



MONTGOMERY COUNTY PLANNING DEPARTMENT
THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION

MCPB
Item #
2-24-11

MEMORANDUM

DATE: February 16, 2011

TO: Montgomery County Planning Board

FROM: Mary Dolan, Supervisor *MD*
Functional Planning and Policy Division

VIA: Dan Hardy, Chief *DKH*
Functional Planning and Policy Division

SUBJECT: Washington Suburban Sanitary Commission: Proposed Change to Pipeline Design Guidelines

RECOMMENDATION

Transmit comments to the Washington Suburban Sanitary Commission expressing concern about the unanticipated effects of the proposed design guidelines on smart growth development potential. Staff recommends additional coordination between the Planning Department staff and WSSC prior to adoption of these amendments to consider the implications of these guidelines on land use. The procedural relationship between the WSSC guidelines, the County's master plans and policies, and design options available to private sector developers should be established before the guidelines are adopted.

BACKGROUND

The Washington Suburban Sanitary Commission (WSSC) is proposing to revise a portion of their 2008 Pipeline Design Manual. The proposed change is to Part Three, Common Design Guidelines, Sections 2 and 3 as they relate to the required minimum horizontal separation, or setback between large diameter water mains and structures. This manual covers design guidelines for all pipeline projects under the jurisdiction of WSSC including ductile iron water mains 54-inch diameter and smaller and all sizes of gravity and pressure sewers with the exception of privately owned and maintained systems referred to as "on-site" systems. These changes deal with the potential for catastrophic

failure of certain types of pipe and the danger to life and property. These dangers are real and our comments are not intended to disregard or diminish that potential threat.

WSSC's proposal is to require an 80-foot setback from pre-stressed concrete cylinder pipe (PCCP) or cast iron water mains 36" in diameter or larger and a 25-foot setback from similar water mains between 12" and 36." If the setback cannot be provided, "the designer must develop an appropriate solution to ensure that a building or dwelling foundation will not be structurally damaged in the event of a pipeline failure and that the public is not subject to a significant risk."

While these guidelines technically apply to the designers or engineers who are designing pipelines, it is our understanding that WSSC would expect any property that is subdividing and/or needs to build a new connection to the WSSC water system to comply with them. As a result, WSSC would appear to become the lead agency with respect to building placements adjacent to pipelines, and their requirements would often be in direct opposition to the aims of the Planning Department, other agencies and the Zoning Code.

Planning staff has mapped the locations of known pipelines in the size ranges described above and will show those at the Planning Board meeting. We do not have precise locations or detailed information about the type of each pipe, so our estimates concerning the degree to which properties will be affected are also only approximate. Nevertheless, even in locations where the pipelines are located within road rights-of-way, the required setback would, at a minimum, require 160' from building face to building face, which is substantially greater than currently exists or is planned in most of our commercial centers. The most common business district street right-of-way is only 70' wide and building setbacks from the right-of-way of zero to 10' are common in our central business districts.

Staff Comments

Our biggest concern is the effect such setbacks (or other protective measures) may have on redevelopment and new development in urban areas where most of our growth is anticipated to occur. Examples of significant properties in areas of recent master or sector plans that may be affected include:

- Great Seneca Science Corridor – Public Service Training Academy, LSC Central and Rickman property
- Wheaton CBD – Aronson Redevelopment (corner of University and Georgia Avenue) and Avalon Bay, as well as some Housing Opportunity Commission property
- White Flint – North Bethesda Gateway, North Bethesda Market
- Shady Grove – WMATA property, Casey 3, the County Transfer Station and other county property
- Germantown – Properties along MD 355 between Gunners Branch Road and Ridge Road.

Project costs in these areas are already very high, with many developers required to provide new rights of way and improvements to existing roads and utilities as they move forward. Our specific concerns include:

- The proposed setbacks required (especially for the larger mains) will make it more difficult, if not impossible in the areas affected, to bring buildings to the street to create the streetscape environment needed to promote smart growth and walkable environments.
- The proposed setbacks may make certain properties, including recorded lots, undevelopable given their lot size or proximity to the main.
- It is unclear what building modifications WSSC will consider acceptable to mitigate the risk of pipeline failure and justify reduced setbacks.

Staff Recommendations

- WSSC should meet with the agencies and the development community to come up with an approach that better balances the potential threat of pipeline failure against the opportunity to improve human health and protect our natural resources by creating a compact urban environment.
- WSSC should prepare examples (including cost estimates) for the types of protective measures that would be acceptable in lieu of setbacks.
- WSSC should prepare a plan for addressing situations where no private sector change is planned around existing mains and the existing buildings fall within the proposed setbacks. WSSC should notify all property owners within the proposed setback distances regarding steps they would need to take to install protective measures.
- The cost of protective measures should be mitigated in some way, particularly for smaller properties and properties that are particularly close to a main.

Staff recommends additional coordination between the Planning Department staff and WSSC prior to adoption of these amendments to consider the implications of these guidelines on land use and revise the guidelines as necessary. We also recommend that these comments, and any others that the Planning Board may add during the roundtable, be transmitted to WSSC prior to their Public Information meeting scheduled for March 1, 2011 at 7:30 pm at WSSC's Headquarters at 14501 Sweitzer Lane, Laurel, MD.

