



May 29, 2018

WINTER SHUTDOWN REQUIREMENTS WINTERIZATION PLAN

INTRODUCTION

In the event pipeline construction encounters seasonal change to winter conditions, the Contractor shall plan, manage and provide all labor, materials, equipment and supervision necessary for an extended shutdown. Outlined below are required guidelines to be performed by the Contractor to effectively prepare for winter shutdown, as directed by RG&E.

PART I – PLANNING

It is not possible to predict exactly when site conditions will dictate adoption of alternate methods or schedules of construction. However, during seasonal change, prudent construction management and scheduling will be required if an extended shutdown becomes necessary. The following shall be adhered to:

- A. Do not start any stream or road crossings unless it is certain that construction and mitigation can be managed.
- B. Limit the exposure of sites so that extensive site re-stabilization under adverse conditions is avoided or unnecessary.
- C. Plan to stabilize or restore sites as work progresses, thus minimizing the need to do it later when conditions will probably be less favorable.
- D. Install and maintain drainage and erosion controls as work progresses.
- E. Keep the right-of-way stabilized and under control.
- F. Make preparations for winter conditions before the weather and physical condition of the right-of-way have degraded to the point where effective implementation of stabilization measures is precluded.
- G. If hydrostatic testing might occur during unfavorable conditions, plan for using locations where access and operations will not require elaborate drainage and erosion control installation under adverse conditions.

PART 2 - CONSTRUCTION

Due to uncertainties of suitable weather for continuing construction and restoration in late autumn and winter periods, do as much as possible to minimize exposure of un-stabilized sites and demobilization needs.

- A. To limit the exposure of sites, effectively manage additional clearing and grading, particularly on unstable slopes and around streams. Stabilize sites immediately following disturbance.



- B. Minimize amount of extraneous materials on site. Move equipment and supplies to marshalling yard as appropriate.
- C. Emphasize the completion and restoration of stream crossings that have been cleared, graded, and where temporary vehicle crossings are in place.
- D. Emphasize work on stabilization or final restoration of disturbed sites as work progresses.
- E. Suspend new site disturbance and site preparation grading if right-of-way conditions degenerate and construction mitigation cannot be managed.
- F. All trenches and pits shall be backfilled prior to extended shutdown periods.
- G. Only the minimum amount of fabrication shall be conducted. All fabricated work should be laid in, and the trench or pits back-filled. Extra construction material shall be removed.

PART 3 - PUBLIC SAFETY

- A. All roads that are not permanently restored shall be suitably repaired for the road's intended use during the shutdown period.
- B. Remove all materials and equipment from Public rights-of-way.
- C. Open drainage ditches, and repair any crushed culverts at roadside areas.
- D. Secure laydown yards and fabrication sites if they present a hazard to trespassers.
- E. Remove extraneous materials and equipment from flood prone areas.
- F. Hardened private access and livestock crossings should be constructed as necessary. Gates, fencing, and other access limitations should be replaced or installed as necessary.

PART 4 - DRAINAGE AND EROSION CONTROL

- A. All exposed soils shall be at least rough graded, and drainage patterns shall be restored. Surface and subsurface drainage features in and around wetlands, agricultural fields and public roads shall be restored and remain effective during this period.
- B. Temporary erosion control measures should be sized and constructed to function effectively for the conditions expected for the duration of the shutdown or over-winter period.
- C. Construct and maintain temporary drainage and erosion control features at proper intervals on slopes and access roads.
- D. Install waterbars on reduced spacing, if necessary. Waterbars shall be installed in accordance with the project drawings and details. When waterbars discharge into areas that are not vegetated, the Contractor shall erect a silt



fence barrier as per drawings and details to trap any sediment. On slopes greater than 10%, where all vegetative cover has been removed leaving the soil exposed, the Contractor shall mulch and apply a mulch binder to such sites to prevent erosion. As an alternative to a mulch binder, straw mulch shall be “tracked” in. “Tracking” shall consist of traversing up and down slopes with tracked equipment such that the tracks overlap.

E. Install containment basins designed for over-winter capability as locations warrant.

F. Install straw bales or other silt barriers in swales, at the base of small slopes, and in areas subject to sedimentation from low velocity runoff.

G. Mulch all slopes over 10% slope with binder or equivalent.

H. Apply temporary seeding of critical areas (e.g., road cuts and stream banks) with fast germinating winter hardy grass such as winter rye.

PART 5 - AGRICULTURAL LANDS

A. Control erosion from topsoil stockpiles with silt fence or straw bales as necessary on steep slopes or unstable soil conditions.

B. Seed stripped topsoil piles with fast germinating winter hardy grass as necessary.

PART 6 - STREAMS AND FLOODPLAINS

A. Equipment crossing installations at streams shall be removed unless they are sized and constructed to withstand flow conditions expected during the over-winter and spring season.

B. All cut stream banks shall be stabilized in accordance with the Construction Sequence on the project drawings. Drawing. On any stream bank where vegetative cover cannot be established before winter, erosion control mats, seeding, fertilizers, etc. shall be installed where needed in accordance with the manufacturer recommendations for winter conditions.

C. Where necessary, install waterbars to prevent water flow from the right-of-way from directly entering stream.

D. Restore floodplain elevations.

E. Remove equipment and supplies from floodplain areas. Equipment crossings at streams that show signs of heavy seasonal flows shall be removed or modified, as determined by the Company representative. Culverts in such streams shall either have their crushed stone cover removed from the top of the pipe, or the entire pipe shall be removed, as determined by the Company representative. Timber mat bridges utilizing a center pier, and crossing streams that show signs of heavy seasonal flows, shall be removed as determined by the Company representative.

PART 7 - INSPECTION AND MAINTENANCE

A. Periodically inspect and maintain sediment and erosion control devices. Replace devices as needed and avoid failures.



B. Post signs discouraging use of access roads, the right-of-way, and associated areas.

END OF REQUIREMENTS