1.0 PURPOSE

The West Virginia Division of Highways (WVDOH) recognizes a need to further develop the scope of its Oil and Gas Road Policy (Policy) on vertical and horizontal drilling operations, transmission and production pipeline and compressor station operations, storage and injection wells, and well abandonments that have significant impacts on State roadways. This policy also includes smaller oil and gas development operations which may have significantly less potential to impact the conditions of local roadways. The WVDOH must ensure continued maintenance of the State's local roadways in light of the additional road traffic consequent to these oil and gas development operations.

This Policy supersedes all previous oil and gas road policies and addenda currently in effect.

2.0 SCOPE

The requirements set forth in this Policy apply to oil and gas operators regulated by the West Virginia Department of Environmental Protection. In accordance with W. Va. Code §22-6A-20, Operators must submit certification from the WVDOH that the Operator and the WVDOH have entered into an agreement regarding the condition and maintenance of the local roads that will be used by the Operator. If an agreement is not required by WVDOH certification of such must be included with the Operator's permit application.

2.1 This Policy, as it pertains to transmission and production pipeline and compressor operations, is limited to oil and gas companies engaged in the development and construction of gathering lines, facilities, midstream gas transmission infrastructure or compression facilities. It does not supersede an existing pipeline's integrity management program nor does it preference existing pipeline systems in comparison to future development.

2.2 This Policy does not prevent the Facility Owner/Operator ("Operator") from performing routine maintenance. In an emergency situation, the Operator is required to notify the WVDOH as soon as is reasonably possible.

2.3 This Policy, as it pertains to vertical and horizontal drilling operations, storage and injection wells, and well abandonments, broken into wells that are utilized for drilling, stimulation activities, injection, storage, or both injection and storage of 5,000 or more barrels of liquids, and those that utilize less than 5,000 barrels. All such wells shall be identified beginning with the onset of site preparation and concluding with the completion of well fracturing and reclamation at a site. Where more than one (1) well is drilled at a site within a period of 12 months, the project will conclude with the completion of well fracturing for the last well, and no additional wells are scheduled to be drilled or fractured for a period of at least 12 months. For ultimate project completion, site reclamation must be coordinated with and approved by the applicable regulatory agencies.

2.4 Bonding is required for those highways classified as "State Local Service" roads in accordance with WV Code §17-1-28, and as defined in WV Code §17-4-2(d), e.g., CR XX/XX, hereafter referred to as "Covered Roads." Highways that carry an Interstate, WV, US or corridor system designation are not Covered Roads and are not included in determining bonding amounts. Specific terms and conditions for bonding Covered Roads are contained in the Road Maintenance Agreement for each road. Should these routes incur damages from the additional traffic loads by oil and gas operations, the Operator's responsibility will be evaluated on a case-by-case basis. The determination of whether the routes incurred additional damage from an Operator's traffic loads, as a result of oil and gas operations will be in the sole discretion of the WVDOH.

2.5 Permits for oversized/overweight vehicles are not subject to the conditions of this Policy and are handled through normal WVDOH procedures, set forth in W. Va. Code §17C-17 and DOH Legislative rule 157 CSR 5 and 157 CSR 9.

3.0 DEFINITIONS

3.1 **Anticipated Damage**: means the added potential stress placed on a highway and/or structure due to the road degradation created during pipeline installation, drilling operations, compressor station installation, well fracturing operations, injection and/or storage well operations and also due to the increased temporary use of the Covered Roads by the high volume of construction vehicles.

3.2 **Application**: means the form of written notice provided to WVDOH by the Operator detailing the information needed to complete an approved Permit.

3.3 **Closed Roads**: means county roadways which are still a part of the state highway system but are no longer maintained by the WVDOH or intended to be open to traffic. If you are unsure if a road falls under this definition, contact the Deputy District Engineer or his or her designee.

3.4 **District Manager**: means the administrative head of the District regardless of whether the person is an engineer or another classification or his or her designee.

3.5 **Gas and Oil Wells**: means wells drilled for the purpose of extracting natural gas and/or oil.

A. **Shallow Well** means any gas well, other than a coalbed methane well, drilled no deeper than 100 feet below the top of the "Onondaga Group."

