

**SCDOT Richland Maintenance**  
**Utility Encroachment Provisions**

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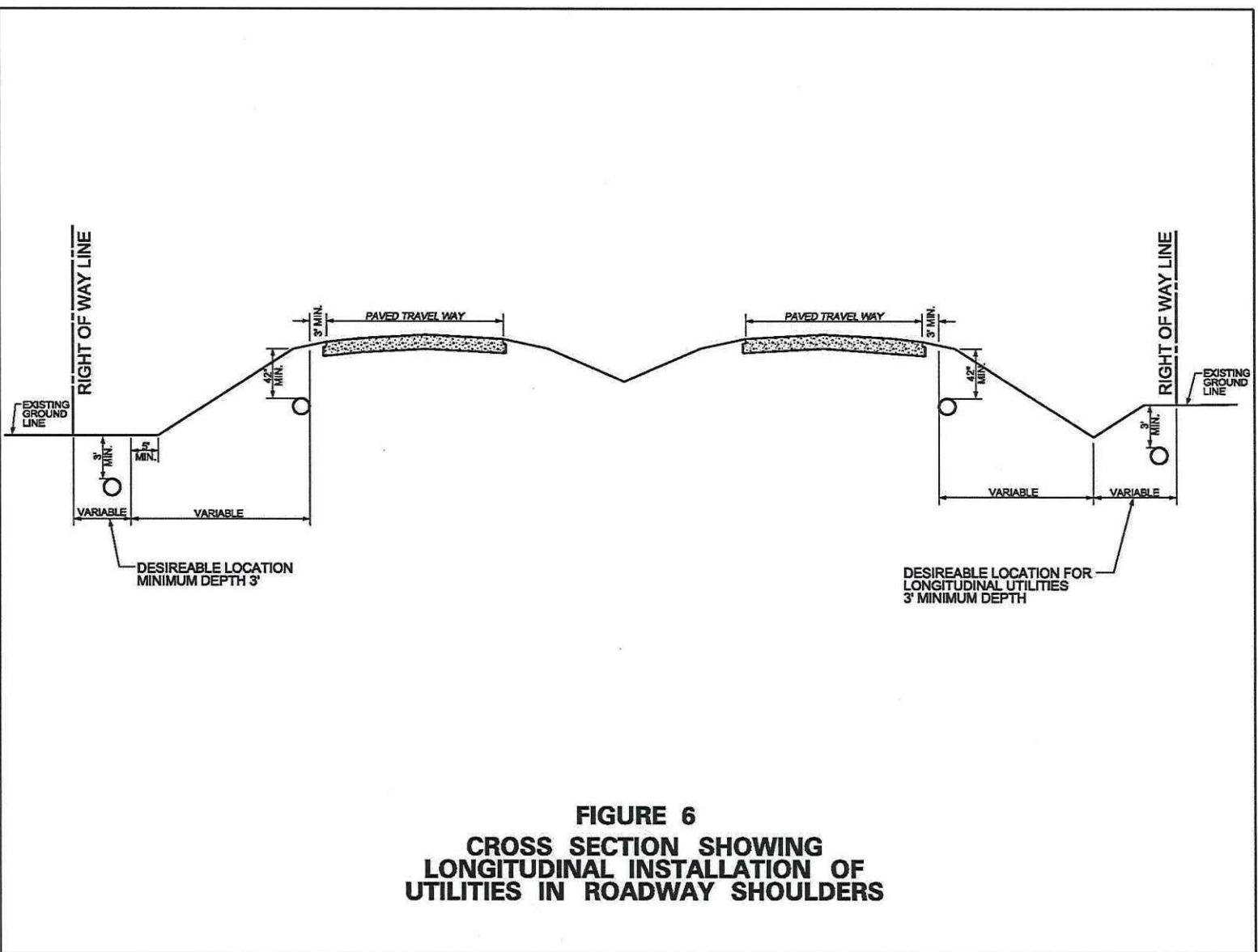
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1. Applicant/Contractor is to notify Richland Maintenance Permit Office when work is scheduled to begin as well as when work is completed. Please provide the permit number or application number for reference.
2. A copy of the encroachment permit and all supporting documents shall be on site at all times when construction is in progress within the SCDOT R-O-W.
3. Traffic control shall be installed and maintained per the approved encroachment permit.
4. Traffic control devices shall not be left in place when no workers are present.
5. Applicant shall be responsible for all pavement repairs if boring procedure causes any damage to the pavement. If damage occurs, applicant shall notify the Richland Maintenance Permits Office immediately at 803-786-0128.
6. Applicant shall be responsible for all future maintenance of any pavement disturbance caused by the utility installation or repair.
7. Applicant shall be responsible for the placement of secured steel plates on open cut of pavement if work is incomplete or left overnight.
8. Applicant shall complete all asphalt repairs using the attached asphalt pavement repair detail.

