

REQUEST FOR QUOTATION 062008

RETURN THIS REQUEST TO:
RFQ 062008/REPAIRS TO EASTERN TRAIL
ATTN: KEITH MATHERNE
PO Box 360
259 US Route One
Scarborough, ME 04070-0360



THIS IS NOT AN ORDER

DATE RFQ ISSUED: 03/14/08

RFQ TITLE: REPAIRS TO EASTERN TRAIL

THERE WILL NOT BE A MANDATORY SITE WALK-THRU. THE TOWN ENCOURAGES INTERESTED CONTRACTORS TO VISIT THE SITE.

QUOTES MUST BE SUBMITTED TO THE PURCHASING AGENT BY FRIDAY April 25th, 2008 by 3:00pm.

THIS IS NOT A PUBLIC OPENING; RESULTS WILL BE MADE PUBLIC AFTER AWARD

F.O.B. POINT: FINAL DESTINATION

ALL QUESTIONS REGARDING THIS RFQ SHOULD BE DIRECTED TO KEITH MATHERNE, PURCHASING AGENT, at (207) 730 4089 or kmathern@ci.scarborough.me.us. THE PREFERRED METHOD IS VIA EMAIL.

IMPORTANT NOTICE: If you received this solicitation from the Town's web site, you must register with the Purchasing Agent to receive subsequent amendments.

Scarborough Eastern Trail Request for Quotation • Storm Damage Repair

I. Description of Work to Be Performed

The section of Eastern Trail that runs from Pine Point Road (Rte 9) north approximately three miles to Black Point Road in the Town of Scarborough sustained erosion damage during the Patriots Day Storm in April 2007. Most of the damage occurred in sections of the trail subject to tidal influence. The repair work has been conditionally approved to receive up to a maximum of \$90,000 in FEMA matching funds. The work has been divided into multiple sites as defined below.

Site 1A - Willowdale Culvert #1 - Located just north of the Washington Rd. access where tidal flow meets the trail and connects with what is commonly referred to as Willowdale Pond. Damage to this area includes minor erosion of the eastern embankment and heavy erosion around the culvert and embankment of the western slope. Approximately 120 ft of trail surface sustained erosion of 3-6 inches of surface material and loam along the shoulders.

Site 1B - Approximately 75' long by 12' wide stretch of trail surface near the GSGT Regulator Station at the Washington Road entrance that GSGT excavated and then replaced with crushed stone material. This material is not suitable for a trail surface and must be removed and replaced.

Site 2 - Willowdale Culvert #2 - Located approximately ¼ mile north of Culvert #1 where tidal flow again meets the trail and connects again with what is commonly referred to as Willowdale Pond. Damage to this area includes minor erosion the eastern embankment and heavy erosion around the culvert and embankment of the western slope. Minor spot repair to trail surface will be required where any depressions exist.

Site 3A – Scarborough Marsh – Spot repairs located in an approximately ¾ of a mile section heading north from the parking area at Pine Point Rd. where heavy tidal influences eroded the embankment along the eastern slope of the trail including the collapse of a section of retaining wall and displacement of box culvert granite blocks. Some damage was sustained to the embankment on the western slope primarily where water was running completely over the trail surface. The trail surface sustained heavy damage where water was able to flow over it causing the removal of between 3-6 inches of surface material.

Site 3B – Dunstan River Bridge – Located approximately ¼ mile north from Pine Point Rd. at the trail crossing of the Dunstan River. Four deck timbers have become significantly warped or rotten and need to be replaced.

II. Construction Specifications

All work shall include Erosion Control and Mobilization. Anything incidental to the work such as Traffic Control should be carried under Mobilization. Estimated quantities have been provided for some, not all work items. They are to be used as a guide only; Contractors are required to verify all quantities. Contractors must use the attached budget form to submit cost proposals. [See Attachment – Schedule of Items.](#)

Site 1A – Willowdale Pond Culvert #1

- **Trail Surface:** Restore eroded trail surface to original depth of 6 inches from sub base by 120' long by 12' wide. Start and terminus to be identified in the filed by the project manager. Remove any existing trail surface material as needed in order to create a new surface with specified material. Material shall conform to Section 703.06a. Type A, except the maximum particle size, shall be 1-inch. Contractor shall submit sample, gradation information, and source location to the Project Manager for approval prior to

delivering material to the site. Grade new surface with a 2% slope matching slope of surrounding terrain to best facilitate even shedding of surface run-off. Blend new grade to existing grade at each end. The trail surface will be prepared and placed in accordance with MDOT Specifications Section 304 and meet compaction requirements of 95% of optimum density (AASHTO T-180). The vibratory roller(s) used will be self-propelled, steel wheeled, of sufficient size to achieve the above density requirements. Any existing material that is not suitable for continued use as a trail surface shall be re-used in the repair of shoulders and slope. Approximately 320 cubic yards of surface material.

