overlap, hazard communication, and emergency response preparedness. The first meeting will be conducted a minimum of 5 days prior to the intended start date to allow for adequate time to prepare for upcoming work and ensure compliance with this *SMP*. These meetings will occur a minimum of once per week, however, a more appropriate frequency may be determined by the project management team.

4.5. Hazard Notification

Communication of hazards on the MMTP will be key to the success of the project. Any work that is likely to create a hazard for any project worker, or the public must be communicated to Voltage.



As the Prime Contractor, Voltage's safety rules and procedures must be followed in a multipleemployer workplace. Each subcontractor has additional responsibilities, at no cost to the Prime Contractor, for their own workers, including:

- Requirements for personal protective equipment (PPE);
- Procedures for working alone;
- Specific procedures for all activities;
- Secondary or peripheral controls such as traffic management or other required, easily identifiable control zones or areas;
- Rules dealing with worker conduct;
- A system for reporting and managing hazards, incidents and near misses; and
- A system for reporting weekly safety performance.



5. Roles and Responsibilities

To be effective, this SMP requires the participation of all workers at all project levels. All workers from senior management to individual workers are equally responsible for promoting a safe and healthy work environment. All project workers have clearly defined responsibilities for health and safety. These responsibilities will be clearly communicated at the project orientation, and all workers are expected to fulfil their responsibilities.

The following outlines the roles and responsibilities of key project personnel as they carry out their assigned duties with respect to this *SMP* and Voltage's *Health and Safety Program*.

5.1. Joint Venture Partners

Joint Venture Partners are expected to play an active role in the implementation, field education, and continual improvement of the project SMP. For safety management on the project, the Joint Venture Partners are required to adhere to, and comply with the requirements identified in this plan for subcontractors.

5.2. Directors & Program Manager

Directors & Program Managers are responsible for providing the overall project direction to Construction Managers, Field Safety Managers, and Subcontractors. Directors & Program Managers must provide the necessary resources and training required to carry out the SMP and ensure that the requirements of the plan are communicated and applied throughout the project.

Responsibilities include:

Assign, evaluate, and monitor the Field Safety Manager who will administer and oversee this program and;

Provide leadership and highlight HSE performance targets by communicating the company's commitment at general meeting, safety talks, and weekly safety meetings.

5.3. Field Safety Manager

The Field Safety Manager's role is to manage the overall function of the Health and Safety Program for the project. The Field Safety Manager will have completed formal safety training, coupled with a general knowledge, and have extensive work experience in the type of activities being performed on the project.

Responsibilities include:

- Attend pre-job meetings to review health and safety matters for the project;
- Have complete understanding of the work being performed and ensure the SMP is communicated, implemented, and followed;



- Be familiar with all applicable federal and provincial legislation and regulations regarding workplace safety;
- Assist in the identification and control of potential safety hazards at work sites and conduct, document, distribute and file site inspections;
- Confirm that prior to every shift or when the scope of the work or location changes, work crews have completed a daily tailboard and reviewed the safe job plan associated with the task;
- Collect, manage, and maintain all project safety documentation and provide copies for review and or audits as requested;
- Ensure the Project *Emergency Response Plan* is up to date, and addresses the appropriate and timely response for potential emergencies;
- Periodically perform compliance audits on the requirements of this Safety Management Plan.

5.4. Construction Manager & Supervisor

Construction Manager and Supervisors must actively participate in the delivery of the requirements of Voltage's Health and Safety Program and this SMP. They must evaluate the workers within their scope of responsibility to ensure they are competent and consistently meeting company safety objectives.

Responsibilities include:

- Communicate the importance of the safety systems and the priority of safety amongst all other project goals;
- Assess the potential impact of project execution strategies on project safety, for example, the effect of schedule enhancement on resulting requirements for increased work hours, manpower loading and shift work;
- Provide direction and support to the safety team and all workers;
- Perform documented site safety inspections;
- Participate in incident investigations and review all incident and near misses reports;
- Actively participate and encourage participation in the health and safety program and its initiatives; and
- Administer disciplinary action as required for non-conformance to the General Project Safety Rules, and Voltage Policies.

5.5. Site Safety Coordinator

The Site Safety Coordinator provides support to the Field Safety Manager, Project Managers, Construction Supervisors, and workers.

Responsibilities include:

 Monitor daily work and perform site safety inspections and provide recommendations or issue corrective actions as required. This task includes a weekly formal inspection report of the work site;



- Participate in all weekly safety meetings and periodically monitor the quality and contents of daily tailboard meetings;
- Coordinate with key project personnel in the development and implementation of Safe Job Plans;
- Perform the necessary administrative duties required for reporting daily and weekly work site activities and statistics; and
- Follow-up on all *incidents* and *near misses* with the preparation of a preliminary incident notification.

5.6. Foreman

Foremen are expected to provide front line supervision and on-the-job training ensuring workers are adequately trained, qualified, and competent to safely perform tasks that are assigned to them.

Responsibilities include:

- Instruct workers in Safe Job Plans and Safe Work Practices and ensure workers perform in compliance with the SJPs and SWPs relevant to their tasks;
- Confirm all workers are fit to perform their job duties;
- Ensure all required health, safety and environmental paperwork is completed in the timeframes specified by this contract;
- Monitor workers to ensure that procedures are being followed and implement corrective action where necessary;
- Verify that all necessary personal protective equipment is on hand and being properly utilized;
- Stop all work when an incident that requires an investigation occurs and ensure that the scene is not disturbed; and
- Ensure that all injuries are promptly and properly cared for and reported.

5.7. Workers

All workers must work in a manner that does not create a danger to themselves or fellow workers and must strive to achieve a high level of awareness to the hazards that may exist in their work environment.

Responsibilities include:

- Follow the *SMP* and *Safe Job Plans* for each task that they are asked to perform;
- Understand health and safety rights under the applicable *Occupational Health and Safety* laws;
- Use all required Personal Protective Equipment (PPE);
- Participate in safety and daily tailboard meetings;
- Participate in completion of all required health, safety, and environmental paperwork;
- Follow incident and hazard protocols and reporting requirements; and



 Understand the requirement to report all near misses, incidents, and injuries immediately to their foreman.

5.8. Subcontractors / Subcontractor Workers

Subcontractor and subcontractor workers have all of the same responsibilities as identified above for their respective position, as well as:

- Ensure that the project SMP requirements are followed;
- Identify, assess, and manage hazards associated with their scope of work on the project in order to provide acceptable work methods for the project;
- Comply with all applicable statutory acts, regulations, and codes of practice;
- Implement the project contractual requirements, as well as the requirements of their own procedures;
- Provide competency and other relevant training, in a structured and documented manner, for all personnel for whom the subcontractor is responsible;
- Ensure that all personnel are supplied with and trained in the correct use, fitting and maintenance of the relevant PPE and equipment;
- Audit and inspect the work site to correct any non-compliance and identify and implement improvements with project requirements and safe work procedures;
- Measure and comply with the requirements of their own Health, Safety & Environmental Management System specific to their work;
- Follow-up on all incidents and near misses with the preparation of a preliminary incident notifications, and final incident investigation reports within the timelines defined in this SMP.
- Comply with the requirement for the timely and organized, submittal of all required HSE documentation.

5.9. Subcontractor Safety Representative

Unless otherwise directed, a safety representative for each subcontractor shall be assigned to the project to ensure site safety coordination with Voltage safety coordinator.

Responsibilities:

- Assist in ensuring compliance with this SMP;
- Ensure compliance with Subcontractor's own Health and Safety program;
- Provides Subcontractor's management/supervision on matters related to occupational Health and Safety;
- Perform the necessary administrative duties required for reporting daily and weekly work site activities and statistics; and
- Follow-up on all incidents and near misses with the preparation of a Preliminary Incident Notifications, and final incident investigation reports within the timelines defined in this SMP.



5.10. Joint Health and Safety Committee Members

The *Joint Health and Safety Committee*, composed of worker and manager representatives, will be established to assist in identifying potential issues and providing mitigation for improving health and safety conditions in the workplace.

Responsibilities:

- Participate in regular committee meetings;
- Respond to, and discuss health and safety concerns identified by coworkers;
- Participate in the identification of risks to the safety or health of workers or other persons in connection with activities in the workplace and make recommendations to correct them;
- Assist in the development and implementation of measures to protect the health, safety, and welfare of persons in the workplace, and verify the effectiveness of such measures;
- Advise on the establishment of appropriate health and safety programs, education, and training;
- Conduct inspections of the workplace at regular intervals and at least once before the scheduled committee meeting; and
- Participate in the investigation of accidents, dangerous occurrences, and work refusals at the workplace.



6. Project Safety Communication

Several different communication approaches will be used on the project to ensure the regular sharing of various safety related information between Voltage and the project workforce. These approaches include project signage, notice board postings, orientation, trainings and awareness sessions, safety meetings and written distribution, i.e. memos, newsletters.

To ensure all project workers can access and benefit from the information, the primary language used for communicating safety information and concerns - for both verbal and written communication - will be English. Where English language literacy and comprehension may be an issue, arrangements such as language translation, verbal communication, and translated communication will be available to ensure all workers can understand the same information.

6.1. Safety Notice Boards

Safety Notice Boards will be placed at each camp / office location on the project. Information on these boards will include regulatory minimum postings and current project safety information, such as:

- Project Goals and Leadership Commitments
- Project General Safety Rules;
- JHSC Meeting Minutes;
- Safety Meeting Minutes;
- Current Safety Initiatives;
- Various Project Inspections; and
- Safety Policies & Regulatory Information.

6.2. Site Safety Coordination Meetings

Regular Site Safety Coordination meetings will be conducted as noted about in Section 4.4.

6.3. General Project Orientation

A project specific orientation is required for project workers, owner / client representatives, and visitors who wish to access the project site. The project orientation will highlight Health and Safety, Security, Environmental requirements specific to the project and will also include a local cultural awareness session.

The Health and Safety elements in the project orientation include, but are not limited to the following:

Elements of the Safety Management Plan;



- Communication of known Hazards and Controls;
- Housekeeping
- New and Young Workers;
- Fitness for Duty;
- Mandatory Minimum Training Requirements;
- Emergency Response Plans;
- Site Security Management;
- General Project Safety Rules & General Camp Rules (where applicable);
- Voltage policies, protocols, procedures; and
- Environmental Requirements.

All orientation participants will provide, by way of signature, their acceptance of, and commitment to comply with the project Safety Management Plan, Legislation, and General Project rules at the time of their orientation. Records of the orientation will be maintained in the project safety office.

The project orientation will remain current for the duration of the project, provided continual engagement on the project. If personnel are absent from the project for more than 90 days, an orientation review must be conducted to ensure that any new hazards, updated project rules or relevant project considerations have been communicated.

6.4. Visitor Orientation

Visitor orientations will be permitted for individuals who will be on site less than 12 hours and who will have a project escort. This version of the orientation will be summarized and highlight: PPE requirement, site specific hazards, and emergency response procedures.

Only those individuals qualified by the project manager or field safety manager as a visitor will be accepted for this orientation.

6.5. Safety Meetings

Safety meetings are an integral proactive element in Voltage's Health and Safety Program. The purpose of these safety meetings is to provide a forum to allow for two-way communication between management and workers.

Safety meetings will be weekly and will generally last between 20 to 40 minutes. The Construction Supervisors and Safety Team will lead Safety Meetings. Attendance for these safety meetings is a mandatory project requirement for all project personnel.

Safety meeting topics will be drawn from project inspection findings, incidents, environmental concerns, Workplace Health and Safety Committee topics, Tailboards, Safe Work Practices, Procedures, community concerns and company and industry bulletins. The topics that were



covered at the meeting and the attendance sign-in sheets will be documented, posted on the safety notice boards, and distributed as required.

With approval from the Field Safety Manager, subcontractors may hold their own safety meetings, provided they occur on weekly scheduled intervals. Minutes and attendance are also required to be recorded and a copy must be forwarded to the Field Safety Manager.

6.6. Foreman Meeting

Following each weekly safety meeting, a separate meeting will be conducted with all Voltage Foreman. These meetings will last between 20-30 minutes and will cover a broader range of topics such as: Safety, Quality, Environmental, and/or Schedule. All Foreman are required to attend, and the Construction Supervisors and Managers will chair meeting. Minutes and attendance will be recorded and maintained on site.

6.7. Joint Health and Safety Committee Meeting

A Work Place Health and Safety Committee (Joint Health and Safety Committee, JHSC) will be formed for the project. Each Contractor will be required to provide representation for this committee. The initial meeting will commence within the 1st quarter of the project starting and will be held quarterly thereafter with representation of all contactor groups on the project.

Records of the meeting shall be maintained on site, posted on the bulletin board(s) and be available to Manitoba Hydro. Copies of WPHSC Meeting minutes will be provided to Manitoba Workplace Safety and Health within 7 days, as required by the regulation.

Topics discussed at the JHSC meetings will include, but are not limited to the following:

- Involve workers in safety management;
- Lower the rate and severity of accidents and injuries;
- Maintain a safe workplace;
- Involve employee participation in safety programs;
- Develop short- and long-term goals;
- Discuss accident prevention methods;
- Review previous accidents and injuries; and
- Recommend changes to safety procedures and policies.

Minutes and attendance from the JHSC Meetings will be distributed as required and posted on the project safety notice boards.

6.8. Training and Awareness Sessions

At times, formalized training or awareness sessions may be the best approach to a safety communication on a topic. These sessions will enable workers to learn elements of their jobs / tasks in greater detail, and allow management to reinforce safety policies, practices, and



procedures. A qualified trainer / subject matter expert will conduct all sessions. Records of attendance and/or certificates of completion will be recorded and stored within employee file.



7. Hazard and Risk Management

The recognition, mitigation, and communication of hazards and risk associated with our construction activities on the project is a critical element of this SMP to help achieve our goal of a zero-incident project. During construction, planning and execution, Voltage will utilize four distinctly different planning tools to control hazards and mitigate risks at the field level.

These planning tools include:

- High Level Project Hazard Assessment;
- Safe Job Plans;
- Daily Tailboards; and
- Field Level Hazard Assessments (FLHA).

7.1. High-Level Project Hazard Assessment

The purpose of a High-Level Project Hazard Assessment is to identify the work scope of specific potentially hazardous activities, conditions or exposure that may pose a danger to workers. Hazards associated with upcoming work are ranked in accordance with the *Risk Assessment Matrix*. The intent is to determine whether existing controls can control and eliminating hazards or whether additional controls need to be considered.

Throughout the duration of the project, the *High-Level Project Hazard Assessment* is a living document that will be reviewed and updated monthly by the Field Safety Manager. The High-Level Project Hazard Assessment is the primary tool used for communicating project hazards at the project orientation. Updates to the High-Level Project Hazard Assessment will be distributed to the all project work fronts.

A preliminary High-Level Project Hazard Assessment has been conducted for the project, see Appendix C.

7.2. Safe Job Plans

The purpose of Safe Job Plan (SJP) is to integrate accepted health and safety principles, standards and practices into a specific task or job. Safe Job Plans are developed by construction managers and supervisors in collaboration with the safety team. For each of our construction activities, SJPs consider recent technology and lessons learned, as well as review industry best management practices and standards. A Job Hazard Assessment is included in each SJP. Each step in the procedure is assessed to recognize the potential hazards and the Safe Job Plan will identify specific controls to mitigate those hazards.



Safe Job Plans may range from detailed written procedures such as erection of structures or stringing of conductor, to a system for developing and recording work plans during daily tailboard discussions.

Safe Job Plans apply to all Voltage staff, and any subcontractor worker who may be directly integrated into a Voltage activity. Workers at all levels must participate in the review and implementation of the Safe Job Plans.

Safe Job Plans must be available and reviewed on the worksite as a continuous reference during the completion of the task, especially in high risk or complex procedures.

For an index and examples of Safe Job Plans and Safe Work Procedures, see Appendix D.

7.3. Daily Tailboard

A Tailboard is the term the utility industry uses for the daily hazard assessment process. The purpose of the daily tailboard is to identify specific hazards associated with the worksite and outline the mitigation that will be used to eliminate or control these hazards. Prior to the start of work, all foremen (in collaboration with workers) will complete a Daily Tailboard meeting in the field. The foremen must have a level of technical competence relevant to the job to be assessed. All workers on the foreman's crew are required to attend. The tailboard also identifies the specific Emergency Response actions to be implemented in the event of an emergency. Daily Tailboards are reviewed and signed by all crew members prior to starting their daily activities and are reassessed when changes to the day's activities occur.

All tailboards that are not completed digitally, will be collected by the Field Safety Manager. All Tailboards will be made available to the Client for review upon request.

7.4. Field Level Hazard Assessment

A *Field Level Hazard Assessment (FLHA)* is a specific tool that an individual or a crew would use to assess and address daily hazards for a specific task or activity, much like the tailboard. The tailboard and FLHA documents may be used interchangeably, and an FLHA is not required when tailboard adequately addressed the task and hazards of the specific activity. A FLHA may be used to assess hazards when a task or work scope changes from those identified on the daily tailboard, or when geographic location is moved, or weather / environmental conditions change.



8. Training and Competency

During the project lifecycle, personnel employed on the project can expect to gain knowledge, new skills, and resources applicable to their job scope requirements. This section outlines the specific training and education requirements for various project scopes and is in line with supporting regulatory requirements.

For the project, Voltage will actively recruit and develop local talent from the communities where we operate, providing valuable training, work experience, and in many cases, apprenticeships and other long-term employment opportunities and skills development. It is the responsibility of the respective Construction Managers and Supervisors to assess the capability of these workers prior to assigning tasks or specialized equipment.

At the time of the project orientation and prior to being permitted to perform work on the project, workers will be required to provide proof of training and qualifications. Under a competent Supervisor, only adequately trained, qualified and authorized workers will perform tasks and / or operate equipment on the project.

8.1. Standard of Training

Voltage sources and procures training that is relevant to the work that we do, advances our commitment to workplace safety and provides opportunities for advancement of our workforce. Where possible, courses are selected that meet certification requirements to provincial or federal agencies or designates.

All training offered by Voltage contains a knowledge retention component, in the form of a test or quiz, to ensure understanding of the subject material. Trainers are selected based on their experience and qualifications and perform training only in topics that they are competent to instruct.

The Voltage team is comprised of a very diverse workforce; our people are culturally and ethnically diverse, of all ages from teenagers through senior age and of all educational backgrounds. With such a disparate workforce, learning abilities and styles vary greatly, and for that reason the delivery of training is flexible, culturally sensitive and respectful of differing capacities to learn.

Voltage's training policies and programs are developed to comply with CAN/CSA-Z1000-14 Occupational Health and Safety Management, specifically to Section 4.4.4 Competence and Training.



8.2. Responsibilities

Field Managers

- Coordinate with Safety Coordinators, Supervisors and Foremen for ongoing training and apprenticeship initiatives.
- Supervisors
- Identify the training needs of workers using feedback from Journeymen, Foremen and Safety Coordinators.
- Request and coordinate training of workers under their direction.
- Assigning competent and experienced crew members to provide on-the-job training and mentorship to New Workers and Apprentices.

Journeymen

- Provide leadership, instruction and performance feedback to Apprentices.
- Mentor share experiences and transfer knowledge to New Workers and Apprentices.
- Provide guidance while overseeing apprentice's work and work habits. Initiate corrections as required.

Foremen

- Assign tasks to develop skills and observe work performance.
- Provide feedback and make corrections as required.
- Assess training requirements and make recommendations to Supervisor.
- Participate in decisions regarding training requirements and scheduling of training.

Safety Coordinators

- Assist in assessment of training needs in the field.
- Deliver New Hire Orientation training and basic training programs.
- Update training records to enable accurate employee training status.
- Recommend training when skills gap is evident.
- Internal Trainers
- Deliver training within their scope of qualifications.
- Issue certificates for successful students.
- Update training records to enable accurate employee training status.
- Instructors
- Delivery of training to Valard employees is shared between several groups, depending on the type of training required:
- New Hire Orientation and project specific orientation is delivered by trained and qualified HS&E Coordinators as part of their regular duties.
- Skills training is delivered by competent Internal Trainers who maintain certification to provide the training that is within their scope.



When it is logistically not practical to deliver training by Internal Trainers, third-part
accredited vendors utilized. Without exception, selected training agencies are qualified and
certified to provide the required training.

8.3. Minimum Project Training Requirements

For the project, training on basic safety topics is required as they relate to the workers specific tasks and provincial regulatory requirements. Some of the basic safety training programs include First Aid, Fall Protection, and Transportation of Dangerous Goods.

These types of training courses are delivered by, or on behalf of accredited vendors, such as *St. John Ambulance*. All basic training that occurs on the project will be tracked in the project employee training database.

Voltage power	Unstit	Led about	ment Operation	ations Open	orter welder	Crane	operator Forem	ar super	uisor safeth	Supervisor	Norter Field	Naragets Naraget
Minimum Training Requirements												
MMTP Orientation	Х	х	Х	х	х	Х	х	х	х	х	Х	х
Standard First Aid	х	х	х	х	х	х	х	х	х	х	Х	х
WHMIS (GHS)	Х	х	х	х	х	х	х	х	х	х	х	х
Working on Ice Safety Awareness*	Х	х	х	х	х	х	х	х	х	х	Х	х
Limits of Approach / Electrical Safety	х	х	х	х	х	х	х	х	х	х	Х	х
Working at Heights				х			х	х	х		х	
Hoisting & Rigging		х	х	х	х	х	х	х	х		Х	
Implosive Sleeve Training				х					х			
Equipotential Bonding and Grounding				х					х			
Ground Disturbance		х	x				х	Х				
Voltage Intergrated Leadership Training							х	Х	х		Х	х

Table 1 Training Requirements

8.4. Skills training

The construction work that Voltage performs requires semi-skilled competent workers. To support these workers in becoming competent to perform their tasks, several formal safety skills training courses are available that specifically address the risks inherent to the industry. These courses will be delivered to workers as required by their job scope.

Formal safety skills training courses are all instructor lead, in a classroom-based learning style that, depending on the program, may or may not include a practical component. Examples of these courses include *Rigging and Hoisting, Grounding and Bonding, and Confined Space Entry and Rescue*. All training programs are delivered by third party vendors, or by a competent internal trainer who has achieved the standard to competently deliver these accredited programs.



All skills training that occurs on the project will be tracked in the project employee training database.

8.5. Compulsory Trades

The work on the project will require several skilled workers for specialized tasks that require trade tickets. To work in a compulsory certification trade, a person must either hold a recognized trade certificate or be a registered apprentice in the trade. Only certified journeypersons or apprentices registered in the trade and working under the direct supervision of a certified journeyperson are permitted to operate on Voltage's equipment. Boom Truck and Mobile Crane are compulsory trades that will be required on the project.

8.6. Power Line M-P License

Personnel involved performing electrical work as it is defined in the current version of The Electrician's Licence Act, C.C.S.M. c. E50, shall possess a Power Line M-P license from the Province of Manitoba.

Supervisors and project management do not require this license as long as they are not performing hands on electrical work. If a supervisor is overseeing work by an apprentice, an M-P license must also be held by the supervisor acting in a journeyman capacity.

8.7. Competency Assurance

Competency requires knowledge and skills that need to be applied to the assigned task to ensure compliance with standards, procedures, and recommended practices. Competency for workers will be verified in several ways and may include both formal training programs, as well as informal training in the form of orientations and safety meetings and on-the job training under the supervision of an experienced, knowledgeable tradesperson.

Competency Verification

Verification of employee competency can be achieved by confirming qualifications, i.e. recognized trade certification, or reviewing apprenticeship blue book; confirming successful completion of general and task specific training, experience confirmation, and practical competency verification.

Practical Competency Verification Process

Practical Competency Verifications serve as the basis for skill standards that specify the level of knowledge, skills and abilities required to complete a task safely and successfully, as well as the measurement criteria for assessing the competency. Voltage has adopted this process to ensure and measure employees proven knowledge and proven skills.



Through the Practical Competency Verification process, employees should be able to demonstrate performing work tasks or using equipment properly and safely. Relevant practical demonstration can include:

- Operate the equipment/tool in a proper, safe, controlled manner in accordance with the manufacturer's specifications; or perform that task in accordance with the Safe Work Practice/industry standard;
- Read and understand the operating instructions;
- Check that all hazards have been identified;
- Correctly answer questions, or explain the process respecting the demonstration.

Review of Competency Verification Check List

Competency Verification Check List should be reviewed every 2 years to ensure that the competency assessment remains current and appropriate. In addition, should an incident occur that relates to the Competency Verification then a review of the assessment along with the relevant Safe Job Plan or Safe Work Practice shall also be required as part of the incident investigation.

If a Competency Verification describes a task or process that is no longer required to be followed, then the Verification of Competency should immediately be withdrawn and archived.

New and Young Workers

Voltage has established a *New Worker Mentorship Program*. This program ensures new and young workers receive adequate on the job training and supervision to allow them to become competent to perform the task they are learning. All new workers will be assigned an experienced "mentor." Mentors will be fully competent in their position (e.g. Journeyman, Supervisor, Foreman, etc.), have extensive construction experience, have demonstrated safe work habits. Full details of the program can be found in Voltage's Training and Competency Policy.

All project subcontractors are expected to have an adequate system in place to track and ensure competency. In the absence of a system, Voltage's system shall be adopted.

8.8. Integrated Field Level Leadership Training

An integrated approach is the best way to successfully execute projects, grow people, build culture, and achieve our goal of a zero-incident project. Voltage will provide a project specific leadership training program for anyone working in the construction scope in a foreman position or above, including subcontractors.

The training program covers the specific roles and accountabilities of a Forman or Supervisors as seen in day to day work. The training will also cover work performed in areas such as: Health, Safety, & Environment, Quality, Production / Operations, Fleet, and Reporting. The program focuses on project specific requirements and utilizes relevant industry examples to highlight learning objectives.



8.9. Task Specialized Training

Depending on the number on new and inexperienced workers recruited for the project, a larger organized training program for tower assembly will be facilitated. Generally, this program will have a small classroom explanation component, but the majority of the training is hands on with a field mentor / instructor. The following describes Voltage's Tower Assembly Training Program.

The training is intended to provide learners with information and practical experience in the assembly of various types of tower steel structures. It requires the use of relevant shop and hand tools, equipment and accessories as well as the reading and interpretation of blueprints for steel assembly. The program provides an overview of the: handling; transporting, storing, setting and moving of steel.

Relevant safety training is incorporated throughout the program, including GHS, Back Injury Prevention, Defensive Driving, Fall Protection, Standard First Aid and Basic Rigging and signaling.

While assembling a project tower, the training covers the following areas:

- Fit for Duty.
- Job expectations.
- Work ethic, behavior, time on task, start and finish times, breaks, etc.
- Safety expectations.
- Common hand injuries and staying out of the line of fire
- Hazard Controls discussion on the differences between Engineering, Administrative and PPE.
- Tailboard Review, Step by step review of what a tailboard is, and how to effectively complete one.
- PPE expectations
- Complete review of Tool Box Equipment. How to properly use each tool in a proper and safe manner. What the tool is used for specifically and not used for.
- Demonstration on the use of each tool.
- Demonstration on how to inspect all tools and the procedures to follow when tools are damaged, in need of repair or replacement.
- Stretching discussion with participants on the pros of stretching prior to performing any task. Basic stretches demonstrated.
- Ladder / step ladder safety which one to use when, for what procedures, tie off procedure, spotters, positioning, three-point contact, etc.
- Lifting techniques proper lifting techniques discussed and demonstrated, use of buddy system when lifting, etc.
- Rigging
- How to safety break open steel bundles, sorting of steel webbing, plates and bolts for organization and production, where to lay out steel, plates and bolts to prevent congestion, trip hazards, etc.
- How to lay out steel / to increase ease of assembly, to minimize lifting and strain to the body, and to increase production, etc.



- The proper way to impact and torque bolts for personal safety concerns and to increase QA efficiencies.
- Daily tool inspection.
- End of day / tower site clean-up.

Each participant will be evaluated daily throughout the training. Their performance will and areas for corrective action / recommendations for improvement will be reviewed with each individual where necessary. At the end of the training, employees will be versed in the tower assembly task and can be incorporated into assembly crews.

8.10. Training Records

Voltage will utilize an electronic project training database to confirm and retain training records for all project workers. The training records will detail who was trained, when they were trained, and what skills they have mastered, and who provided the training.

This database will assist in highlighting the minimum training requirements for particular job positions. It will also serve as a resource to minimize the re-training of workers and promote the culture of caring and appreciation of workers. It will also maximize efficiency by getting workers on the field more quickly when they change work scopes within the project or change employers.

The database ensures that training records can easily be provided upon request to workers, supervisors, clients, and or regulatory agencies.

Subcontractor are still required to ensure that their respective training record management systems are maintained regularly and that the training requirements of their job are kept current.



9. Personal Protective Equipment

Voltage will ensure that all workers and subcontractors on the project utilize proper personal protective equipment required by company *Rules, Safe Work Practices, Safe Job Plans, Material Safety Data Sheets*, and all applicable government regulations.

9.1. Minimum PPE Requirements

As a minimum, all project personnel including subcontractor workers must wear:

- CSA approved safety glasses with side shields;
- CSA approved hard hat;
- CSA approved safety work boots;
- Gloves, appropriate for the task;
- Long sleeved shirts or jackets; and
- High visibility outer garment.

Subcontractors are expected to supply their workers with the minimum project PPE requirements, excluding CSA boots, and long sleeve shirts.

All high visibility garments shall comply with latest edition of *The Occupational Health and Safety Regulation* and latest edition of High-Visibility Apparel CSA Z96. At a minimum for all project personnel, a Class 2 shall be worn.

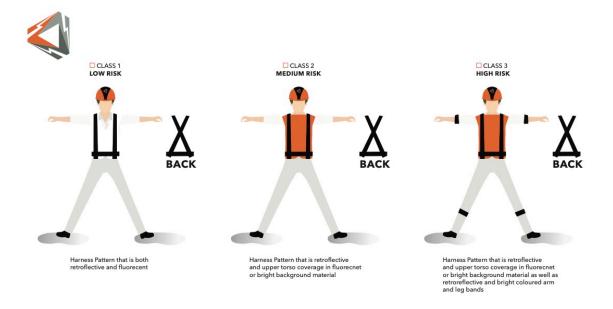


Figure 1 CSA Z96 High-Visibility Classification



9.2. Specialized PPE Requirements

The requirement for specialized PPE such as chain saw pants, wood pole climbing gear; fall protection harnesses & lanyards, hearing protection, respiratory protection will be identified within the Safe Job Plans. All specialized PPE must meet the applicable CSA standard, and any worker required to use specialized PPE shall be trained in its use, care, and maintenance.

9.3. Protective Clothing Program

Given the isolated nature of the project, Voltage will offer a Protective Clothing Program to ensure appropriate protective clothing, and work boots are readily available at the project site. Full details on the program can be found in Voltage's Protective Clothing Standards.

9.4. Fire Retardant PPE Requirements

Workers exposed to the danger of arc flash hazards shall wear flame resistant clothing that meets or exceeds the requirements of the latest editions of CAN/ULC-S801, ASTM -1506A and UL 61482-1.

Workers that may be exposed to the danger of flash fire hazards, shall wear flame resistant clothing that meets or exceeds the requirements of the latest edition of CAN/CGSB-155-20.

Voltage Power Arc Flash Protection Safe Work Practice outlines the Arc Flash Hazard Analysis process to help identify the appropriate level of FR protection.

Appendix E - Arc Flash Protection Safe Work Practice



10. Inspections and Monitoring

One of the goals identified for this project is to be better than due diligence when it comes to our safety performance. We aim to achieve beyond the bare minimum for regulatory compliance. At Voltage Power, we genuinely want our workers to return home from work in good health every day. We achieve this by consistently maintaining a safe workplace and job site. Job site monitoring and inspections help to achieve this goal by identifying substandard work practices, non-compliance with Safe Work Practices and Safe Job Plans, and by highlighting possible at-risk behaviors that could cause or contribute to an incident or loss.

10.1. Types of Inspections

Several types of inspections and monitoring programs will be implemented on the project, putting focus on measuring quality, proactive safety participation, and creating a culture wherein everyone, at every level, is truly accountable for owning their own safety.

Below are some examples of inspection types:

- Continuous activity "day to day" inspections performed by all project workers (field staff, safety team, environmental team, management team).
- Preventative maintenance Scheduled inspections conducted by electricians, mechanics, maintenance workers, supervisors, or other designated personnel. Preventative maintenance includes inspections for safety and mechanical functioning, damage, lubrication, and wear.
- Licensed Inspections made by certified or licensed 3rd party inspectors i.e. NDT, Fire Suppression Systems, Electrical Inspectors.
- Special inspections Inspections made for specific purposes. Compliance Safety and Health Officers, accident investigators, or health monitoring officials conduct these inspections.

10.2. Equipment and Vehicle Inspections

Inspections are among the best tools available to identify hazards and assess the risks associated with the operation of equipment or a vehicle prior to incidents and losses occurring. All equipment and vehicles on the project must be thoroughly inspected. A vehicle and equipment inspection form will be completed prior to use of the vehicle and equipment. Any significant deficiencies must be reported to a mechanic and corrected prior to use.

10.3. Worksite Inspections

Voltage's personnel and subcontractors are expected to identify and provide immediate controls and correction for substandard site conditions, inadequate work practices and/or at-risk behaviors during the day's work.



Voltage and their subcontractors shall conduct formal and informal inspections of all work sites at a minimum of once per week. The Project Supervisors, Project Safety Manager, Crew Foreman, Workplace Health and Safety Committee shall conduct these inspections and communicate any findings that require corrective actions with all staff.

All Voltage and subcontractor Sr. Management are required to conduct a documented inspection while visiting the project. Records of these inspections shall be documented, maintained, and filed on site.

10.4. Rigging Inspections

Initial Inspection

Prior to initial use, a qualified inspector or person must perform an initial inspection on all hoisting and rigging and pulling equipment. Any lifting or rigging device used that do not have the manufacturer's certification must be certified by a registered professional engineer.

Pre-use Inspection

All rigging must be thoroughly inspected before each period of continuous use during the shift. Inspections shall be done by a competent worker and shall include:

- Inspection of wire rope for wear, elongation, damage, i.e. bird caging, kinks, cuts, signs
 of overloading, corrosion, and pitting;
- Inspection of slings for abrasion, cuts/tears, burn marks and corrosion;
- Inspection of sheaves and hooks for deformation cracks and wear;
- Inspections of shackles for crown (bow) wear, cracks, chips, gouges, deformation, pin wear, thread damage;
- Inspection of eye bolts and lift rings for gouges, cracks, wear, deformation;
- Inspections of spreader bars and lift beams for wear, excessive movement, cracks, loose components, deformation, integrity of connection points.
- Pre-use rigging inspections shall be documented on the daily tailboard.

10.5. Electrical Rubber Goods Inspection Schedule

Minimum Inspection Schedule for Electrical Rubber Goods (deemed expired if not stamped with a date).

Type of Equipment	When to Test				
Rubber insulating line hose	Upon indication that insulating value is suspect				
Rubber insulating covers	Upon indication that insulating value is suspect				
Rubber insulating blankets	Before first issue and every 12 months				



Rubber insulating gloves	Before first issue and every 6 months after being issued for service
Rubber insulating sleeves	Before first issue and every 12 months

10.6. Electrical Hot Stick Inspection Schedule

Minimum Inspection Schedule for Electrical Hot stick (deemed expired if not stamped with a date).

Type of Equipment	When to Test
All live line tools	Every 2 years or damaged
Tree Trimming	Every 1 years or damaged
Hydraulic Hose	Every 2 years or damaged
Insulator Wash Hose	Every 1 years or damaged
Live Line Jumpers	Every 1 years or damaged
Load Break Tools	Every 2 years or damaged or 1500 operations
Plastic Air-Guard	Every 1 years or damaged
Live Line Rope (60 kV +)	Every 1 years or damaged (field test daily)

Contracts and customer/client requirements may have a more stringent inspection/ testing schedule. The most stringent requirements will take precedence.

10.7. Subcontractor Audits

Subcontractors will be evaluated for compliance to this SMP after a minimum of 30 days and maximum of 90 days on site using Voltage's Subcontractor's Site Safety Audit Tool. After the initial audit, subcontractor audits shall be conducted on a quarterly basis for the duration of the project.



10.8. Certification Audits

Voltage is an OHSAS 18001 and COR certified company, as such, the project site may be subject to independent third (3rd) party agency safety auditors. Corrective actions from all inspections and audits will be logged to ensure follow up and the required corrective actions have been achieved.

10.9. Field Technical/Safety Audit by Owner

Throughout the lifecycle of the project, the owner my periodically conduct audits/inspections of Voltage's SMP implementation, operations, equipment, emergency procedures, etc. All project workers are expected to fully cooperate with the Owner during such audits/inspections.



11. Workplace Hazardous Materials Information System

Material Safety Data Sheets also known as Safety Data Sheets for all hazardous materials located on site are to be maintained, filed, and shall be made available to workers. MSDS/SDS's must be dated within three years or when significant new data becomes available.

In order to ensure all Safety Data Sheets for controlled products used on the project are available, Voltage will utilize an Online Binder <u>www.VoltagePower.MSDSbinders.com</u>.

All project workers, including subcontractors and client representatives will have access to the projects-controlled product list and current SDS sheets through a generic log-in on their iPad or Smartphone.



Figure 2 Mobile Safety Data Sheet Application

All project workers on site are responsible for the proper use, storage, handling, and ultimate disposal of their controlled products.

In addition, all waste materials and controlled products or dangerous goods shall be promptly removed by the responsible party at or before the completion of the work, as applicable.

Chemical storage shall comply with industry best practices and the work group responsible shall have an inspection process in-place to check its work areas to ensure proper storage practices are being utilized for controlled products. All products will have a UN class number regardless of the quantity.

Warning labels which comply with WHMIS format are required on all containers of controlled products. The responsible subcontractor is to ensure all provincial and federal requirements regarding transportation of dangerous goods and WHMIS requirements are met when shipping materials and equipment with fluids.



12. Occupational Health, Injuries, and Hygiene

Maintaining a healthy workplace will be key to the success of the project, and another critical element to achieving our goal of zero incidents on the project. Several occupational health and hygiene programs will be implemented for the lifecycle of the project.

12.1. Fitness for Duty

In some cases, an employee's off-the-job stressors can influence on-the-job behaviour. These stressors may be financial, emotional or substance related. While the project does not wish to dictate lifestyle to anyone, it is of concern when these influences impact on-the-job performance.

All project workers are expected to report to work "fit for duty." All project workers will be educated on requirements and procedures around "Fitness for Duty" at the project orientation.

12.2. Fatigue Management

Voltage is committed to providing a safe and productive workplace by eliminating conditions and work practices that could lead to personal injury, equipment and other property damage. Fatigue can impair fitness to work and may have negative impacts in the areas of Health and Safety. Our objective is that all workers recognize this threat and manage and minimize the associated risks.

Managing fatigue on the project will include:

- Create a safe working environment by managing the risks associated with fatigue;
- Strive to ensure off-duty time is sufficient to achieve eight hours of continuous sleep;
- Manage work shifts and work schedules to ensure workers are provided adequate time away from the project to rest and reset;
- Identify and manage work-related fatigue issues;
- Fairly and constructively manage people who are deemed unfit for work as a result of fatigue; and
- Provide training and education materials related to fatigue management.

12.3. Noise Management and Hearing Conservations

Voltage and its subcontractors will be responsible for assessing and identify high noise areas which will be posted with signs identifying "hearing protection required" throughout the project. All workers exposed to elevated levels of noise are required to take part in a Hearing Conservation Program.



All new workers will have a base line hearing test conducted upon arrival to the project, and on an annual basis thereafter. The project orientation will include coverage of the following topics with respect to hearing conservation and noise management.

