

# Safety of Gas Gathering Lines

## Safety of Gas Gathering Pipelines

### *Extension of Reporting Requirements, Regulation of Large, High-Pressure Lines, and Other Related Amendments*

Docket No. PHMSA-2011-0023

RIN: 2137-AF38

86 FR 63296, Nov. 15, 2021

(referred to as RIN-3)

**US DOT PHMSA**

**Office of Pipeline Safety**



# Safety of Gas Gathering Lines

- **Final Rule Published 11/15/21**
  - Effective date: May 16, 2022
- **Major Topics**
  - New Type C category
  - Incident and annual reporting
  - Incidental gathering
- **Technical Corrections/ petition response**
  - **87 FR 26296** Correction Publication Date: May 4, 2022
  - **87 FR 35675** Second Correction Publication Date: June 13, 2022
- **Limited stay of enforcement**: Sec. 192.9 requirements for Type C pipelines less than or equal to 12.75” until May 17, 2024



# Overview of Requirements prior to this Rule

- Gathering pipelines transport gas from production facilities to a transmission line or distribution main.
- Prior to issuance of this final rule (RIN-3):
  - The start and end points of gathering were defined in API RP 80 (*1st edition, April 2000*) and § 192.8.
  - Existing Regulated Onshore Gas Gathering included:
    - Type A: “High Pressure” in Class 2-4 areas
    - Type B: “Low Pressure” in Class 2-4 areas
  - Class 1 gathering was exempt from parts 191 and 192.



# Highlights of New Requirements

- Annual and incident reporting for all gas gathering lines, including previously unregulated lines (over 425,000 miles of pipe)
- Newly regulated “Type C” and “Type R” gathering lines
- Type C - Previously-unregulated gathering pipelines (Dia.  $\geq$  8.625”, SMYS  $>$ 20%) in Class 1 locations now subject to safety standards
- Type R - All other onshore gathering lines in Class 1 and 2 locations
  - ❖ Defined in Part 192, Only regulated in Part 191
- “Incidental Gathering” line exception limited to lines 10 miles or less from the furthest downstream endpoint of gathering for newly constructed lines (after May 16, 2022). No other definitional changes adopted



# Compliance Dates

- Final Rule Effective Date: May 16, 2022
- Reporting
  - Incident reports: Report events occurring after May 16, 2022
  - Annual reports: 2022 reports due March 2023
- Identify Type C lines: November 16, 2022
- Section 192.9 compliance: May 16, 2023
- Section 192.9 compliance for lines that become Type C after May 16, 2022: 1 year from date they become Type C lines
- MAOP lookback: 5-year period ending May 16, 2023
- Enforcement discretion
  - [Incidental gathering lines constraints: constructed after May 16, 2022](#)
  - [Part 192 requirements for Type C pipelines ≤12.75”](#): May 17, 2024



# Corrections to Final Rule

- Technical Correction issued May 4, 2022 provided for response to Petition and corrections [87 FR 26296](#)
  - Petition Response
  - Changes to SRCR reporting requirements,
  - Determination of Type C (MAOP alternative), and
  - Issued an Enforcement Discretion on Incidental Gathering
- PHMSA issued an additional Technical Correction on June 13, 2022 to correct an inadvertent error that removed offshore gathering from reporting [87 FR 35675](#)
  - §191.15 “Each operator of a transmission, **offshore gathering**, or a regulated onshore gathering pipeline system ...”
  - §191.17 “Each operator of a transmission, **offshore gathering**, or regulated onshore gathering pipeline system ...”



# Litigation and Settlement

## - API appeal / GPA petition -

- June 27, 2022 – Order Granting Abeyance issued by US Court of Appeals, and litigation will be stayed during pendency of the Enforcement Discretion
- July 8, 2022 – Enforcement Discretion for Particular Type C Gas gathering Pipelines
  - Pipelines with Outer Diameter greater than or equal to 8.625” but less than or equal to 12.75 have extend compliance deadline for Safety Requirements in 192.9 – Deadline extended to **May 17, 2024.**



# Gathering Lines Prior to the RIN 3

- Gathering line transports gas from a current production facilities to a transmission line or distribution main (§ *192.3 Definitions*)
- Start and end points of gathering defined in API RP 80 (*1st edition, April 2000*) **and § 192.8**
- Regulated Onshore Gas Gathering included:
  - Type A: “High Pressure” in Class 2-4 areas
  - Type B: “Low Pressure” in Class 2-4 areas
- Class 1 gathering exempt from Part 191 and Part 192





# Previously Defined Gathering Line Types: Type A and Type B (§192.8)

## Type A

- Metallic, MAOP with hoop stress  $\geq 20\%$  SMYS
- Non-metallic with MAOP  $>125$  psig
- Class 2, 3, or 4 locations

## Type B

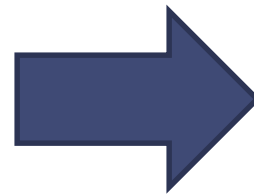
- Metallic with MAOP  $< 20\%$  SMYS
- Non-metallic with MAOP  $\leq 125$  psig
- Class 3 and 4, Class 2 by one of three methods (cluster)



# Gathering Line ‘Evolution’

- Conventional wells used when regulations issues; used smaller diameter piping and lower pressures
- Never anticipated:
  - Growth of new technology for horizontal wells
  - Shale plays such as Utica and Marcellus

**Lower Risk**  
**Smaller, Lower Pressure**  
**Gathering Lines**



**Higher Risk**  
**Larger, Higher Pressure**  
**Gathering Lines**



# Highlights of New Requirements

- Annual and incident reporting for all onshore gas gathering lines, including previously unregulated lines
- Newly regulated “Type C” and “Type R” gathering lines
- Limits use of incidental gathering line exception
  - Limited to lines  $\leq 10$  miles from the furthestmost downstream endpoint of gathering
  - Applies to new, replaced, relocated or otherwise changed lines after May 16, 2022



# Revised Gathering Line Code Sections

§ 192.3 Definitions - Gathering line means a pipeline that transports gas from a current production facility to a transmission line or main.