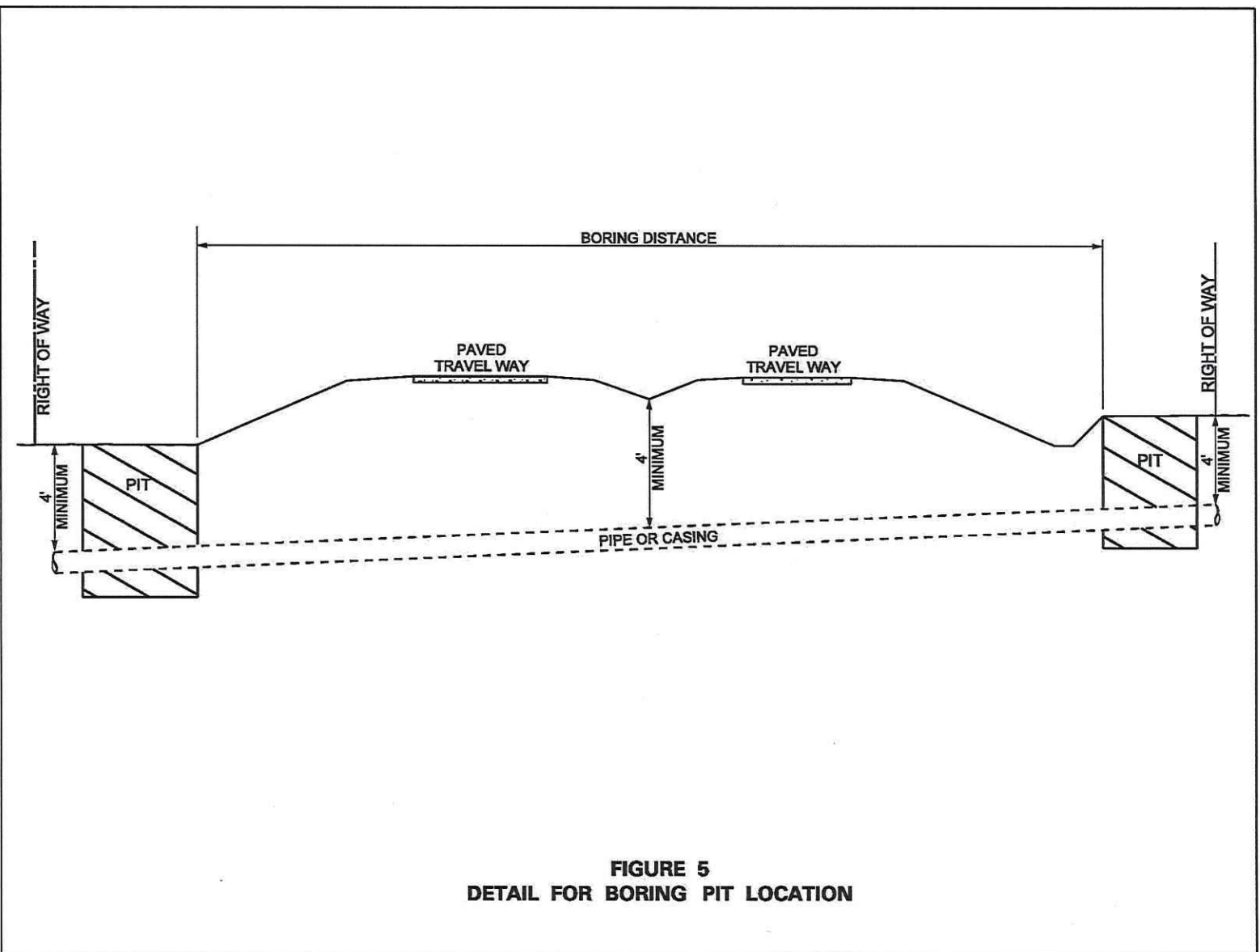
9. Any pavement markings, to include RPM's, disturbed shall be replaced to meet current SCDOT Standards and Specifications.
10. Any sidewalk or curb and gutter damaged or removed during installation of a utility shall be replaced joint to joint and to current SCDOT Standard Specifications.
11. Sidewalk removed or damaged shall be replaced within 48 hours of completion of the work. The sidewalk shall remain properly secured and barricaded while awaiting final repair. If repair will require more than 48 hours to complete the applicant shall notify SCDOT immediately by phone or email.
12. All open excavations within SCDOT right-of-way shall be properly secured and barricaded when work is not being performed.
13. Applicant shall ensure all current OSHA requirements are followed for shoring and trenching activities and protection of open excavations from the traveling public and pedestrians.
14. Ditches and/or shoulders disturbed under this permit shall be restored to the original grade and cross section to ensure positive drainage.
15. No valves or other appurtenances shall be allowed within ditch/swale lines.
16. All areas disturbed shall be reseeded and monitored until 100% vegetation is re-established.
17. Applicant shall be responsible for removing all wire flags and other vertical markings related to utility locates associated with this encroachment within 15 days of completion of work approved under the encroachment permit. Applicant shall be responsible for any damages caused by wire flags or other vertical markings.
18. This permit applies exclusively to that tenement owned by the Department (SCDOT), and particularly to the, or those portions of roadway indicated on page one of form 637 (the permit). Any work which leaves the Department's right-of-way is a private endeavor on part of the permittee, and is completely unsupported by the Department. Should the permittee deem it necessary to enter onto private property, the permittee shall obtain all necessary agreements or permission from the respective private property owner(s).

