Bi-Annual GRMP Review Meeting
Peace Region: Swan Hills District
March 7, 2018

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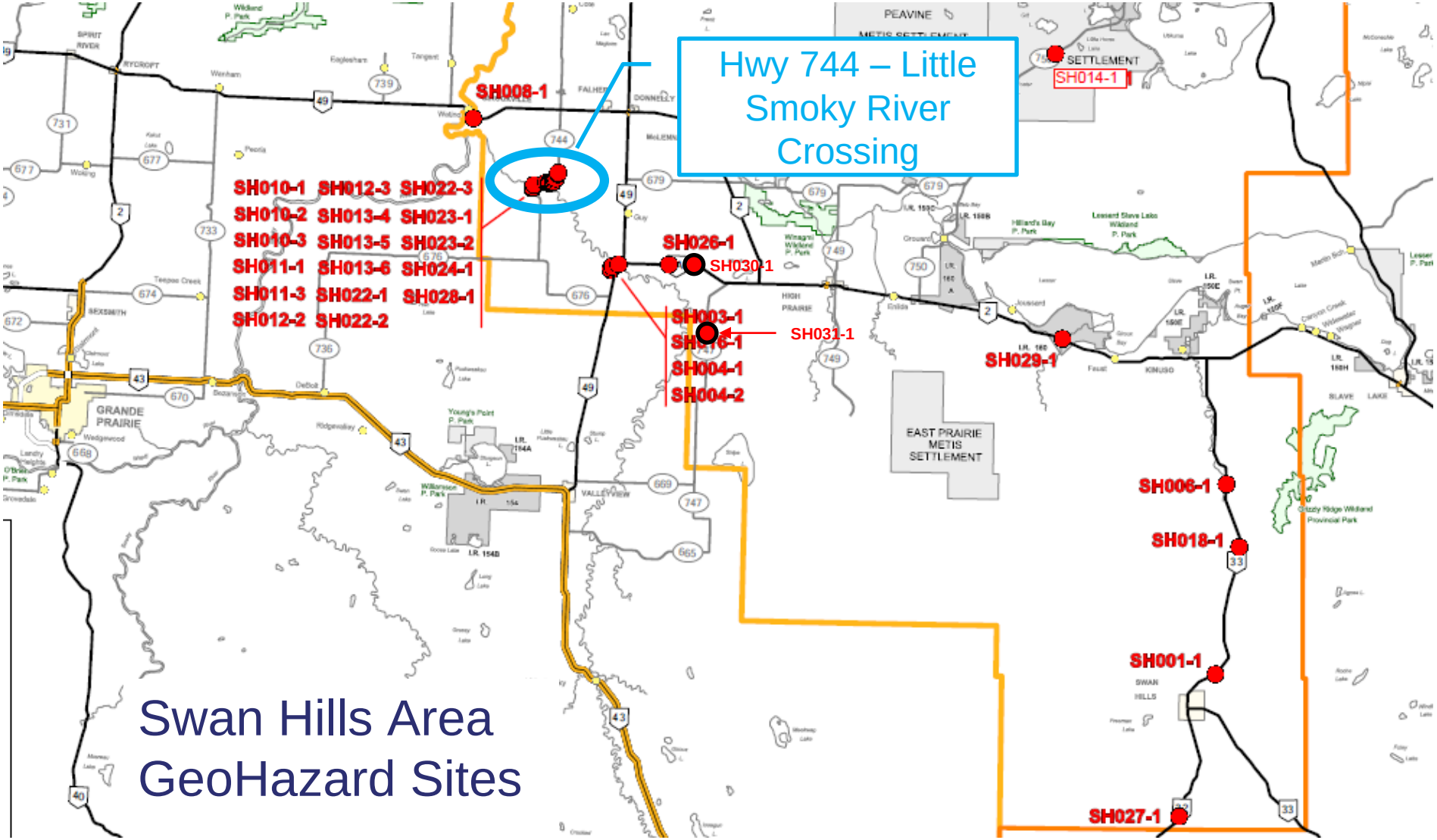

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Area Summary

2016: 12 super-sites inspected

- Combined risk level of 763

2017: 14 super-sites inspected

- Combined risk level of 724 (for 23 active subsites)
- 3 sites repaired by others, 1 by MCI
  - SH16 – toe erosion at south abutment
  - SH26 – erosion and embankment failure of large fill
  - SH27 – creek erosion
  - SH13-13 – new culvert installed to replaced one blocked by embankment failure