- **Embankment Repair:** Spot placement of Regular Rip Rap in accordance with MDOT S.S. 703.26 around culvert and slope as needed where significant erosion has occurred. Locations to be identified in the field by Project Manager. Spot fill over/around rip rap material with aggregate for unpaved shoulders in accordance with MDOT S.S. 703.11 and/or any old trail surface material that was removed to install the new material around culvert and at the top of slope where required to level shoulder to match trail surface grade. Drainage Geotextile in accordance with MDOT S.S. 722.02 shall be used on all embankment repairs and shall be installed in accordance with MDOT S.S. Section 620
- **Shoulder Repair:** As needed where erosion has occurred and around new rip rap. Final product should be an even shoulder surface that blends the final grade of the trail surface with the top of the embankment. Shoulder may have up to a 2% slope away from the trail surface. Shoulder should be constructed of loam in accordance with MDOT S.S. Section 615. Loam content for original shoulders was approximately 4 inches in depth. In areas that require more than 4 inches of loam to create desired final product, use aggregate for unpaved shoulders in accordance with MDOT S.S. 703.11 or any old trail surface that was removed to install the new material should be used to create a sub-base.

Site 1B – Trail Surface Repair near GSGT Regulator Station – Add Item

- **Trail Surface:** Excavate existing crushed stone trail surface to a depth of 6 inches by 75' long by 12' wide. Start and terminus to be identified in the field by the project manager. Material shall conform to Section 703.06a. Type A, except the maximum particle size, shall be 1-inch. Contractor shall submit sample, gradation information, and source location to the Project Manager for approval prior to delivering material to the site. Grade new surface with a 2% slope matching slope of surrounding terrain to best facilitate even shedding of surface run-off. Blend new grade to existing grade at each end. The trail surface will be prepared and placed in accordance with MDOT Specifications Section 304 and meet compaction requirements of 95% of optimum density (AASHTO T-180). The vibratory roller(s) used will be self-propelled, steel wheeled, of sufficient size to achieve the above density requirements. Any existing material that is not suitable for continued use as a trail surface shall be re-used in the repair of shoulders and slope. Approximately 200 cubic yards of surface material.

Shoulder: Spot fill shoulders as needed in order to achieve an even shoulder surface that blends with the final grade of the trail surface. Shoulder may have up to a 2% slope away from the trail surface. Shoulder should be constructed of loam in accordance with MDOT

Site 2 – Willowdale Pond Culvert #2

- **Trail Surface:** Spot repair any areas of eroded trail surface to match existing grade within culvert and embankment area. Material shall conform to Section 703.06a. Type A, except the maximum particle size, shall be 1-inch. Contractor shall submit sample, gradation information, and source location to the Project Manager for approval prior to delivering material to the site. Grade new surface with a 2% slope matching slope of surrounding terrain to best facilitate even shedding of surface run-off. Blend new grade to existing grade at each end. The trail surface will be prepared and placed in accordance with MDOT Specifications Section 304 and meet compaction requirements of 95% of optimum density (AASHTO T-180). The vibratory roller(s) used will be self-propelled, steel wheeled, of sufficient size to achieve the above density requirements.