B. **Deep Well** means any well other than a shallow well or coalbed methane well, drilled to a formation below the top of the uppermost member of the "Onondaga Group."

C. **Well** means any shaft or hole sunk, drilled, bored or dug into the earth or into underground strata for the extraction or placement of any liquid or gas, or any shaft or hole sunk or used in conjunction with such extraction or injection or placement.

D. **Well work** means the drilling, redrilling, deepening, stimulating, pressuring by injection of any fluid, converting from one (1) type of well to another, combining or physically changing to allow the migration of fluid from one (1) formation to another or plugging or replugging of any well.

3.6 **Oil and Gas Data Sheet:** means a form provided by the WVDOH for the purpose of submitting the details of the Proposed Project needed to begin the permitting process.

3.7 **Permit**: means the approved and signed MM-109 document used to allow an Operator to work within WVDOH right of way. Scope of work under this document can include Maintenance Activities including repairs of damages caused by, or access to a Proposed Project. Each Permit is bonded based on the criteria found in Section 4.0.

3.8 **Maintenance Activities**: means the specific requirements to sufficiently maintain a road in a safe and usable manner for the traveling public. The WVDOH standards for maintenance activities are found in the Maintenance Management System - Performance Standard manual.

3.9 **Project**: means the completed oil or gas well including completion of remediation of the site and repair of any damage to Covered Roads damaged by the Project.

3.10 **Proposed Project**: means the planned work to be completed by the Operator within and, in some cases, adjacent to WVDOH right of way.

3.11 **Project-Specific Agreement**: means an agreement between WVDOH and one or multiple Operators that defines a scope and terms of a Proposed Project. A Project-Specific Agreement is needed when the scope of work of a Proposed Project goes beyond maintenance activities and/or the WVDOH is to receive funding from a company(s) to perform a scope of work. The need for additional bonding to cover the Proposed Project's scope of work will be discussed before the Project-Specific Agreement is finalized and will be evaluated on a case-by-case basis. Engineered plans will be required and approved by the District Manager before any Proposed Project may proceed with planned work. A signed Permit will be issued, once the Project-Specific Agreement is finalized, as the official notice to proceed on the Proposed Project.

3.12 **Required Major Improvements**: means those modifications to Covered Roads that are necessitated by the increase in count and type of traffic anticipated for a Proposed Project and may include, but are not limited to sight distance improvements, signage and/or traffic control, signalization, road widening, construction of new roadways and acquisition of right of way; provided said

modification shall be limited to those improvements deemed necessary to maintain the roadway in a condition as good as before commencement of the Proposed Project. If appropriate, the Operator may enter into a Project-Specific Agreement in order to provide clear travel, via a separate bond. Subject to considering information provided by an Operator, the WVDOH shall have sole discretion to fully define the Required Major Improvements, as well as the Project-Specific Agreement.

3.13 **Restrictions**: means the requirements directed at the protection of the traveling public including, but not limited to, pilot cars, hours of operation, etc.

3.14 **Road Maintenance Agreement**: means an oil and gas bonding agreement which defines the Operator's and WVDOH's responsibility as it pertains to the bonding and maintenance requirements of the Covered Roads and/or hauling routes for a Proposed Project.

3.15 **Well operator, owner, operator or contractor**: means any person or persons, firm, partnership, partnership association or corporation that proposes to or does locate, drill, operate or abandon any well in the state of West Virginia.

4.0 PROCEDURES

4.1 Permit Application and Agreement Requirements:

A. Each permit application includes, but may not be limited to the following items:

1. Oil and Gas Data Sheet;
2. Photos in each of the 4 directions;
3. Haul route map showing Covered Roads;
4. Plans for Proposed Project to include plan, profile and cross-sectional views as needed;
5. Pipe calculations for uncased pipe crossing;
6. Method of repair plan for WVDOH route pipe crossings;
7. Traffic Control plans; and
8. Overview map.