# Appendix B: Pipelines Figure 6 – Longitudinal Installation of Utilities in Roadway Shoulders



**FIGURE 6**  
**CROSS SECTION SHOWING**  
**LONGITUDINAL INSTALLATION OF**  
**UTILITIES IN ROADWAY SHOULDERS**

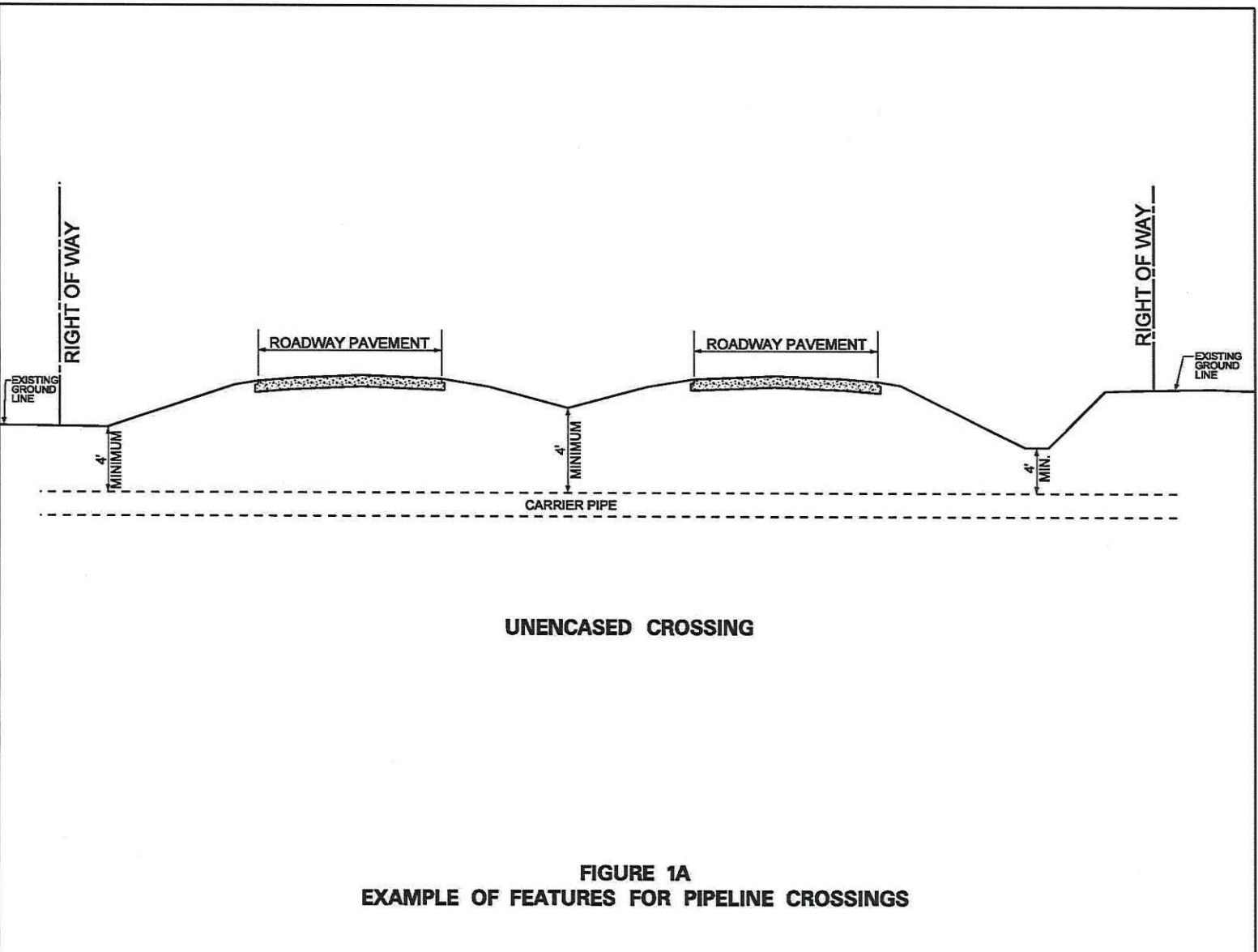
# Appendix B: Pipelines Figure 5 – Detail for Boring Pit Location



