

COMPANY LOGO		CALCULATION SHEET		Client Logo
Project Title	Some Project	Project No.	24xxx	
Client	Some Client	Calculation No.	24xxx-ST-CAL-0001	
Calculation Title	Some Calculation	Revision	D	
Project Phase	Detailed Design	Date	27/04/2024	

## CALCULATION OBJECTIVE / SCOPE

This is a Quarto document template (.qmd) intended to be used to develop engineering calculations in the format of a typical engineering calculation pad.

You can learn more about creating custom Typst templates here:

<https://quarto.org/docs/prerelease/1.4/typst.html#custom-formats>

For actual use, the introduction should be a *brief* description of the calculation objective and scope and ideally include a picture.

## CALCULATION ASSUMPTIONS

Document key calculation assumptions here. Generally just repeat the assumptions from the assumptions tab, but if there are a lot summarise the most important handful.

- Assumption 1
- Assumption 2
- ...

## SOFTWARE USED

- MS Excel for calculations
- Space Gass / Strand7 / RFEM, your packages here....
- ...

## HOLDS

- Hold 1
- Hold 2
- Hold 3

Rev.	Date	Description	Prepared	Checked	Approved
D	27/04/2024	Heaps More preliminary	A. Engineer	B. Engineer	C. Engineer
C	26/04/2024	Even More preliminary	A. Engineer	B. Engineer	C. Engineer
B	25/04/2024	More preliminary	A. Engineer	B. Engineer	C. Engineer

This calculation was prepared by Some Company pursuant to the Engineering Services Contract between Some Company and Some Client in connection with the services for Some Project.

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## 1 INTRODUCTION

### 1.1 Calculation Objective / Scope

This calculation covers the design of the structural steel and foundation for the XXX.

The structural steel consists of three individual sub-structures isolated to control vibrations. These buildings are all braced framed systems and columns are considered pinned base.

Foundations are either combined or individual spread reinforced concrete footings.

In addition to the main structural framing, the calculation verifies the structural adequacy of:

- Footings including hold down bolts
- Mechanical frames and equipment plinths
- Associated chute-work and chute supports

### 1.2 Exclusions

This calculation excludes the following:

- Design of the process / mechanical function for items where structural design has been completed, e.g. chutes, hoppers
- Structural design of vendor supplied equipment

### 1.3 Basis of Design

This calculation has been completed in accordance with XXXX. The Basis of Design for this calculation is described in XXXX, with mechanical load data in accordance with the XXXX.

### 1.4 Design Standards and Codes

Unless specifically noted, the design complies with Australian Standards and selected international standards as listed in the Design Criteria. The following summarises the key standards used in producing this calculation:

- AS 1170.0 - 2002 Structural design actions - Part 0: General principles
- AS 1170.1 - 2002 Structural design actions - Part 1: Permanent, imposed and other actions
- AS 1170.2 - 2021 Structural design actions - Part 2: Wind actions
- AS 1170.4 - 2007 Structural design actions - Part 4: Earthquake Actions in Australia
- AS 3600 - 2018 Concrete structures
- AS 4100 - 1998 Steel structures

### 1.5 Other Reference Documents

Other reference documents used in this design include: \* Geotechnical Report \* Certified Vendor Drawings

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## 2 ASSUMPTIONS

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### 2.1 Holds

### 2.2 Assumptions

### 2.3 Relied on Information

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### 3 DRAWINGS

This calculation covers the structural components on the drawings and/or sketches listed in the following table:

Drawing Number	Drawing Title	Revision
0001	General Arrangement	A
0002	Details 1	0
0003	Details 2	C1
0004	Earthworks	x

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## 4 METHODOLOGY, LOADING AND LOAD COMBINATIONS

Do some calculation here.

```
import numpy as np
import pandas as pd
import matplotlib.pyplot as plt

a = 1
b = 2
a + b
```

3

And some text.

And now plot a graph (see Figure 1):

```
x = np.linspace(0, 10, 100)
y = np.sin(x)

plt.plot(x,y)
```

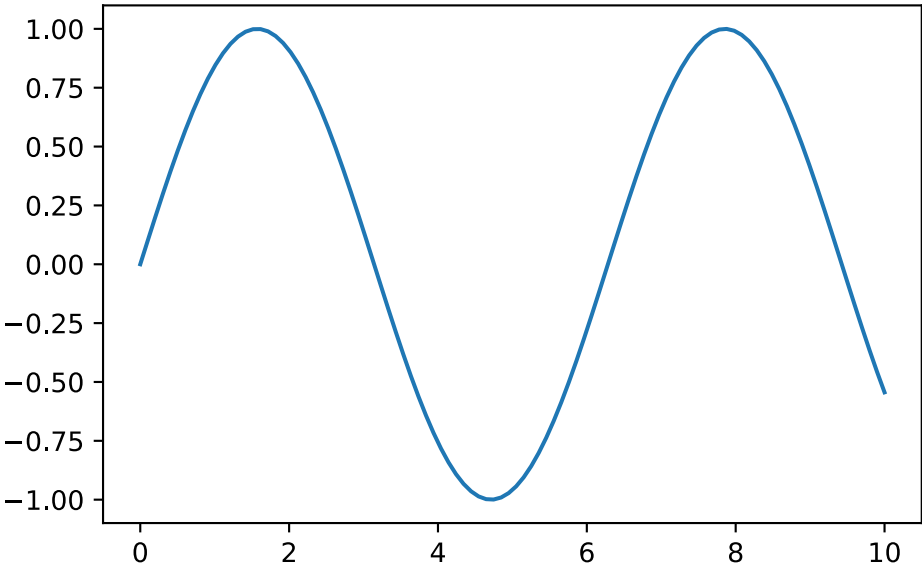


Figure 1: Test Figure

Woohoo!

And do some data processing with Pandas (see Table 1):

```
z = np.cos(x)
df = pd.DataFrame({"x": x, "y": y, "z": z},)

df.head()
```

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Table 1: Test Data

	x	y	z
0	0.00000	0.000000	1.000000
1	0.10101	0.100838	0.994903
2	0.20202	0.200649	0.979663
3	0.30303	0.298414	0.954437
4	0.40404	0.393137	0.919480

💡 Tip 1: Tip

This is an example of a callout “tip”.

⚠ Warning

This is an example of a callout “warning”.

! Important

This is an example of an “important” callout.

Callouts can even be cross-referenced - see Tip 1. So can sections - see Section 1.

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## 5 CALCULATION

Copy this section as required.



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6 APPENDIX A

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7 APPENDIX B

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