B. The Operator shall provide an Application to the appropriate District Manager of its intent to engage in a Proposed Project covered by this Policy at a location within the subject district. The Application shall include the exact location of the Proposed Project along with the proposed routes to

be used by the Operator. The Operator shall submit an Oil and Gas Data Sheet with this required information. Proposed routes may be revised during project construction or operations by a written request from the Operator, however, no route changes may be traversed until approved in writing by the WVDOH. These proposed routes are the Covered Roads and may be changed by the WVDOH, even without written request from Operator, if WVDOH routes are being used for the Proposed Project.

C. After the receipt of the Application provided pursuant to this policy the District Manager may determine the need to conduct an on-site meeting with the Operator, or appointed representative, to determine if the proposed routes are designed to meet the requirements of both the Operator and the WVDOH, to discuss the scope of the Proposed Project, or other issues that may arise.

D. If the Operator's proposed route is a "closed road" or contains a "closed road" within the route, the Operator shall be solely responsible for all costs associated with re-opening the road to meet the requirements of both the Operator and the WVDOH. The determination of whether the road meets WVDOH requirements will be solely within the discretion of the WVDOH. The Operator shall be solely responsible for all maintenance activities, including all "CORE" maintenance activities, required on the "closed road," during operations. "CORE" maintenance activities are defined as routine maintenance activities to include, but are not limited to, mowing/brush cutting, ditching, pothole patching and stabilization with aggregate material, as may be required for normal traffic operation. These "CORE" maintenance activities may be required by Operator when the Operator elects to utilize a "closed road." Routine Maintenance Activities may not require a full set of plans, but may be presented and approved with typical sections or drawings.

E. Before the work commences on Proposed Project, the proposed routes shall be filmed by the WVDOH or the Operator, at the discretion of the WVDOH, or jointly between the WVDOH and the Operator, to document the condition of the proposed route before commencement of the project. The documentation shall record the condition of the road, along with a good-faith estimate of depreciation being caused by other industrial or commercial vehicles of similar weight and size. The Operator shall have the opportunity to review the video and inspection report in order to propose comments or revisions associated therewith. The WVDOH shall negotiate with the Operator to secure a Road Maintenance Agreement defining the responsibilities of both parties. This action may not be needed if an Agreement is already in place. A single Road Maintenance Agreement per company may be utilized, especially when there will be several Proposed Projects in the same area or if Proposed Projects will be worked concurrently.

F. If the Proposed Project warrants the need, the WVDOH and the Operator shall secure a Project-Specific Agreement and Permit which shall include at a minimum, any Required Major Improvements before, during and after the Operator has completed the Proposed Project; provided, the responsibility of the Operator shall be limited to its percentage share of any Required Major Improvements based upon the good-faith estimate referenced in B.4. above. Any work to be performed within the DOH right of way shall be performed to all DOH standards and specifications currently in effect, and will be subject to DOH final approval. The Operator shall not begin a Proposed Project until a Road Maintenance Agreement, Permit and if necessary, Project-Specific Agreement are reduced to writing and signed by all parties. The determination of whether any Required Major Improvements are necessary shall be solely within the discretion of the DOH. In making its determination, the DOH may take into consideration information provided by the Operator.

G. The Operator shall invite the DOH to any pre-construction meetings to answer any questions and ensure the terms of the Road Maintenance Agreement, Project-Specific Agreement and/or Permit are clear to all parties. The DOH will make every effort to provide proper inspection of the Proposed Project work that takes place within, or which could adversely affect DOH right of way with in-house workforce. The Operator will provide the DOH with as-built notes and plans for public roadways or any other documentation requested by the DOH necessary to verify the Proposed Project work was constructed in a correct manner and will not negatively affect the public roadways. Third-party inspection is encouraged especially during pipeline crossings, Required Major Improvements and any Proposed Project that will require a Project-Specific Agreement.

H. The Permit shall stipulate that Covered Roads will be maintained by the Operator in accordance with the Road Maintenance Agreement. The DOH shall complete and issue an approved Permit within 45 days from the time the Operator submits all required information, provided all conditions and requirements are met. Any time spent compiling the necessary information back and forth between the Operator and the DOH will not count against the 45-day time frame.

