PLANS AND DOCUMENTS
referred to in the PDA
DEVELOPMENT APPROVAL

Approval no: DEV2025/1679

Date: 6 November 2025

Queensland Government

Pacific Geotech
Consulting Geotechnical Engineers

GEOTECHNICAL REVIEW & GLOBAL STABILITY ASSESSMENT:

Proposed Water Storage Basin & Biobasins, Interim Batters, Creek Crossing Road Embankments and Bulk Earthwork Embankments

Various locations within Precinct 5, 6, 8 and 13

Yarrabilba

Golding Contractors

October 2025

PG-5335-I

E: info@pacgeo.com.au
www.pacgeo.com.au ABN: 62 615 248 952

Ref: PG-5335-I, 2025-09-09, GSR VER 1
Author: Robert Maxwell

16th October, 2025

Golding Contractors
Email: Cameron.McClure@golding.com.au
Cc: Tom.Vaessen@golding.com.au; Steve.King@golding.com.au

ATTN: CAMERON MCCLURE

Dear Sir,

GEOTECHNICAL REVIEW & GLOBAL STABILITY ASSESSMENT
PROPOSED WATER STORAGE BASIN & BIOBASINS, INTERIM BATTERS, CREEK CROSSING ROAD EMBANKMENTS AND BULK EARTHWORK EMBANKMENTS
VARIOUS LOCATIONS WITHIN PRECINCT 5, 6, 8 AND 13, YARRABILBA

1.0 INTRODUCTION

This report contains the results of the geotechnical review and global stability assessment for the various locations within the above future Precincts at Yarrabilba.

As part of the planning of the OPW application, Pacific Geotech has been commissioned by Golding Contractors on behalf of Stockland to undertake the geotechnical review and global stability assessment outlined in our proposal PG-5335-I, 2025-08-05 PR VER 1.

The global stability assessments are listed below: -

1. P6 Bio-basin embankment
2. P5 MIBA South Interim Batter – Waterford Tamborine Road
3. P8 Lot 8526 Interim Batter – Pine Forest Way
4. P8 Stage 829 Basin South
5. P8 Stage 827 Basin
6. P8 Stage 828 Basin
7. P8 Stage 823 Culvert/ Creek Crossing
8. P8 Stage 829 Basin North
9. P8 Lot 8382 Interim Batter – Pine Forest Way

The methodology comprised the following:

- Review of available geotechnical information and preliminary design drawings/sections.
- Development of a geotechnical model of the site.
- Global stability analysis of selected embankment sections using proprietary computer modelling software Slide 2.
- Commentary on the results of the global stability analysis and provide design and construction recommendations to improve the geotechnical stability.

It is understood that a factor of safety (FOS) against long term global instability of no less than 1.5 is considered acceptable for design of the proposed earthwork embankments and 1.3 for short term.

2.0 EXECUTIVE SUMMARY

Based on the results of our geotechnical review and global stability assessment of the provided batters, a summary of our assessment is shown in Table 1 below.

TABLE 1 SUMMARY OF GLOBAL STABILITY ASSESSMENTS

Section	Phreatic Conditions	FOS for Proposed Batter	Comment
P6 Bio-basin embankment	Construction	>1.5	Silty Sand must be removed from under embankment to expose underlying natural very stiff or better clay as per **Section 4.5** of this report to achieve required FOS
	Elevated	<1.3	
P5 MIBA South Interim Batter – Waterford Tamborine Rd	Construction	<1.5	Embankment must be flattened back to no steeper than 26° as per **Section 4.5** of this Report to achieve required FOS
	Elevated	<1.3	
P8 Lot 8526 Interim Batter – Pine Forest Way	Construction	>1.5	Embankment must be flattened back to no steeper than 45° as per **Section 4.5** of this Report to achieve required FOS
	Elevated	<1.3	
P8 Stage 829 Basin South	Construction	>1.5	Achieves required FOS as per **Section 4.5** of this Report
	Elevated	>1.3	
P8 Stage 827 Basin	Construction	>1.5	Achieves required FOS as per **Section 4.5** of this Report
	Elevated	>1.3	
P8 Stage 828 Basin	Construction	>1.5	Achieves required FOS as per **Section 4.5** of this Report
	Elevated	>1.3	
P8 Stage 823 Culvert Crossing	Construction	>1.5	Achieves required FOS as per **Section 4.5** of this Report
	Elevated	>1.3	

Section	Phreatic Conditions	FOS for Proposed Batter	Comment
P8 Stage 829 Basin North	Construction	>1.5	Embankment must be founded into the underlying natural clay as per **Section 4.5** of this Report to achieve required FOS.
	Elevated	<1.3	
P8 Lot 8382 Interim Batter – Pine Forest Way	Construction	<1.5	Embankment must be battered back to no steeper than 26° as per **Section 4.5** of this report to achieve required FOS
	Elevated	<1.3	

3.0 SUBSURFACE CONDITIONS

Subsurface conditions within P5 MIBA South, Precinct 6 and Precinct 8 were previously investigated and presented in reports by Morrison Geotechnic and Pacific Geotech.

The subsurface conditions encountered during the investigations and envisaged to be present throughout P5 MIBA South, Precinct 6 and Precinct 8, generally comprised surficial sands overlying natural sandy clays. The natural sands are expected to be loose to medium dense and extend to depths typically ranging between 0.5m and 1.0m over stiff or stronger natural sandy clays and medium dense clayey sands. Significant variation in depths to the natural clay must be expected within the lower lying areas due to the presence sand filled slopewash.

Groundwater is expected to be encountered in the lower lying areas of the site and are expected to fluctuate with the flows in the drainage gullies / creek and with seasonal and climatic conditions.

4.0 GLOBAL STABILITY OF PROPOSED NEW ROAD EMBANKMENT

The global stability assessment of the proposed new road embankment has been carried out using the 'Slide 2' computer program developed by Rocscience. This program allows the use of Bishop's Modified, and Morgenstern-Price Methods applied to circular, composite and fully specified failure surfaces.

Failure conditions are analysed by dividing the failure body into a number of vertical slices. The forces acting on each slice are evaluated and the equilibrium of the entire failure body is determined by assessing the forces on all the slices.

A factor of safety is computed for each failure surface considered. A minimum factor of safety for the section under analysis is found by analysing a large number of potential failure surfaces.

A factor of safety of greater than 1.5 is considered appropriate for long term global stability.

The global stability analysis was undertaken on 4 typical embankment sections for the long-term conditions. A surcharge of 5kPa for service vehicles and 10kPa for public traffic has been applied to the crest of the embankment slopes, where applicable.

4.1 Geometry

The following embankment sections were selected for modelling, which represent the typical worst-case section for global stability.

1. P6 Bio-basin embankment
2. P5 MIBA South Interim Batter – Waterford Tamborine Road
3. P8 Lot 8526 Interim Batter – Pine Forest Way
4. P8 Stage 829 Basin South
5. P8 Stage 827 Basin
6. P8 Stage 828 Basin
7. P8 Stage 823 Culvert/ Creek Crossing
8. P8 Stage 829 Basin North
9. P8 Lot 8382 Interim Batter – Pine Forest Way

The proposed development layout and sections of the proposed embankments are shown in Figures 1 to 9 below.

FIGURE 1 – Section 1: P6 Bio-basin Embankment

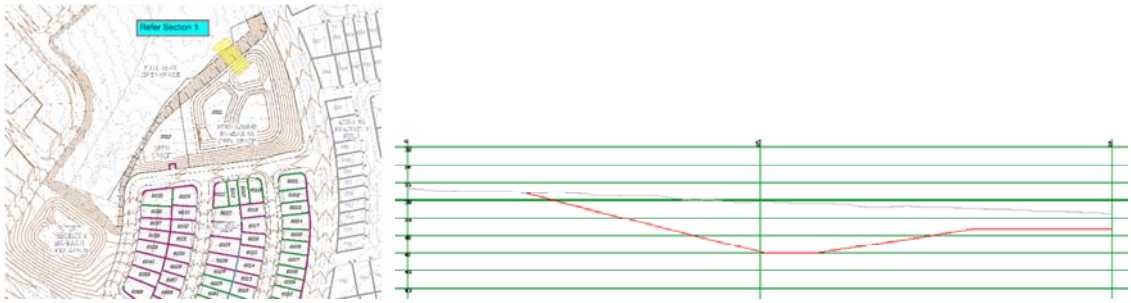


FIGURE 2 – Section 2: P5 MIBA South Interim Batter – Waterford Tamborine Road

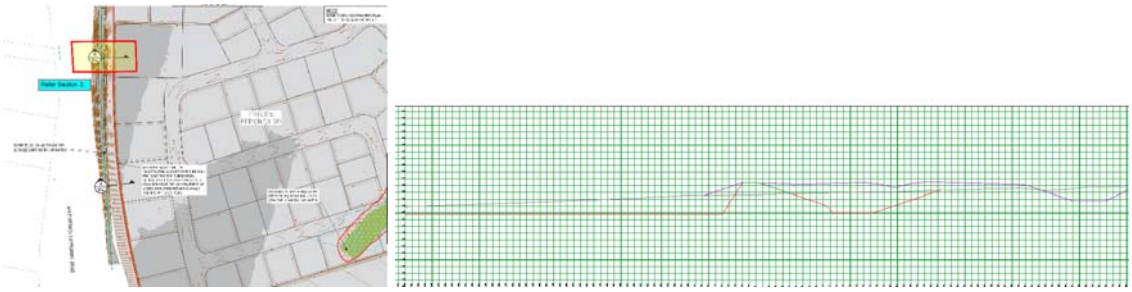


FIGURE 3 – Section 3: P8 Lot 8526 Interim Batter – Pine Forest Way

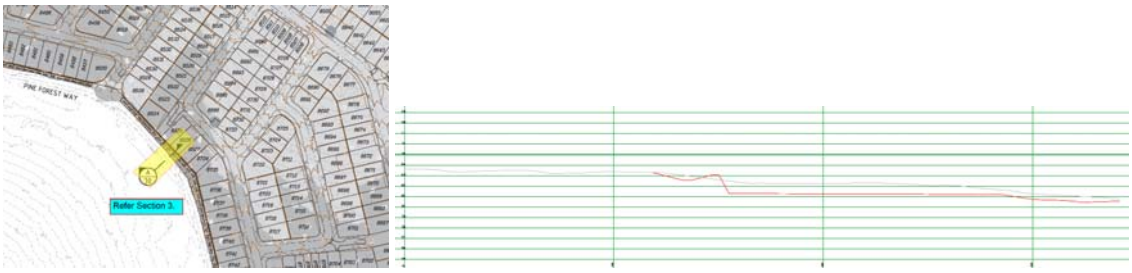


FIGURE 4 – Section 4: P8 Stage 829 Basin South

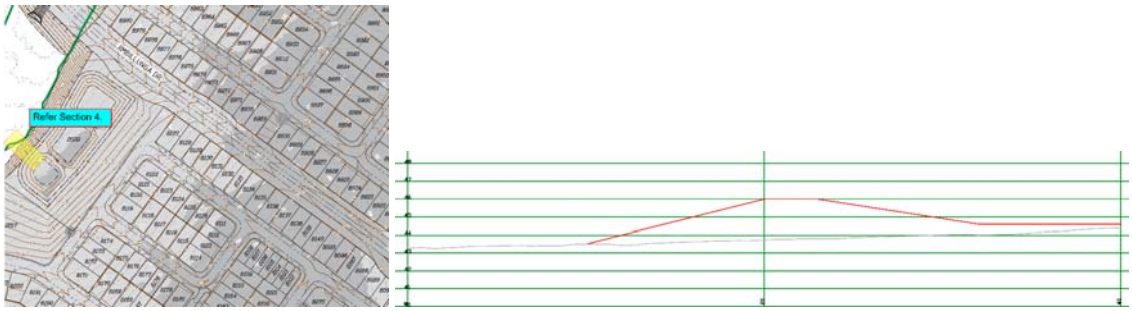


FIGURE 5 – Section 5: P8 Stage 827 Basin

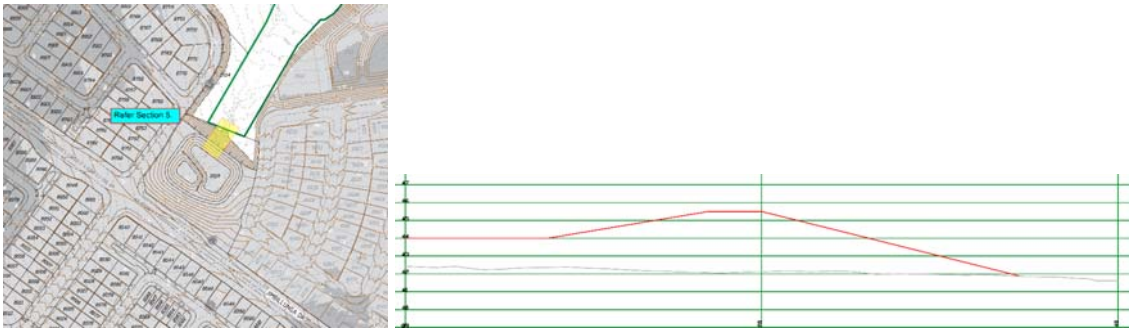


FIGURE 6 – Section 6: P8 Stage 828 Basin

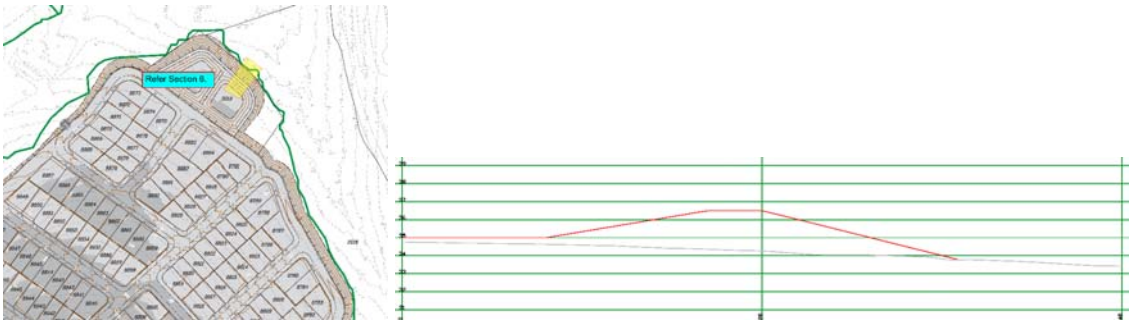


FIGURE 7 – Section 7: P8 Stage 823 Culvert/ Creek Crossing

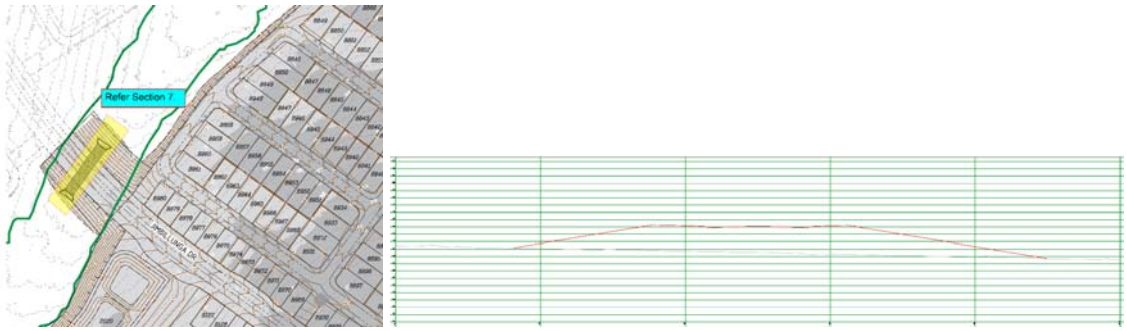


FIGURE 8 – Section 8: P8 Stage 829 Basin North

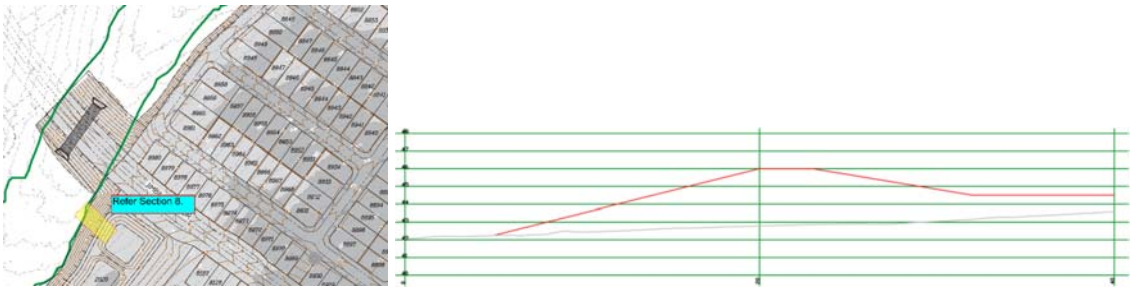
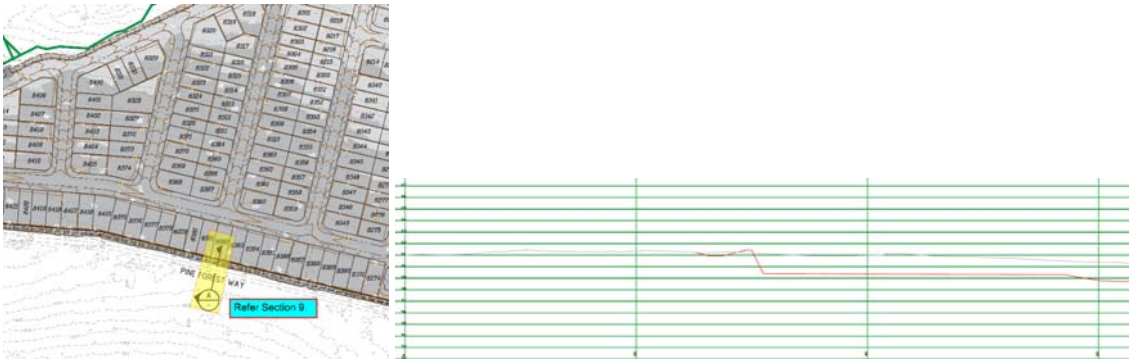


FIGURE 9 – Section 9: P8 Lot 8382 Interim Batter – Pine Forest Way



4.2 Geotechnical Stability Model

For the global stability analysis, the following details have been adopted for the proposed embankments.

The results of the previous investigations, published correlations, and engineering judgement were used to assess the design geotechnical parameters given in Table 2.

TABLE 2 GEOTECHNICAL DESIGN PARAMETERS

Material	Density (kN/m³)	Geotechnical Design Parameters	
		Drained Cohesion c' (kPa)	Friction Angle Φ' (°)
Controlled Fill*	19	3	26
Natural Silty Sands – Very Loose to Loose	18	0	28
Natural Sandy Clay (incl. Clayey Sand) – Stiff or stronger	19	5	26
Rock Mattress	22	0	45

Notes: * Depends on fill material type and level of compaction. Assumes on site material compacted under 'Level 1' supervision.

4.3 Phreatic conditions

The following phreatic conditions were adopted for the global stability analysis:

- Construction condition – No groundwater.
- Elevated phreatic condition – Groundwater elevated near surface level within embankment.

4.4 Global Stability Analysis Results

The results of the global stability analysis for the proposed embankment geometry and elevated phreatic conditions are presented in Table 3 below.

TABLE 3 GLOBAL STABILITY ANALYSIS RESULTS

Embankment Section	Phreatic Conditions	Factor of Safety (FoS)
Section 1: P6 Bio-basin Embankment	Construction	2.52
	Elevated Phreatic Condition	1.44
Section 1A: P6 Bio-basin Embankment (Embedment into clay)	Construction	2.70
	Elevated Phreatic Condition	1.69

Embankment Section	Phreatic Conditions	Factor of Safety (FoS)
Section 2: P5 MIBA South Interim Batter – Waterford Tamborine Road	Construction	0.90
	Elevated Phreatic Condition	0.90
Section 2a: P5 MIBA South Interim Batter – Waterford Tamborine Road (45° Slope max.)	Construction	1.38
	Elevated Phreatic Condition	1.04
Section 2a: P5 MIBA South Interim Batter – Waterford Tamborine Road (26° Slope max.)	Construction	1.73
	Elevated Phreatic Condition	1.32
Section 3: P8 Lot 8526 Interim Batter – Pine Forest Way	Construction	1.52
	Elevated Phreatic Condition	1.12
Section 3a: P8 Lot 8526 Interim Batter – Pine Forest Way (45° Slope max.)	Construction	2.34
	Elevated Phreatic Condition	1.44
Section 4: P8 Stage 829 Basin South	Construction	2.73
	Elevated Phreatic Condition	1.65
Section 4: P8 Stage 829 Basin South (Embedment into clay)	Construction	2.12
	Elevated Phreatic Condition	3.09
Section 5: P8 Stage 827 Basin	Construction	2.76
	Elevated Phreatic Condition	1.63
Section 6: P8 Stage 828 Basin	Construction	2.75
	Elevated Phreatic Condition	1.70
Section 7: P8 Stage 823 Culvert Crossing	Construction	3.68
	Elevated Phreatic Condition	2.54
Section 7: P8 Stage 823 Culvert Crossing (1.2m min. Rock Mattress	Construction	4.04
	Elevated Phreatic Condition	2.64
Section 8: P8 Stage 829 Basin North	Construction	2.57
	Elevated Phreatic Condition	1.47
Section 8a: P8 Stage 829 Basin North (Embedment into clay)	Construction	2.76
	Elevated Phreatic Condition	1.71

Embankment Section	Phreatic Conditions	Factor of Safety (FoS)
Section 9: P8 Lot 8382 Interim Batter – Pine Forest Way	Construction	1.33
	Elevated Phreatic Condition	0.93
Section 9a: P8 Lot 8382 Interim Batter – Pine Forest Way (45° Slope max.)	Construction	2.60
	Elevated Phreatic Condition	1.28
Section 9b: P8 Lot 8382 Interim Batter – Pine Forest Way (26° Slope max.)	Construction	2.60
	Elevated Phreatic Condition	1.83

The global stability output plots from 'Slide2' Software are attached to this report.

Several of the global stability analysis indicated failure / relatively low factor of safety due to the design embankment slope angles being excessively steep. The following section provides further commentary and advice to achieve an acceptable factor of safety for global stability under long and short term conditions.

4.5 Discussion of Global Stability Results

The results of the global stability analysis indicate a factor of safety (FoS) of greater than 1.5 for long term and 1.3 for short term (during construction) conditions can be achieved under the construction and elevated phreatic conditions, where the following conditions are met:

- Maximum short term batter slopes of 45 degrees and maximum long term batter slopes of 26 degrees in on site soils are recommended for cut slopes up to 3m in height (subject to inspection at the time of excavation). For cut slopes greater than 3m in height, a 1.5m wide horizontal bench should be incorporated mid height and every 3m elevation, if the above maximum batter slopes are adopted.

- For excavations of a very short-term nature into weathered rock, and subject to assessment of factors such as the conditions at the time of excavation, length of time excavations are to remain open, working conditions/requirements and most importantly the rock structure in the cut face, etc., steeper excavations could be possible. Pacific Geotech should be contacted to determine an appropriate profile when construction details have been finalised.

- It is essential that batters be suitably protected from erosion and scour. Runoff should not be allowed to discharge directly across the batters.

- All fill embankments must be keyed a minimum 0.5m depth into the underlying stiff (or stronger) natural clays. Where the clay embedment is not able to be practically achieved, consideration maybe given to supporting the section of embankment on a crushed rock mattress, with details ot be confirmed by Pacific Geotech.