- Understand the hazards and effects of noise;
- Recognize high-noise areas;
- Protect themselves from noise;
- Use and maintain hearing protection.

12.4. Washroom Facilities

Washroom facilities will be placed for men and woman throughout the project, at major active access points, and laydown yards. These facilities will be kept cleaned and in good working order.

12.5. Return to Work / Modified Work Program

The project will promote a return to work program for workers who sustain occupational injuries and illnesses while on the project. All project workers are expected to participate in the program. Work that is a meaningful, productive, and associated with project activities will be considered for the modified work program.

The employee will be permitted to return to work when:

- The workers medical findings support the return to work;
- The worker agrees to return and follow the assigned restrictions;
- A productive work assignment has been identified and the work will not aggravate the condition as prescribed by the medical professionals recommended medical restrictions; and
- All return to work assignments will comply with the WSIB temporary work program policy.



13. Helicopter Safety

Helicopter operations provide specialized and efficient support required for the successful completion of the transmission construction projects. It is essential that the Project Manager and Construction Manager are aware of any specialty flying operations to provide expertise and safety input as required. This section outlines the basic principles of Helicopter Safety Management.

It is Voltage's expectations that no job will be considered too urgent or important to justify:

- Contravention of the Canadian Air Regulations (CARs); OH&S Regulations; or the Safe Job Plans or Safe Work practices.
- Loading an aircraft beyond established safety limits;
- Encouraging flying in weather below acceptable or legal limits;
- Flying with companies or pilots who have not met the requirements for Voltage's approved vendors list.
- Utilizing unsuitable landing areas;
- Directing flight crews to fly beyond Transport Canada, and company established flight time or duty day limits (unless a conveyance is delivered by such organizations);
- Flying any crew on specialty flights in which they are not an *essential* member of the aircrew or flight crew;
- Performing high-risk operations such as deplaning/emplaning in flight with workers not trained and/or current in the operation;
- Creating a hazardous environment for any worker/property in the air or on the ground.

13.1. Helicopter Selection

The types of Helicopters used will be selected based on the requirements of the scope of work they are required to support. The Construction Manager, in consultation with the and helicopter operators will review the requirements of the activity to identify the suitable selection.

13.2. Engineering Controls and Work Practices

Voltage Power will work with the helicopter company and pilot to institute engineering controls and work practices that minimize the possibility of falls, rotor strikes, and exposure to an operating helicopter. Engineering controls eliminate hazards at their source. Inspect and maintain engineering controls on a regular schedule to keep them in good working condition.



13.3. Transportation of Dangerous Goods

The helicopter transportation of products classified as Dangerous Goods, will follow guidelines and requirements referenced in the Transport Canada regulations, SDS, and Company Operations Manual.

13.4. Personal Protective Equipment

Specialized Personal Protective Equipment will be supplied to those who are working in close proximity to an operating helicopter. PPE must be accessible and available in appropriate sizes and must be kept clean and in good repair. The types of PPE needed for working near helicopters include CSA approved fly hard hats, or head protection with chin straps, sealed eye protection or safety goggles, fall protection equipment, work gloves, and grounding equipment where applicable.

13.5. Housekeeping Techniques

Equipment and work areas such as the landing zone (LZ) must be clean and free of trash and loose paper that can be blown into the rotor as a result of rotor wash. Keep doors closed, roll up windows, and clear trash off all equipment in the LZ to prevent damage to truck doors and keep paperwork from blowing out of trucks. A designate worker will be assigned responsibility to ensure that the LZ is clean at all times.

13.6. Training and Retraining

It is the Supervisor's duty to ensure that all project workers at all levels and functions are competent to perform their tasks, and are provided with adequate instruction, training, and supervision to accomplish the task.

Competency for workers will be verified in a number of ways that may include both formal training programs and informal training such as: on-the job training under the supervision of an experienced, knowledgeable tradesman. Safe Job Plans and Safe Work Practices will define the specific required training for each task for line workers.

In general, training will be provided when:

- Training upon initial assignment to a job.
- When changes are made in the tasks, and or Safe Job Plan or Practices, or when other changes are made that may affect the workers exposure.

Retraining under any of the following conditions:

- Supervision or inspections indicate that the worker is not complying with the safetyrelated work practices.
- New technology, new types of equipment, or changes in procedures necessary to the use of safety related work practices that are different from those that the employee would normally use.



- The worker must use safety-related work practices that are not normally used during his or her regular job duties.
- Tasks are performed less often than once per year (in this case, employees are retrained before beginning the tasks).

The training program must provide the following elements at a minimum:

- A general explanation of skills proficiency requirements of the program, i.e. course outline.
- Methods of identifying potential exposure situations and the engineering controls, work practices, and PPE that are used to prevent exposure.
- Complete information about all aspects of PPE.
- Appropriate action in the event of an emergency, including proper reporting and medical follow-up procedures.
- An opportunity for interactive questions and answers with the trainer.
- A trainer knowledgeable about the particular workplace and how it will affect the possibility for exposure to helicopter operations.

13.7. Pre-flight Meeting

Before flight operations begin, a pre-flight meeting must be conducted and documented. This meeting must address all aspects relating to the operations, including the responsibility of each individual, rigging, safety issues, and emergency procedures. The pilot-in-command (PIC) must ensure that all persons working with the helicopter fully comprehend their functions and responsibilities.

13.8. Helicopter Vendors

All subcontractors utilized on the project will be pre-qualified and evaluated to ensure they appropriately meet Voltage's minimum standards, and qualification requirements.

All assessed and approved subcontractor files will be maintained Voltage's subcontractor repository with copies of records including their:

- C.O.M. Company Operations Manual (Transport Canada Approved);
- Certified maintenance program;
- Safe Work Practices & Procedures;
- Solid track record of performance;
- Copies of any perinate permits to the scope of work, I.e. Dangerous Goods

Pilot Qualifications - The baseline criteria for a pilot is:

- An approved vendor must directly employ them.
- Qualifications and experience must be made available in writing and verified by the vendor.



13.9. Communications

The following guidelines regarding communication must be observed during operations involving helicopters:

- Establish and maintain reliable communication among the pilot, the employees transferring to or from the helicopter, and the employees on the ground. Verbal communication through radios is the preferred method of communication.
- If possible, establish a backup frequency.
- Identify each person with a radio by a name or a call sign that is maintained throughout the operation.
- Ensure that the pilot makes a radio check with each affected employee before the first flight.
- Establish a "lost communication" procedure with the pilot and ground crew before the first flight.
- Designate one employee as the signal person.
- Use hand signals in the absence of or in combination with radio communication.
- Use the same terminology throughout the flight. Keep radio communication concise and to a minimum.
- When providing the pilot with directions, give the pilot specific distances, for example, "6 inches up" and "20 feet forward".

13.10. Occupants and Ground Personnel

The following guidelines will be observed for all occupants of a helicopter and all workers on the ground during helicopter operations:

- Only approved project workers and project representatives will be allowed to ride in the helicopter.
- All unauthorized personnel must stay at least 50 feet (15.24 m) from the helicopter.
- All workers riding in the helicopter must receive instructions on the use of the door, handles, headsets, and seat belt/restraint systems. This pre-flight briefing will be conducted by the pilot.
- Workers must receive instruction about the safest routes for approach to and departure from the helicopter, including any special consideration for the type of helicopter or terrain specific to the operations area.
- Workers must receive permission from the pilot before approaching or exiting the helicopter. All workers must remain secured in the helicopter until the pilot gives clearance to exit.
- All workers on the ground during helicopter operation must wear safety glasses with side shields, or sealed eye wear.
- Workers may not wear loose-fitting clothing.
- Workers approaching, riding, or departing a running helicopter must wear approved head gear, i.e. fly hard hat, or hard hat secured with a chinstrap.



- All workers riding on the skid of a helicopter must wear a full body harness equipped with a shock absorbing lanyard that has one end attached to the harness and the opposite end attached to a suitable anchorage capable of supporting a 5,000 lb (2,268 kg) static load. If a seat belt system is being utilized, then fall restraint load force anchors can be used. This includes Touch and Go as long as the same anchor loading is applied from the connection point to the SLR.
- Ground workers must exercise special caution to keep clear of rotors when visibility is reduced by dust or other conditions.

Cargo and Equipment

The following guidelines will be observed for cargo and equipment involved in helicopter operations:

- Secure all material and equipment loaded or carried on the helicopter for flight. Secure items, such as preform ties, preform taps, armor rods, and so on, that could possibly spring up into the rotor blades.
- Carry long objects such as shovels and hot sticks horizontally below the waist to avoid contact with the main rotor blades.
- Never throw any objects in the vicinity of a helicopter while the helicopter is being loaded or unloaded. Thrown items might contact and damage the rotor blades and cause serious injury to ground personnel.
- Remove trash and secure items around the landing area. Rotor down wash can cause these items to contact the rotor blades or ground workers.
- Keep all unnecessary equipment, people, and vehicles away from the landing and staging areas during flight operations.
- Secure or remove loose gear within 100 feet (30.48 m) of rotor down wash.

Operations

The following guidelines will be observed during helicopter operations:

- Be aware of the increased danger of walking into the rotor system when a helicopter is operating on an irregular surface, such as sloped terrain where rotor blade or terrain clearance might be reduced.
- On rocky or uneven terrain, the skids can move or slide, resulting in potential foot injuries. To avoid injury when loading or unloading the helicopter, step or stand directly on the skid, not immediately near or outside of it.
- Ensure that only trained workers load, unload, enter, or exit the helicopter while it is hovering in flight or when the landing gear is only in partial contact with the surface.
- Provide a safe means of access when workers are required to work under a hovering craft to reach the hoist line or hook to engage or disengage cargo slings.
- Do not permit open fires in areas where such fires might be spread by rotor down wash.

Rigging

The following guidelines will be observed for rigging during helicopter operations:

Inspect all rigging before use.



- Test all electronically operated remote hooks before flight operations.
- Before commencing flight operations, determine the complete rigging requirements, including slings and tag lines. Consider the type of rigging to be used, the weight of the object to be lifted, and what type of hooks or other hardware is needed.
- Ensure that tag lines are short enough that they cannot fly into the rotor systems.
- For overhead lifting, do not use hand-braided loops or splices or cable slings that have eyes and are formed using cable clamps.
- When necessary, use swivels incorporated into the rigging to avoid unwrapping wire rope during flight operations.
- Identify the best way to attach sock lines, bull lines, or conductor to the helicopter.
- Dissipate the static charge on suspended loads, cargo hooks, or rigging by touching the load, cargo hook, or rigging to the ground or shunting the load with a grounding device before allowing ground workers to touch it.

Suspended Loads

The following guidelines will be observed for operations that involve suspended loads:

- Ensure that when a sling or line is attached to the cargo hook of the helicopter that the line is freely suspended and not entangled in the landing gear or other equipment. A pre-flight procedure must be developed to ensure the pilot is knowledgeable of line attachment during the take-off process.
- After the cargo is hooked to the line attached to the helicopter, ensure that the lift proceeds smoothly.
- Ground observers must inform the pilot of any unusual circumstances.
- After the load is released, assist the pilot from the ground to determine that the hook is clear before continuing operations.

Line Stringing Operations

The following guidelines will be observed regarding line stringing operations:

- Ground or barricade all tension and pulling equipment or consider it energized.
- Ensure that all pulling and tensioning equipment has properly functioning brake systems.
- Use swivels between the helicopter and the line being pulled to prevent the line from becoming twisted.
- Ensure that rope slings or cables do not twist around the cargo hook, preventing proper operation of the hook or clean release when the hook is opened.
- Place guards to preclude vehicular traffic from coming in contact with moving line. Any
 movement of or over the sock line must be done with the coordination of the pilot.
- During the pull, give consideration to any and all inactive sock lines in the vicinity of the helicopter. No sag changes may be made to those lines until the pull is completed or the pilot is properly notified.



- Allow the pilot to make the initial decision about the order in which lines are pulled to help keep the tail rotors and main rotors out of the lines behind and above the helicopter.
- Use extreme caution when hooking up to the line at the base of a tower that is already threaded. Consider using a long line if a tower base hookup is required.
- Do not allow anyone under the helicopter or sock line during the course of a pull.
- Consider conductors and metal cables as energized until properly grounded and caught off.

Transferring

The following guidelines will be observed when using a helicopter to transfer workers:

- Workers transferring from a hovering helicopter to a structure or riding on a suspended line underneath the helicopter must be trained and qualified in the safe work practices for that operation.
- Workers riding on the skid of the helicopter must wear a full body harness with a shockabsorbing lanyard attached to the helicopter at all times when riding from the ground to the structure.
- Workers riding on the skid of the helicopter must check the condition of the positioning attachment device to ensure that the device is in proper working condition.
- Workers transferring from the helicopter to a steel tower or other structure must attach a shunt from the helicopter to the tower before transferring to the tower.
- Workers transferring to a conductor or structure must disconnect their lanyards from the helicopter and re-attach the lanyard to the structure immediately upon reaching the work location. A wishbone lanyard will be used to ensure 100% tie off at all times.
- Workers must transfer to and from the helicopter as smoothly as possible and only by permission of the pilot.
- Workers must use caution when transferring to a structure with insulated static. Workers must shunt the static with a ground lead that is attached to the helicopter before stepping onto the structure.
- After the shunt is removed, employees must use a hot stick to attach a personal ground from the pole bond to the static conductor before coming in contact with the conductor.
- To dissipate any possible static charge that might exist, employees transferring from a helicopter to a steel structure must attach a shunt that is also attached to the helicopter to the tower before coming in contact with the tower.
- Workers transferring to a conductor from a suspended position underneath the helicopter must wear a fall arrest system consisting of a full body harness and a dual shock-absorbing lanyard. One leg of the dual lanyard must be attached to the long line or boatswain chair. When the worker is placed in a stable position on the conductor, the employee must attach the free side of the dual lanyard to the conductor and then immediately disconnect the lanyard attached to the helicopter.
- The time that the employee is attached to both the helicopter and the conductor must be kept to a minimum.



14. Emergency Response Plan

A project specific Emergency Response Plan (ERP) has been developed for the project. The ERP will serve as a guide to ensure that workers are prepared and that responses to project emergencies are completed in a safe, timely, organized, and effective manner.

In any emergency, actions for safeguarding the health and safety of project personnel and the public will take priority over any other aspect of the emergency.

The review of this ERP is mandatory for all project workers and will initially take place at the project orientation. Crews will reference and periodically review the ERP during on-site tailgate meetings. Any subsequent ERP updates will be reviewed with the Client and discussed at the weekly safety meeting.

The intent of the plan is to:

- Provide accessible information to aid in facilitating and coordinating an effective response and initial first aid treatment in the event of an emergency situation, thereby reducing the impact and potential loss to the injured, damage to property, equipment and the environment;
- Provide step by step response protocols to be undertaken in the event of an emergency to facilitate rapid response activities; and
- Provide accurate contact information for medical emergency personnel and project staff that may be communicated during an emergency.

See Appendix F – Project Emergency Response Plan



15. Incident Management

All incidents, whether injury or non-injury related, are a source of valuable information that can be analyzed to ensure that future incidents are avoided. Complete, timely and accurate incident reports are essential to any Health and Safety program. A good investigation and report will identify the *causes* and *corrective actions* necessary to prevent similar incidents.

Incident investigations go beyond the simple filling out of forms in that they seek to truly understand what led to the occurrence and to use data driven decision making to identify root causes of the incident. Properly understanding the root cause of an incident allows for intelligent corrective action identification and implementation, reducing the likelihood of reoccurrence, and ensuring a safer workplace for all employees.





15.1. Incident Management Process:

A systematic incident management process has been established and will be implemented on the project to ensure that all incidents - whether the nature of the incident be: Near – Miss, Worker Injury, Property Damage, Environmental, Respectful Workplace Violation, Employee Safety Concerns - are properly managed. All incidents will be classified, assessed, investigated, corrected, reported, corrected with lessons learned shared as appropriate.



15.2. Stop Work Orders

Any directives or stop-work orders issued by a Governmental Authority must be immediately verbally reported to Voltage's Field Safety Manager, who will then immediately verbally notify the project management team and client. The Incident Management Process will be followed to ensure that all stop workorders are appropriately communicated and investigated.

15.2.1. Classification of Incidents

All incidents will be classified and rated to establish the level of investigation that is required and who is involved in the investigation process.

All incident can be categorized into one of the following categories, Injury, Damage, Process or Operation, Motor Vehicle Accident, or Environmental. The category will be determined by the highest loss factor if multiple categories apply. For example, if a worker is involved in a motor vehicle accident and sustains an injury, and the vehicle releases hazardous material as a result of the accident, the incident will be categorized as an injury. The appropriate details of the damage and the spill will still be collected and recorded in the details of the incident report.

All incidents will be assigned a severity rating. This will to help to further determine the post



incident actions required, the level of incident investigation to be performed, who is required to participate in the investigation, and the appropriate level of review required.

15.2.2. Incident Notification

Timelines for the incident management process have been established. These timelines will allow those immediately responding to the incident and investigating the incident adequate time for each step of the process. The top priority after an incident will be caring for any injured worker, followed by gathering information to begin accurate reporting. The timeline below in table 2, outlines the general ideal timeline for the incident management process. However, given the complexity of the investigation required, and incident location factors, i.e. poor/limited communication, these timelines could be tightened or extended based on the individual circumstances.

15.2.3. Incident Notifications to Workplace Safety and Health

Manitoba Workplace Safety and Health requires immediate notification when a serious incident occurs at a workplace.

"The employer is required to notify the Workplace Safety and Health Branch (WSH) of the incident immediately, and by the fastest means of communication available."

The Workplace Safety and Health Regulation defines a serious incident as one:

- in which a worker is killed;
- in which a worker suffers:
 - an injury resulting from electrical contact,
 - o unconsciousness as the result of a concussion,
 - \circ $\;$ a fracture of his or her skull, spine, pelvis, arm, leg, hand or foot,
 - o amputation of an arm, leg, hand, foot, finger or toe,
 - third degree burns,
 - o permanent or temporary loss of sight,
 - $\circ~$ a cut or laceration that requires medical treatment at a hospital as defined in The Health Services Insurance Act, or
 - \circ asphyxiation or poisoning; or
- that involves
 - $\circ~$ the collapse or structural failure of a building, structure, crane, hoist, lift, temporary support system or excavation,
 - $\circ~$ an explosion, fire or flood, an uncontrolled spill or escape of a hazardous substance, or
 - \circ the failure of an atmosphere-supplying respirator.



When	How	What	Who	
Verbally as soon possible by the quickest means, followed up with written notification within 2 Hours * *The primary objective will be to get any injured workers cared for, make the incident scene safe, and gather information for accurate reporting.	Verbally or replied to text message,	 Accurate detail on: Who, What, Where, & When, Direct Supervisors Name; If there was an injury, did worker go to hospital; Details of regulatory reporting required; Status of the worksite, i.e. work has been stopped, or clean up in progress; Cause – If known Immediate corrective actions that have been implemented. 	Project Team Client Sr. Manager * External Regulatory – If Required (OHS, RCMP) *Level 2 or greater	
End of Incident Day or 24 Hours	Formal Incident Report or Preliminary Report if further investigation time is required (generally Level 2 Incidents or Above) *.	 Updated accurate detail on: If there was an injury: Did worker go to hospital; Nature of injury and treatment; Has the worker returned to work; Details of regulatory reporting required; Status of the worksite, i.e. work has been stopped, or clean up in progress; Basic causes of the incident; Immediate corrective actions that have been implemented; and Indication of investigation status. *For Level 1 Incidents – This may serve as the final report. 	Project Team Fleet (Required) Internal WCB Coordinator (as required) Client	
*72H Post Incident	Draft Investigation Report	 For Level 2-5 Incidents Draft Investigation Report including: Supporting Documentation & Photos Recommended Corrective Actions 	Internal team for review and sign- off.	
*5 Days Post Incident Final Investigation Report		For Level 2-5 Incidents Final Investigation Report including: Supporting Documentation & Photos Corrective Action Plan Appropriate Sign Offs	Project Team Fleet (If required) Sr. Management Team Client & Other External (as required)	

Table 2 Incident Notifications Timelines



15.2.4. Initial Assessment

The classification of incidents can be subjective, and initial notification does not always include all pertinent facts. Engaging a safety / environmental coordinator at this stage to review the known information about the incident will help maintain classification consistency. This assessment of the classification will also provide further direction for the level of investigation required and the post incident follow up actions.

15.2.5. Investigate and Analyze

An investigation can be awkward for the people involved, but our culture is an open one and everyone understands that we investigate to learn from what went wrong. To be productive in investigating incidents, we must separate emotions from facts, because it is all about the facts when it comes to understanding the root causes, whether they are mistakes or management failures, and learning to prevent them from happening in the future.

15.2.6. Review Communicate and Track

To ensure timely completion of and review of investigation reports, and corrective action items all incident will be reviewed. Learning from the investigation will be communicated back to the workforce to prevent future reoccurrence. Incidents will be tracked in a data base and analyzed to set goals, targets and initiatives to improve HSE performance.



16. Subcontractor Safety Management

All subcontractors engaged on the Project will be evaluated prior to being considered for hire to ensure they are capable of meeting Voltage's safety standards. This evaluation includes the review of the subcontractor's historic Health and Safety statistics and a completed safety questionnaire with respect to their safety management system.

This evaluation includes the collection and review of:

- WCB Clearance Certificate;
- WCB Experience rating for 4 years historical plus current year;

After the subcontractor has been approved, and prior to starting work on the project, the subcontractor will be required to provide the following documentation to the Field Safety Manager for review:

- A signed copy of the Project Safety Management Plan Commitment Form;
- Work Procedures & Job Hazard Assessments; and
- Employee Training Certificates & Matrix to be updated prior to arrival of new employees to the project.
- All Subcontractor workers are required to complete the project orientation, prior to being permitted to access the project site.

On a weekly basis, the subcontractor safety representative shall submit the following to the Voltage Field Safety Manager:

- Weekly HSE Report;
- Weekly safety meeting minutes & attendance sheets, if not participating in Voltage's meetings;
- Daily tailboards; and
- Copies of Worksite Inspections.
- Incidents and Near Miss reports shall be submitted within the timelines identified in the Incident Management, Investigation, and Reporting section of this *SMP*.

See Appendix G– Subcontractor Requirements



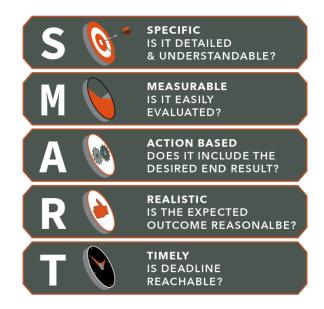
17. Performance Management and Reporting

17.1. Performance Management

Key Performance Indicators (KPIs), both leading and lagging, provide a valuable insight to ensure the continual measurement and management our HSE performance. Lagging indicators can be used to track incidents that have occurred (past data) and assist in sourcing the root of the problem, while leading indicators are more predictive by nature, and will help address and prevent potential issues and incidents from occurring. Both types of indicators provide an objective basis to determine the HSE program effectiveness and provide information to allow data for driven decision making to set performance goals and targets.

KPIs will be tracked on a weekly basis and include; project man hours, project training hours, incidents and near miss occurrences. They will also include information on the number of; orientations, safety meetings and training sessions, inspections, audits and drills. These KPIs will be communicated and circulated on a monthly basis to ensure the project workforce is continually engaged in meeting the HSE performance targets set for the project.

Using KPI data, the project leadership will periodically establish Specific, Measurable, Action based, Realistic, and Timely (SMART) performance targets and goals. The standard for these targets and goals will to be to focus on leading indicators. This outcome this focus will provide a performance assessment of the "effort" vs "result"; and by not getting caught up on the lagging indicators, create strong positive moral among the workforce.

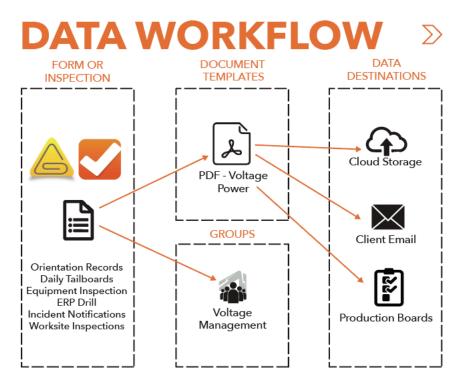


Specific, Measurable, Action based, Realistic, and Timely (SMART) performance targets and goals.



17.2. Records Management

Many of the project HSE records are generated digitally on various electronic form platforms (i.e. SiteDocs, and Pronto Forms) all featuring off-line functionality. Utilizing these systems automates the workflow of the documentation management and provides almost instantaneous availability for review / audit for onsite and offsite users.



Voltage Powers Data Workflow Process for Health and Safety Records Management

17.3. HSE Performance Report

Safety representatives from each project contractor will track and report on a weekly basis, their HSE Key Performance Indicators. As the Prime Contractor, Voltage will compile a summary of all the reported KPIs for the project, for the reporting period. This report will include a high-level summary of all project near misses and incidents.

This HSE Performance Report will be communicated to the project workforce, and distributed to the project leadership team, and Manitoba Hydro on a weekly basis,

17.4. Incident Classification

The CEA A-2 Standard for Recording and Measuring Occupational Injury/ Illness Experience and Transportation will be followed to determine when injuries, illnesses and fatalities are recordable, and how to calculate recordable metrics. The purpose of the standard is to provide framework for consistent reporting of health & safety performance metrics for the project contractors, and for benchmarking health & safety performance.



To maintain consistency in project reporting, all incidents will be classified as one of the following: Injury; Property Damage; Process / Operation, Motor Vehicle Incident, or Environmental. The definition of each classification is below:

Injury

An injury is any injury or illness suffered by a worker. Injury or illness incidents will be further categorized into the following:

First Aid

A first-aid injury is any one-time treatment and any follow up visit for observation of minor scratches, cuts, burns, splinters and the like which do not normally require medical care. Such treatment is considered to be first aid even if administered or supervised by a medical practitioner. The following procedures are considered first aid treatment:

- Using a non-prescription medication at non-prescription strength (for medications available in both prescription and non-prescription form, a recommendation by a physician or other licensed health care professional to use a non-prescription medication at prescription strength is considered medical treatment)
- Administering tetanus immunizations (other immunizations, such as Hepatitis B vaccine or rabies vaccine, are considered medical treatment)
- Cleaning, flushing or soaking wounds on the surface of the skin
- Using wound coverings such as bandages, Band-Aids[™], gauze pads, etc.; or using butterfly bandages or Steri- Strips[™] (other wound closing devices such as sutures, staples, etc., are considered medical treatment);
- Using hot or cold therapy;
- Using any non-rigid means of support, such as elastic bandages, wraps, non-rigid back belts, etc. (devices with rigid stays or other systems designed to immobilize parts of the body are considered medical treatment);
- Using temporary immobilization devices while transporting an accident victim (e.g., splints, slings, neck collars, back boards, etc.).
- Drilling of a fingernail or toenail to relieve pressure, or draining fluid from a blister; Using eye patches;
- Removing foreign bodies from the eye using only irrigation or a cotton swab;
- Removing splinters or foreign material from areas other than the eye by irrigation, tweezers, cotton swabs or other simple means;
- Using finger guards;
- Using massages (physical therapy or chiropractic treatment are considered medical treatment); or Drinking fluids for relief of heat stress

Medical Aid

Any occupational injury or illness requiring treatment provided by a physician or treatment provided under the direction of a physician. Medical treatment does not include:

• Visits to a physician or other licensed health care professional solely for observation or



counselling;

- The conduct of diagnostic procedures such as x-rays and blood tests or the administration of prescription medications used solely for diagnostic purposes (e.g., eye drops to dilate pupils);
- "First aid" as defined in this section.

Medical Aid with Modified Work

A combination of the above definition of Medical Aid, with a physician or other licensed health care professional recommendation that the worker not perform one or more of the routine functions of his or her job.

Lost Time

Any occupational injury that prevents the worker from performing any work for at least one day, including fatalities.

Occupational Illness

Any abnormal condition or disorder, other than one resulting from an occupational injury, caused by exposure to environmental factors associated with employment. Occupational illness may be caused by inhalation, absorption, ingestion of, or direct contact with the hazard, as well as exposure to physical and psychological hazards. It will generally result from prolonged or repeated exposure.

Non- Occupational Illness

Injuries and illnesses incurred during normal life activities (e.g., eating, sleeping, recreation) are not considered to be work related. Recreational activities may be considered to be work related if the worker's participation in the activities was work related (e.g., the activity involved transacting, promoting, or discussing business) or was perceived by the worker to be an expectation of employment.

Fatality

A fatality is a death resulting from a work-related injury or illness.

Property Damage

This is an incident that results in equipment, tool, or property damage.

Process / Operation

Generally, a process / operation incident is a way to classify those incidents that may or may not result in loss, but no injury, or damage to property has occurred. Types of incidents that are classified here include: Equipment Failure, Respectful workplace, safety Violations / Non-Compliance, Security / Theft.

Motor Vehicle Accident (MVA)



An MVA is an incident the occurs when a motor vehicle hits a person, an object, or another vehicle, causing injury or damage.

Environmental

An Environmental Incident is an event, or release that may cause harm or potential harm to an environmental receptor e.g. air, water, land, wildlife or local habitat.



18. MMTP Specific Considerations

18.1. Public Conveniences and Service Systems

The location of highways, roads, railroads, communications systems, powerlines, pipelines and other service systems crossed by the transmission line and project access roads are shown on the drawings, permits, and access maps. Before commencing any part of the Work that may interfere with the security of or free passage on any:

- Electrical distribution or transmission system;
- Communications system;
- Gas and oil lines;
- Road or highway;
- Rail lines;
- Navigable water; and, or
- other service systems.

Voltage will provide sufficient notice, and not less than 72 hours to the owner or other jurisdiction having authority of the service system, to allow measures to be taken to prevent or minimize such interference. This notice will ensure the security of the service system and allow to plan and perform the transmission line construction work such that workers or equipment do not come closer than the allowable limits of approach to any energized line, roadway, railway etc. without the proper protection in place.

All service crossings will be done at designated crossings, once permission has been obtained from the appropriate authority. Where crossing permits are required, all the term and conditions will be followed before installing or entering any crossing. Workers conducting the work will be briefed on the permit / crossing requirements as part of the daily tailboard discussion.

18.2. Traffic Management and Control Plans

Voltage will assess and control all activities that create a hazard to a user of a road or trail, railway, the general public or livestock in the area of the Work. Controlling these hazards includes but is not limited to signage, flag persons, barricades, and temporary fencing.

Where a construction activity creates a hazard to any portion of a highway or road, or where a condition could be dangerous to road users or workers, Voltage will ensure the work planning and execution is conducted in alignment with Manitoba Infrastructure and Transportation Work Zone Traffic Control Manual, and the Traffic Management Plans within.

Traffic Control Person

Where a Traffic Management Plan outlines the requirement for a Traffic Control Person (Flag Persons), Voltage will utilize a pre-qualified, third party traffic control subcontractor to



provide traffic control. All Traffic Control Persons training will be verified at the project orientation.

In general, flag persons should be used when it is desirable or necessary to give some message to the motorist respecting:

- Road or traffic conditions ahead
- The correct path to follow
- The existence of potential conflicts between the road user and workers or equipment
- Limited approach sight distance to the work ahead.

Off Road Operations

Off-road operations include all activities which are done away from the surface of the road but within the right-of-way, typically greater than ten minutes. Safety of the motorist and workers requires that some form of advance warning be provided and maintained.

Off Road Operations - Include any operation where the activity is off the road surface but within the highway right-of-way. Off-road operations for this project, sign installation, and installation of rider poles, and stringing over roadways. Traffic control must consist of at least the minimum installation as described in the Traffic Management Plans. See Appendix H

The work zone must be left in a safe condition prior to workers and equipment leaving the worksite. All excavations must be closed or protected.

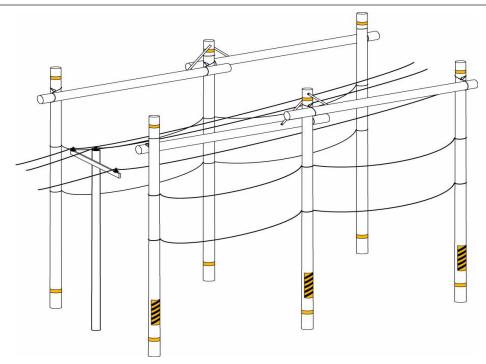
18.3. Rider Poles

It is occasionally necessary install rider poles over crossings to protect public convince and service systems before stringing over them. If it is required to store the poles on a roadside right-of-way, prior to their temporary installation, they will be stored as far from the roadway travel lane as practical, with the following requirements:

- Poles will be stored in the right-of-way for as short a period as practical.
- Poles must not be stored within 4 meters of the travel lane.
- Where poles are temporarily stored within the roadway "Clear Zone" (12 metres from the edge of the travel lane), the area must be signed and delineated as a work zone. This would normally consist of a "construction area" sign with poly-posts or cones.
- Where rigid materials are temporarily stored outside the "Clear Zone" but within a roadway right-of-way, they must be delineated.

Poly-posts or cones with retroreflective sheeting should be used to delineate all poles and rigid materials temporarily stored in the right-of-way. Where poly-posts or cones are unavailable or impractical to use, a 75 mm x 75 mm (3-inch x 3 inch) fluorescent orange prismatic reflective material should be installed, at a minimum height of 600 mm (2 feet) above the ground surface.





18.4. Protective Equipment and Tools

Workers must use general protective equipment and tools when in the proximity of or when working on exposed energized parts. The following rules apply:

- When working on or near exposed energized parts, qualified employees must use insulated tools or handling equipment suitable for the voltage present and the working environment. These tools must be tested according to the manufacturer's specifications, utility requirements, or when tools are damaged.
- Fuse handling equipment, insulated for the circuit voltage, must be used to remove or install fuses.
- Ropes and other hand lines used within the minimum approach distance must be non-conductive and clean.
- Portable electrical equipment must be handled in such a manner that will not cause damage. Do not staple or hang power cords in a way that can cause damage to the outer jacket or insulation.
- Portable electrical equipment must be visually inspected for damage, wear, cracked or split outer jackets or insulation, and other damage before use or each shift. Any defects, such as cracked or split outer jackets or insulation must be repaired, replaced, or placed out of service. Only cord sets rated for hard or extra hard duty may be used.
- Always check the compatibility of cord sets and receptacles for proper use.
- Ground-type cord sets may only be used with ground-type receptacles when used with equipment requiring a ground-type conductor.



- Attachment plugs and receptacles may not be altered or connected in a way that would prevent the proper continuity of the equipment-grounding conductor. Adapters may not be used if they interrupt the continuity of the grounding conductor.
- Only portable electrical equipment that is double insulated or designed for use in areas that are wet or likely to contact conductive liquids may be used.
- PPE must be used when handling portable electrical equipment that is wet or covered with a conductive liquid.
- Locking-type connectors must be properly secured after connection to a power source.
- When strap hoists are used on energized conductors, an insulating link shall also be used to increase the integrity of the strap hoist and the insulating qualities.

18.5. De-Energizing Lines and Equipment

A designated employee (crew leader, foreman, etc.) shall inform the system operator that a particular section of line or equipment is to be de-energized. The designated employee becomes the employee in charge and is responsible for the clearance.

All switches, disconnectors, jumpers, taps, and other means through which known sources of electric energy may be supplied to the particular lines and equipment to be de-energized, shall be opened. Such means shall be rendered inoperable, unless its' design does not allow for it to be tagged to indicate that employees are at work.

Automatically and remotely controlled switches that could cause the opened disconnecting means to close shall also be tagged at the point of control. The automatic or remote-control feature shall be rendered inoperable, unless its' design does not so permit.

Tags shall prohibit operation of the disconnecting means and shall indicate that employees are at work.

After the applicable requirements for de-energizing lines and equipment as stated above have been followed and the employee in charge of the work has been given a clearance by the system operator, the lines and equipment to be worked shall be tested to ensure that they are de-energized and protective grounds shall be installed as required.

If two or more independent crews will be working on the same lines or equipment, each crew shall independently comply with the requirements of this procedure.

To transfer the clearance, the employee in charge (or, if the employee in charge is forced to leave the work site due to illness or other emergency, the employee 's supervisor) shall inform the system operator. Employees in the crew shall be informed of the transfer and the new employee in charge shall be responsible for the clearance.

To release a clearance, the employee in charge shall:

- Notify employees under his or her direction that the clearance is to be released.
- Determine that all employees in the crew are clear of the lines and equipment.
- Determine that all protective grounds installed by the crew have been removed.
- Report this information to the system operator and release the clearance.



The person releasing a clearance shall be the same person that requested the clearance, unless responsibility has been properly transferred.

Tags may not be removed unless the associated clearance has been released.

Only after all protective grounds have been removed, after all crews working on the lines or equipment have released their clearances, after all employees are clear of the lines and equipment, and after all protective tags have been removed from a given point of disconnection, may action be initiated to reenergize the lines or equipment at the point of disconnection.

18.6. Aerial Basket Operations

- Employees shall visually check the bucket truck at the first job of the day where a basket is used. With the basket empty, the lower controls shall be operated and checked before anyone goes aloft. The basket should be operated through its' full range of motion.
- Visual inspection will include the confirmation of Current NDT certification and documentation.
- No one on the ground shall operate the lower controls to the bucket truck or basket while someone is in the basket except in an emergency or when following the direct orders from the employee in the basket.
- The truck shall be parked out of traffic whenever possible.
- Employees shall make sure that the brakes are set, and the wheels are chocked before setting up the bucket truck.
- When the vehicle is provided with outriggers, they shall be used.
- Before operating outriggers, employees shall:
 - Check to see that everyone is at a safe distance from the equipment.
 - Position the outrigger pads on firm ground.
 - Use cribbing and / or mats under the outrigger pads, when necessary, to provide a solid footing.
 - Make sure the equipment is level before operating the boom.
- Employees riding in a basket shall wear an approved body harness with a shockabsorbing lanyard properly attached to the boom or factory-approved attachment point.
- Employees shall not climb in or out of the basket while the basket is elevated, unless there is an emergency. Employees shall not belt off to a structure while working in the basket.
- The operating control box shall be kept clear of materials and tools. No objects, except approved storage containers, shall be allowed to hang on the outside of the basket when employees are working in an energized area.
- The boom shall be cradled and secured when the bucket truck is being moved. Employees shall not ride in a basket when the bucket truck is moving.
- The manufacturer's designated load limit shall not be exceeded in the loading of a basket.



- Employees shall position themselves below energized equipment when working on it. Work shall be performed only on one conductor at a time.
- Climbing hooks shall not be worn by employees who are working in a basket.
- On a bucket truck, with a two-man basket, no change in basket position shall be made without the knowledge of both employees except in case of an emergency.
- No tools or equipment shall be rigged to the basket in such a manner as to cause the basket to become unstable.
- Good housekeeping shall be exercised in the basket.

18.7. Climbing Poles and Structures

- All employees must be qualified climbers before climbing any pole or structure not equipped with 100% fall protection. Employees in training are not considered "qualified" and must have 100% fall protection when exposed to fall hazards greater than 10 feet. Climbing equipment shall be inspected prior to use. Safety straps shall be equipped with double locking snap hooks.
- Before climbing poles and structures, an inspection by a qualified person shall be performed.
- An inspection must be made to determine if the poles or structures can sustain the additional or unbalanced stresses to which they will be subjected from climbing or from adding or removing conductors or equipment.
- When climbing poles or structures, employees should maintain three points of body contact while ascending or descending. If the pole or structure cannot withstand the loads imposed, it must be braced, guyed, or otherwise supported in order to prevent failure. In all cases where load or stresses are imposed, a competent person must complete a detailed Job Hazard Analysis to determine alternative means of supporting the structure.