I. The DOH shall be responsible for all routine “CORE” maintenance responsibilities. The required maintenance which is a result of the Operator’s traffic load or oil and gas operations is the responsibility of the Operator. The Operator is also responsible for all maintenance on “closed roads” that have been opened for their operations, including all “CORE” maintenance activities. If an Operator fails to perform any maintenance required under this Policy, the DOH, without waiving any other form of relief, may conduct the required maintenance activities and bill the Operator the costs incurred. The Operator continues to be responsible for “CORE” maintenance activities until completion of the reclamation of the

Proposed Project site and all conditions of agreements and permits are met.

J. If additional approach permits are approved by the DOH for a "closed road," the provisions of Section F of this Policy will control. Specifically, the Operators are required to enter into an agreement, which must include and maintenance responsibilities and resolutions for any liability issues. A copy of this Agreement must be provided to the DOH.

K. The Road Maintenance Agreement may stipulate any appropriate Restrictions and shall require an individual or statewide bond.

L. Upon conclusion of the Proposed Project, the Operator shall notify the DOH by written notification. Thereafter, the DOH shall as quickly as possible schedule an on-site meeting to determine if the conditions of the Road Maintenance Agreement, Project-Specific Agreement and/ the Permit were satisfactorily fulfilled.

1. If it is determined that the terms and conditions have been met, any bonding applicable to the Proposed Project shall be released a minimum of one (1) year after Project completion by written notice from the DOH to the Operator.

2. The DOH will not release any bond if there are still outstanding issues that have not been resolved by the Operator whether work was authorized via Project-Specific Agreement or Permit.

3. If it is determined by the DOH that any terms or condition have not been adequately fulfilled, the DOH shall prepare a written notification of objection to release the bonding, which at a minimum, shall cite each specific contention that must be fulfilled by the Operator prior to the release of the bond.

4. DOH shall have sole authority to determine if the terms and conditions of the Road Maintenance Agreement, Project-Specific Agreement and Permit were met, and if not, Operator is responsible to meet the terms and conditions at their sole expense.

M. Any crossing of a DOH right of way by pipelines shall be performed and permitted in accordance with the manual for ACCOMODATION OF UTILITIES ON HIGHWAY RIGHT OF WAY, https://transportation.wv.gov/highways/right- of way/Documents/ACCOMMODATION_OF_UTILITIES.pdf or otherwise approved by the State Highway Engineer, or his or her designee.

N. Access to the roadway at crossing sites, staging areas, storage sites, access roads and compressor stations shall be in accordance with the

MANUAL ON RULES AND REGULATIONS FOR CONSTRUCTING DRIVEWAYS ON STATE HIGHWAY RIGHS-OF-WAY, https://transportation.wv.gov/highways/engineering/Manuals/Traffic/Driveway.pdf or otherwise approved by the State Highway Engineer, or designee. Each access point requires a Permit.

O. The Operator is responsible for the development and maintenance of a traffic control plan which must be submitted to and approved by the applicable District Traffic Engineer. The Operator is responsible for providing all signage required for work zones, road closures, detours and any other necessary directional signs. The Operator is responsible for notifying the public and local E-911 center of any road closures. The Operator shall provide a 24-hour point of contact for use by the DOH for emergency situations. The DOH general rule is traffic may only be held on the roadway for a maximum time of 15 minutes per stop. The MANUAL ON TEMPORARY TRAFFIC CONTROL FOR STREETS AND HIGHWAYS, 2006 EDITION for additional guidance. https://transportation.wv.gov/highways/engineering/Manuals/Traffic/TCM_06L.pdf

P. When the Operator impedes traffic for more than one hour, the Operator may be assessed a fine by enforcement personnel of all costs associated with exceeding the one-hour limit. Incidents that require the use of law enforcement or emergency services personnel are not subject to the one-hour time limit.

Q. With all new Oil and Gas permits and Agreements, the individual District Offices of the DOH will issue and advocate the usage of the one-page Federal Highway Administration (FHWA) Summary of Pilot/Escort Vehicle Operators Best Practices Guidelines for Oil and Gas Operators and their contractor(s). The full FHWA guidelines are found on the website at: https://ops.fhwa.dot.gov/publications/fhwahop16051/index.htm. The DOH may consult with ad hoc groups regarding pilot and escort vehicle best practices that reasonably build upon, but do not contradict these FHWA guidelines.