  Subject to inspection and testing of the stripped subgrade by Pacific Geotech to confirm the undrained shear strength, it is envisaged the crushed rock mattress would comprised the following - *NOTE: Rock mattress design may need to be altered at this point subject to results of the subgrade assessment by Pacific Geotech with an increase in thickness required if the shear strength is less than 50kPa.*

  1. A lower layer of approved Geotextile/Geogrid (Tensar TX150 or Combigrid 60/60 or similar approved).
  2. A minimum 1.2m thick layer of 75/150 crushed shot rock (or approved equivalent). The shot rock must be placed using end dumping techniques and compacted using the mechanical interlock method with a large excavator (>20t). The shot rock layer must pass a proof roll using a heavily loaded heavy rigid truck prior to placement of the next layer.
  3. An optional additional layer of Bidim A39 (or similar approved) can be placed over the shot rock before placement of the MRTS Subtype 2.3 to assist in reducing potential loss of the road base gravel into the shot rock.
  4. A 200mm thick layer of MRTS Subtype 2.3 shall be placed over the shot rock in maximum 200mm thick layers and compacted to 100% standard dry density ratio at +/- 2% of standard optimum moisture content.

  Hold points should be incorporated into the project ITP to allow confirmation by Pacific Geotech the above points materials and processes have been adopted.

5.0 LIMITATIONS

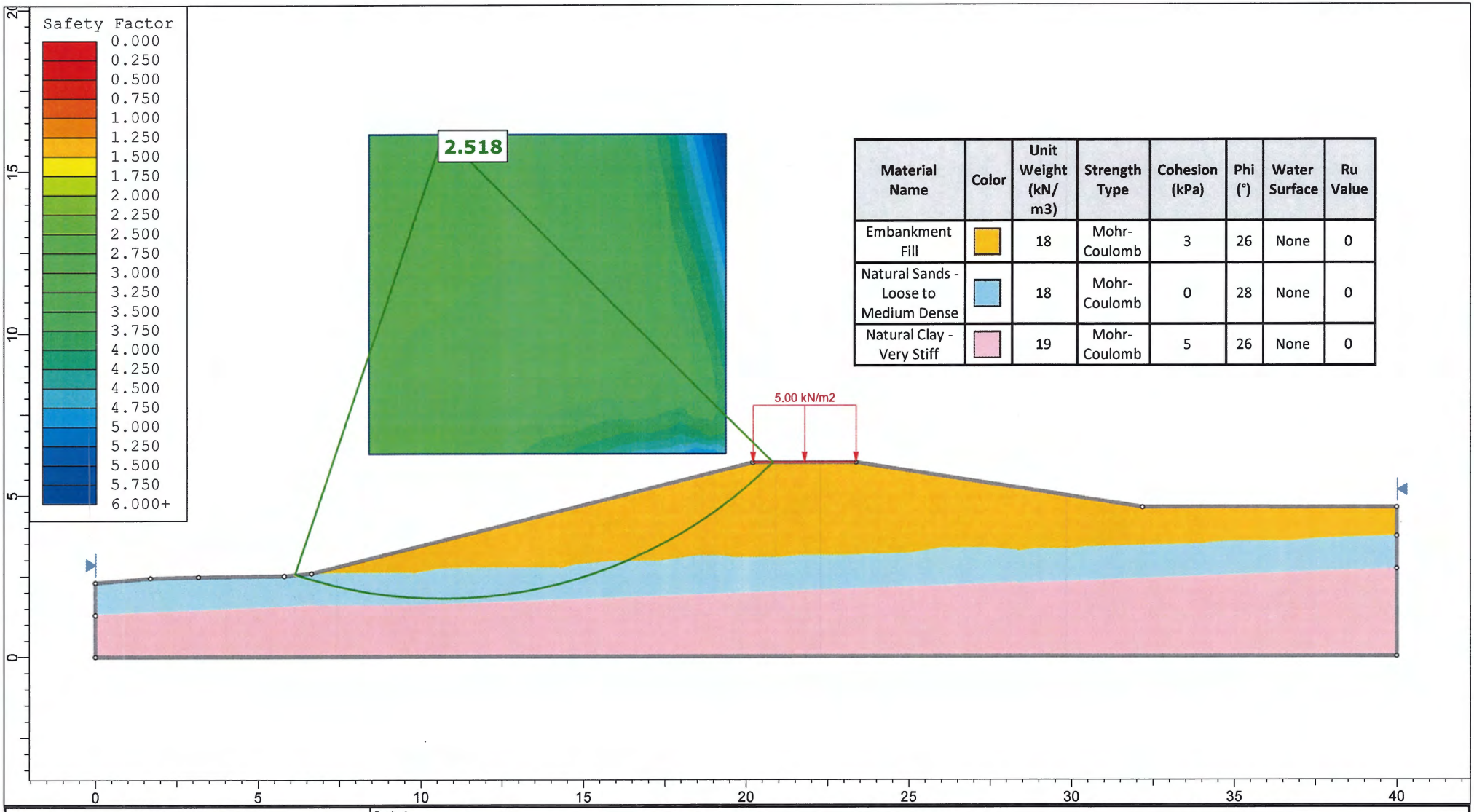
We have prepared this global stability assessment report for the proposed new road embankment at Various locations within Precinct 5, 6, 8 and 13, Yarrabilba. The report is provided for the exclusive use of Golding Contractors, for this project only and for the purposes outlined in the report. It should not be used by, or relied upon, for other projects on the same or different sites or by a third party. In preparing this report, we have relied upon information provided by the client or their agents.

The results are indicative of the subsurface conditions on site only at the specific testing locations. Subsurface conditions can change between test locations and the design and construction should take the spacing of the testing and testing methods adopted and the potential for variation between the test locations.

This is not to reduce the level of responsibility accepted by Pacific Geotech, but rather to ensure that the parties who may rely on the information contained in this report are aware of the responsibilities they assume in doing so.

R. MAXWELL (RPEQ 16596)
For and on behalf of
PACIFIC GEOTECH PTY LTD

Attached: Slide2 Global Stability Analysis Outputs



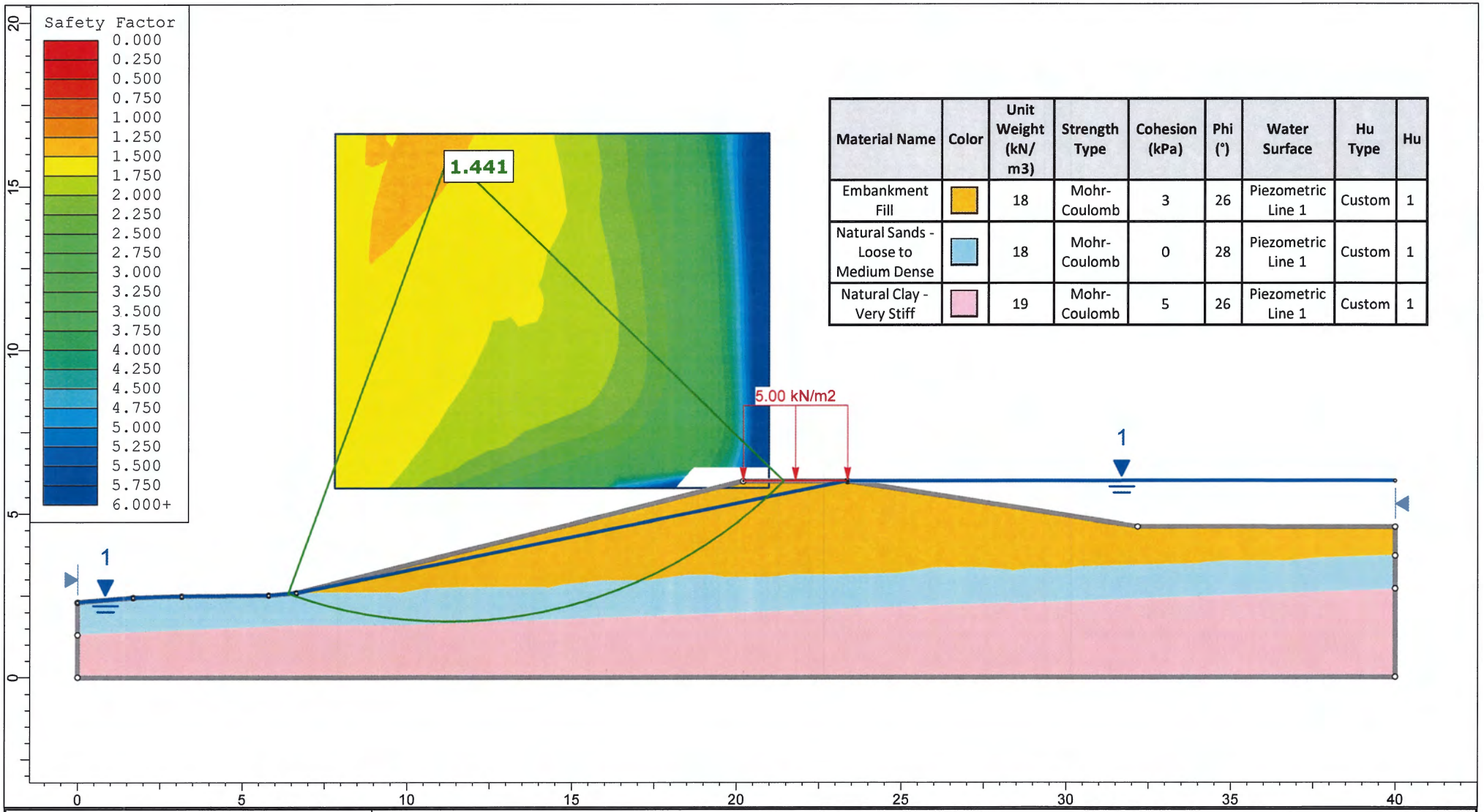
Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Water Surface	Ru Value
Embankment Fill		18	Mohr-Coulomb	3	26	None	0
Natural Sands - Loose to Medium Dense		18	Mohr-Coulomb	0	28	None	0
Natural Clay - Very Stiff		19	Mohr-Coulomb	5	26	None	0

Pacific Geotech
Consulting Geotechnical Engineers

SLIDEINTERPRET 9.040

Project Slide2 - An Interactive Slope Stability Program

GroupName	1. P6 Bio-basin	*Analysis*	Construction
Date	10/09/2025, 5:49:17 PM	*File Name*	PG-5335-I - Stability Assessment - 11.09.25.slmd



Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Water Surface	Hu Type	Hu
Embankment Fill		18	Mohr-Coulomb	3	26	Piezometric Line 1	Custom	1
Natural Sands - Loose to Medium Dense		18	Mohr-Coulomb	0	28	Piezometric Line 1	Custom	1
Natural Clay - Very Stiff		19	Mohr-Coulomb	5	26	Piezometric Line 1	Custom	1

Pacific Geotech
Consulting Geotechnical Engineers

SLIDEINTERPRET 9.040

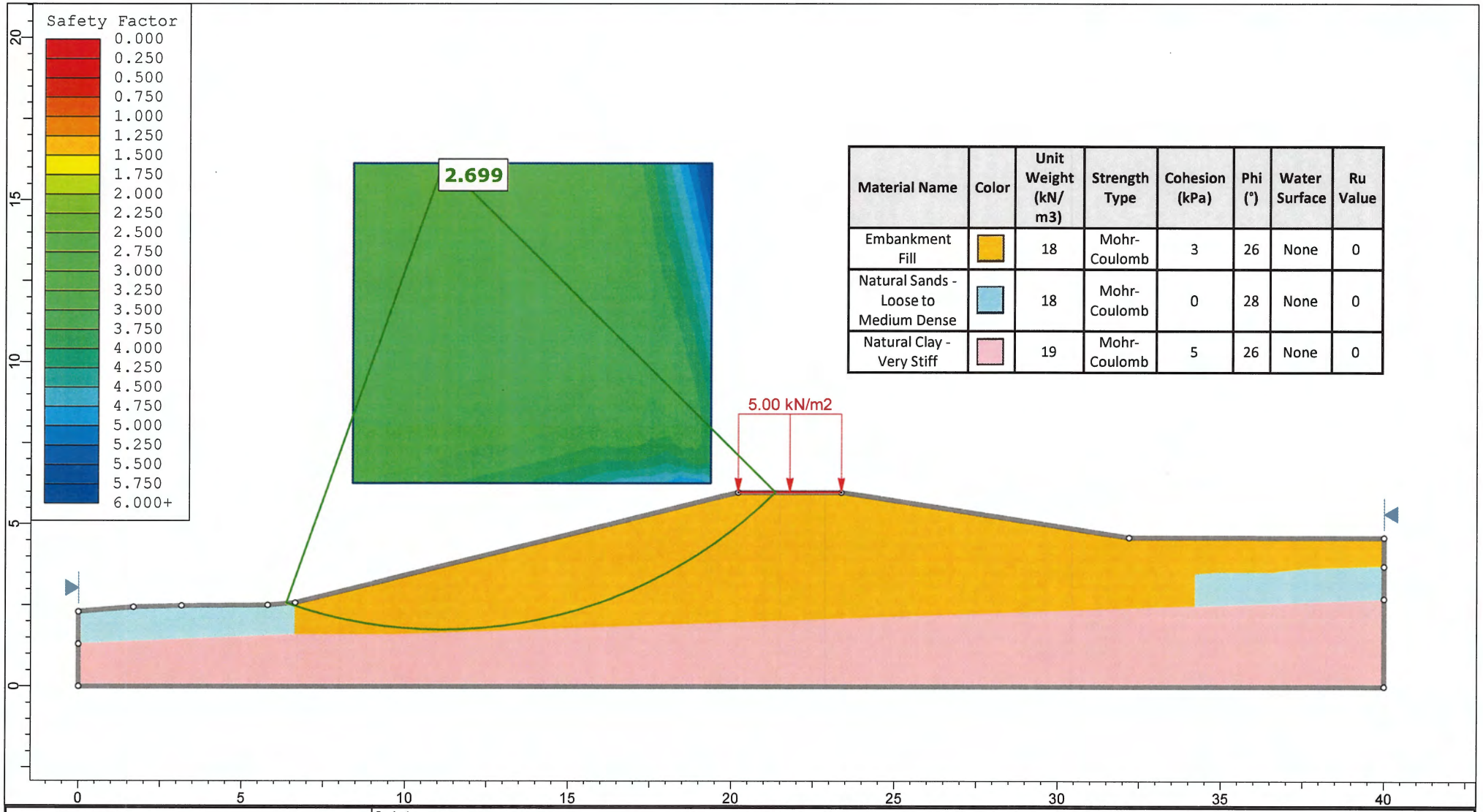
Project Slide2 - An Interactive Slope Stability Program

GroupName 1. P6 Bio-basin

Analysis Elevated Groundwater

Date 10/09/2025, 5:49:17 PM

File Name PG-5335-I - Stability Assessment - 11.09.25.slmd

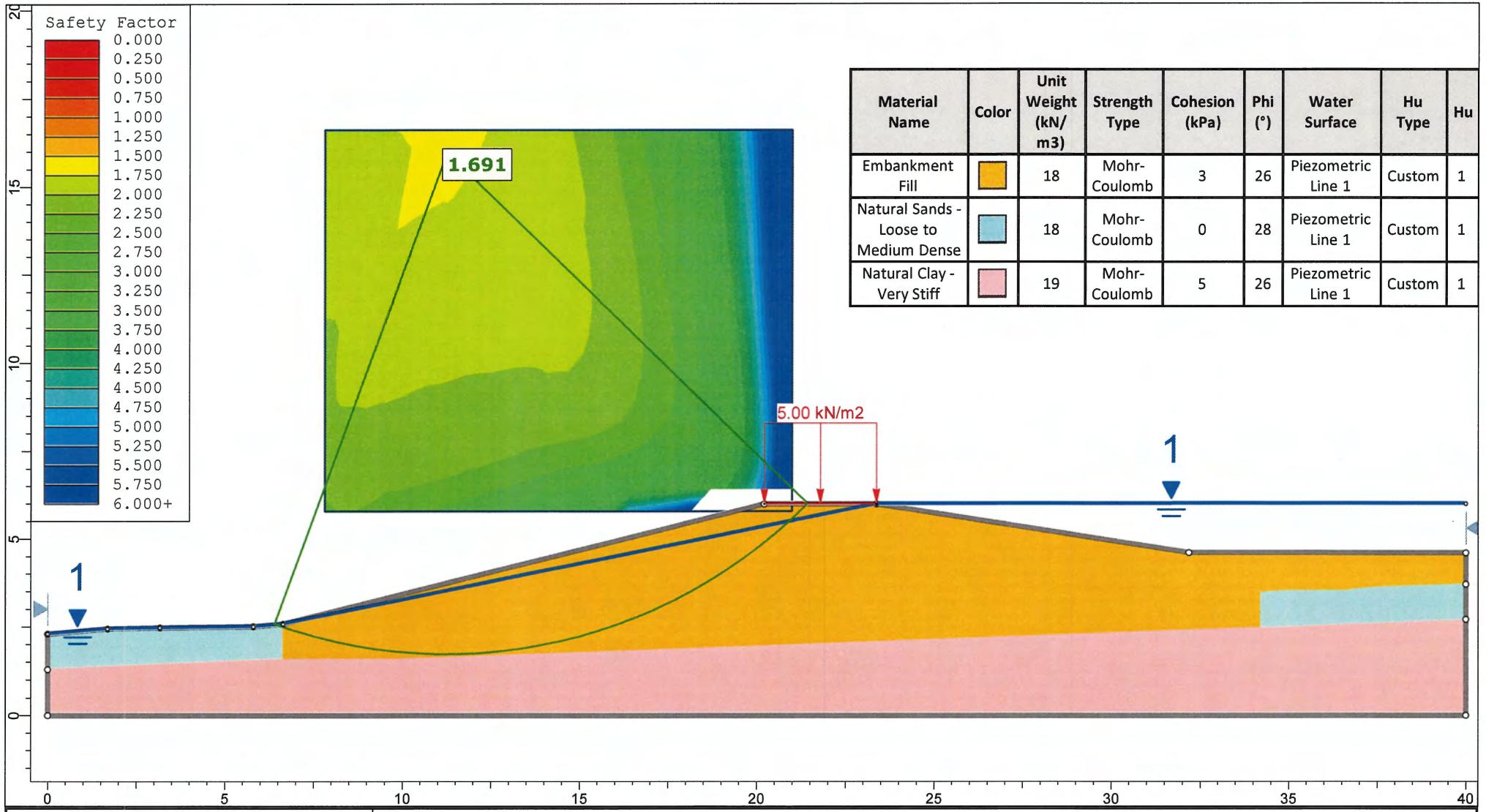


Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Water Surface	Ru Value
Embankment Fill		18	Mohr-Coulomb	3	26	None	0
Natural Sands - Loose to Medium Dense		18	Mohr-Coulomb	0	28	None	0
Natural Clay - Very Stiff		19	Mohr-Coulomb	5	26	None	0

Pacific Geotech
Consulting Geotechnical Engineers

SLIDEINTERPRET 9.040

Project	Slide2 - An Interactive Slope Stability Program		
GroupName	1a. P6 Bio-basin	*Analysis*	Construction - Embed into clay
Date	10/09/2025, 5:49:17 PM	*File Name*	PG-5335-I - Stability Assessment - 11.09.25.slmd



Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Water Surface	Hu Type	Hu
Embankment Fill		18	Mohr-Coulomb	3	26	Piezometric Line 1	Custom	1
Natural Sands - Loose to Medium Dense		18	Mohr-Coulomb	0	28	Piezometric Line 1	Custom	1
Natural Clay - Very Stiff		19	Mohr-Coulomb	5	26	Piezometric Line 1	Custom	1

Pacific Geotech
Consulting Geotechnical Engineers

SLIDEINTERPRET 9.040

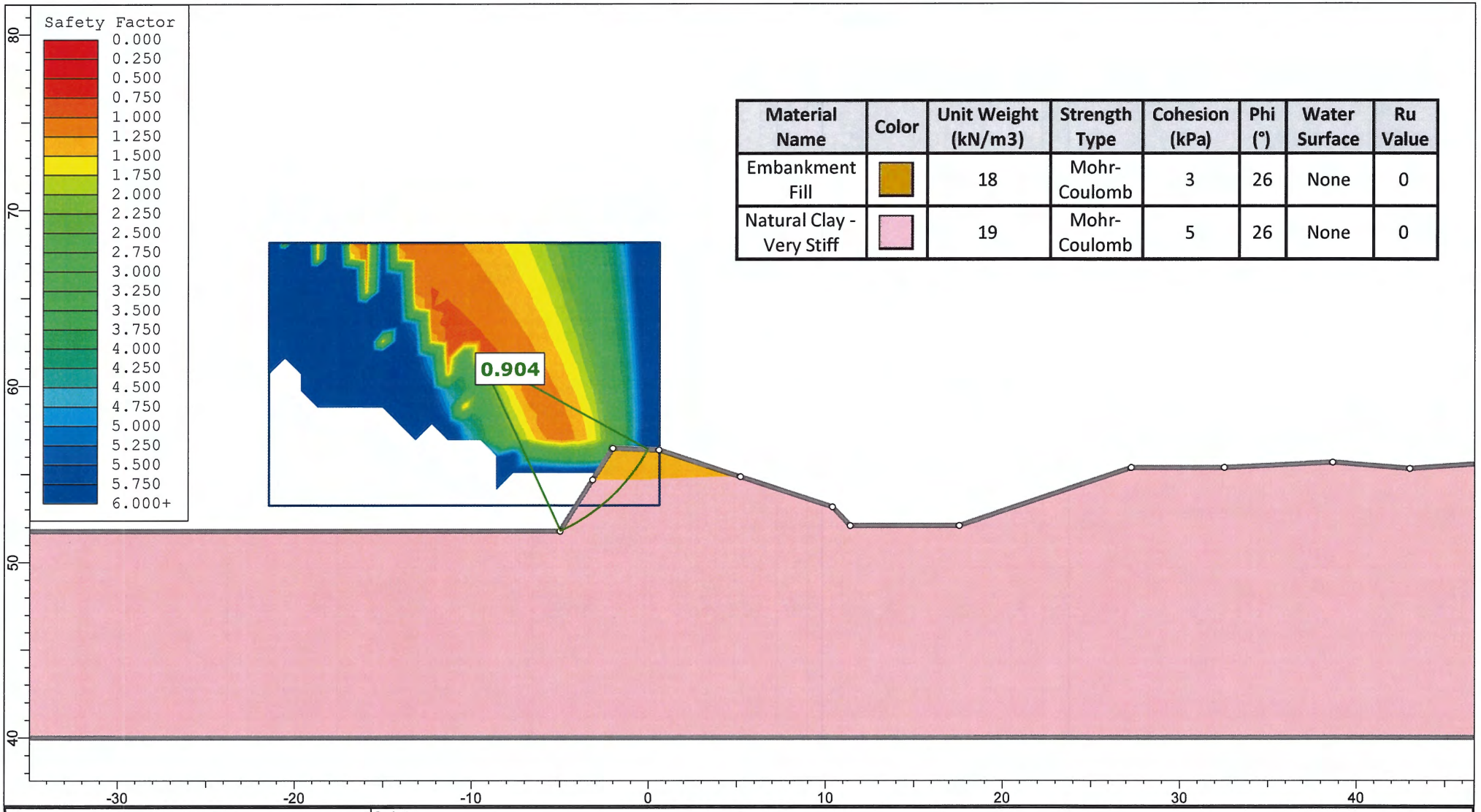
Project: Slide2 - An Interactive Slope Stability Program

GroupName: 1a. P6 Bio-basin

Analysis: Elevated Groundwater - Embed into clay

Date: 10/09/2025, 5:49:17 PM

File Name: PG-5335-I - Stability Assessment - 11.09.25.slmd



Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Water Surface	Ru Value
Embankment Fill		18	Mohr-Coulomb	3	26	None	0
Natural Clay - Very Stiff		19	Mohr-Coulomb	5	26	None	0