Hwy 744 – Little Smoky River Valley

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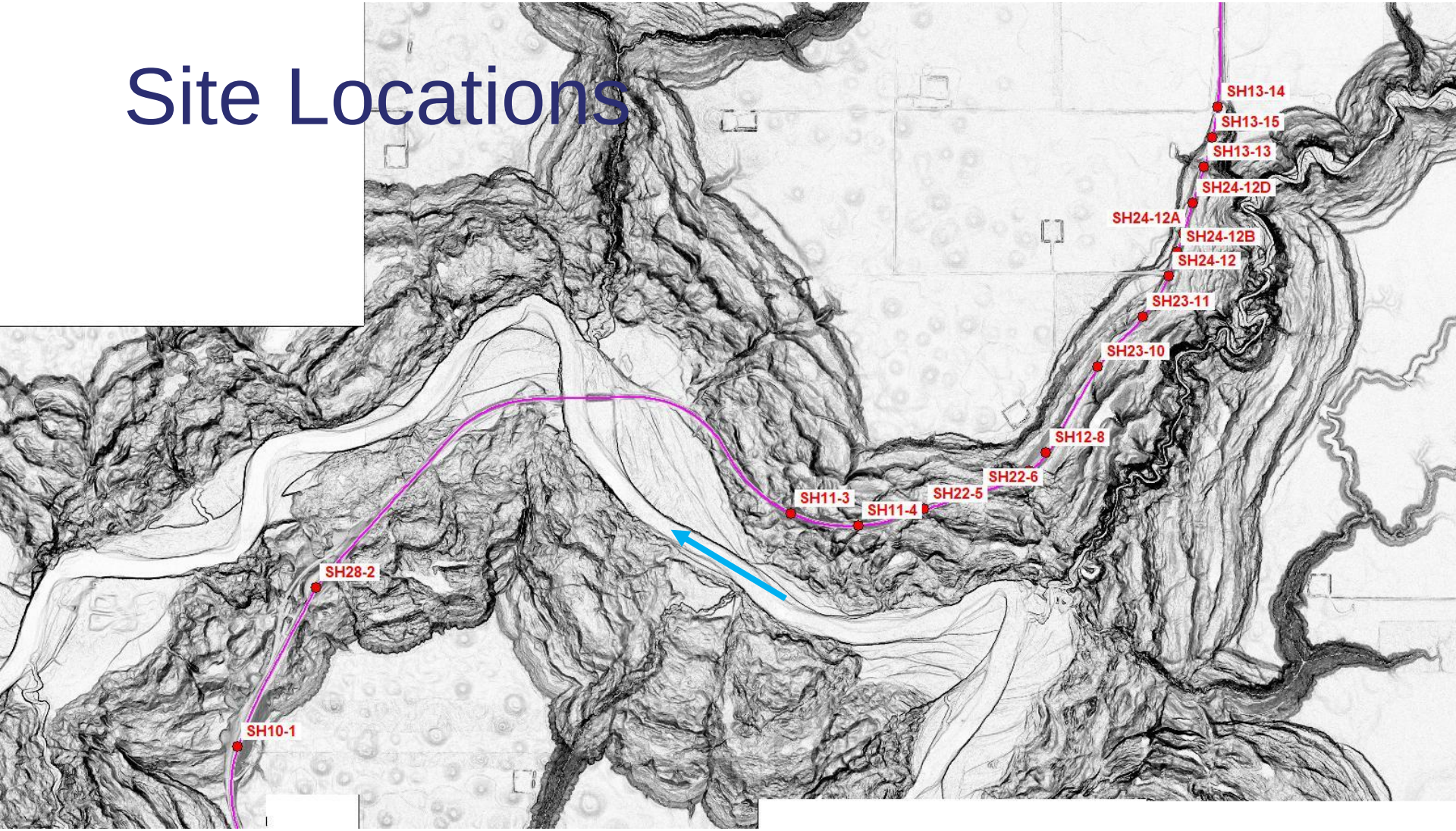
Site Locations