R. The DOH reserves the right to make the FHWA, and when deemed applicable the ad hoc group, guidelines a requirement of a Permit, when certain attributes present safety concerns as it pertains to all truck traffic associated with the Proposed Project. These attributes may include but are not limited to: geometry, average daily traffic, and functional classification of a proposed a haul route. The determination of the presence of potential safety concerns shall be solely within the discretion of the DOH.

5.0 SECURITY

5.1 Single Bonds

A. For an individual Proposed Project covered by Section B above, bonding shall be based on the degree of Anticipated Damage to Covered Roads up to the following maximum amounts:

BOND	ROAD TYPE
$100,000	Paved Mile
$ 35,000	Tar and Chipped Mile
$ 25,000	Graveled Mile

B. An exception is made for Operators of wells with less than 5,000 barrels of liquids or well abandonments; bonding shall be based on the degree of Anticipated Damage to Covered Roads negotiated up to a maximum amount of $50,000 per well.

C. All Single Bonds require an executed Road Maintenance Agreement for each bond.

D. The DOH may raise the maximum amount for a single bond if, in the determination of the DOH, a higher maximum amount is needed.

5.2 Blanket Bonds

A. As an alternative to § A.1.a above, the Operator may elect to post either a district wide or statewide blanket amount to cover multiple roads. The maximum blanket bond shall be $250,000 per district, or $1,000,000 statewide.

B. The DOH may require the Operator to obtain a single site specific bond, as set forth in § A above, if the DOH determines that a site specific bond is preferable to including the route on a blanket bond.

C. As an alternative to § A.1.b above, Operators of wells with less than 5,000 barrels of liquids utilized may elect to post a maximum statewide blanket bond of $50,000.

D. All Blanket Bonds shall require a Road Maintenance Agreement to be executed for each well site.

E. The DOH may raise the maximum amount of a blanket bond if, in the determination of the DOH, a higher maximum amount is needed.

F. Should the Operator elect to use blanket bonding, Projects may be added or deleted as they are initiated or completed. The DOH shall be provided with written notification of any changes to the blanket bond. Once a Project has been completed and the DOH finds the Covered Roads to be acceptable, the DOH shall remove the Project from the blanket bond.

G. For public road pipeline crossings, the Operator is required to maintain a $75,000 operational blanket bond per District, or a statewide operational blanket bond of $750,000, once the construction of the pipeline is complete.

H. All agreements utilizing blanket bonds are negotiable and shall be handled by the DOH Central Office in Charleston, WV.

5.3 Forms of Security

The form of the bond(s) described in § A.1 and § A.2 above, must be approved by the DOH prior to commencement of any site work. The forms of the security provided pursuant to this Policy may include, at the option of the Operator; surety bonding, collateral bonding (including cash and securities), letters of credit, establishment of an escrow account, self-bonding, or a combination of these methods.

6.0 DAMAGE

Should damages attributable to the Operator's activities occur on a Covered Road, the Operator will cooperate with the DOH to agree upon the appropriate method of repair, with option 1 being the most preferable to the DOH:

6.1 The Operator repairs the Covered Road(s) to the applicable DOH standards and specifications, the DOH shall have sole approval of all repairs and methods used;

6.2 The DOH repairs the Covered Road(s) with up-front reimbursement by the Operator; or

6.3 The DOH seeks reimbursement from the pledged security.

7.0 RELEASE OF SECURITY

Provided that the requirements of any Road Maintenance Agreement, Project-Specific Agreement or Permit executed in accordance with this Policy have been met, or, where no Road Maintenance Agreement, Project-Specific Agreement or Permit is required by this Policy and the conditions of the Covered Roads at the conclusion of the Project are at least as good as before the commencement of the Project, normal wear and tear excepted, the DOH shall promptly return the security to the Operator upon written notice from the Operator that the Operator has:

7.1 Completed the Project identified in the single bond and up to a year of time has elapsed without additional damage or incident from the Project; or

7.2 Notified the DOH that all Projects under a blanket bond are complete and the Operator anticipates no further work under the blanket bond; and up to a year of time has elapsed without additional damage or incident from the Projects; or

7.3 All responsibility and authority of an Road Maintenance Agreement, Project-Specific Agreement or Permit has transferred another Operator due to the sale of certain assets to said Operator with an approved and current bond and Agreement.