18.8. Verifying Utility Locations and Potholing

The following guidelines must be followed to ensure safety during any work operations where underground utilities might be encountered:

- The location of all identified utilities must be verified using non-destructive methods of excavation.
- If any risk to the utility from the work activity is present, a "window" must be excavated at or near the utility to visually monitor the potentially hazardous situation.
- Exposed existing utilities must be adequately protected and supported.
- When crossing or running parallel to existing utilities within 3 feet (0.91 m), the utilities shall be visually confirmed by exposing the buried utility at appropriate intervals.
- Because of a high risk and hazard potential, a competent person must visually confirm the location of gas lines, electrical utilities, fiber, and communication lines within the immediate vicinity of the work taking place.
- Contact documents and local regulations must be checked to determine responsibility for verifying locations of unmarked utilities.



 When utilizing high-pressure water for verifying utility locations, the proper PPE shall include long-sleeved arm protection, di-electric shoes/ boots or overshoes, safety glasses and face shield, and Class 3 rubber insulating gloves.

Refer to provincial One Call procedures for details of ground disturbance procedures and associated surface color markings

18.9. Excavations

- All excavations and trenches must be evaluated on a daily basis by a competent person before entry.
- The following guidelines establish the minimum requirements for all work in and around excavations and trenches that might expose employees to the hazards of moving
- ground:
- All surface encumbrances adjacent to an excavation that might create a hazard to employees must
- be removed, secured, or supported as necessary to protect employees.
- While the excavation is open, underground installations that create a hazard to employees will be supported, protected, or removed as necessary to protect employees.
- Appropriate access and egress in the form of a stairway, ladder, or ramp must be provided in all
- excavations deeper than 4 feet (1.23 m). In trenches, the stairway, ladder, or ramp must be installed so
- that a worker does not have to travel farther than 25 feet (7.62 m) in any direction to exit.
- Employees exposed to vehicular traffic must wear highly visible vests or other equivalent apparel.
- Employees must be protected from falling loads that might be dropped by lifting or excavating equipment.
- A warning system must be provided when mobile equipment is operated adjacent to an excavation and the operator does not have a clear and direct view of the edge of the excavation. The warning system may include barricades, signals, stop logs, or other authorized methods.
- Employees will not work in excavations where they are exposed to the hazards associated with water accumulation. If water accumulation in an excavation is controlled using pumps, the operation of the pumps must be monitored by a competent person.
- Employees must be protected from loose rock or soil that could fall or roll into the excavation by placing and keeping such material at least 2 feet (0.61 m) from the edge of the excavation.
- A competent person must make daily inspections of excavations to identify and eliminate conditions that could result in cave-ins, failure of support systems, hazardous atmospheres, or other unsafe conditions. Inspections must be conducted before the start of each work day and after every rainstorm or other occurrence that might increase the hazard of moving ground.



- Where employees or equipment are allowed or required to cross-over excavations that are 6 feet (1.83m) or greater in depth, appropriate fall protection in the form of walkways or bridges with standard guard-rails must be provided.
- An open excavation or trench that is left open overnight must be barricaded, covered, and secure in a manner that prevents anyone from entering the excavation intentionally or accidentally.

18.10. Fall Protection

- Fall-arrest equipment, work positioning equipment, or travel restricting equipment must be used by employees working at elevated locations more than 10 feet above the ground, unless an approved ladder, work platform, guardrail system, or safety net system is in place.
- Personal fall-arrest systems shall be rigged to prevent an employee from free-falling more than 6 feet (1.83 m) or contacting any lower level.
- If vertical life lines or drop lines are used, not more than one employee may be attached to any one life line.
- Unless designed for that purpose, snap hooks may not be connected to loops made in webbing type lanyards.
- Snap hooks may not be connected to each other.
- Each employee working from a hook ladder must wear a full body harness with a 6 foot (1.83 m)lanyard. They must also use a shock-absorbing lanyard that has one end attached to the rear center D-ring of the body harness and the opposite end attached to a rope grab that is attached to a 5/8 inch poly-dacron rope (unless a retractable lanyard is used). Each employee shall be attached to a separate life line.
- The rope shall be attached to the cross-arm or structure by means of a locking carabiner attached to a tie-off adapter and shall be long enough to hang past the bottom of the hook ladder.
- Employees may omit the lifeline if a 6 foot (1.83 m), shock-absorbing lanyard attached to a tie off adapter will provide enough length to access the work area.
- In lieu of this method, employees may use self-retracting lifelines (SRL) to ascend and descend hook ladders. Each SRL must be attached to the structure by use of a tie-off adapter. The snap end of the SRL must be directly attached to the rear dorsal D-ring of the body harness. Shock absorbing lanyards must not be used in conjunction with an SRL

18.11. Pole Loading, Unloading, and Hauling

- During pole loading or unloading operations, employees must not stand between the pole pile and the loading or transporting equipment.
- At least two employees, a driver and a swamper, shall be assigned to pole hauling. The swamper shall assist the driver with loading and unloading poles and watching traffic at the side and rear of the truck.
- Slings shall be used to load and unload poles. Pole tongs shall not be used to load or unload poles. Pole tongs may only be used to raise a pole high enough to get a sling underneath the pole. Employees should not be permitted to reach under suspended loads while attaching or removing the sling.
- Employees must not stand or pass beneath suspended loads.



- Unloading poles from rail cars is hazardous and must be done only by experienced personnel.
- All unauthorized personnel must be kept clear of all pole-handling operations.
- If when unloading poles from a rail car, it becomes necessary to move the car, only an agent of the railroad may do so.
- A winch line or other tightening device of ad equate strength to hold the load must be secured around the load before removing bands or stakes from rail cars.
- Employees and equipment must be positioned in such a way as to avoid injury or damage should a load of poles get out of control.
- To control or guide a pole during the loading or unloading process, tag lines must be placed on the end of the poles. Employees guiding suspended poles should do so only from the ends of the suspended load.
- Employees handling poles must wear a hard hat, safety glasses, and work gloves. Care
 must be taken to avoid unnecessary contact with treated poles to reduce the possibility
 of chemic al burns.
- When poles must be rolled from a pile or from a trailer to the ground, a line, cant hook, or other approved tools must be used.
- Poles must be securely fastened to the trailer when being hauled. During daylight hours, a red flag must be fastened to the far end of the pole that protrudes farthest to rear. After dark, a steady, burning red light must be used instead of a flag.
- When hauling transmission poles or when hauling any poles in heavy traffic areas, it may be necessary to use a follow vehicle.
- When the driver is maneuvering corners, other motorist must be given as much advance warning as practical.
- A pole trailer with a pintle hook attachment must be properly connected to its' towing vehicle with safety latches and chains. The safety chains must be capable of supporting the gross weight of the pole trailer should a failure occur.
- When possible, poles temporarily stored along the streets or highways shall be placed behind the curb or beyond the ditch line and be blocked so that they cannot roll.
- Routinely inspect the pole trailer for signs of stress and cracked or fatigued metal members. Immediately remove from service a damaged trailer until proper repairs have been completed.
- Employees must not be on a pole pile or pole trailer when poles are being placed or removed.
- When loading or unloading poles on public highways, advance warning signs, flag persons (if needed due to blocking lanes), emergency flashers, and strobe lights (if so equipped) shall be used.

18.12. Setting Structures

- All lift plans to be followed will be developed by a person who has been deemed competent in the preparation and development of lift plans.
- development of lifting studies
- Only qualified, certified operators or operator apprentices under the direct observation and direction of a qualified operator, may operate cranes to set structures.
- Any lifting device used to set structures must legibility show the manufactures rated load capacity, the



- manufactures name, the model, serial number, and a current NDT Inspection, if any
 of this information is missing contact your supervisor and do not operate.
- All rigging to be used must be inspected prior to use. Any damaged rigging is to be taken out of
- service and discarded.
- All rigging and lifting equipment must meet ASME Standards. All rigging equipment must have the maximum load range identified on it and if it is not in a condition to meet this they must be taken out of service and removed from site.
- Outriggers must be properly extended when setting structures. Additional mats must be used under outriggers for increased stability when working on unstable ground.
- When setting structures in close proximity to an energized circuit, the automatic reclosing apparatus protecting the circuit must be rendered inoperative.
- Employees must not be on structures that are being plumbed or tamped unless the are properly secured.
- The operator must be at the controls whenever the crane is supporting a load.
- Barriers are to be placed to prevent any entry to lift area. Where there are workers
 present in a proposed lift area, the crane operator is not to move the load over the
 workers. The workers shall be warned of the impending danger and be instructed to
 move to a safe area.

18.13. Wire-Stringing Operations

- When removing empty conductor reels and loading full ones, all persons not actively engaged in the work must stay a safe distance away.
- Employees must avoid placing themselves in "caught between" situations when loading, unloading, or handling reels.
- Extreme caution is required when digging holes for guard structures to avoid cutting or damaging buried utilities.
- Extreme caution must be taken when setting or removing guard structures near energized equipment. Employees handling or guiding the pole butt must wear rubber, insulating gloves.
- Extreme care must be taken by employees hanging guard arms near energized equipment. Only qualified climbers may climb guard poles that are set in proximity of energized lines or equipment. Employees must stay on the opposite side of the upright from the energized equipment, and employees shall maintain complete control of slings used to hang guard arms. Under no circumstances may slings be whipped around guard arms.
- Rider poles set within 15 feet (4.57 m) of a roadway must have reflective markers in place to warn passing motorist.
- Entrances to puller or tensioner set-ups that pull directly off a main road must be marked with advance warning signs in both directions of travel.
- Care must be taken to ensure that mud does not build up on the highway where equipment enters and exits from puller and tensioner set-ups.
- When in use, all pulling and tensioning equipment must be grounded by attaching a 4/0 ground conductor between the body of the puller, tensioner, or reel stand and a ground rod that is installed to a depth of at least 5 to 8 feet (1.52 to 2.44 m) or a known ground such as a substation grid.



- Employees must not touch equipment unless rubber gloves are being worn or equipotential grounding methods are in place.
- A traveling ground must be installed between the tensioning reels and the first structure in order to ground each bare conductor and sub-conductor during the stringing operations.
- During transmission stringing operations, each bare conductor and sub-conductor (excluding ADSS fiber-optic cable) must be grounded at the first structure adjacent to the tensioning and pulling machine and at increments of no more than 2 miles (6.44 km) apart.
- The grounds must be left in place until the conductor installation is complete. The grounds must be removed as the last phase of the stringing operations.
- Grounds must be installed on each conductor and sub-conductor and at all catch-off points, including snubs and dead ends before attaching the catch-off rigging.
- Grounds must be installed within 10 feet (3.05 m) on either side of where conductors are being spliced on the ground.
- Rubber gloves must be worn, or equipotential grounding methods must be in place when adjusting reel stand brakes while standing on the ground.
- Wire being strung, removed, or sagged close to energized lines or equipment must be handled with rubber protective equipment unless adequately grounded.
- Wires or rope being pulled in or out must not be allowed to sag to less than 18 feet (5.49 m) over a street or highway.
- Rope, lines, cables, or wires hanging from poles, structures, or equipment must be tended or properly secured.
- Employees must not stand in loops of rope or wire or tie wire or rope around the body.
- Reliable communications, through two-way radios or equivalent means, must be maintained between the reel tender and the pulling rig operator. The preferred method is to have radios mounted on the puller and tensioner or use portable radios. In the event that this system fails, as a temporary alternative, a radio mounted in a separate vehicle may be used as long as the vehicle in which the radio is mounted is bonded to the puller or tensioner with a minimum 2/0 ground conductor.

18.14. Blasting Implosive Connections

- All blasting will be done by a certified blaster in accordance with the regulations set out in the MB Workplace Safety and Health Act and Regulations.
- A Certified Blaster hold a blaster's certificate issued by Manitoba Labour and Immigration.
- Certified Blaster shall ensure he/she gives a safety briefing to all worker's on site and document on the tailboard;
- Certified Blaster shall maintain effective control of the site until blasting operations are complete;
- Blasting area extends 50 meters(165ft) in all directions from a place in where explosive materials are being prepared, or fixed where an unexploded charge is known or believed to exist.
- Prior to any blasting, notify proper authorities, working crews and area residents within a 1.6 km radius about upcoming blasts;



- Signs shall be posted on all roadways leading to a blasting area in accordance with local rules and regulations;
- Maintain safe distances of the blasting area from other employees, vehicles, equipment, structures, and fire hazard sources as described above; Perform blasts during predetermined times; do not perform blasts during electrical storms or adverse weather conditions;
- During the handling of all explosive components avoid such things as shock, exposure to flame, heat, impact, and friction at all times. Damage to any of these components may affect reliability of product, and create unwanted hazards;
- Smoking, ignition sources (matches, lighter, etc.) are strictly prohibited within 15 meters of any explosives with NO exceptions.
- The blaster is responsible for establishing the limits of the "danger area". "Danger Area " is defined as an area centered on the explosion, in which a person could suffer injury from the effects of the blast,
- Danger area exists at the time of the blast and unlike the blasting area, it has no minimum size due to the amount of explosives used, the technique of blasting and the type of material used;
- During priming, placing and connecting charges, only the blaster and his/her assistants should remain in the area. No other person is allowed entry unless the blaster gives permission and maintains control over that person's activities
- Before detonating a charge, the blaster must clear the "danger area" of all persons
- Placing Guards- the blaster is responsible for placing guards to prevent access to the "danger area". Warning signs, barricades and other obstructions cannot substitute for a guard. Guards shall be posted in a safe location, usually outside the "danger area."
- Guards Duties- only competent personnel (one who has been deemed competent by the blaster) should be assigned to guard a "danger area." Blaster is responsible for instructing every guard in his/her duties and responsibilities and;
- He/she is not to re-enter or permit re-entry to the danger area until; the all clear signal is given; or he/she is personally relieved by the blaster;
- Warning Signals- every person in the vicinity of a blast should understand the warning signals. These warn that a blast is about to be fired;
- Signals shall be distinct from other sounds in the area and audible throughout the danger area, a car or truck horn is unacceptable;
- The standard warning signals are 3 short signals at 1 second intervals before detonating the explosive charge;
- If all charges appear to have fired properly, sound the "All clear" signal. This consists of a single shot of the air horn lasting 5 seconds. Ensure that guards do not leave their posts and that no one re-enters the "danger area" until "all clear" signal is heard;
- During the time between the warning signals and the "all clear" signal, only the blaster responsible and authorized persons may enter blast area. After a blast it may be necessary for the blaster and an assistant to clear all dangers before the "all clear" signal is sounded;
- Implosive sleeves are to be stored only in magazines and daily day boxes that are to standards of NRCAN, ERD and Part 34 of The Workplace Safety and Health Regulation;
- Only those who obtain current provincial licenses to handle and or blast explosives may be in contact with magazines, daily boxes and explosives;
- Daily logging of explosive materials is critical; magazine logs and blaster logs must be completed to keep records of materials used. It is the licensed handlers and blasters obligation to ensure this is never overlooked;



- Vehicles used for transportation of explosives must have a completed service by a certified mechanic and pass inspection;
- Vehicles carrying such dangerous materials must be equipped with fire extinguishers; minimum 5ABC and located within drivers reach;
- A minimum of one person in the vehicle has TDG training
- Placards are required for transporting IMPLO connectors in any quantity of more than 10kg of net explosive quantities (NEQ;)

18.15. Welding and Cutting

When welding or cutting is required and it takes place in locations not designated as welding shops, the responsible contractor shall:

- Provide its Personnel with adequate ventilation for metals that produce toxic fumes or provide respirator masks with a continuous supply of fresh air. The respirator must be worn by the worker when welding or cutting metals that produce toxic fumes;
- Provide suitable screens or other appropriate measures to protect adjacent workers or public from injury due to thermal or light energy, molten slag and sparks;
- Provide a fire extinguisher of the correct fire class for the hazard present and use protective blankets and barriers to prevent fires and personal injury to workers, at the same or other elevations. The fire extinguisher must be on hand for the welder to use when required; and
- Provide fire watch and monitoring of the welding site:
- During and at the end of the work operations, each day and before the welding crew ceases or breaks from work or leaves the welding site;
- Investigate and keep watch using practical methods and/or by using a heat detector gun to ensure no combustion; and
- The safety watch for fires shall be for a minimum of two (2) hours after work ceases in each work area where the hazard is present.
- Provision of heat detection equipment (heat gun) is mandatory and such detection equipment must be located and stored in the vicinity of the work and readily available for use by the Manitoba Hydro and designated Personnel at all times during the work.

18.16. Limits of Approach and Proximity of the Work to High Voltage Lines

Manitoba Hydro's Limits of Approach must be adhered to at all times when working in close proximity to energized lines or equipment. A Job Safety Plan will be developed jointly by Manitoba Hydro and the Voltage representatives prior to the commencement of the work, to address such issues.

When there is a chance of equipment, trees or other material violating the limits of approach, the contractor must first contact the local Manitoba Hydro District Office. The Manitoba Hydro District Office will provide a safety watch where required. The contractor shall allow sufficient time for the coordination of a Safety Watch.



Part of the Work is close to high voltage transmission lines and switching structures. The Contractor shall exercise all due caution and shall be responsible for employing construction methods that afford the maximum degree of safety to all personnel engaged in the Work.

Each contractor on the project shall comply with Manitoba Workplace Safety and Health Regulation 217/2006 Part 25 when Work is completed within three (3) meters of an overhead electrical line or switching structures, or when any part of any contractor's equipment is capable of coming within three (3) meters of an overhead electrical line or switching structures.

When the Work includes exposure to electrical energy, or a potential thereof, the contractor must generate Safe Work Procedures and submit to the Manitoba Hydro for review. Such circumstances will be applicable, for example, for work associated with equipotential bonding and grounding and work in the vicinity of existing distribution, sub-transmission and transmission lines such as when stringing across existing electrical distribution / transmission line infrastructure.

Prior to commencement of the work, the contractor shall ensure that its Safe Work Procedures take into account the Manitoba Hydro's standard safety practices developed to preserve its power system and to protect persons and property from injury or damage.

High Voltage in kV	Absolute Limits of Approach for Qualified Employees		Others unde supervision Employee		Others <u>NOT</u> under direct supervision of Qualified Employee	
Phase to Phase AC Voltage	cm	ft	cm	ft	cm	ft
Over 750 volts to 25 kV	30	1	60	2	300	10
25 – 50 kV	60	2	120	4	300	10
50 – 75 kV	75	2.5	150	5	300	10
75 – 150 kV	105	3.5	240	8	450	15
150 – 300 kV	150	5	300	10	450	15
300 – 450 kV	210	7	450	15	600	20
450–600 kV	300	10	600	20	600	20
DC Voltage (+ or – to ground)						
Ground Electrode	30	1	60	2	300	10
150 and below	150	5	300	10	450	15
Over 150 to 300	210	7	450	15	600	20
Over 300 to 500	270	9	600	20	600	20



19. Appendices Index

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Appendix A- Respectful Workplace Policy



RESPECTFUL Workplace



Voltage is committed to providing a respectful workplace in which all people are treated with respect and dignity. The **safety** and **well-being of everyone** working for or in connection with Voltage is a **priority**, and as such, **workplace harassment**, **discrimination and violence** will **not be tolerated** in any form.

The purpose of our respectful workplace policy is to establish clear standards and expectations for all employees in order to prevent and protect individuals from workplace harassment, discrimination and violence.

Our policy was developed to comply with all applicable laws, including applicable employment standards, occupational health and safety, human rights and privacy laws. To the extent there is an inconsistency between our and applicable laws, the applicable laws shall govern without affecting the remainder of this Policy.

The policy applies to all voltage employees and any other individuals (subcontractors, visitors, clients) attending Voltage's workplace. It applies to behavior in the office, field, at worksite, during business-related travel, at conferences and training sessions, in the course of telephone, email and other communications and at Voltage-sponsored events.

Voltage will ensure that the policy is implemented and followed, and that all employees have the appropriate information and instruction to protect them from workplace harassment, discrimination and violence.

All employees are responsible for conducting themselves in a manner consistent with the Policy. Any Worker determined by Voltage to be responsible for a violation of the Policy may be subject to appropriate disciplinary action with their colleagues, supervisors or team members.



respect (verb) to feel admiration for (someone or something)

to regard (someone or something) as being worthy of admiration because of good qualities.

to act in a way which shows that you are aware of (someone's rights, wishes, etc.)

Please refer to the current edition of Voltage's Health, Safety & Environmental Management System, or contact a member of the HSE Team, for additional information, on this, or any other policy.



Appendix B - Project General Safety Rules



GENERAL WORKPLACE RULES



	Every worker is responsible for their safety, and the protection of the workplace and the environment.
	Follow all instructions for performing job functions, be certain of the outcome of actions before performing, ask a supervisor for clarification of instructions if there is a question.
	Correct or report all unsafe conditions to your immediate supervisor. Report all injuries, no matter how slight, to your supervisor immediately.
	Horseplay, Violence and / or Harassment of any sort is not tolerated. Every worker must report and remain fit for diuty,
15	Help keep everything clean and orderly (specially your immediate work area). Use the correct tools and equipment for the job.
	Use, adjust, operate, and repair only those machines and equipment for which you have been trained and authorized on, that is in good working order.
23	Protective equipment and clothing prescribed by SJPs or SWPS must be used and maintained in good condition.
	There is zero tolerance for tampering with, removal of, or theft of, any safety device or equipment, including GPS equipment, and may be grounds for dismissal.
	Smoking is not permitted in Voltage facilities, vehicles or equipment. All company vehicles must be "backed in" for parking when possible. Seatbelts are to be used all times
	Possession of any firearms or dangerous weapons in not permitted at any Voltage Work- place.
	Voltage Power

Appendix C - High Level Project Hazard Assessment



Hazard Assessment Matrix											
Probable 1:10 Chance of o	ccurrence	L-5		5	10	1	5 2		20		25
Likely 1:50 Chance of C	Occurrence	L-4	Likelihood	4	8	1	2	1	6		20
Possible 1:100 Chance of	occurrence	L-3		3	6		9	1	2		15
Unlikely 1:500 Chance of	Occurrence	L-2		2	4		6		8		10
Highly unlikely 1:1000 Chance o	fOccurrence	L-1		1	2		3	4		5	
Action Required RANGE		Severity									
Risk Rank	Action	FACTOR		S-1	S-2		S	-3	S-4		S-5
20-25	Unacceptable Risk – Cease work until an action plan has been implemented to	Sat	fety	First Aid, immediate treatment	Medical Aid Treatr	ment	-	treatment; rgery	life cha	lisability; anging; ve care	Fatality or total permanent disability
16 - 10	Action plan must be created to try and further reduce risk. Approved by executives	Health		No health effects	Health effects caus modification of wo	•	causing	h effects short term ability.	causing l disability	effects ong term y and / or time.	Health effects permanent debilitating health affects
9-4	Risk is acceptable, with	Environmental Release / Exposure		<1L No Exposure	>1L, <10L		mod	, <100L derate osure		<1000L t exposure	>1000L Extreme exposure
1-3	Risk is considered low and tolerable. No action	Property	/ Revenue	< \$100	>\$100, < \$5	00		, <\$1000	>\$1000,	<\$10,000	>\$10,000



Risk	Risk Score	Barriers	Post Mitigation
Buried Obstructions Aviation/helicopter safety, egress	12 16	 Current Locates Personnel trained in ground disturbance Daylight identified utilities Use hydrovac and hand tools if required to work within the tolerance zone Personnel trained in basic helicopter awareness Safe Job Plans prepared for helicopter actives Personnel trained in confined space entry 	Mitigation 4 8
Confined space entry	5	 Confined Space hazard assessment to classify pace Ventilation of space prior to entry Continual atmospheric monitoring 	1
Fall protection and working at heights	20	 Personnel trained in fall protection Personnel trained in at height rescue Fall protection equipment inspection conducted and documented 	4
Craning, hoisting, rigging, and slinging	20	 Qualified personnel operation cranes Personnel trained in rigging and signal person Lift plans documented prior to lifts Rigging and slings inspected prior to use Rigging selected to have a 5:1 design factor 	4
Open excavations	16	 Tracked equipment set up perpendicular to excavation Spoil piles removed from the edge of the excavation Excavations marked, barricade, covered as required by regulations Standing water removed from excavation if entry is required Excavation shoring as required and defined by soil type Access and egress into excavation as per regulation if required 	3
Highway and Road Crossings	15	 Appropriate provincial and municipal permits obtain prior to crossing Signage in place Trained traffic control personnel in place Safe Job Plan for crossing 	4
Railway Crossings	16	 Appropriate provincial and municipal permits obtain prior to crossing Railway schedule obtained Safe Job Plan for crossing 	3

Risk	Risk Score	Barriers	Post Mitigation
Working alone or in isolation	12	 Work with a partner at all times Working Alone Procedure in place Personnel trained in procedure 	1
Working in proximity to energized lines/apparatus	20	 Personnel trained in electrical awareness Comply with MB WSHR Part 25 Limits of approach reviewed Contact MB Hydro district office Safe Job Plan for work in proximity Grounding and bonding practices utilized 	9
Underground facility hazards	12	 Current Locates Personnel trained in ground disturbance Daylight identified utilities Use hydrovac and hand tools if required to work within the tolerance zone 	4
Working with tools and equipment	9	 Personnel trained as required 	2
Hazards to the public	12	 Public barricaded from the work area Signage posted Work areas cleaned prior to being left unattended Overnight security as required 	4
Explosives	16	 Personnel trained in the use, storage and proper disposal pf explosive material Certified blaster to handle explosives Licensed magazines for storage in accordance with NRCAN requirements Magazine log books maintained Safe Job Plan for using explosives 	4
Implosive connections	16	 Personnel trained in the use, storage and proper disposal of explosive material Personnel certified in High Energy Joining Licensed magazines for storage in accordance with NRCAN requirements Magazine log books maintained Safe Job Plan for using Implosive connectors 	4
Welding and cutting	12	 Personnel to wear respiratory equipment if ventilation is inadequate Screens provided for adjacent works as applicable Fire extinguishers on site Fire watch as required 	3
Hearing conservation and noise control	12	 Baseline and annual hearing assessment conducted for employees Noise monitoring and measuring conducted for Voltage activities 	4

Risk	Risk Score	Barriers	Post Mitigation
		 Hearing protection appropriate to the noise hazard 	
Other work groups	12	 Work coordination meetings conducted to address overlapping work areas 	3
Proximity to high voltage lines	20	 Personnel trained in electrical awareness Comply with MB WSHR Part 25 Limits of approach reviewed Contact MB Hydro district office Safe Job Plan for work in proximity Grounding and bonding practices utilized 	9

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SAFE JOB PLAN

Wooden Dead-End Structure Framing

SJP Number: SJP242034

Costcode(s): 242034

Revision History

Rev: 4 Date: 2019-01-08

By: H.McNeil, J.Avery



Purpose

The Safe Job Plans is the tool Voltage utilizes to outline the general methodology for our construction activities. Safe Job Plans are to be used as a planning and instruction tool for the crews who will execute the activity. At the felid level, they are used in conjunction with applicable Safe Work Practices, and the Tailboard.

Responsibilities

Supervisor

It is the responsibility of the Supervisor to ensure:

- 1. The Safe Job Plan selected for the activity being performed, aligns with the construction methodology, tools and equipment being utilized to execute the task, as well as any jurisdictional requirements.
- 2. All employees know, understand and comply with the Safe Job Plans, and applicable Safe Work Practices applicable to the activity being performed.
- 3. Any changes that have been made to the work procedure must be immediately communicated to all employees, this includes a review of any new hazards.
- 4. Must ensure the crew assigned to perform the activity described in the SJP is suitably trained, with the appropriate level of certification.

Employees

It is the responsibility of the Employee to:

- 1. Review, understand and comply with the Safe Job Plan and applicable Safe Work Practices.
- 2. Participate in the Tailboards, which is used in conjunction with all SJPs, SWPs, to record the crew's discussion and review of the site-specific hazards, and hazard control mitigation plan.
- 3. record the crewâ€[™]s discussion and review of the site-specific hazards, and hazard control mitigation plan.
- 4. If an emergency situation occurs while conducting this activity, or there is an equipment malfunction, shut the equipment off immediately and follow the lock out procedure.



Job Preparation

Documentation	 Tailboard Equipment Inspection / Certifications IFC Drawing Time Sheet QA / QC Sheet Technical Specifications
	Technical Specifications

Certificates and Training	 Prior experience and or supervision Certified Operator Rigging and Hoisting Signal Person
● Additional / Special PPE	Basic PPE
✗ Tools and Equipment	 Adjustable Wrench Angle Grinder Bolt Cutter Cordless Cutters Cutting Tools - Hand Delineators Drill - Electric Extension Cords Hammer Hand Tools Impact Wrench Marker Paint Measuring Tape Shackles Signage - Warning Slings - Nylon Generator with Inverter Skid Steer Telehandler

Job Steps

- 1. Complete the Tailboard and all required documentation prior to commencing work activities.
- 2. The foreman will inspect the site and determine where the structure will be built based on the site layout.
 - Take into consideration the set-up location of the crane when the structure will be erected.

• Avoid assembly near or on the path of travel of the ROW unless absolutely necessary. Any steel that must encroach on a pathway must be marked clearly so that it is visible to traffic.

- 3. Once a build location is determined, the crew can layout one pole cowl per pole.
- 4. The poles can be set into place on the cowls with the zoom boom. Use a peavey bar to face the poles so that the manufacturerÕs stamp is faced directly upwards.
- 5. Pull a 100Õ tape measure down the length of each pole and mark each drilling location on that face of the pole as specified in the structure assembly print.
- 6. Drill each hole with its correctly specified bit size. A spotter should always stand perpendicular to the drill bit to aid the driller in keeping the bit level.
- 7. Roll the pole with the peavey to the next desired drilling face and repeat step 5 and 6 for all additional faces.
- 8. The dead-end and guy wire brackets can now be installed completely.
- 9. Pull out the grounding down leads and staple them on a 45-degree face of the pole. 15Ó staple spacing is a standard, but always refer to the structure specific specifications.
- 10. Reference the staking data for guy wire measurements or calculate the lengths manually and pull out all necessary guy wires and secure them to the pole at their designated locations.

- 11. All hardware can now be completely tightened and marked.
- 12. Verify that each pal nut has been tightened and marked and all the hardware has been bonded in accordance with the structure specifications.
- 13. Lift the poles the zoom boom and replace the pole cowls with blocking.
- 14. Before demobilizing from site, return the environment to its original state.

Hazard Assessment

Job Steps	Job Hazards	Barriers / Controls		
Mobilize to site	Traffic on major roads and rural routes	 Obey all posted speed limits and traffic laws. Maintain a safe distance between vehicles. Where multiple fleet vehicles are involved travel in a convoy. Where applicable with wide loads ensure the use of a pilot vehicle where required. 		
	Driving powered mobile equipment on roads	 Ensure that the overhead beacon is on and functional. Use four-way flashers on the equipment while in transit. Ensure that the power mobile equipment is led by a pilot vehicle. 		
	Poor driving conditions	 Allow adequate time for the trip. Notify supervision prior to leaving and upon arrival to destination. Drive to the conditions. 		
	Wildlife conflict	 Stay alert and focused for wildlife on the road. Assign passengers in the vehicle to watch for wildlife. 		
	Distracted driving	 Pay attention to the road. Do not use cellular devices while driving. Pull safely off of the road if you must use the phone. Keep the volume of the stereo low enough to be able to hear ambient noise. 		
Site access	Stopping vehicles and equipment on roads to open gates and access	• Use flag persons and traffic control where required as per provincial requirements.		
	sites	• Ensure when stopping vehicles and equipment on the side of the road that all beacons and hazard lights are on and functional.		

Job Steps	Job Hazards	Barriers / Controls
	Congestion and R.O.W. limits	 Ensure that all equipment has working radios and applicable frequencies are used. Ensure that all vehicles are parked off of the designated travel path. Ensure that only essential vehicles and equipment are placed inside the designated work area. Use spotters at all times to guide equipment and vehicles into designated work areas.
	Existing line structures	 Ensure that all operators and crew members are aware of overhead lines. Ensure that all operators and crew members are aware of the Limits of Approach. Always use a designated spotter to monitor the proximity of equipment to overhead lines. Ensure a clear line of sight between the equipment operator and spotter at all times. Maintain clear communication between vehicles as required.
Picking load with forked equipment	Exceeding maximum load capacity	 Verify the weight listed on the shipping manifest or estimate the weight of the load and refer to the load chart to. Ensure the weight of the pick does not exceed the manufacturer specified lifting parameters.
	Pushing load off opposite side of trailer	 Prior to picking load ensure that no workers are on the opposite side of the load being picked. Use a spotter at all times to guide forks under the load.
	Load not centered on forks	 Before picking the load ensure that the forks are spread as wide as possible. Use a spotter to guide forks under center point of the load. Slowly lift the load ensuring that it is centered before pulling the load away from the trailer.
Moving material in yards and on R.O.W.	Uneven ground	 Walk the path prior to moving loads ensuring that and unseen obstacles are removed, any sudden dips or drops in the ground are identified, and that the ground is firm. Ensure where practicable that all loads are secured.

Job Steps	Job Hazards	Barriers / Controls	
Suspended loads		 Always carry loads as close to the ground as possible. Ensure that the operator is qualified and competent to perform the task. Ensure that the equipment daily inspections have been completed prior to use. 100% spotter use is required when obstacles are present. Always use taglines to control the load. Never push or pull the load with your hands to avoid pinch and crush point. Inspect all rigging used prior to use. Verify that nylon slings are not frayed, cut, or exceedingly worn. Verify that the slings being used are rated for the weight of the load. Ensure that wire slings are not crimped, do not have more than 3 broken braids, and have their certification tag attached near the eye of the sling. Use softeners where possible. Ensure that all lifting shackle are rated for the liand are free of cracks or visual damage. All shackles must have their rated capacities stamped on them. 	
	Swinging load	 Use a spotter to guide load into place. Maintain eye contact between operator and spotter at all times. Do not swing loads over any vehicles or personnel. 	
	Placing loads on dunnage	 Ensure that the dunnage has been laid out prior to the load being set down. Never place your body under a suspended load to set or adjust dunnage. Ensure that the dunnage is placed on level ground and is free of ice or mud to prevent the load from shifting after it is set down. 	
Place wooden pole cowls	Poles cowl being caught by high winds	• Ensure that when carrying wooden pole cowls that the hollow end is down wind to prevent cowls from being blown out of the workers hands.	
	Setting poles cowls on uneven surfaces causing pole cowls to tip when loaded	 Pre-assess the work area prior to placing pole cowls. If necessary level the ground surface where pole cowl will be placed. 	

Job Steps	Job Hazards	Barriers / Controls		
Place wooden poles on pole cowls with	Poles shifting on forks	• Ensure that the pole is centered on the forks.		
zoom boom	Poles sliding off of the forks	 Ensure that the pole is completely on the forks resting against the fork cradle. While in transport ensure that the forks are tilted up to prevent the pole from sliding off of the forks. Use a spotter to guide the forks fully and centered on the forks. 		
	Pole not seated correctly in the cowl causing the pole to fall off	• Ground personnel shall ensure that the pole cowl is centered to the pole prior to signaling the operator to set the pole down.		
Rotating the pole on the cowl with a peavey bar	Peavey bar not biting into the pole causing the peavey bar to slip	 Ensure that the peavey bar is driven firmly into the pole prior to attempting to rotate. Maintain good center of balance and good footing while rotating poles with a peavey bar to prevent slips,trips,and falls. Never pull the peavey bar towards your body always push away from yourself. 		
Pre-drilling hardware holes into the wooden pole	Over exertion from pushing the drill bit into the wood	• Never force the drill bit. Let the drill do the work for you.		
	Drills shorting out from wear and tear or abuse	 Never carry the drill by its cord. Inspect the drill and bit prior to use to ensure the cord is not frayed or damaged and the bit is straight and sharp if damaged follow lockout procedure. 		
	Environmental release of fluids from portable generators	 Always set the gas powered generators inside a spill tray while in use. Inspect generators prior to use. Have emergency spill kits readily available onsite and report any spills to your foreman immediately. 		
Pulling out and stapling ground leads	Falling backwards while pulling ground leads	 Never walk backwards while pulling out the ground leads. 		
	Tripping over worksite materials from other workers	• While pulling out ground leads ensure that all other workers are out of the path of the ground lead and that all excess tools and materials are picked up before pulling out the leads.		

Job Steps	Job Hazards	Barriers / Controls		
	Ground lead coiling back after being cut	• While cutting the ground lead length from the spool ensure that the tail is secured before cutting to prevent lead from coiling back and striking workers.		
	Hitting hands/fingers with hammer while stapling ground leads	 Avoid wearing bulky gloves while installing staples to ensure good finger dexterity. After staple is tacked into place keep hands free of the striking zone of the hammer. 		
Place standalone overhead assembly with a zoom boom	Standalone overhead assembly shifting of the forks	 Ensure that when you pick the standalone overhead assembly that it is centered on the forks and resting against the fork cradle. Tilt the forks back slightly to ensure that the standalone overhead assembly cannot slide forward off of the forks. 		
	Workers hands being pinched while lining up hardware holes	 Never place your hands underneath a suspended load. 		
Place upper and lower cross arms	Back injuries caused from lifting crossarms into support bracket	 Use proper lifting techniques while placing crossarm onto mounting bracket. Where required use the buddy system to lift/support crossarms. Always lift with your legs not your back. 		
Adjust pole placement with zoom boom	Knocking poles off of the cowls	 Use a spotter at all times to slowly guide the forks under the suspended poles. When pushing poles with a zoom boom ensure that the operator gently makes contact between the forks and the butt of the pole. Ensure that all workers are clear of the pole prior to moving it. 		
Tighten all hardware	Awkward body positioning to reach bolts causing muscular strains/injuries	 Always use a second worker to back the bolts if you cannot comfortably reach the nut. 		

Job Steps	Job Hazards	Barriers / Controls	
	Torque wrenches/wrenches slipping into workers body	 Keep your body out of the line of fire of the torque wrench/wrench while tightening bolts. Inspect all wrenches prior to use. 	
	Ambient noise levels from multiple workers using impact guns	• Ensure that when impact guns are being used that all workers wear adequate hearing protection.	
	Pinching fingers between loose bolts and hardware	 Always avoid the bite zone and wear adequate gloves. 	
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Saskatchewan OHSR	 Part III - General Duties Part V - First Aid Part VII - Personal Protective Equipment Part VIII - Noise Control and Hearing Conservation Part IX - Safeguards, Storage, Warning Signs and Signals Part X - Machine Safety Part XI - Powered Mobile Equipment Part XIV - Rigging Part XXX - Additional Protection for Electrical Workers
Ontario OHSR	 Noise Occupational Health And Safety Awareness And Training Construction Projects Workplace Hazardous Materials Information System Roll-Over Protective Structures



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TRAINING

- Certified training required 8hr (OSSA standard)
- No person shall work at heights over 6 ft without having taking Fall Protection Training (unless on a ladder, then ladder safety training is required)
- At least 2 workers must be present when a restraint or arrest system is used

PURPOSE

This section is provided as guidelines for Voltage managers, supervisors, and other employees who are involved with worksite operations 6 feet or more above ground level.

Falls are preventable through use of appropriate employee training, use of appropriate fall protection devices, and proper supervision to prevent the likelihood of employee falls when working at elevated worksites as outlined in the Voltage Fall Protection Program.