- **Embankment Repair:** Spot placement of Regular Rip Rap in accordance with MDOT S.S. 703.26 around culvert and slope as needed where significant erosion has occurred. Locations to be identified in the field by Project Manager. Spot fill over/around rip rap material with aggregate for unpaved shoulders in accordance with MDOT S.S. 703.11 and/or any old trail surface material that was removed to install the new material around culvert and at the top of slope where required to level shoulder to match trail surface grade. Create a drainage swale using Regular Rip Rap (703.26) on western slope at the north corner of the culvert where erosion has impacted both the embankment and the shoulder. Drainage Geotextile in accordance with MDOT S.S. 722.02 shall be used on all embankment repairs and shall be installed in accordance with MDOT S.S. Section 620
- **Shoulder Repair:** As needed where erosion has occurred and around new rip rap. Final product should be an even shoulder surface that blends the final grade of the trail surface with the top of the embankment. Shoulder may have up to a 2% slope away from the trail surface. Shoulder should be constructed of loam in accordance with MDOT S.S. Section 615. Loam content for original shoulders was approximately 4 inches in depth. In areas that require more than 4 inches of loam to create desired final product, use aggregate for unpaved shoulders in accordance with MDOT S.S. 703.11 or any old trail surface that was removed to install the new material should be used to create a sub-base.

Site 3A – Scarborough Marsh

- **Trail Surface:** Restore eroded trail surface to original depth of 6 inches from sub-base. Remove any existing trail surface material as needed in order to create a new surface with specified material that matches approximately with existing shoulder grade. Material shall conform to Section 703.06a. Type A, except the maximum particle size, shall be 1-inch. Contractor shall submit sample, gradation information, and source location to the Project Manager for approval prior to delivering material to the site. Grade new surface with a 2% slope matching slope of surrounding terrain to best facilitate even shedding of surface run-off. Blend new grade to existing grade at each end. The trail surface will be prepared and placed in accordance with MDOT Specifications Section 304 and meet compaction requirements of 95% of optimum density (AASHTO T-180). The vibratory roller(s) used will be self-propelled, steel wheeled, of sufficient size to achieve the above density requirements. Any existing material that is not suitable for continued use as a trail surface shall be re-used in the repair of shoulders and slope.
 - ◆ 1,200 long by 8’ wide by 6 inches deep. Essentially between the northern side of the Bridge north to the Oak Tree, but better identified in the field by the project manager. Grade and roll surface shall occur from the top of the northern bridge abutment north to the end of the newly installed material; this is a greater distance than the 1,200 feet of newly installed trail surface. Note that the grade of trail surface must match the top of the back wall of the bridge abutment (deck plate). Approximately 213.33 cubic yards of surface material.
 - ◆ Spot repairs as needed between Pine Point Rd. and Bridge, including significant erosion on east side of trail at the base of the southern bridge approach.
- **Embankment Repair:**

Regular Rip Rap in accordance with MDOT S.S. 703.26 as needed where minor to moderate erosion has occurred; locations to be better identified in the field by the Project Manager. Spot fill over/around rip rap material with aggregate for unpaved shoulders in accordance with MDOT S.S. 703.11 and/or any old trail surface material that was removed to install the new material at the top of slope where required to level shoulder to match trail surface grade. Drainage Geotextile in accordance with MDOT S.S. 722.02 shall be used on all embankment repairs and shall be installed in accordance with MDOT S.S. Section 620

 - ◆ Install a blanket of Rip Rap at the base of the south-east retaining wall approximately 100’ by 6’. Approximately 22.2 cubic yards of Rip Rap.

- ◆ Install a blanket of Rip Rap on the west embankment running from the large Oak Tree south toward the bridge approximately 120' by 4'. Approximately 17.78 cubic yards of Rip Rap.
- ◆ Spot placement of Rip Rap as needed along east side of trail from the Oak Tree south to the bridge. In some areas this will be used as needed in combination with Heavy Rip Rap. Locations to be identified by the Project Manager in the field. Approximately 18.5 cubic yards of Rip Rap
- ◆ Spot placement as needed along east side of trail from the end of the south-east approach rail up to the box culvert. Locations to be identified by the Project Manager in the field. In some areas this will be used as needed in combination with Heavy Rip Rap. Approximately 14.8 cubic yards of Rip Rap
- ◆ Create a drainage swale on the slope using Rip Rap at the end of the north-west retaining wall where runoff has caused erosion. Rip rap should not extend into trail area. Approximately 3 cubic yards of Rip Rap.
- ◆ Create a drainage swale on the slope using Rip Rap at the end of the south-west retaining wall where runoff has caused erosion. Rip rap should not extend into trail area. Approximately 3 cubic yards of Rip Rap.