The DOH reserves the right to pursue an Operator for damages attributable to the Operator's activities that exceed the bonded amount. The DOH further reserves the right to pursue the assistance of the Operator with regard to damages which can be attributed to the Project on ALL routes. Such assistance may include the Operator repairing or assisting in the repair of any damages that can be identified as a result of the Project.

8.0 MULTIPLE OPERATORS SHARING A COMMON ROAD OR APPROACH

8.1 In the event that damages occur on a shared section of roadways, approaches or Covered Roads, the DOH shall seek an equitable reimbursement from all persons whose contractors or activities have contributed to road damages on roadways or Covered Roads. The DOH shall consider the operations and activities by the Operator and their contractors, and credits may be provided for any improvements previously funded on a particular road, by an Operator. If all Operators cannot agree to an equitable solution, the DOH will decide the applicable distribution per Operator.

8.2 In the event that two or more Operators share a common approach, the first permitted Operator will receive a Permit for the approach and assume ultimate responsibility for said approach. The second, and/or subsequent Operator(s) will receive a Permit of a different type (i.e., hauling) and will be required to obtain an agreement with the first Operator, which will include liability resolution if issues happen at the approach.

9.0 NIGHT TIME TRAVEL

Night time hauling of oversized loads may be authorized in writing by the State Highway Engineer, or designee, in certain circumstances to improve traffic safety for the traveling public.

10.0 APPEAL PROCESS

Should the Operator and the district representative be unable to reach an amicable agreement on the conditions to be stipulated in the Road Maintenance Agreement, Permit, Project-Specific Agreement or on an equitable reimbursement allocation under Section F above, the Operator may progressively appeal to:

A. District Manager

B. Central Office Oil and Gas Coordinator

C. Director of Operations Division

D. State Highway Engineer

E. Commissioner of Highways

11.0 DEP DRILLING CERTIFICATION LETTER

An Operator's request for a DEP Drilling Certification Letter should be made to the Central Office Oil and Gas Coordinator. The Central Office Oil and Gas Coordinator will check with the District to ensure that the Operator is abiding by all terms and conditions of the Road Maintenance Agreements, all Permits and Project-Specific Agreements before issuing the signed letter. The Coordinator shall make reasonable efforts to issue the signed letter within 5 business days after obtaining all necessary information from the District to determine compliance with permits and agreements.

12.0 OIL AND GAS PIPELINE CROSSING REQUIREMENTS

12.1 Controlled/Limited Access (CA) Highways

A. **General**

CA highways include interstates, APD, (Appalachian Development Highway System routes) and any other sections of highway that use fence lines as a means to mark Division of Highways (DOH) Right of Way and to control or limit access. Longitudinal pipeline installations are not permitted within the DOH Right of Way. Coring requests, access to work areas from the travel lane or shoulder, parking, equipment loading or unloading, or material loading and unloading will not be permitted from any travel lane or shoulder of the roadway. No interference with the traveling public shall be permitted. If an unexpected circumstance creates the need for traffic control, then the proper case from the latest edition of the MANUAL ON TEMPORARY TRAFFIC CONTROL FOR STREETS AND HIGHWAYS shall be used, with the approval of the District Engineer/Manager.

B. **Location**

It is expected that all borings shall originate and terminate outside of controlled access right of way. Crossings are expected to be made perpendicular to the centerline of the highway. Small angular deviations (maximum skew of 15 degrees) may be approved as special circumstances are encountered.

Crossings should be planned for regions below fill areas; crossings may not disturb the fill slope, or place drill or bore pits within the fill slope limits. Areas such as cut slopes, drainage structures, and bridge structures are to be avoided. Some cut to fill transition areas have special rock fills or drainage blankets which must be considered. Drill or bore pits shall be located outside of the road right of way and as a minimum, 15 feet from the toe of the fill. All areas to be disturbed need to be reviewed for potential slip areas. Any evidence of prior slip activity must be considered when proposing a crossing location.