**FIGURE 5  
DETAIL FOR BORING PIT LOCATION**

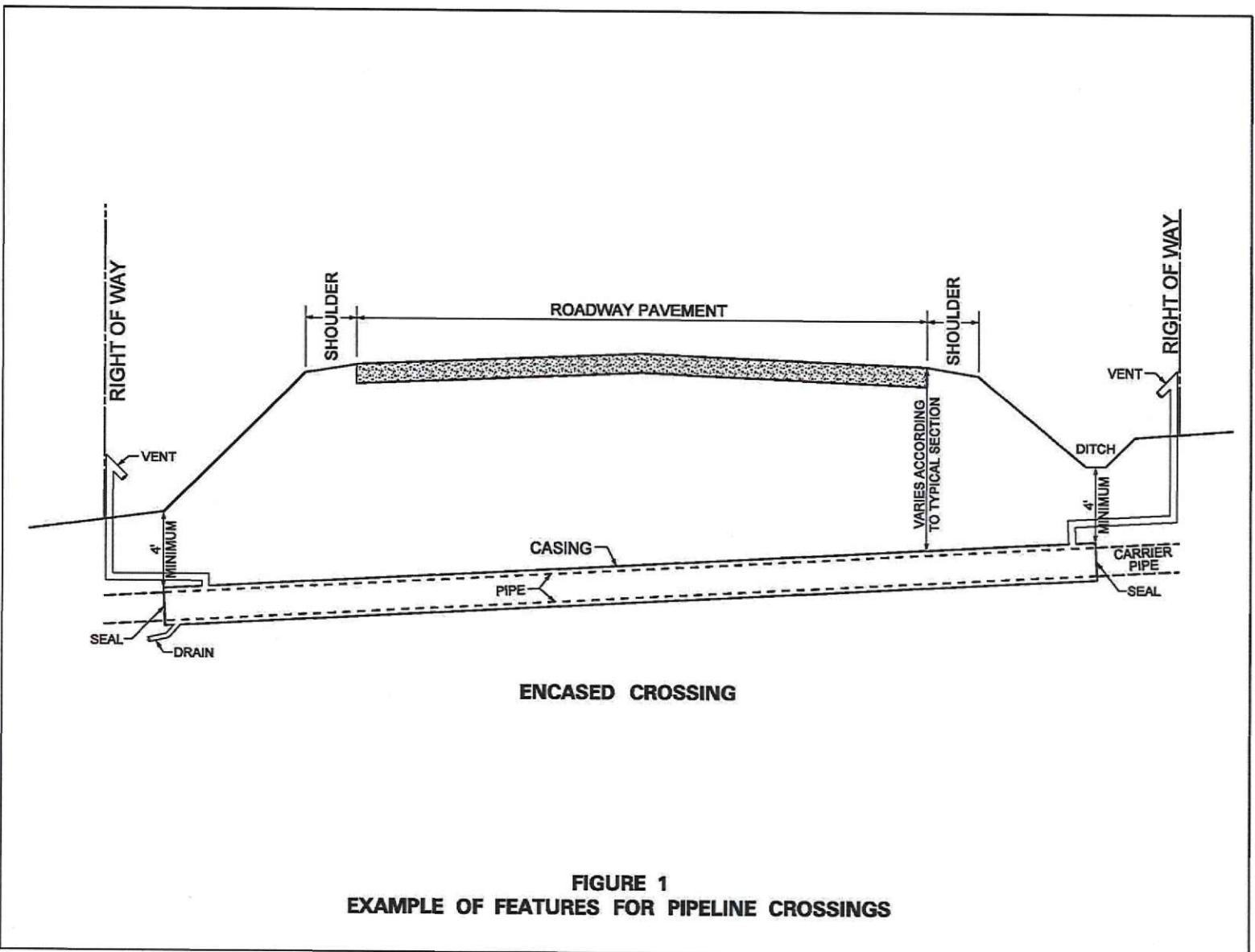
## Appendix B: Pipelines