Pacific Geotech
Consulting Geotechnical Engineers

SLIDEINTERPRET 9.040

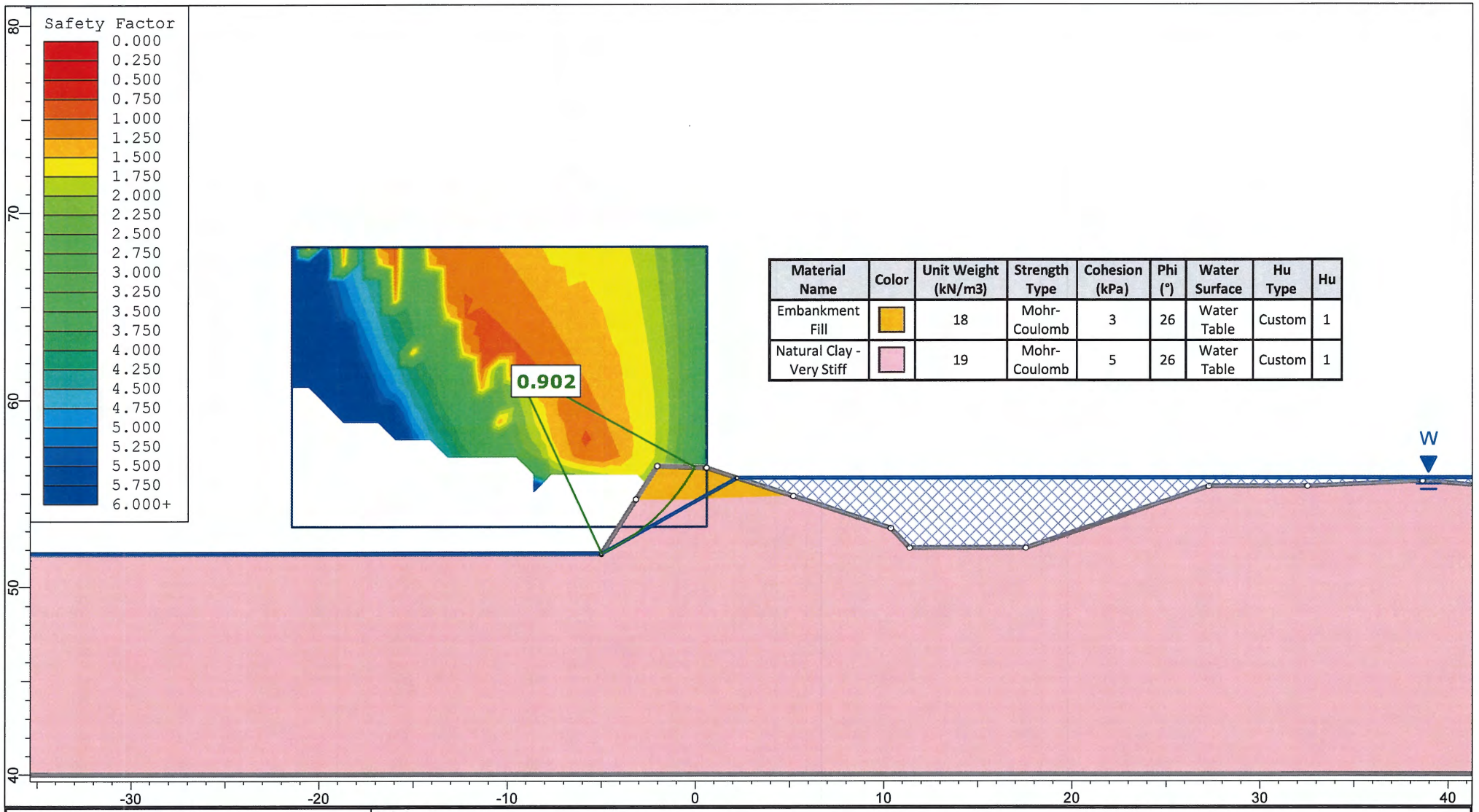
Project Slide2 - An Interactive Slope Stability Program

GroupName 2. P5 MIBA Interim Batters

Analysis Construction

Date 10/09/2025, 5:49:17 PM

File Name PG-5335-I - Stability Assessment - 11.09.25.slmd

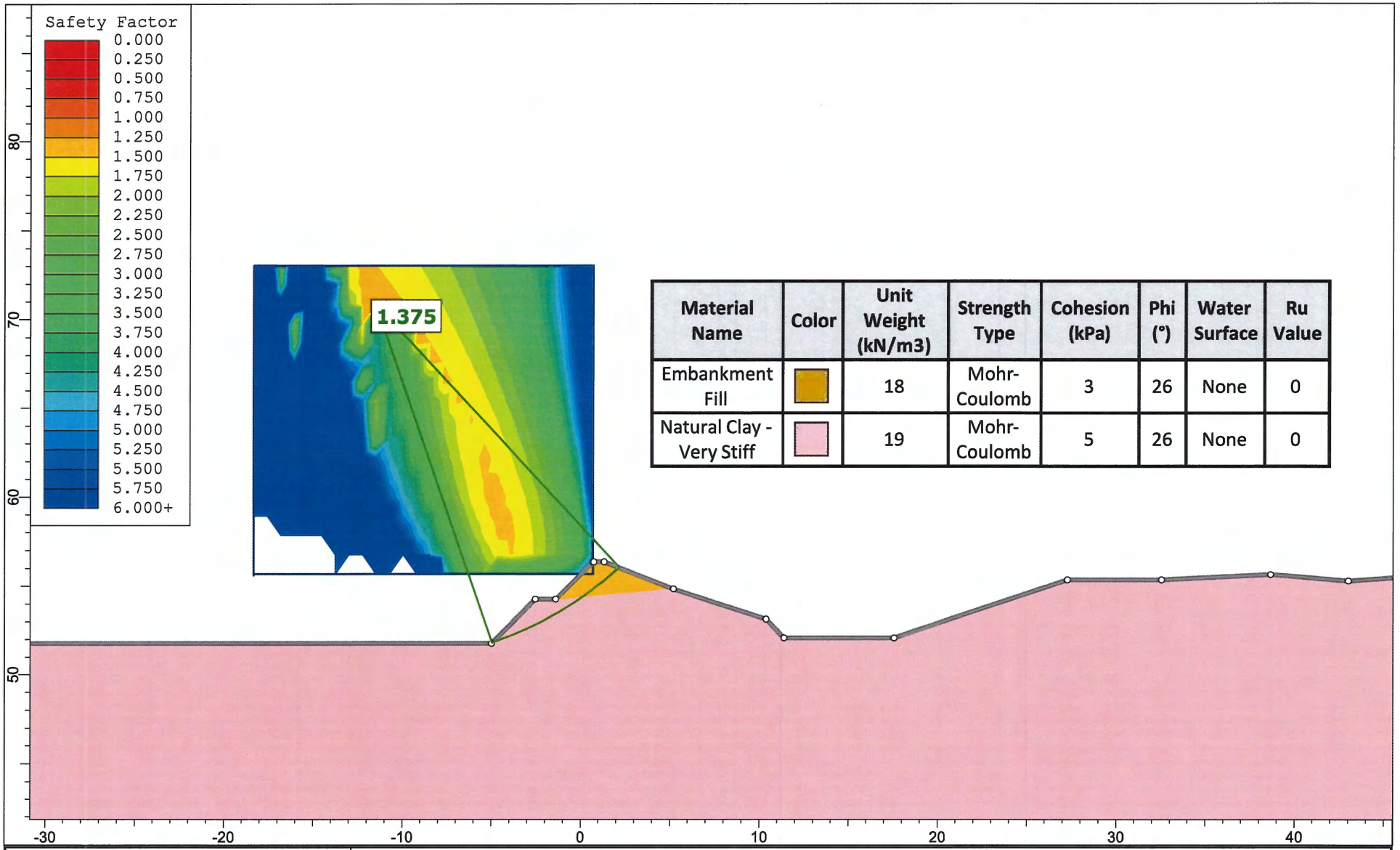


Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Water Surface	Hu Type	Hu
Embankment Fill		18	Mohr-Coulomb	3	26	Water Table	Custom	1
Natural Clay - Very Stiff		19	Mohr-Coulomb	5	26	Water Table	Custom	1

Pacific Geotech
Consulting Geotechnical Engineers

SLIDEINTERPRET 9.040

Project	Slide2 - An Interactive Slope Stability Program		
GroupName	2. P5 MIBA Interim Batters	*Analysis*	Elevated Groundwater
Date	10/09/2025, 5:49:17 PM	*File Name*	PG-5335-I - Stability Assessment - 11.09.25.slmd

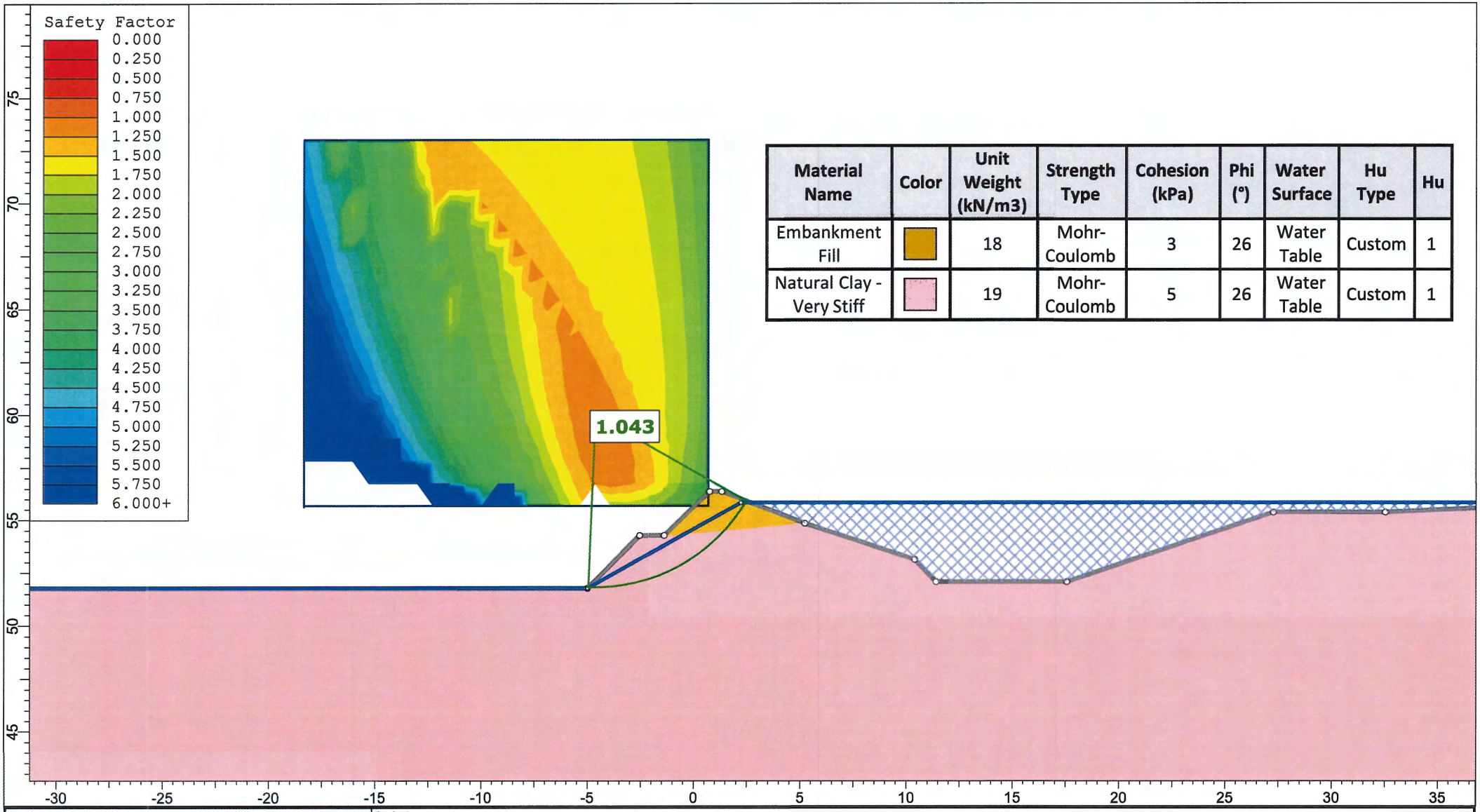


Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Water Surface	Ru Value
Embankment Fill		18	Mohr-Coulomb	3	26	None	0
Natural Clay - Very Stiff		19	Mohr-Coulomb	5	26	None	0

Pacific Geotech
Consulting Geotechnical Engineers

SLIDEINTERPRET 9.040

Project	Slide2 - An Interactive Slope Stability Program		
GroupName	2a. P5 MIBA Interim Batters	*Analysis*	Construction
Date	10/09/2025, 5:49:17 PM	*File Name*	PG-5335-I - Stability Assessment - 11.09.25.slmd



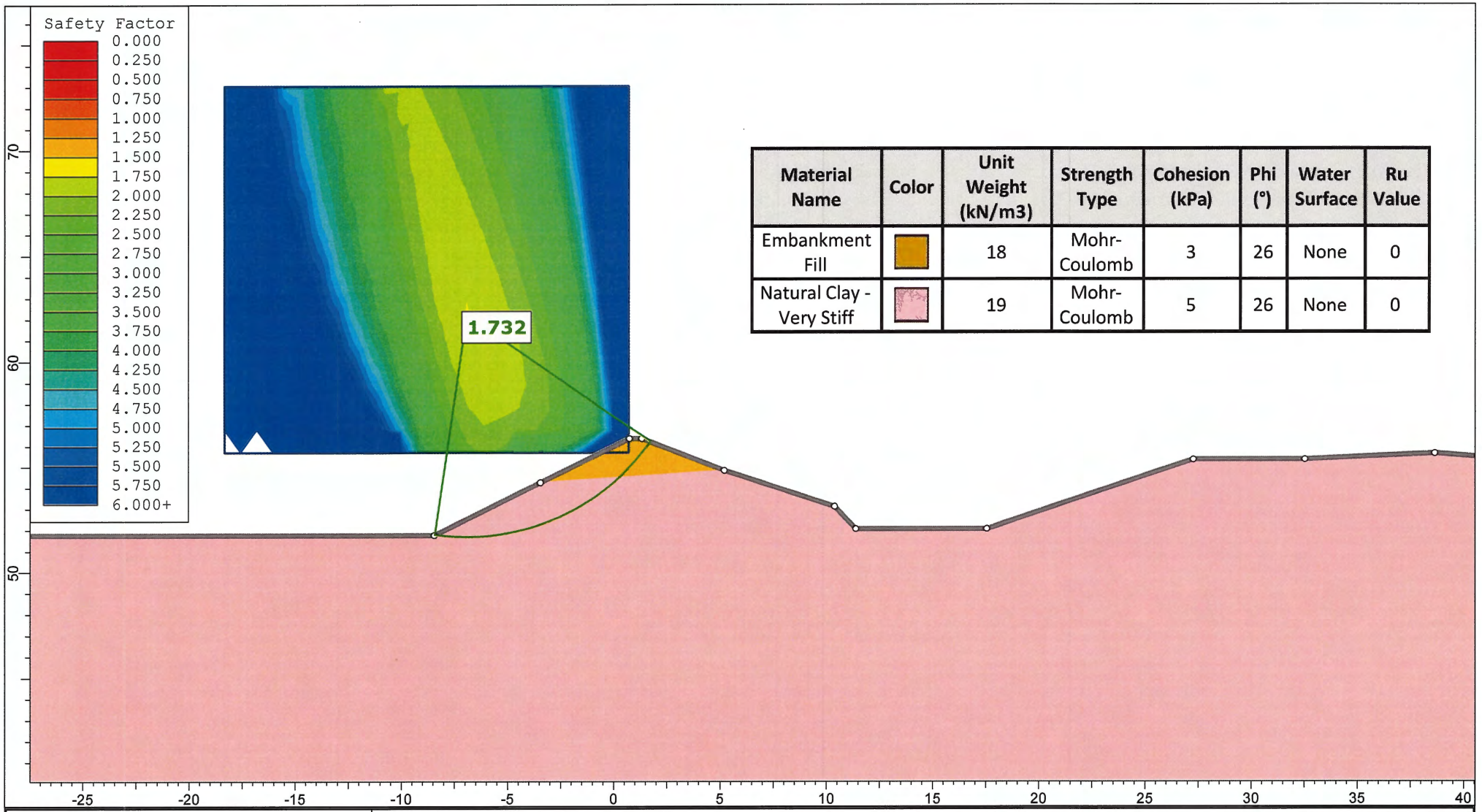
Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Water Surface	Hu Type	Hu
Embankment Fill		18	Mohr-Coulomb	3	26	Water Table	Custom	1
Natural Clay - Very Stiff		19	Mohr-Coulomb	5	26	Water Table	Custom	1

Pacific Geotech
Consulting Geotechnical Engineers

SLIDEINTERPRET 9.040

Project Slide2 - An Interactive Slope Stability Program

GroupName	2a. P5 MIBA Interim Batters	*Analysis*	Elevated Groundwater
Date	10/09/2025, 5:49:17 PM	*File Name*	PG-5335-I - Stability Assessment - 11.09.25.slmd

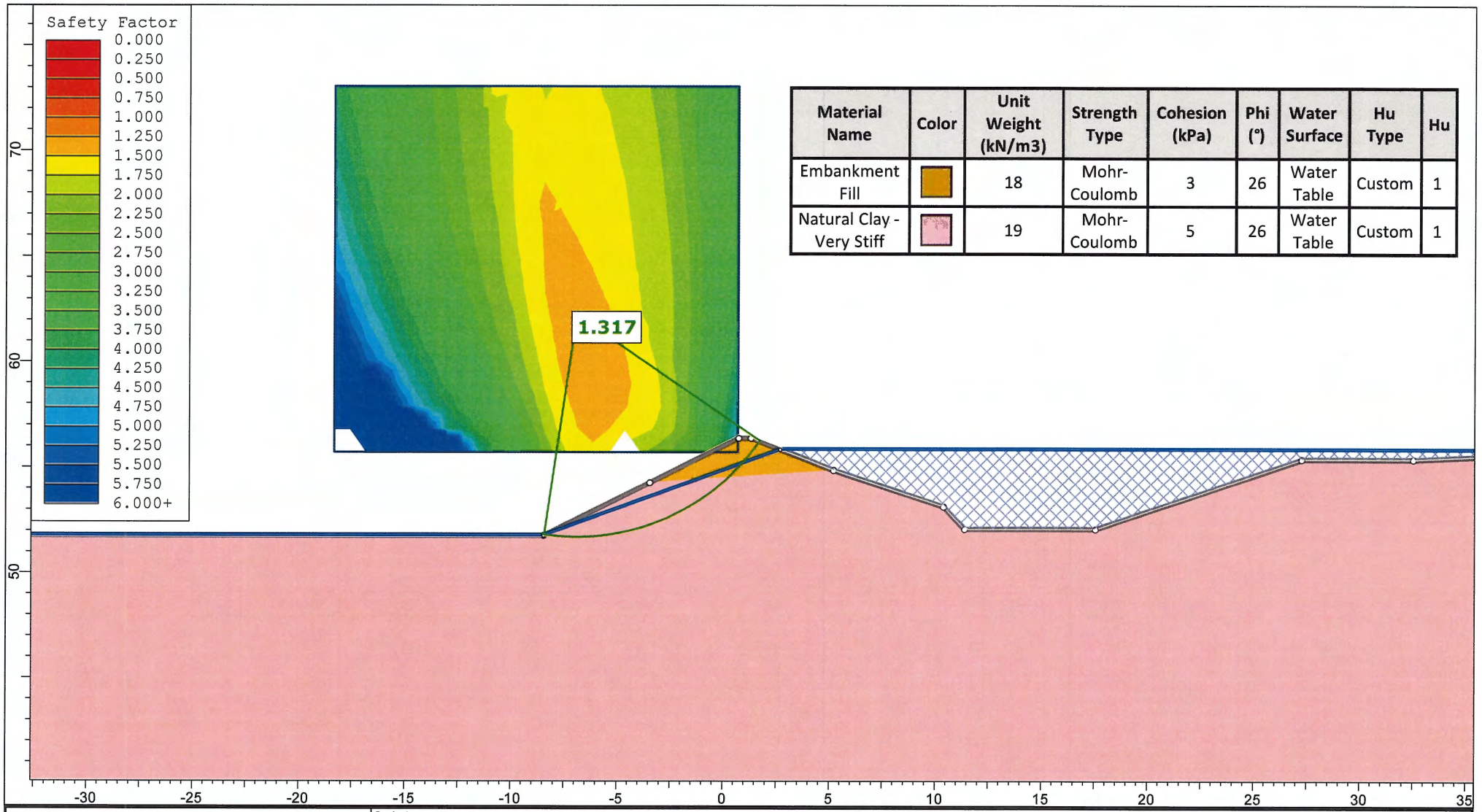


Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Water Surface	Ru Value
Embankment Fill		18	Mohr-Coulomb	3	26	None	0
Natural Clay - Very Stiff		19	Mohr-Coulomb	5	26	None	0

Pacific Geotech
Consulting Geotechnical Engineers

SLIDEINTERPRET 9.040

Project	Slide2 - An Interactive Slope Stability Program		
GroupName	2b. P5 MIBA Interim Batters	*Analysis*	Construction - 1V:2H Slope
Date	10/09/2025, 5:49:17 PM	*File Name*	PG-5335-I - Stability Assessment - 11.09.25.slmd

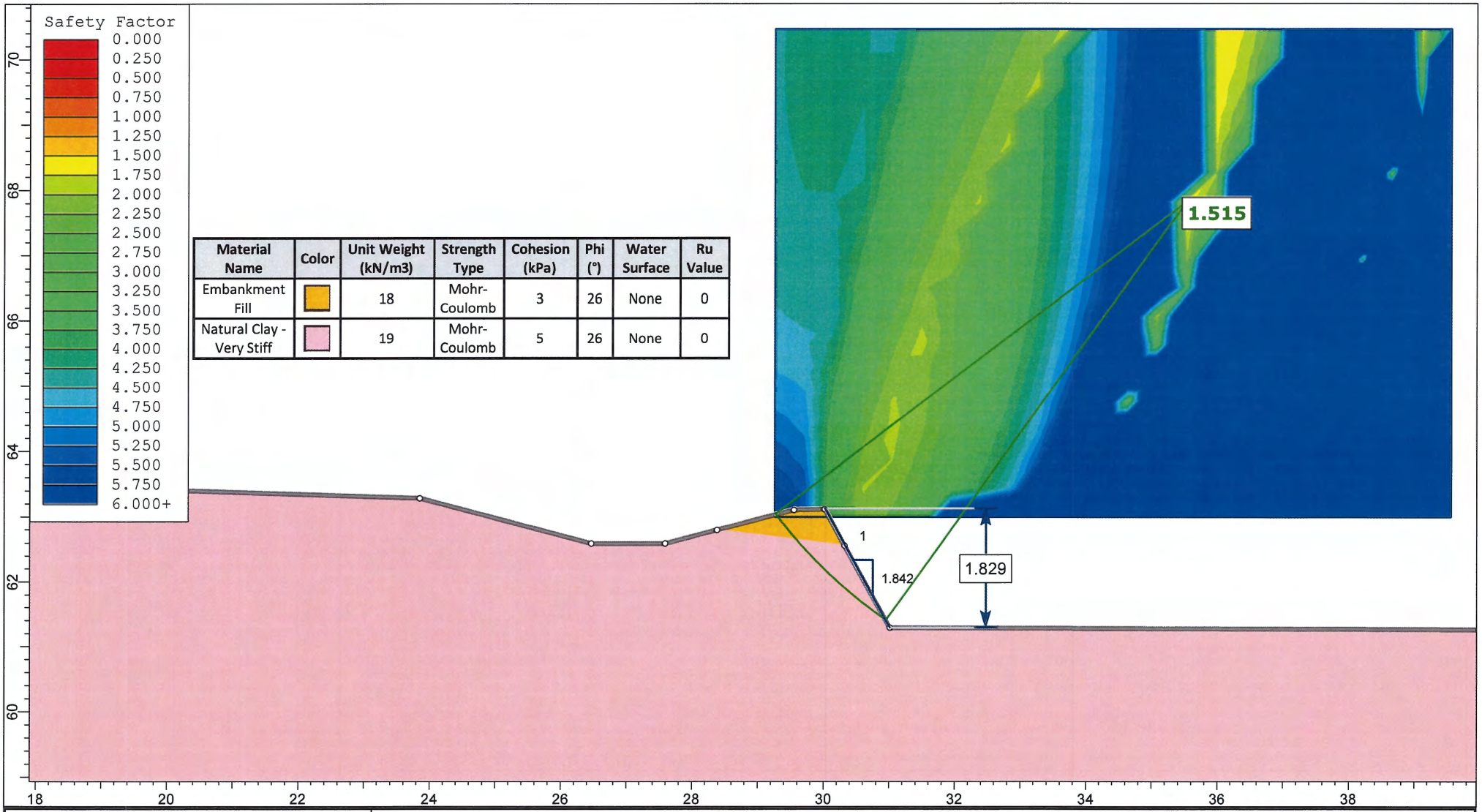


Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Water Surface	Hu Type	Hu
Embankment Fill		18	Mohr-Coulomb	3	26	Water Table	Custom	1
Natural Clay - Very Stiff		19	Mohr-Coulomb	5	26	Water Table	Custom	1