*This new regulation did not change the definition of gathering it just added new types of regulated onshore gathering (Types C & R).*

§ 192.8 How are onshore gathering pipelines and regulated onshore gathering pipelines **determined**?

*Note that Operators are still required to use API RP 80 1st edition (April 2000) to determine if pipeline is designated as gathering.*

§ 192.9 What **requirements** apply to gathering pipelines?



# New Gathering Lines: Type C

Outside diameter greater than or equal to 8.625 inches and any of the following:

- Metallic and the MAOP produces a hoop stress of  $> 20\%$  SMYS; or
- If the stress unknown, segment is metallic and the MAOP  $> 125$  psig (862 kPa); or
- Non-metallic (or Composite) and the MAOP  $> 125$  psig (862 kPa); and
- In a class 1



# New Gathering Lines: Type R

## “All other onshore gathering lines”

- *§ 191.3 Definitions - Reporting-regulated gathering* means a Type R gathering line as determined in § 192.8 of this chapter. A Type R gathering line is subject only to this part.
- *§ 192.8(c)(3)* - A Type R gathering line is subject to reporting requirements under part 191 of this chapter but is not a regulated onshore gathering line under this part.



# Type R Reporting Requirements

## *§ 191.5 Immediate notice of certain incidents.*

Call within 1 hour of discovery

## *§ 191.15 Incident report.*

Type R use form DOT F 7100.2-2 *New Form*

## *§ 191.22 National Registry of Operators*

Must get an OPID

Use Form DOT F 1000.1

## *§ 191.17 Annual report.*

First report due March 2023

Type R use form DOT F 7100.2-3 *New Form*



# Type R Requirements

## Type R gathering must:

§ 191.22 National Registry of Operators.

**Yes, you must get an OPID**

– All use Form DOT F 1000.1 (*see website*)

§ 191.23 Reporting safety-related conditions?

**No for Type R**

§ 191.29 National Pipeline Mapping System?