MD:DH:tc

Attachment

NOTICE OF INTENT TO ADOPT REGULATIONS

WSSC to Revise Portions of the 2008 Pipeline Design Manual

In March 2008, the Washington Suburban Sanitary Commission (WSSC) approved the WSSC Pipeline Design Manual. WSSC is now proposing to amend the Design Manual by changing portions of Part Three, Common Design Guidelines, Sections 2 and 3 as they relate to the required minimum horizontal separation, or setback, between large diameter water mains and structures.

To review proposed Design Manual changes, you may visit the WSSC Website at <http://www.wsscwater.com/home/jsp/content/design-man-index.faces>. A limited number of hard copies of the proposed Design Manual changes will be available at the WSSC Office of Communications and Community Relations.

WSSC will hold an informational briefing for the public on these proposed changes. The briefing will be held in the Commissioner's Auditorium on Tuesday, March 1, 2011 at 7:00 PM at WSSC's headquarters, located at 14501 Sweitzer Lane, Laurel, Maryland 20707.

WSSC intends to adopt these changes following a public comment period. Written comments will be accepted until Tuesday, March 8, 2011 and should be forwarded to: David Venanzi, Civil Engineering Support Unit Coordinator, WSSC Technical Services Group, 14501 Sweitzer Lane, Laurel, MD 20707 or by email to Dvenanz@wsscwater.com.

For more information, please contact:

David Venanzi, Civil Engineering Support Unit Coordinator: Dvenanz@wsscwater.com, 301-206-8556.

2. Rights of Way and Construction Strips.

Changes to this Section are as follows:

b. DELETE in its entirety. “Existing Pipeline Width Requirements.”

~~b. Existing Pipeline Width Requirements.~~

- ~~1) The existing widths of right of ways shown/provided for existing large diameter pipelines (30 inch and larger) may be inadequate from both public safety and operation and maintenance perspectives. The most serious risks are posed in situations where occupied spaces are built within short distances of large diameter Pre-Stressed Concrete Cylinder Pipe (PCCP). PCCP fail catastrophically and result in serious public safety concerns. For any new development proposed within two hundred (200) feet of these pipelines, special considerations and modifications may be imposed.~~



3. Pipeline Crossings and Clearances.

Changes to this Section are as follows:

c. Horizontal Separation With Other Utilities/Structures.

- 2) Provide the following minimum separation when a water/sewer pipeline is parallel or adjacent to existing or proposed buildings or dwellings:

a) Water Pipelines.

- (1) For water pipelines 12-inch and smaller in diameter, provide a minimum separation from a building or dwelling the greater of the following: fifteen (15) feet horizontal separation or 1:1 slope from the bottom of the foundation of the existing or proposed building or dwelling to the bottom edge of the pipeline trench.
- (2) For water pipelines larger than 12-inch diameter, but less than 36-inch diameter if PCCP or cast iron pipe, the minimum separation from a building or dwelling is to be determined based on the following factors: maintain a minimum horizontal separation of twenty-five (25) feet and consider separation required for construction and maintenance and potential structural damage and personal injury during a potential failure of the pipeline in assessing whether a greater separation is warranted. Select the separation so that the existing or proposed foundation of the building or dwelling will not be structurally damaged during the construction, maintenance, or potential failure of the pipeline.
- (3) For PCCP or cast iron water pipelines with a 36-inch diameter or larger, WSSC studies have indicated that damage from a catastrophic failure can extend in excess of eighty (80) feet beyond the pipeline. A minimum horizontal separation of eighty (80) feet from a building or dwelling is required.
 - (a) Should the designer/applicant propose a separation of less than eighty (80) feet, the diminished separation must be mitigated through use of structural enhancements, building material selections rated to withstand a potential pipeline failure or other site-specific engineering solutions approved by WSSC Technical Services Group Leader using the below review process.
 - [1] The designer must develop an appropriate solution to ensure that a building or dwelling foundation will not be structurally damaged in the event of a pipeline failure and that the public is not subject to significant risk. Adequate documentation, including, but not limited to, diagrams, calculations and/or drawings, must be provided to support a deviation of the required horizontal separation. All such documentations must be sealed, dated, and signed by a Professional Engineer registered in the State of Maryland. If, after review and a written decision issued by the WSSC Technical Services Group Leader, the proposed engineering solution is denied, the designer/applicant may appeal the denial to the Chief Engineer within fifteen days of the date of the written denial. The appeal will be handled as an adjudicatory hearing pursuant to WSSC Standard Procedure L-07-02.



- (1) For sewer pipelines 12-inch and smaller in diameter, provide a minimum separation from a building or dwelling the greater of the following: fifteen (15) feet horizontal separation or 1:1 slope from the bottom of the foundation of the existing or proposed building or dwelling to the bottom edge of the pipeline trench.
- (2) For sewer pipelines larger than 12-inch diameter, the minimum separation from a building or dwelling is to be determined based on the following factors: maintain a minimum horizontal separation of twenty-five (25) feet and consider separation required for construction and maintenance and potential structural damage and personal injury during a potential failure of the pipeline in assessing whether a greater separation is warranted. Select the separation so that the existing or proposed foundation of the building or dwelling will not be structurally damaged during the construction, maintenance, or potential failure of the pipeline.