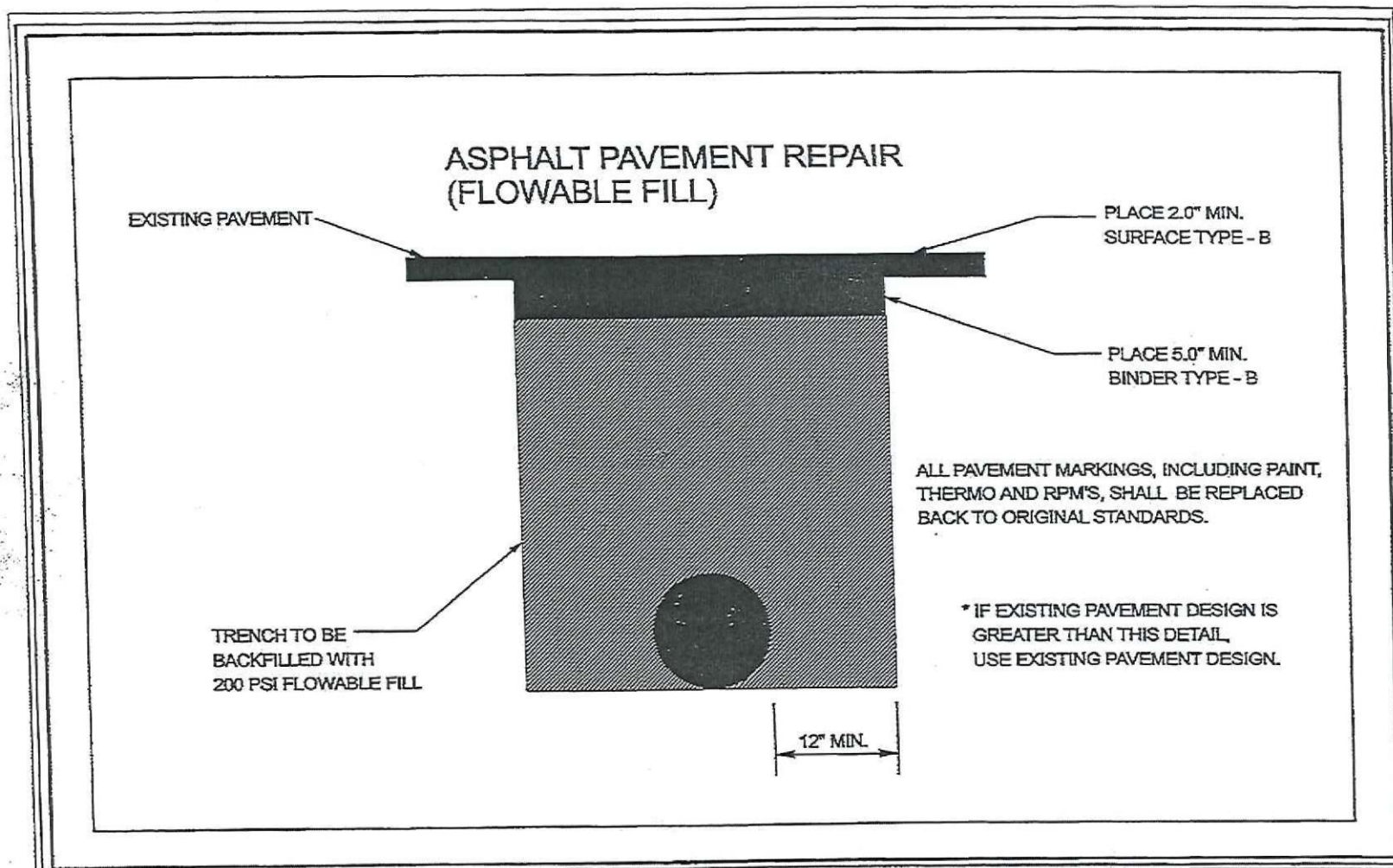
Figure 1A – Example of Features for Unencased Pipeline Crossings