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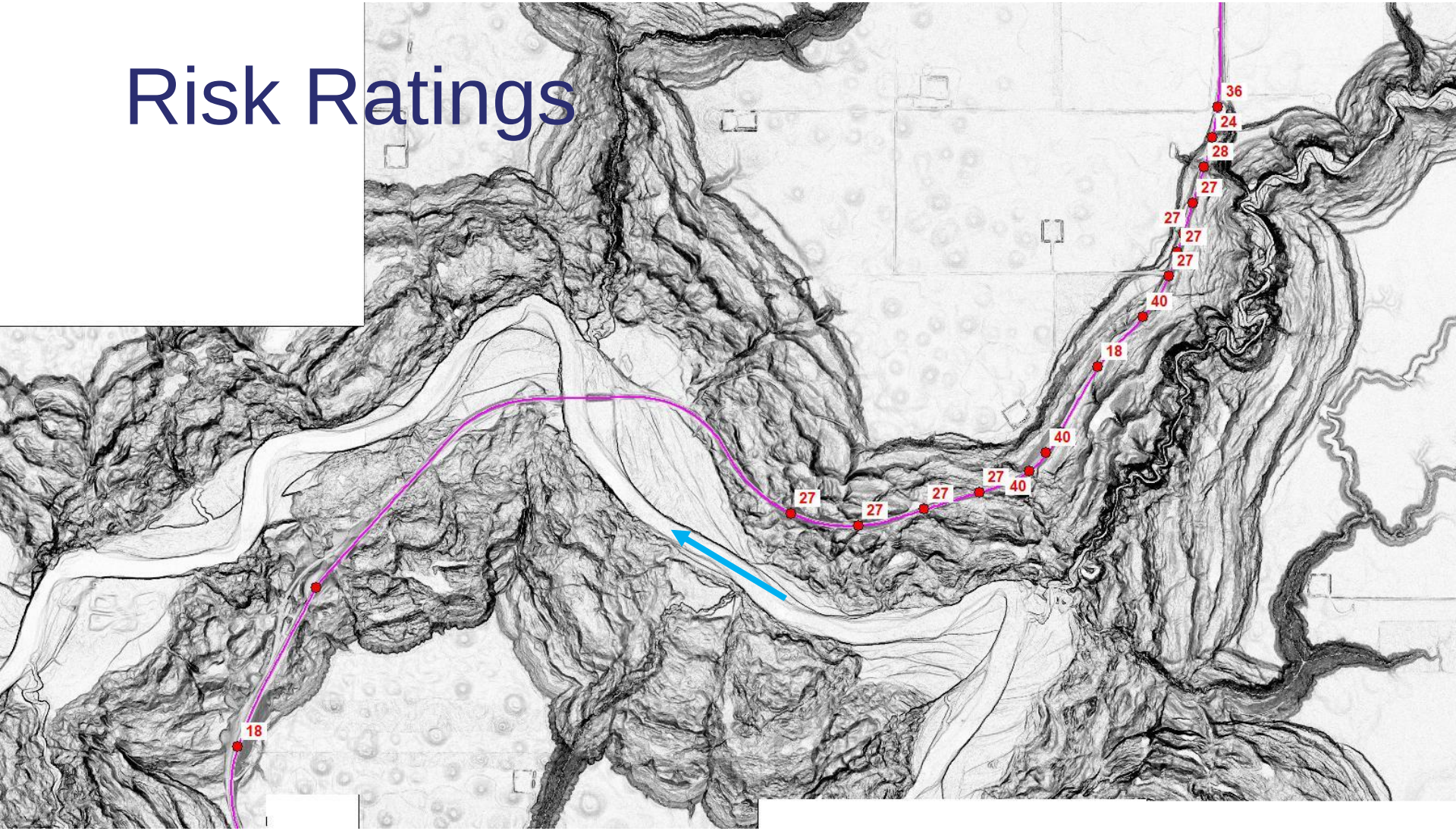
Risk Ratings



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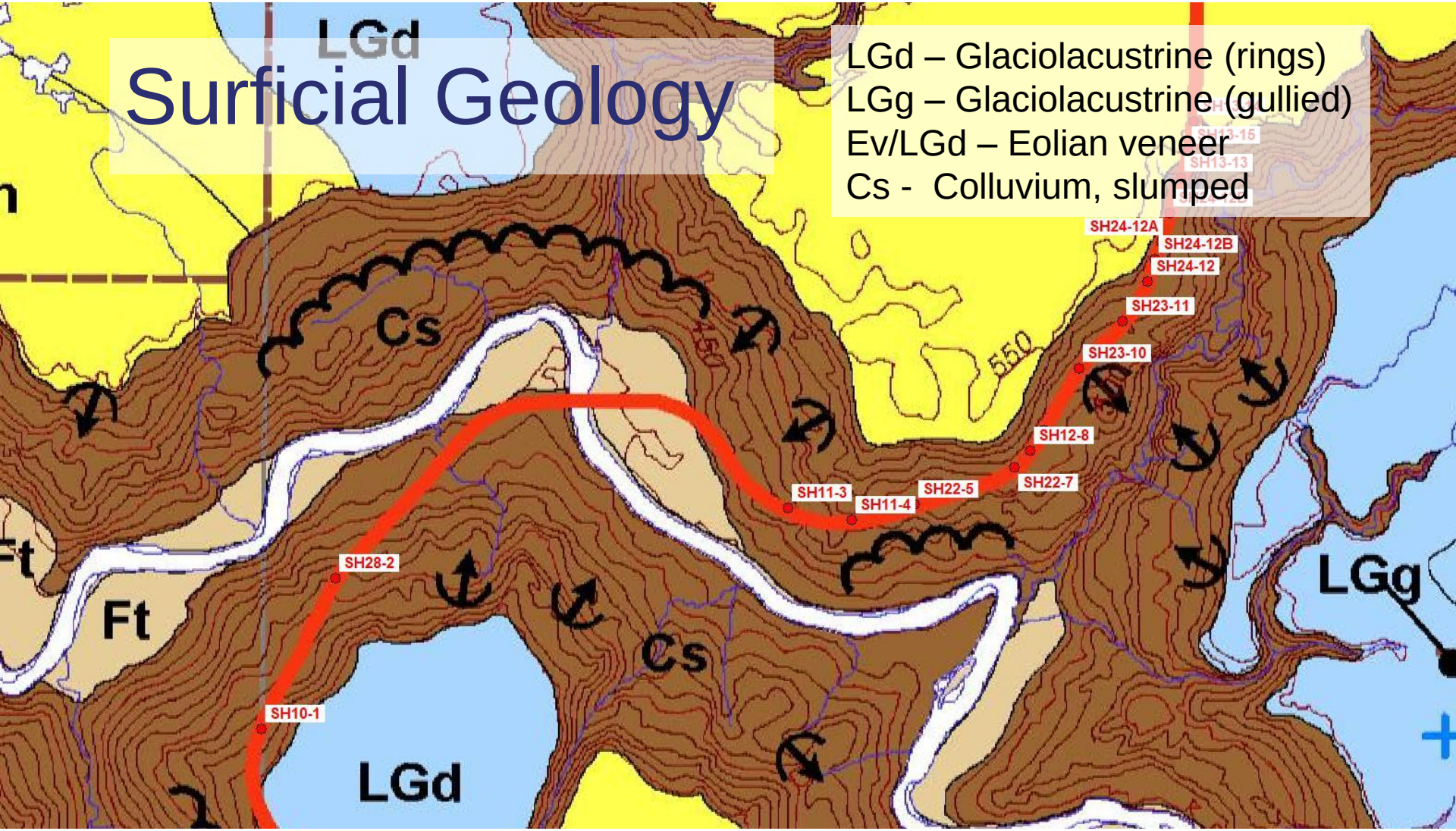
Surficial Geology