METHOD AND STRATEGY

Supervisors and managers are responsible for training and insuring the use of safe fall protection work practices by employees working 8 feet or more above ground level

- Increase employee awareness and recognition of potential fall hazards at various departments, procedures, equipment and worksites (e.g. exposed elevated worksites with unprotected perimeters, elevated areas without guardrails or other barriers).
- Implement appropriate measures to eliminate or control potential fall hazards (e.g. effective planning and use of engineering controls, such as guardrails, scaffolds and platform barriers) to provide protection from falls and establish employee working levels at safe, desired heights.
- As a last option, implement appropriate employee training to properly select and use fall protection equipment to avoid the likelihood of falls from elevated worksites.

HEALTH AND SAFETY HAZARDS

- Working alone.
- Energy hazards; electricity, gravity (fall from height and struck by falling object).
- Materials handling hazards; lifting, lowering.
- Work practice hazards; following established safe work practices and procedures, and general housekeeping practices.



SAFE WORK PRACTICES

Fall protection equipment must be inspected by a "competent", trained individual prior to each use.

Employee Fall Protection Safety Practices

- All equipment MUST be inspected and documented pre-use
- Fall protection equipment must comply with CSA and ANSI standards.
- Ensure that barricades, warning tape and signs identify restricted areas
- Personal fall arrest systems are designed to stop a person in a fall.
- Equipment selected will depend on specific job tasks and working environment.
- Basic fall arrest systems consist of an anchorage point, connectors, a full body harness, and a lanyard. Additional features include a deceleration device or a lifeline.
- Defective equipment must be immediately removed from service and tagged or marked as unusable.
- Do not use defective equipment or components.
- Do not use a harness or lanyard that has arrested a fallen worker.
- Do not attach two lanyards together to make them longer.
- Do not use out of date equipment (synthetics) 10 years of as per manufacturer recommendations

Employee Fall Arrest System Equipment Safety Features

Full body Harness - Using Dorsal "D" Ring

Connector

- Most common type of connecting device to a body harness is a lanyard. Lanyards join the full body harness to a secure anchorage point.
- Type of connecting device used depends on the potential fall distance, work being performed and the work environment.
- Additional connecting devices include a shock-absorbing lanyard, self-retracting lifeline, rope grabs and fall limiters.

Lanyard

- Maximum length must not permit a fall greater than 6 feet.
- Keep your free fall distance to a minimum.
- Maximum length must not allow the employee to come in contact with lower level hazards.
- Lanyards are attached to an anchorage point by a means that will not reduce its strength, using a locking snap-hook and attached OVERHEAD.
- Lanyards must have a minimum breaking strength of 5000 pounds.
- As a reminder, never tie a know anywhere in a lanyard; it could reduce it's strength by more than 80 percent or more!

Anchorage

- A secure point of attachment for a personal fall arrest system.
- Must be capable of supporting at least 5000 pounds per attached employee for arrest and 400 pounds for restraint with a 3 foot proximity to the edge.
- Must be reachable for attachment without exposure to nearby hazards.
- Must be located (positioned) to prevent the worker from contacting a lower level hazard in the event of a fall.
- Anchorage height must allow the fall arrest system to reduce free fall to the shortest possible distance, not to exceed 4 feet.
- Anchorage height must not allow the employee to contact any lower level hazards during a fall.

Minimum Distance from Electrical Powerlines

Unless special measures and procedures are in place, scaffolds must be protected from making contact with energized conductors and kept safe distances at least as far as required by the following table:

Table #2

Minimum Distances from Live Power Lines			
Nominal Phase-to-Phase Voltage	Minimum Distance		
750 or more volts, but not more than 150 000v	3m		
More than 150 000V, but no more than			
250 000V	4.5m		
More than 250 000V	6m		

Minimum Distances from Live Power Lines

BASIC SAFE WORK PROCEDURES

Identification of Fall Hazards

Worker must determine if he/she will be exposed to the hazard of falling from a work area that is:

- 1.8 meters (6 ft) or more above the nearest safe surface or water;
- Above a surface or thing that could cause injury to the worker if he/she were to fall on the surface or thing; or
- Above an open tank, pit or vat containing hazardous materials.

Hazard Assessment

- If a worker is exposed to any of the above noted fall hazards, then adequate work platforms or staging must be provided where it is practical to do so, otherwise at least one of the following control measures must be implemented.
- Guardrail is constructed or install.
- Worker is provided with a fall restraint or arrest system.

- Temporary flooring is constructed or installed.
- Worker is provided with another means of fall protection.
- Assessment of rescue plan (can we get him/her down)

Guardrail

- Guardrails must be installed where an open-sided surface is over 1.8 meters (6 feet) above the floor or ground; a stairway ends in direct proximity to dangerous traffic or other hazards and on walkways over open tanks containing harmful substances or over open tanks.
- Ensure the guardrails are secured so they cannot be moved in any direction. Must be able to withstand 200lbs of horizontal force and 42 inches in height with a mid-rail with the same expectation
- If a portion of a guardrail has to be temporarily removed, then the exposed workers must be protected by another fall protection system.

Fall Arrest System

- Worker must determine and assemble the necessary components.
- Worker must calculate the total fall distance and ensure that an adequate clearance distance is available.
- Worker must ensure that the harness is adjusted to fit properly and is rated for his/her weight.
- A full body harness and appropriate lanyard must be secured to an anchorage point, lifeline or static line.
- Only one worker is permitted to be attached to a lifeline at any one time.
- A lifeline must be provided with softeners at all sharp edges or corners.
- A shock absorber should be used to reduce and control the maximum arrest force that occurs in a fall.
- A self-retracting device can only be used as a form of fall arrest. Worker must field test the device before using it.

Temporary Flooring (scaffolding)

Temporary flooring must be constructed or installed at each floor level where work is in progress, extend over the whole area except for openings necessary for carrying out work and be able to withstand 4 times the maximum load likely to be imposed on it

Other Means of Fall Protection

- Other means of fall protection can include a harness, net, rope, body belt, structure or other equipment, device or means.
- A fall restraint system must be arranged so a worker cannot fall lower than the surface on which the worker was supported on.
- A control zone may be used on level and low-sloped work surfaces. The width of a control zone must be at least 1.8 metres (6 feet).

Debris Net

A debris net or other means of protection must be installed or provided if a worker below an

elevated work area is exposed to the hazard of falling objects or debris.

Inspection

A fall arrest system must be inspected before each work shift. Any defects must be immediately reported. Defective components are not to be used. Follow the manufacturer's recommendations for inspections.

Maintenance and Storage

- Wipe off all surface dirt with a sponge and a solution of water and mild soap. Rinse the webbing in clean water, dry with a cloth and hang to dry.
- Store equipment in a clean, dry area that is free of fumes, excessive heat and direct sunlight.

Emergency Response

- The goal is to quickly and safely transport the worker to the ground. (Within 15 minutes)
- Where possible, the fallen worker can self-rescue.
- Call 911, the local fire department, emergency response services and respective Department supervisor.
- Advise the suspended worker to lift his/her knees into a sitting position or pump the legs
- Suspension relief straps or a rope with a loop should be used to take weight off the harness to relieve stress on the worker's body.
- Use suitable equipment that is available to safely rescue the worker.
- First aid attendant should administer on-site first aid as required.
- The fallen worker should seek appropriate medical attention.

Appendix E- Arc Flash SWP





SAFE WORK PRACTICE

Arc Flash Protection

- Company Safety orientation
- Electrical Safety Training

PURPOSE

The objective of this policy is to reduce the risk of injury or fatality and to provide for employee safety relative to electrical hazards. Identifies safe work practice for working on or near exposed electrical conductors or circuit parts in workplaces.

TOOLS AND EQUIPMENT

- Cover ups (certified within 3 years)
- Insulated Rubber Gloves (certified within 6 Months).
- Appropriate FR Clothing
- Hot Sticks (certified within 1 year).

RESPONSIBILITIES

This practice shall be implemented by the employees. The employer provides this practice and the training of the employees.

METHOD

Establishing an Electrical Safe work Condition:

An electrical safe work condition shall be achieved and verified by the following process:

- Determine all possible sources of electrical supply to the specific equipment. Check applicable up-to-date drawings, diagrams, and identification tags.
- After properly interrupting the load current, open the disconnecting device(s) for each source.
- Wherever possible, visually verify that all blades of the disconnecting are fully open or that drawout-type circuit breakers are withdrawn to the fully disconnected position.
- Apply lockout/tagout devices.
- Using an adequately rated voltage detector, test each phase conductor or circuit part both phase-to-phase and phase-to-ground. Before and after each test, determine that the voltage detector is operating satisfactorily.
- Where there is a possibility of induced voltage or stored electrical energy, ground the phase conductors or circuit parts before touching them. If it is a possibility that the

conductors or circuit parts could contact other exposed energized conductors or circuit parts, apply ground-connecting devices rated for the available fault duty.

- Working on or near de-energized Electrical Conductors or Circuit Parts that have Lockout/Tagout/Devices applied.
- All electrical circuit conductors and circuit parts shall be considered energized until the source(s) of energy is (are) removed and grounded, at which time they shall be considered de-energized. All electrical circuit conductors and circuit parts shall not be considered in electrically safe condition until all sources of energy are removed, the disconnecting means is under lockout/tagout, the absence of voltage is verified by an approved voltage testing device, and where exposure to energized facilities exists, are temporary grounded.
- Employee Involvement. Each person who could be exposed directly or indirectly to a source of electrical energy shall be involved in the Lockout/Tagout process.

Note: An example of direct exposure is the qualified electrician who works on the motor starter control, the power circuits or the motor. An example of indirect exposure is the person who works on the coupling between the motor and compressor.

• Control of energy. All sources of electrical energy shall be controlled in such a way to minimize employee exposure to electrical hazards.

Working on or Near Live Parts

 Live parts to which employee might be exposed to shall be put into an electrically safe work condition before an employee works on or near them, unless the employer can demonstrate that de-energizing introduces additional or increased hazards or is not freezable due to equipment design or operational limitations.

Approach Boundaries to Live Parts

- Shock Hazard Analysis. A shock hazard analysis shall determine the voltage to which personnel will be exposed, boundary requirements, and the personal protective equipment necessary in order to minimize the possibility of electrical shock to personnel.
- Shock Protection Boundaries. The shock protection boundaries identified as Limited, Restricted, and Prohibited Approach Boundaries are applicable to the situation in which approaching personnel are exposed to live parts. See table on Page 4 table for the distances associated with various system voltages.

Note: In certain instances, the Flash Protection might be a greater distance from the exposed live parts than the Limited Approach Boundary.

Arc Flash Hazard Analysis

An arc flash hazard analysis shall determine the Arc Flash Protection Boundary and the personal protective equipment that people within the Arc Flash Protection Boundary shall use. The arc flash hazard analysis shall be updated when a major modification or renovation takes place. It shall be reviewed periodically, not to exceed five years, to account for changes in the electrical distribution system that could affect the results of the arc flash hazard analysis. The arc flash hazard analysis shall take into consideration the design of the overcurrent protective device and its opening time, including its condition of maintenance.

Exception: An arc flash hazard analysis shall not be required where all of the following conditions exist:

- The circuit is rated 240 volts or less.
- The circuit is supplied by one transformer.

• The transformer supplying the circuit is rated less than 125 kVA.

Note: Improper or inadequate maintenance can result in increased opening time of the overcurrent protective device, thus increasing the incident energy.

Arc Flash Protection Boundary.

- Voltage Levels Between 50 Volts and 600 Volts. In those cases where detailed arc flash hazard analysis calculations are not performed for systems that are between 50 volts and 600 volts, the Arc Flash Protection Boundary shall be 4.0 ft, based on the product of clearing time of 2 cycles (0.033 sec) and the available bolted fault current of 50 kA or any combination not exceeding 100 kA cycles(1667 ampere seconds). When the product of clearing times and bolted fault current exceeds 100 kA cycles, the Arc Flash Protection Boundary shall be calculated.
- Voltage Levels Above 600 Volts. At voltage levels above 600 volts, the Arc Flash Protection Boundary shall be the distance at which the incident energy equals 5 J/cm2 (1.2 cal/cm2). For situations where fault-clearing time is equal to or less than 0.1 sec, the Arc Flash Protection Boundary shall be the distance at which the incident energy level equals 6.24 J/cm2 (1.5 cal/cm2). For clearing times and bolted fault currents other than 300kA cycles, or under engineering supervision, the Flash Protection Boundary shall alternatively be permitted to be calculated in accordance with the following general Formula:

Flash Protection Boundary for systems that are 600 volts or less, the Flash Protection Boundary shall be 4.0ft, based on the product of clearing times of 6 cycles (0.1 Second) and the available bolted fault current of 50 KA or any combination not exceeding 300 kA cycles (5000 ampere seconds). For clearing times and bolted fault currents other than 300 kA cycles, or under engineering supervision, the Flash Protection Boundary shall alternatively be permitted to be calculated in accordance with the following general formula:

 $Dc = [2.65 \times MVAbf \times t]1/2$ or $Dc = [53 \times MVA \times t]1/2$

Where:

Dc = distance in feet from arc source for a second –degree burn

MVAbf = bolted fault capacity available at point involved (in mega volt-amps)

MVA = capacity rating of transformer (mega volt-amps). For transformers with MVA ratings below 0.75 MVA, multiply the transformer MVA rating by 1.25

t = Time of arc exposure (in seconds)

APPROACH BOUNDARIES TO LIVE PARTS FOR SHOCK PROTECTION				
Nominal System Voltage Range, Phase to Phase	Exposed Movable Conductor(Unqualified worker)	Exposed Fixed Circuit Part	Restricted Approach Boundary; Includes Inadvertent Movement Adder (qualified worker)	Prohibited Approach Boundary
Less than 50	Not specified	Not Specified	Not specified	Not Specified
50 to 300	3.05m (10ft 0in.)	1.07m (3ft 6in.)	Avoid Contact	Avoid Contact
301 to 750	3.05m (10ft 0in.)	1.07m (3ft 6in.)	304.8mm (1ft 0in.)	25.4mm (0ft 1in.)
751 to 15kV	3.05m (10ft 0in.)	1.53m (5ft 0in.)	660.4mm (2ft 2in.)	177.8mm (0ft 7in.)
15.1 kV to 36 kV	3.05m (10ft 0in.)	1.83m (6ft 0in.)	787.4mm (2ft 7in.)	254 mm (0ft 10in.)
36.1 kV to 46 kV	5m (10ft 0in.)	2.44m (8ft. 0in.)	838.2mm (2ft 9in.)	431.8mm (1ft 5in.)
46.1 kV to 72.5 kV	3.05m (10ft 0in.)	2.44m (8ft 0in.)	965.2mm (3ft 2in.)	635mm (2ft 1in.)
72.6 kV to 121 kV	3.25m (10ft 8in.)	2.44m (8ft 0in.)	991 mm (3ft 3in.)	812.8mm (2ft 8in.)
138 kV to 145 kV	3.36 m (11ft 0in.)	3.05m (10ft 0in.)	1.093m (3ft 7in.)	939.8mm (3ft 1in)
161 kV to 169 kV	3.56m (11ft 8in)	3.65m (11ft 8in.)	1.22m (4ft 0in.)	1.07m (3ft 6in.)
230 kV to 242 kV	3.97m (13ft 0in.)	3.97m (13ft Oin.)	1.6m (5ft 3in.)	1.45m (4ft. 9in.)
345 kV to 362 kV	4.68m (15ft 4in)	4.68m (15ft 4in.)	2.59m (8ft 6in.)	2.44m (8ft 0in.)
500 kV to 550 kV	5.8m (19ft 0in.)	5.8m (19ft 0in.)	4.43m (11ft 3in.)	3.28m (10ft 9in.)
756kV to 800 kV	7.24m (23ft 9in.)	7.24m (23ft 9in.)	4.55m (14ft 11in)	4.4m (14ft 5in.)

APPROACH BOUNDARIES TO LIVE PARTS FOR SHOCK PROTECTION

Incident Energy Analysis.

The incident energy analysis shall determine, and the employer shall document, the incident energy exposure of the worker (in calories per square centimeter). The incident energy exposure level shall be based on the working distance of the employee's face and chest areas from a prospective arc source for the specific task to be performed. Arc-Rated FR clothing and other personal protective equipment (PPE) shall be used by the employee based on the incident energy exposure associated with the specific task. Recognizing that incident energy increases as the distance from the arc flash decreases, additional PPE shall be used for any parts of the body that are closer than the distance at which the incident energy was determined.

FR Clothing

Studies into industrial flash fires and explosions resulting from electrical arc have shown the most severe burns are those areas of skin covered by non-Arc Rated or non-Flame-Resistant clothing and not uncovered skin. In many cases bare skin will survive a direct arc or flash fire exposure but this same arc or flash fire will ignite or melt non-rated clothing.

An electrical arc is relatively short in duration but will produce temperatures as high as 20,000 degrees C (35,000 F)

Requirements

The table below identifies tasks, the associated hazard with performing the task, and the FR clothing class which is required for the task.

If you are going to perform a task that is not on this list and is a risk for an electrical arc, you must get an arc flash calculation completed before proceeding.

FR Clothing Requirement Task / Hazard Assessment			
Task/Activity	Hazard	Risk or Impact	Clothing Class
Metal clad switch gear operation. Metering instrument ct/pt cubicles & padmount transformer secondaries	Electric arc - thermal burns Explosion - hearing loss, lacerations from metal fragments.	High	4
138/240/500 kV bare hand live line maintenance	Electric arc - thermal burns Electric contact - electrical burns	High	3
4/14.4/25 kV rubber glove live line maintenance.	Electric arc - thermal burns Electric contact - electrical burns	High	3
Substation 69/138/240/500 kV operation. (switching)	Electric arc - thermal burns Electric contact - electrical burns	High	3
Substation 69/138/240/500 maintenance. (de- energized) Metal clad switch gear maintenance.	Electric arc - thermal burns Electric contact - electrical burns	Medium	2
69/138/240 kV hot stick live line maintenance.	Electric arc - thermal burns Electric contact - electrical burns	Medium	2
14.4/25 kV hot stick live line maintenance.	Electric arc - thermal burns Electric contact - electrical burns	Medium	2
Construction, operation & maintenance on customer property where hydrocarbon hazards exist.	Flash fire or explosion - thermal burns	Medium	2
Operation & maintenance in metering instrument enclosures. (padmount/indoor) Installation & removal of instrument meters.	Flash fire or explosion - thermal burns	Medium	2
Construction, operation & maintenance on customer property where hydrocarbon hazards exist.	Flash fire or explosion - thermal burns	Medium	2
Operation & maintenance in metering instrument enclosures. (padmount/indoor) Installation & removal of instrument meters.	Flash fire or explosion - thermal burns	Medium	2
Application of trip grounds and equipotential grounds and bonds on 14.4/25/138/240 kV circuits.	Electric arc - thermal burns Electric contact - electrical burns	Low	1
Installation/removal of 120/240 V self-contained meters.	Flash fire or explosion - thermal burns	Low	1
Installation/removal of 277V to 600V self-contained meters.	Flash fire or explosion - thermal burns	Low	1
Switching on circuits 14.4/25 kV and below.	Electric arc - thermal burns	Low	1
When working around energized conductors (e.g. while on towers, entry/exit from helicopter on towers, on poles, work from a bucket)	Electric arc - thermal burns Electric contact - electrical burns	Low	1
Equipment operators working around energized conductors (e.g. crane operators)	Electric arc - thermal burns Electric contact - electrical burns	Low	1

	Weight classification standard for FR clothing				
Clothing Class No.	Proposed Range Of Calculated Energy* (cal/cm2)	Clothing Guideline Description (example of layers)	Total Weight (oz/yd2)	Estimated Incident Energy For Onset Of Second Degree Burn(cal/cm2)	
0	0 - 2	Untreated cotton	4.5 - 7	N/a	
1	2 - 5	One FR layer (1)	4.5 - 8	5 - 7	
2	5 - 8	One FR layer plus cotton shirt under (2)	9 - 12	8 - 18	
3	8 - 25	One FR layer plus FR coverall plus cotton shirt under (3)	16 - 20	25 - 50	
4	25 - 40	One FR layer plus FR switching coat plus cotton shirt (4)	24 - 30	40 > 60	
* Range of in	cident energy to mi	nimize a second degree burn to skin covered	by the clothing sys	item.	

Appendix F – Emergency Response Plan



Voltage Power

Emergency Response Plan





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1. Emergency Management Process

This **Emergency Response Plan** (ERP) provides information and direction with respect to the management of, and preparedness for emergency situations.

An **Emergency** is a situation that poses an immediate risk to health, life, property, or environment. This would include but not be limited to fire, environmental spills, leakage of toxic and/or flammable gases, personal injury, high angle rescue, cave in, or man down (unconscious) situations.

Emergency *prevention* is the first line of defense and the cornerstone to an effective emergency response plan. By employing proper engineering, design, and constructability studies, as well as utilizing Safe Work Practices and Safe Job Plans, emergency events typical to construction activities can be avoided.

In the unlikely event that an emergency occurs within one of our project work areas, trained personnel from the project workforce will work with external resources support (police, ambulance, fire department, etc.) to serve as an Emergency Response Team (ERT), equipped to respond and assist as required.

1.1 Purpose

The purpose of this Emergency Response Plan is to outline the emergency management process for predictable emergencies. The plan will provide guidelines for the following:

- Preparedness for Emergency Response;
- Notification and Communication Protocols
- Response Plans to various predictable emergencies; and
- Post-emergency actions.





2. Emergency Preparedness

2.1 Communication of Emergency Response Plans

All personnel will become familiar with the Emergency Response Plan at the project orientation.

Whenever updates are made to the Emergency Response Plan, the revised plan will be distributed to the project team and communicated at the Weekly HSE Meeting.

On a daily basis, as part of the daily tailboard meetings, each crew will document their review of the relevant emergency response procedures.

2.2 Emergency Services Contact Preparation

It is important to establish working relationships with officials when assistance is required. In preparation for the start of the project, the project safety representative will contact local emergency agencies and officials to ascertain accurate information regarding what services are available and what the most effective contact methods and protocols to follow are in the event of an emergency.

2.3 Emergency Equipment / Information

According to the scope of work and environmental conditions, emergency response equipment will be accessible on site. This equipment will be inspected as outlined in the inspection and maintenance policy, as well as whenever deployed to a new project, or new project location.

At a minimum, every worksite location will have the following equipment:

- Fire Extinguisher
- First Aid Kit
- Spill Kit
- Communication Device (Cell Phone, Two-Way Radio, Sat Phone)
- Access to Safety Data Sheets* (Foremen iPad)
- Emergency Roadside Kit* (hazard triangles, booster cables, recovery strap, and shackles) Voltage Trucks
- *Denotes standard Voltage Power equipment subcontractors may not carry the same equipment.

Safety Data Sheets (SDS), previously known as *Material Safety Data Sheets (MSDS),* are required for all materials present on the worksite that are deemed hazardous under the *Hazardous Products Act.*

SDS's are readily available to all project workers through the Voltage Power SDS website, <u>www.VoltagePower.MSDSBinders.com</u>.



Additional emergency equipment specific to the scope of work, season, risk etc. will be made available as required. The location of this equipment will be identified to the workforce at HSE Meetings and during the tailboard session.

This emergency equipment may include:

- Automatic External Deliberator (AED)
- 55 gallon-Universal Drum Spill Kits
- Working at Heights Rescue Kit
- Advanced Fire Fighting Equipment (pumps, water packs, shovels etc.,)
- Mobile Treatment Center / First Aid Room / Clinic

2.4 Training

On each project, and site / crew location within project, the Supervisor will ensure that an adequate number of workers, trained and certified in first aid are available. The required number of first trained will be defined by the jurisdictional Occupational Health and Safety Regulations.

See Appendix A – Provincial Requirements.

In general, all *project personnel* are expected to be familiarized with all Emergency Response Procedures as applicable to their scope of work. As well, they are to be competent in the use of the emergency equipment, and capable of assisting in the response to emergencies in conjunction with the rescue team. The training of the specific Emergency Response Procedures may be done in a classroom setting, or on the field. This training will be documented as an Emergency Response Plan Drill.

Formal training and re-training will be conducted with the appropriate workers for more specialized Emergency Response Procedures, i.e. Working a Heights Rescue.

2.5 Emergency Response Drills

Ensuring the adequacy of Emergency Response Procedures for the tasks, locations, seasons, etc. is essential for effective emergency management. Testing and training the workforce in Emergency Response procedures can be achieved effectively by conducting Emergency Response Plan Drills.

2.5.1 **Table Talk Drills**

Table Talk Drills provide the opportunity to assess and confirm the equipment and resources available, as well as the adequacy of the Emergency Response Plan and Procedures. Table Talk Drills do not involve physical demonstration or simulation of the emergency response activities, but through discussion they may help identify local risks or hazards that had not previously been considered in the Emergency Response Plan.

At the onset of every project – and as there are major advancements or changes in the activities or the scope of the project - the project Construction Manager, Safety Coordinator,



and Environmental Coordinator will conduct a Table Talk Drill. Additional project leadership may be requested to participate in the Table Talk Drill as the project scope dictates

2.5.2 Field Practice Drills

Specific, crew or function level Field Practice Drills will be conducted to confirm comprehension of, educate on, and test the applicable Emergency Response Procedures.

Emergency Response Drills will be led by the foreman and conducted once per shift (one per month), rotating through the various Emergency Response Procedures.

The Field Practice Drill will range from ten minutes in duration to one hour, depending on the procedure and the size of crew.

All Table Talk Drills, and Field Practice Drills are to be recorded on the Emergency Response Plan Drill Form – PRONTO Form.

2.6 Emergency Response Plan Review

As the project progresses, at a minimum of a quarterly basis, the responsible project Safety and Environmental Coordinators shall review the Emergency Response Plan.

Following an Emergency Response Plan Drill, or actual activation of the Emergency Response Plan, and as part of the Incident Management Process, the Emergency Response will be reviewed.

Any lessons learned or opportunities for improvement with respect to Emergency Response will be incorporated into the plan.



3. Activating Emergency Response Plan

When an emergency occurs, it is essential to activate the Emergency Response Plan and notify other crews in the area quickly and effectively.

Upon detection of an emergency one of two notifications will be used:

3.1 Non-Injury Emergencies

- 1. One 10-Second Long Blast Over the Radio Use Truck Horn, Whistle, or Air Horn
- 2. Announcement of the nature of the incident.
- 3. Provide one of the following Instruction
 - Order to Evacuate;
 - Request for Support;
 - Stand-by for further instruction;
- 4. Designate one person from the emergency scene to remain beside the radio.

3.2 Injury Incidents

- 1. Three Short blasts on the radio, followed by "Medic, Medic, Medic";
- 2. Identify yourself and your location;
- 3. Designate one person from the emergency scene to remain beside the radio;
- 4. Begin following the Serious Injury Procedure.

3.3 Upon Hearing Emergency Notification Call

- 1. Maintain Radio Silence;
- 2. Shut down work;
- 3. Ready yourself to respond and act as part of the emergency response team;
- 4. Stand by for further instruction;
- 5. Resume work and Radio communication after the "All Clear" has been given.

3.4 Incident Scene Management

Following an incident or emergency scene, the following steps shall be taken:

• Ensure the safety of the people at the scene of the incident – this is of primary importance.



- Shut down and de-energize all equipment, and as much as possible eliminate any immediate hazards to prevent further incident.
- If there are injuries, provide first aid and get the worker the medical attention they require.
- Secure the scene to preserve any evidence that may be helpful in determining the cause of the incident. As possible, restrict access to the incident scene.
- Emergency Responders, and regulatory bodies may require access to provide response or investigation. Accommodate this access as required.
- Immediate verbal reporting to the respective Emergency Response team, onsite Supervisor or Manager, and respective Safety / Environmental coordinator should be done without delay.



4. Notification and Reporting

4.1 Incident Notification

Initial Notification will generally be conducted verbally or by text message and should be completed as soon as possible following the occurrence, followed by written notification as soon as possible but within two hours. purpose of this written notification is to provide accurate, basic information of the incident. This basic information should include:

- Who, What, Where, & When
- Direct Supervisors Name
- If there was an injury, did worker go to hospital?
- Details of regulatory reporting required
- Status of the worksite, i.e. "work has been stopped," or "clean up in progress"
- Cause If known
- Immediate corrective actions that have been implemented.

4.2 External Regulatory Reporting

The Occupational Health and Safety Regulatory body (OHS) in each Canadian jurisdiction have defined Serious Incidents, Critical Injury, or Dangerous Occurrence that require immediate reporting.

The Canadian Environmental Protection Act, 1999 requires that, when an environmental spill or release occurs for any of the substances that meets or exceeds a reportable quantity, shall, as soon as possible, verbally notify an enforcement officer.

Refer to Appendix A –Regulatory Reporting Requirements for the specific detail on reportable incidents and reportable quantities

4.3 Communication with Media

All media/public inquiries on project where Voltage Power is the Prime Contractor / Constructor; are to be handled by the Voltage Power Project Manager or their designate, in conjunction with the Voltage Power's President and the Client's Communications Manager.

Project employees, subcontractor personnel, or their visitors are not to provide any project or incident information to media representatives or members of the public.



5. Post-Emergency Actions

5.1 Investigations & Reporting

A systematic incident management process has been established to ensure that all incidents – be they Near-Miss, Worker Injury, Property Damage, Environmental, Respectful Workplace Violation, or Employee Safety Concerns are managed properly.

All incidents shall be classified, assessed, investigated, corrected, reported, corrected with lessons learned shared as appropriate following the Voltage Power SMS - Incident Management Protocol.

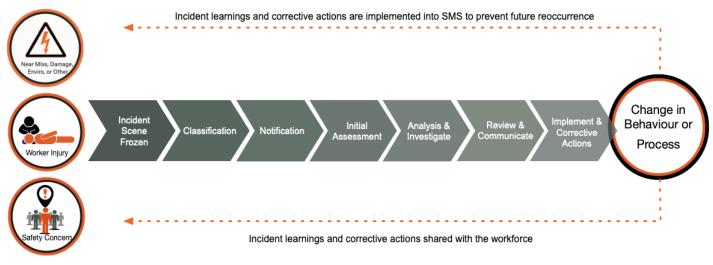


Figure 1 - Incident Management Process

5.2 Critical Incident ERP Performance Review

Within **30 days** of an incident, a team made up of Workers, Supervisors, Emergency Responders, and Management will conduct a *broad review* of all steps taken in response to the incident, including:

- Emergency procedures
- Critical incident debriefing
- Accident investigation
- Corrective Actions
- Claims management

The purpose of this review is to assess the effectiveness of our ERP procedures, to evaluate how effectively the incident was responded to, and to suggest other corrective actions that could be put in place. **This general review does not replace an incident investigation.**



5.3 Post Critical Incident Support

Critical incidents include traumatic events, such as a workplace death or serious injury, or incidents with the potential for serious injury. Because of their serious nature, these incidents often bring unique challenges and stressors to the workplace.

Role of the Police or Coroner

When an ambulance or other emergency service is called for a death or serious injury, the police are routinely notified, and will usually attend the workplace as well. The role of the police is to determine whether or not a criminal act has been committed. The police will notify the Coroners Service.

The coroner is a quasi-judicial investigator, independent from all law enforcement agencies and health authorities. The coroner determines the identity of the deceased and the cause of death, and classifies the death as "natural, accident, suicide, homicide, or undetermined." The coroner does not assign fault or blame but conducts a fact-finding investigation into deaths that are unnatural, unexpected, unexplained, or unattended. One of the most important purposes of a coroner's investigation is to identify risk factors to prevent future deaths.

Dealing with emotions after an incident

Following a serious injury, death, or other critical incident, all workplace parties can experience difficult emotions. These emotions can range from anger and resentment to fear and extreme grief. The following session types will be arranged immediately following a critical incident to provide support to the workforce.

Defusing sessions

Held within 6 to 8 hours of the incident, a defusing session is a brief, confidential, nonjudgmental group meeting of workers affected by the incident. It is critical to have experienced people trained to conduct a defusing session; this can include trained peers. The defuser explains the physical, emotional, and psychological reactions that workers may be experiencing, and how workers can take care of their emotional and physical health following the incident. Third party counselling services can be obtained to conduct this session, if there is no one appropriately trained at the worksite

Debriefing Sessions

Ideally, we will hold a debriefing session within 24 to 72 hours after an incident. The purpose of this session is to alleviate the trauma of affected workers and to assist in the recovery process. The session will be a confidential, non-judgmental discussion of the continuing effects of a traumatic incident on workers. Debriefing focuses on the emotional well-being of workers; it does not attempt to find the cause of the accident or assign blame. Sessions should be led by trained professionals, and participation should be voluntary.

Critiquing Session



A critiquing session is held a few weeks after the incident. Employers, supervisors, and workers review all aspects of the incident to uncover deficiencies in the handling of the incident and provide corrective solutions. The session looks at how the incident was handled, how it could have been handled better, how it could have been prevented, and the effectiveness of the intervention. It includes a review of related company policies, safety regulations, and safe work procedures.

Third-Party Critical Incident Investigations

Depending on the circumstances of the critical incidents, Voltage may choose to retain additional resources to provide expert advice and a neutral, independent perspective to assist in the incident investigation.



6. Serious Injury Procedure

1. Stop all work immediately. Ensure the scene is safe before approaching the injured worker;

2. Provide First Aid immediately. Render lifesaving first aid within your scope of certification and abilities. Do not move the injured person unless their life is in immediate danger;

- 3. Perform the Notification for Medical Emergencies:
- 4. Three short blasts on the radio, followed by Medic Medic Medic
- 5. Identify yourself, and your location

6. Designate a person to remain in radio contact with the Medic, until they arrive on site;

7. Assume Incident Command responsibility until replaced by the First Aider and follow instructions given by the First Aider or the next level of care;

NOTE: If a medic is not onsite – the designated First Aid attendant on the tailboard will take care of performing first aid on the injured worker;

8. Designate Worker responsible for radio communication, and contacting / coordinating with external / off-site Emergency Response Support;

9. If instructed by the First Aider, contact (911) and provide the site access number, nature of injury and number of people injured;

10. Designate worker to meet the Emergency Response Support and bring them to injured worker;

11. First Aider will determine the best method of transportation to the nearest clinic or hospital based on the seriousness and availability of transportation.



7. Environmental Spill/Release Procedure

This procedure has been developed to provide guidance to project employees for initial response, clean-up, reporting and disposal of impacted hazardous materials.

7.1 Procedure

- **1**. Ensure the safety of yourself and other onsite personnel.
- 2. Assess the Situation
 - a. If possible, and safe to do so, identify the source of the spill / release and attempt to stop it, close valves, shut off pumps, plug holes/leaks, set containers upright.
- 3. Identify the Substance
 - a. Identify the substance released and review the substance Safety Data Sheet (SDS).
 - b. Utilize the SDS to obtain information on the hazards, appropriate protective clothing, and emergency equipment, and other safe guards.
 - c. Identify hazards on the site that may have been created by or effected by the release of the substance.
- 4. Contain the Release
 - a. Do not attempt to contain or clean up the release until all safe guards are in place.
 - b. Deploy contents of spill kit (adsorbent pads and socks).
 - c. Contain the spill as close to the source as possible using the appropriate spill containment methods for the type of spill.
- 5. Secure the Site. Ensure affected area is blocked off and limit unnecessary access.
- 6. Perform Notifications as per protocol
 - a. Notify Supervisor and Environmental Coordinator.
- 7. Plan the Clean-up
 - a. Mobilized recovery equipment and clean-up crew;
 - Identify impacted area and excavate material until there is no further sign of contamination (visual and scent);



- c. Contaminated and potentially contaminated materials will be collected and removed from site; or Contaminated and potentially contaminated materials will be collected and stored in lined, water-proof bins, or covered (under and over) using impermeable sheeting and placed in a secure area, a minimum of 100m from any water course, or as specified by project environmental requirements;
- d. Area surrounding the release will be visually inspected for potential impacts and/or signs of further contamination;
- e. Impacted clean up equipment (adsorbent pads, booms, etc.) will be collected separately from contaminated soil and disposed of in accordance with provincial regulations;
- f. All equipment used in the clean-up must also be thoroughly cleaned.
- 8. Manage Waste from Clean-up
 - a. All contaminated material should be removed from site and must be segregated, classified and stored, until material can be disposed at a licenced treatment facility.
 - b. Transportation of contaminated materials will be conducted in accordance with regulatory requirements.
 - c. Waste dockets will be collected and attached to the Environmental Incident Report.
- 9. Replenish Emergency Spill Kit contents



8. Bucket Rescue Procedure

8.1.1 Bucket Rescue

Time is of extreme importance when performing any type of rescue. You will want to carry out the procedures as quickly as possible. However, if you hurt yourself while hurriedly performing a rescue, you may not be able to help your co-worker.

Avoid unsafe situations such as jumping from the truck deck. Do not endanger yourself.

If the injured worker or truck is in an energized circuit, ensure the circuit is de-energized before touching the truck to avoid step/touch potential.

Rescue Blocks

The rescue blocks are a simple rope-pulley system used to perform a bucket rescue in the conventional position. The rope blocks are stored in a clean, dry bin that is identified by a sticker on the bin door.

Rope blocks must always be reeved correctly and properly stored so that in an emergency, time is not lost untangling and / or re-reeving the rope.

When the blocks are stored correctly, the standing block is first out of the bag. The standing block attaches to the boom rescue strap "D"-ring. The next piece to exit the bag is the running block which will be attached to the D-ring on the injured worker's harness. Finally, the fall line of the rope exits the bag.



MSA Suretyman Rescue System



Procedure

- 1. Evaluate the Situation Quickly
 - a. Stop and evaluate the scene. Consider what the injured worker was doing and when the problem arose.
 - b. Assess the scene further to ensure that whatever happened poses no further hazard to the workers, yourself or the public.
- 2. Activate the Emergency Reponses Plan for Medical Attention
 - a. If possible, identify the source of the injury (e.g., electrical, mechanical, medical); and call for additional support.
 - b. If the injured worker does not respond, call 911 immediately.

3. Initiate the Rescue

- a. Identify if additional equipment or staff is required to complete the rescue. If so, be certain to request this additional help before you begin the rescue.
- b. There are two methods that can be utilized to perform rescue from a bucket.
 - i. Conventional (Non-tilt) Method
 - ii. Over-centre (Tilt) Method.

Conventional Method (Non-tilt)

- 1. Grab the rescue blocks.
- 2. Climb onto the truck deck.
- 3. Move the combination valve lever to the lower controls position.
- 4. Use the three levers at the lower control station to move the booms to a position where you can place the lower boom in a vertical position and lower the upper boom until the buckets are in a position for a rescue. The side of the truck or rear corners of the truck deck are options with the side being the best option, if possible.
- 5. Open the emergency rescue bag and remove the standing block from the bag. Attach the standing block to the D-ring on the boom rescue strap.
- 6. Pull down on the running block which will be hanging below the standing block.
- 7. Attach the running block to the D-ring on the injured worker's harness. Make sure there are no kinks or knots in the fall line.



- 8. Ensure the carabiners on both blocks are secure on their attachment points. If necessary, operate the upper boom lever to move the boom slightly away from the truck.
- 9. Release the injured worker's lanyard from the aerial device anchor point and pull on the fall line until the injured worker is clear of the bucket lip.
- **10**. It may be necessary to hold the fall line with one hand and use the other hand to reach into the bucket and lift the worker's legs out of the bucket.
- **11**.Carefully release the fall line and lower the injured worker to the ground.
- 12. When the injured worker is safely on the ground, carefully climb down from the truck deck using the access steps on the curb-side of the truck.
- **13**. Move the injured worker to a safe place where you and/or the First Responders can perform any necessary First Aid/CPR.
- 14. Follow above procedure for Serious Injury.