## Appendix B: Pipelines

Figure 1 – Example of Features for Encased Pipeline Crossings

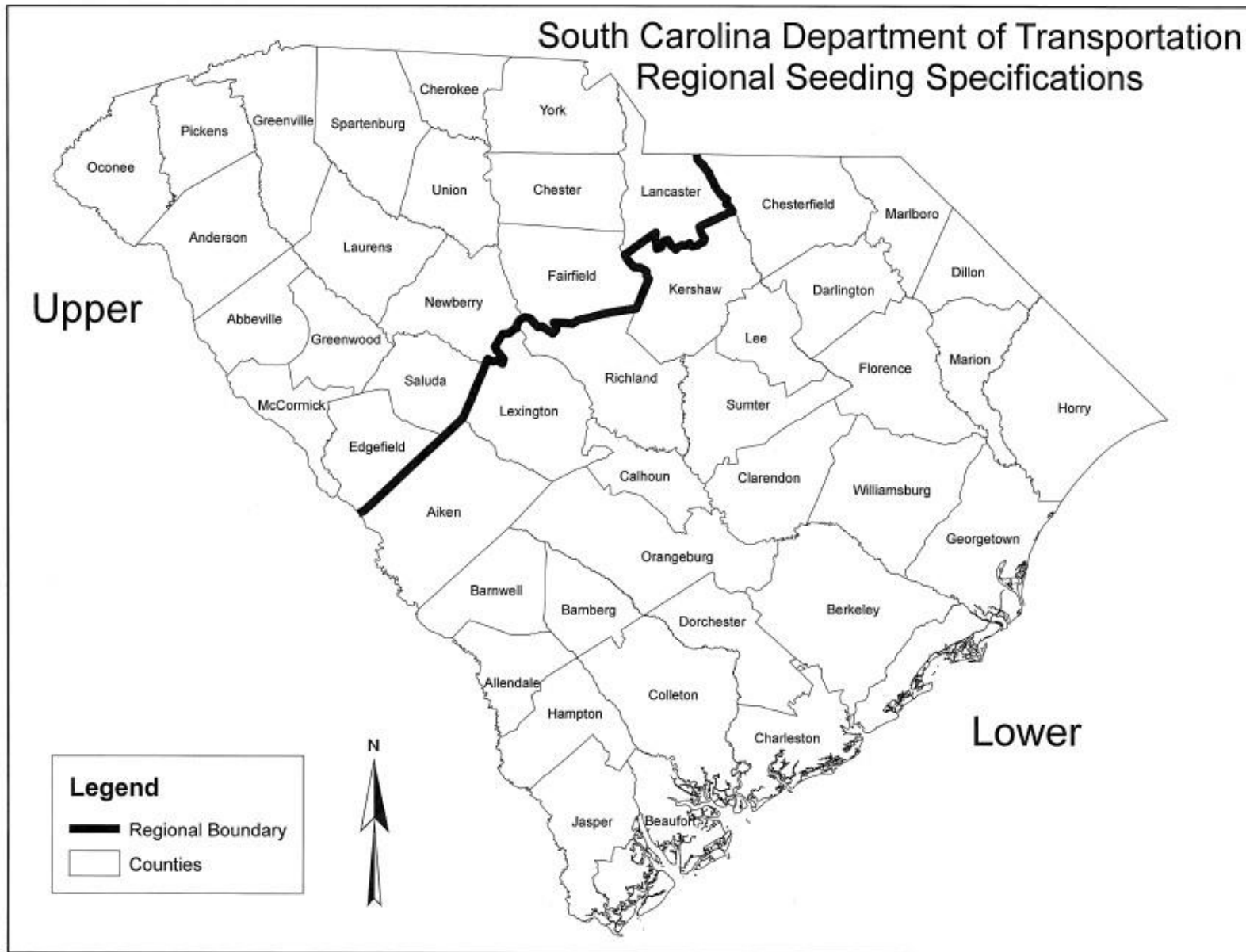




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FIGURE 1: UPPER AND LOWER STATE MAP





**TABLE 1: PERRENIALS** \* Months shaded in gray represent applicable planting dates.

COMMON NAME <sup>6</sup>	BOTANICAL NAME	APPROVED SITE(S)	PLANTING RATE (lbs/acre)	PLANTING LOCATION	Planting Dates*											
					JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
TURF-TYPE GRASSES (SELECT ONE)																
Bahia <sup>1</sup>	Paspalum notatum	Shoulders, Slopes, or Medians	30	Upper State												
				Lower State												
Common Bermudagrass <sup>2</sup> (hulled = hull absent)	Cynodon dactylon	Shoulders, Slopes, or Medians	50	Upper State												
				Lower State												
Common Bermudagrass <sup>2</sup> (unhulled = hull present)	Cynodon dactylon	Shoulders, Slopes, or Medians	60	Upper State												
				Lower State												
Carpet Grass / Centipedegrass Combo	Axonopus affinis Eremochloa ophiuroides	Shoulders, Slopes or Medians	15	Upper State												
			10	Lower State												
Tall Fescue (KY-31) <sup>3</sup>	Festuca arundinacea	Shoulders, Slopes, or Medians	75	Upper State												
				Lower State												
GRASSES																
Weeping Lovegrass	Erograstis curvula	Slopes	10	Upper State												
				Lower State												
Indiangrass	Sorghastrum nutans	Slopes	10	Upper State												
				Lower State												
Little Bluestem	Andropogon scoparius	Slopes	10	Upper State												
				Lower State												
Coastal Panicgrass	Panicum amarum	Slopes	20	Upper State												
				Lower State												
Switchgrass	Panicum virgatum	Slopes	10	Upper State												
				Lower State												
Perennial Rye Grass <sup>4</sup>	Lolium perrene	Shoulders, Slopes, or Medians	15	Upper State												
				Lower State												
Virginia Wild Rye	Elymus virginicus	Shoulders, Slopes, or Medians	6	Upper State												
				Lower State												
LEGUMES <sup>4</sup>																
White Clover	Trifolium repens	Shoulders, Slopes, or Medians	5	Upper State												
				Lower State												
Crownvetch	Coronilla varia	Slopes	25	Upper State												
				Lower State												
Sericea Lespedeza (Scarified seed)	Lespedeza cuneata	Slopes	50	Upper State												
				Lower State												
Sericea Lespedeza (Unscarified seed)	Lespedeza cuneata	Slopes	80	Upper State												
				Lower State												

<sup>1</sup>Bahiagrass: Use at discretion of RCE based on project location.

<sup>2</sup>Common Bermudagrass: Do not use Giant Bermudagrass (NK-37).