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North Hill - Challenges

16 separate sites over 3.5 km

Geologically:

- Valley is 120 m deep
- Slopes moving in at least 3 directions and deeply
- Local issues with seepage, drainage, slumping, and erosion

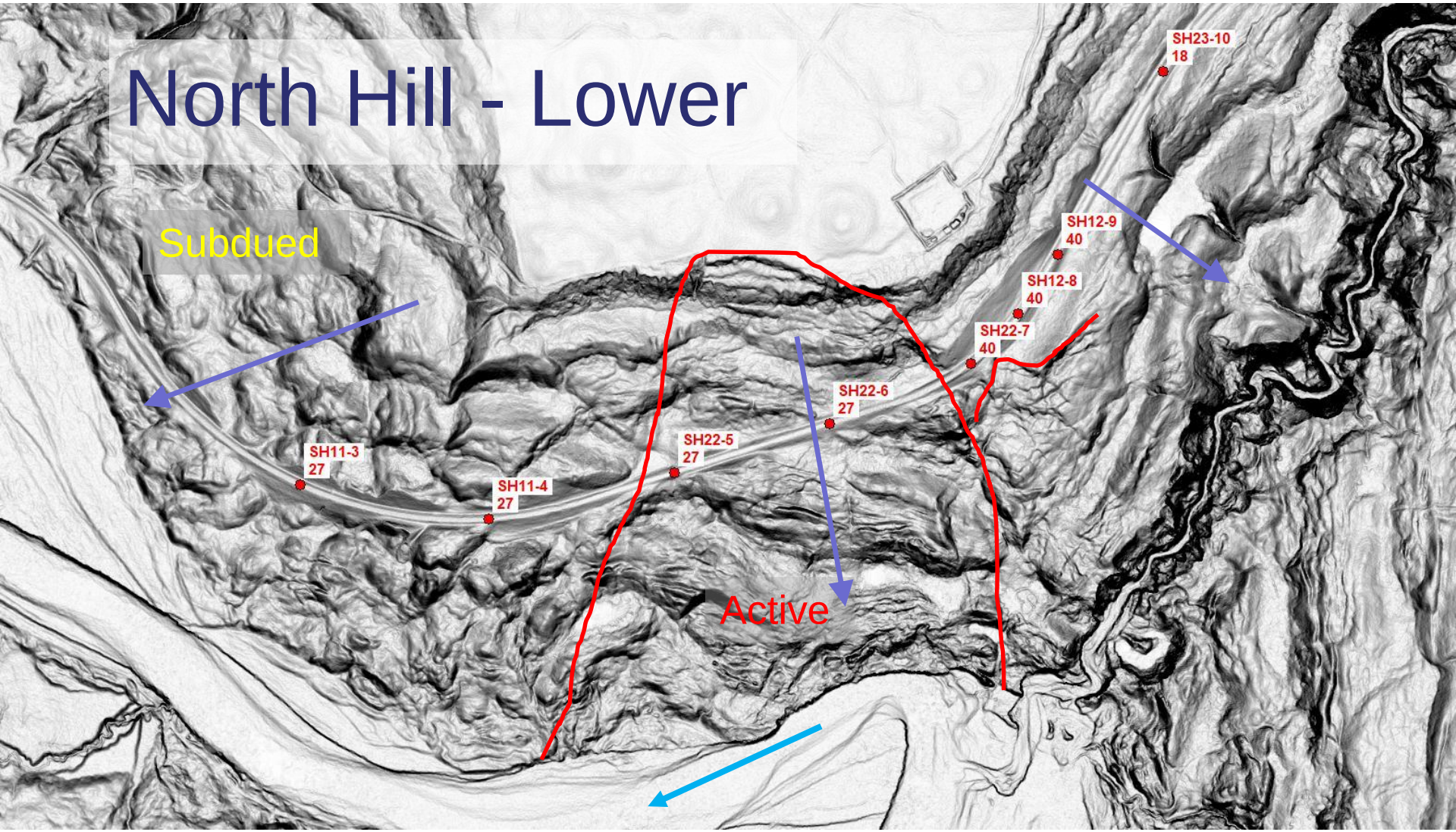
Logistically:

- They all look the same!
- Frequent patching complicates comparison of photos and drawings
- Initial site drawings made before high-res satellite and LiDAR available

Economically:

- AADT is only 260 so limited funds available

North Hill - Lower



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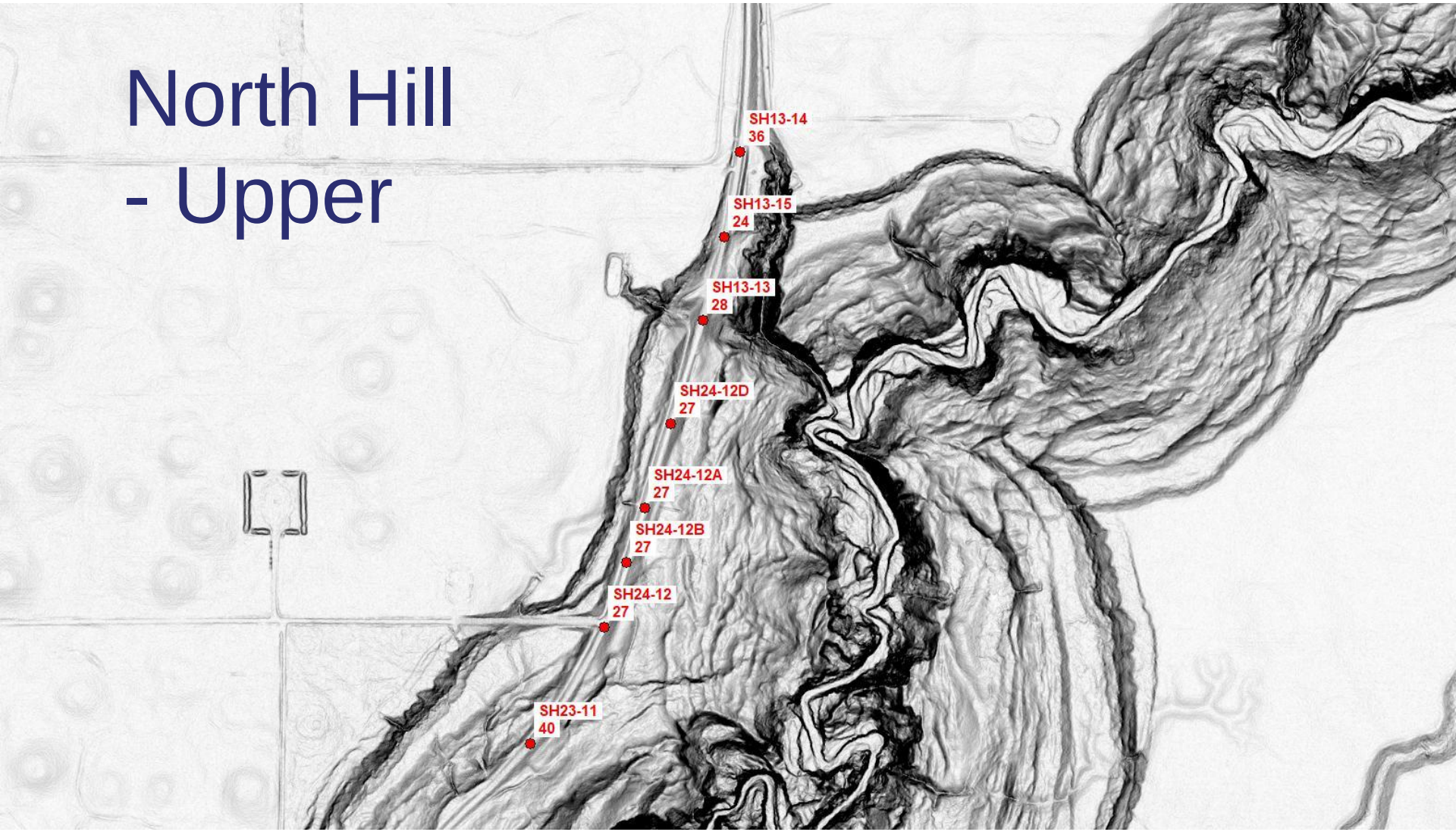
North Hill - Upper