Over-Centre Method (Tilt)

- 1. Climb onto the truck deck.
- 2. Move the combination valve lever to the lower controls position.
- 3. Use the three levers at the lower control station to move the booms to a position where you can place the lower boom in a horizontal position and the upper boom past horizontal, until the buckets are just above the ground and in a position for a rescue that is best suited at the particular jobsite. The front or rear of the truck are options in most cases, the front being the best option, if possible.
- 4. Once the booms are safely positioned, and the buckets are close to the ground, carefully climb down from the truck deck using the access steps on the curb side of the truck.
- 5. At the bucket area, release the injured worker's lanyard from the aerial device anchor point.
- 6. Locate the bucket tilt lever and pull up on the safety lock. Then move the lever to tilt the buckets to a position closer to horizontal that will help you remove the injured worker from the bucket.
- 7. Pull the injured worker out of the bucket and place him/her on the ground away from any immediate danger.
- 8. Follow above procedure for Serious Injury.



9. Tower Rescue Procedure

Tower rescue is used when an injured worker, wearing a full body harness, has fallen off the structure and is hanging from a fixed anchor point such as a tower arm.

Two people must carry out the rescue; one rescuer in the tower and one rescuer on the ground.

- 1. Climb the tower carrying the rescue rope and a block to a point beside or above the injured worker, if a rescue rope and/or block are not already aloft raise it with a handline.
- 2. Attach the block to a steel member using the anchor sling, taking into consideration the rescue descent path. Reeve the rescue rope through the block. Use the front or back "D" ring depending on accessibility. This procedure is written for the back "D" ring.
- 3. If the rescuer can reach the back "D" ring on the injured worker's harness:
 - a. Connect the rescue rope directly into the back "D" ring, ensuring that ground personnel can effectively tag the injured worker
- 4. If the rescuer cannot reach the "D" ring on the injured worker's harness:
 - a. Raise a switch stick and anchor hook to the rescue location on the structure.
 - b. Connect the rescue rope to the anchor hook.
 - c. Connect the rescue rope to the victim's back "D" ring using the switch stick and anchor hook.
 - d. Connect a tagline (if required) to the rescue rope and allow it to slide down to the anchor hook, ensuring that ground personnel can effectively tag the injured worker.

Note: The tagline, if required, must not be connected directly on the injured worker. Connecting directly to the inured worker will put undue stress on the body when tagging out.

- 5. Run the rope through a Figure 8 or Petzl I'D S anchored to the tower leg, or through a karabiner and tie a munter hitch to provide a friction break.
- 6. Raise the injured worker with the rescue rope to take weight from their fall arrest. If the injured worker is connected to the rescue rope through an anchor hook, connect the karabiner from the injured workers shock absorber onto the karabiner on the anchor hook.

This provides a safety connection in the event that the injured worker somehow comes loose from the anchor hook.

 Detach the injured worker from their fall arrest (i.e. cut the fall arrest rope / pole strap). The full weight of the injured worker will then be taken on the handline controlled by the rescuer on the ground.



- 8. Lower the injured worker, controlling the rate of descent. Tagging the injured worker around an obstruction will have to be done by others (if available) on the ground.
- 9. Once the Injured worker is on the ground, follow the above procedure for Serious Injury.

9.1 Rescue (Figure) 8

Rigging the Figure 8 Device

To brake with the right hand, stand with the rope on the right side. Hold the figure 8 in your left hand with the large hole away from you. Rig the Figure 8 device as follows:

- Push a loop through the large hole of the Figure 8
- Pull the loop over the small end of the Figure 8
- Connect the small hole of the Figure 8 to your harness with a karabiner

Rigging the Figure 8

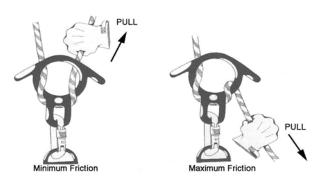
Controlling Rate of Descent

The rate of descent is based on the position and amount of tension on the tail of the rope. To decrease speed of the descent, do any one of the following:

- Hold the rope tighter with your breaking hand,
- Push the rope tighter against the body,
- Wrap the rope around more body surface (buttocks), or
- Have ground personnel tension on the rope (this is particularly useful should the person aloft slip or become unconscious).

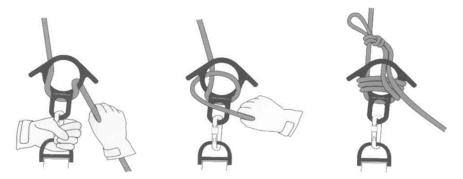
Controlling the Rate of Descent Diagram





Locking off a Figure 8

The Figure 8 device can be locked off to prevent descent before exiting the bucket. While holding the rope tightly in your brake hand, move it towards the Figure 8. When the hand is about 8 in. (200 mm) away smoothly draw the rope over the top of the Figure 8 and wedge it down between the Figure 8 and the standing line. One wrap will support the weight of most people, and a second wrap will secure it. A third wrap held with an overhand knot tied to the standing line can be used to provide additional security.

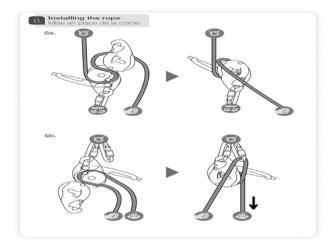


9.2 PETZL I'D S

Rigging the Petzl I'D S Device

- Open the moving side plate. Put the handle in position (c) to open the cam. Insert the rope as indicated by the diagrams engraved on the device. Close the moving side plate.
- Connect the I'D S with a locking carabiner. WARNING: the moving side plate must be properly engaged on the cam axle and on the carabiner.
- 6A. Device on the harness (see below)
- 6B. Device on an anchor (See below) You must add friction by redirecting the brake side of the rope through a carabiner. WARNING: the anti-error catch can catch a rope that is installed backwards, but it does not eliminate all possible errors.
- The rope between the rope adjuster and the anchor must always be taut to reduce the risk of a free fall.





Testing the device

Before each job, verify that the device is working properly.

Do not allow anything to interfere with the operation of the device or its components (cam, antierror catch...). Any constraint on the device negates the braking action.

Device on the anchor

- Pull on the load side of the rope; the rope should lock in the device. If not, check that the rope is correctly installed.
- Warning: if the rope is installed backwards without being redirected through a braking carabiner, the anti-error catch will not work.
- Warning: if your device still doesn't work (rope slippage), retire it.
- Maximum descent height: 200 m. Normal working load: 30-150 kg.

Lowering from an anchor-point

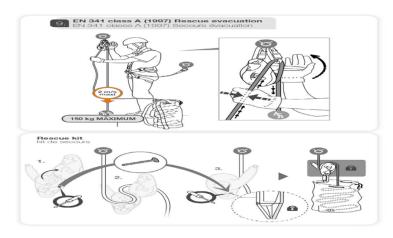
The brake side of the rope must be redirected through a carabiner. Hold the brake side of the rope and move the handle up (position c) to allow the rope to slide. Braking is regulated by varying the grip on the brake side of the rope. Release the handle to activate the self-braking function.

When the device is lightly loaded, if the panic brake activates too easily, use the horizontal movement button.

- Always tie a knot at the end of the rope.
- Equipment left in place must be protected from the elements.
- Do not lose control during the descent; descend at a reasonable speed.

Warning: the device can overheat and damage the rope during descent





Munter hitch and Carabiner





10. Site/Project/Camp Evacuation Procedure

If an evacuation is required:

- 1. Stop all work activity immediately.
- 2. Activate Notification
- In Camp Sound the Fire Alarm to activate evacuation;
- In the field Perform the Notification for Non- Medical Emergencies:
 - One 10-Second-Long Blast of Truck Horn, Whistle, or Air Horn over the Radio
 - Announcement of the nature of the incident and instruction:
 - Order to Evacuate
 - Request for Support;
 - On Stand- By for further instruction
- 3. Shut off all vehicles & equipment if safe to do so. Leave keys in ignition.
- Take your tailboard! You can use this for headcount!
- 4. In the case of fire or gas leak, determine the wind direction for safe route of choice.
- 5. Walk calmly cross wind or up wind (do not drive) to your designated muster point area without delay.
- Do Not Smoke at the Muster Point.
- 6. Report to your Supervisor for head count.
- Stay with your crew!
- 7. Inform Supervisor if anyone is missing.
- 8. Inform Supervisor of any unsecured ignition sources, i.e. equipment or vehicle left running.
- 9. Return to your work site only after the "All Clear" is given.



11. Fire - Work/Office/Camps/Equipment Procedure

All vehicles, equipment, office trailers, and yard work areas are equipped with hand-held fire extinguishers for first-response use on small fires.

In the event of a fire:

- Clear the immediate area and attempt to extinguish the fire using the extinguisher.
- If the fire is too big to control with a fire extinguisher immediately evacuate the area and call for help. No person shall at any time put their life or health in jeopardy while attempting to extinguish a fire.
- If personal safety is in doubt, raise the alarm and order to evacuate.



11.1 Fire-Wild

Initial Fire Suppression Response

- 1. Upon detection of the fire or spark, the immediate crew on site will initiate fire suppression activities.
- 2. Perform the Notification for Non- Medical Emergencies:
 - a. One 10-Second-Long Blast of Truck Horn, Whistle, or Air Horn over the Radio
 - b. Announcement of the nature of the incident and instruction:
 - i. Order to Evacuate;
 - ii. Request for Support; or
 - iii. Stand by for instruction
- **3**. Report the details of the fire to the Provincial Wildfire Management, the report shall include: location, size, wind direction and source of ignition.



- 4. Construction activities will be suspended, and all available equipment and trained personnel will prepare to respond under the direction of the Construction Manager.
- 5. An initial attack crew will immediately respond and begin to action the fire with fire suppression tools and equipment.
- 6. A communications person will be directed to man a radio and phone line for emergency purposes.
- 7. Depending on the size and location of the fire, crews and equipment may be directed to evacuate their work area and stage at a muster area.
- 8. Evacuation routes and muster areas will be determined in the field.

Where safety is not compromised and crews are adequality trained, under the direction of the Construction Manager, project crews will take charge of fire suppression and control measures until relieved by a higher authority or agency equipped to control the fire.



12. Civil Disturbance or Demonstrations Procedure

The following guideline must be followed by all project personnel in the event of a civil disturbance or demonstration on the project site. Worker safety is top priority.

Instructions for all Project Employees

Do Not:

- Physically confront or threaten the participants
- Attempt to force your way through a roadblock
- Engage in communications/conversations, have an argument or threaten any legal action
- Use cell phones to conduct sensitive confidential communications that can be overheard by participants.

Do:

- Notify your supervisor
- Yield right of way to demonstrators
- Remain calm and professional
- Stay friendly toward demonstrators
- Avoid a confrontation, especially if provoked
- Note whether the participants are abusive or threatening (inform your supervisor)
- Regardless of the situation, remember you are representing Voltage. Cameras are likely watching. Always show empathy, composure and tact.
- Politely decline interviews

A disturbance or roadblock is in place, remedial actions will include:

- Localized evacuation and internal roadblocks;
- Communication to onsite project personnel to ensure people are directed away from area of disturbance and given specific evacuations routes;
- Site evacuation and confirmation that all personnel cleared;
- Communication to offsite project personnel to ensure non-essential travel is stopped and people are directed away from area of disturbance and given specific travel route:

The following guideline shall be followed by the **designated spokesperson, generally the Project Manager, or their designate,** in the event of a civil disturbance or demonstration on the project site. Worker safety is top priority.

- 1. If demonstrators are not impeding access do not approach or try to prevent the demonstration from taking place. Do not react in any way that will escalate the situation.
- 2. Politely ask demonstrators to stop blocking the site. If they refuse, don't argue. Notify local police. Remain calm, friendly and focused on offering solutions. Remember you are being observed. Be as friendly as possible to demonstrators.



- **3**. If shouted down, stay calm toward demonstrators. All interactions should be polite. Avoid shouting back or any confrontation, especially if provoked.
- 4. Basic Messages in confrontational situation:
 - a. "We're disappointed you're taking this action."
 - b. We'd be glad to meet with you immediately to talk about this."
- 5. Demonstrators may have journalists and camera crews with them. If media arrives at the site, a spokesperson may also be required to act as "site" media spokesperson. This will be the Project Manager, or their designate.
- 6. While the RCMP should take the lead in media statements related to management of the roadblock, it's also important for a spokesperson to talk with reporters at site as soon as possible with a factual account of what's happening around them. Have a sample statement prepared in advance (see site statement below).
- 7. All personnel should be conscious of being observed / recorded by journalists even when not being directly interviewed.
- 8. All personnel should be conscious of the potential for being observed/recorded by demonstrators when at the site. Assume everything at the site is being recorded.
- 9. Dress casually. Try to limit clothing or equipment bearing the Voltage logo in the vicinity of the roadblock.
- **10**.Don't give interviews, politely decline further interview requests and refer media to media contact in Winnipeg Head Office.

After the site representative has dealt directly with the demonstrators the designated site representative may be required to make a brief statement to the media. These statements should be short and general.

Sample #1-Demonstration

"We respect the right of individuals to peacefully express their point of view as long as their activities do not disrupt or jeopardize the safety of our employees, contractors or operations. It's important to Voltage Power to maintain good relationships with all our neighbours. We are certainly willing to meet with the individual(s) involved to discuss any concerns they have with them. Any further media enquiries should be directed to our head office in Winnipeg"

Sample #2-Roadblock

"We are disappointed that ______ have chosen this method to protest. It's important to Voltage Power to maintain good relationships with all our neighbours. We are certainly willing to meet with the individual(s) involved to discuss any concerns they have. We want to work with all parties to see this matter resolved quickly and safely. Media enquiries regarding the roadblock itself should be directed to the RCMP. Any further media enquiries should be directed to our head office in Winnipeg"



13. Dangerous Wildlife Encounters Procedure

Responding to a Bear Encounter

If you encounter a bear in any situation:

- Do not feed the bear
- Do not approach the bear or entice it to come closer
- If you come upon a bear and it is unaware of your presence:
- Ready bear spray if available
- Discreetly leave the way you came
- Double back
- Keep your eyes on the bear (back away)
- Give a wide berth
- Choose route with no other bears
- Make your presence known once you have backed 300 meters away (talk loudly, sing, etc.)
- Keep moving

If You Come Upon a Bear and It Is Aware of Your Presence:

- Ready bear spray if available
- STOP, stay calm, assess the situation
- Determine your distance from the bear
- DO NOT run or turn around
- Avoid rapid movements
- Appear non-threatening
- Keep eyes on bear without direct eye contact
- Assess surroundings
- Leave escape route for the bear
- Determine what the bear is doing (food nearby? Young nearby?)
- If the bear bluff charges: STAND YOUR GROUND

If a bear shows stress signs, including yawning, salivating, huffing, hair up on neck, bluff charging, stomping the ground and swatting trees, be ready for a defensive attack. It means that your presence is stressful for the bear, and it is protecting something, either young, a food source, or its territory.

If You are the target of a defensive attack:

- Ready bear spray if available
- You need to recognize stress signs
- Do not shout or escalate the situation
- Attack will occur quickly and end when the bear sees threat as gone
- Do not move until bear leaves
- If the attack escalates, fight back



If you come across a bear and notice predatory behaviour, it may be targeting you for a predatory attack. Predatory behaviour is characterized by stalking you, watching you intently and approaching with no sign of fear or stress.

If you are the target of a predatory attack:

- Ready bear spray if available
- DO NOT be submissive
- Face the bear
- Act aggressively
- DO NOT run
- Scan for cover and move there
- Remove pack and use as distraction
- Prepare and use bear spray
- Make yourself large
- Shout and be as loud as possible
- Raise arms and stomp feet
- Stand on something
- Use rapid arm/leg movements
- Fight back DO NOT play dead
- Attack eyes, nose & face

Responding to a Cougar Encounter

If Approached by a Cougar

- Never approach the animal
- Never feed the cougar
- Prepare bear spray/deterrent
- Stay calm
- Speak in a loud, commanding voice
- Do NOT run
- Do NOT turn your back on the animal
- Back away very slowly, facing the animal
- Make yourself larger
- Do NOT climb a tree
- Never take eyes off the cougar
- Make direct eye contact
- Act aggressively
- Stomp feet, wave arms, throw rocks/sticks
- Find a weapon (stick, rock, knife)

If Attacked by a Cougar

- Do NOT play dead
- Fight for your life
- Use bear spray



- Use weapons
- Protect the throat and back of the neck

Responding to Wolf or Coyote Encounters

If you Encounter a Wolf or Coyote

- Do not feed the animal
- Do not entice the animal to come closer, or approach the animal
- Leave a wide berth 100 metres
- Leave an escape route for the animal
- Do not threaten or corner the animal
- If approached or attacked by a wolf or coyote:
- Prepare bear spray
- Stay calm
- Speak in a loud, commanding voice
- Do NOT run
- Do NOT turn your back on the animal
- Back away very slowly, facing the animal
- Make yourself larger
- Act aggressively
- Stomp feet, wave arms, throw sticks/rocks
- Find a weapon (stick, rock, knife)
- Fight for your life



14. Contact with Utility Procedure

14.1.1 Contact with Power

- 1. Stop all work immediately;
- 2. Sound air or vehicle horn 3 times to notify workers in the immediate area.
- 3. Caution: ground and objects may still be energized;
- 4. Be aware of step potential Shuffle your feet to a safe distance (minimum 10 meters)
- 5. Contact utility/facility company and have them shut off the line;
- Confirm circuit is de-energized from system operator before entering a potentially energized field;
- 7. Flag off the area and keep all people and traffic away.

If inside of mobile equipment during contact of an energized line:

- 1. Sound air or vehicle horn 3 times to notify workers in the immediate area;
- 2. If possible, break contact by driving the equipment clear of the powerline; otherwise
- Remain in the equipment until confirmation of de-energization is received and the line is grounded;
- 4. If the equipment is immobilized and you must exit due to fire, jump from equipment and land on both feet. Shuffle your feet or hop to a safe distance (minimum 10 meters);
- 5. Contact utility/facility and have them shut off line; and
- 6. Flag off the area and keep all people and traffic away.

14.1.2 Contact with Natural Gas, Petroleum or Propane Line

- 1. Stop all work immediately;
- 2. Sound air or vehicle horn 3 times to notify workers in the immediate area;
- 3. Shut off machinery and all ignition sources and evacuate the area in the upwind direction;
- 4. Meet at Muster take a head count based on the tailboard to ensure all workers are accounted for;
- 5. Notify Site Supervisor who will contact the utility company and relevant authorities; and
- 6. Barricade/Flag off area to keep all people and traffic away.



15. Heat/Cold Related Injuries Procedure

Prevent heat related conditions with frequent cooling breaks, staying hydrated with water and fruit juice and monitoring each other for signs of overheating. Both Heat Exhaustion and Heat Stroke require immediate treatment.

15.1.1 Heat Exhaustion

Heat Exhaustion symptoms can include fatigue, nausea, dizziness, confusion, headache, cold and clammy skin and slow heartbeat.

If symptoms of Heat Exhaustion appear, notify first aider and:

- 1. Have the worker lie down in a cool place such as a shaded location or an air-conditioned vehicle;
- 2. Remove unnecessary clothing;
- 3. Use wet rags or a water-soaked blanket to cool the Worker if temperature is seriously elevated;
- 4. Have the Worker drink fluids such as water, fruit juice or a sports drink; and
- 5. Worker should begin to recover within 30 minutes.

15.1.2 Heat Stroke

Heat Stroke symptoms can include disorientation, seizures, loss of consciousness, body temperature of 104° to 106° F or 40° to 41° C, rapid heartbeat or very slow heartbeat. Dry skin with a complete lack of sweating or profuse drenching sweat with cold and clammy skin.

Heat stroke is very dangerous and can cause death. It is critical that a person with heat stroke be transported to a Medical Treatment Facility immediately; Heat Stroke is life threatening and warrants an ambulance.

If Heat Stroke is suspected:

- 1. Begin cooling of the body must immediately.
 - a. Cooling should be performed simultaneously while preparing for transport and during transportation to the nearest Medical Treatment Facility.
 - b. Cold wet rags or a wet blanket work well but change frequently or douse with cold water to promote rapid cooling. Use caution to avoid over cooling the body.

15.1.3 Frostbite

Frostbite is an injury to the body's tissues caused by exposure to very cold temperatures. The condition results in a loss of feeling and color in the affected area and can cause permanent tissue damage. Extreme frostbite can result in amputation. Workers should take frequent



warm up breaks from the extreme cold. Workers should monitor each other for signs of frostbite on exposed skin.

Signs and symptoms of frostbite:

- Symptoms will begin with pain from the cold, pins and needles and numbness.
- Frostbitten skin appears white and waxy and feels hard to the touch. Never rub or massage the area if frostbite is suspected;
- Affected skin area should be warmed gently with either body heat or warm water;

If frostbite is suspected:

- Do not re-expose the area to cold until completely healed;
- People with diabetes must be extra cautious due to the possibility of reduced blood circulation; and
- Contact the first aid for an assessment.



16. Working on Ice Emergency Procedure

16.1.1 Emergency Self Rescue

- 1. ONE minute to control breathing.
- 2. For about one minute, the person will gasp for air in reaction to contact with the cold water. After one minute, the gasping subsides, the skin numbs, and the sensation of intense cold decreases.
- 3. Ten minutes of meaningful movement.
- 4. The person has about 10 minutes to get out of the water.
- 5. Do not panic and thrash about. Resist the urge to gasp, slowly tread water or grasp the edge of the ice to keep your head above water.
- 6. Always attempt to exit in the same direction as you entered as the ice thickness was capable of holding your weight prior to entering.
- 7. Keep your hands and arms on the ice and kick your feet. This brings your body to horizontal position, parallel to the ice surface.
- 8. Horizontal Kick and Pull. Once horizontal, continue to kick your feet while pulling with your hands. Draw yourself up onto the ice.
- 9. Roll onto the Ice. Keep your weight spread out while you roll, crawl and slide across the ice until it will support your weight.

16.1.2 **Ice Rescue**

Before performing the rescue, consider the following:

- Is the ice safe for rescue to work?
- Is there enough manpower to perform the rescue?
- Is there sufficient equipment?

All rescue personnel operating near ice or water must wear a life jacket, if available. No rescue should be initiated without a backup team and shore support.

Rescue Operation:

- 1. Make verbal contact with the worker as soon as possible.
- 2. Communication with the worker is crucial to the rescue process, yet, it is often overlooked.
 - a. Talking helps to reassure the worker, and to determine their condition and level of consciousness.



- b. Due to hypothermia and shock, a worker might not communicate back to you, but the potential is still there that they can hear and understand you.
- c. Keep talking, even if they do not respond.
- 3. Based on their input or lack thereof, decisions can be made as to what level of risk will need to be taken to rescue the worker. The following chart is a guideline for rescue and recovery time conditions.

Water Temperature	Exhaustion/ Unconscious	Survival Time
32.5	Under 15 minutes	15 to 45 minutes
32.5 to 40	15-30 minutes	30 to 90 minutes
40 to 50	30-60 minutes	1 to 3 hours
50 to 60	1 to 2 hours	1 to 6 hours
60 to 70	2 to 7 hours	2 to 40 hours
70 to 80	3 to 12 hours	3 hours to Indefinite
80+	Indefinite	Indefinite

- a. If the worker has gone under, and the water is below 70 degrees Fahrenheit, rescue attempts should not exceed a period of 90 minutes from time of disappearance or time of dispatch if patient was missing prior to arrival. A recovery effort should begin.
- b. If the worker has gone under and the water is above 70 degrees Fahrenheit, rescue attempts should not exceed a period of 60 minutes from the time of disappearance or time of dispatch if patient was missing prior to arrival. A recovery effort should begin.
- **4**. Rescues should be conducted with the least amount of risk to the rescuer necessary to rescue the worker.
- 5. The order of water rescue from low risk to high risk will be:
 - a. TALK the worker into self-rescue. If possible, the worker can be talked into swimming to shore or assisting the rescuers with his/her own rescue.
 - b. REACH If possible, the rescuer should extend his/her hand or some other object, such as a pike pole, to remove the worker from the water.
 - c. THROW If the worker is too far out in the water to reach, rescue(s) should attempt to throw the victim a piece of positive flotation such as a rescue ring. Downstream personnel should be in position during the actual rescue operation.
 - d. GO If all the above attempts fail, 2 workers wearing life jackets are to take the skiff and proceed out in water to the worker.
- 6. Assessing the worker:



- a. Once the rescuer(s) have reached the worker, they should do an immediate assessment of the worker and determine the exact method of entrapment.
- b. If the worker is conscious, the rescue should determine if the worker could assist in his/her own rescue.
- c. If the worker is unconscious, the rescue must be quick
- d. If the workers can assist in his/her own rescue, the rescuers should proceed with the rescue action plan.
- 7. The worker should be lifted into the skiff and brought into shore as soon as possible.
- 8. As soon as the worker is brought to safety, the worker should be covered with warm, dry blankets and transported for medical attention immediately.



17. Electrical Storm Protocol Procedure

General Lightning 30-30 Rule

30 Seconds: Count the seconds between seeing the lightning flash and hearing the thunder clap. Each second represents around 300 meters. If this time is 30 seconds or less, then the lightning storm is less than 10km away and there is an 80% chance that the next strike will happen within that 10km.

Seek shelter immediately. Preferably in a building, all-metal vehicle or in a low-lying area.

30 Minutes: After seeing the last lightning flash or thunder clap, wait 30 minutes before leaving shelter. More than half of lightning deaths occur after the thunderstorm has passed.

Stay in a safe area until you are sure that the threat has passed.

If lightening is imminent, prepare to stand down until conditions are safe.

- 1. If the scope of work is working is not part of a line or the isolation point (open) is within visual range, you must stop all work once rumble or lightening is confirmed.
 - a. Work is not to resume until 30 minutes after the last confirmation of lightning or rumble.
- 2. If the scope of work is on grounded lines of which the known open points are not at the immediate work area, expand your weather and lightening search parameters to include the lines that are part of your bonded work zone.
 - a. Using visual and audible (lightening & thunder) method only, after the last rumble or strike observed, wait 30 minutes prior to work resuming.



18. Overdue Air Procedure

The below steps outline the general response for Overdue Aircraft situations. The Helicopter Operators' company specific Overdue Aircraft Protocol will be reviewed and updated for the local jurisdiction and will be followed in the event of an Overdue Air Craft Situation on the project.

"Overdue", in respect to an aircraft, means an aircraft for which an arrival report has not been filed:

1.

- a. Attempt to Contact / Locate the Aircraft After 30 Minutes
- b. Ramp Check (Flight Follower)
- c. Check with the flight destination for aircraft or crew (Engineer)
- d. Exhaust all possible means of communications cell, sat phone, radio, alternate aircraft or crews (check with Supervisor, Site Safety)
- e. Check SAT tracking (latitude)
- f. If satellite tracking has not provided a location of the aircraft in question, begin a route check starting with the last known position
- 2. Overdue Aircraft Notification After 60 Minutes
 - a. Contact local Flight Service Station if applicable
 - b. Contact the Construction Supervisor and the Aircraft Operations Manager / Chief Pilot with the following information:
 - i. Registration of the aircraft,
 - ii. Pilot in command,
 - iii. E.T.A. of the missing aircraft,
 - iv. Location of the flight, Refer to Latitude satellite tracking (structure number)
 - v. Number of passengers on board, (flight manifest)
 - vi. Last communication with the pilot,
 - vii. Nature of work.
- 3. Initiate Search for Missing Aircraft



- a. Helicopter Operations Manager will be responsible for all external communication including subcontractor offices or Search and Rescue.
- b. All available onsite aircraft should initiate a search if possible, in the general location of the missing aircraft
- c. All involved to keep an accurate diary of events on paper if and when possible
- d. Advise the Construction Supervisor of any changes in the situation.
- e. A bilateral communication between parties shall be kept at all time.



19. Appendix A – Manitoba Provincial Reporting Requirements

19.1 Serious Incident/Injury Reporting

Workplace Safety and Health Regulations

When a serious incident occurs at a workplace, the employer is required to notify the Workplace Safety and Health Branch (WSH) of the incident immediately, and by the fastest means of communication available.

The Workplace Safety and Health Regulation defines a serious incident as one:

- in which a worker is killed;
- in which a worker suffers:
- an injury resulting from electrical contact,
- unconsciousness as the result of a concussion,
- a fracture of his or her skull, spine, pelvis, arm, leg, hand or foot,
- amputation of an arm, leg, hand, foot, finger or toe,
- third degree burns,
- permanent or temporary loss of sight,
- a cut or laceration that requires medical treatment at a hospital as defined in The Health Services Insurance Act, or
- asphyxiation or poisoning.

that involves:

- the collapse or structural failure of a building, structure, crane, hoist, lift, temporary support system or excavation,
- an explosion, fire or flood, an uncontrolled spill or escape of a hazardous substance, or
- the failure of an atmosphere-supplying respirator.

19.2 Environmental Spills/Releases

The *Canadian Environmental Protection Act, 1999* requires that, when an environmental spill or release occurs for any of the substances that meets or exceeds a reportable quantity, shall, as soon as possible, verbally notify an enforcement officer.



19.3 Reportable Release Quantities

Hazardous Substance	Class	Reportable Quantity
Explosives	1	Any Quantity
Compressed Gas		
Flammable Gas (i.e. Aerosols, Propane)	2.1	100 L
Flammable - Natural Gas Underground Lines		
Non-flammable, Non-Toxic (i.e. Fire Extinguishers)	2.2	100 L
Toxic (i.e. Hydrogen Sulphide; Chlorine)	2.3	Any Quantity
Corrosive (i.e. Hydrogen Chloride)	2.3	Any Quantity
Flammable Liquids (i.e. Gasoline, Diesel Fuel, Methanol)	3	100 L
Flammable Solids, Spontaneous Combustible and Water- Reactive Substances (i.e. Sulphur, Zinc Dust)	4	1 kg
Oxidizing Substances	5.1	
Packing Groups 1 & 2 (i.e. Sodium Peroxide, Potassium Permanganate)	5.1	1 kg or 1 L
Packing groups III (i.e. Potassium Nitrate)	5.1	50 kg or 50 L
Organic Peroxides (i.e. Methyl Ethyl Ketone Peroxide)	5.2	1 kg or 1 L
Toxic Substances	6.1	5 kg or 5 L
Packing Group 1 (i.e. Acrylonitrile, Hydrogen Sulfide))	6.1	1 kg or 1 L
Packing groups 2 & 3 (Pesticides, Wood Preservative)	6.1	5 kg or 5 L
Infectious Substances (i.e. Infectious Substances affecting humans)	6.2	Any Quantity
Radioactive Materials (i.e. Nuclear Densometers)	7	Any discharge or radiation exceeding 10 m@v/h at the package surface and 0.2 mSv/h at



		1m from the package surface.
Corrosives (Battery fluid, Hydrofluoric Acid)	8	5 kg or 5 L
Miscellaneous Products, Substances, or Organisms (i.e. Lithium Cells & Batteries, Asbestos)	9	25 kg or 25 L
Miscellaneous (except PCB mixtures)	9.1	50 Kg
Polychlorinated Biphenyls		
PCB Mixtures	9.1	500 grams
PCB or PCB Contaminated Oil IN USE	9	1 gram
PCB Containing Equipment in STORAGE	9	Any Quantity greater than or equal to 2 ppm
Aquatic Toxic	9.2	1 kg or 1 L
Ozone Depleting Substances (i.e. R-11 Refrigerant) *Report using MOPIA form	9.3	5 kg or 5 L

19.4 TDG Externally Reportable Quantities for Releases

TDG Externally Reportable Quantities for Release				
Class	Packing Group or Category	Quantity		
1	II	Any quantity		
2	Not applicable	Any quantity		
3, 4, 5, 6.1 or 8	I or II	Any quantity		
3, 4, 5, 6.1 or 8	III	30 L or 30 kg		
6.2	A or B	Any quantity		
7	Not applicable	A level of ionizing radiation greater than the level established in section 39 of the "Packaging and Transport of Nuclear Substances Regulations, 2015"		
9	II or III, or without packing group	30 L or 30 kg		



19.5 Minimum First Aid Requirements – Manitoba

Regulatory Reference: https://web2.gov.mb.ca/laws/regs/current/217.06.pdf

Number of first aiders that must be present:

5.5(1) An employer must ensure that the minimum number of first aiders, as set out in the following tables, are present during working hours:

MB – Table 1 – Close Workplace		MB - Table 2 – Distant Workplace				
Close Workplace means a workplace from which, under normal travel conditions and using the means of transportation used at the workplace in an emergency, an ill or injured worker can be transported to a medical facility in 30 minutes or less.		Distant Workplace means a workplace from which, under normal travel conditions and using the means of transportation used at the workplace in an emergency, an ill or injured worker can be transported to a medical facility in two hours or less.				
No. of Workers per Shift	Low Hazard Work		Other Work	No. of Workers per Shift		
1 to 10	-	-		1 to 10		Basic
11 to 40	Basic		Intermediate	11 to 40	Basic	Intermediate
41 to 100	Ba	sic	Two – Intermediate	41 to 100	Basic	Two – Advanced
101 to 199	Two –	Basic	Two – Intermediate	101 to 199	Two – Basic	Two – Advanced
200 to			Three -			Three -
More	Three -	- Basic	Intermediate	200 to More	Three – Basic	Advanced
	MB - Table 3 – Isolated Workplace					
Isolated Workplace means (a) that is normally accessible only by air; or (b) from which, under normal travel conditions and using the means of transportation used at the workplace in an emergency, an ill or injured worker cannot be transported from the workplace to a medical facility within two hours or less.						
No. of Work Shift		Low Hazard Work		Other Work		
1 te	o 10		FA1	Intermediate		
11 1	to 40	FA1		Advanced		
41 te	o 100	Two – FA1		Two – Advanced		d
101 1	101 to 199		Two – FA1	Three – Advanced		ed
200 t	200 to More Three – FA1		Three - FA1	Four – Advanced		



19.6 Emergency Services/Regulatory Reporting Contact List

Who	What	Regulation Agency	Verbal Notification 24 – Hour Contact Number
OHS Work Place Safety & Health	Report a Serious Incident	Provincial	855.957.SAFE
Salety & Health			855.957.7233
Environmental Emergency Reporting	Reportable Quantity Spills / Release	Provincial	204.944.4888
Poison Control Centre	Toxicology Consultation Services	Provincial	855.776.4766
Wild Fire Reporting	Report Wild Fires	Provincial	800.782.0076
Fisheries and Oceans Canada	Spills in Water	Federal	855.852.8320
CANUTEC	Transportation Spills	Federal	888.226.8832
Canadian Nuclear Safety Commission	Any accident involving a nuclear reactor, nuclear fuel facility, or radioactive materials	Federal	613.995.0479



20. Appendix B – MMTP ERP Field Card



EMERGENCY RESPONSE PLAN – FIELD CARD

ммтр

Rev. 2- Mar. 5, 2019

SERIOUS INJURY PROCEDURE

- 1. Stop all work immediately and ensure the scene is safe before approaching injured worker;
- 2. Provide First Aid immediately and render lifesaving first aid within your scope of certification and abilities. Do not move the injured person unless their life is in immediate danger;
- 3. Perform the Notification for Medical Emergencies
- Assume Incident Command responsibility until replaced by the First Aider and follow instructions given by the First Aider or the next level of care; NOTE: If a medic is not onsite – the designated First Aid attendant on the tailboard will take care of
- *performing first aid on the injured worker.*5. Designate worker responsible for radio communication, and contacting / coordinating with external / off-site emergency Response Support;
- 6. If instructed by the First Aider, contact (911) and provide the site access number, nature of injury and number of people injured;
- 7. Designate worker to meet the Emergency Response Support and bring them to injured worker;
- 8. First Aider will determine the best method of transportation to the nearest clinic or hospital based on the seriousness and availability of transportation.

FIRE RESPONSE PROCEDURE

All vehicles, equipment, office trailers, and yard work areas are equipped with hand-held fire extinguishers for first-response use on small fires. In the event of a fire:

- 1. Clear the immediate area and if safe to do so, attempt to extinguish the fire using the extinguisher.
- 2. If the fire is too big to control with a fire extinguisher immediately evacuate the area and call for help. No person shall at any time put their life or health in jeopardy while attempting to extinguish a fire.
- 3. If personal safety is in doubt, raise the alarm and order to evacuate.

SPILL RESPONSE PROCEDURE

- 1. Ensure the safety of yourself and the other onsite personnel.
- 2. Assess the Situation
 - a. If possible, and safe to do so, identify the source of the spill / release and attempt to stop it, close valves, shut off pumps, plug holes/leaks, set containers upright.
- 3. Identify the Substance
 - a. Utilize the SDS to obtain information on the hazards, appropriate protective clothing, and emergency equipment, and other safe guards.
 - b. Identify hazards on the site that may have been created by or effected by the release of the substance.
- 4. Contain the Release
 - a. Do not attempt to contain or clean up the release until all safe guards are in place.
 - b. Deploy contents of spill kit (adsorbent pads and socks).
 - c. Contain the spill as close to the source as possible using the appropriate spill containment methods for the type of spill.
- 5. Secure the Site
 - a. Ensure affected area is blocked off and limit unnecessary access.
- 6. Perform Notifications as per protocol
 - a. Notify Supervisor and Environmental Coordinator.
- 7. Plan the Clean-up
 - a. Mobilized recovery equipment and clean-up crew;
 - b. Identify impacted area and excavate material until there is no further sign of contamination (visual and scent);
 - c. Area surrounding the release will be visually inspected for potential impacts and/or signs of further contamination;
 - d. All equipment used in the clean-up must also be thoroughly cleaned.
- 8. Manage Waste from Clean-up
 - a. All contaminated material should be removed from site and must be segregated, classified and stored, until material can be disposed at a licenced treatment facility.
 - b. Transportation of contaminated materials will be conducted in accordance with regulatory requirements.
 - c. Waste dockets will be collected and attached to the Environmental Incident Report.
- 9. Replenish Emergency Spill Kit contents.