Heavy Rip Rap in accordance with MDOT S.S. 703.28 as needed where significant erosion has occurred; Locations to be better identified in the field by Project Manager. Heavy Rip Rap should be placed against slope in order to stabilize and in some cases build-up the existing embankment. Regular Rip Rap (703.26) should be placed in conjunction with Heavy Rip Rap to fill in gaps between heavy Rip Rap. Spot fill over/around rip rap material with aggregate for unpaved shoulders in accordance with MDOT S.S. 703.11 and/or any old trail surface material that was removed to install the new material around culvert and at the top of slope where required to level shoulder to match trail surface grade. Drainage Geotextile in accordance with MDOT S.S. 722.02 shall be used on all embankment repairs and shall be installed in accordance with MDOT S.S. Section 620

- ◆ At base of slope and marsh near south-east corner of Dunstan River & retaining wall where marsh material is being heavily eroded. Location to be better identified in the field by Project Manager. Area is approximately 40 feet long. Approximately 4.44 cubic yards of Heavy Rip Rap.
 - ◆ Two sections on north-east embankment (north of the bridge). Locations to be better identified in the field by Project Manager. Each area is approximately 20 ft long. Approximately 4.44 cubic yards of Heavy Rip Rap.
 - ◆ South-east embankment between the bridge approach and the box culvert where heavy erosion has taken most of the embankment. Area is approximately 40 ft. long. Location to be better identified in the field by Project Manager. Approximately 4.44 cubic yards of Heavy Rip Rap.
- **Shoulder Repair:** As needed where erosion has occurred and around new rip rap. Final product should be an even shoulder surface that blends the final grade of the trail surface with the top of the embankment. Shoulder may have up to a 2% slope away from the trail surface. Shoulder should be constructed of loam in accordance with MDOT S.S. Section 615. Loam content for original shoulders was approximately 4 inches in depth. In areas that require more than 4 inches of loam to create desired final product, aggregate for unpaved shoulders in accordance with MDOT S.S. 703.11 or any old trail surface that was removed to install the new material should be used to create a sub-base.
 - **South-East Segmental Retaining Wall:** Repair and extend section of retaining wall that has collapsed. Damaged segmental blocks should be replaced with exact or comparable blocks. Match top of wall to existing trail surface grade. Installation shall conform to the original construction and manufacturer specifications. Total length of repaired/extended wall is to be 20 ft. Budget as lump sum item including all material, labor, equipment and anything incidental to the work.

- **Box Culvert Repair:** The storm eroded material between the large granite blocks causing some blocks to shift and holes to open up around others. This is a historic structure so it cannot be altered only restored to its pre-existing condition. Both sides of the culvert were damaged; however the east side had more significant damage. Work will include the tasks listed below. Budget as a lump sum item including all material, labor, equipment and anything incidental to the work.
 - ◆ East Side: Reposition 2-4 blocks to their original position as directed by the project manager in the field.
 - ◆ East Side: Fill larger spaces between blocks with Regular Rip Rap material as needed
 - ◆ East Side: Fill smaller spaces between blocks and Regular Rip Rap with aggregate for unpaved shoulders in accordance with MDOT S.S. 703.11 or any old trail surface that was removed to install the new material as needed. Drainage Geotextile in accordance with MDOT S.S. 722.02 shall be used on all embankment repairs and shall be installed in accordance with MDOT S.S. Section 620
 - ◆ West Side: Spot fill larger spaces between blocks with Regular Rip Rap material as needed
 - ◆ West Side: Spot fill smaller spaces between blocks and Regular Rip Rap with trail surface material as needed. Drainage Geotextile in accordance with MDOT S.S. 722.02 shall be used on all embankment repairs and shall be installed in accordance with MDOT S.S. Section 620

Site 3B – Dunstan River Bridge

Bridge Decking Repair: Four deck timbers have become significantly warped or rotten and need to be replaced as directed by the project manager in the field. Fasteners to be carriage bolts; galvanized in accordance with ASTM A153. Power actuated fasteners will not be allowed. Planks are to be drilled prior to installation of bolts. In addition to at least one fastener at either end of every plank, planks shall receive a minimum of one interior connection bolt at a stringer location approximately near the center of the plank. Wood shall be .40 lbs per cubic foot pressure treated with Alkaline Copper Quaternary (ACQ). Budget as a lump sum item including all material, labor, equipment and anything incidental to the work.