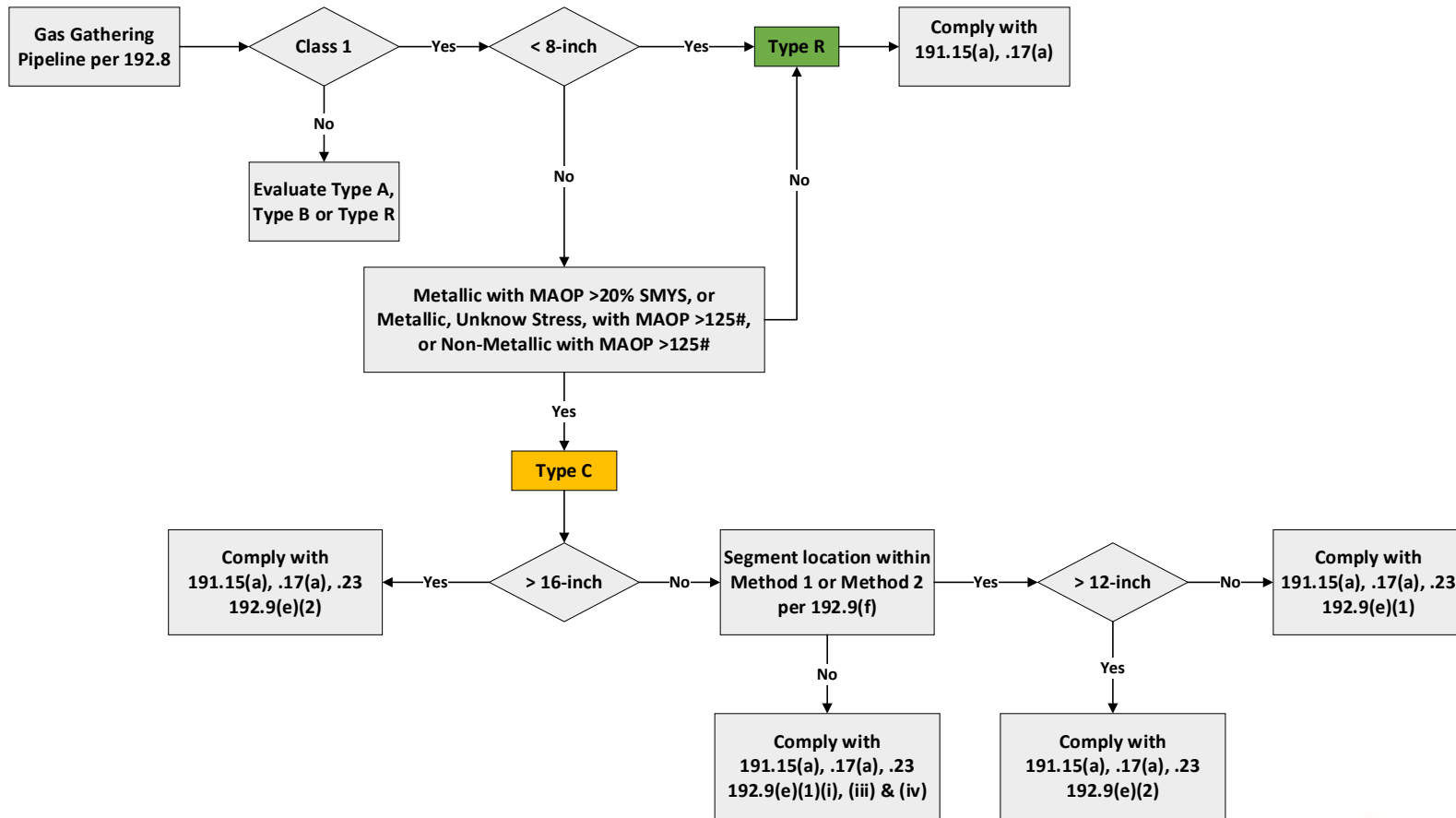
**No**





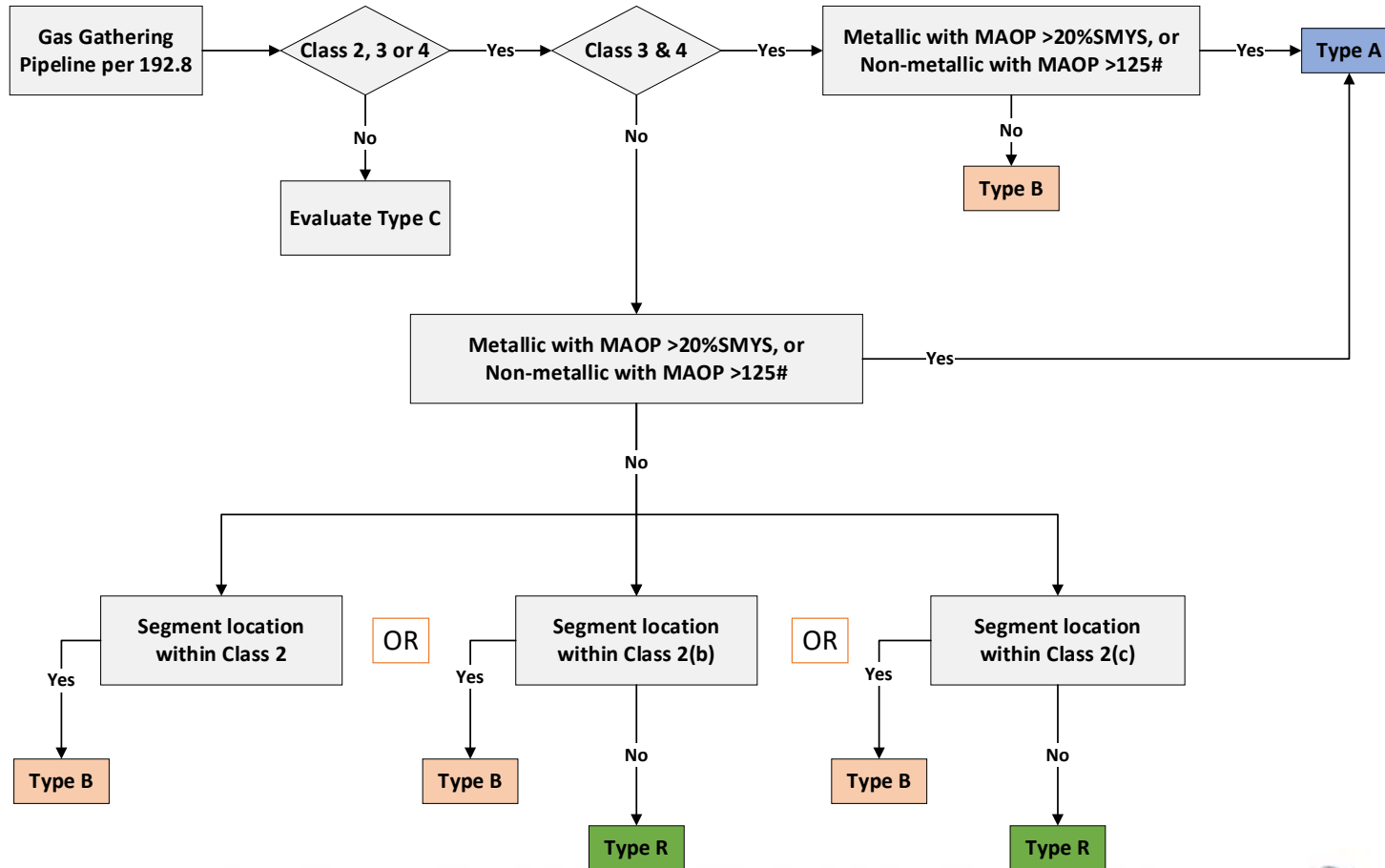
# Safety of Gas Gathering Lines

## Regulatory Flow Chart for Class 1 Locations



# Safety of Gas Gathering Lines

## Regulatory Flow Chart for Class 2, 3, & 4 Locations



# Summary of Type C Requirements

Criteria	Type C requirements (cumulative)
Diameter equal to greater than 8.625 inches	Damage prevention § 192.614 Emergency Plans § 192.615 New/replaced - <u>Design, installation, construction, inspection, and testing requirements*</u>
Diameter 8.625 inches through 12.75 inches with a building within the potential impact circle (PIC):	The above and: Public Awareness § 192.616 Line Markers § 192.707 Corrosion control (subpart I) Leakage surveys (192.706)
Diameter > 12.75 inches through 16 inches with a building within the PIC, or Diameter > 16 inches	The above and: Plastic pipe requirements Establish maximum allowable operating pressure (MAOP, § 192.619)

\* Exceptions created for short replacement sections and composite pipe



# Safety of Gas Gathering Lines - Rule Coverage

Provision	Scope	Mileage*
<b>Reporting (incident, annual)</b> Part 191	Previously unregulated gathering	>400,000 miles
<b>Design, Construction, initial Inspection and Testing**</b>	All new and replaced Type C (diameter $\geq$ 8.625")	New & replaced only
<b>Damage Prevention</b> § 192.614	All Type C (diameter $\geq$ 8.625")	90,863 miles
<b>Emergency Plans</b> § 192.615	All Type C (diameter $\geq$ 8.625")	90,863 miles
<b>Public Awareness</b> § 192.616	Diameter 8.625" through 16" with a PIR exception All Type C with a diameter >16"	20,336 miles
<b>Line Markers</b> § 192.707	Diameter 8.625" through 16" with a PIR exception All Type C with a diameter >16"	20,336 miles
<b>Corrosion Control</b> Subpart I to part 192	Diameter 8.625" through 16" with a PIR exception All Type C with a diameter >16"	20,336 miles
<b>Leakage Surveys and Repairs</b> §§ 192.703, 192.706	Diameter 8.625" through 16" with a PIR exception All Type C with a diameter >16"	20,336 miles
<b>Maximum Allowable Operating Pressure</b> § 192.619	Diameter >12.75" through 16" with a PIR exception All Type C with a diameter >16"	13,760 miles
<b>Plastic Pipe Requirements</b>	Diameter >12.75" through 16" with a PIR exception All Type C with a diameter >16"	13,760 miles

\* Estimated

\*\* Allowance for the use of composite pipe and short segment replacements



# Type C Gathering

## Type C gathering $\geq 8.625$ ” must:

- Follow “all” reporting requirements of Part 191
- A new, replaced, relocated, or otherwise changed ... be designed, installed, constructed, initial inspection, and tested in accordance with the requirements in subparts B through G and J of this part applicable to transmission lines;
- Carry out a Damage Prevention program under §192.614;
- Develop and implement procedures for emergency plans in accordance with § 192.615.