<sup>3</sup>Tall Fescue (KY-31): Do not use Tall Fescue (Lolium arundinacea).  
Grass: Do not use Annual Italian Rye grass (Lolium multiflorum).

\* Months shaded in gray represent applicable planting dates.

<sup>5</sup>Only use pre-inoculated legumes or use an appropriate inoculant with the seed at plant

<sup>6</sup>If Common Name of seed is not available, use seed with the listed Botanical Name. <sup>4</sup>Perennial Rye

**TABLE 2: ANNUALS**

\* Months shaded in gray represent applicable planting dates.

COMMON NAME <sup>5</sup>	BOTANICAL NAME	APPROVED SITE(S)	NURSE CROP RATE (lbs/acre)	TEMP COVER RATE (lbs/acre)	PLANTING LOCATION	Planting Dates*											
						JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Crimson Clover <sup>1</sup>	Trifolium incarnatum	Shoulders, Slopes, or Medians	20	20	Upper State												
					Lower State												
Lespedeza <sup>1</sup> Kobe / Korean	Lespedeza striata / stipulacea	Shoulders, Slopes	15	60	Upper State												
					Lower State												
Browntop Millet <sup>2</sup>	Panicum ramosum	Shoulders, Slopes, or Medians	10	40	Upper State												
					Lower State												
German Millet <sup>2</sup> (Foxtail Millet)	Setaria italica	Shoulders, Slopes, or Medians	10	40	Upper State												
					Lower State												
Japanese Millet <sup>2</sup>	Echinochloa crusgalli	Slopes	10	50	Upper State												
					Lower State												
Oats	Avena sativa	Slopes	40	110	Upper State												
					Lower State												
Hairy Vetch <sup>1</sup>	Vicia villosa	Slopes	15	50	Upper State												
					Lower State												
Pearl Millet	Pennisetum glaucum	Slopes	15	50	Upper State												
					Lower State												
Sudangrass	Sorghum bicolor	Slopes, Buffers	20	60	Upper State												
					Lower State												
Barley	Hordeum vulgare	Slopes	55	110	Upper State												
					Lower State												
Wheat <sup>4</sup>	Triticum spp.	Slopes, Buffers	35	110	Upper State												
					Lower State												
Rye Grain <sup>3,4</sup>	Secale cereale	Shoulders, Slopes, or Medians	40	110	Upper State												
					Lower State												

<sup>1</sup> Only use pre-inoculated legumes or an appropriate inoculant with the seed at planting.

\* Months shaded in gray represent applicable planting dates.

<sup>2</sup> Mow Millet (no lower than 3 inches) once it reaches a height of 18 - 24 inches or at the discretion of the RCE to reduce competitiveness with permanent vegetation. <sup>3</sup>

**Rye Grain:** Do not use Annual Italian Rye Grass (Lolium multiflorum).

<sup>4</sup> Mow Wheat and Rye Grain (no lower than 3 inches) once they reach a height of 18 - 24 inches or at the discretion of the RCE to reduce competitiveness with permanent vegetation.

<sup>5</sup> If the Common Name of the seed listed is not available, use seed with the listed Botanical Name. Do not use Wild Bird, Wild Animal, or Domestic Feed Seed.

Supplemental Specification
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May 1, 2013

**SECTION 806: TEMPORARY BARRIER FENCE FOR ENVIRONMENTAL BOUNDARY:**

**DESCRIPTION**

This work shall consist of furnishing, installing, maintaining, and removal of temporary barrier fence at environmentally sensitive areas, locations shown on the plans, permit, or as directed by the Engineer.

Sections of fence shall be installed prior to any clearing and/or grubbing activities. Unless prior approval is received from the Engineer, failure to install the fence as specified herein will result in stoppage of all operations until the necessary fence is installed.

**MATERIALS**

Fence shall be pre-constructed orange barrier fence meeting the following requirements:

1. Constructed of polyethylene, polypropylene or a combination of the two
2. Contain a ultraviolet stabilizer or inhibitor
3. Mesh opening : 1 ½" x 1 ½" (Min.) 3" x 3" (Max.)
4. Tensile strength : 180 lbs/ft (Min.)
5. 4' x 100' roll weight : 18 lbs (Min.)

Steel posts are required and shall be a length of at least 6 feet and have a minimum weight of 1.25 lb/ft of length. The steel post shall be equipped with a soil stabilization plate having a minimum area of 14 square inches.

**CLEARING AND GRUBBING**

No additional clearing and grubbing is anticipated for the installation of this fence; however, if any clearing is required, it will need to occur by hand tools. No mechanized clearing is allowed for fence installation. The fence shall be installed to conform to the general contour of the ground.

**INSTALLATION AND REMOVAL**

Fence shall be installed along environmentally sensitive areas within project limits as identified on the plans, permit drawings, or as directed by the Engineer. Posts shall be set and maintained in a vertical position and may be hand set or set with a post driver at 8 foot spacing. If hand set, all backfill material shall be thoroughly tamped. The fence fabric shall be attached to the steel posts with wire or other acceptable means.