Pacific Geotech
Consulting Geotechnical Engineers

SLIDEINTERPRET 9.040

Project	Slide2 - An Interactive Slope Stability Program		
GroupName	2b. P5 MIBA Interim Batters	Analysis	Elevated Groundwater - 1V:2H Slope
Date	10/09/2025, 5:49:17 PM	File Name	PG-5335-I - Stability Assessment - 11.09.25.slmd

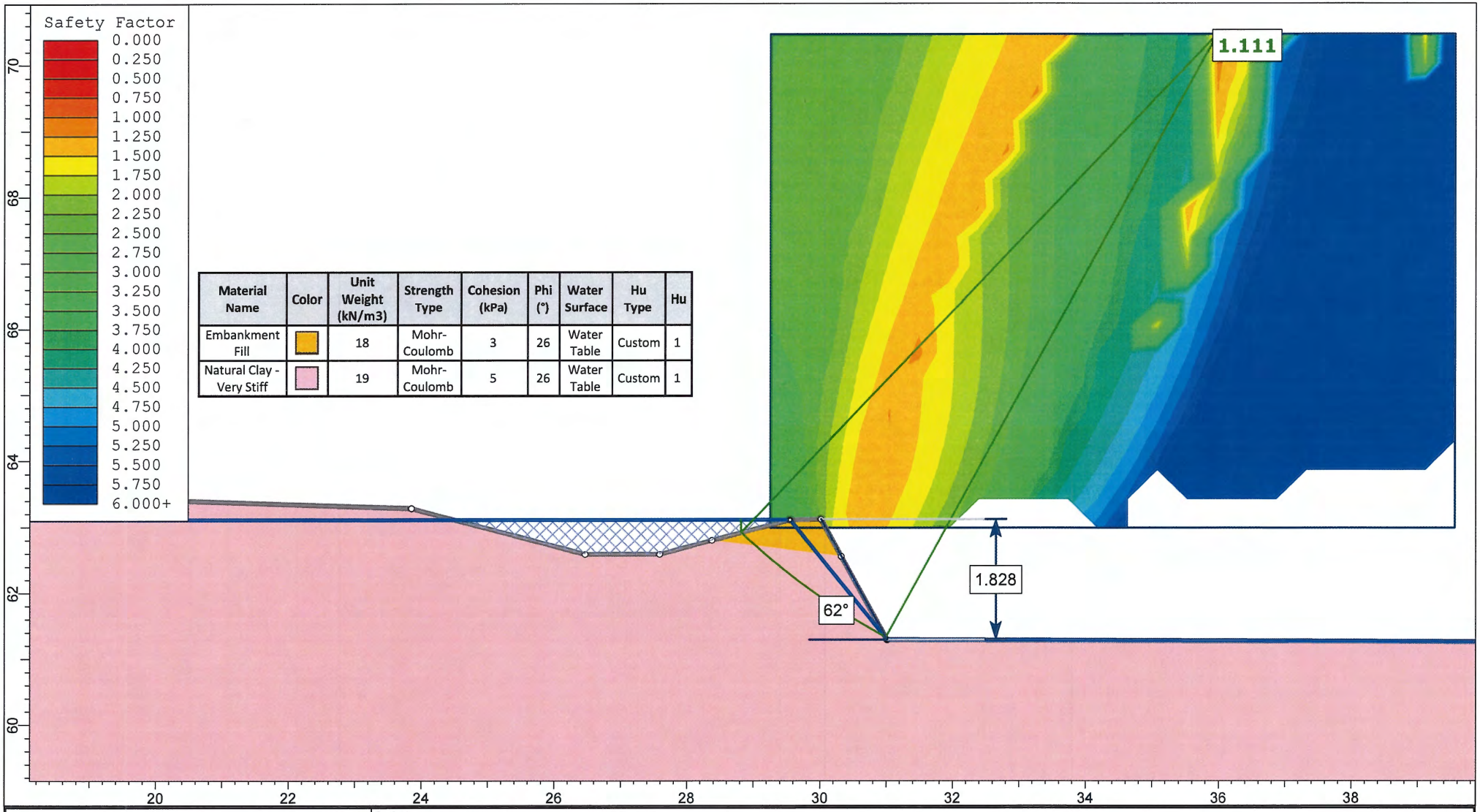


Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Water Surface	Ru Value
Embankment Fill		18	Mohr-Coulomb	3	26	None	0
Natural Clay - Very Stiff		19	Mohr-Coulomb	5	26	None	0

Pacific Geotech
Consulting Geotechnical Engineers

SLIDEINTERPRET 9.040

Project	Slide2 - An Interactive Slope Stability Program		
GroupName	3. Lot 8526	Analysis	Construction
Date	10/09/2025, 5:49:17 PM	File Name	PG-5335-I - Stability Assessment - 11.09.25.slmd

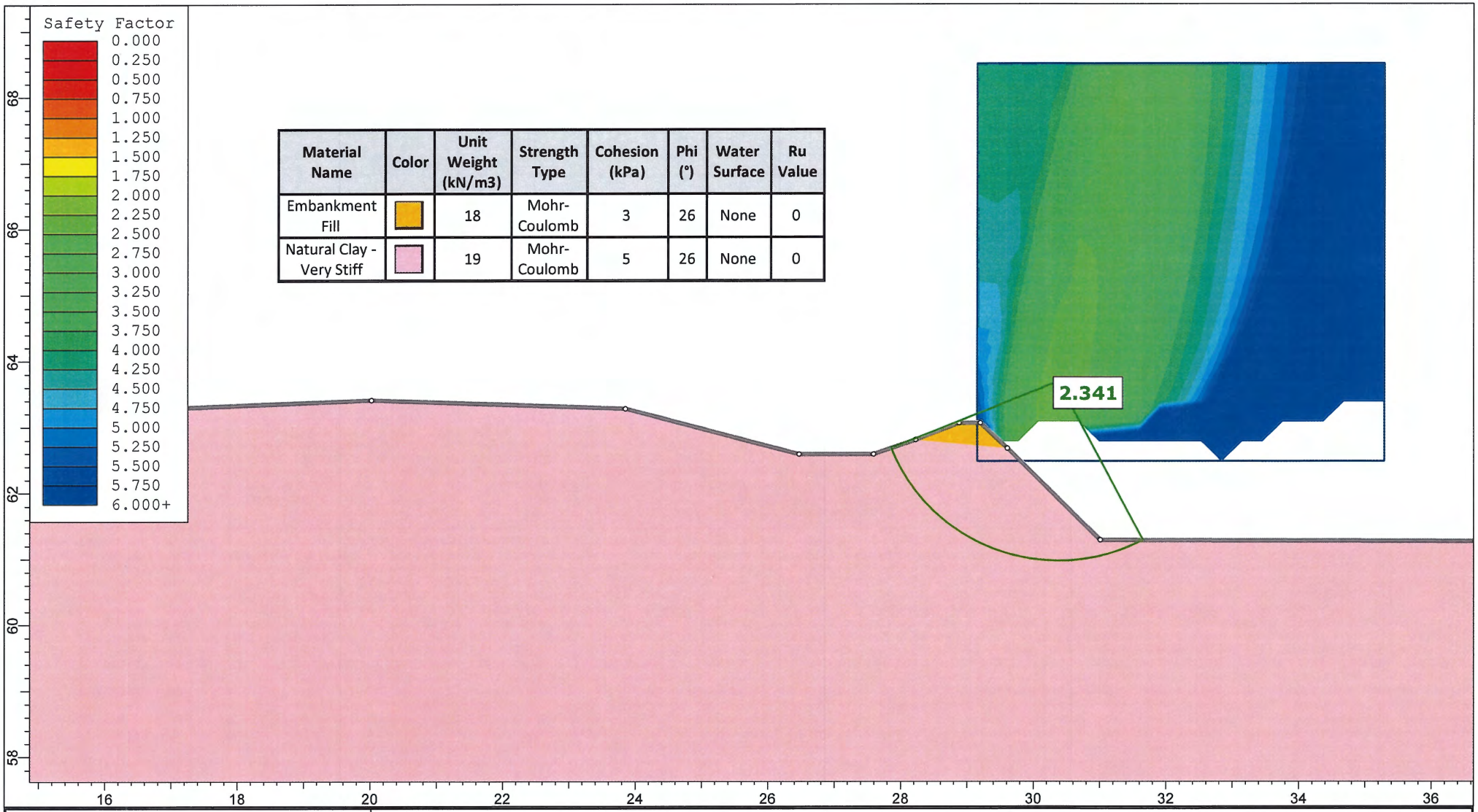


Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Water Surface	Hu Type	Hu
Embankment Fill		18	Mohr-Coulomb	3	26	Water Table	Custom	1
Natural Clay - Very Stiff		19	Mohr-Coulomb	5	26	Water Table	Custom	1

Pacific Geotech
Consulting Geotechnical Engineers

SLIDEINTERPRET 9.040

Project	Slide2 - An Interactive Slope Stability Program		
GroupName	3. Lot 8526	Analysis	Elevated Groundwater
Date	10/09/2025, 5:49:17 PM	File Name	PG-5335-I - Stability Assessment - 11.09.25.slmd

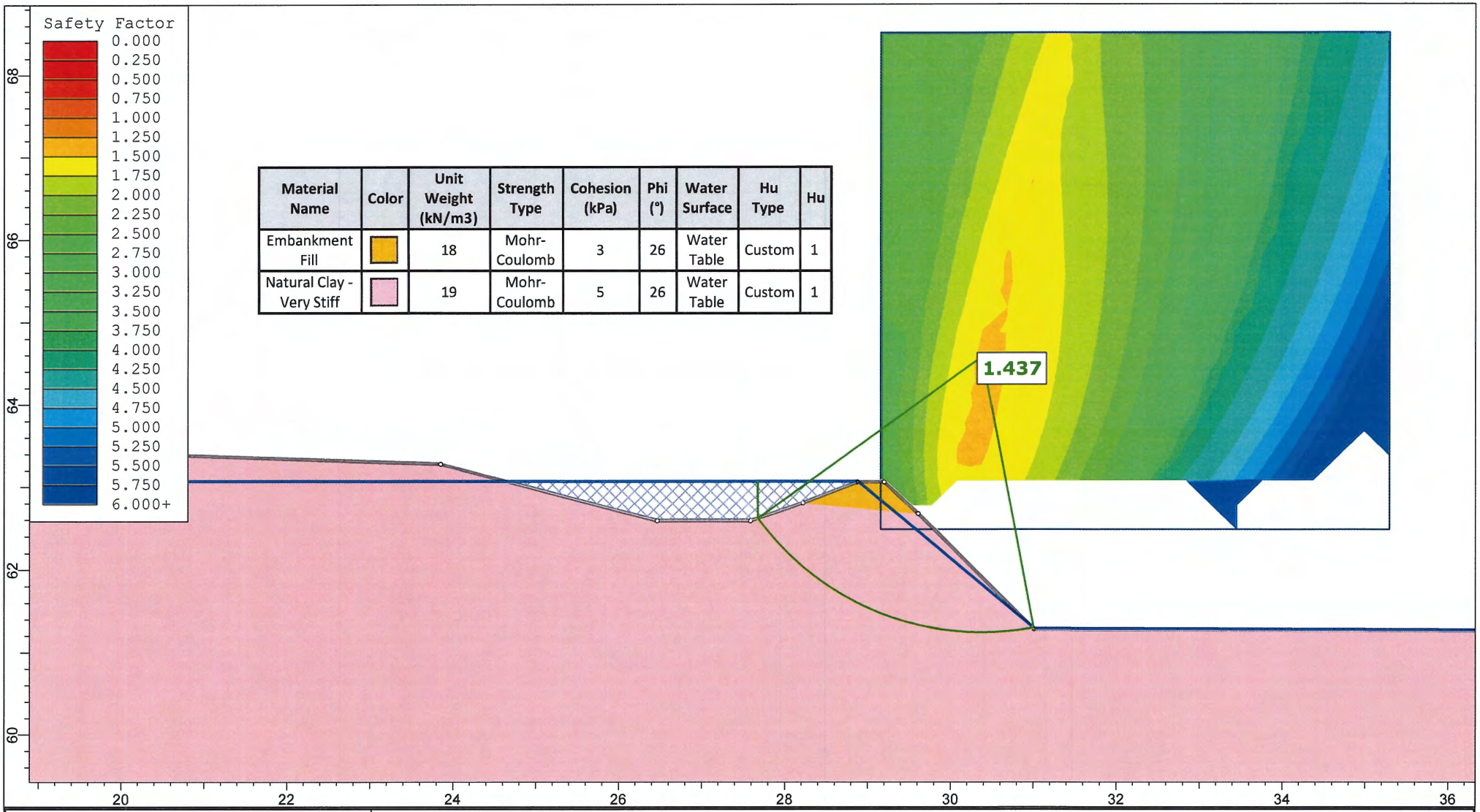


Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Water Surface	Ru Value
Embankment Fill		18	Mohr-Coulomb	3	26	None	0
Natural Clay - Very Stiff		19	Mohr-Coulomb	5	26	None	0

Pacific Geotech
Consulting Geotechnical Engineers

SLIDEINTERPRET 9.040

Project	Slide2 - An Interactive Slope Stability Program		
GroupName	3a. Lot 8526	*Analysis*	Construction
Date	10/09/2025, 5:49:17 PM	*File Name*	PG-5335-I - Stability Assessment - 11.09.25.slmd

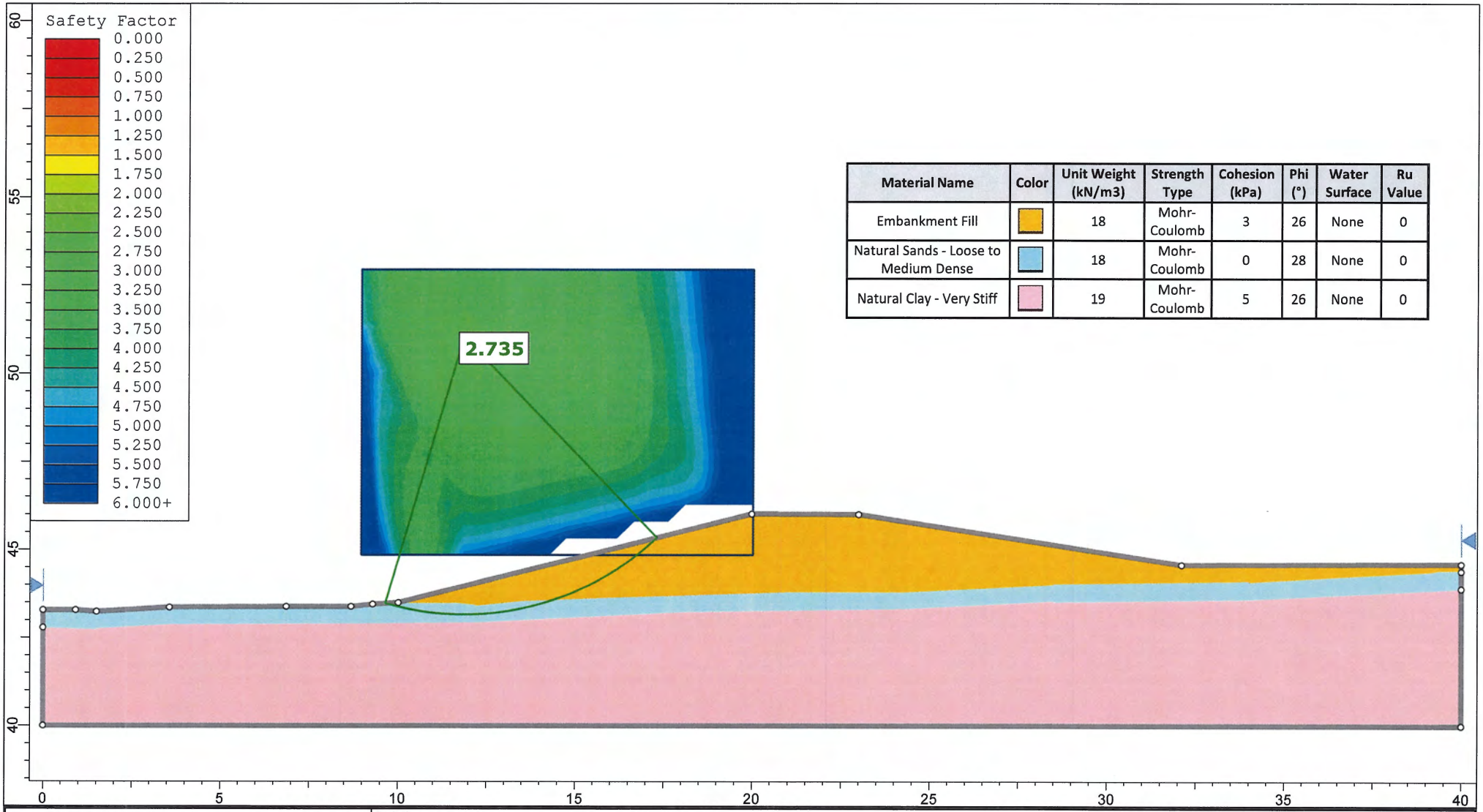


Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Water Surface	Hu Type	Hu
Embankment Fill		18	Mohr-Coulomb	3	26	Water Table	Custom	1
Natural Clay - Very Stiff		19	Mohr-Coulomb	5	26	Water Table	Custom	1

Pacific Geotech
Consulting Geotechnical Engineers

SLIDEINTERPRET 9.040

Project	Slide2 - An Interactive Slope Stability Program		
GroupName	3a. Lot 8526	*Analysis*	Elevated Groundwater
Date	10/09/2025, 5:49:17 PM	*File Name*	PG-5335-I - Stability Assessment - 11.09.25.slmd



Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Water Surface	Ru Value
Embankment Fill		18	Mohr-Coulomb	3	26	None	0
Natural Sands - Loose to Medium Dense		18	Mohr-Coulomb	0	28	None	0
Natural Clay - Very Stiff		19	Mohr-Coulomb	5	26	None	0

Pacific Geotech
Consulting Geotechnical Engineers

SLIDEINTERPRET 9.040

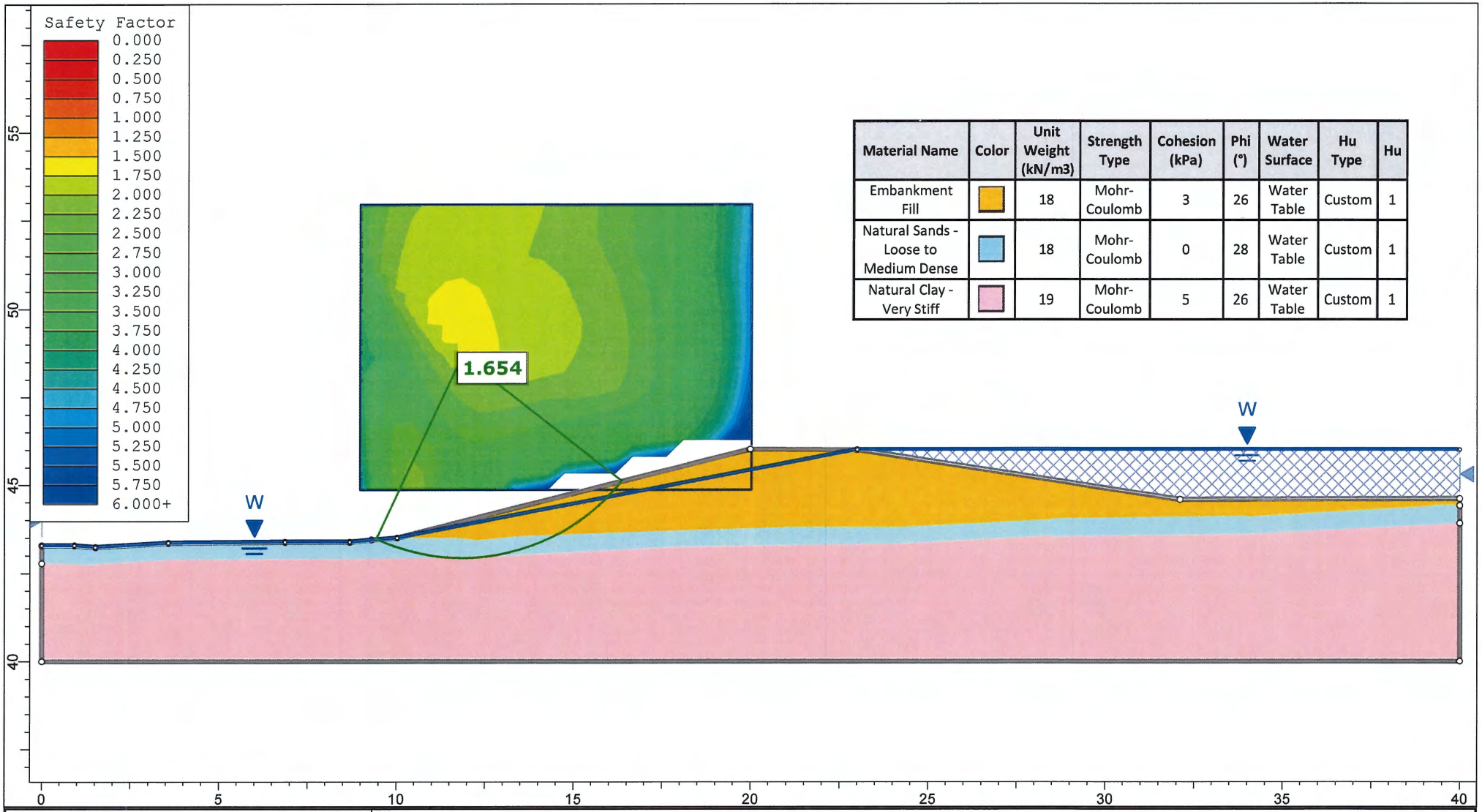
Project Slide2 - An Interactive Slope Stability Program