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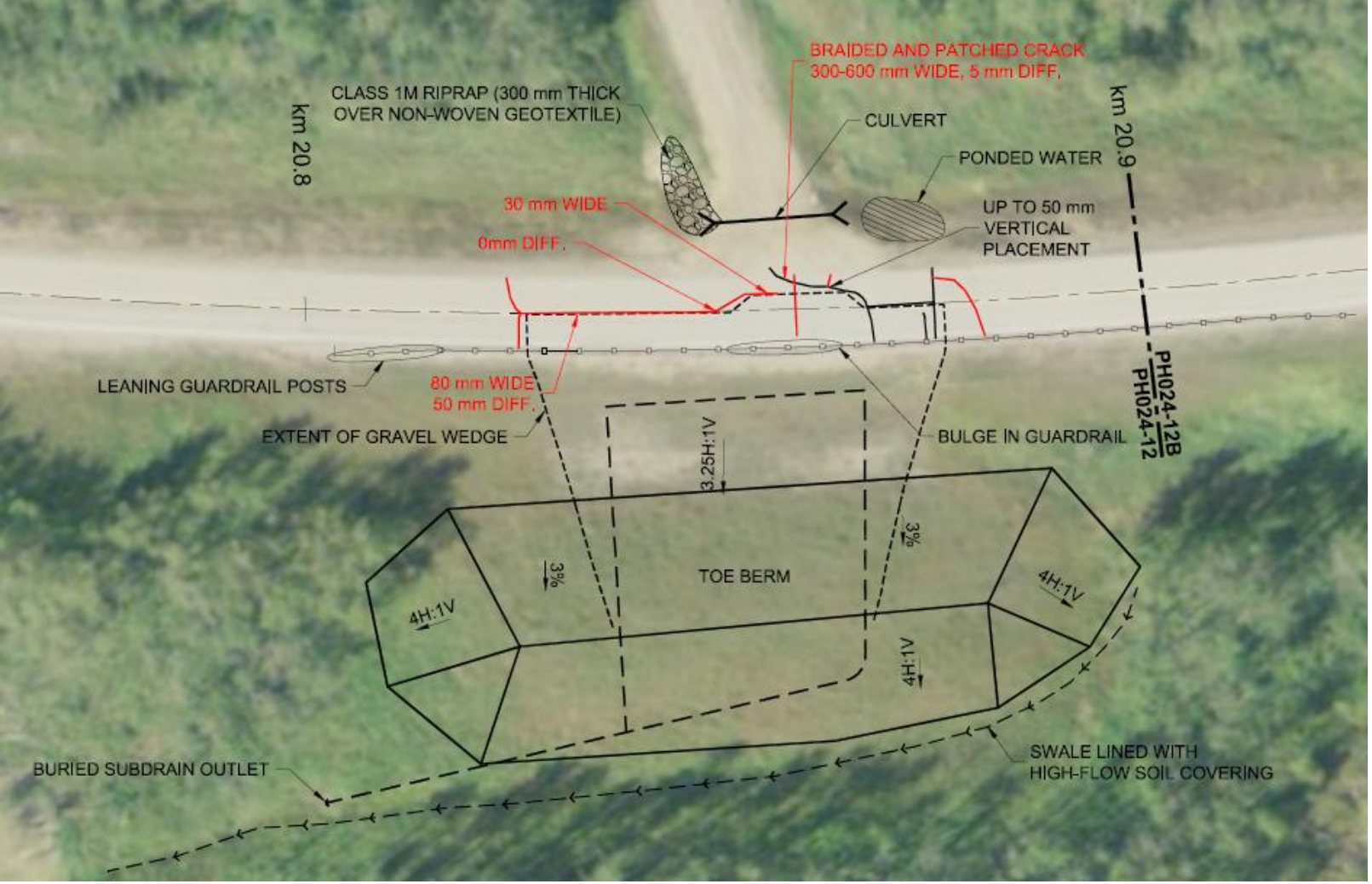