# Type C Gathering

**If you are 8” or greater AND meet “Criteria”, you must also:**

- *If the pipeline is metallic*, control corrosion according to requirements of subpart I of this part applicable to transmission lines except for § 192.493;
- Develop and implement a written public awareness program in accordance with § 192.616; *API RP 1162 (1st edition, Dec. 2003)*
- Install and maintain line markers according to the requirements for transmission lines in § 192.707; and
- Conduct leakage surveys in accordance with the requirements for transmission lines in § 192.706 using leak-detection equipment, and promptly repair hazardous leaks in accordance with §192.703(c).



# Type C Gathering

**If you are > 12” AND meet “Criteria”, you must also:**

- *If the pipeline contains plastic pipe*, comply with all applicable requirements of this part for plastic pipe or components. This does not include pipe and components made of composite materials that incorporate plastic in the design; and
- Establish the MAOP of the pipeline under §192.619(a) or (c) and maintain records used to establish the MAOP for the life of the pipeline.



# Exemption Criteria

## 192.9 (f) Exceptions

1) Compliance with paragraphs (e)(1)(ii), (v), (vi), and (vii) and (e)(2)(i) and (ii) of this section is not required for pipeline segments that are 16 inches or less in outside diameter if one of the following criteria are met:

(i) Method 1

(ii) Method 2

(2) Paragraph (e)(1)(i) of this section is not applicable to pipeline segments 40 feet or shorter in length that are replaced, relocated, or changed on a pipeline existing on or before May 16, 2022.





# Exemption Criteria: Method 1

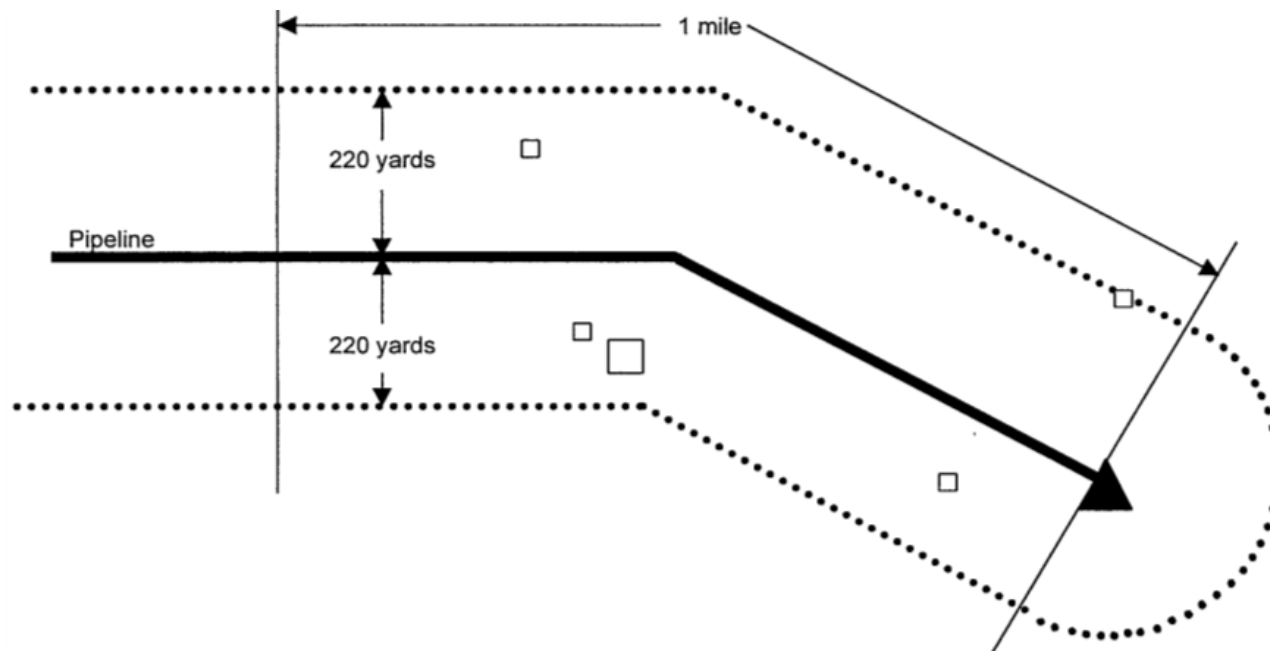
- Method 1. The segment is not located within a potential impact circle containing a building intended for human occupancy or other impacted site. The potential impact circle must be calculated as specified in § 192.903, except that a factor of 0.73 must be used instead of 0.69. The MAOP used in this calculation must be determined and documented in accordance with paragraph (e)(2)(ii) of this section.

$$PIR = 0.73 * \sqrt{MAOP * d^2}$$



# Exemption Criteria: Method 2

- Method 2. The segment is not located within a class location unit (see § 192.5) containing a building intended for human occupancy or other impacted site.



# What does “building intended for human occupancy or other impacted site” mean?

- Any building that may be occupied by humans, including homes, office buildings factories, outside recreation areas, plant facilities, etc.;
- A small, well-defined outside area (such as a playground, recreation area, outdoor theater, or other place of public assembly) that is occupied by 20 or more persons on at least 5 days a week for 10 weeks in any 12-month period (the days and weeks need not be consecutive); or
- Any portion of the paved surface, including shoulders, of a designated interstate, other freeway, or expressway, as well as any other principal arterial roadway with 4 or more lanes.