GroupName 4. STG829 BASIN STH

Analysis Construction

Date 10/09/2025, 5:49:17 PM

File Name PG-5335-I - Stability Assessment - 11.09.25.slmd

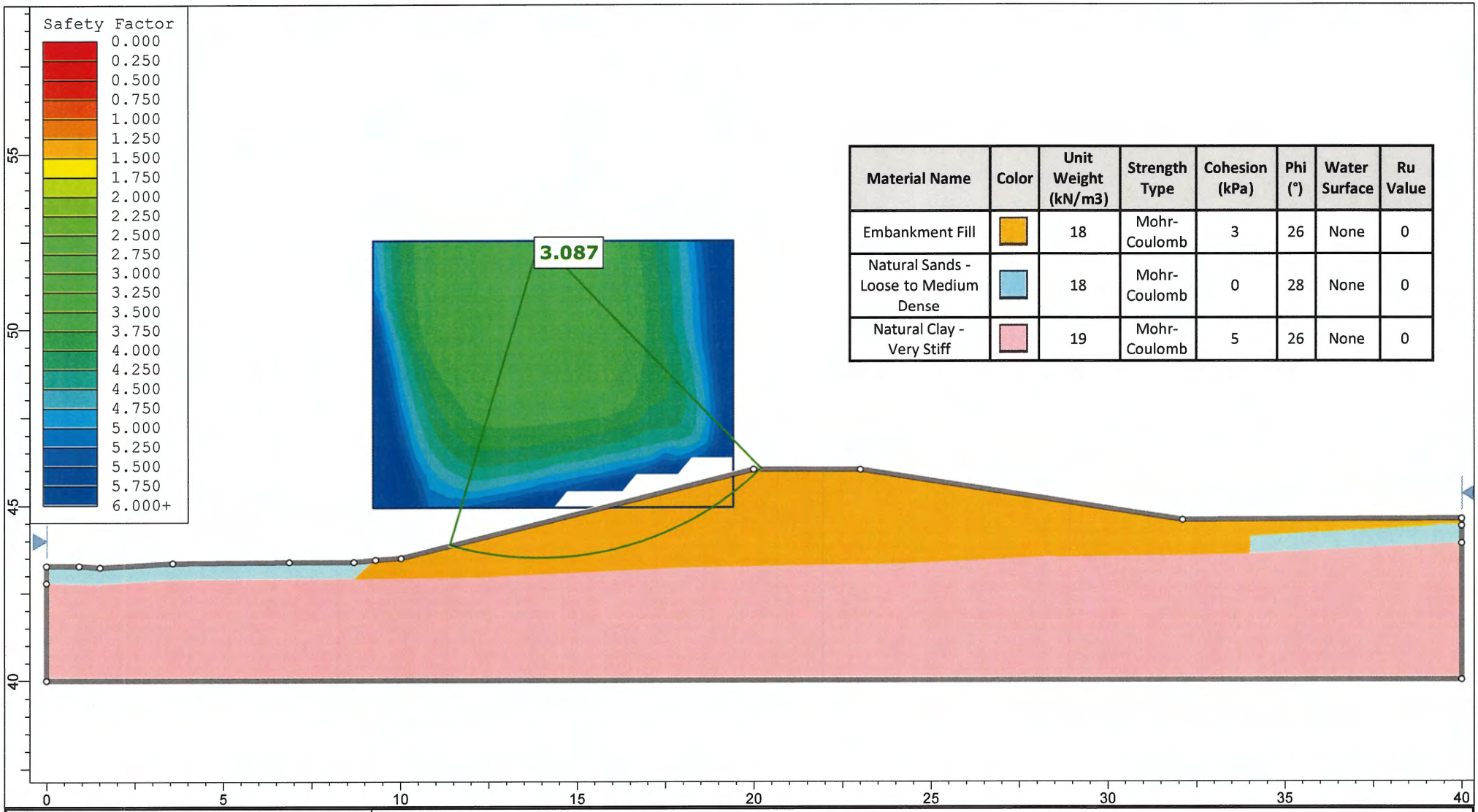


Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Water Surface	Hu Type	Hu
Embankment Fill		18	Mohr-Coulomb	3	26	Water Table	Custom	1
Natural Sands - Loose to Medium Dense		18	Mohr-Coulomb	0	28	Water Table	Custom	1
Natural Clay - Very Stiff		19	Mohr-Coulomb	5	26	Water Table	Custom	1

Pacific Geotech
Consulting Geotechnical Engineers

SLIDEINTERPRET 9.040

Project	Slide2 - An Interactive Slope Stability Program		
GroupName	4. STG829 BASIN STH	*Analysis*	Elevated Groundwater
Date	10/09/2025, 5:49:17 PM	*File Name*	PG-5335-I - Stability Assessment - 11.09.25.slmd



Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Water Surface	Ru Value
Embankment Fill		18	Mohr-Coulomb	3	26	None	0
Natural Sands - Loose to Medium Dense		18	Mohr-Coulomb	0	28	None	0
Natural Clay - Very Stiff		19	Mohr-Coulomb	5	26	None	0

Pacific Geotech
Consulting Geotechnical Engineers

SLIDEINTERPRET 9.040

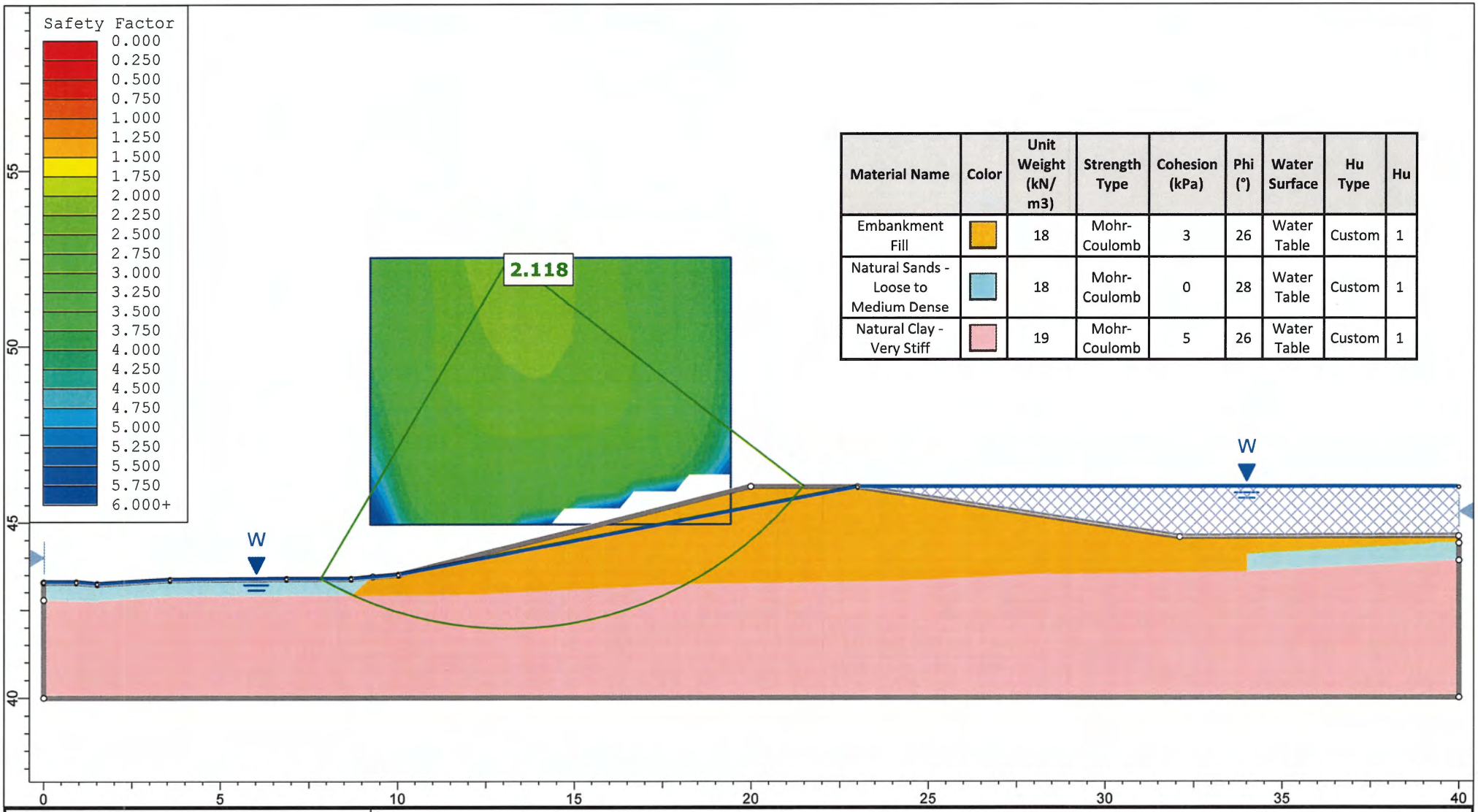
Project Slide2 - An Interactive Slope Stability Program

GroupName 4a.STG829 BASIN STH

Analysis Construction

Date 10/09/2025, 5:49:17 PM

File Name PG-5335-I - Stability Assessment - 11.09.25.slmd

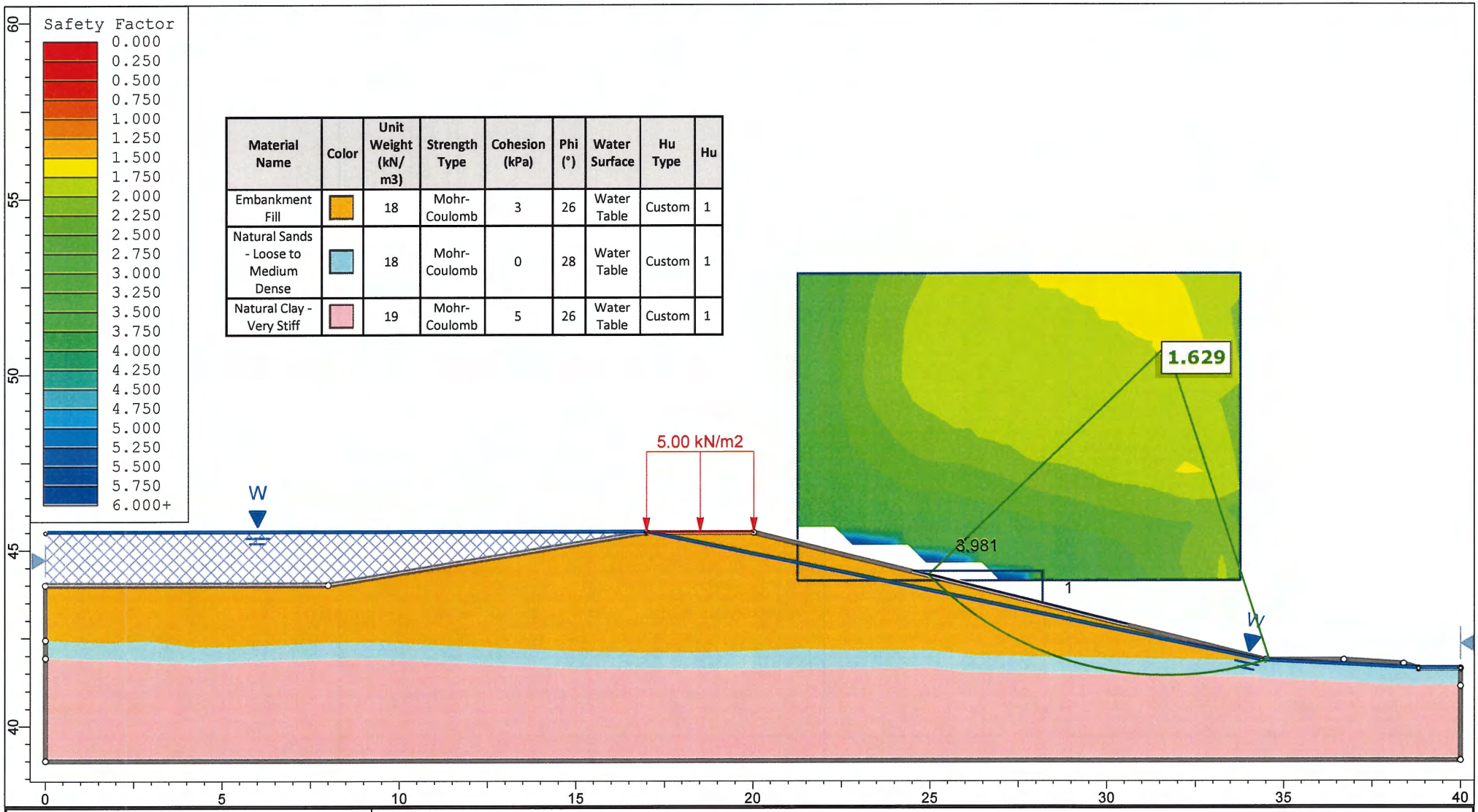


Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Water Surface	Hu Type	Hu
Embankment Fill		18	Mohr-Coulomb	3	26	Water Table	Custom	1
Natural Sands - Loose to Medium Dense		18	Mohr-Coulomb	0	28	Water Table	Custom	1
Natural Clay - Very Stiff		19	Mohr-Coulomb	5	26	Water Table	Custom	1

Pacific Geotech
Consulting Geotechnical Engineers

SLIDEINTERPRET 9.040

Project	Slide2 - An Interactive Slope Stability Program		
GroupName	4a.STG829 BASIN STH	Analysis	Elevated Groundwater
Date	10/09/2025, 5:49:17 PM	File Name	PG-5335-I - Stability Assessment - 11.09.25.slmd

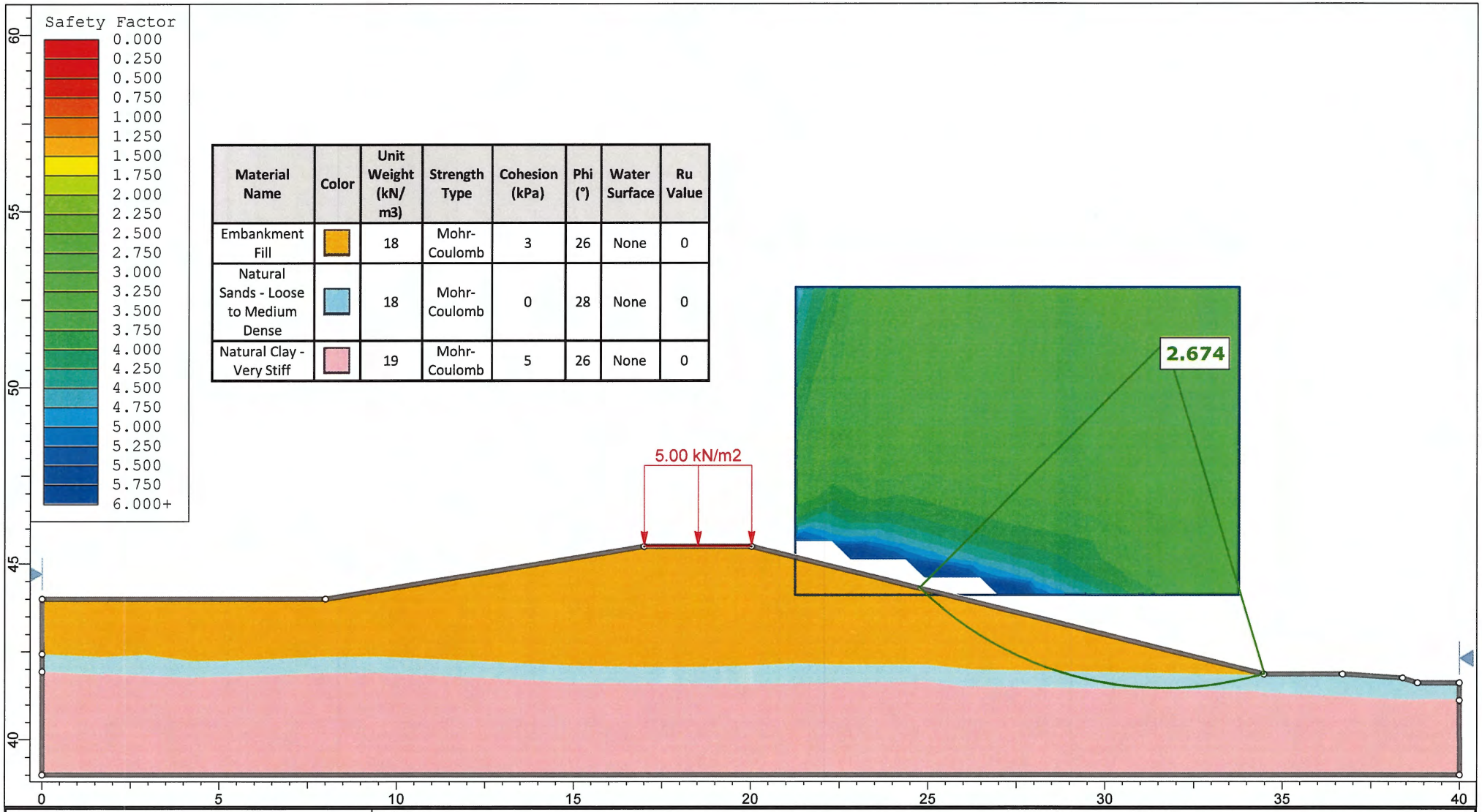


Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Water Surface	Hu Type	Hu
Embankment Fill		18	Mohr-Coulomb	3	26	Water Table	Custom	1
Natural Sands - Loose to Medium Dense		18	Mohr-Coulomb	0	28	Water Table	Custom	1
Natural Clay - Very Stiff		19	Mohr-Coulomb	5	26	Water Table	Custom	1

Pacific Geotech
Consulting Geotechnical Engineers

SLIDEINTERPRET 9.040

Project	Slide2 - An Interactive Slope Stability Program		
GroupName	5. STG827 BASIN	Analysis	Elevated Groundwater
Date	10/09/2025, 5:49:17 PM	File Name	PG-5335-I - Stability Assessment - 11.09.25.slmd



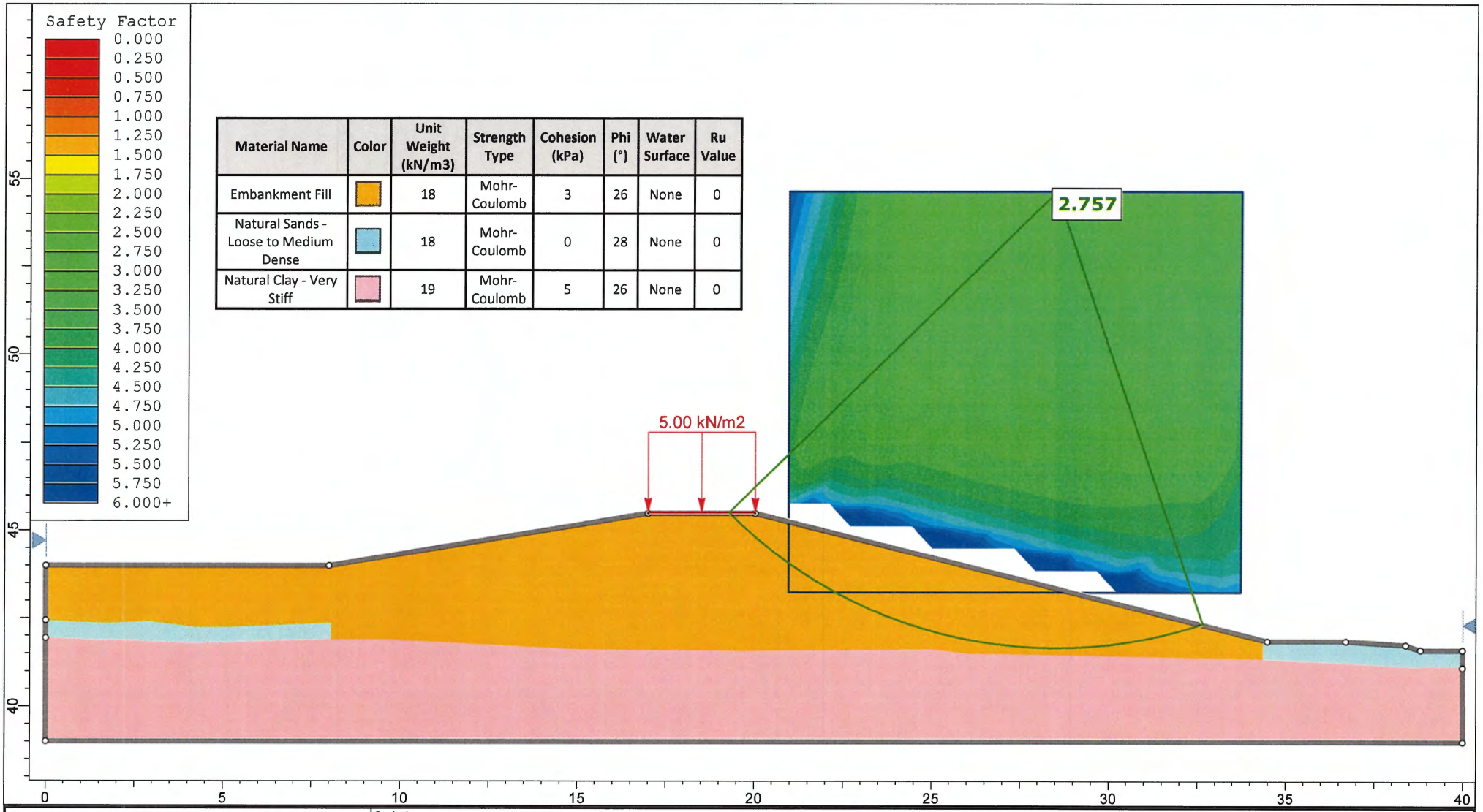
Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Water Surface	Ru Value
Embankment Fill		18	Mohr-Coulomb	3	26	None	0
Natural Sands - Loose to Medium Dense		18	Mohr-Coulomb	0	28	None	0
Natural Clay - Very Stiff		19	Mohr-Coulomb	5	26	None	0

Pacific Geotech
Consulting Geotechnical Engineers

SLIDEINTERPRET 9.040

Project Slide2 - An Interactive Slope Stability Program

GroupName	5. STG827 BASIN	*Analysis*	Construction
Date	10/09/2025, 5:49:17 PM	*File Name*	PG-5335-I - Stability Assessment - 11.09.25.slmd



Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Water Surface	Ru Value
Embankment Fill		18	Mohr-Coulomb	3	26	None	0
Natural Sands - Loose to Medium Dense		18	Mohr-Coulomb	0	28	None	0
Natural Clay - Very Stiff		19	Mohr-Coulomb	5	26	None	0

Pacific Geotech
Consulting Geotechnical Engineers

SLIDEINTERPRET 9.040

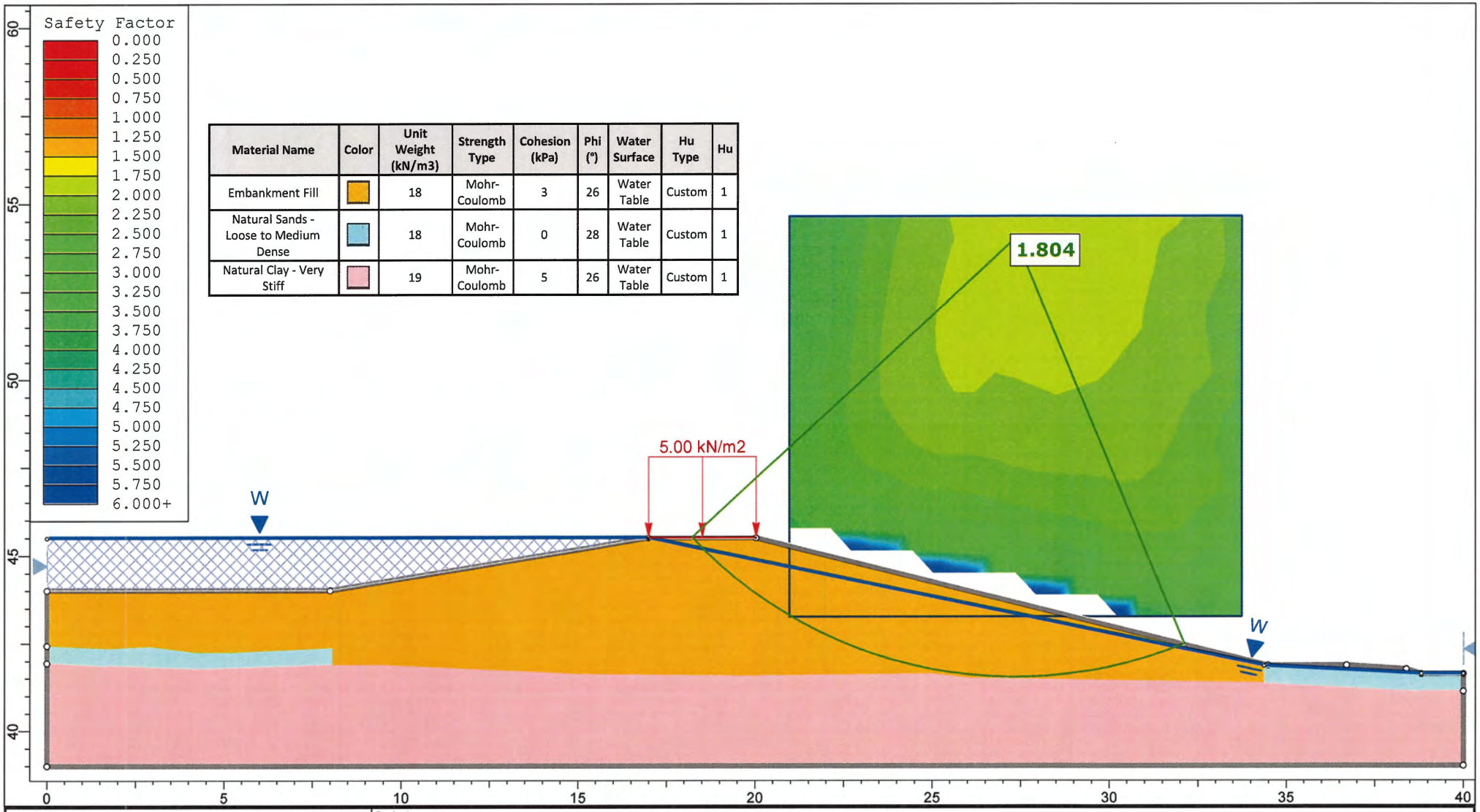
Project Slide2 - An Interactive Slope Stability Program

