

















- e) For streams, drainage channels, and ditches, a minimum cover of 60 inches is required between the pipeline and the bottom of the drainage canal or ditch (see section 5.4 for road drainage ditches).

## **5.0 Aboveground and Underground Structures**

To maintain safe operating pipelines, CountryMark routinely performs maintenance and required federal/state inspections on its pipelines. In order to perform these critical activities, CountryMark's maintenance personnel must be able to access the pipeline right-of-way, as provided in the easement agreement. Required access is accomplished by keeping the area on either side of the pipeline contained within the right-of-way clear of trees, shrubs, buildings, structures, or any other encroachments that might interfere with access to the pipeline. CountryMark typically uses aerial patrol to survey the right-of-way, providing critical information regarding potential issues involving the safe operation of the pipeline. The landowner, as well as potential land purchasers and/or developers, have the obligation to respect the pipeline right-of-way by not placing obstructions or encroachments within the right-of-way and in planning developments in a manner that maintains the visibility and accessibility of the right-of-way, such as in the platting of "green belts" or common ground across the right-of-way area.

The Encroaching Party should provide CountryMark with a plan and profile drawing indicating the existing and proposed property improvements within 100 feet of the pipeline, and such drawings should depict the distance and relationship between the property improvements and pipeline. At the Encroaching Party's request, CountryMark will locate and mark its pipeline location to enable the location of the pipeline to be accurately surveyed and shown on the plan and profile drawings. CountryMark will have a representative at the site during improvement activities.

### **5.1 General Requirements**

- a) Buildings or other structures, including, but without limitation, overhanging balconies, patios, decks, swimming pools, wells, walls, septic systems, propane tanks, transformer pads, manholes, valve boxes, storm drain inlets, utility poles, the storage of materials, or any other item which will create obstruction or prevent the inspection of the right-of-way by air or foot, shall not be erected within the right-of-way.
- b) The Crossing Party shall not develop or build retaining walls, drive piling, or sheeting, or install an engineered structure that develops or controls overburden loads that will affect the pipeline.
- c) Deep foundations which include piers, caissons, drilled shafts, bored piles, and cast-in-situ piles located within 500 feet of the pipeline shall be installed/drilled using an auger.
- d) Any deviation for aboveground and underground structures will be reviewed by CountryMark on a *case-by-case basis*.









correct or shut down the HDD trajectory should the operation exceed the established tolerances. CountryMark must be notified immediately if tolerances are compromised and ~~be~~ be involved in the recommencement of operations after tolerances are exceeded.

#### 6.2 Metallic Utilities:

- ☐ Cathodic protection bonds and potential leads shall be installed at the expense of and by the Crossing Party at all ~~the~~ crossings and terminate them at aboveground locations. CountryMark will install test leads on ~~the~~ existing pipeline.
- ☐ Utilities shall be coated with a non-conductive coating for a distance of 50 feet on either side of the pipeline crossing.
- c) Ductile water pipe shall include nitrile gaskets within 50 feet of the pipeline crossing or anywhere within 25 feet of horizontal offset locations.
- d) A warning tape, or warning mesh, shall be used to indicate the location of a foreign pipeline for a distance of 25 feet on either side of CountryMark's pipeline.

#### 6.3 Non-Metallic Utilities:

- a) Utilities shall be wrapped with tracer wire within the width of the right-of-way.
- b) Natural gas (or other industrial gases) lines shall be encased in a 6-inch envelope of yellow 3,000 psi concrete across the right-of-way for a minimum distance of 10 feet to each side of each CountryMark pipeline(s) across the right-of-way.
- c) PVC water pipe shall include nitrile gaskets within 50 feet of the pipeline crossing or anywhere within 25 feet of horizontal offset locations.

#### 6.4 Underwater Line Crossings:

- a) For underwater line location procedures, refer to Section 3.2.
- b) The Encroaching Party must provide qualified diving inspectors (CountryMark must approve qualifications) to CountryMark for use during the crossing activity with no cost to CountryMark.☐
- c) The Encroaching Party must place sacks filled with sand and cement between CountryMark's pipeline(s) and the encroaching utility to provide and maintain the required minimum vertical clearance between the two utilities.

#### 6.5 Electrical, Fiber-Optic, and Communication Cables:

- a) Buried Cables:

[1] "Cable" is defined as all wires and fiber optic facilities that transmit electrical power or communication signals.