III. General Conditions:

A. Applicable Laws & Regulations – The Contract and the Project are subject to all applicable Federal, State and Municipal laws, rules, regulations, orders and decrees (“Law”).

All work will be governed by MDOT Standard Specifications, most recent edition, including erosion control practices The Contractor is responsible for obtaining all manuals, Specifications, reference guides, or other publications referenced or indicated by the Contract Documents and performing the work in conformity with the same. Unless a specific date or version is specified, the Contractor shall use the most recent version of such publication that existed at the time the proposal was submitted. The following MDOT Publications are hereby referenced and incorporated and shall govern all work performed under this Contract unless otherwise provided in the Contract Documents.

1. “State of Maine Department of Transportation Standard Specifications” (MDOT S.S.) most recent version
2. “State of Maine Department of Transportation Standard Details”, most recent version

B. Same Rights – For the purpose of this Contract, the Town of Scarborough shall have the same rights, privileges and protections as those provided to the MDOT under the MDOT Standard Specifications, most recent version.

- C. Dig Safe & Maintaining Utility Markings** - The Contractor shall be responsible for determining the presence of underground utility facilities prior to commencing any excavation work and shall notify utilities of proposed excavation in accordance with M.R.S.A. Title 23 §3360-A, Maine "Dig Safe" System. Call 1-888-344-7233. The Contractor will be responsible for maintaining the buried utility location markings following the initial locating by the appropriate utility or their designated representative.
- D. Granite State Gas Transmission (GSGT)** - Has an easement from landowners for a 33-foot Right of Way to operate an eight-inch, high-pressure, natural gas pipeline. The pipeline runs the entire length of the Project Site within that easement area; generally on the east side of the corridor. The Contractor will be responsible for meeting the following requirements agreed to by and among GSGT, the ETMD and the Town of Scarborough:
- 1. Construction Supervision** - GSGT will schedule personnel for supervision of construction activities in accordance with the mutually agreed to Project schedule to oversee any contractors or subcontractors who may be working near to the gas pipeline. Supervision shall be required any time work is being done within GSGT's 33-foot easement area; in the Marsh area where there is limited land area, supervision will be required at all times.
 - 2. Work Stoppage** - GSGT shall have the right to stop work immediately if the gas pipeline or the safety of the public are or might be negatively impacted. Immediately following the decision to stop work, the Project Manager must be contacted and a meeting held with GSGT, the Project Manager and the Contractor(s) to evaluate the concern(s) and determine a corrective course of action.
 - 3. Minimum Guidelines for Construction** - The Contractor shall observe the *Minimum Guidelines for Construction* established by GSGT and its parent company Columbia Gas Transmission, Inc. The *Minimum Guidelines for Construction* - [See Attachment](#).
 - 4. Weight Restrictions** – GSGT has placed weight restrictions for all equipment working on or within seven (7) feet of the gas pipeline. In the Marsh there is not enough available land to have the preferred off-set so weight restrictions will apply to all work conducted in this area. The contractor must provide a list of equipment for review and approval by GSGT.
 - 5. Access** – At all times during construction GSGT will require immediate access to their pipeline facilities. GSGT shall be given a key to locks used on any gates or chains erected by the Contractor. Large items should not be used as a barrier during non-working hours unless they can be moved at a moments notice.
- E. Scarborough Sanitary District (SSD)** - SSD has an easement from landowners for a 33-foot Right of Way to operate a 12 inch forced sewer pipeline; generally located on the west side of the corridor. The pipeline runs the entire length of the Project Site within that easement area. The SSD may wish to schedule personnel for supervision of construction activities in accordance with the mutually agreed to Project schedule to oversee any contractors or subcontractors who may be working near to the sewer pipeline.
- F. Indemnification and Insurance** – The Contractor shall apply the conditions of MDOT S.S. Section 110 for indemnification and insurance; bonding is not required. The Contractor shall provide signed, valid and enforceable certificate(s) of insurance. Each policy with the exception of Worker's Compensation insurance shall name the Town of Scarborough and Eastern Trail Management District as additional insured.
- G. The Work** - The Contractor agrees to complete all Work as specified or indicated in the Contract Documents including Extra Work in conformity with the Contract. The Work includes construction, maintenance during construction, warranty as provided in the Contract, and other incidental work. The Contractor shall be responsible for furnishing all supervision, labor, equipment, tools supplies,

permanent materials and temporary materials required to perform the Work including construction quality control including inspection, testing and documentation, all required documentation at the conclusion of the project, warranting its work and performing all other work indicated in the Contract. The Town of Scarborough shall have the right to alter the nature and extent of the Work as provided in the Contract; payment to be made as provided in the same.