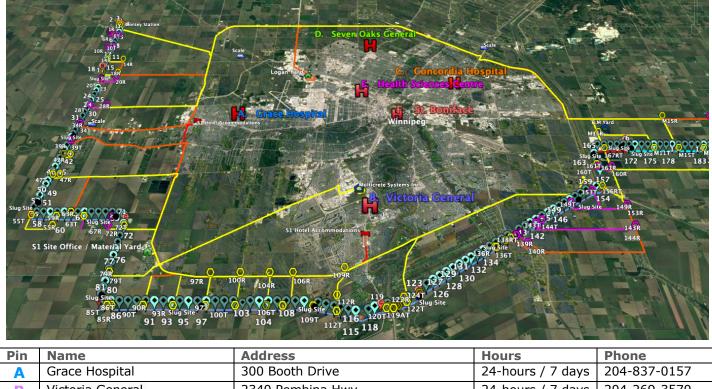




24 HOUR EMERGENCY SERVICE INFORMATION

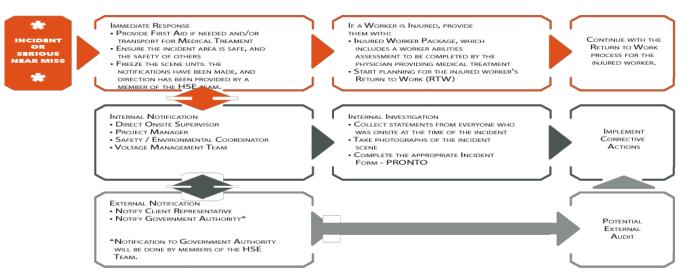
Voltage Power Contacts		
Project Manager	Gerald Budzinski 2	204.794.8603
Director, HSE	Hayley McNeil 2	250.219.7515
Superintendent	Floyd Hayward	
Provincial 24-Hour Emergency S	ervices	
Police / Fire / Ambulance	911	
OHS Work Place Safety & Health	Report a Serious Incident	855.957.SAFE (7233)
Environmental Emergency Reporting	Reportable Quantity Spills / Release	204.944.4888
Poison Control Centre	Toxicology Consultation Services	855.776.4766
Wild Fire Reporting	Report Wild Fires	800.782.0076
Fisheries and Oceans Canada	Spills in Water	855.852.8320
CANUTEC	Transportation Spills	888.226.8832
Canadian Nuclear Safety Commission	Any accident involving a nuclear reactor, fuel facility, or radioactive materials.	nuclear 613.995.0479

Nearest Hospital Locations:



Pin	Name	Address	Hours	Phone
Α	Grace Hospital	300 Booth Drive	24-hours / 7 days	204-837-0157
В	Victoria General	2340 Pembina Hwy	24-hours / 7 days	204-269-3570
С	Concordia Hospital	1095 Concordia Avenue	24-hours / 7 days	204-661-7194
D	Seven Oaks General Hospital	2300 McPhillips Street	24-hours / 7 days	204-632-7133
E	Health Sciences Centre	700 William Avenue	24-hours / 7 days	204-787-3167
F	St. Boniface Hospital	409 Taché Avenue	24-hours / 7 days	204-233-8563







PROJECT CONTACT LIST

Project Contacts	S				
Company	Contact		Role	Number	Email
Voltage	Gerald Budzir	nski	Project Manager	204.794.8603	Gbudzinski@voltagepower.ca
Voltage	Floyd Haywar	d	Superintendent	204.792.8936	Fhayward@voltagepower.ca
Voltage	Hayley McNe	il	Director, HSE	250.219.7515	Hmcneil@voltagepower.ca
Voltage .	Jerry Avery		Safety Coordinator	204.599.3630	Javery@voltagepower.ca
Voltage	Adam McRury	4	Safety Coordinator	780.913.8486	Amcrury@voltagepower.ca
Voltage	Todd Martin		Enviro. Manager	204.794.0770	TMartin@voltagepower.ca
Voltage	TBD		Environmental Coordinator		
Voltage	TBD		Environmental Coordinator		
Voltage	Shaun Hellemi	ich	Quality Mngr.	204.792.8892	Shellmich@voltagepower.ca
Voltage .	Joe Hordal		Material/Logistics	204.806.9822	Jhordal@voltagepower.ca
Sigfusson	Andrew Burde	tt	Construction Mngr.	204.805.0096	aburdett@sigfusson.ca
Voltage	Chris Bruneau		Construction Mngr.		Cbruneau@voltagepower.ca
Voltage	Ryan Desjarlai	s	Construction Mngr.	204.470.2695	RDesjarlais@voltagepower.ca
Voltage .	Jay McCaulay		Construction Mngr.	204.739-3693	JMcCaulay@voltagepower.ca
Voltage	David Darknel		Construction Mngr.	204.891.9652	DDarknell@voltagepower.ca
MB Hydro	Josh Pawluk		Project Manager	204.226.1690	jcpawluk@hydro.mb.ca
MD	De ere De ek		C. C. L. Marian	204.040.2024	dagash Olasdag sala sa
,	Dean Rach		Safety Manger		dmrach@hydro.mb.ca
MB Hydro	Ann Melnichu	k	Enviro. Manager	204-619-1745	amelnichuk@hydro.mc.ca
Provincial 24-Ho	our Emergenc	y Servic	es		
Department		Contact	:	Number	Email
MB Sustainable Development Off	fice	Environ	ment Officer: Alvin Dyck	C: 204-470-7548	alvin.dyck@gov.mb.ca
				E: 204-944-4888	
RM of Rosser &		Emerger	ncy Coordinator:	C: 204-807-7341	MEC@altona.ca
RM of Macdonald	d	Rick Des	jardins	0:204-954-0010	<u>Rifle@mts.net</u>
RM of Rosser		CAO: La	rry Wandowich	C: 204-390-0636	<u>cao@rmofrosser.com</u>
				O: 204-467-5711	<u>info@rmofrosser.com</u>
RM of Headingley	у	Emerger	ncy Coordinator: Barb Gillis	C: 204-292-4676	<u>Mecnet@qworks.biz</u>
				0: 204-885-5997	<u>Bcmcmanus@mymts.net</u>
RM of Headingle	у	Fire Chie	ef: Doug Hansen	C: 204-782-8217	duke.42@shaw.ca
RCMP Headingley	y	Corpora	I: Toni Zoledowski	O: 204-888-0358	toni.zoledowski@rcmp-grc.gc.ca
				E: 204-831-5929	
RM of Macdonald	d	Chief Ad	lmin. Officer: Daryl Hrehirchuk	0: 204-736-2255	daryl@rmofmacdonald.com
RM of Ritchot		Emerger	ncy Coordinator: Harold Schlamp	C: 204-330-1323	emergencycoordinator@ritchot.com
RM of Ritchot		Fire Chie	ef: Scott Weir	C: 204-981-3199	<u>sweir@mymts.net</u>
RM of Tache		Emerger	ncy Coordinator: Kim King	0: 204-878-3321	<u>rkking@mymts.net</u>
RM of Tache		RM Offic	ce Receptionist: Monique Lebrun	O: 204-878-3321 ext. 11	4 <u>monique@rmtache.ca</u>
RM of Springfield	l - Police	Adminis	trative Assistant: Kelly Bourns	C: 204-444-4308	kbourns@rmofspringfield.ca

Appendix G– Subcontractor Requirements





Project Subcontractor Certificate Matrix

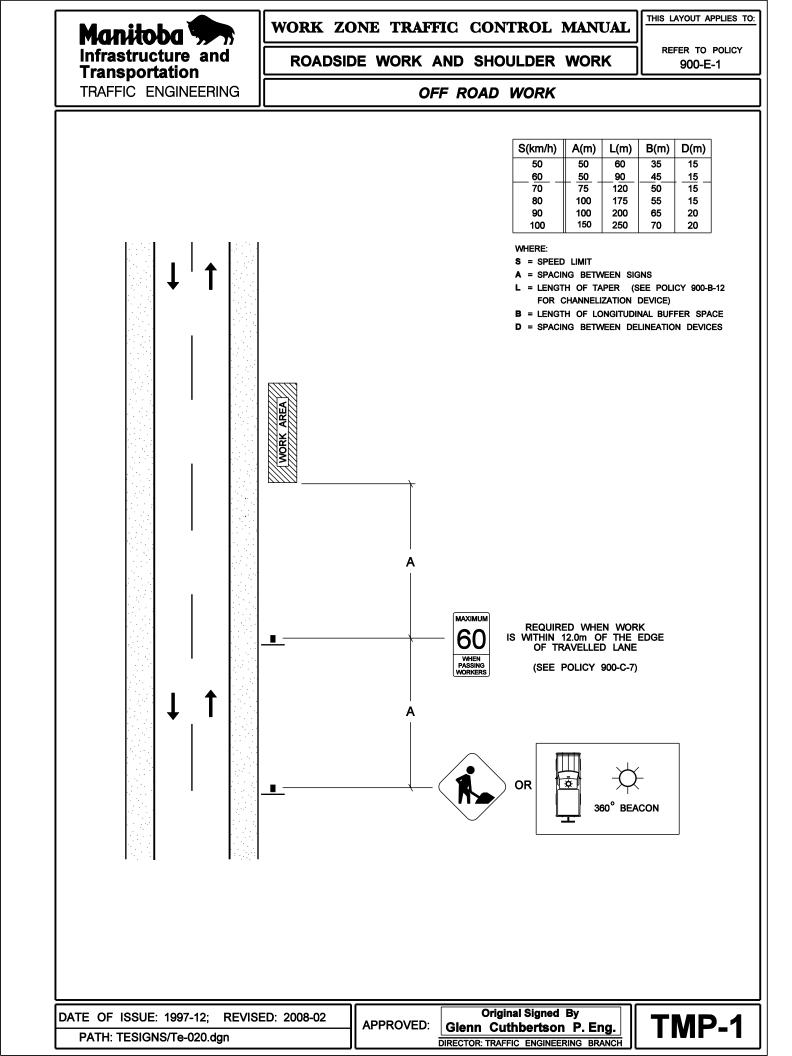
Company Name:				Project Name:				
				Base	Requirement	S		
Type in Worker Name and Date of Expiry of the current certificate on file. (Add rows for names and expiry date as required)	Trade Certification	Safety and Environmental Site Specific Orientation	WHMIS Training	First Aid and CPR Certificate	Ground Disturbance Training	Fall Arrest Training	Column22	Column3

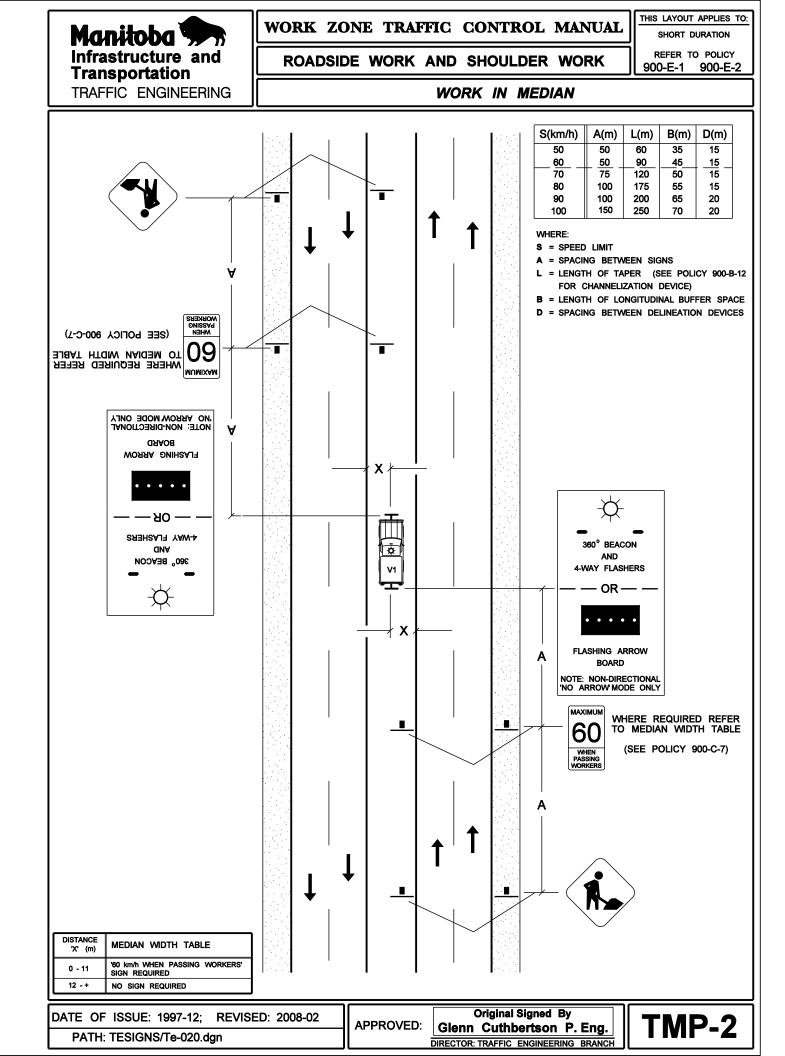


Prime Contractor Name: Project Name:	Voltage Power Mandatory				201	9 HSE P	Project N	1onthly	Perform	ance Rep	ort			
Subcontractor Name	Mandatory	JAN	FEB	MAR	APR	MAY	JUN	JULY	AUG	SEPT	ОСТ	NOV	DEC	YTD .
Voltage Project Manager:	Mandatory	2019	2019	2019	2019	2019	2019	2019	2019	2019	2019	2019	2019	2019
PROJECT MAN HOURS		Man Hours	Man Hours	Man Hours	Man Hours	Man Hours	Man Hours	Man Hours	Man Hours	YEAR TO DATE				
PROJECT MAN HOURS			Mail Hours	Mail Hours	Mail Hours	Mail Hours	Mail Hours		Mail Hours					
	Total Man Hours	0	0	0	0	0	0	0	0	0	0	0	0	-
Average NUMBER OF STAFF working	ber day	AVG # of Staff	AVG # of Staff	AVG # of Staff	AVG # of Staff	AVG # of Staff	AVG # of Staff	AVG # of Staff	AVG # of Staff	YEAR TO DATE				
Total Number of A	VERAGE Staff per working day	0	0	0	0	0	0	0	0	0	0	0	0	N/A
INJURY Incidents	VERAGE Starr per working day	MONTH	MONTH	MONTH	MONTH	MONTH	MONTH	MONTH	MONTH	MONTH	MONTH	MONTH	MONTH	YTD
First Aid			Homm	Homm		Homm	Holdin	Homm		Homm	Homm	Homm	Homm	-
Medical Aid														-
Medical Aid w/ Modified Work														-
Lost Time Fatality				-		-	-							-
Occupational Illness														-
Non-Occupational Illness														-
# of Modified Work Days														-
# of Lost Time Days			0.00		0.00							0.00		-
	tal Number of Injury Incidents	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	rdable Injury Frequency (TRIF)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Los	t Time Injury Frequency (LTIF)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Safaty Incidents	Lost Time Severity Rateing	MONTH												YTD
Safety Incidents Equipment Failure		MONTH	MONTH	MONTH	MONTH	MONTH	MONTH	MONTH	MONTH	MONTH	MONTH	MONTH	MONTH	- 110
Fire				1		1	1	1				1	1	-
Injury / Illness														-
Motor Vehicle Accident														-
Near Miss OHS Order														-
Property / Asset Damage				-		-	-							-
Property Damage				1		1	1							-
Respectful Workplace														-
Safety Violation / Non- Compliance														-
Security / Theft Vandalism														-
Stop Work Order - Safety														-
Stop Work Order Surety	Total Safety Incidents	0	0	0	0	0	0	0	0	0	0	0	0	-
Environmental Incidents		MONTH	MONTH	MONTH	MONTH	MONTH	MONTH	MONTH	MONTH	MONTH	MONTH	MONTH	MONTH	YTD
Air Degradation Incident														-
Bio Security EPP/EMP Non-Conformance														-
Hazardous Materials Incident														-
Permit Non-Compliance														-
Soil Degradation Incident														-
Spill Incident														-
Trespass Incident Waste Management Incident														-
Water Degradation Incident														-
Wildlife Incident														-
Other														-
Stop Work Order - ENVIRO	Total Enviro Incidents	0	0	0	0	0	0	0	0	0	0	0	0	0
HSE Proactive Tracking	Total Enviro Incidento	MONTH	MONTH	MONTH	MONTH	MONTH	MONTH	MONTH	MONTH	MONTH	MONTH	MONTH	MONTH	YTD
Training Courses Conducted (First Aid, Rig	ging Hoisting, Etc)													
Daily Tailboard / FLHA														
Pre-Use Vehicle & Equipment Inspections														
HSE Meetings (Weekly HSE, JHSC, Forem HSE Emergency Equipment Inspection (Fin	ian) re Evt. FA Kit. Spill Kit)						<u> </u>					───		
Rigging Inspections	C EXCLA KIC SPIL KIC											+		
Hazard ID				i i	1	i i	İ	1	1	i	1	1	1	
Workplace Inspections (Field, Office, Sho	p)													
Audits												<u> </u>		-
PPE Inspections				l		l	<u> </u>					┥─────		-
HSE Observation Emergency Preparedness / Rescue Drills				ł		ł	<u> </u>					───		<u> </u>
Environmental Inspection							1					1		
Bio Cleaning Records												1		
Wildlife Sighting Records														-
			Reports must	be submitted o	on a MONTHLY	basis no lat <u>er t</u>	han the 4th bu	usiness day of e	ach month.					
				All reports m	hust be submit	ted via email to	Safety@volta	gepower.ca						

Appendix H– Traffic Management Plans







PART 1c:

Valard SOP 27.004C Emergency Reponse Procedure Manitoba-Minnesota Transmission Project (MMTP) & Section 12 - Emergency Preparedness

Corporate H	ealth Safety	and Environme	ental
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SOP 27.004 C Emergency Response Procedure Manitoba-Minnesota Transmission Line Project (MMTP)

Doc. Number Safe O

Safe Operating Procedure 27.004 Revision: 2

Date: May 2019

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Definitions:

"AED" means automated external defibrillator.

"EMS" means emergency medical services.

"ERP" means emergency response plan.

"GHS" refers to the globally harmonized system of classification and labelling of chemicals.

"GPS" means global positioning system.

"HS&E" means health, safety and environment.

"HS&E Manual" means Valard's Health Safety & Environmental Manual, latest revision.

"Person in Charge" refers to the designated person in charge of a Valard worksite.

"PPE" means personal protective equipment.

"RCMP" means Royal Canadian Mounted Police.

"ROW" refers to the right of way.

"SDS" means safety data sheet.

"TDG" refers to transportation of dangerous goods.

"Valard Safety" refers to Valard's Corporate Safety department.

"W.H.M.I.S" means workplace hazardous materials information system.

1.0 INTRODUCTION

1.1 EMERGENCY RESPONSE POLICY

In any emergency, actions for safeguarding the health and safety of project personnel and the public will take priority over any other aspect of the emergency.

1.2 PURPOSE

This plan has been developed to serve as a guideline to ensure that responses to emergencies are safe, prompt, organized and effective.

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1.3 SCOPE

This plan covers all aspects of the project and shall be used when dealing with emergency situations including:

- major accidents involving personal injuries;
- emergencies involving acute chemical, pathological, toxic or radioactive hazards;
- natural emergencies including flooding, gale force winds, snow blizzards
- fire including wildfires and industrial or equipment fires; and
- explosions, terrorism or serious workplace violence.

2.0 RESPONSIBILITIES

Foreman/ Person in Charge will be accountable for the implementation of this ERP and the development and implementation of site-specific ERP's for their areas of responsibility. As appropriate, Foreman/ Person in Charge will assume leadership, and contact appropriate Valard Management, contractor representatives, and the appropriate emergency response agencies. Foreman/ Person in Charge will provide on-site emergency leadership to coordinate the response effort, direct the orderly shutdown of operations, secure the site, evacuate personnel, ensure that outside emergency services such as medical, police, regulatory agencies, or fire departments are called.

3.0 PREVENTION

Valard is committed to maintaining a safe operation and protecting the environment. Valard will regularly communicate with workers and contractors to identify hazards and opportunities for improvement, implement controls, conduct training and monitor operations in an effort to prevent emergencies from occurring. The company will also ensure that regulatory requirements are identified and implemented as appropriate.

4.0 PREPARDNESS

The ERP documents actions to be taken for a safe, prompt, organized and effective response to emergencies. This plan will be updated on an annual basis, and as opportunities for improvement are identified or regulatory requirements change.

4.1 TRAINING

ERP training will be provided to ensure all workers/ subcontractors understand emergency procedures, what they are expected to do and from whom they should take direction. Project management/safety will review job specific ERP's with all workers prior to beginning the work.

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All workers will also be trained in the use of the emergency equipment required to be at their work site. This includes, but is not limited to, fire extinguishers, spill kits and eye wash kits.

Additional training as per Valard's Health and Safety Manual Section 08 Orientation, Training and Meetings Policy will be required for the following circumstances:

- Workers who works with or may be exposed to a hazardous product in the course of the worker's work must be trained in W.M.H.I.S/GHS.
- TDG training will be required for any individuals transporting dangerous goods.

4.2 EQUIPMENT

Emergency response equipment specific to the emergency response needs of each work site (e.g. tower sites, office trailers, yard) shall be available to workers. At a minimum, all work sites shall have the following:

- Fire Extinguisher,
- First Aid Kit, and
- Air Horn.

Additional work site emergency response equipment may include, but is not limited to:

- Eye wash kit where hazardous, irritating or corrosive substances are used;
- Equipment spill kits on all powered mobile equipment;
- AED All supervisor's trucks, office trailers and as required in additional locations;
- Tower rescue kit all personnel who ascend towers without mechanical means will be required to have a tower rescue kit on site; and
- Bucket rescue & escape kit all equipment that is used to elevate personnel for the purpose of aerial work (e.g. manlift, manbasket) will be required to have a bucket rescue and escape kit within the basket of that equipment.

Emergency response equipment will be maintained at each work site. Emergency response equipment will be inspected annually or as required, and when operations move to a new site.

4.3 TESTING

Emergency response plan shall be tested by Valard's safety supervisor prior to the start of the project to ensure that emergency measures are appropriate and function as stated in this document. Project management will determine the scope of the emergency response plan test (i.e. which work sites and testing

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methodology) and shall provide additional workers to the safety supervisor as needed.

Emergency response drills will be conducted periodically as per Valard's HS&E Manual Section 12 Emergency Preparedness Policy (at project start and annually) to test responses, assist with training, ensure competency and identify opportunities for improvement. Records of emergency response drills and associated corrective actions will be maintained (see Section 8.5).

4.4 EMERGENCY CONTACT LIST

An emergency contact list for project personnel and outside agencies will be provided to the foreman/Person in Charge for each work group as part of their foreman binder. The foreman binder will also contain a copy of this emergency response plan.

All subcontractors working on the project shall receive a copy of the job specific emergency response plan during their orientation, which will include the emergency contact list.

Office trailers shall have the emergency contact list posted on their safety bulletin boards.

4.5 EMERGENCY ACCESS, ROUTES AND SITE LOCATIONS

Manitoba Hydro to provide Valard with ROW access locations and access point naming conventions. Upon doing so Valard shall provide the local EMS station with this information to ensure expediency during medical emergencies. Emergency response plan will be updated to include a map of access points and appropriate naming conventions.

Crews will determine appropriate work site specific muster point location during initial tailboard meeting at new site. Muster point locations will be determined based on site conditions and work activities. Muster point location and nearest site access point will be documented on daily Valard Tailboard.

4.6 SECURITY PLAN

All transmission line jobs shall perform a hazard assessment to determine appropriate security requirements at material/equipment storage locations, camp locations and work sites with valuable material/equipment present.

The following security precautions shall be taken:

- All material placed on a site shall be placed to prevent individuals from being able to see any spools of wire and all valuable items.
- Where there is local traffic in the material laydown area a sign stating that "No Entry is Permitted" and that it is monitored 24 hours a day.

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- Any outside individuals that are seen in the area are to be informed that if they are seen in the area again without permission shall be notified to the local police.
- In cases where there are individuals that are not permitted are seen then a security firm shall be hired to patrol the area or a Valard employee shall have a trailer located in the material laydown area which contains sleeping accommodate to prevent any others from unlawfully entering Valard's sites.

Valard Construction will also ensure that appropriate site security measures are taken to protect the public from the hazards present on the project. Valard shall erect and properly maintain safeguards for the protection of the public and shall post danger signs warning against unusual hazards.

Valard shall ensure that visual and physical barriers are used effectively throughout the site to restrict access to work areas, to protect personnel and equipment, and to identify potential hazards.

Some examples of barriers include, but are not limited to:

- areas marked with red flagging tape "Do Not Enter";
- areas marked with yellow flagging tape "Proceed With Caution";
- barricades to mark open excavations, craning operations, etc.; and
- barricades to enable traffic control;

5.0 EMERGENCY RESPONSE

- Each emergency situation will be unique; however the basic steps needed to ensure the safety of responders, save lives and limit or prevent further injury or damage to property and the environment will be similar.
- Safe response to an emergency involves following a pre-determined plan of action. Workers are expected to understand and follow the correct procedures to identify hazards, assume a leadership or support role, direct the orderly shutdown of operations, secure the site, evacuate personnel, provide first aid and transport of injured, ensure that outside emergency services such as medical, police, regulatory agency or fire departments are called, and notify the on-site supervisors and senior management of the emergency.
- When reporting, include your name, location, contact number, type of incident, type and number of injuries, assistance required, actions planned and any other information you feel is important.
- Keep lines of communication open until help arrives or the emergency is resolved.
- Attempt to ensure the earliest possible response and control of the emergency.

Only respond to an emergency when safe to do so.

• Prior to entering an emergency situation assess all hazards.

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- Look for dangers from hazardous materials, potential falling objects or explosions, road traffic or moving equipment, flammable materials, electrical conductors, water or soil movement, other individuals or any issues that are currently or could become hazardous.
- Do not enter an emergency situation until hazards are controlled and you have the proper equipment, lines of communication, personnel, support and confirmation that the site is safe. This includes controlling traffic on roads, placement of emergency flares or markers for traffic control, shutting down and locking out of equipment and whatever other actions may be required to eliminate risks.
- Where necessary evacuate and secure the site to keep others out until help arrives or it is safe to enter.
- Follow directions when provided by regulatory agencies.

5.1 MEDICAL EMERGENCY RESPONSE

When responding to medical emergencies, take steps to ensure the safety of all responders while providing emergency first aid to the injured. Make the best use of all qualified and trained first aiders at the site.

For a medical emergency take the following steps as appropriate:

- Take charge or appoint a qualified first aider to take charge.
- Assess and control hazards to ensure the safety of yourself and others.
- Call for support or delegate someone to call for you. Call for emergency medical service if required.
- Contact the supervisor and notify them of the incident. Details should include location, types of injuries, number injured, your name and contact number.
- Secure the area, keep others a safe distance away, as appropriate.
- When safe, provide first aid as appropriate, or until required help can arrive.
 - Wear proper PPE to protect yourself.
 - Determine the history what happened?
 - Look for signs indications of injury or illness.
 - Look for symptoms how the casualty feels.
 - Check to ensure a clear airway.
 - o Check to ensure effective breathing.
 - Check to ensure effective circulation.
 - Treat for injuries and shock.
- Provide support to and assist emergency medical services as required or directed.
- Transport during a medical emergency shall be provided by a licensed ambulance service which is operated within 30 minutes' travel time of the workplace or camp. Camp facilities will have access to 24hour emergency transport via nearby licensed ambulance services.
 - Ambulance service(s) to be provided with ROW access point information in order to facilitate a quick response time.

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- Crews shall document (and update when necessary) the nearest ROW access point on daily tailboards in order to ensure ambulance is provided with appropriate directions.
- If a licensed ambulance service is not operated from within 30 minutes' travel time of a worksite, Valard shall ensure a means of transportation, which is capable of accommodating an occupied stretcher, and is available for the injured worker.
- The Medical Transportation Coordination Centre (MTCC), is the primary contact point for the 24 hours a day, 7 days a week 911 emergency response system for the dispatch of ground and air ambulances as well as medical first response in Manitoba. Where cellular phone capabilities may be limited (southern portion of project), MTCC can be contacted directly at 204 425-3222 (Vita Exchange) using satellite phone or other compatible device.

5.2 ON-SITE MEDICAL COVERAGE

On- site medical coverage, including number of first aiders, shall be determined based on the requirements of Manitoba Workplace Safety and Health Regulation Part 5 First Aid.

The following tables shall be used as minimum standards for the number and level of training of first aiders that must be present during working hours at a workplace:

	TABLE 1		
Number of	Close Workplace	e	
workers per shift	Low Hazard Work	Other Work	
1-10	—	—	
11-40	1 Basic	1 Intermediate	
41-100	1 Basic	2 Intermediate	
101-199	2 Basic	2 Intermediate	
200 or more	3 Basic	3 Intermediate	
	TABLE 2		
Number of	Distant Workpla	ce	
workers per shift	Low Hazard Work	Other Work	
1-10	_	1 Basic	
11-40	1 Basic	1 Intermediate	
41-100	1 Basic	2 Advanced	
101-199	2 Basic	2 Advanced	
200 or more	3 Basic	3 Advanced	
	TABLE 3		
Number of	Isolated workpla	ice	
workers per shift	Low Hazard Work	Other Work	
1-10	1 Basic	1 Intermediate	
11-40	1 Basic	1 Advanced	
41-100	2 Basic	2 Advanced	
101-199	2 Basic	3 Advanced	
200 or more	3 Basic	4 Advanced	

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Outside agencies, such as EMS, may be utilized on the project depending on the severity of the injury. EMS stations located near the work will be provided with site access and tower location maps, information on the type of work being performed and information on the potential injuries that could occur during the work.

5.3 FIRE EMERGENCY RESPONSE

Manitoba Forest Fire Emergency 1-800-782-0076

Workers should only attempt to contain a fire after all hazards have been identified and it is safe to do so. When safe, take the following steps as appropriate:

Equipment or Industrial Type Fire:

- **GET HELP**. Contact the supervisor and notify them of the fire. Indicate location, size of fire, 'what' is burning, resources available, your name and contact number.
- Sound alarm (operate air horn three times & short blasts) to notify site personnel.
- All workers must go directly to the muster point and remain there until further direction is provided by the person in charge.
- If safe, shutdown machinery cut off fuel and high voltage power supplies, close doors and windows, remove flammable sources and evacuate buildings.
- Immediately report the fire to Valard, client and contractors.
- Approach a fire from the 'up-wind' side. NEVER breathe in smoke.
- Assess the fire and if safe to do so take action.
- Only attempt to extinguish a fire if you have been properly trained in the use and limitations of the equipment at hand.
- Use an appropriate method to fight the fire. This may include:
 - o remove the fuel isolate the area on fire,
 - remove oxygen use chemical foam, dry powder or carbon dioxide extinguishers,
 - o cool the fuel use water to cool, or
 - isolate the fire -- protect surrounding equipment and property while leaving the fire to burn itself out.
- When using a portable fire extinguisher, always direct the extinguishing powder towards the base of the fire, using a sweeping (side-to-side) motion.
- Be aware of your surroundings. Do NOT allow yourself to get 'boxed-in' or 'cornered' by fire. ALWAYS have an escape route and Do NOT put yourself at unnecessary risk.

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5.4 HAZARDOUS MATERIAL AND SPILL EMERGENCY RESPONSE

When responding to spills of hazardous materials in quantities that could affect worker health or safety, or the environment, attempt to contain the spill only after all hazards have been identified, controlled, and safe to do so. Powered mobile equipment will have spill kits which can be utilized by the operator or individual(s) in the vicinity of the spill. SDSs are to be referred to prior to using spill kit to ensure contents of spill kit are appropriate for hazardous material clean up.

When safe, take the following steps as appropriate:

- Notify the crew and stop operations if workers, the environment or infrastructure are endangered and move a safe distance away up-wind or crosswind.
- Contact the supervisor and notify them of the spill or hazardous material. Details should include location, type of material and volume, your name and contact number.
- If determined serious, sound alarm by operating air horn three times (short blasts) to notify all personnel on site.
 - All workers must go directly to the muster point and remain there until further direction is provided by the Person in Charge.
- Keep a safe distance and approach from up-wind. Look for WHMIS or TDG safety marks to identify the spilled or hazardous material, and assess the hazards.
- Refer to Product *SDS*, and/or call CANUTEC for information about appropriate response.
- Report the hazardous material or spill to the appropriate authorities including environment, TDG, Valard, Client contact, Manitoba Sustainable Development, contractors and others in the area.
 - Manitoba Hydro's Externally Reportable Releases September 2018 document should be used to assist in determining reporting requirements.
- For releases or spills, if safe to approach and you have the required PPE, stop the product flow and / or secure the site. Act quickly. Shut off pumps, close valves, etc.
- Warn other people in immediate vicinity. Take precautionary measures such as enforcing "No Smoking" and extinguishing any flame or sources of ignition.
- Contain the spill. Block off drains, culverts, ditches. Surround product with dirt or clay, peat, straw, sand, or commercial absorbents to assist with containment.
- Be aware of your surroundings. Do NOT allow yourself to get 'overcome' by toxic fumes. ALWAYS have an escape route and Do NOT put yourself at unnecessary risk.
- Develop a remediation plan with regulatory approvals and commence recovery, clean-up and restorative action as appropriate.

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5.5 ENVIRONMENTAL EMERGENCY RESPONSE

When responding to natural emergencies including flooding, gale force winds or severe snow storms assess all hazards prior to determining the appropriate course of action:

- Notify the crew and stop all operations.
- Contact the supervisor and notify them of the natural emergency.
- Sound alarm by operating air horn three times (short blasts) to notify all personnel on site.
- If safe, all workers must go directly to the muster point and remain there until further direction is provided by the Person in Charge.
- Assess all hazards and determine best control available to minimize the hazards.
- Identify all resources required and all resources available.
- Determine where the available safe escape routes and safe areas are.
- Do not attempt to travel if safe routes are not currently available and there is less risk by staying at the current location.
- Stay together and be aware of your surroundings.
- Do NOT allow yourself to get 'boxed-in' or 'cornered'. ALWAYS have an escape route and Do NOT put yourself at unnecessary risk.

5.6 MOTOR VEHICLE ACCIDENT EMERGENCY RESPONSE

When responding to a motor vehicle accident, take the following steps as appropriate:

- Control all potential traffic hazards.
- Ensure it is safe to approach a motor vehicle accident. Look for hazardous materials, leaking or spilled fuel, electrical shorts, smoke or fire.
- Notify the person in charge for the area and ask for assistance.
- Notify local authorities immediately should emergency assistance be required. Provide information including location, type of accident, numbers and severity of injured, your name and contact number.
- If the vehicle is on its side, be aware of the potential for the vehicle to fall onto its roof or wheels and stay clear. If possible, stabilize the vehicle.
- When safe, provide medical assistance to the injured, including provision of blankets or clothing to keep them warm, or shade in hot weather.
- If flames are visible, fire responders should attempt to safely put out the fire. However, **Do NOT** place yourself at risk. Vehicle fires can be difficult to extinguish due to the materials contained in a motor vehicle (plastics, rubber, oils, and fuel).
- Extreme caution must be exercised when entering inside of a vehicle involved in an accident as vehicle air bags may deploy after the vehicle has come to a stop.

5.7 EMERGENCY SCENES

- The scene of a major incident must not be **disturbed** unless:
 - o you are permitted to do so by an WS&H officer, or a peace officer,

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- o you must attend to someone who has been injured,
- o you must prevent further injuries, or
- o you must protect property that is endangered as a result of the incident.

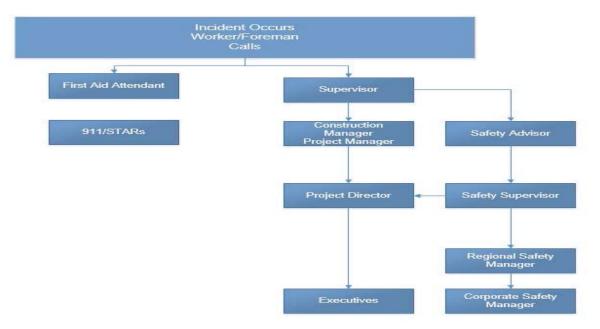
5.8 EMERGENCY RESPONSE FOR EXPLOSIONS, INCIDENTS OF TERRORISM OR SERIOUS WORKPLACE VIOLENCE

When responding to emergencies involving explosions, incidents of terrorism or serious work place violence, personal safety and the safety of co-workers and the public take priority over other factors. The following steps should be followed as appropriate:

- Notify the crew and stop all operations.
- Sound alarm by operating air horn three times (short blasts) to notify all personnel on site.
- All workers must go directly to the muster point and remain there until further direction is provided by the Person in Charge. Account for all workers.
- If safe, when leaving the site lock-up, eliminate all ignition sources, extinguish open flames & shut off all vehicles & equipment that will be left on site.
- If not safe, immediately vacate the site and move to a safe muster point.
- Contact the person in charge and notify them of the emergency. Details should include location, type of emergency, your name and contact number.
- Immediately report the incident to the appropriate authorities including the RCMP, Valard, client, contractors and others in the specific area.
- Act quickly to remove yourself and others from danger.
- Warn other people in the vicinity. Take further precautionary measures as appropriate such as restricting entry into the area.
- Wait for assistance from professional responders or local authorities; do not put yourself at further risk.
- Provide assistance to, or call for help for injured victims.
- All workers must remain at the muster point until the Person in Charge provides further direction.

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Incident Notification Flow Chart



6.0 Evacuation Procedures

If an emergency or hazardous situation on or near the worksite threatens the health or safety of site personnel, and cannot be safely managed with the resources at hand, a site evacuation should proceed as follows:

- warn all workers in the vicinity of the potential hazard;
- immediately notify the Supervisor that the site is being evacuated, the reason for evacuation and the location of the emergency muster area if different than the site designated muster area;
- sound alarm by operating air horn three times (short blasts) to notify all personnel on site;
 - all workers must go directly to the muster point and remain there until further direction is provided by the Person in Charge.
- conduct the evacuation in an orderly fashion & conduct a head count to account for all workers;
- provide first aid if required; and
- maintain radio/phone contact if possible; and wait for assistance and further instructions from the Person in Charge.

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6.1 EMERGENCY MUSTER LOCATIONS

Muster locations should be identified and clearly communicated for each work site. Muster points will typically be located at ROW access points for those working on the ROW. In the event that a designated muster location cannot be used for an emergency, workers will move to an emergency muster location upwind or crosswind from the worksite at a safe location up to 500 meters or more from the incident site.

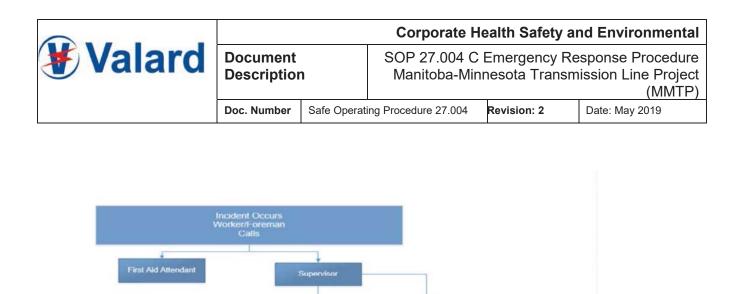
7.0 Emergency Communications and Notification

7.1 COMMUNICATION METHODS

- All project vehicles will have a two- way radio that can contact supervision or safety, as well as other worker vehicles, in the event of an emergency.
- Work group(s) will have satellite phones and/or cell phones that can communicate with **RCMP/Ambulance/Fire.**
- Alarm systems, air horns, vehicle horns, cell phones and radios will be used at worksites to provide notification for emergencies.
- During initial ERP test, safety supervisor will note areas of poor coverage encountered on the transmission line. Project management will be informed of poor coverage areas and appropriate means of communication are to be determined. This may include, but is not limited to:
 - Cell phone boosters for vehicles,
 - SPOT GPS messaging system, and
 - o Repeaters.

7.2 NOTIFICATION OF INCIDENTS

- All workers must report all hazards, near misses and incidents to their foreman or supervisor immediately.
- Foremen and supervisors are responsible to report all hazards, near misses and incidents to the site person in charge.
- The Foreman/Person in charge is responsible to report all incidents to the project manager and to the safety advisor.
- The Valard project manager and the safety supervisor will notify corporate management and client of the incident and, maintain appropriate lines of communication.
- The responsible contractor will notify Manitoba Workplace Safety & Health Division immediately for all reportable incidents as specified in the regulations.
- The responsible contractor will work with the safety supervisor to notify the RCMP and other regulatory agencies for all other reportable health, safety and environmental incidents as specified in the regulations.





7.3 EMERGENCY INFORMATION MANAGEMENT

• Supervisors, or a designate, will maintain a written log of activities during the emergency (date, time, weather conditions, and actions taken). Each entry in the log should be initialed and the information must be accurate and continuously updated until the emergency conditions have ceased.

Regional Sa

• Workers are not to release any information to the media or public during an emergency (see below).

8.0 POST EMERGENCY PROCEDURES

8.1 MEDIA NOTIFICATION

• After Valard and Client Senior Management team has determined that the emergency situation has been controlled, the media and other interested individuals may be notified as appropriate.

8.2 INCIDENT INVESTIGATION

 The Contractor(s) involved in the emergency response, along with Valard & Client representatives, will conduct an investigation in cooperation with all other relevant investigative bodies or regulatory officers, for the purpose of determining causes and steps that should be taken to prevent re-occurrence of similar incidents.