GroupName 5a. STG827 BASIN

Analysis Construction - Embed into clay

Date 10/09/2025, 5:49:17 PM

File Name PG-5335-I - Stability Assessment - 11.09.25.slmd

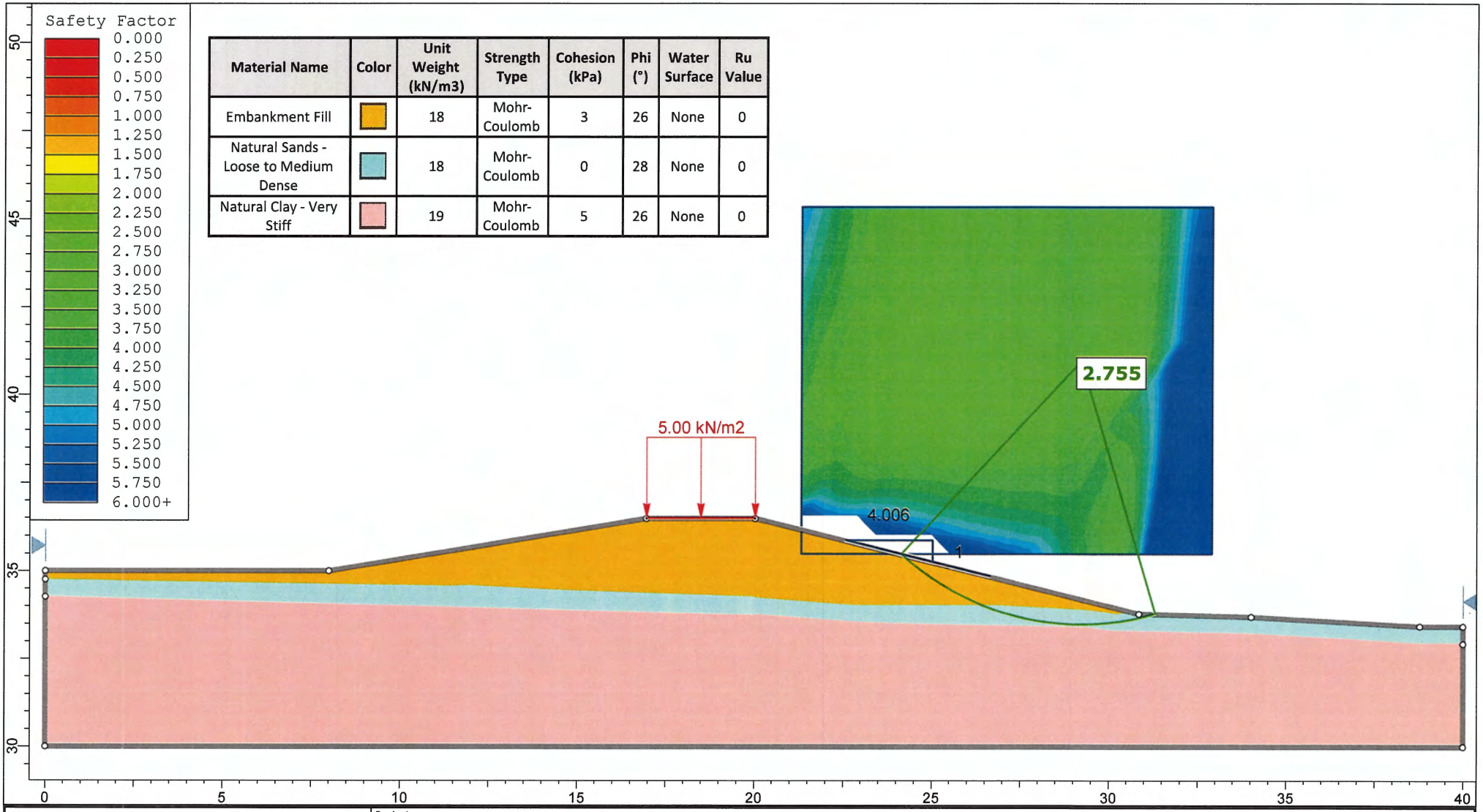


Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Water Surface	Hu Type	Hu
Embankment Fill		18	Mohr-Coulomb	3	26	Water Table	Custom	1
Natural Sands - Loose to Medium Dense		18	Mohr-Coulomb	0	28	Water Table	Custom	1
Natural Clay - Very Stiff		19	Mohr-Coulomb	5	26	Water Table	Custom	1

Pacific Geotech
Consulting Geotechnical Engineers

SLIDEINTERPRET 9.040

Project	Slide2 - An Interactive Slope Stability Program		
GroupName	5a. STG827 BASIN	Analysis	Elevated Groundwater - Embed into clay
Date	10/09/2025, 5:49:17 PM	File Name	PG-5335-I - Stability Assessment - 11.09.25.slmd



Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Water Surface	Ru Value
Embankment Fill		18	Mohr-Coulomb	3	26	None	0
Natural Sands - Loose to Medium Dense		18	Mohr-Coulomb	0	28	None	0
Natural Clay - Very Stiff		19	Mohr-Coulomb	5	26	None	0

Pacific Geotech
Consulting Geotechnical Engineers

SLIDEINTERPRET 9.040

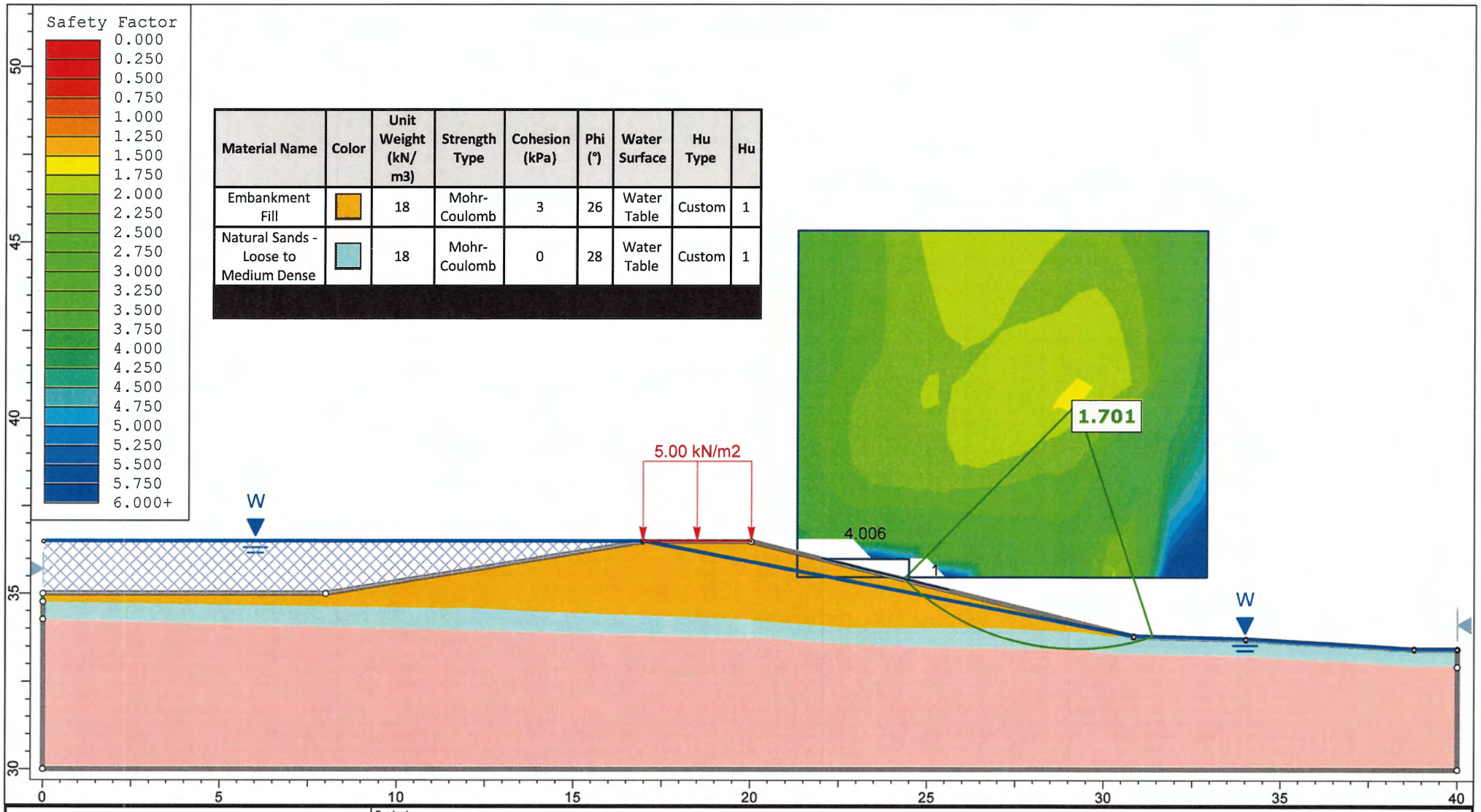
Project Slide2 - An Interactive Slope Stability Program

GroupName 6. STG828 BASIN

Analysis Construction

Date 10/09/2025, 5:49:17 PM

File Name PG-5335-I - Stability Assessment - 11.09.25.slmd



Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Water Surface	Hu Type	Hu
Embankment Fill		18	Mohr-Coulomb	3	26	Water Table	Custom	1
Natural Sands - Loose to Medium Dense		18	Mohr-Coulomb	0	28	Water Table	Custom	1

Pacific Geotech
Consulting Geotechnical Engineers

SLIDEINTERPRET 9.040

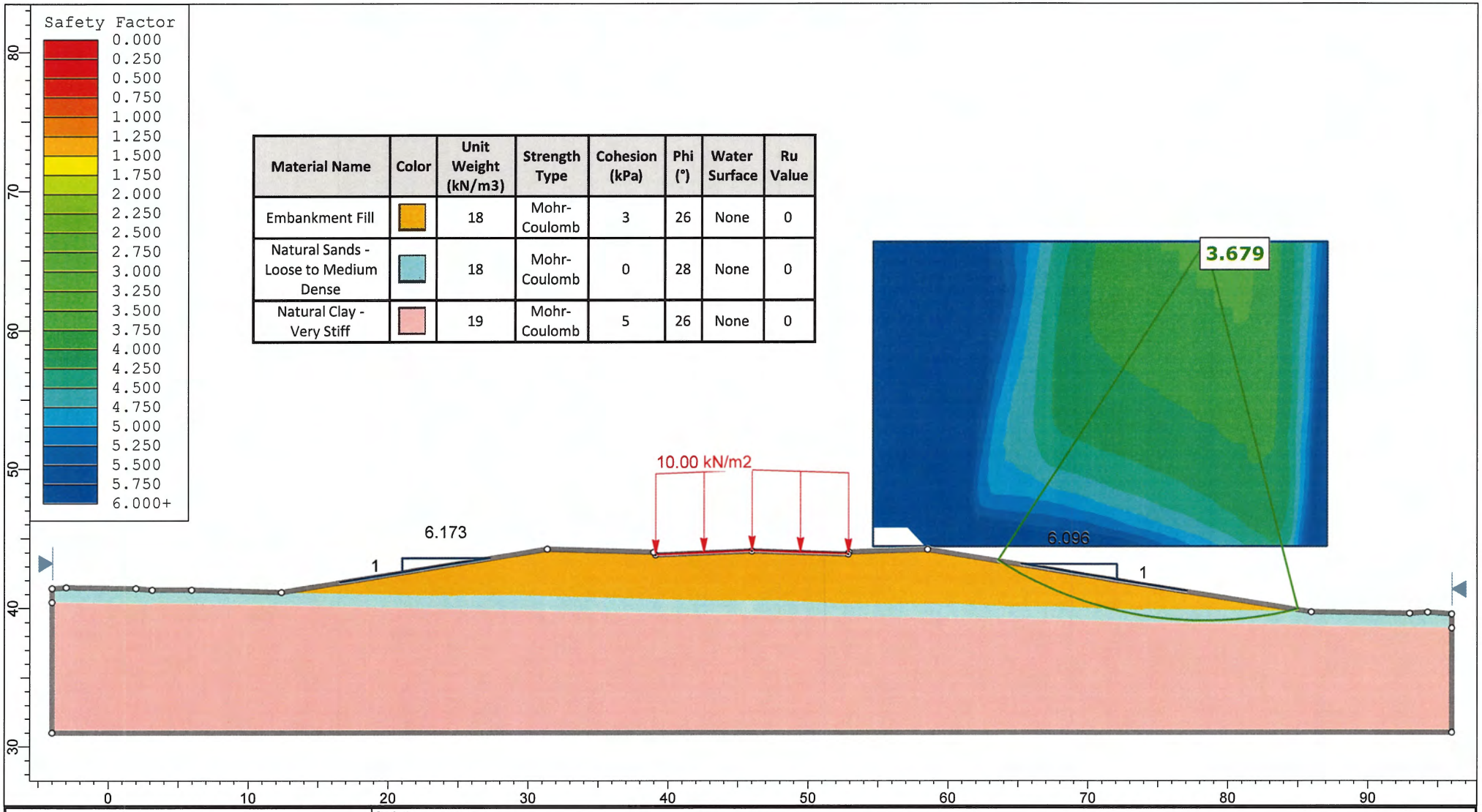
Project Slide2 - An Interactive Slope Stability Program

GroupName 6. STG828 BASIN

Analysis Elevated Groundwater

Date 10/09/2025, 5:49:17 PM

File Name PG-5335-I - Stability Assessment - 11.09.25.slmd



Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Water Surface	Ru Value
Embankment Fill		18	Mohr-Coulomb	3	26	None	0
Natural Sands - Loose to Medium Dense		18	Mohr-Coulomb	0	28	None	0
Natural Clay - Very Stiff		19	Mohr-Coulomb	5	26	None	0

Pacific Geotech
Consulting Geotechnical Engineers

SLIDEINTERPRET 9.040

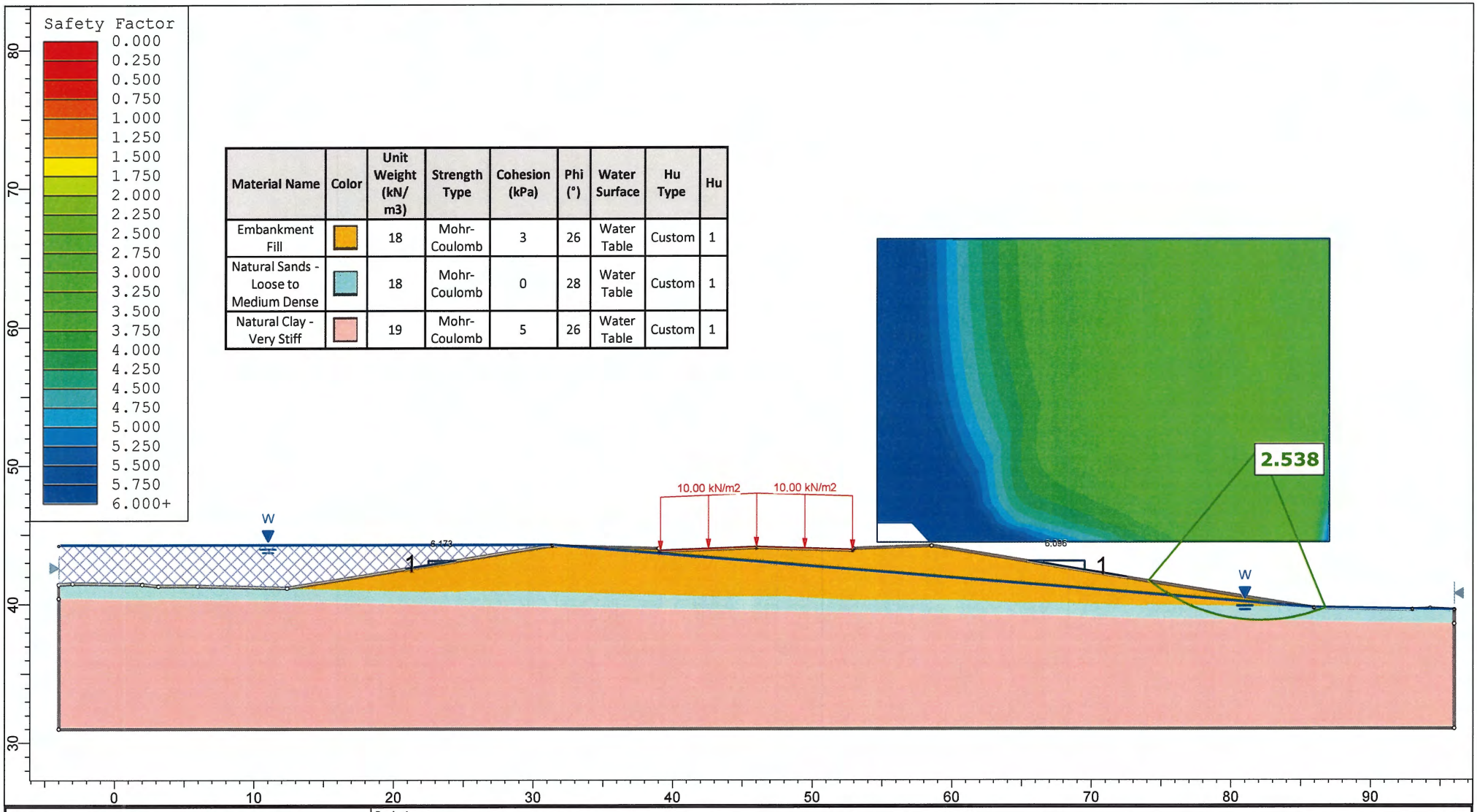
Project Slide2 - An Interactive Slope Stability Program

GroupName 7. STG823 CULVERT

Analysis Construction

Date 10/09/2025, 5:49:17 PM

File Name PG-5335-I - Stability Assessment - 11.09.25.slmd

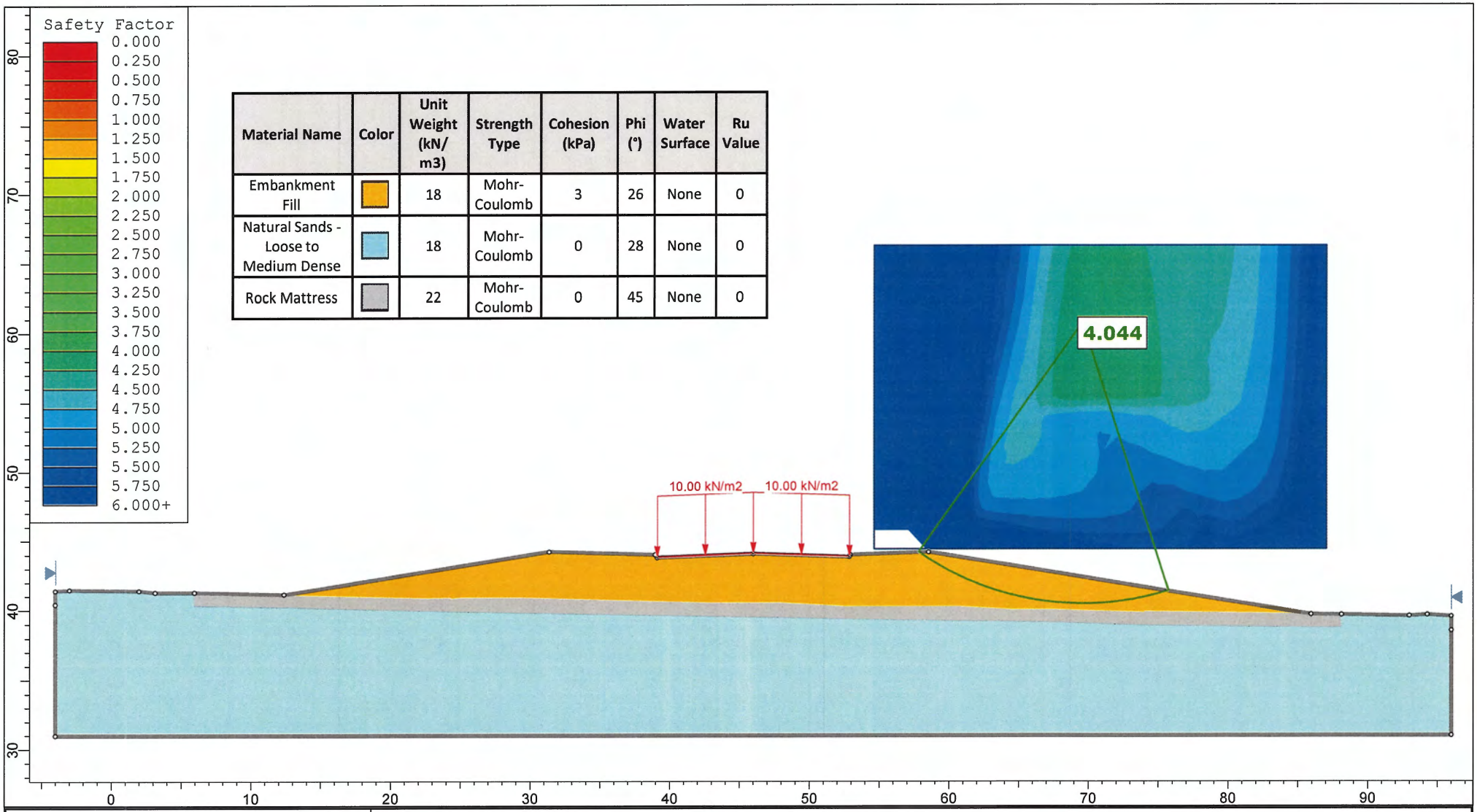


Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Water Surface	Hu Type	Hu
Embankment Fill		18	Mohr-Coulomb	3	26	Water Table	Custom	1
Natural Sands - Loose to Medium Dense		18	Mohr-Coulomb	0	28	Water Table	Custom	1
Natural Clay - Very Stiff		19	Mohr-Coulomb	5	26	Water Table	Custom	1

Pacific Geotech
Consulting Geotechnical Engineers

SLIDEINTERPRET 9.040

Project	Slide2 - An Interactive Slope Stability Program		
GroupName	7. STG823 CULVERT	*Analysis*	Elevated Groundwater
Date	10/09/2025, 5:49:17 PM	*File Name*	PG-5335-I - Stability Assessment - 11.09.25.slmd



Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Water Surface	Ru Value
Embankment Fill		18	Mohr-Coulomb	3	26	None	0
Natural Sands - Loose to Medium Dense		18	Mohr-Coulomb	0	28	None	0
Rock Mattress		22	Mohr-Coulomb	0	45	None	0