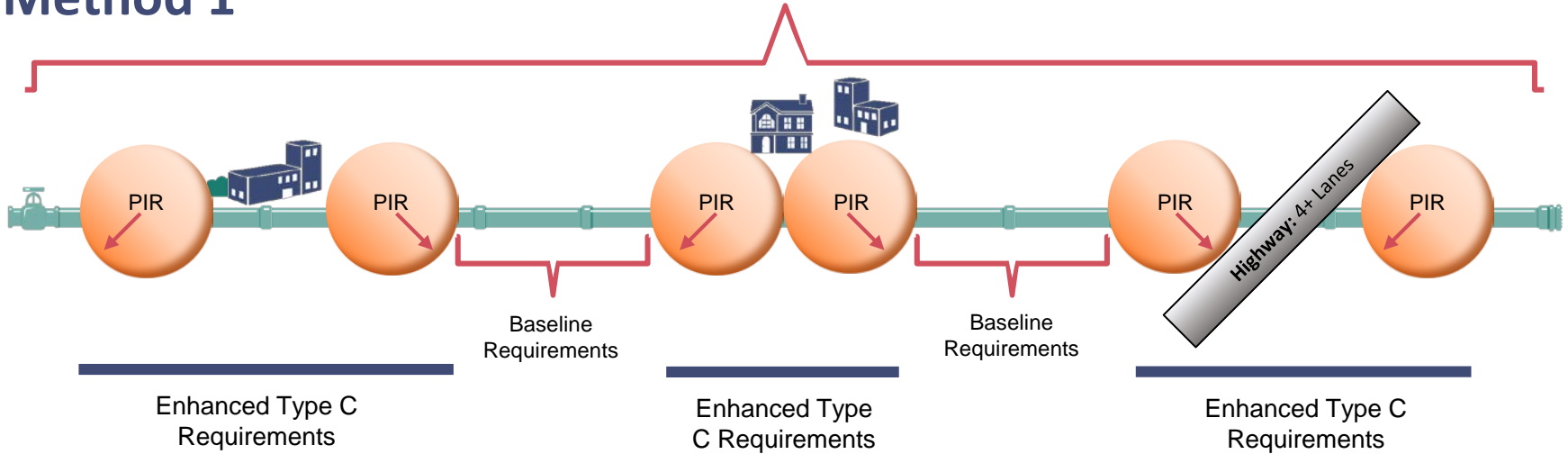
*It is not the same as an “identified site” under IM in 192.903*



# Example: Method 1

## Method 1

Class 1, 8" ≤ OD ≤ 16"



$$PIR = 0.73 * \sqrt{MAOP * d^2}$$

**Example 1:**  
12-inch with MAOP 1,440 psig  
PIR = 332 feet

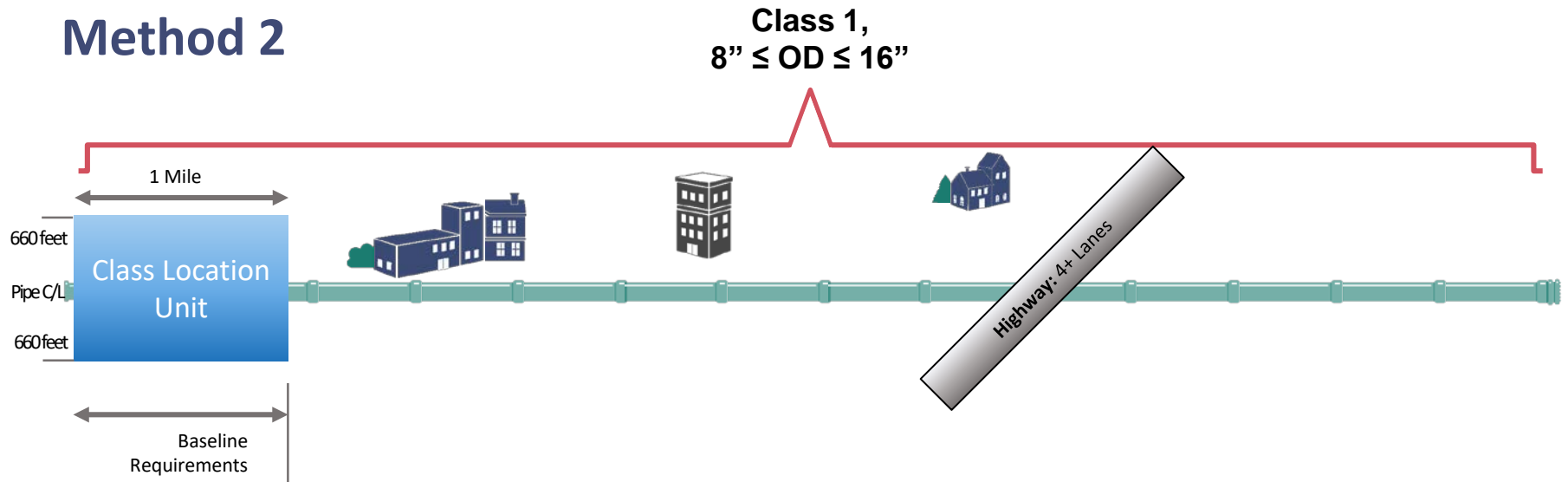
**Example 2:**  
16-inch with MAOP 1,440 psig  
PIR = 443 feet