- [2] Electrical conductors/cable installations shall meet minimum requirements of National Electric Code for buried conductors and be adequately shielded and be impervious to hydrocarbon liquids.
- [3] Cables are required to cross beneath the pipeline with a minimum clearance of 24 inches and requires implementation of corrosion control procedures.
- [4] Sand or select fill shall be placed between the pipeline and cable (see Section 3.8).
- [5] Critical buried cables shall be installed in Schedule 80 PVC pipe and encased in a 6-inch envelope of color coded (i.e. red for electrical cable, orange for communication cable) 3,000 psi concrete for a minimum distance of 10 feet to each side of each CountryMark pipeline(s) across the right-of-way. The top of the concrete slab shall have at least 24-inch clearance of CountryMark's pipeline.
- [6] Warning tape, in accordance with A.P.W.A Uniform Color Code, shall be placed above the utility, 12 inches below ground, for a distance of 25 feet on either side of the crossing.
- [7] Cable crossings shall be installed with warning tape above the cable and signage aboveground. An extra length cable should be looped to help with future excavations.
- [8] All power cables shall be marked with red signs indicating "buried power cable", according to National Electric Code standards.
- [9] After construction of cables with an operating voltage greater than 13.8kV, CountryMark will investigate the possibility of induced current on the pipeline. If AC interference is evident, the Crossing Party shall be responsible for the cost of mitigating the AC interference.

b) Aboveground Cables:

- [1] A minimum of 20 feet of above-grade clearance for a distance of 25 feet on each side of the pipeline is required.
- [2] Mechanical supports and service drops including poles, guy wires, ground rods, anchors, etc. are not permitted with CountryMark's right-of-way.

**7.0 Temporary Access Roads and Heavy/Construction Vehicle Crossings**

7.1 General Requirements

- a) Each location is unique and shall be evaluated by a CountryMark representative to determine site-specific protective requirements.
- b) The Encroaching Party shall provide CountryMark information as to the type, model, size, and axle weight of construction equipment that will be used over or near the pipeline(s).



- c) Equipment with tracks, as opposed to having tires, is preferred if travel over CountryMark's pipeline is required.
- d) Trucks carrying a maximum axle load up to 15,000 pounds may cross the right-of-way after CountryMark has confirmed a minimum 48 inches over the pipeline.
- e) When temporary fill must be added, colored sheets of plastic shall be placed under the temporary fill at original grade so that the original grade will not be disturbed when the temporary fill is removed.
- f) Site conditions (such as damp soil) may require that the crossing location be matted or provided with additional cover to compensate for soil displacement due to the subsidence of tires.
- g) For all other cases, earthen ramps, swamp mats, air bridges, reinforced concrete slabs, one (1) foot thick timber matting, or steel plates may be required.
- h) If CountryMark determines that matting is required, the mats shall be placed on a minimum of two (2) feet undisturbed earth above the pipeline and oriented with the timbers perpendicular (across) the pipeline. Enough mats shall be placed to cover the complete width of the proposed crossing.
- i) At all crossing locations, the Crossing Party will provide 12" of clean AASHTO 1 stone over the pipeline right-of-way.
- j) CountryMark will limit the number of temporary construction roads constructed by the Crossing Party.
- k) Alternate means of protecting the pipeline must be approved by CountryMark.

## **8.0 Railroad Crossings**

### 8.1 General Requirements:

- a) A minimum clearance of 72 inches is required between railroad tracks and the pipeline.
- b) A minimum cover of 36 inches is required between the bottom of drainage ditches on either side of a railroad and the pipeline.
- c) For railroad main lines, the pipeline crossing must comply with local railroad guidelines that delineate the requirements for carrier pipe, casing pipe, and clearances. CountryMark shall be consulted for the review of any State submittals.
- d) For private spur crossings, CountryMark will determine the railroad entity having jurisdictional authority to dictate crossing requirements

## **9.0 Farming and Field Tile**

### 9.1 General Requirements:

- a) Field tile running parallel to the pipeline shall be spaced 10 feet from the centerline of the pipeline.



- b) File tile shall cross the pipeline perpendicularly with a clearance of 12 inches above or below the pipeline.
- c) Deep plowing or “ripping” operations shall be approved by and coordinated with CountryMark.