Pacific Geotech
Consulting Geotechnical Engineers

SLIDEINTERPRET 9.040

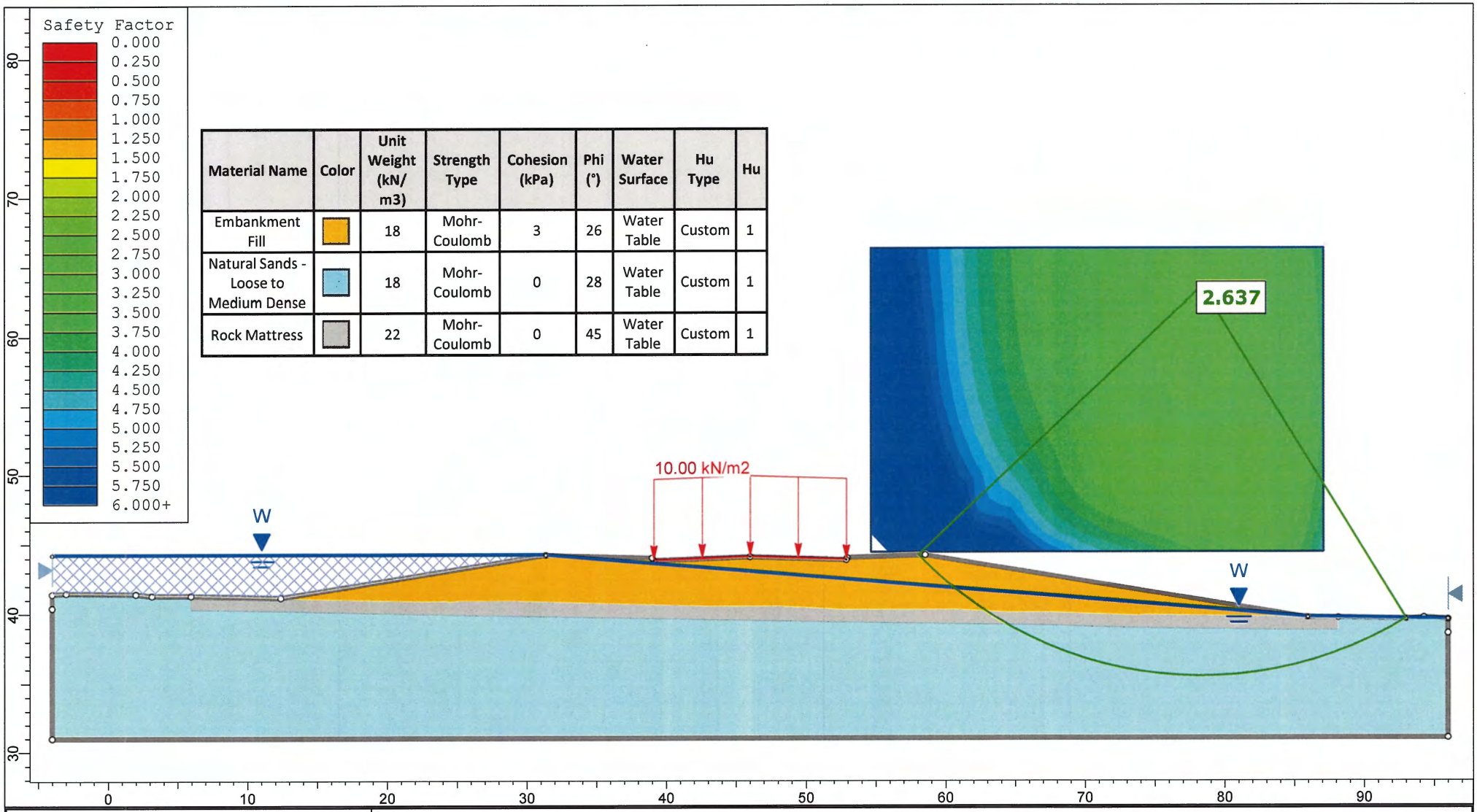
Project: Slide2 - An Interactive Slope Stability Program

GroupName: 7a. STG823 CULVERT

Analysis: Construction - 1.2m Min. Rock Mattress

Date: 10/09/2025, 5:49:17 PM

File Name: PG-5335-I - Stability Assessment - 11.09.25.slmd



Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Water Surface	Hu Type	Hu
Embankment Fill		18	Mohr-Coulomb	3	26	Water Table	Custom	1
Natural Sands - Loose to Medium Dense		18	Mohr-Coulomb	0	28	Water Table	Custom	1
Rock Mattress		22	Mohr-Coulomb	0	45	Water Table	Custom	1

Pacific Geotech
Consulting Geotechnical Engineers

SLIDEINTERPRET 9.040

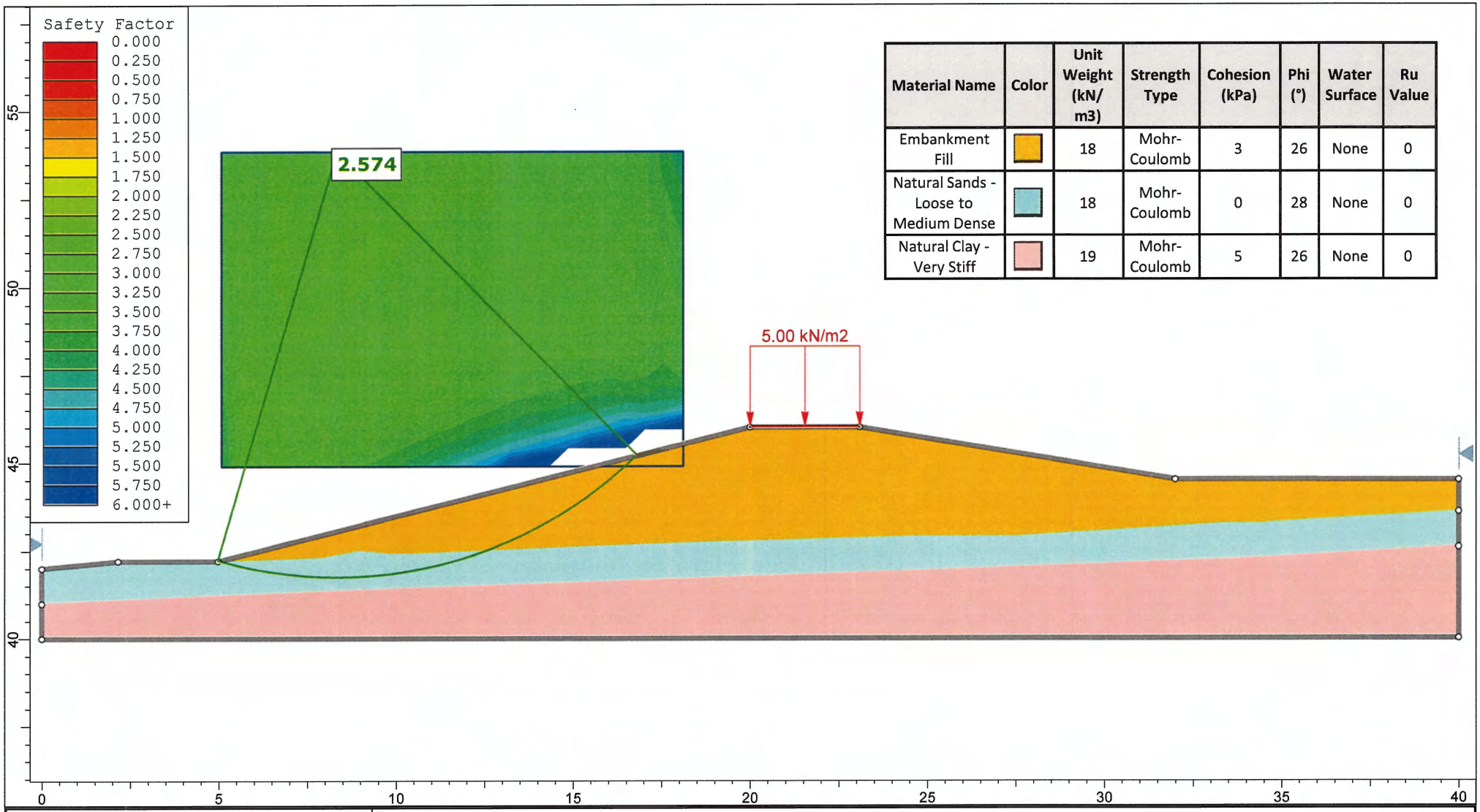
Project Slide2 - An Interactive Slope Stability Program

GroupName 7a. STG823 CULVERT

Analysis Elevated Groundwater - 1.2m min. Rock Mattress

Date 10/09/2025, 5:49:17 PM

File Name PG-5335-I - Stability Assessment - 11.09.25.slmd



Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Water Surface	Ru Value
Embankment Fill		18	Mohr-Coulomb	3	26	None	0
Natural Sands - Loose to Medium Dense		18	Mohr-Coulomb	0	28	None	0
Natural Clay - Very Stiff		19	Mohr-Coulomb	5	26	None	0

Pacific Geotech
Consulting Geotechnical Engineers

SLIDEINTERPRET 9.040

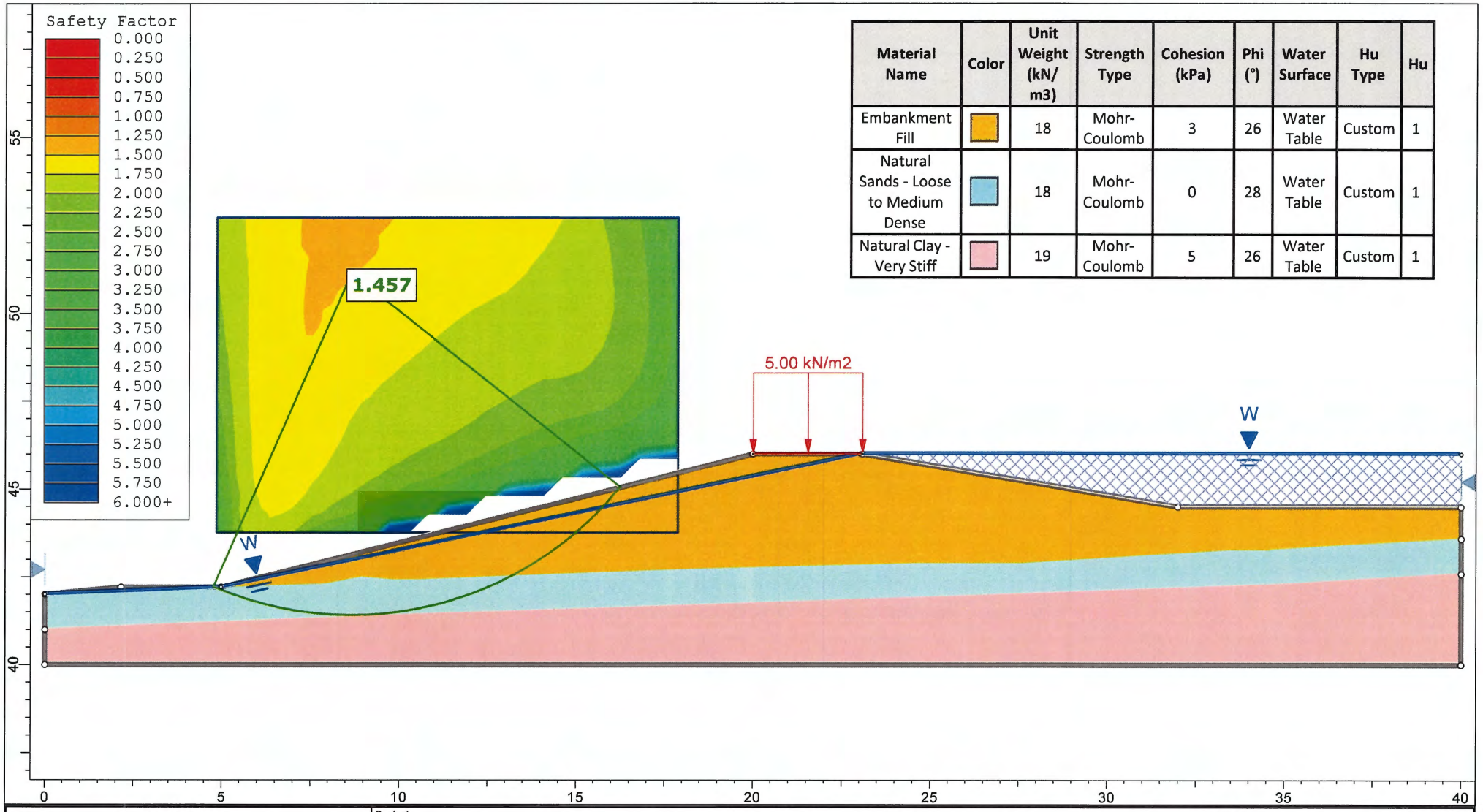
Project Slide2 - An Interactive Slope Stability Program

GroupName 8. STG829 BASIN NTH

Analysis Construction

Date 10/09/2025, 5:49:17 PM

File Name PG-5335-I - Stability Assessment - 11.09.25.slmd



Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Water Surface	Hu Type	Hu
Embankment Fill		18	Mohr-Coulomb	3	26	Water Table	Custom	1
Natural Sands - Loose to Medium Dense		18	Mohr-Coulomb	0	28	Water Table	Custom	1
Natural Clay - Very Stiff		19	Mohr-Coulomb	5	26	Water Table	Custom	1

Pacific Geotech
Consulting Geotechnical Engineers

SLIDEINTERPRET 9.040

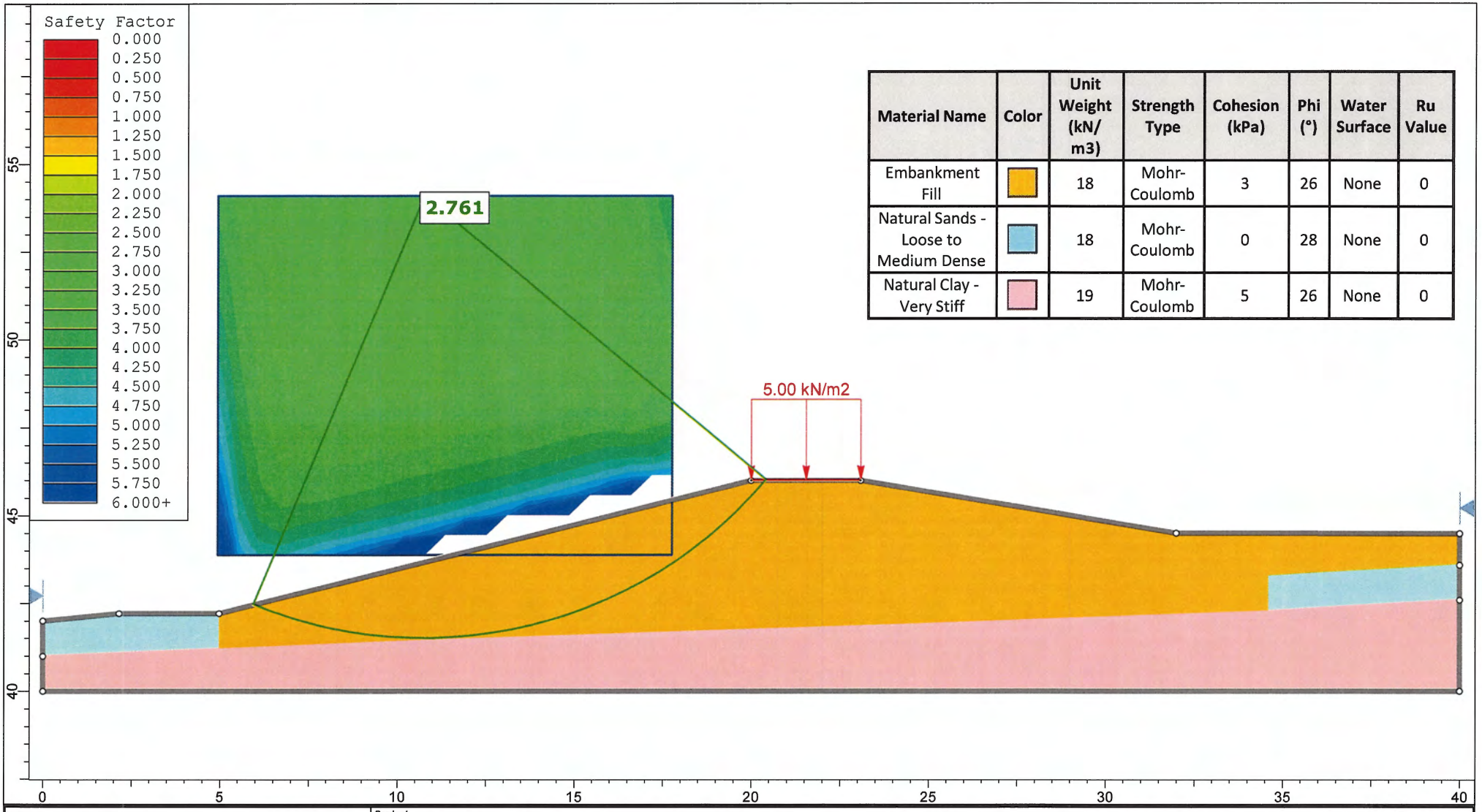
Project Slide2 - An Interactive Slope Stability Program

GroupName 8. STG829 BASIN NTH

Analysis Elevated Groundwater

Date 10/09/2025, 5:49:17 PM

File Name PG-5335-I - Stability Assessment - 11.09.25.slmd



Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Water Surface	Ru Value
Embankment Fill		18	Mohr-Coulomb	3	26	None	0
Natural Sands - Loose to Medium Dense		18	Mohr-Coulomb	0	28	None	0
Natural Clay - Very Stiff		19	Mohr-Coulomb	5	26	None	0

Pacific Geotech
Consulting Geotechnical Engineers

SLIDEINTERPRET 9.040

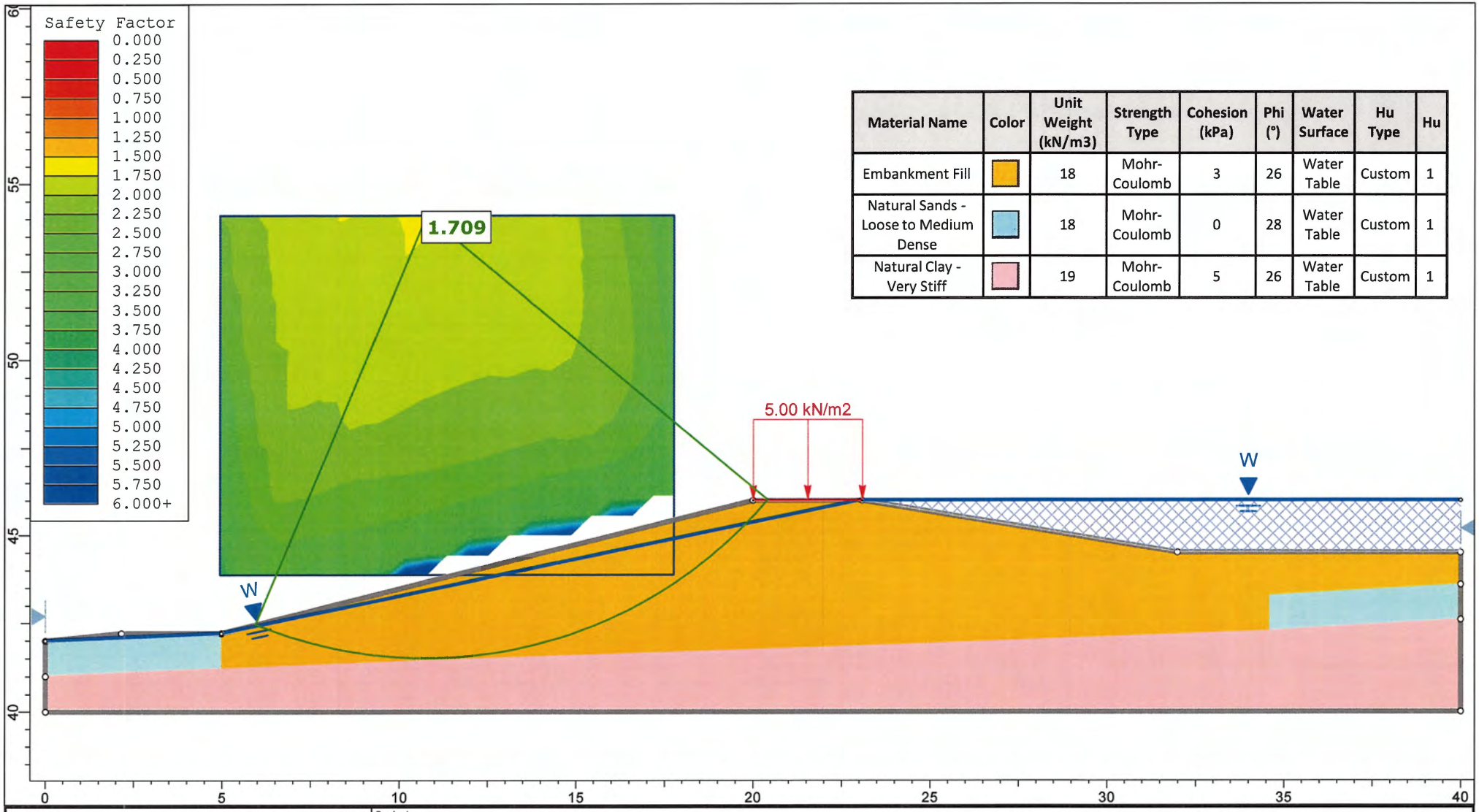
Project Slide2 - An Interactive Slope Stability Program

GroupName 8a. STG829 BASIN NTH

Analysis Construction - Embed into clay

Date 10/09/2025, 5:49:17 PM

File Name PG-5335-I - Stability Assessment - 11.09.25.slmd

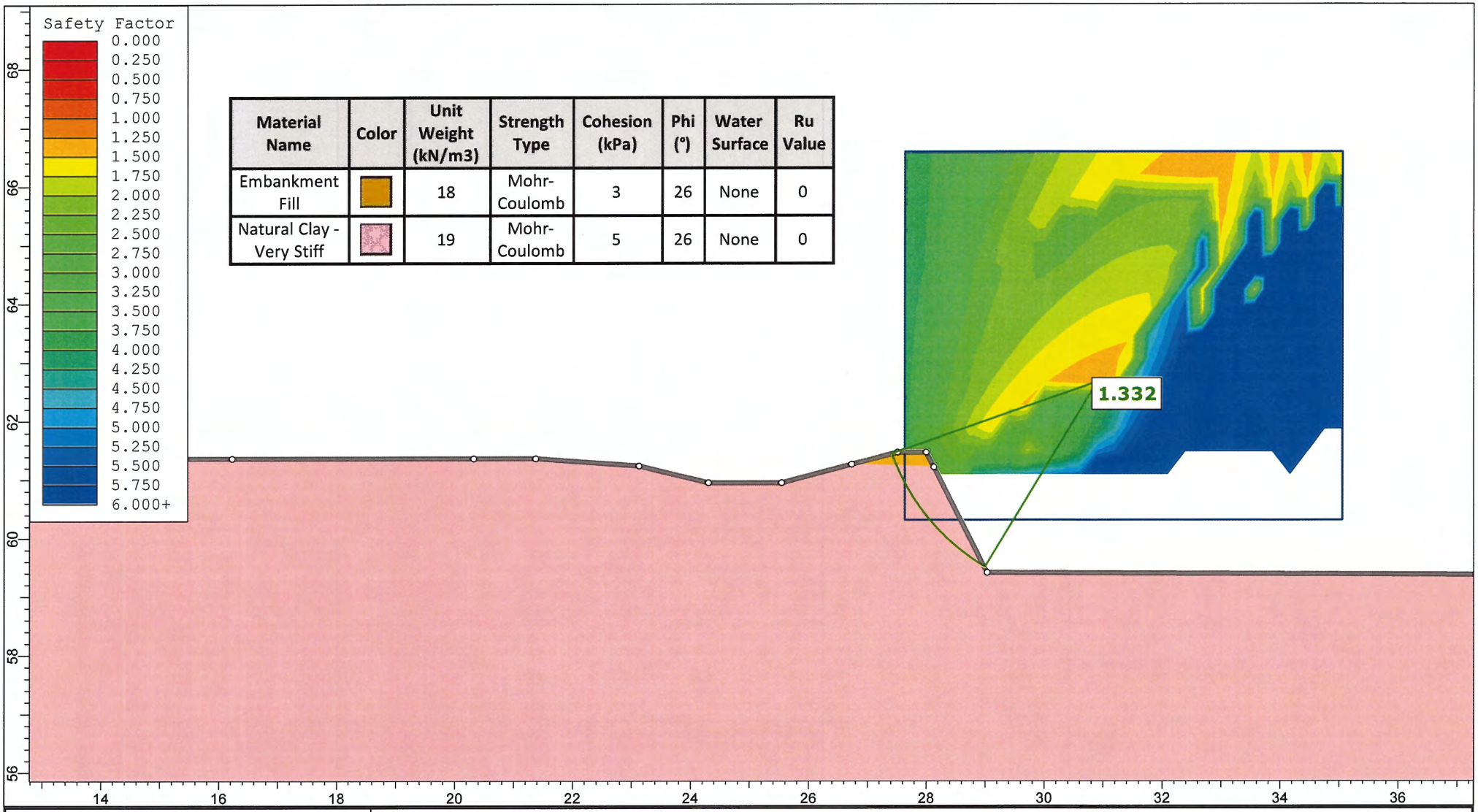


Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Water Surface	Hu Type	Hu
Embankment Fill		18	Mohr-Coulomb	3	26	Water Table	Custom	1
Natural Sands - Loose to Medium Dense		18	Mohr-Coulomb	0	28	Water Table	Custom	1
Natural Clay - Very Stiff		19	Mohr-Coulomb	5	26	Water Table	Custom	1