- H. Permitting** - The ETMD shall furnish Department of Environmental Protection Permits to perform the Work within the Project limits. The permitting process with DEP is underway. Work may not begin on the project until the Town has received all required DEP Permits. The Contractor is responsible for any other incidental permits that may be required to undertake the Work. The Contractor shall follow any conditions set forth in the Permits.
- I. Contract Time and Completion** - The Contract time shall be between the date of Contract execution and July 30, 2008. Work can be performed at any time between the hours of 7am and 9pm except Sundays and Holidays, unless expressly specified otherwise by the Project Manager.

Attachments

Schedule of Items

GSGT Minimum Guidelines for Construction

****THIS FORM MUST BE COMPLETED BY CONTRACTOR AND INCLUDED WITH SUBMITTAL****

Scarborough Eastern Trail
Storm Damage Repair Schedule of Items

Work	Unit	Quantity	Materials	Labor	Equipment	Total
Site 1A - Willowdale Culvert #1						
Trail Surface	CY					
Emabankment & Shoulder Repair	CY					
Erosion Control	LS					
Mobilization	LS					
Site 1B - Trail Surface Repair - GSGT Regulator Station						
Trail Surface & Shoulder	CY					
Erosion Control	LS					
Mobilization	LS					
Site 2 - Willodale Culvert #2						
Trail Surface	CY					
Emabankment & Shoulder Repair	CY					
Erosion Control	LS					
Mobilization	LS					
Site 3A - Scarborough Marsh						
Trail Surface	CY					
Embankment Heavy Rip Rap	CY					
Embankment Regular Rip Rap	CY					
Shouler Repair	CY					
Segmental Retaining Wall Repair	CY					
Box Culvert Repair	LS					
Erosion Control	LS					
Mobilization	LS					
Site 3B - Dunstan River Bridge						
Decking Repair	LS					
Grand Total						

Columbia Gas Transmission Corp.
Minimum guidelines for construction near natural gas pipeline facilities

Interstate natural gas pipelines are an important part of the nation's energy infrastructure. Pipelines and related facilities operated by Columbia Gas Transmission Corp. safely transport much of the clean-burning fuel used in homes, businesses and factories of the United States.

These minimum guidelines for construction near Columbia's natural gas pipeline facilities are intended to protect public safety and help assure the continuous safe flow of the nation's natural gas supplies.

Consult Columbia early in your plans

To expedite construction or excavation projects safely and without delay, property owners and developers planning any such activities in the vicinity of Columbia pipelines should consult with Columbia in the design phase of the project. Have your construction plans reviewed by company personnel before you apply for zoning permits or commit to construction schedules.

For more information, call the appropriate Columbia telephone number on the back of this brochure.

***Note:** These guidelines supersede any and all prior guidelines pertaining to activities and placements on or near Columbia Gas Transmission facilities. Existence of, or the ramifications from, the implementation of prior guidelines will not dictate, direct or provide for exemption of any of the above guidelines.*

February 2004

Notify Columbia before construction begins

Columbia must be notified according to the state law before construction begins in the vicinity of its facilities. This notification shall be made through the appropriate state One-Call notification service, but follow up contact should be made with the local Columbia Gas Transmission office.

No construction or excavation activities of any kind, including blasting, shall be done on Columbia's right of way area before Columbia personnel have established the actual location of all affected facilities and the limits of the right of way. Columbia personnel must be present during any construction or excavation activities.

Excavation near pipelines/buried facilities

No excavation shall be made on the pipeline right of way without prior notification to Columbia through the state One-Call notification service. Subsequent follow-up must be made to Columbia to seek approval for the proposed construction. Approved excavations above, below or within three-feet of either side of the pipeline shall be dug using hand tools.