**10.0 Construction-Induced Vibrations**

10.1 General Requirements

- a) Construction activities that generate ground vibrations, including, but without limitation, pile driving, sheet driving, soil compaction work, jackhammering, or ramming shall be reviewed by CountryMark on a *case-by-case* basis.
- b) If the Crossing Party anticipates such an activity with 10 feet of the pipeline, then continuous testing monitored by seismograph is located directly over the pipeline at the closest point to the activity must be conducted. The Crossing Party shall provide, at their expense, the monitoring service which must be approved by CountryMark.
- c) The particle velocity of any one component of a three-component seismograph must not exceed 2.0 inches per second as recorded on the seismograph placed directly over the pipeline.

**11.0 Blasting Operations**

11.1 Blasting within 500 feet of the pipeline right-of-way:

- a) The Crossing Party must submit a blast plan to CountryMark for review and approval. Verbal and written notice will be given 14 and 21 days respectively.
- b) Blasting plans must include the following information:
  - Dates blasting to occur
  - Explosive type
  - Maximum shot hole depth and diameter
  - Number of holes and spacing
  - Delay pattern
  - Delay types and intervals
  - Depth of overburden
  - Depth of blast area
  - Maximum charge per hole, per delay
  - Show drilling/blasting pattern plan and profile in relation to CountryMark facilities
  - Calculated radiant peak particle velocity (PPV) at varying distances from the pipeline at the pipeline itself
  - State permit (copy)
  - Blasting contractor qualifications and insurance certificate (copy)
  - Blasting Safety Plan (copy)

The Crossing Party shall complete Attachment 3, “Blasting Plan Submission Form”, and include this form with their submission to CountryMark.



- c) The Crossing Party shall arrange for a CountryMark representative to be present to witness the blasting operations.

11.2 Blasting within 300 feet of the pipeline right-of-way:  
(Adds to or replaces items in section 12.1)

- a) Blasting shall be monitored by a seismograph located directly over the pipeline at its closest point to the blast hole(s). The Crossing Party shall provide, at their expense, the monitoring service, which must be approved by CountryMark.
- b) The particle velocity of any one component of a three-component seismograph must not exceed 2.0 inches per second as recorded on the seismograph placed on the ground directly over the pipeline.
- c) For blast testing, an initial test blast using a maximum charge of one pound shall be performed. The Crossing Party shall detonate the first test blast with all necessary monitoring equipment in place to observe the results of the proposed blast design. Each subsequent test blast may be set and detonated only after the seismograph reading from the previous test blast indicates that further blasting can be safely conducted.
- d) Routine production blasting may be initiated after completion of a successful test blast, with allowable charge based on the seismograph vibration recordings of test blasts. However, all blasting must be continuously monitored by a seismograph. The velocity recorded must not exceed the 2.0 inches per second limit noted above.

11.3 Blasting within 50 feet of the pipeline right-of-way:  
(Adds or replaced items in section 12.2)

- a) The Crossing Party shall hire a consulting firm that specializes in underground blasting to conduct the seismograph survey and certify the results.
- b) CountryMark will approve the Crossing Party's selection of consulting firms that will conduct the seismographic surveys before starting any blasting operation.

11.4 Special Requirements:

- a) For multiple-delay blasting, the Crossing Party shall begin the blasting sequence at the charge closest to the pipeline and progress away from the pipeline.
- b) If seismographic readings above the limit stated in item 12.2.b of this section are recorded, the pipeline must be exposed and inspected for possible damage and/or product release. The Crossing Party conducting blasting operations is responsible for all expenses related to the exposure and any subsequent repairs necessitated by the operation.
- c) At CountryMark's request, the Crossing Party shall install sheet piling, open trench channels, and/or matting to protect the pipeline during blasting.



**12.0 Seismic Vibrating Operations**

12.1 Seismic vibrating within 500 feet of the pipeline right-of-way:

- a) The Crossing Party must submit a seismic vibrating plan to CountryMark for review and approval. Verbal or written notice will be given 14 and 21 days respectively.
- b) Seismic vibrating plans, when using Vibroseis System Vibrators to radiate ground vibrations, must include information on soil conditions and depth of exploration, the anticipated number and type of vibrations, type and weight of vehicle, and peak force of equipment.
- c) The peak force by vehicle weight shall not exceed 45,000 pounds.
- d) The Crossing Party shall also arrange for a CountryMark representative to be present to witness the seismic vibrating operation.