Crossings on level or gently sloping ground shall be constructed so their depth shall be sufficient to obtain the minimum ten feet cover required. In some instances, a slope stability analysis and/or a geotechnical report may be required prior to approval of the crossing location, depending upon the topography and the planned disturbance of the natural ground.

Once crossing is preliminarily approved at the District, DOH must get approval from FHWA before final approval can be given.

C. **Cover**

The minimum required vertical depth of cover for a crossing is 10 feet. The critical control point for cover on a pipeline crossing is the low point in the highway cross-section; usually the bottom of the roadway drainage ditch. When measuring cover over pipes, the commonly specified reference points are the bottom of the pavement base, natural ground, or the flow line of drainage ditches, whichever is lowest. A protective coating is considered part of the pipe. When the carrier is encased, cover is measured to the top of the casing. Minimum depth should be carried to the right of way line.

12.2 Non-Controlled/Limited Access Highways

A. General

Non-CA highways include 1-lane, 2-lane or multi-lane roadways with no type of access control, such as US, WV, County Routes, HARP (Home Access Road Program routes) and State Forest routes under the control of DOH. Longitudinal pipeline installations are not permitted within the DOH Right of Way. Coring requests, access to work areas from the travel lane or shoulder, parking, equipment loading or unloading, or material loading and unloading will not be permitted from any travel lane or shoulder of the roadway. No interference with the traveling public shall be permitted. If an unexpected circumstance creates the need for traffic control, then the proper case from the latest edition of the MANUAL ON TEMPORARY TRAFFIC CONTROL FOR STREETS AND HIGHWAYS shall be used, with the approval of the District Manager.

B. Location

Subject to express authorization otherwise, it is anticipated that all borings shall originate and terminate outside of DOH right of way. Crossings are expected to be made perpendicular to centerline of the highway. Small angular deviations (maximum skew of 30 degrees) may be approved as special circumstances are encountered, with proper documentation.

C. Cover

Maximum pipe depth is desired under the roadway at all crossings. The minimum required vertical depth of cover for a crossing is 5 feet. The critical control point for cover on a pipeline crossing is the low point in the highway cross-section; usually the bottom of the roadway drainage ditch. When measuring cover over pipes, the commonly specified reference points are the bottom of the pavement base, natural ground, or the flow line of drainage ditches, whichever is lowest. A protective coating is considered part of the pipe. When the carrier is encased, cover is measured to the top of the casing. Minimum depth should be carried to the right of way line.

D. Open Cuts

Open cuts may be considered on these roadways on a case-by-case basis. New pavement and pavements in good condition should not be requested for open cutting. Backfill and compaction requirements, as found in the ACCOMMODATION OF UTILITIES ON HIGHWAY RIGHT OF WAY AND ADJUSTMENT AND RELOCATION OF UTILITY FACILITIES ON HIGHWAY PROJECTS MANUAL will be required. When reviewing open cut requests, consideration will be given to road condition, traffic volume and type of vehicles using the route, school and mail routes, the detour length and condition, the duration of a closure and if an overnight closure is involved. An on-site detour is preferred in all cases, for the health and emergency needs of the traveling public, and the residents served by the route. Approval of each location will be at the discretion of the District Engineer/Manager.

Coordination will be required with emergency services, county school systems, local law enforcement, and news media on closure times or expected delays due to construction or detours.

12.3 Casing

A. General

It is recognized that a definite policy on the encasement of pipelines must take into account many inconclusive variables, not the least of which is the progressive improvements being made in the pipeline industry for strengthening and protecting carrier pipes. An arbitrary policy of requiring

casing for all highway crossings is too expensive for both the utility consumer and the highway user. As an alternative to casing, the Operator or the Operator's contractor may increase the minimum depth of cover in lieu of placing casing, if proper stress calculations are performed. However, if the Operator or Operator's contractor wishes to use this method, they must first obtain approval from the DOH for each location this method is to be used. Casing will only be required in certain locations that the District Engineer/Manager determines are required to maintain the safety of the traveling public.