(If required)

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8.3 CLEANUP

- After an emergency, clean up the site, returning it as closely as possible to its original state. Cleanup procedures may include:
 - o protection of evidence,
 - o proper disposal of hazardous wastes,
 - hiring of specialist cleanup services,
 - o documentation of cleanup activities, and
 - restoration of the worksite and surrounding area (including vegetation).

8.4 RETURN TO WORK

- Crews should proceed with a systematic return to operations. This may include:
 - o determination of the extent of damage,
 - o isolation and / or repair of damaged equipment,
 - taking necessary steps to prevent further damage and control of hazards in damaged areas,
 - $\circ\,$ barricading damaged areas and erecting temporary shelters as necessary, and
 - o recall of all appropriate personnel.

8.5 RECORDS

• Records of emergency response drills, first aid treatments, emergency response reports, cleanup and remediation and follow-up including investigations and corrective actions will be maintained on file for a minimum of 3 years.

Corporate Health Safety and Environmental

Document Description

Valard

SOP 27.004 C Emergency Response Procedure Manitoba-Minnesota Transmission Line Project (MMTP)

		Doc. Number	Safe Operating Procedure 27.004	Revision: 2	Date: May 2019		
		•					
			US INJURY PROCEDURES				
1.		•	le first aid immediately. Do not	move injured wo	orker(s) unless		
	they are in imminent	-					
2.			attendant and notify Valard pe	-			
3.	•		ed worker(s) and render lifesav	ing first aid.			
4.	Initiate medical respo		-				
			phone to call emergency servi				
5.			, provide location of incident si		s point (w/ GPS		
		,	jury and number of people inju				
6.	Under the direction of	f the first aider	, the first aider will direct to hav	ve the patient(s)	prepped and		
	secured to be either:						
	a. picked up						
	•		point for the ambulance to pic		person.		
7.			re first aider rides with injured				
8.		• •	vices contacted and under their				
			I in the most expedient method	possible to a me	edical facility as		
	directed by emergend	•					
9.			injured person and follow any	medical directior	n provided by		
	emergency services t						
10.			ing an occupied stretcher to be		ort. Ensure a		
	driver and first aid pe		ble to transport the injured per	son.			
			FIRE PROCEDURES				
1.			n activities immediately on det				
2.		• •	ed to the Valard Construction N	-			
3.			le: location, size, wind directior		-		
4.		s will be suspe	nded and all equipment and tra	ined personnel v	vill be applied to		
_	action the fire.		.				
5.		-	fire must still suspend work ac	tivities and beco	me prepared to		
	evacuate the area to						
		-	designate will report to Forest	-	nt.		
7.	. An investigation and report of the fire will be conducted when it is safe to do so.						
	SPILL PROCEDURES						
	Once the spill material is identified the MSDS must be consulted for personal protection, clean up						
	and disposal requirements.						
	Locate the source and try to stop the spill where it originates.						
	Contain the spill material.						
	Notify the Valard Cons						
			should include: location of spil				
			ent and man power needed to o		up the spill.		
6.	Valard Project Management will notify the appropriate regulatory agencies.						

7. An investigation and report will be conducted and completed for all spills.

			Corporate H	ealth Safety a	nd Environmental
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9.0 MMTP EMERGENCY CONTACT INFORMATION

Emergency	Agency/Service	Phone Number
		911
	Beausejour District Hospital	(204)268-1076
	Ste-Anne Hospital	(204) 422-8837
Injury	Bethesda Regional Health	(204)326-6411
	Centre	
	Vita & District Health Centre	(204) 425-3804
	Anola Fire Department	(204) 981-4042
Fine	Ste Anne Fire Hall	(204) 422-8882
Fire	Steinbach Fire Department	(204) 326-1109
	Vita Fire Hall	(204) 425-3600
	RCMP Steinbach	(204) 425-3600
Vandalism, Bomb threat	RCMP Sprague	(204) 437-2041
	RCMP Oakbank	(204) 444-3847
Government Emergency	Workplace Safety & Health	
Contacts	Division (after hour's emergency)	1-866-888-8186
	Forest Fire Emergency	1-800-782-0076
Poison Control Centre	Provincial Reporting	1-800-567-8911
	VALARD	
Jaimie Creasy	Project Manager	1-204-509-0946
Ryan Budzinski	Construction Manager	1-403-333-9943
Jordan Boudreau	Quality Manager	1-431-999-1782
lqbal Brar	Safety Manager	1-204-880-2152
Derrick Gould	Aboriginal Relations	1-204-880-8677

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Emergency	Phone	Email	Address
Response			
Contacts			
Canada Border Services- Piney	204-423-2153		Box 150, Piney, MB R0A 1K0
Port of Entry			
United States Border Patrol	1-218-689-4333 1-218-386-1802		502 State Ave, Warroad, MN 56763, USA
Manitoba Sustainable Development Office- Sprague	204-437-2348	<u>dan.cooper@gov</u> .mb.ca	Box 70, Sprague, MB R0A 1Z0
Manitoba Sustainable Development Office- Winnipeg	204-470-7548	<u>alvin.dyck@gov.</u> <u>mb.ca</u>	1007 Century St, Winnipeg, MB R3H 0W4
RCMP Sprague	204-437-2041		Box 29, Sprague, MB R0A 1Z0
RCMP Steinbach	204-326-4452		100 PTH12 North, Steinbach, MB R5G 1T4
RM of La Broquerie	204-424-5251	<u>mec@rmlabroqu</u> <u>erie.ca</u>	Box 130 (123 Simard St), La Broquerie, MB R0A 0W0
RM of La Broquerie	204-424-5251		Box 130 (123 Simard St), La Broquerie, MB R0A 0W0
RM of Piney	204-437-2284	<u>martin@rmofpin</u> <u>ey.mb.ca</u>	Box 48 (6092 Boundary St), Vasser, MB R0A 2J0
RM of Springfield	204-444-4308	kbourns@rmofs pringfield.ca	Box 219 (100 Springfield Centre Drive), Oakbank, MB R0E 1J0
RM of St Anne	204-422-8209	<u>marc.robichaud</u> @stannemb.ca	Box 6, Grp 50, RR1 (395 Traverse Road), St Anne, MB R5H 1R1
RM of Stuartburn	204-425-3218	acao@rmofstuart burn.com	Box 59 (108 Main St N), Vita, MB R0A 2K0
RM of Tache	204-878-3321		28007 Mun 52N, Dufresne, MB R5K 0N7
RM of Tache	204-878-3321 ext 114	<u>monique@rmtac</u> <u>he.ca</u>	28007 Mun 52N, Dufresne, MB R5K 0N7

	Corporate Health Safety and Environmental				
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Emergency response agencies	Address	Contact number				
(RM = Rural Municipality)	*in case of emergency call 911. Other numbers listed are for administrative					
	purposes					
Police / RCMP						
Sprague RCMP	2151 Main St	204-437-2041				
	Sprague MB					
Steinbach RCMP detachment	100 PTH 12 N, Steinbach, MB	204-326-4452				
Fire / Paramedic	*in case of emergency call 911. Other nur	mbers listed are for administrative				
	purposes					
RM of La Broquerie Fire	Box 130, La Broquerie, MB	204-424-4251				
Department						
RM of Springfield - Fire and	Box 219, 100 Springfield Centre Drive,	204-981-4042				
Rescue Service	Oakbank MB					
RM of Tache Fire Department	PO Box 100	(204) 878-3321				
	28007 Municipal Road 52N., Lorette MB					
RM of Stuartburn – Fire	Box 59, Vita MB 108 Main Street North	204-425-3218				
Department						
RM of Ste Anne Fire	395 Traverse Road	204-422-8882				
Department	Box 6, Grp 50, RR 1					
	Ste. Anne, MB R5H 1R1 (units in Town					
	of Ste. Anne and Richer)					
Town of Sainte-Anne Police	608 Traverse Road, Sainte Anne MB	204 -422-8209				
Department						
Town of Sainte Anne – Fire	736 Traverse Road, Sainte Anne, MB	204-422-5293				
Department						



Corporate Health Safety and Environmenta						
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10.0 LIST OF FIRST AIDERS

Name:	Type of First Aid Certification/Expiry:

A		Corporate Health Safety and Environmental				
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11.0 DIRECTIONS FROM CAMP TO NEAREST HOSPITAL

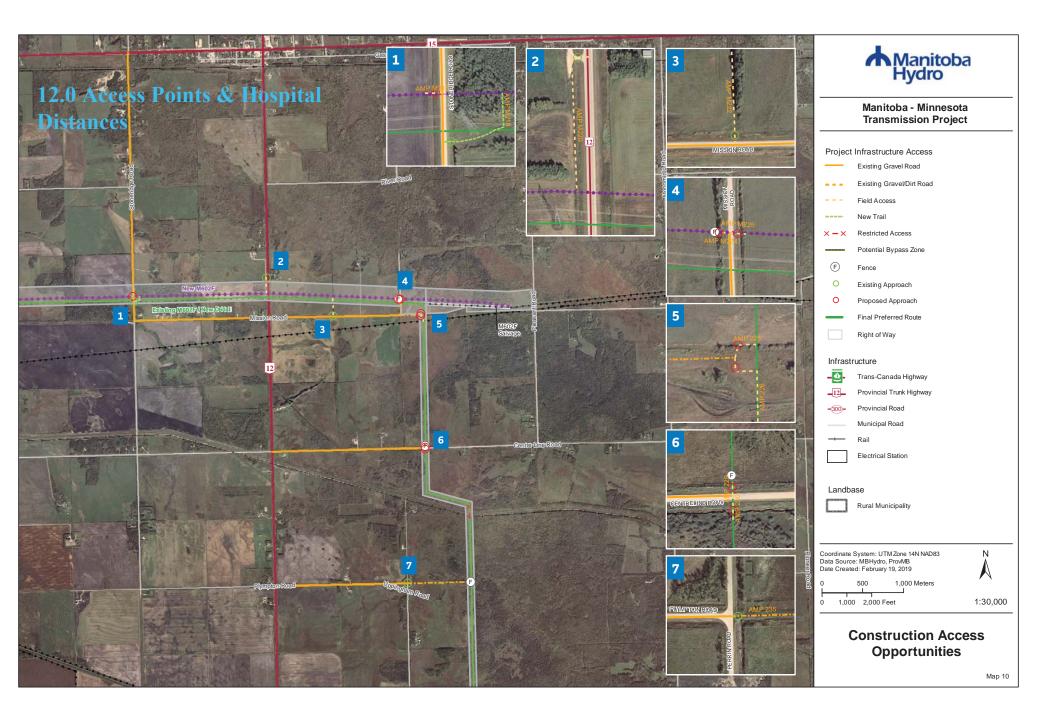


	min (10.6 km) 🛛 🔁 🗲 🖷	9
Best	route	
49.	5237723, -96.5468767	
t	Head south toward MB-52 E	
r	Turn right at the 1st cross street onto MB-52 W 9.5 km	
r+	Turn right onto Barkman Ave	

٦	Turn left onto Henry St
	400 m
1	Turn left

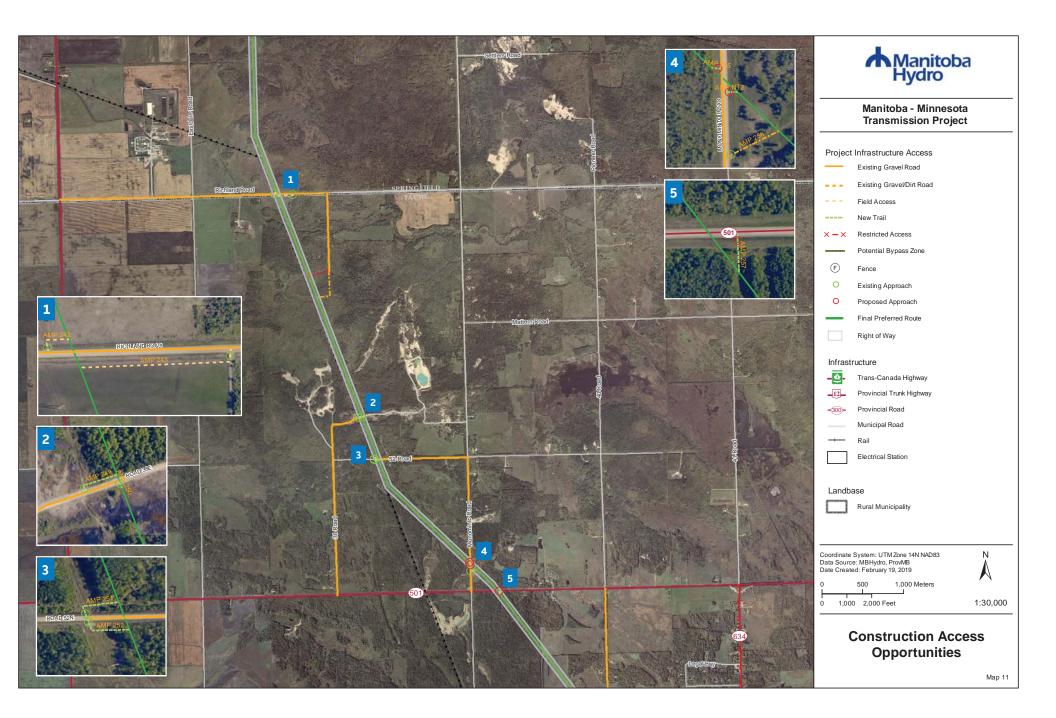
Destination will be on the left 23 m

Bethesda Regional Health Centre 316 Henry St, Steinbach, MB R5G 0P9

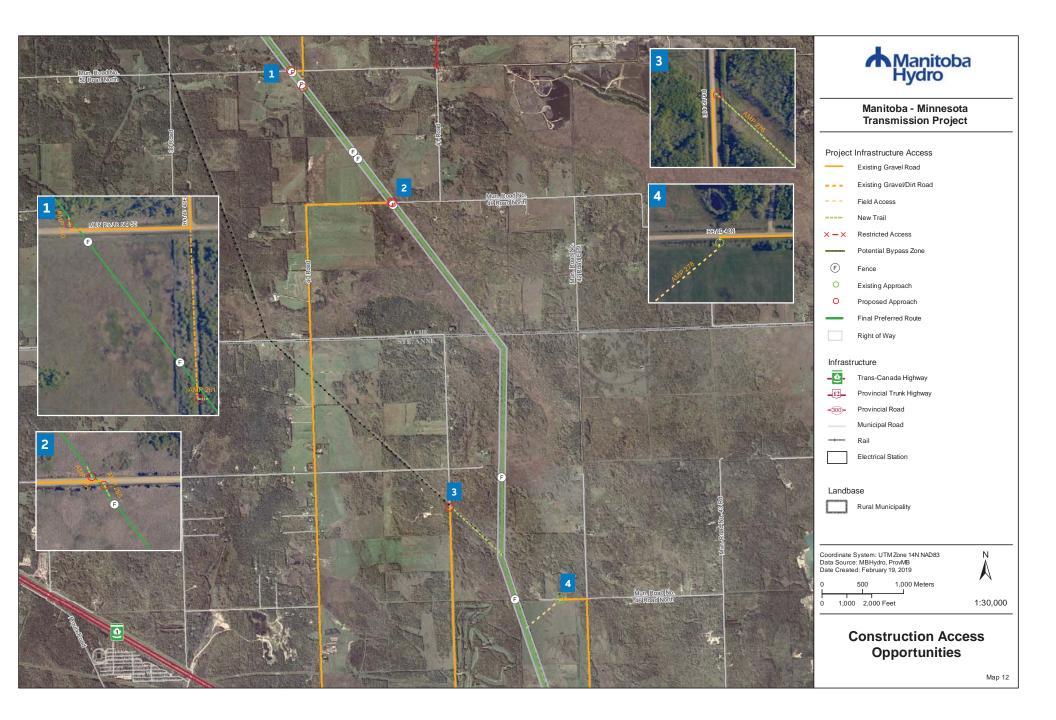


Hospital Distances

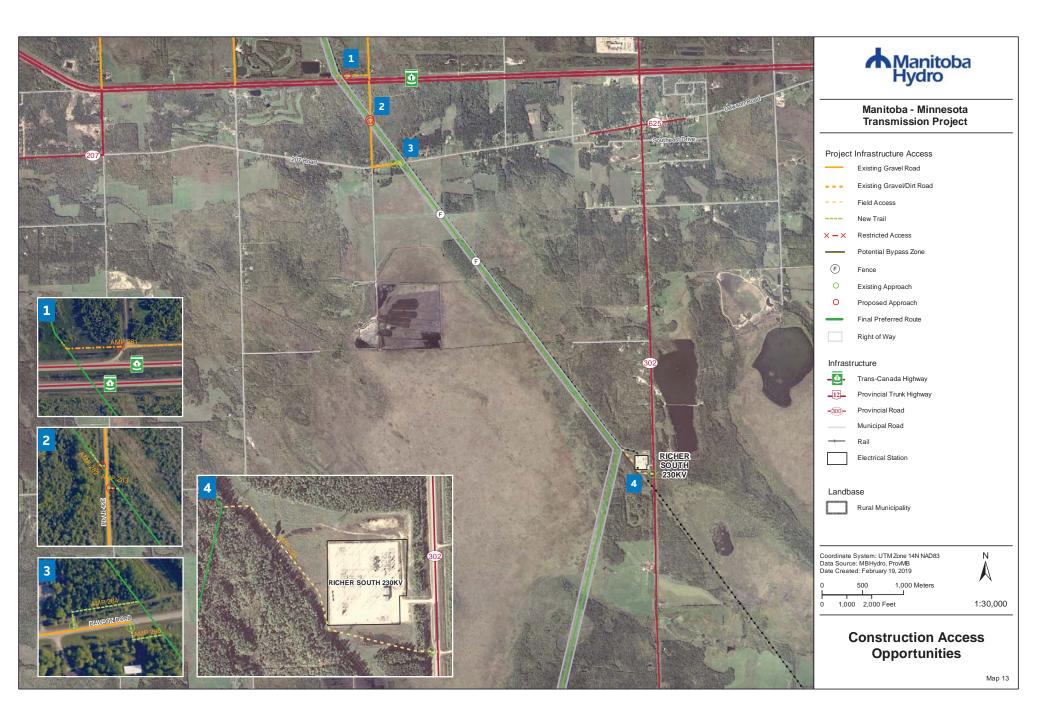
		nce to Hospital	Beausejo	nce to ur District pital		nce to I Hospital	Distance to Vita Hospital			
Access Name	KMs	Time	KMs	Time	KMs	Time	KMs	Time	Existing or Proposed Approach	Access Type
AMP 226	23.6	18 min	33.2	24 min	39.4	29 min	92.9	1 h 5 min	Proposed Approach	Field Access
AMP 229	22.2	16 m	35.2	24 m	38	28 m	91.5	1 h 3 m	Proposed Approach	Field Access
AMP 230	22.2	16 m	35.2	24 m	38	28 m	91.5	1 h 3 m	Proposed Approach	Field Access
AMP 235	20.3	15 m	36.5	26 m	36.1	27 m	89.6	1 h 2 m	Existing Approach	Existing Dirt Road



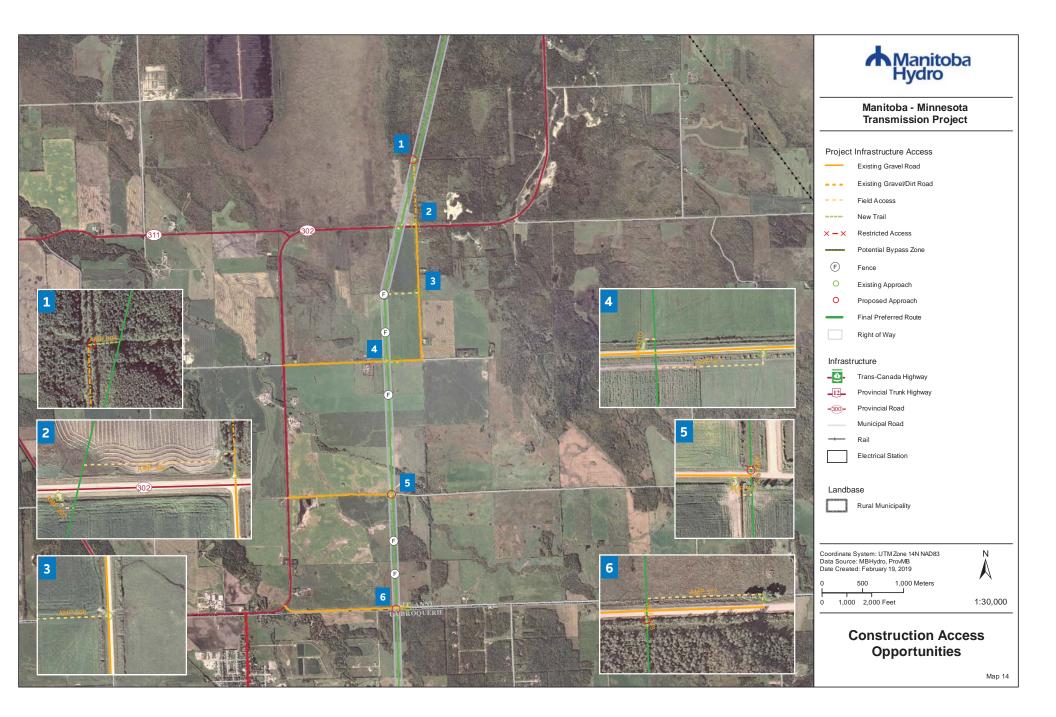
		nce to Hospital	Beausejo	nce to ur District pital		nce to Hospital	Distance to Vita Hospital		-	
Access									Existing or Proposed	
Name	KMs	Time	KMs	Time	KMs	Time	KMs	Time	Approach	Access Type
AMP 242	18	14 m	40.8	28 m	33.8	25 m	87.4	1 h 1 m	Existing Approach	Field Access
AMP 243	18.2	14 m	41	28 m	34	26 m	87.6	1 h 1 m	Existing Approach	Field Access
AMP 246									Not on Map	Existing Dirt Road
AMP 249	16.2	14 m	48.8	34 m	32	26 m	85.5	1 h 1 m	Existing Approach	New Trail
AMP 250	16.2	14 m	48.9	34 m	32	26 m	85.5	1 h 2 m	Existing Approach	New Trail
AMP 251	15.9	13 m	48.5	33 m	31.7	25 m	85.2	1 h 0 m	Existing Approach	New Trail
AMP 252	15.9	13 m	48.5	33 m	31.7	25 m	85.1	1 h 0 m	Existing Approach	New Trail
AMP 255	15.7	12 m	48.4	32 m	31.5	23 m	85	59 m	Proposed Approach	New Trail
AMP NT2	15.7	12 m	48.3	31 m	31.5	23 m	85	59 m	Proposed Approach	New Trail
AMP 256	15.6	12 m	48.3	31 m	31.4	23 m	84.9	59 m	Existing Approach	Existing Dirt Road
AMP 257	15.7	12 m	48.4	31 m	31.5	23 m	85.1	59 m	Proposed Approach	New Trail



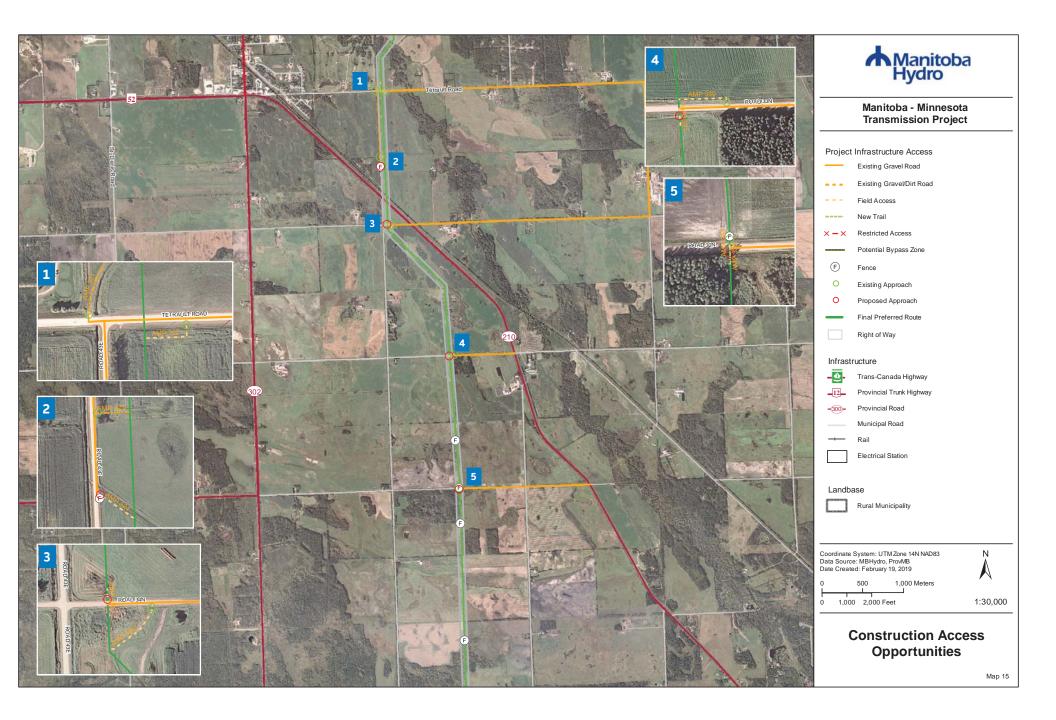
		nce to Hospital	Beausejo	nce to ur District pital		nce to Hospital	Distance to Vita Hospital		_	
Access Name	KMs	Time	KMs	Time	KMs	Time	KMs	Time	Existing or Proposed Approach	Access Type
AMP 260	15.2	14 m	51.4	35 m	31	26 m	84.5	1 h 2 m	Proposed Approach	New Trail
AMP 261	18.6	15 m	51.3	35 m	34.4	27 m	88	1 h 2 m	Proposed Approach	New Trail
AMP 264	15	16 m	55.2	37 m	30.8	27 m	84.3	1 h 3 m	Proposed Approach	New Trail
AMP 265	15	16 m	55.1	37 m	30.8	28 m	84.3	1 h 3 m	Proposed Approach	New Trail
AMP 276	12.9	14 m	61.3	41 m	33.8	26 m	87.3	1 h 2 m	Proposed Approach	New Trail
AMP 278	13.7	15 m	62	42 m	34.6	28 m	71	1 h 0 m	Existing Approach	Field Access



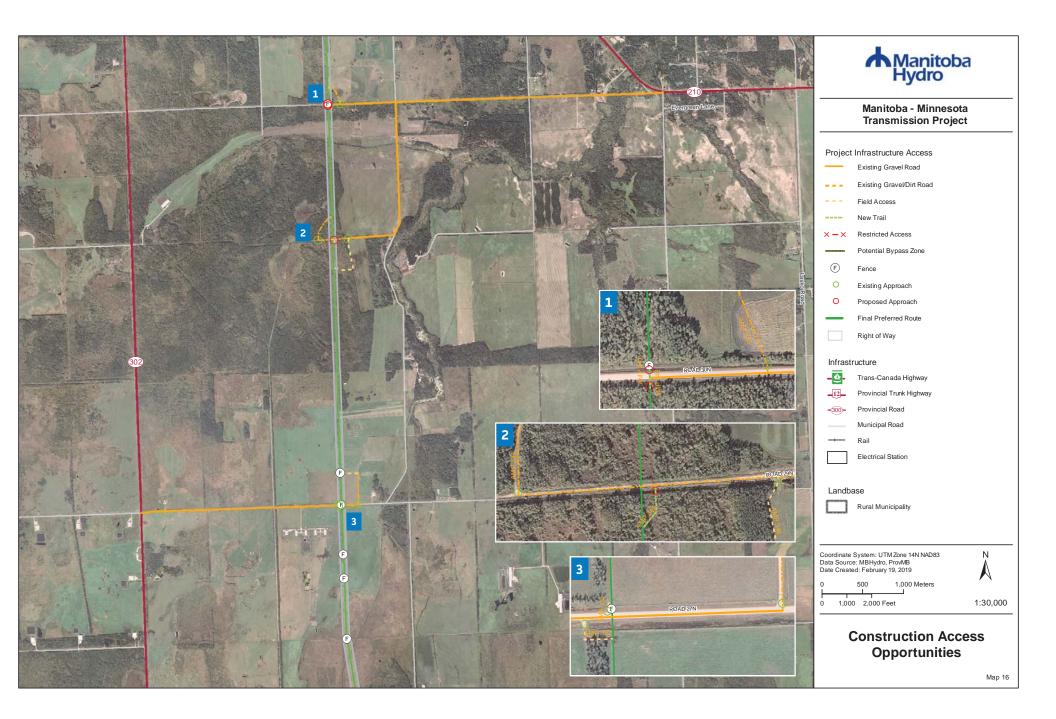
	Distance to St. Anne Hospital		Beausejo	nce to ur District pital	Distar Bethesda	nce to Hospital		e to Vita pital		
Access Name	KMs	Time	KMs	Time	KMs	Time	KMs	Time	Existing or Proposed Approach	Access Type
AMP 281	11.8	12 m	60.1	38 m	32.7	24 m	69.1	57 m	Proposed Approach	Existing gravel/Dirt Road
AMP 282	11.6	12 m	60.6	40 m	33.1	26 m	69.5	56 m	Proposed Approach	New Trail
AMP 283	11.5	12 m	60.6	40 m	33.2	26 m	69.5	56 m	Proposed Approach	New Trail
AMP 284	11.3	11 m	61.2	40 m	33.8	26 m	68.1	55 m	Existing Approach	New Trail
AMP 285	11.3	11 m	61.3	40 m	33.8	26 m	68.1	55 m	Existing Approach	New Trail
AMP 294	20	17 m	53.8	41 m	25.4	21 m	60.8	49 m	Existing Approach	Field Access



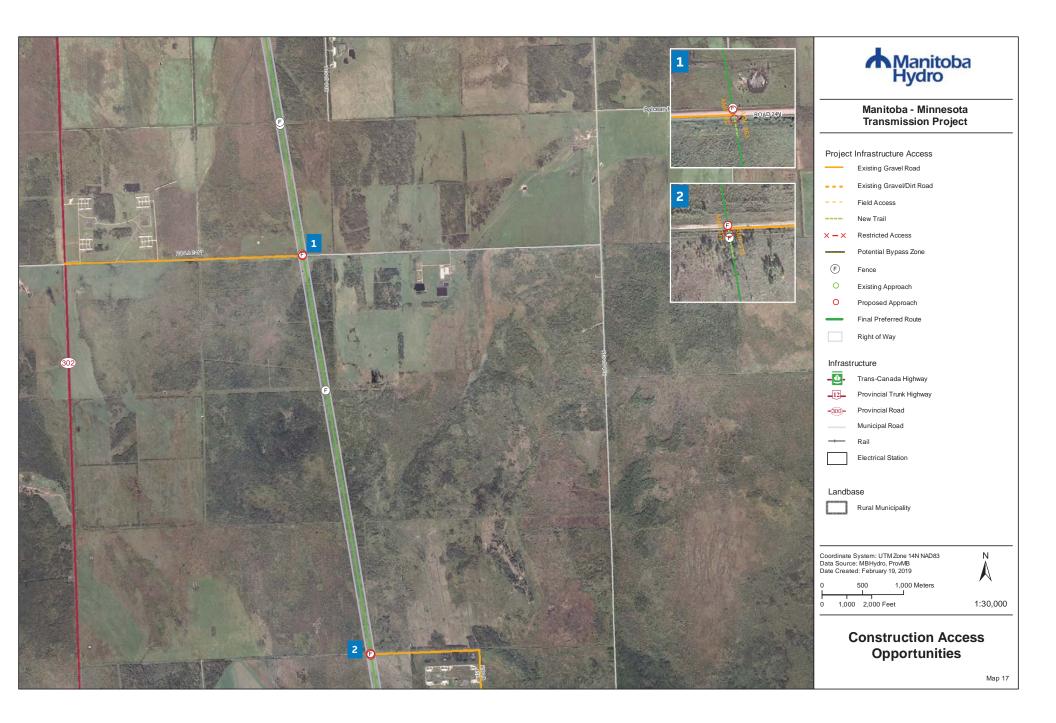
	Distance to St. Anne Hospital		Beausejo	nce to ur District pital		nce to a Hospital		e to Vita spital	_	
Access Name	KMs	Time	KMs	Time	KMs	Time	KMs	Time	Existing or Proposed Approach	Access Type
AMP 304	19.4	16 m	60	45 m	19.1	17 m	54.6	45 m	Proposed Approach	New Trail
AMP 306	19.4	16 m	60	45 m	19.1	17 m	54.6	45 m	Existing Approach	Field Access
AMP 307	19.2	16 m	60.4	45 m	18.9	17 m	54.4	45 m	Existing Approach	Field Access
AMP 308	20.2	19 m	60.8	47 m	20	20 m	55.4	48 m	Existing Approach	Field Access
AMP 310	20.7	18 m	62.1	49 m	17.2	18 m	52.7	46 m	Existing Approach	Field Access
AMP 311	20.9	19 m	61.9	49 m	17.4	18 m	52.8	46 m	Existing Approach	Field Access
AMP 313	22.8	19 m	66.1	50 m	15.6	17 m	51	45 m	Proposed Approach	Field Access
AMP 314	22.8	19 m	66.1	50 m	15.6	17 m	51	45 m	Existing Approach	Field Access
AMP 317	21.7	17 m	74.6	51 m	14.5	15 m	50	43 m	Existing Approach	Field Access
AMP 318	21.6	17 m	74.5	51 m	14.4	15 m	49.8	43 m	Proposed Approach	New Trail



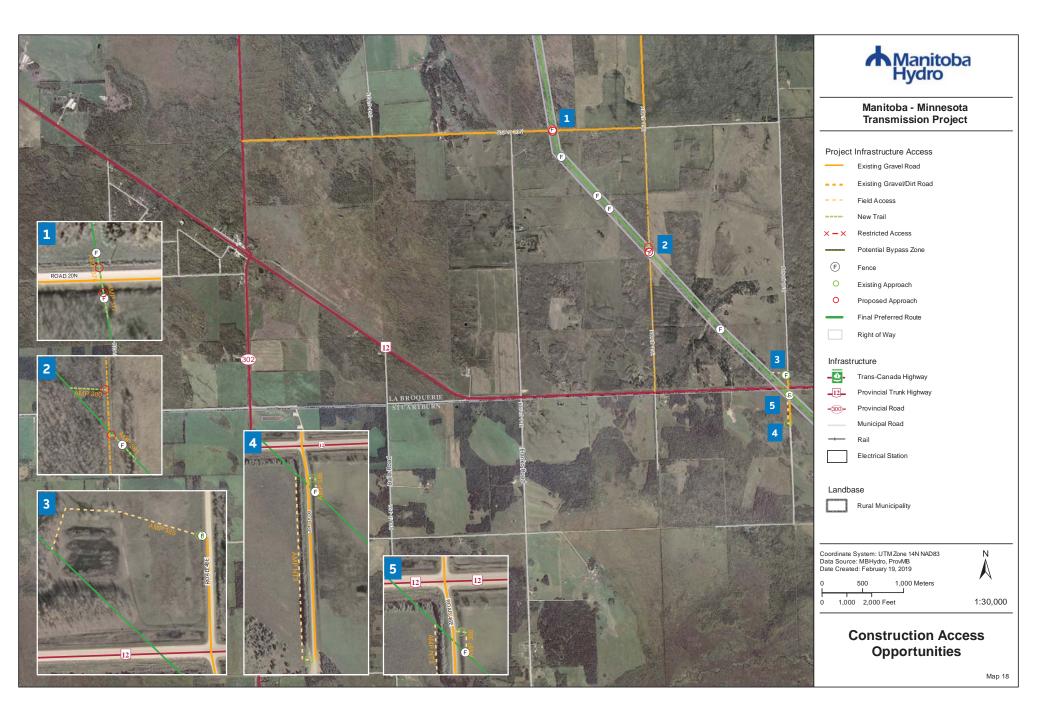
	Distance to St. Anne Hospital		Beausejo	nce to ur District pital		Distance to Bethesda Hospital		e to Vita pital	_	
Access Name	KMs	Time	KMs	Time	KMs	Time	KMs	Time	Existing or Proposed Approach	Access Type
AMP 321	22.7	19 m	75.6	53 m	15.6	15 m	48.4	41 m	Existing Approach	Existing Gravel/Dirt Road
AMP 322	22.8	19 m	75.7	53 m	15.7	15 m	48.6	41 m	Existing Approach	Field Access
AMP 323	23.5	20 m	76.4	54 m	16.4	16 m	49.3	42 m	Existing Approach	Existing Dirt Road
AMP 324	23.6	20 m	76.5	54 m	16.5	16 m	49.4	43 m	Proposed Approach	Field Access
AMP 325	24.2	20 m	77.2	54 m	16.3	15 m	46.3	39 m	Proposed Approach	Field Access
AMP 326	24.2	20 m	77.1	54 m	16.2	15 m	46.4	39 m	Existing Approach	Field Access
AMP 330	26.8	22 m	79.7	56 m	18.8	16 m	45.5	38 m	Existing Approach	Field Access
AMP 331	26.8	22 m	79.7	56 m	18.9	16 m	43.8	36 m	Proposed Approach	Field Access
AMP 334	28.5	24 m	81.4	58 m	20.5	18 m	43.8	36 m	Existing Approach	Field Access
AMP 335	28.5	24 m	81.4	58 m	20.5	18 m	43.8	36 m	Proposed Approach	New Trail



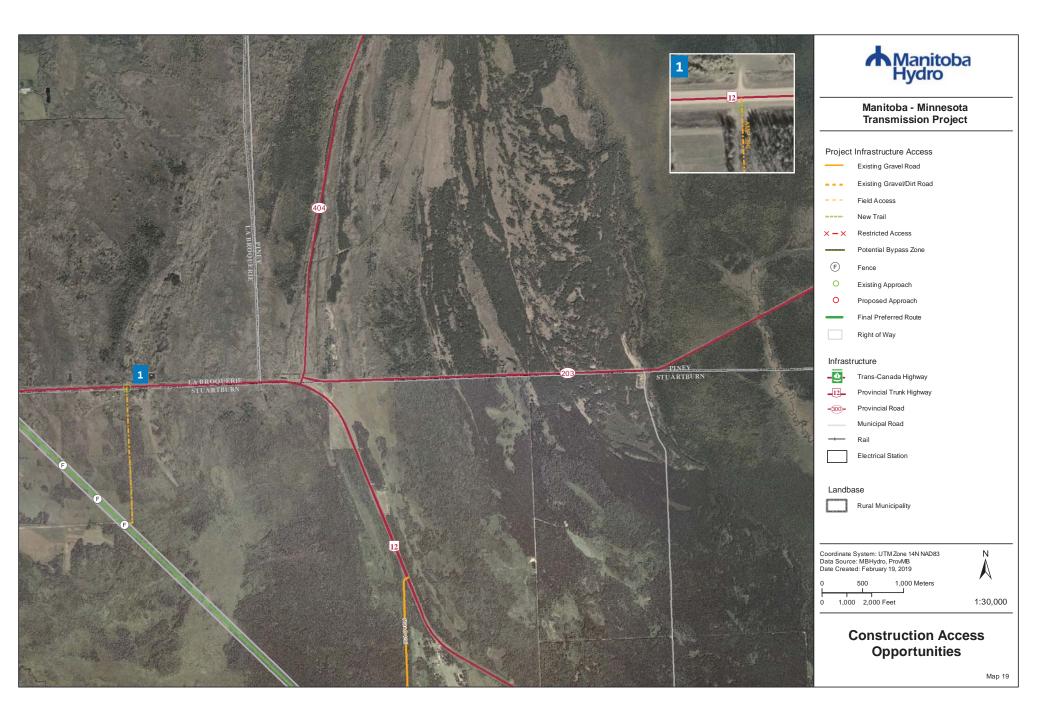
	Distance to St. Anne Hospital		Beausejo	nce to ur District pital		nce to I Hospital		e to Vita pital		
Access									Existing or Proposed	
Name	KMs	Time	KMs	Time	KMs	Time	KMs	Time	Approach	Access Type
AMP 340	31.6	28 m	84.6	1 h 1 m	23.7	22 m	40.7	33 m	Existing Approach	Existing Dirt Road
AMP 341	31.8	28 m	84.7	1 h 1 m	23.8	22 m	40.5	33 m	Proposed Approach	New Trail
AMP 342	31.8	28 m	84.7	1 h 1 m	23.8	22 m	40.5	33 m	Proposed Approach	New Trail
AMP 344	32.9	29 m	85.8	1 h 3 m	24.9	23 m	39.3	35 m	Existing Approach	Existing Dirt Road
AMP 345	32.9	29 m	85.8	1 h 2 m	24.9	23 m	39.3	35 m	Proposed Approach	New Trail
AMP 346	32.9	29 m	85.8	1 h 2 m	24.9	23 m	39.4	35 m	Existing Approach	Field Access
AMP 350	36.4	33 m	89.1	1 h 7 m	28.4	27 m	35.8	30 m	Existing Approach	Field Access
AMP 351	36.9	33 m	89.8	1 h 6 m	28.9	27 m	35.6	30 m	Existing Approach	Field Access
AMP 352	36.9	33 m	89.8	1 h 6 m	28.9	27 m	35.6	30 m	Existing Approach	Field Access