**Example 3:**  
24-inch with MAOP 1,440 psig  
PIR = 664 feet



# Example: Method 2

## Method 2

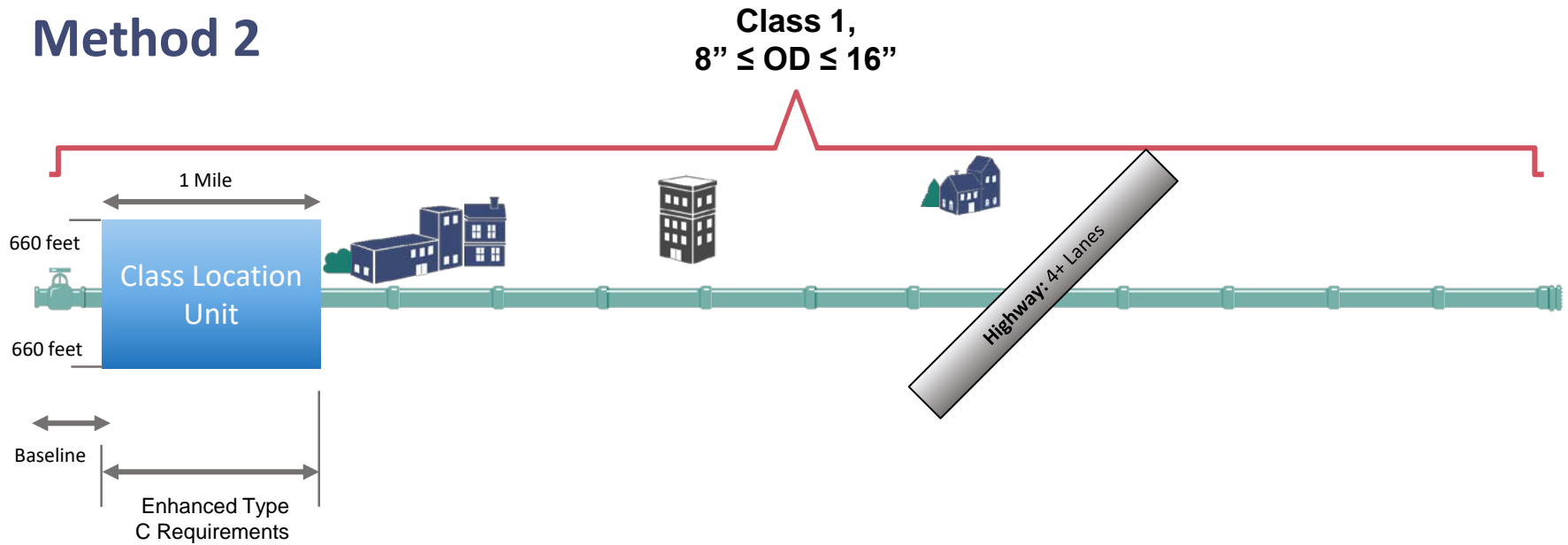


*Application of Continuous Sliding Mile*



# Example: Method 2 (continued)

## Method 2

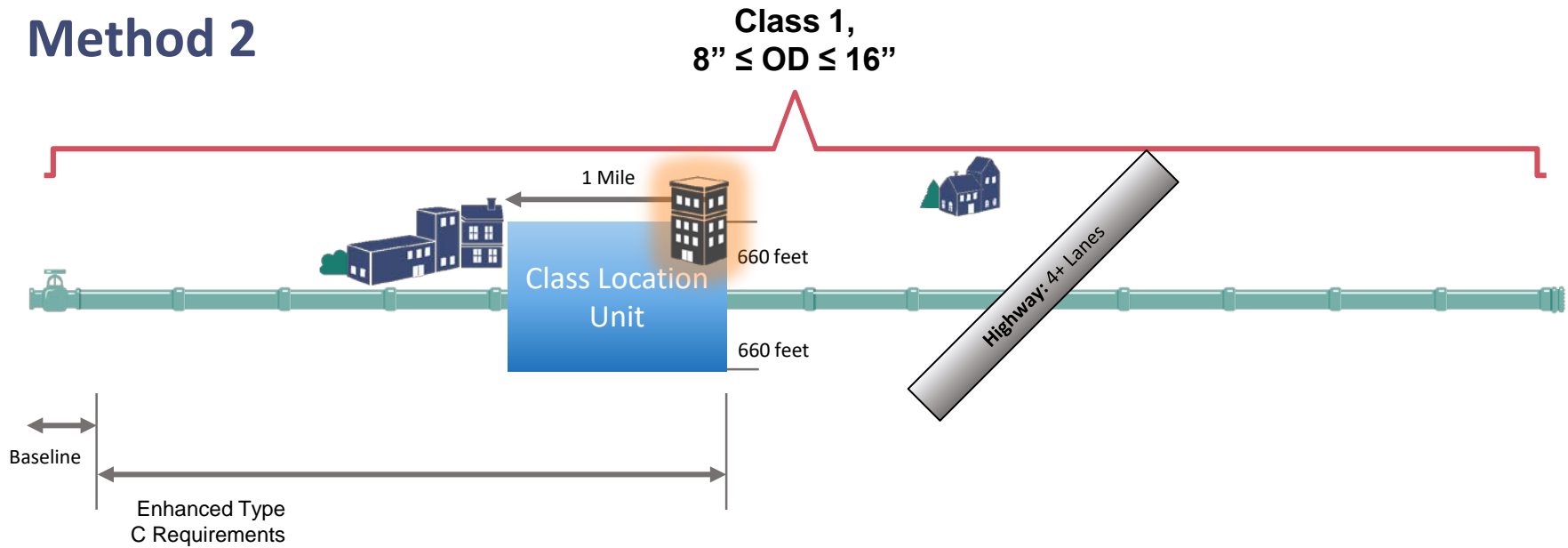


*Application of Continuous Sliding Mile*



# Example: Method 2 (continued)

## Method 2

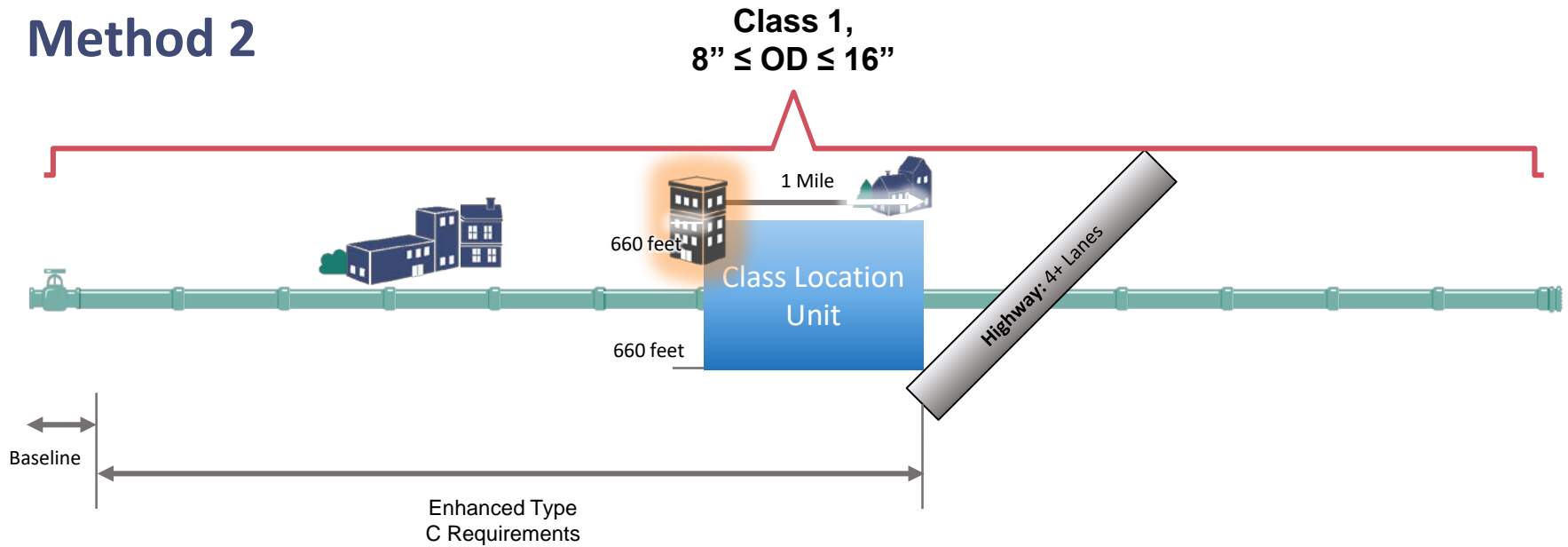


*Application of Continuous Sliding Mile*



# Example: Method 2 (continued)

## Method 2



*Application of Continuous Sliding Mile*

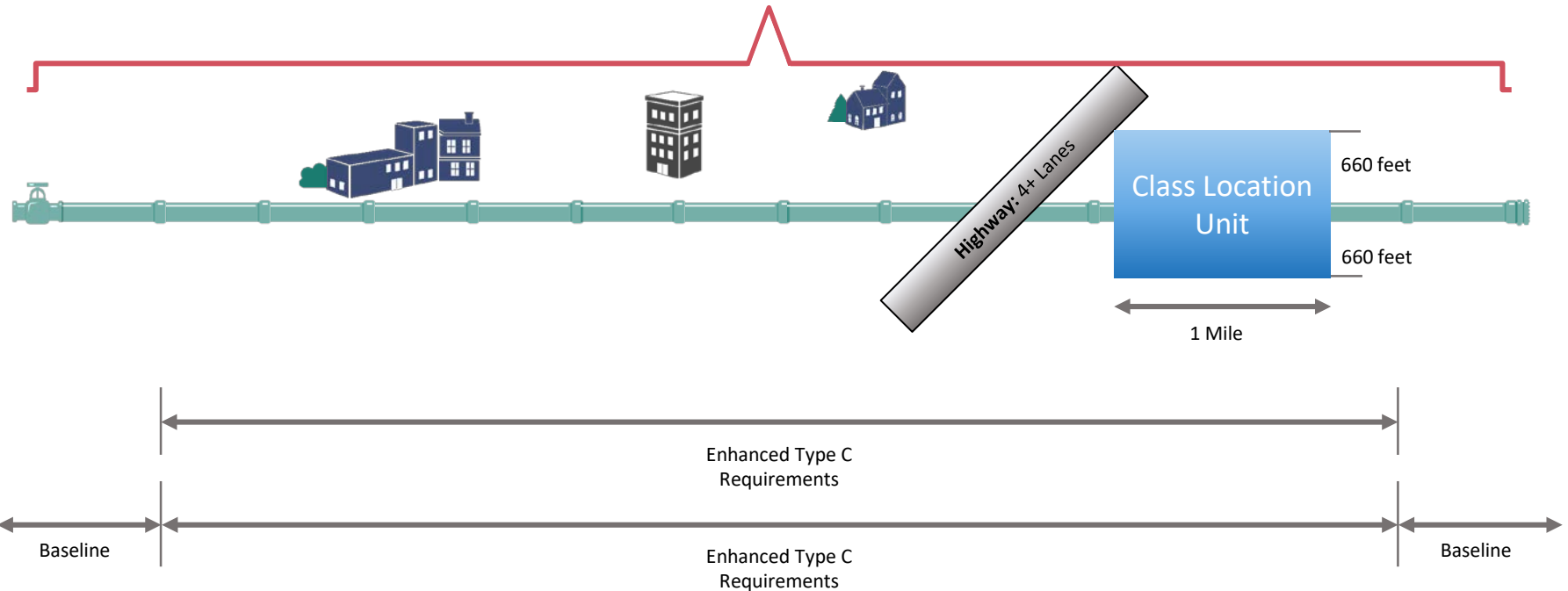




# Example: Method 2 (continued)

## Method 2

Class 1,  
 $8'' \leq OD \leq 16''$

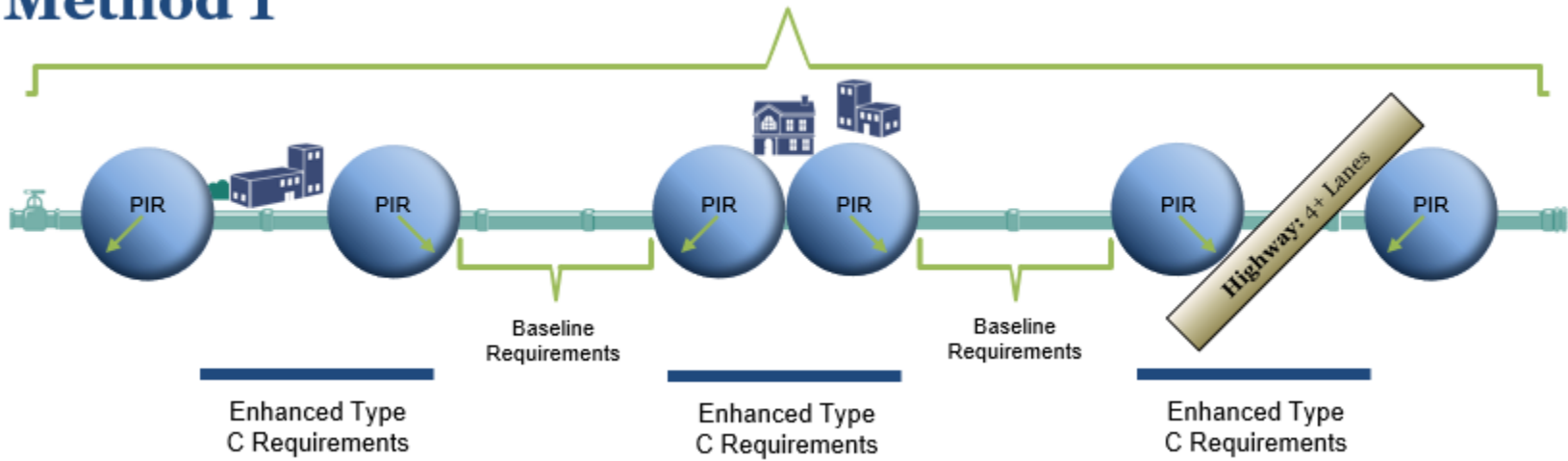


*Application of Continuous Sliding Mile*



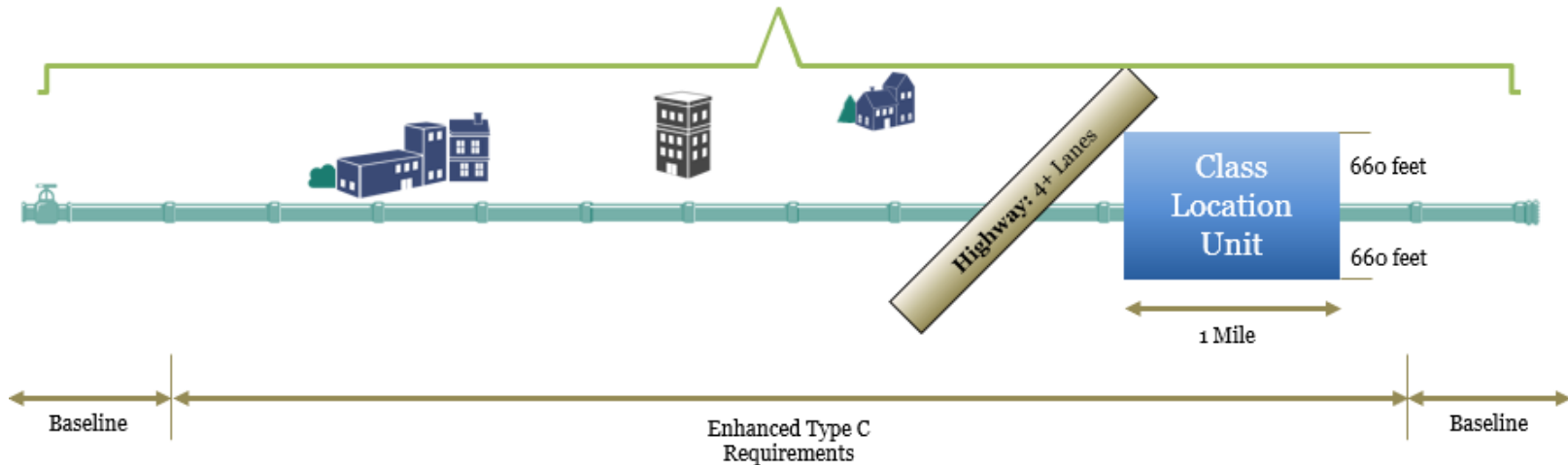