Site 12

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Site 12

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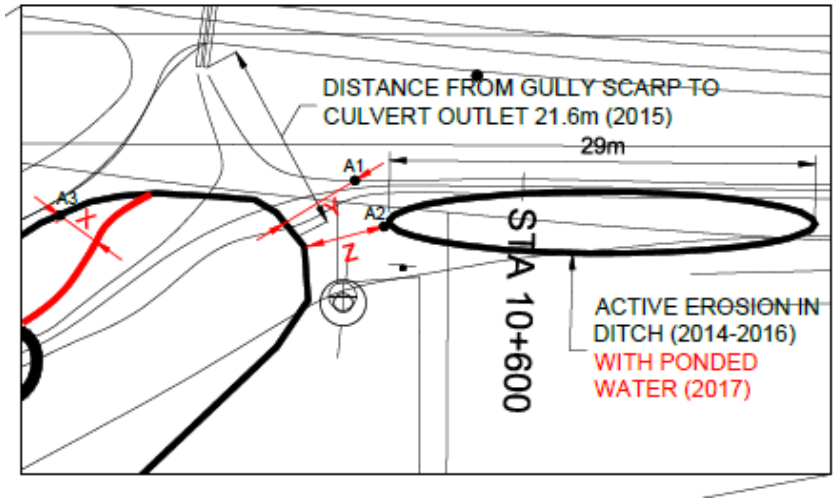

DIMENSION LABEL	LENGTH (m)			
	2017	2016	2015	2014
X * (WIDTH)	5.0	-	-	-
Y (A1 TO CREST)	3.9	4.4	5.6	6.0
Z (A2 TO CREST)	6.9	7.55	8.6	8.7

* LOCATION RESET IN 2017

Site 14

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Site 14

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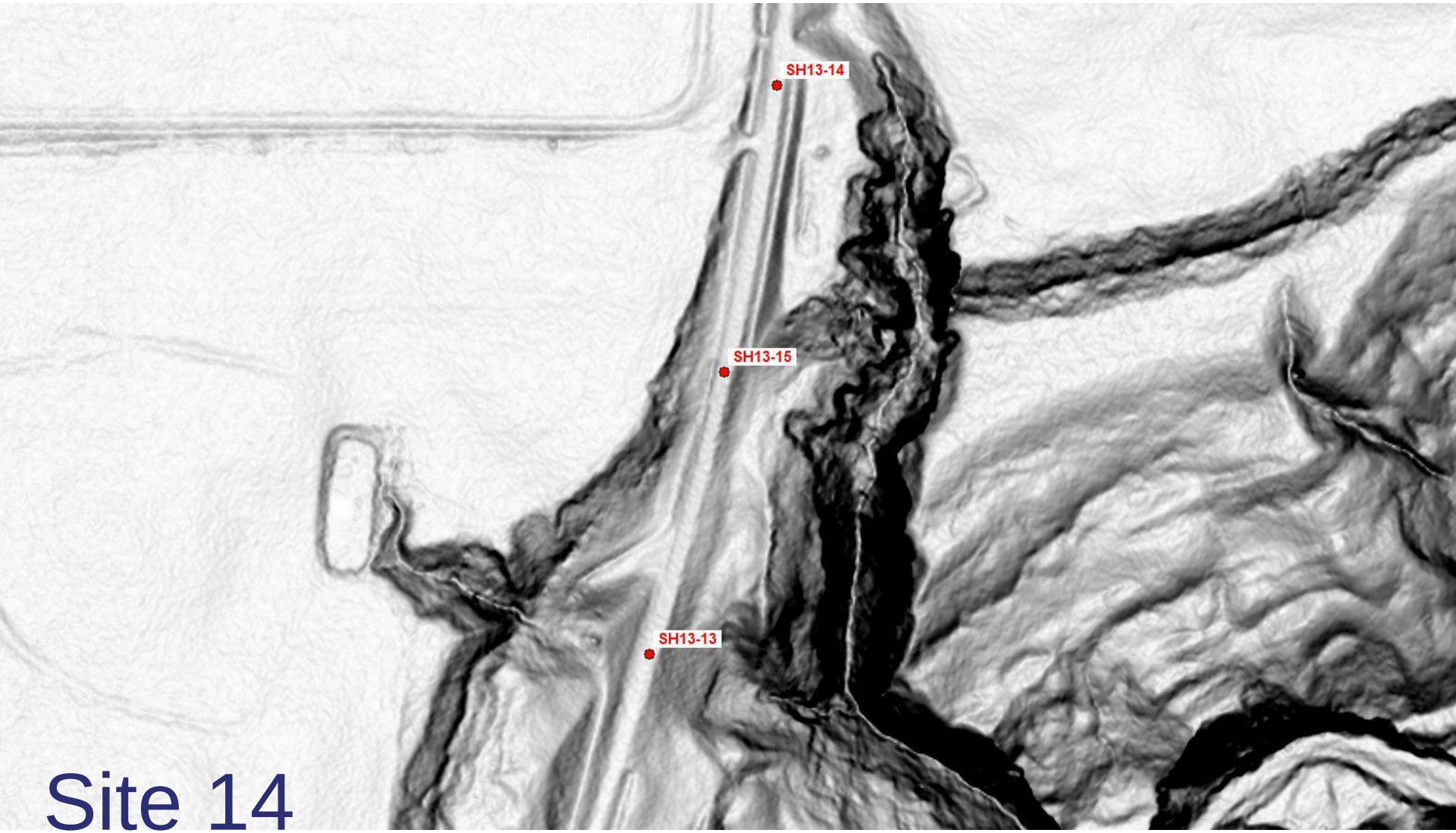