12.2 Seismic vibrating within 100 feet of the pipeline right of way:

- a) Vibration shall be monitored by a seismograph located directly over the pipeline at its closest point to the vibrator(s). The Crossing Party shall provide, at their expense, the monitoring service, which must be approved by CountryMark.
- b) The Crossing Party shall determine and limit the maximum peak force allowed under continuous seismographic vibration monitoring such that peak particle velocity will not exceed 2.0 inches per second.
- c) Seismic vibration surveys shall not be conducted closer than 100 feet to the pipeline.

12.3 Special Requirements:

- a) If seismographic readings above the limit stated in item 12.2.b of this section are recorded, the pipeline must be exposed and inspected for possible damage and/or product release. The Crossing Party conducting seismic vibrating operations is responsible for all expenses related to the exposure and any subsequent repairs necessitated by the operation.
- b) At CountryMark's request, the Crossing Party shall install sheet piling and/or open trench channels to protect the pipeline during seismic vibrating operations.

**13.0 Wind Turbines**

13.1 Setback Distance from Pipelines

- a) Wind turbine structures shall be set back from any CountryMark pipeline at least a distance equal to 110% of the structure height, which is defined as the height of the entire wind turbine system as measured from the bottom of the



base to the highest vertical point of the system including the base and tower at the highest reach of the turbines or blades.

- b) No facilities associated with a wind turbine installation project shall be permitted to be installed within the pipeline easement.
- c) Warning lights shall be installed on all wind turbines that are located within 1,200 feet of any CountryMark pipeline.

### 13.2 Construction Equipment and Crane Crossings

- a) All temporary access roads and heavy/construction vehicle crossing shall comply with Section 7 above.
- b) Where cranes and other maintenance vehicles will need to cross CountryMark pipelines on a routine permanent basis for maintenance of the turbine(s), permanent crossing locations must be established, an encroachment agreement must be signed by the landowner and facility owner, and permanent crossing protections must be installed to the satisfaction of CountryMark.
- c) Construction materials or equipment shall not be transported longitudinally over CountryMark's pipelines.

### 13.3 Underground Utilities

- a) Cables and electrical conduit shall comply with Section 6.5 above.
- b) CountryMark may require at the expense of the Crossing Party an AC Arc Fault Study, specific to the Crossing Party's project encroachments. The study will determine if there is adequate AC Arc Fault protection and separation from CountryMark's facilities. CountryMark will arrange for the engineering, design and installation of AC mitigation and Lightning suppressions systems, as deemed necessary by the AC Arc Fault Study. The reasonable cost of such AC remediation and Lightning suppressions systems shall be submitted to the Crossing Party for review and approval, which approval shall not be unreasonably delayed, conditioned or withheld, and, upon approval such reasonable cost will be prepaid by the Crossing Party to CountryMark.

## 14.0 Solar Farms and Solar Panels

### 14.1 Setback Distance From Pipelines

- a) No panels are permitted in the right-of-way.
- b) Panels shall be 100 feet from any CountryMark pipeline.
- c) Fencing shall comply with Section 5.3 above

### 14.2 Construction Equipment and Crane Crossings

- a) All temporary access roads and heavy/construction vehicle crossing shall comply with Section 7 above.



- b) Where cranes and other maintenance vehicles will need to cross CountryMark pipelines on a routine permanent basis for maintenance of the turbine(s), permanent crossing locations must be established, an encroachment agreement must be signed by the landowner and facility owner, and permanent crossing protections must be installed to the satisfaction of CountryMark.
- c) Construction materials or equipment shall not be transported longitudinally over CountryMark's pipelines.

**14.3 Electrical Design and Risk Assessment**

- a) A risk assessment showing the impacts of the effects of a rise of earth potential (touch and step potentials and possibility of voltage exceeding the dielectric strength of pipeline coatings), under fault conditions, shall be submitted to CountryMark for consideration prior to the commencement of any construction work.
- b) Cable diagrams shall be provided to CountryMark that show the proposed location of all electrical cables both buried and aboveground in the vicinity of the pipeline. All electrical cables should be kept out of the right-of-way.
- c) Both buried and aboveground alternating current (AC) electrical cables shall be routed to avoid the cables running parallel to the pipeline; sub-stations are not permitted in the right-of-way.

**14.4 Underground Utilities**

- a) CountryMark may require at the expense of the Crossing Party an AC Arc Fault Study, specific to the Crossing Party's project encroachments. The study will determine if there is adequate AC Arc Fault protection and separation from CountryMark's facilities. CountryMark will arrange for the engineering, design and installation of AC mitigation and Lightning suppressions systems, as deemed necessary by the AC Arc Fault Study. The reasonable cost of such AC remediation and Lightning suppressions systems shall be submitted to the Crossing Party for review and approval, which approval shall not be unreasonably delayed, conditioned or withheld, and, upon approval such reasonable cost will be prepaid by the Crossing Party to CountryMark.
- b) Cables and electrical conduit shall comply with Section 6.5 above.