Crossing pipelines with heavy equipment

Columbia may require heavy equipment operators to install mats, dirt pads, or other approved protective materials to adequately protect Columbia pipelines from potential

damage by heavy equipment crossing the right of way. All proposed road crossings of buried facilities must be evaluated by Columbia personnel. Any additional over-burden must be removed after construction unless otherwise directed by Columbia personnel.

Blasting plans must be approved

Any blasting proposed within 300 feet of Columbia facilities must be submitted to Columbia in advance along with a blasting plan outlining such proposed activity. No blasting may begin unless and until Columbia provides written confirmation that it does not object to such blasting. Any modifications to the blasting plan must also be submitted to Columbia for review and should not be implemented unless and until Columbia provides written confirmation that it does not object to such modifications. The blasting contractor may be required to monitor and record seismic shock at the facilities.

Allow adequate clearance for directional drilling

Any directional drilling or boring proposed under Columbia's buried facilities must be submitted to Columbia for review and approval. Adequate clearance must be maintained from Columbia's facilities and additional excavations may be required to ensure adequate clearance. As-built plans are required for all borings.

Maintain up to 300-foot clear area around storage well heads

Property owners or developers must notify Columbia of any proposed construction or excavation within 300 feet in any direction of a natural gas storage well. For safety, Columbia reserves the right to object to any such proposed activities or placement of objects closer than 300 feet to a storage wellhead.

Construction requirements within a right of way

The requirements listed below are minimum guidelines for construction in the vicinity of Columbia pipeline rights of way to protect public safety and the integrity of Columbia's facilities. A review of individual plans and property rights may reveal more specific requirements.

1. The existing cover over pipelines and rights of way, which is normally a minimum of 36-inches and a maximum of 48-inches, shall be maintained. The minimum earth cover over pipelines at all street and road crossings, including the adjacent ditch line, shall be 36-inches; 60-inches minimum cover shall be maintained at stream and river crossings.
2. Above-ground or below-ground structures or obstructions of any type shall not be placed within the easement area of any pipeline, which generally extends 25 feet on each side from the center of the pipeline, or as defined in the applicable right of way or land rights agreement.
3. Pipeline easements shall not be shared longitudinally with other utilities. All water valves, curb boxes, manholes, etc. must be outside the easement. Other utilities which cross Columbia pipelines must do so at or as near 90 degrees as practical and with a minimum of 12-inches vertical clearance. Any crossing not installed below Columbia's pipelines must have prior written consent from Columbia

(Location of Buried Facilities Form – Form 1050-P17). All crossings (excluding single telephone and single television drops) of Columbia facilities by cable and/or wire utilities, including but not limited to electric, fiber optic, telephone, and television lines crossing Columbia's pipelines must be encased with a minimum of 2-inch Schedule 80 PVC pipe. For safety reasons, electric and fiber optic lines shall also be surrounded with a minimum of six inches of concrete or encased with 4-inch minimum diameter, .250-wall, coated steel pipe for the full width of the right-of-way. Metallic warning flags shall also be buried above all cable, wire utility, or fiber optic lines crossing a Columbia right-of-way. All crossings must be approved by Columbia before installation begins.

4. Roads shall cross pipelines at or as near 90 degrees as practical, but at angles not less than 45 degrees. The entity constructing the street must pay for any measures required by Columbia to protect its pipeline(s). Such protective measures shall be designed and/or approved by Columbia personnel.
5. Paved areas, such as parking lots, shall not be allowed over the easement unless the pavement can be altered so as not to impact the safe and reliable operation and maintenance of Columbia's pipeline. Concrete paving in Columbia's right-of-way, except for sidewalks and curbs, is prohibited. Consequently, all plans for pavement within a Columbia right-of-way must be submitted and approved by Columbia personnel before paving can begin.
6. Septic tanks and leach fields should be placed so they drain away from the pipeline where practical. In no case shall they be placed in the easement area.
7. The right-of-way may be planted in lawn and small shrubs (less than 5 feet tall) or may be used for normal agricultural purposes. However, shrubs will not be allowed within 5 feet each side of the pipeline. Shrubs greater than 5 feet tall and trees, including fruit or nut bearing trees of any kind, are prohibited within the right of way.
8. Fences that block visual inspection or interfere with access to Columbia's facilities are prohibited within Columbia rights of way. Fences permitted by Columbia to cross its rights of way must be designed with 12-foot gates centered on the pipelines and must cross at or as near to 90 degrees as possible.