Pacific Geotech
Consulting Geotechnical Engineers

SLIDEINTERPRET 9.040

Project	Slide2 - An Interactive Slope Stability Program		
GroupName	8a. STG829 BASIN NTH	*Analysis*	Elevated Groundwater - Embed into clay
Date	10/09/2025, 5:49:17 PM	*File Name*	PG-5335-I - Stability Assessment - 11.09.25.slmd

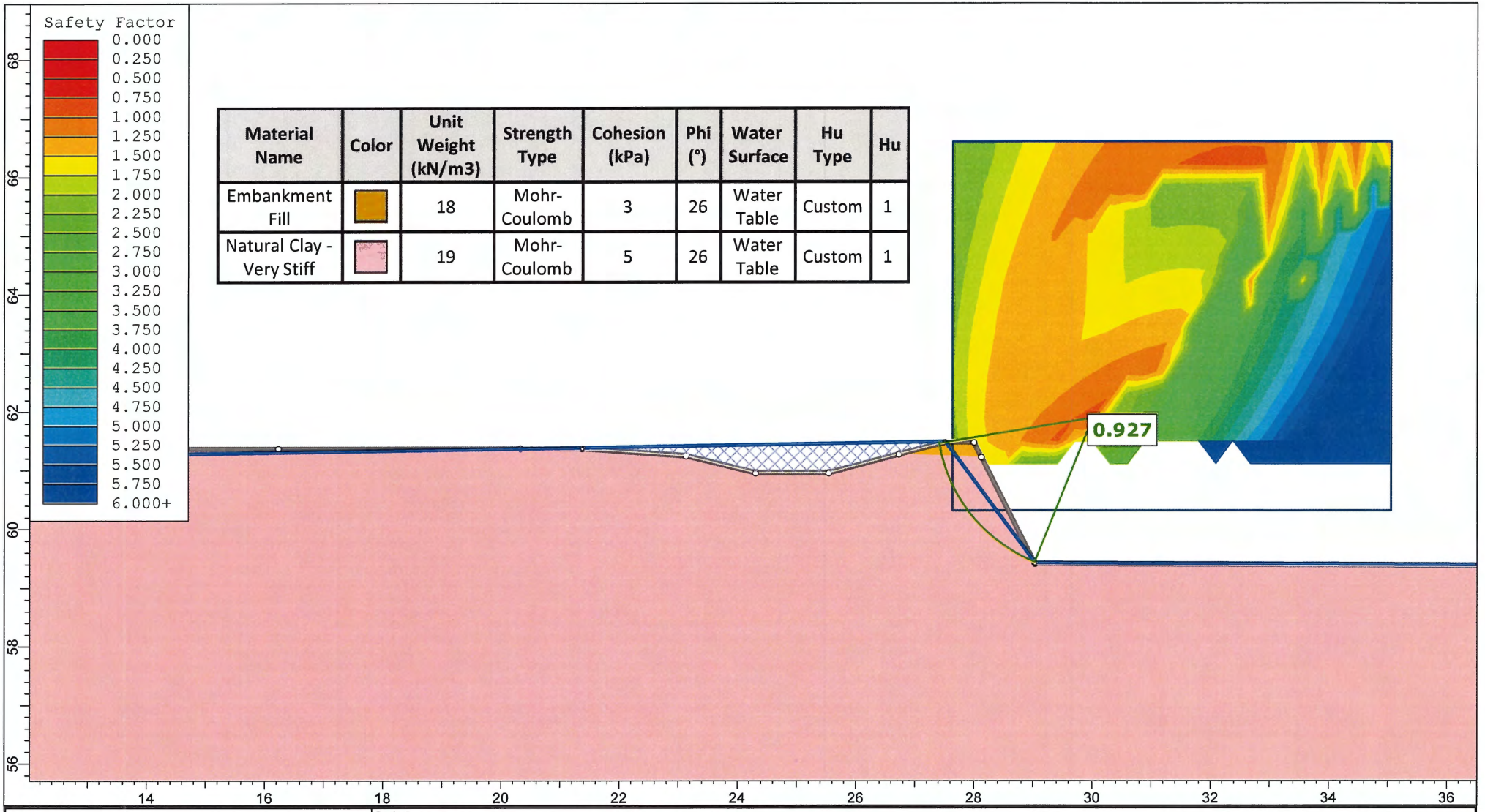


Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Water Surface	Ru Value
Embankment Fill		18	Mohr-Coulomb	3	26	None	0
Natural Clay - Very Stiff		19	Mohr-Coulomb	5	26	None	0

Pacific Geotech
Consulting Geotechnical Engineers

SLIDEINTERPRET 9.040

Project	Slide2 - An Interactive Slope Stability Program		
GroupName	9. LOT 8382	Analysis	Construction
Date	10/09/2025, 5:49:17 PM	File Name	PG-5335-I - Stability Assessment - 11.09.25.slmd



Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Water Surface	Hu Type	Hu
Embankment Fill		18	Mohr-Coulomb	3	26	Water Table	Custom	1
Natural Clay - Very Stiff		19	Mohr-Coulomb	5	26	Water Table	Custom	1

Pacific Geotech
Consulting Geotechnical Engineers

SLIDEINTERPRET 9.040

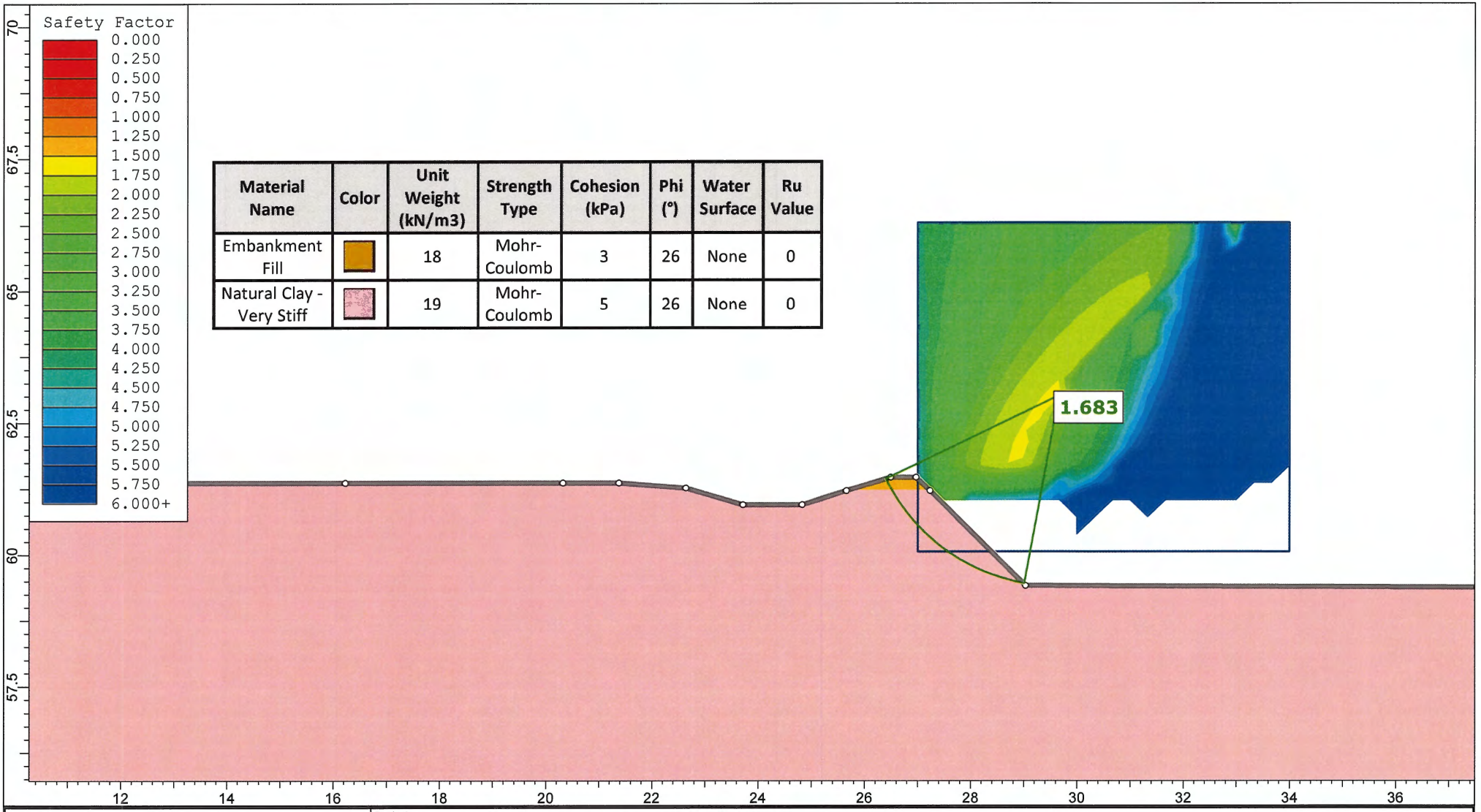
Project: Slide2 - An Interactive Slope Stability Program

GroupName: 9. LOT 8382

Analysis: Elevated Groundwater

Date: 10/09/2025, 5:49:17 PM

File Name: PG-5335-I - Stability Assessment - 11.09.25.slmd



Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Water Surface	Ru Value
Embankment Fill		18	Mohr-Coulomb	3	26	None	0
Natural Clay - Very Stiff		19	Mohr-Coulomb	5	26	None	0

Pacific Geotech
Consulting Geotechnical Engineers

SLIDEINTERPRET 9.040

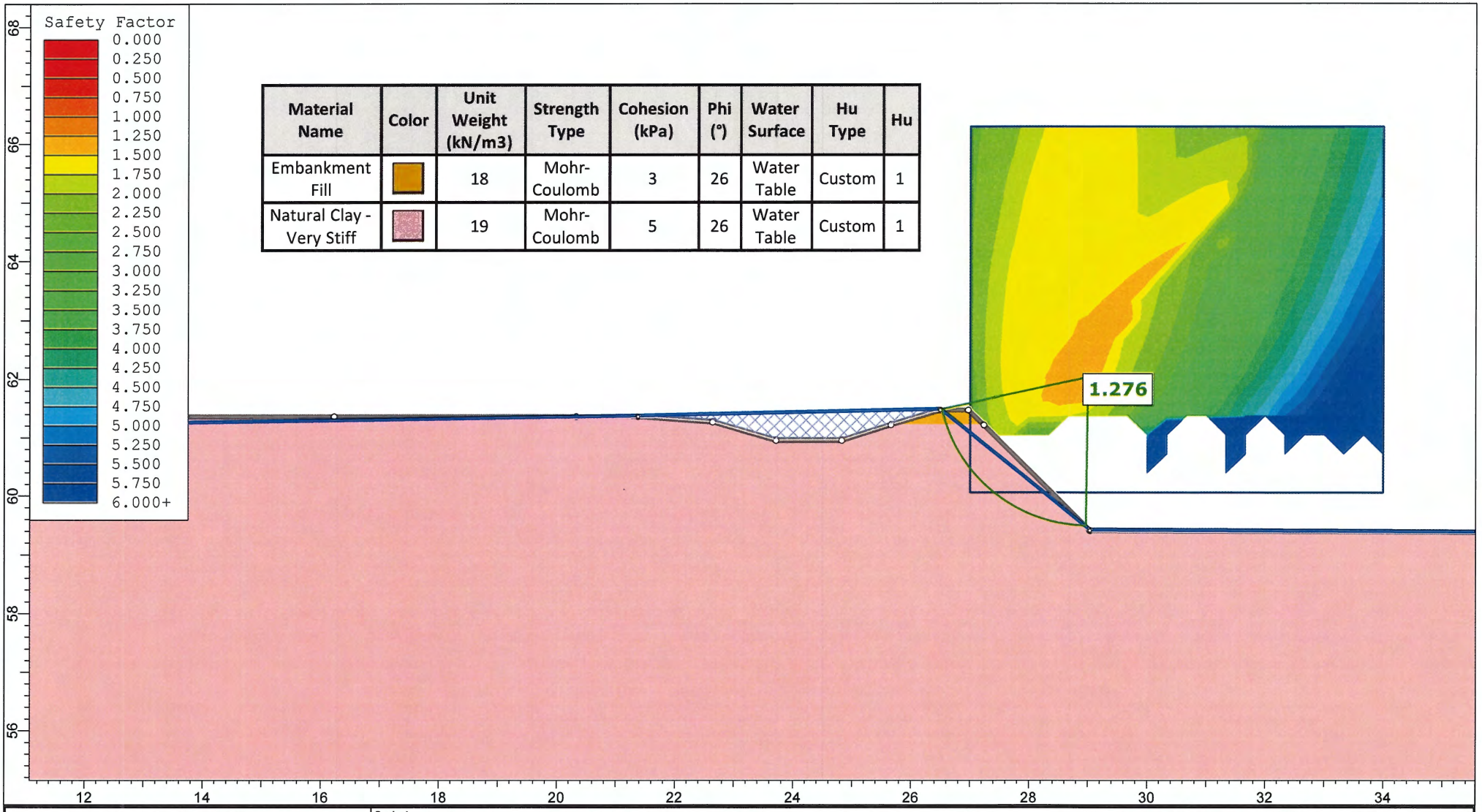
Project Slide2 - An Interactive Slope Stability Program

GroupName 9a. LOT 8382

Analysis Construction - 1V:1H Slope

Date 10/09/2025, 5:49:17 PM

File Name PG-5335-I - Stability Assessment - 11.09.25.slmd

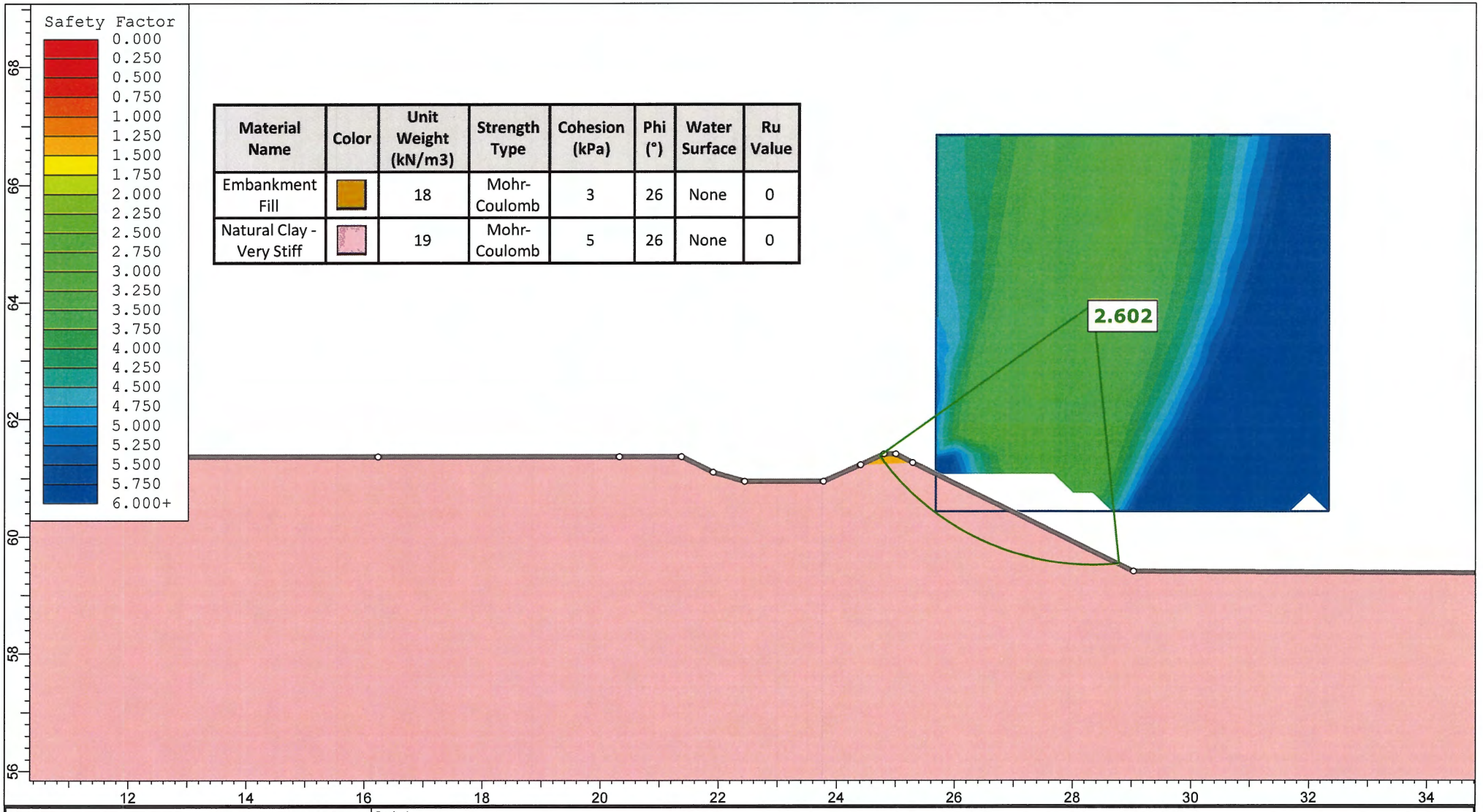


Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Water Surface	Hu Type	Hu
Embankment Fill		18	Mohr-Coulomb	3	26	Water Table	Custom	1
Natural Clay - Very Stiff		19	Mohr-Coulomb	5	26	Water Table	Custom	1

Pacific Geotech
Consulting Geotechnical Engineers

SLIDEINTERPRET 9.040

Project	Slide2 - An Interactive Slope Stability Program		
GroupName	9a. LOT 8382	*Analysis*	Elevated Groundwater - 1V:1H Slope
Date	10/09/2025, 5:49:17 PM	*File Name*	PG-5335-I - Stability Assessment - 11.09.25.slmd

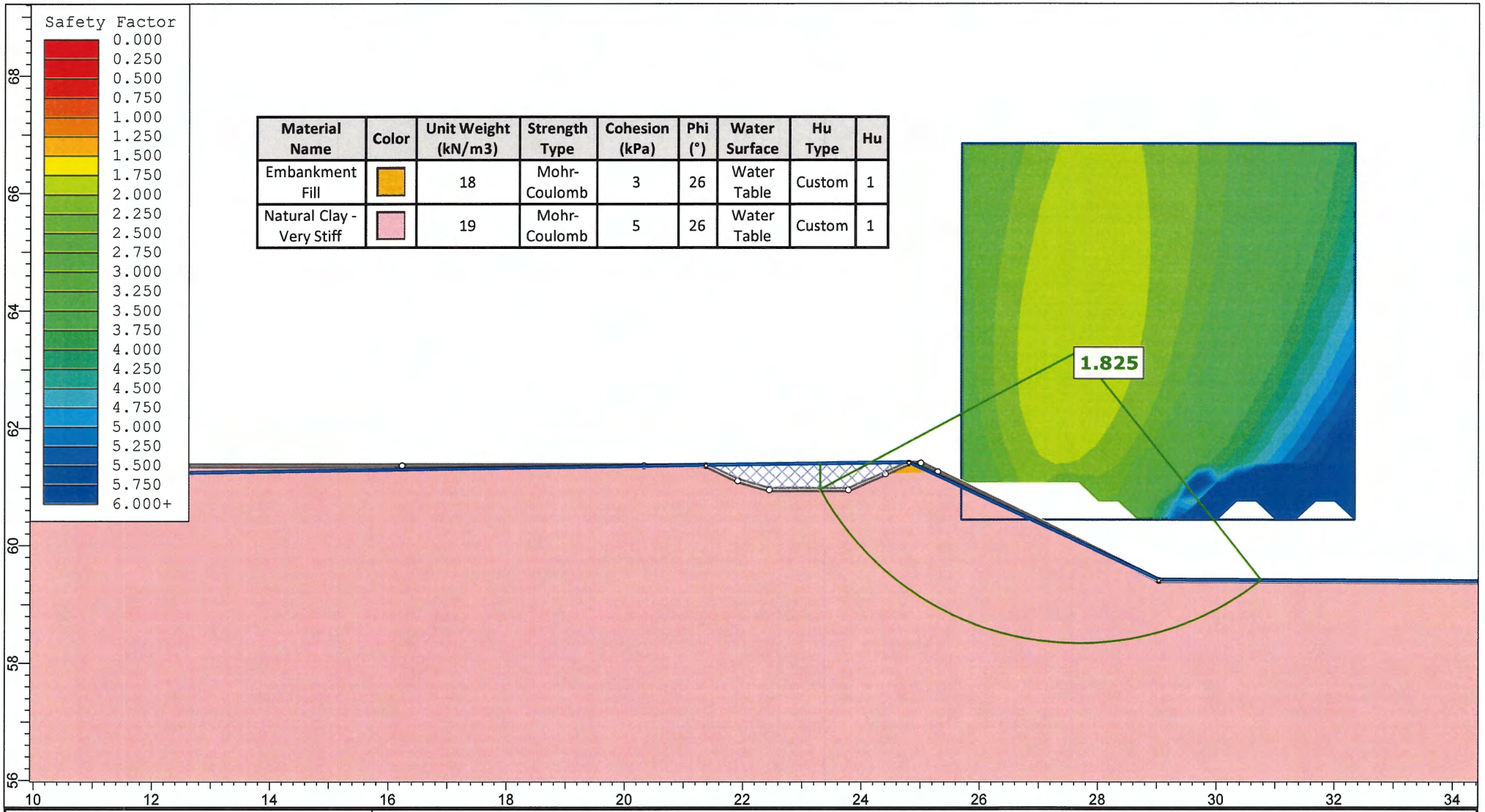


Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Water Surface	Ru Value
Embankment Fill		18	Mohr-Coulomb	3	26	None	0
Natural Clay - Very Stiff		19	Mohr-Coulomb	5	26	None	0

Pacific Geotech
Consulting Geotechnical Engineers

SLIDEINTERPRET 9.040

Project	Slide2 - An Interactive Slope Stability Program		
GroupName	9b. LOT 8382	*Analysis*	Construction - 1V:2H Slope
Date	10/09/2025, 5:49:17 PM	*File Name*	PG-5335-I - Stability Assessment - 11.09.25.slmd



Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Water Surface	Hu Type	Hu
Embankment Fill		18	Mohr-Coulomb	3	26	Water Table	Custom	1
Natural Clay - Very Stiff		19	Mohr-Coulomb	5	26	Water Table	Custom	1

Pacific Geotech
Consulting Geotechnical Engineers

SLIDEINTERPRET 9.040

Project: Slide2 - An Interactive Slope Stability Program

GroupName: 9b. LOT 8382

Analysis: Elevated Groundwater - 1V:2H Slope

Date: 10/09/2025, 5:49:17 PM

File Name: PG-5335-I - Stability Assessment - 11.09.25.slmd