B. Cased Crossing Design

For cased road crossings, the calculated wall thickness required for the maximum allowable operating pressure shall be determined using the following:

Liquid Pipeline - 0.72 Design Factor
Class 1 (Gas) - 0.72 Design Factor
Class 2 (Gas) - 0.60 Design Factor
Class 3 (Gas) - 0.50 Design Factor
Class 4 (Gas) - 0.40 Design Factor

The wall thickness shall meet or exceed the Title 49 CFR 192,193 and 195 current requirements for road crossings. DOH will require one class higher than the calculated required thickness for all major road crossings.

C. Uncased Crossing Design

For uncased road crossings, the calculated wall thickness required for the maximum allowable operating pressure shall be determined using the following:

Liquid Pipeline - 0.50 Design Factor
Class 1, 2, 3 (Gas) - 0.50 Design Facto
Class 4 (Gas) - 0.40 Design Factor

The wall thickness shall meet or exceed the Title 49 CFR 192, 193 and 195 current requirements for road crossings. DOH will require one class higher than the calculated required thickness for all major road crossings.

12.4 Permit Application Submittal

A. General

An individual crossing permit shall be required for each location at which the pipeline crosses the State Highway Right of Way. The permit for the crossing may include accesses from the State Highway Right of Way on

each side of the road within the crossing's limits, only within non-CA right of way areas.

B. Permit Application Forms

The Oil & Gas Information Data Sheet will contain all information needed for DOH personnel to initiate a new permit in the database. It must include contact personnel for permit questions and for personnel in charge of field construction. All necessary hauling route information will also be included on the Data Sheet.

C. Site Photos

Photos in the four directions of each entrance/crossing should be included with the submittal. These need to be captioned and have a recognizable land mark shown or referenced in the photo. The proposed site needs to be staked before submitting the permit application.

D. Map

A site-specific map showing the location of the proposed project should include the hauling routes used. The DOH prefers a portion of the latest County Maps be used for this. When the pipeline crossing is a part of a larger pipeline project with multiple crossing and accesses, it is recommended to provide an overview map showing the centerline of the entire project on the County Maps. This is helpful for the District personnel to plan site and route reviews more efficiently in order to minimize the time needed to approve the permit.

E. Proposed Plans

Plan, profile and cross-sectional views of proposed plans are to be included with each application showing depth of cover and original ground slopes for both sides of the roadway extending at least to the Right of way limits. No access or break of controlled access will be permitted from within the roadway right of way.

When the cut or fill slope is steeper than 2:1, a slope stabilization plan shall be included in the plan submittal.

F. Pipe Calculations

High pressure pipelines with an operating pressure over 150 psi will be considered individually to determine if they will present a danger to the traveling public. The pipe thickness under the roadway shall be increased 1 class above the calculated required thickness. The pipe wall thickness under the roadway shall be as calculated in C.2 or C.3 above. The

application for permits for these lines shall include the operating pressure, the maximum allowable operating pressure and safety calculations signed by a WV licensed Professional Engineer which shall comply with the Title 49 Code of Federal Regulations Part 192.

G. Method of Repair

The submitted application shall include a general plan for repair or replacement of this pipeline crossing structure, in case of a leak or defect.

12.5 Inspection

The DOH will make every effort to provide proper inspection of the pipeline crossing work with in-house workforce. The Contractor will provide the DOH with as-built notes, plans, or other documentation that verifies the pipeline was constructed at the proper location and grade, unless directed otherwise.

13.0 RELEVANT MATERIALS/DOCUMENTS (or REFERENCES)

13.1 Maintenance Management System - Performance Standard manual

14.2 Oil and Gas Data Information Sheet

14.0 CHANGE LOG

March 06, 2023 –

- Converted the 10/1/2018 Oil and Gas Road policy memo and developed a new policy.
- Added Pipeline Crossing Requirements policy memo to this policy.

Effective Date of Policy: March 6, 2023

Approved by:

Jimmy D. Wriston, P.E.
Secretary of
Transportation
Commissioner of
Highways

3/6/23
Date

*The Secretary of the West Virginia Department of Transportation or the Commissioner of Highways may, pursuant to the authority vested with the Secretary and Commissioner in W. Va. Code §5F-2-2, §17-2A-1 *et seq.*, and §17-2-1 *et seq.*, waive the requirements of this policy if the circumstances, in the Secretary or Commissioner's sole discretion, warrant such action.