# Method 1

Class 1,  $8'' \leq OD \leq 16''$



# Method 2

Class 1,  $8'' \leq OD \leq 16''$



# Compliance Deadlines (again)

- Final Rule Effective Date: May 16, 2022
- Reporting
  - Incident Reports: Report events occurring after May 16, 2022
  - Annual Reports: 2022 reports due March 15, 2023
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- MAOP lookback: 5-year period ending May 16, 2023
- Enforcement discretion
  - [Incidental gathering lines: constructed after May 16, 2022](#)
  - [Part 192 requirements for pipelines  \$\leq 12.75\$ "](#): May 17, 2024



# Safety of Gas Gathering Lines

## General Information

Docket:

<https://www.regulations.gov/docket/PHMSA-2011-0023>

Website Link:

<https://www.phmsa.dot.gov/pipeline/gas-gathering/gas-gathering-regulatory-overview>

Contacts:

[Chris.McLaren@dot.gov](mailto:Chris.McLaren@dot.gov)



# Additional Resources and Tools

- PHMSA Homepage, Office of Pipeline Safety
  - [www.phmsa.dot.gov](http://www.phmsa.dot.gov)
- Standards & Rulemaking
  - <http://www.phmsa.dot.gov/pipeline/regs>
- PHMSA Technical Resources
  - <https://www.phmsa.dot.gov/technical-resources/pipeline/pipeline-technical-resources-overview>
  - GPAC Meeting slides for reference at “Public Meetings” tab (<https://primis.phmsa.dot.gov/meetings/>)
- PHMSA’s Stakeholder Communications Site
  - <http://primis.phmsa.dot.gov/comm>
- For Federal Regulations (Official Version)
  - [www.ecfr.gov](http://www.ecfr.gov)



# Safety of Gas Gathering Lines

**Thank You  
for Your Participation  
in Pipeline Safety**