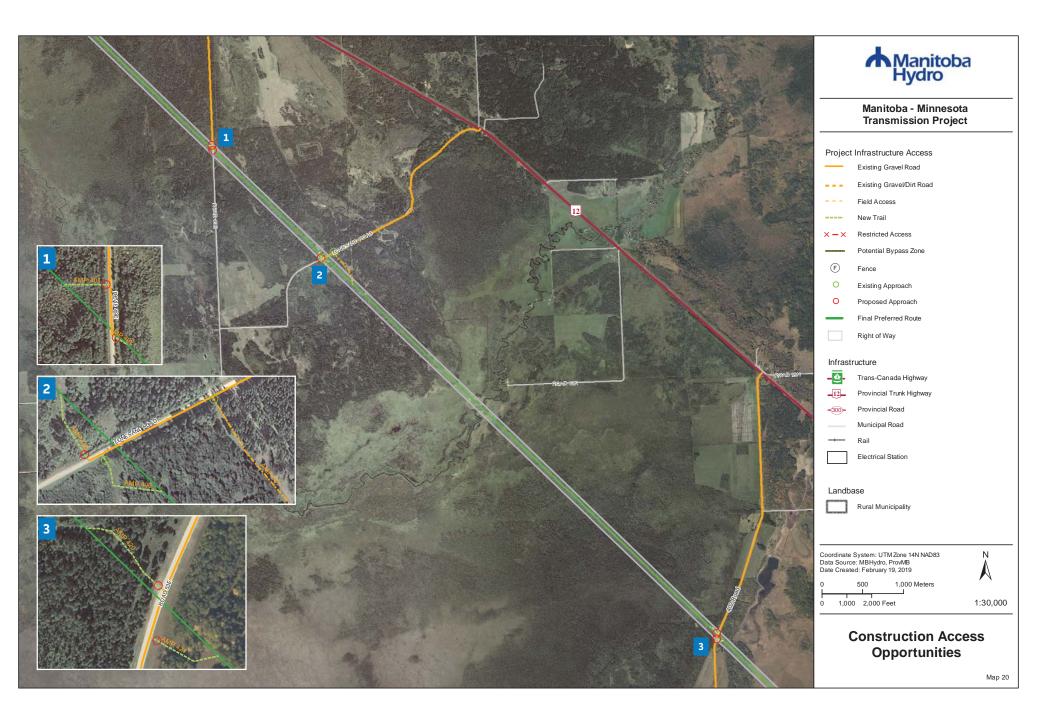
		nce to Hospital	Beausejo	nce to our District spital		nce to Hospital		e to Vita pital		
Access Name	KMs	Time	KMs	Time	KMs	Time	KMs	Time	Existing or Proposed Approach	Access Type
AMP 362	42.3	38 m	95.1	1 h 11 m	34.3	32 m	31.1	26 m	Proposed Approach	New Trail
AMP 363	42.3	38 m	95.2	1 h 11 m	34.3	32 m	61.1	26 m	Proposed Approach	New Trail
AMP 372	62.6	49 m	114	1 h 19 m	45.2	36 m	31.1	26 m	Proposed Approach	New Trail
AMP 373	62.6	49 m	114	1 h 19 m	45.2	36 m	31.1	26 m	Proposed Approach	New Trail



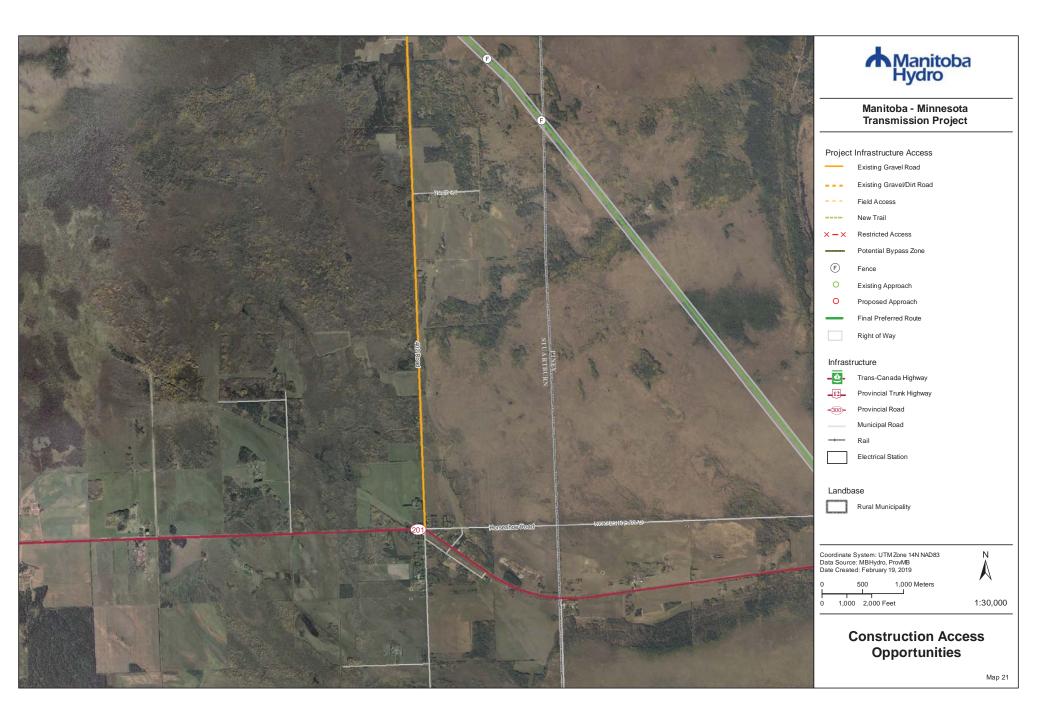
		nce to Hospital	Beauseiour District							
Access Name	KMs	Time	KMs	Time	KMs	Time	KMs	Time	Existing or Proposed Approach	Access Type
AMP 376	57	44 m	108	1 h 14 m	39.6	31 m	25.5	21 m	Proposed Approach	New Trail
AMP 377	57	44 m	108	1 h 14 m	39.6	31 m	25.5	21 m	Proposed Approach	New Trail
AMP 380	59.1	43 m	110	1 h 14 m	41.6	30 m	27.5	21 m	Proposed Approach	New Trail
AMP 381	59	43 m	110	1 h 13 m	41.6	30 m	27.4	21 m	Proposed Approach	New Trail
AMP 385	59.1	42 m	110	1 h 13 m	41.6	29 m	27.5	20 m	Existing Approach	Field Access
AMP NT3	59.4	44 m	110	1 h 14 m	41.9	30 m	27.8	21 m	Existing Approach	Field Access
AMP 386	59	43 m	110	1 h 13 m	41.6	30 m	27.4	20 m	Existing Approach	Field Access



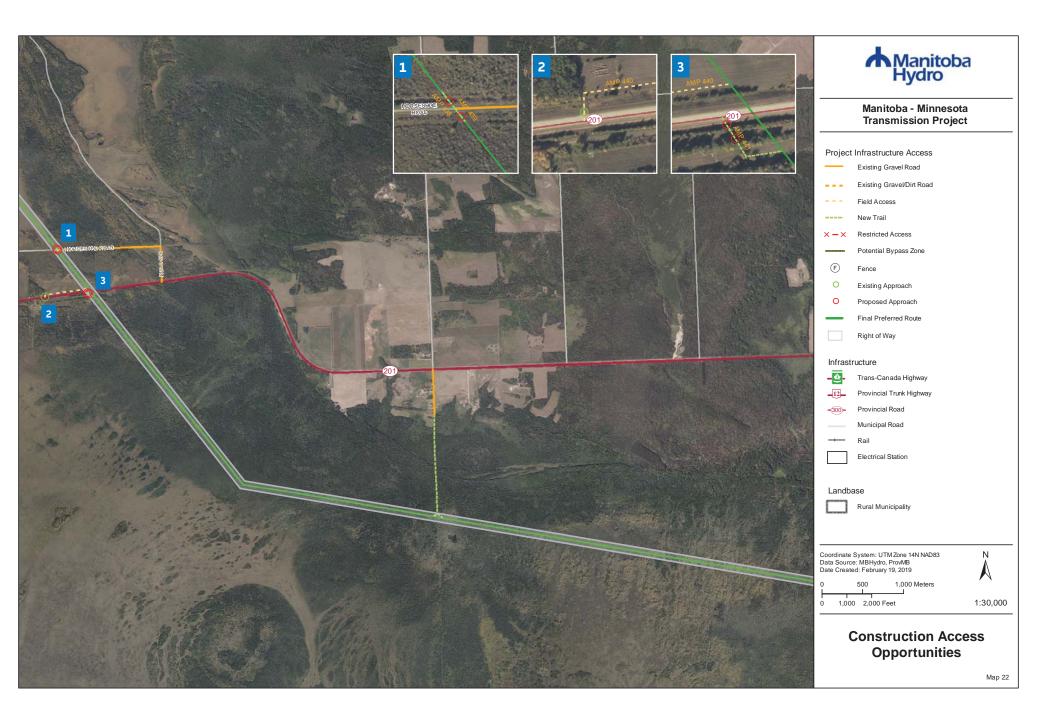
		nce to Hospital	Beausejo	nce to our District pital		nce to I Hospital		e to Vita pital		
Access									Existing or Proposed	
Name	KMs	Time	KMs	Time	KMs	Time	KMs	Time	Approach	Access Type
AMP 390	60.6	43 m	111	1 h 13 m	43.1	29 m	29	20 m	Existing Approach	Existing Dirt Road



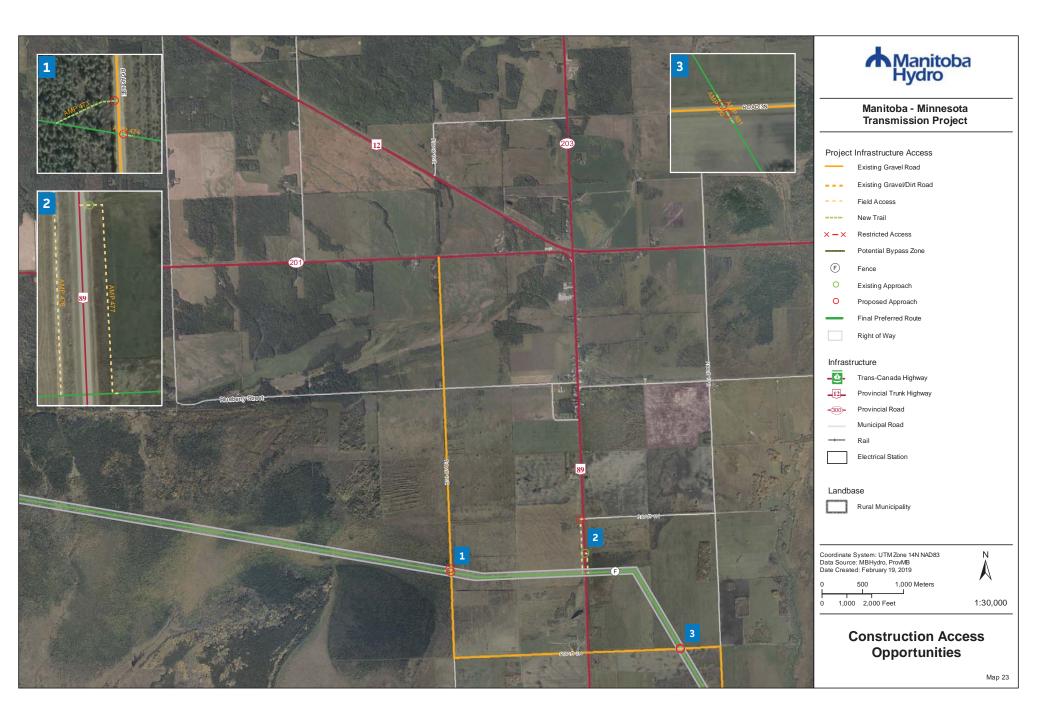
		nce to Hospital	Beausejo	nce to our District pital		nce to Hospital		e to Vita pital		
Access Name	KMs	Time	KMs	Time	KMs	Time	KMs	Time	Existing or Proposed Approach	Access Type
AMP 401	68.2	51 m	119	1 h 21 m	50.7	38 m	36.6	28 m	Proposed Approach	New Trail
AMP 402	68.2	51 m	119	1 h 21 m	50.8	38 m	36.7	28 m	Proposed Approach	New Trail
AMP 405	72.5	54 m	123	1 h 24 m	55	40 m	23.9	27 m	Proposed Approach	New Trail
AMP 406	72.5	54 m	123	1 h 24 m	55.4	40 m	23.9	27 m	Existing Approach	New Trail
AMP 407	72.3	53 m	126	1 h 23 m	54.9	40 m	24	27 m	Existing Approach	Existing Dirt Road
AMP 420	77.7	55 m	129	1 h 25 m	60.2	42 m	30.4	24 m	Proposed Approach	New Trail
AMP 421	77.7	55 m	129	1 h 25 m	60.2	42 m	30.4	24 m	Proposed Approach	New Trail



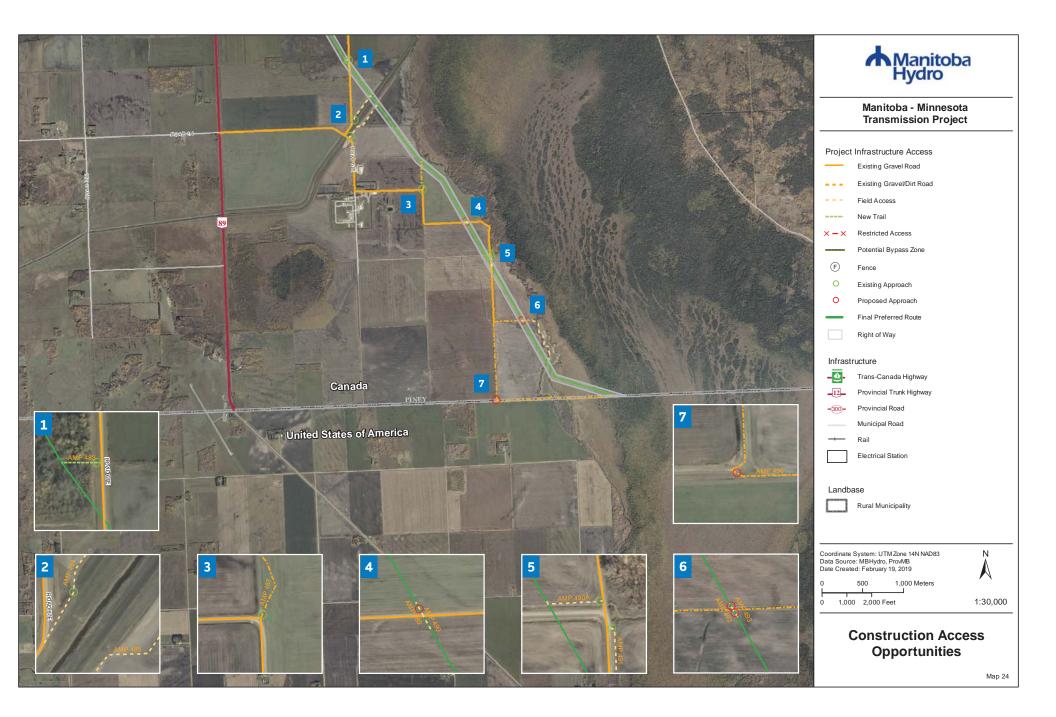
NO ACCESS POINTS ON THIS MAP



	Distance to St. Anne Hospital Distance to Beausejour District Hospital			nce to Hospital		e to Vita pital				
Access Name	KMs	Time	KMs	Time	KMs	Time	KMs	Time	Existing or Proposed Approach	Access Type
AMP 438	89.3	1 h 5 m	140	1 h 36 m	71.9	52 m	32.2	23 m	Proposed Approach	New Trail
AMP 439	89.3	1 h 5 m	140	1 h 36 m	71.9	52 m	32.2	23 m	Proposed Approach	New Trail
AMP 440	95.1	1 h 5 m	146	1 h 35 m	77.6	52 m	29.1	20 m	Existing Approach	Field Access
AMP 441	95.6	1 h 5 m	146	1 h 36 m	78.2	52 m	29.6	20 m	Proposed Approach	New Trail
AMP 452									Not on Map	New Trail
AMP 453									Not on Map	New Trail



	Distance to St. Anne Hospital		Beausejo	nce to ur District pital		nce to a Hospital		e to Vita pital		
Access Name	KMs	Time	KMs	Time	KMs	Time	KMs	Time	Existing or Proposed Approach	Access Type
AMP 473	96.2	1 h 12 m	155	1 h 43 m	86.7	1 h 0 m	48	35 m	Proposed Approach	New Trail
AMP 474	96.2	1 h 12 m	155	1 h 43 m	86.7	1 h 0 m	48.1	35 m	Proposed Approach	New Trail
AMP 476	93.9	1 h 7 m	153	1 h 38 m	84.5	55 m	49.1	34 m	Proposed Approach	Field Access
AMP 477	94.4	1 h 8 m	153	1 h 39 m	84.9	55 m	49.5	34 m	Existing Approach	Field Access
AMP 480	96.7	1 h 10 m	156	1 h 41 m	87.2	58 m	51.9	37 m	Proposed Approach	New Trail
AMP 481	96.7	1 h 10 m	156	1 h 41 m	87.2	58 m	51.9	37 m	Proposed Approach	New Trail



		ince to e Hospital	Beausejo	nce to our District pital		nce to a Hospital	Distance to Vita Hospital		_	
Access Name	KMs	Time	KMs	Time	KMs	Time	KMs Time		Existing or Proposed Approach	Access Type
AMP 483	98	1 h 12 m	157	1 h 43 m	88.5	1 h 0 m	53.2	38 m	Existing Approach	New Trail
AMP 484	98.9	1 h 12 m	158	1 h 43 m	89.4	1 h 0 m	54.1	39 m	Existing Approach	Field Access
AMP 485	98.8	1 h 12 m	158	1 h 43 m	89.4	1 h 0 m	54	39 m	Existing Approach	Field Access
AMP 487	100	1 h 17 m	159	1 h 48 m	90.8	1 h 5 m	55.4	43 m	Existing Approach	Existing Dirt Road
AMP 489	109	1 h 20 m	160	1 h 50 m	91.2	1 h 7 m	55.9	45 m	Proposed Approach	Field Access
AMP 490	102	1 h 17 m	161	1 h 48 m	92.5	1 h 5 m	57.1	43 m	Proposed Approach	Field Access
AMP 490A	102	1 h 17 m	161	1 h 48 m	92.5	1 h 5 m	57.1	43 m	Existing Approach	Field Access
AMP 491	102	1 h 17 m	161	1 h 48 m	92.5	1 h 5 m	57.1	43 m	Existing Approach	Field Access
AMP 492	102	1 h 17 m	161	1 h 48 m	92.9	1 h 5 m	57.5	44 m	Proposed Approach	Field Access
AMP 493	102	1 h 17 m	161	1 h 48 m	92.9	1 h 5 m	57.5	44 m	Proposed Approach	Field Access
AMP NT4									Not on Map	Field Access
AMP 496	112	1 h 20 m	163	1 h 50 m	94.3	1 h 7 m	58.9	45 m	Proposed Approach	Existing Dirt Road

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SECTION 12 - EMERGENCY PREPAREDNESS

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12.1 EMERGENCY PREPAREDNESS POLICY

It is the policy of Valard Construction that all projects shall have in place an emergency response plan specific to the potential hazards of the project or offices. Emergency preparedness drills shall be conducted. Valard Construction shall provide first aid facilities as required by provincial regulations.

12.2 EMERGENCY/FIRST AID RESPONSE PLAN

To be effective, an Emergency Response/First Aid Plan must be tailor made for the site that it is intended for. Emergency Response needs should be discussed during the initial project hazard analysis and a procedure developed and made available at all worksites and reviewed by all employees.

Items that should be considered include:

- Legislated requirements for first aid training and facilities.
- Provide a plan to provide prompt First Aid to injured worker(s).
- Distance of the site from an advanced medical care facility and time to reach a medical facility.
- Provide an Emergency Transport Vehicle if required.
- A Level 3 first aid certificated attendant will be required.
- Availability of client provided first aid and emergency resources.
- Availability of Valard Construction first aid resources.
- Location and availability of professional emergency services (fire, ambulance, police).
- Review types of injuries that may be incurred on the worksite.
- If air transportation is the primary or only method for transporting an injured worker, then prior to the start of operations, arrangements must be made with an air service to ensure that an appropriate aircraft is reasonably available as well as an alternate system in case the aircraft is unavailable.
- Special situations that could be encountered (e.g. confined space rescue, high angle rescue).
- Hazards specific to the work site (e.g. product releases at petrochemical facilities, work over water).
- Methods of internal communication available, radio, satellite phone, cell phone*, land line phone, horn, alarm etc.
- Methods of external (off site) communications (radio, satellite phone, land line, cell phone* etc.).
- Internal fire-fighting capability.

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- Emergency evacuation procedures and muster points.
- Requirements for Environmental Spills (spill kits, absorbent)
- Contact numbers for Federal and Provincial reporting (OH&S, Environmental incident)
- Bomb threats

When developing an emergency response plan use the Emergency Response Form 12.8.1 and complete the required numbers and a list of contacts to call in the event of an emergency so that all employees are aware of it. This procedure must be posted in areas where workers are present such as lunchrooms, vehicles and the site office. This must be communicated and discussed with the workers for their input to insure their understanding and also discussed at the start of the job as well as during it. If required a list of the landing points for Stars or other aircraft must be identified.

This plan must be reviewed on a monthly basis as well as when conditions or services change.

* It should be noted that cell phone communication is not ideal in all situations due to possible service disruption and the tendency for cellular towers to be overloaded with calls during widespread emergencies. An example of this would be the Pine Lake tornado disaster in Alberta, in which only one cell phone call was received by the local ambulance service before towers were overloaded and failed to function.

Emergency Equipment Provided:

- Blankets in site office (also in MTC (Mobile Treatment Centre) if available)
- First Aid Kits (in all vehicles)
- Stretcher (available in Site office or MTC)
- AED Units where required

Emergency procedure as to location of hospitals Medi-centres etc. shall be identified on worker's daily Tailboards (Hazard Assessments) This includes land locations, directions to a hospital, identify the First Aiders on crew, directions for the emergency crew and the emergency phone numbers. Crews must address this daily as they may be changing locations daily, Pole/structure locations have the land locates identified on them. These must be identified on all daily tailboards. All workers will attend an annual training program for both Pole Top Rescue and Bucket Rescue. This documentation is to be sent to the Corporate Office. In case of an emergency the means of transporting the injured worker to a hospital must be addressed at each site. A dedicated vehicle must be identified on each crew. In cases where there is an MTC available then the attending EMT will insure that the worker is transported in an appropriate vehicle.

All records of injuries must be sent to the Corporate Safety Office for investigation and retention.

FIRST AID/CPR/AED:

First aid equipment, supplies and facilities must be kept clean, dry and ready for use, and be readily accessible at any time a worker works in the workplace. Conspicuously posted signs at the work site will direct workers to where First Aid supplies are available. Locations of First Aid Kits are in each vehicle used on any site, and identified on each daily tailboard.

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This First Aid Kit must be kept in the interior of the vehicle to insure a clean and safe environment for storage.

Valard's policy is to provide a two-day, standard First Aid Course to a recommended level of 50% of their field crew employees, unless there are 3 or fewer workers, and then 1 must be trained. All First Aiders must be available to assist injured workers. And prepare for transport to the nearest health care facility in the event of an injury or illness.

Training providers are to inform the Corporate Office of all workers' successful completion of training with supporting documentation; this will be inputted into the training database. No one-day refresher courses will be accepted.

- Recognized providers include:
 - St. John's First Aid
 - Canadian Red Cross
 - Canadian Heart Foundation

First Aid services including the first aider, first aid equipment (mobile treatment centre), facilities, and supplies required, shall meet provincial requirements.

Where the site is more than 20 minutes from a medical facility a mobile treatment centre will be based at the worksite.

AED

Valard will provide AED Units as required, and these will be maintained and inspected monthly using Form 9.9 found in Section 9 of this manual.

12.3 EMERGENCY PREPAREDNESS DRILLS

For projects as designated by the Corporate, Safety Office, emergency preparedness drills will be conducted within 4 months from the start date of the project. Offices and Shops shall perform a drill annually.

All personnel on site should be notified in advance of the drill. An incident should be simulated and observations made of the response. A post drill meeting should be conducted to review the response and address any deficiencies.

All drills shall be recorded on Form 12.10 of this section and forwarded to the Corporate Safety Office.

12.4 FIRE PROTECTION AND PREVENTION

A fire team will be established on sites when the risk of fire is high. The Project Management or designate and the Safety Advisor shall establish the Fire Team.

The Area Fire Team will be organized with specific duties being designated to each member.

The type of project and associated hazards will determine the need for a Team, its size, functions and specific duties.

An individual will be appointed by the Project Manager to act as Fire Team Leader.

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Team members should always ensure they are able to escape in the event the fire is out of control. Team duties shall include as a minimum:

- Sounding the alarm or notify the work force using the pre-established emergency summons.
- Notifying the local Fire Department.
- Directing fellow workers to the evacuation area.
- Fighting the fire with available equipment, if safe to do so, until assistance arrives.
- De-energizing power to machines and equipment.
- Closing-off fuel supply to furnaces, ovens, temporary heating facilities, etc.
- Closing doors to contain fire.
- Removing combustible materials from threatened areas. Closing-off valves on lines that carry flammable fluids.
- Spreading waterproof covers over open floor drains to minimize water damage.
- Removal of vehicles or equipment from threatened areas.
- Guiding municipal fire-fighting personnel to fire.
- Assisting police in crowd control.
- Maintaining access for fire-fighting and other emergency vehicles.
- Re-establishing the fire-fighting capability after the fire has been extinguished (i.e.- spent fire extinguishers recharged or replaced immediately).

Important: No Fire Team member shall place his or her own personal safety at risk.

Additional direction for investigation, cleanup and reconnection of services will be provided by the respective fire agency, during their investigation of the cause.

It is essential that organizers of the Fire Team impress upon its members that the Team is only the first line of defense against a fire. Caution must be exercised and the Team members are to be instructed not to place themselves in danger at any time.

12.5 OFFICE EMERGENCIES

Possible office emergencies:

- Bomb Threat
- Workplace Violence
- Hostage Situation/Armed Siege
- Earthquakes
- Storm Damage
- Fire
- Medical Emergency

12.5.1 OFFICE RESPONSE PLAN

12.5.1(a) Bomb Threat Response

- If possible, indicate to a co-worker that you have a bomb threat.
- Keep the caller on the line.

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- The co-worker must notify the Police from a telephone that cannot be overheard by the caller.
- The Police may appoint a search coordinator.
- Each employee shall check their own area, reporting any suspicious or unidentified parcels, bags, containers, etc.
- EMPLOYEES MUST NOT ATTEMPT TO EXAMINE OR MOVE SUCH ITEMS
- On completion of search of occupied area, the Police/search coordinator will arrange for all unoccupied areas to be searched.
- Evacuation and mustering will be at the command of the Police Officer or Valard's Fire Marshall.
- No worker is permitted back into the building unless authorized by the Police or Valard's Fire Marshall.

12.5.1(b) Workplace Violence Response

- If the violence comes from a fellow co-worker refer to Section 29 Violence Policy.
- If the threat of violence comes from a terrorist then the Police are to be notified.

12.5.1(c) Hostage/Armed Siege Situation

In many instances, a troubled employee or member of the public, who may make overt threats, often with little or no warning, may generate a hostage or armed siege situation.

Police should be notified immediately.

The response emphasis should be placed on:

- Protecting employees and visitors from danger;
- Evacuating employees and visitors safely;
- Managing the emergency until Police arrive.

The assailant should not be challenged or confronted. Remain calm and attentive to the events. Avoid argument with or aggravation of the assailant.

12.5.1(d) Earthquakes

Warning Signs

An earthquake is often 'announced' by a loud noise like that of a train.

Initial earth movements and swaying of structures caused by the earthquake could be followed some time later (after hours or days) by after-shocks, usually of decreasing severity.

During the Earthquake

- If indoors, stay there. There could be falling debris around exits and outside.
- Take cover under an internal door frame, sturdy table or bench.

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- Keep away from windows, mirrors, overhead fittings and tall furniture.
- Stay clear of roof and wall fittings
- If outside, keep well clear of buildings, walls, power lines, trees, etc.
- If in a vehicle, stop in the open until shaking stops
- Beware of 'downed' powerlines and damage to roads, overpasses or bridges.

After the Earthquake

- Check for injuries, apply first aid and do not move the seriously injured unless in danger
- Do not use the telephone unless there is a serious injury or fire (avoid congestion)
- Turn off electricity, gas and water
- Check for gas/fuel leaks before lighting matches
- Check for water or sewerage leaks, broken electrical wiring etc.
- Check for cracks and damage, including roofs and foundations
- Be prepared for aftershocks
- Evacuate if building is badly damaged
- Do not waste water, as supplies may be interrupted
- Heed warnings and advice on damage and service interruptions
- Avoid driving unless for emergency (keep streets clear for emergency vehicles)
- Do not go sight-seeing or enter damaged buildings
- Stay calm and help others if possible

12.5.1(e) Storm Damage

Severe storms produce flash flooding, damaging hailstones and destructive wind gusts. They can occur anywhere in Canada, doing so more frequently, and causing more physical damage (including vehicles, equipment and buildings) than any other natural hazard. Deaths and injuries occur when trees or limbs fall, buildings are damaged, or debris is hurled about in high winds.

Lightning poses a greater threat to individuals than most other natural hazards.

As the storm approaches:

• Instruct employees whether to remain at work, or go home.

When the storm strikes:

- Take cover, remain indoors
- Refrain from telephone use, wherever possible
- Keep clear of windows, glass doors, electrical items, pipes and metal fixtures
- If outdoors find solid, enclosed shelter or vehicle (not under a tree)
- If driving, stop clear of trees, powerlines and flooded areas

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12.5.1(f) Medical Emergencies

When accidents and injuries occur in the workplace, the first-aider trained person on the scene should attend to the welfare of the injured person(s) immediately.

- If danger still exists, remove the cause from the casualty, or the casualty from the cause.
- Preserve life and apply first aid.
- Send others for help (do not leave injured unattended).
- Notify Senior Management and Safety department of incident.
- All witnesses to the incident must participate in the investigation process.

12.5.1(g) Identification of Fire Marshalls and First Aiders

- All First Aiders shall have a Red Cross attached to their nameplate on the exterior of their office/cubical location.
- All Fire Marshalls shall have a Decal with a flame attached to their nameplate on the exterior of their office/cubical location.
- All Fire Marshals shall wear an orange vest with yellow reflective striping to identify themselves during any emergency situation in order that all staff will readily identify them.

Any changes to these individuals shall be communicated to all office staff in the respective offices.

12.6 COMMUNICATION WITH WORKERS, PUBLIC AND MEDIA

If and when an emergency occurs the following company officials will only be permitted to talk to either the general public and/or media:

- President
- Executive Vice-President of Corporate Communications
- Executive Vice President of Health, Safety and Environment

Following an actual incident, the response shall be reviewed to evaluate effectiveness and to correct deficiencies.

12.7 REGULATORY REFERENCES

NFPA 1 version 2012

Alberta

- Part 7 Alberta's OH&S Code (Emergency Preparedness)
- Part 11 Alberta's OH&S Code (First Aid)
- Part 11 Alberta's OH&S Code, Schedule 2, tables 5, 6, &7

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British Columbia

- Occupational First Aid Sections 3.14 3.21
- Enacted by B.C. Reg. 348/2003, effective March 30, 2004.
- Amended by B.C. Reg. 320/2007, effective February 1, 2008

Yukon

- Yukon Workers Health and Safety Board. Minimum First Aid regs.
- Sections 1-21 including tables 2-12 inclusive

Saskatchewan

• The Occupational Health and Safety Regulations, 1996

Manitoba

• Workplace Health and Safety Regulation 217/2006 Part 5 First Aid

Northwest Territories/Nunavut

• Part III of the Act First Aid Service Requirements

Ontario

• Emergency Management and Civil Protection Act R.S.O. 1990, CHAPTER E.9

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12.8 EMERGENCY RESPONSE PROCEDURE IN REMOTE AREAS.

This procedure is to aid in the development of emergency procedures for work activities in remote areas so that they can be performed in a safe and efficient manner.

Objective:

The following is a list of items which must be addressed and questions that need to be answered and addressed in order that a comprehensive plan is in place in case of an emergency. It is to be reviewed by everyone so that all are aware of the actions that must be taken to reduce the impact of the emergency itself. Use SOP 27.004 Emergency Procedure for development of ERP's for projects.

1. Goals:

- To ensure timely response.
- To provide transportation (how?)
- To provide immediate treatment to injured worker(s).
- To safeguard the general public.
- To prevent additional injury or damage to the rescuers and the environment.

2. Communication:

- Radio system or cell phones (check if there is cell coverage), ensure that the 911 number is available in the working location.
- Note the phone numbers or system to be used in daily tailboards.
- Have workers review emergency numbers in the safety meetings (document).

3. Potential Emergencies:

- Hoisting Equipment upset
- Electrical contact (worker)
- Fall from height
- Heart attack/stroke
- Motor vehicle accident
- Personal injury (fractures, deep cuts, loss of consciousness)
- Aircraft accident

4. Directions Required:

- Identify local communities where there is a hospital.
- Write down exact directions to the nearest hospital so that workers know the directions.
- Make sure this is written on all daily tailboards.

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12.8.1 EMERGENCY RESPONSE FORM – TO BE POSTED IN ALL BUILDINGS/SITES

EMERGENCY PROCEDURE

- 1. Protect yourself
- 2. Control the scene
- 3. Call the Supervisor/Foreman or the EMT's phone number
- 4. Provide first aid (if trained)
- 5. Keep individual warm while waiting for assistance

CALLING FOR ASSISTANCE

INFORMATION REQUIRED

- 1. Your name and call back number
- 2. Location GPS or other
- 3. Type of injury(s)
- 4. Number of injured
- 5. Call Valard's EMT for assistance
- 6. Advise appropriate Air Ambulance (i.e. Stars)
- 7. Ask if response will be by land or air and the approximate time.
- 8. Keep line free for follow-up calls
- 9. Instruct someone to wait at the pre-determined location to meet the emergency crew.

COMMUNITY	AMBULANCE	HOSPITAL	FIRE DEPT.	RCMP
				911
STARS	888-888-4567			

POSITION	CONTACT	PHONE NUMBER
Valard's Safety Department		
Valard's Head Office		
Client's Site Supervisor		

	Document Description			Emergency Preparedness					
Valard	Created	Created By: A. Felczak			nber	Health, Safety & Environmental Policy 12			
	Date:		ot. 23, 2003	Revision:	12	Revised by:	A. Felczak	Date:	Sept. 18, 2017

12.9 EMERGENCY MUSTER POINTS FORM

EMERGENCY MUSTER POINTS										
LAND LOCATION	MUSTER POINT	NAME OF LOCATION	N LATITUDE			STARS REG #	W LONGTITUDE			
			ļ							

<u>NOTE:</u> Provide this information to the workers every day to be noted on their tailboard.

<u></u>	Document Description			Emergency Preparedness					
Valard	Created By: A. Felczak		Doc. Number		Health, Safety & Environmental Policy 12				
	Date:	Sept. 23, 2003		Revision:	12	Revised by:	A. Felczak	Date:	Sept. 18, 2017

12.10 EMERGENCY RESPONSE DRILL FORM

Date of Drill:		Location:
Туре:	Office Shop Site	Injury Fire Evacuation Environmental
Participants	Valard Others	
Duration of Dril	l / Hr. Min.	
Positives:		
Lessons Learn	ed:	
Fire Marshall:		
	Print	Signature
Area Manager:	Print	Signature

			escription	Emergency Preparedness					
Valard	Created	By:	A. Felczak	Doc. Number		Health, Safety & Environmental Policy 12			
	Date:	Sep	ot. 23, 2003	Revision:	12	Revised by:	A. Felczak	Date:	Sept. 18, 2017

12.11 OFFICE EMERGENCY RESPONSE PLAN

Emergency Procedures

Fire Emergency:

- 1. Activate Fire Alarm.
- 2. Call 9-1-1 from a cell phone.
- 3. Do not close your office door (fire wardens will do this during the sweep of the suite if it is safe to do so).
- 4. Leave area where the fire is immediately.
- 5. Use the closest and safest emergency exit.
- 6. Do **NOT** use the elevator.
- 7. Proceed to the muster point located on the east side of the parking lot as identified on the map.
- 8. All employees and visitors must be accounted for and verified by the area fire wardens at the muster point.
- 9. Enter the building only after being given clearance by your area fire warden.

Medical Emergency:

- 1. Protect yourself (wear latex gloves if required).
- 2. Control the scene (ask someone for assistance with this) have them call 9-1-1 if required.
- 3. Provide first aid if it is safe to do so and you have your certification, if not locate a person with the green sticker on their name plate.
- 4. Follow the directions of the 9-1-1 operator.
- 5. Gather information regarding the incident and any medication the individual may be taking (do not disturb the scene of the incident).
- 6. All medical emergencies must be reported to safety and your supervisor.

Threats:

- 1. Call 9-1-1 immediately.
- 2. Do not activate the alarm unless instructed to by 9-1-1 operator.
- 3. Do not approach the threat.
- 4. Leave the area immediately.
- 5. Provide other occupants with information if possible.

Chemical Spills:

- 1. Assess the severity (size, dangerous fumes, material and containment).
- 2. Activate fire alarm if there are any safety concerns for the buildings occupants.
- 3. Call 9-1-1 from a cell phone.
- 4. Leave the area immediately where there is imminent danger.
- 5. Fire wardens will sweep the suite and close the door if it is safe to do so.
- 6. Advise occupants of potential threat while evacuating.
- 7. Use the closest and safest emergency exit.
- 8. Proceed to the muster point located on the east side of the parking lot as identified on the map.
- 9. All employees and visitors must be accounted for and verified by the area fire wardens at the muster point.
- **10.** Enter the building only after being given clearance by your area fire warden.

Available in accessible formats upon request