HDD Large Diameter Pipeline Crossings of Highways

Protecting Everyone’s Assets

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General Stakeholders on HDD Highway Crossings

- Owners (DOTs & pipeline companies)
- Traveling public
- Engineer
- Various agencies
- Contractor
HDD Stakeholder Needs

- Pipeline companies
  - Transfer product from point “A” to point “B”

- DOTs
  - Keep highways operating safely for traveling public

- Engineers
  - Identify risks of installing HDD at proposed location
  - Design HDD to be feasible, reduce risk
  - Make recommendations on how to mitigate identified risks

- HDD Contractor
  - Follow best industry practices to complete HDD installation while mitigating risks
Engineering Considerations

- Is proposed HDD alignment feasible?
- What type subsurfaces will be encountered during drill?
  - Complete geotechnical exploration with soil borings and laboratory testing
- Does site location allow for proper layout of workspaces and are they accessible?
<table>
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<tr>
<th>OD</th>
<th>RADIUS</th>
<th>MIN W.T.</th>
<th>10°/8°</th>
<th>12°/10°</th>
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<td></td>
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<td></td>
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<td>MD</td>
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<tr>
<td>8''</td>
<td>800</td>
<td>0.173''</td>
<td>507 ft</td>
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<tr>
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<td>1200</td>
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<td>0.320''</td>
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<td>48''</td>
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<td>0.960''</td>
<td>1913 ft</td>
<td>84 ft</td>
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Engineering

- Identify risks and design HDD to reduce risks
- Inadvertent drilling fluid returns surfacing
- “Dry hole” from entry and exit point elevation differential and cause hole stability issues
PORTAL \( \pm 100' \)

**PROPOSED PROFILE**

- **Borehole Legend**
  - **Type of Soil**
  - **PRT**

**Recommended Tolerances**

- **Pilotline Depth**
  - **Pilotline Height**
  - **Pilotline Placement**
  - **Pilotline Extension**

- **Minimum Allowable**
  - **Not Specified**

**Notes**

- All existing underground facilities and connections are to be considered.
- **Issued for Bid**

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***WARNING***

- All work shall be performed in accordance with the specifications and plans shown herein.
- **Access Roads**
- **Exit Points**
- **WATERLINE**
- **GROUND SURFACES**

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**Profile**

- **Horiz.** \( \pm 100' \)
- **Vert.** \( \pm 100' \)

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**Profile Details**

- **Borehole**
  - **Legend**
  - **PRT**

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**Issued for Bid**

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**Plan**

- **Access Road**
- **Exit Point**
- **WATERLINE**
- **Proposed Profile**
- **Horizontal Alignment**

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**Notes**

- **Access Roads**
- **Exit Points**
- **Waterline**
- **Profile Alignment**
Questions?

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