The Contractor shall be required to maintain the fence in a satisfactory condition for the duration of the project as determined by the Engineer. Upon completion of the project, the fence and all posts shall be removed by the contractor.

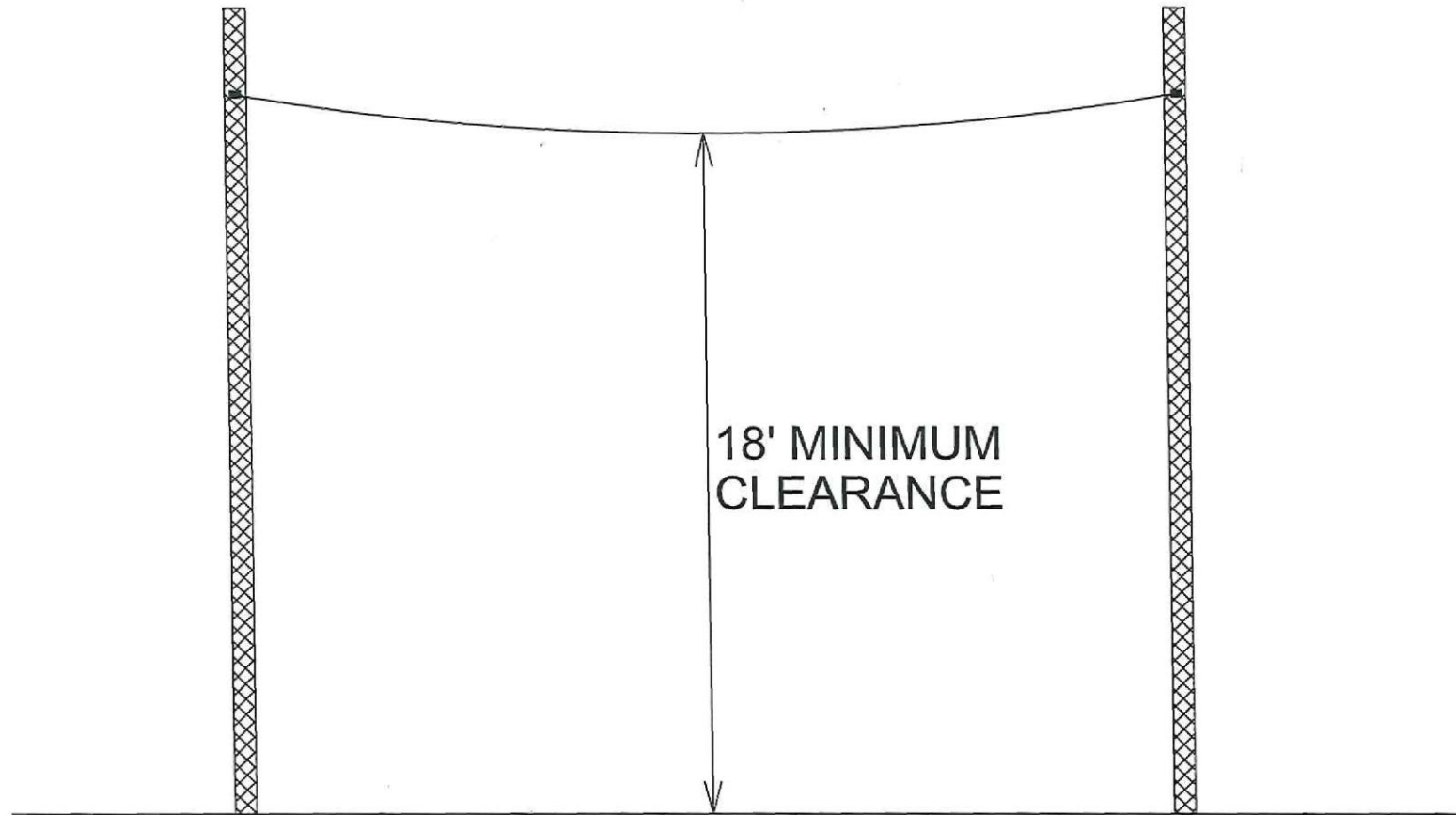
**METHOD OF MEASUREMENT AND PAYMENT**

The quantity of barrier fence to be paid for shall be the actual number of linear feet of fence installed in place and accepted by the Engineer. No direct payment will be made for post and post bracing. The above prices and payments will be considered full compensation for all work covered by this provision.

Payment will be made under:

Item No.	Description	Unit
8068301	TEMPORARY BARRIER FENCE	LF

## **PLACEMENT OF OVERHEAD UTILITY LINES**



PERMITEE SHALL BE RESPONSIBLE FOR ANY AND ALL DAMAGES THAT OCCUR AS A RESULT OF THIS INSTALATION.