Site 14

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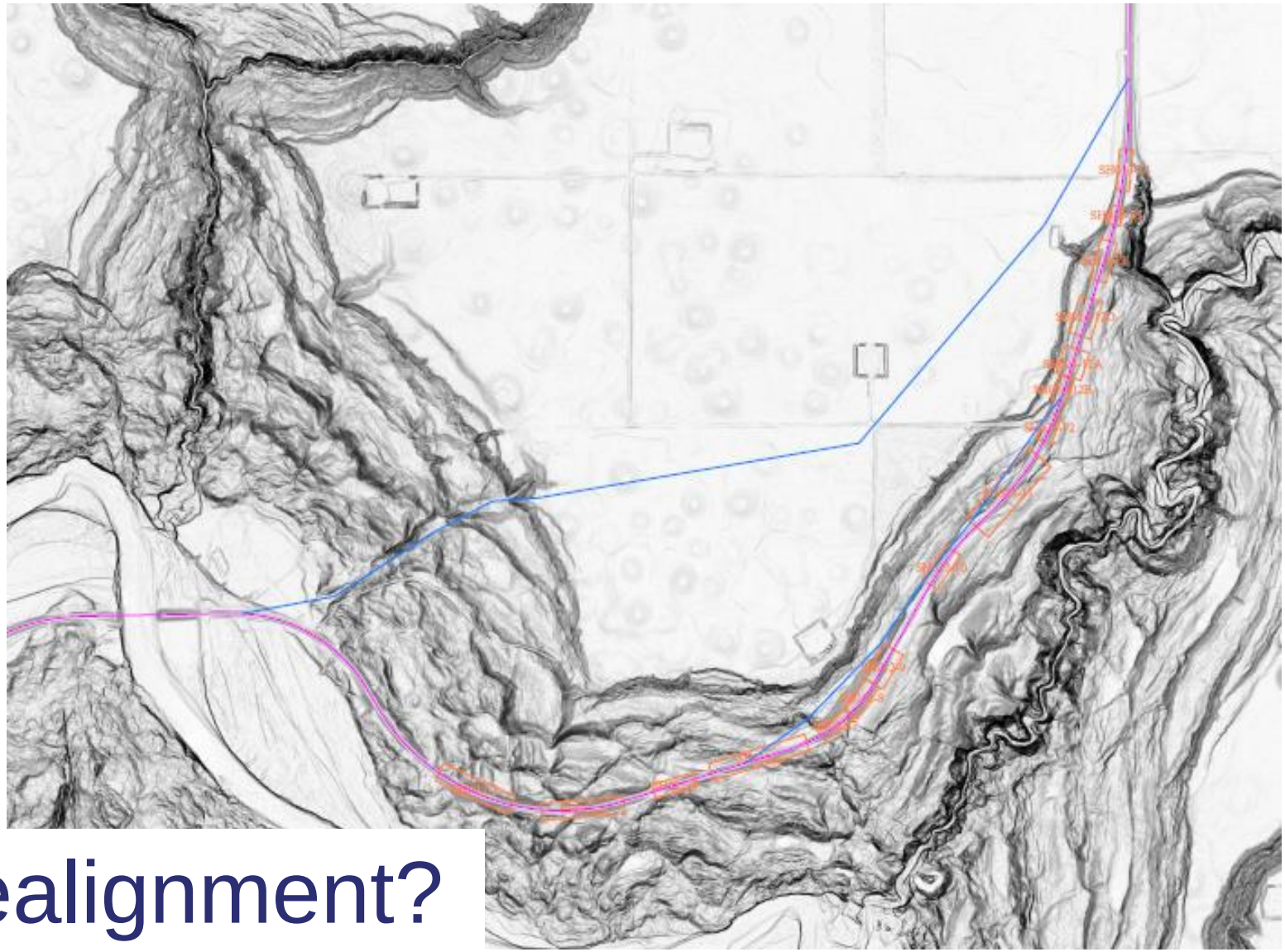

Realignment?

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Site 13 - 2016

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Site 13 - 2017

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Site 13 - 2017

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Thurber's Team – 2017 Swan Hills

- Don Proudfoot, Review Principal – inspection and instrumentation report review
- Ken Froese, Project Engineer – Project management, site inspection, instrumentation report review
- Barry Meays, Project Engineer – site inspection
- Niels Rasmussen, Project Geologist – instrumentation coordination and reporting
- Bruce Nestor, Junior Engineer – instrumentation coordination and reporting
- Niraj Regmi, Tom Vogt, Aldrin Pascua, Greg Swan – instrumentation readings