**15.0 Deviations and Exceptions**

15.1 When and where special circumstances dictate, deviation from these requirements must be formally approved by CountryMark in writing prior to commencement of any excavation or other construction activity that may impact the pipeline. Such deviations must be explained and documented prior to CountryMark for review and approval.



**16.0 Additional Information and CountryMark Contacts**

16.1 Should you have any questions regarding pipeline rights-of-ways or your specific easement, contact CountryMark's Right of Way Department at the applicable phone number listed in Attachment 1.

16.2 Should you have any questions regarding CountryMark's engineering or integrity requirements, contact the applicable phone number listed in Attachment 1.



**CountryMark®**

ATTACHMENT 1: COUNTRYMARK RIGHT-OF-WAY AND ENGINEERING CONTACTS

<b>Name</b>	<b>Responsibility</b>	<b>Phone/E-mail</b>
<b>Angie DeKemper</b>	Land/Legal/ROW Supervisor	812-838-8153 Angie.Dekemper@Countrymark.com
<b>Brittany Griggs</b>	Right-of-Way Agent	812-838-8160 Brittany.Griggs@Countrymark.com
<b>Darlene Risher</b>	One Call Coordinator	812-838-8513 Darlene.Risher@Countrymark.com
<b>Jamie Marques</b>	Pipeline Engineer <i><u>Encroachment Design Review</u></i>	812-833-2598 Jamie.Marques@Countrymark.com
<b>Blair Currie</b>	Pipeline Integrity Manager	812-838-8555 Blair.Currie@Countrymark.com









Indicate any areas of disturbances or other work that will require CountryMark's pipeline(s) to be exposed in order to perform any of your work.

*Supplemental Plan Information (as applicable)*

Blasting Vibrating Plan

Seismic Vibrating Plan

Support Plan

Drill Plan

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I hereby authorize CountryMark to contact the Engineer/Survey firm which prepared the drawings, survey, and attachments.

**I certify that the information provided is accurate and I realize that incomplete information may delay processing or invalidate this application.**

Signature of Application

By: \_\_\_\_\_

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Title: \_\_\_\_\_



ATTACHEMENT 3: Blasting Plan Submission Form

<b>INFORMATION SECTION</b>	
<b>Blasting Contractor –</b>	<b>Contracted by –</b>
Company Name: _____	Company Name: _____
Phone: _____	Address: _____
Email Address: _____	_____
Contact Person: _____	Contact Person: _____
Address: _____	
*Latitude: _____	
*Longitude: _____	
Location and Distance (in feet) to Nearest CountryMark Pipeline: _____	
Date of Blasting: _____	

<b>EXPLOSIVES SECTION</b>	
Types of Explosives: _____	
Max. Charge / Hole (lbs): _____	
Charge Delay (ms): _____	
No. of Holes: _____	
Max. Depth of Charge (ft): _____	
Max. Diameter of Charge (in): _____	
<b>Calculated Particle Velocity at a point –</b>	
Depth of Blast Area (ft): _____	300 feet from blasting event (in/sec): _____
Depth of Overburden (ft): _____	200 feet from blasting event (in/sec): _____
Type of Rock to be Blasted: _____	100 feet from blasting event (in/sec): _____
Density of Rock (lbs/cu-ft): _____	Directly above the pipeline (in/sec): _____ @ ft. _____

<b>ATTACHMENT CHECKLIST</b>
<input type="checkbox"/> Drilling/Blasting Pattern Sketch – include all depths, measurements, and delay patterns relative to CountryMark facility involved and each charge. <input type="checkbox"/> State Approval Letter <input type="checkbox"/> Blasting Contractor’s Qualifications <input type="checkbox"/> Blasting Contractor’s Certificate of Insurance <input type="checkbox"/> Blasting Contractor’s Safety Plan
<p><b>OMMISSION OF ANY INFORMATION REQUESTED ABOVE WILL DELAY YOUR BLASTING PLAN REVIEW</b></p> <p>CountryMark requires a minimum of 14 days for technical review uoupon receipt of complete and accurate blasting plans</p>