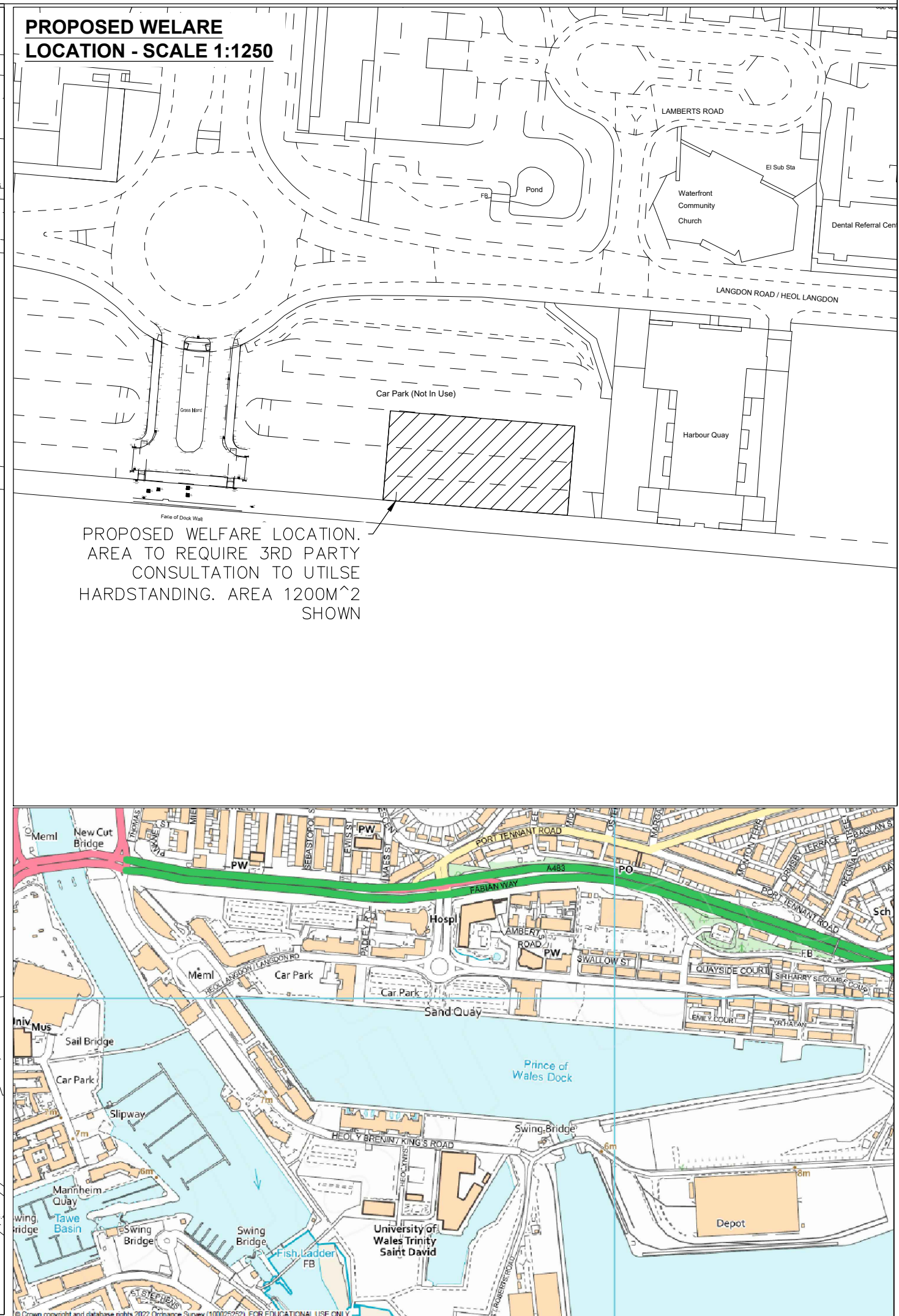
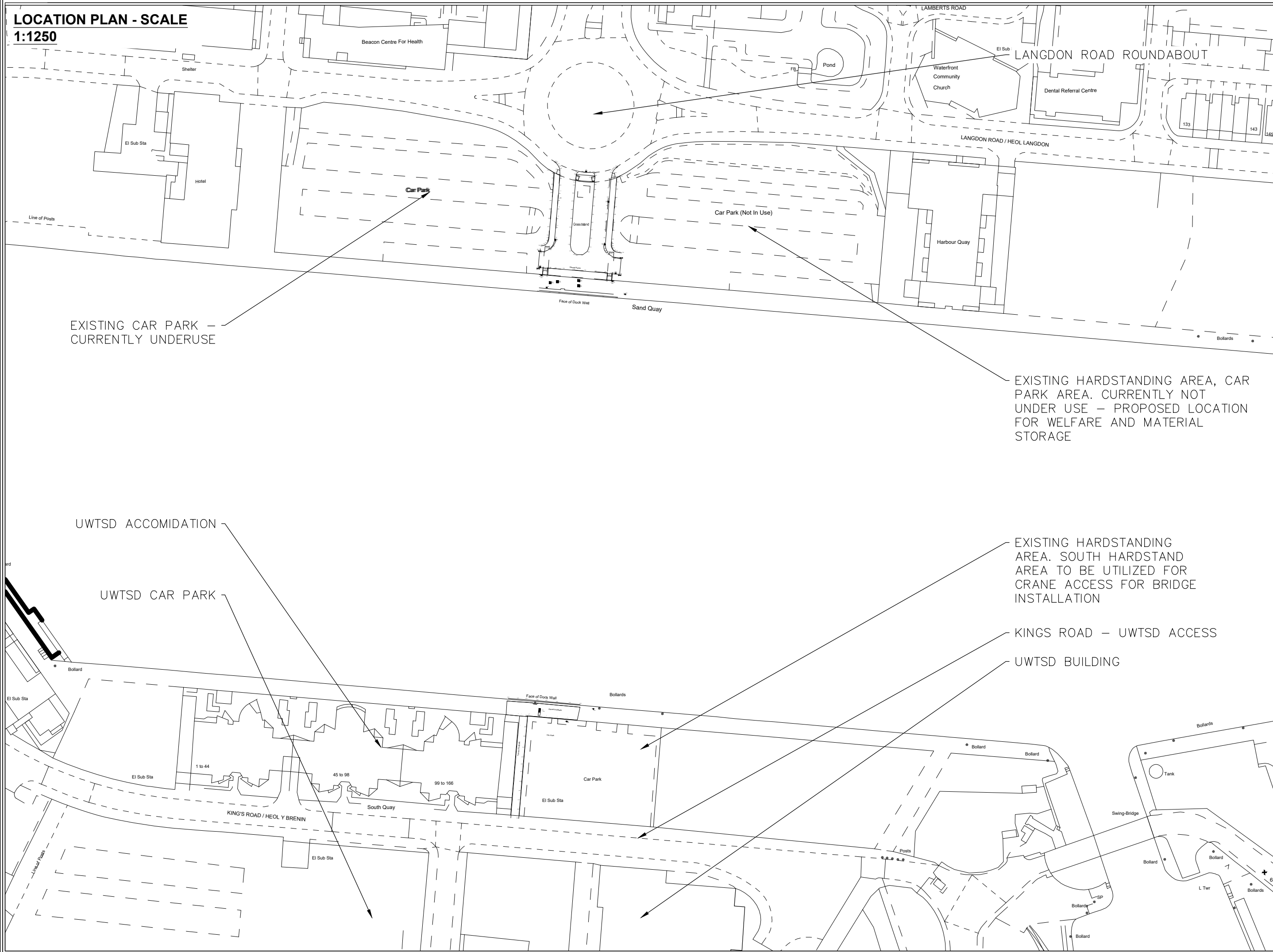


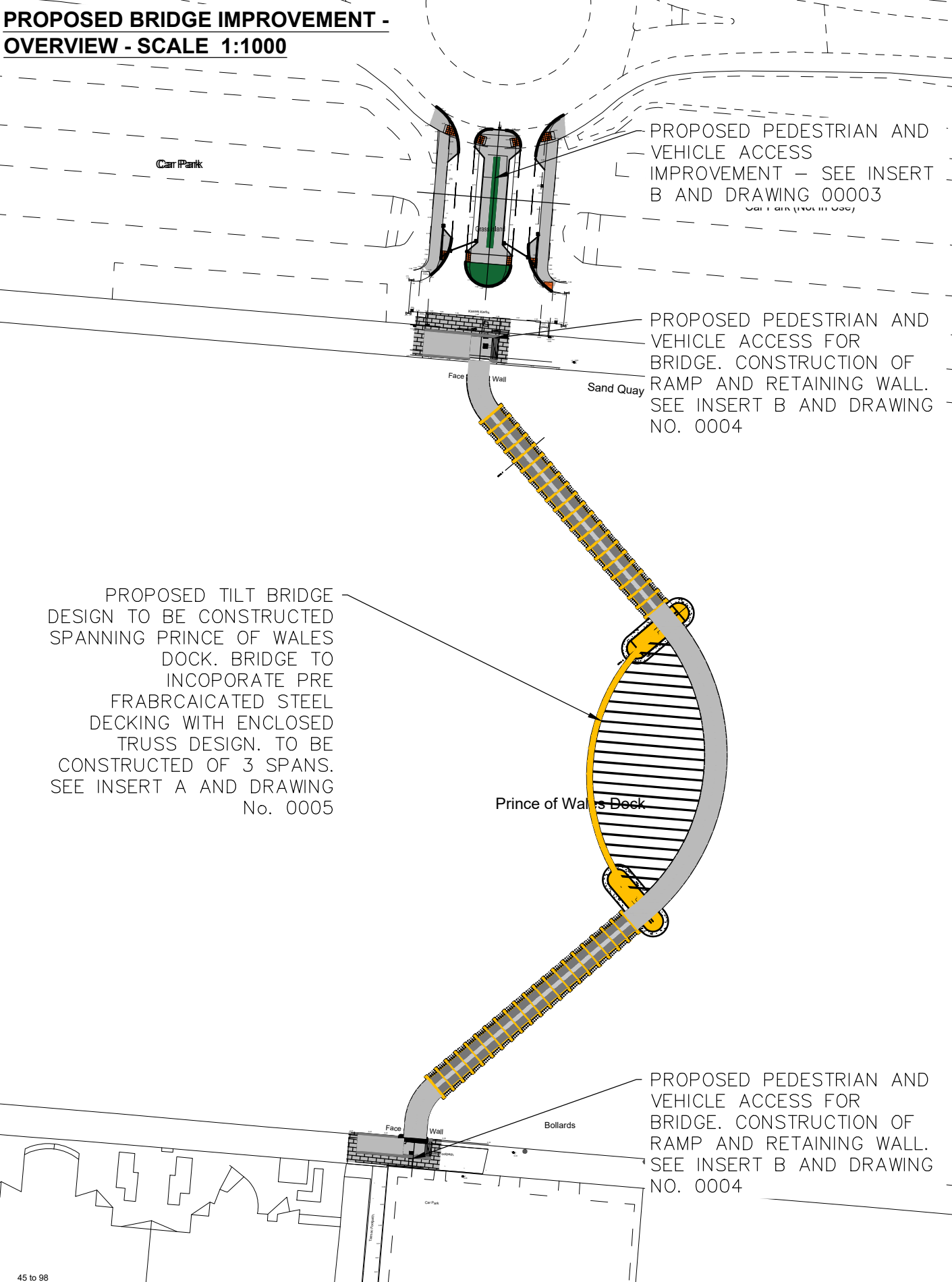
# SPRINGFIELD DESIGNS Ltd



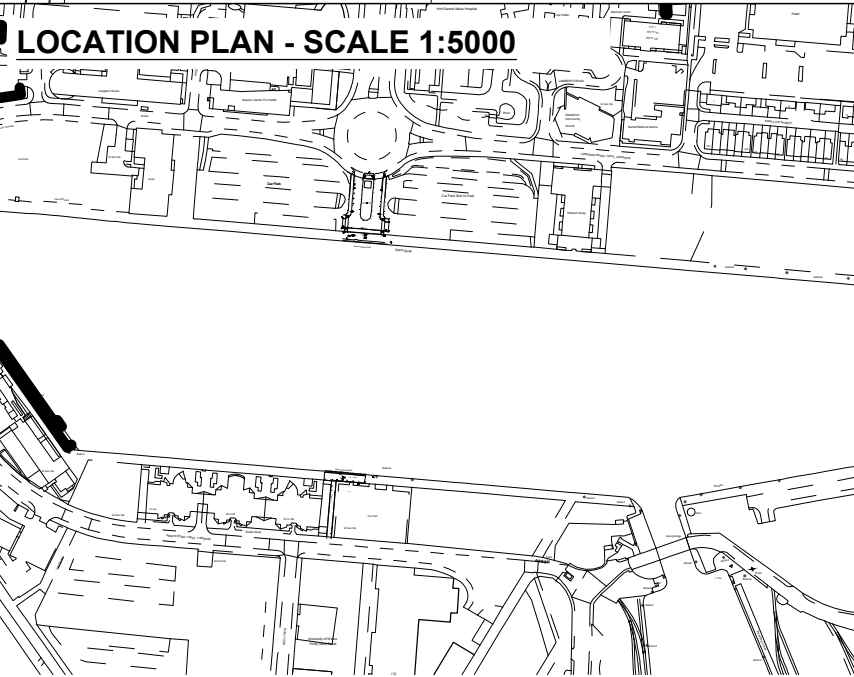
| DRAWING TITLE                               |  |  |  | PROJECT TITLE                                      |  |  |  | DRAWING No.                 |  |  |  |
|---------------------------------------------|--|--|--|----------------------------------------------------|--|--|--|-----------------------------|--|--|--|
| LOCATION PLAN AND PROPOSED WELFARE LOCATION |  |  |  | ACBA6003 - SPRINGFIELD DESIGNS - PEDESTRIAN BRIDGE |  |  |  | 6003-UWTSD-ZZ-ZZ-SP-A-00001 |  |  |  |
| CAD REF.                                    |  |  |  | REV.                                               |  |  |  | REV.                        |  |  |  |
| DRAWN BY RM 11/22 SCALE                     |  |  |  | PROJECT PHASE                                      |  |  |  | DESCRIPTION                 |  |  |  |
| CHECKED XXX X/XX SHOWN                      |  |  |  | BY                                                 |  |  |  | DATE                        |  |  |  |

# SPRINGFIELD DESIGNS Ltd

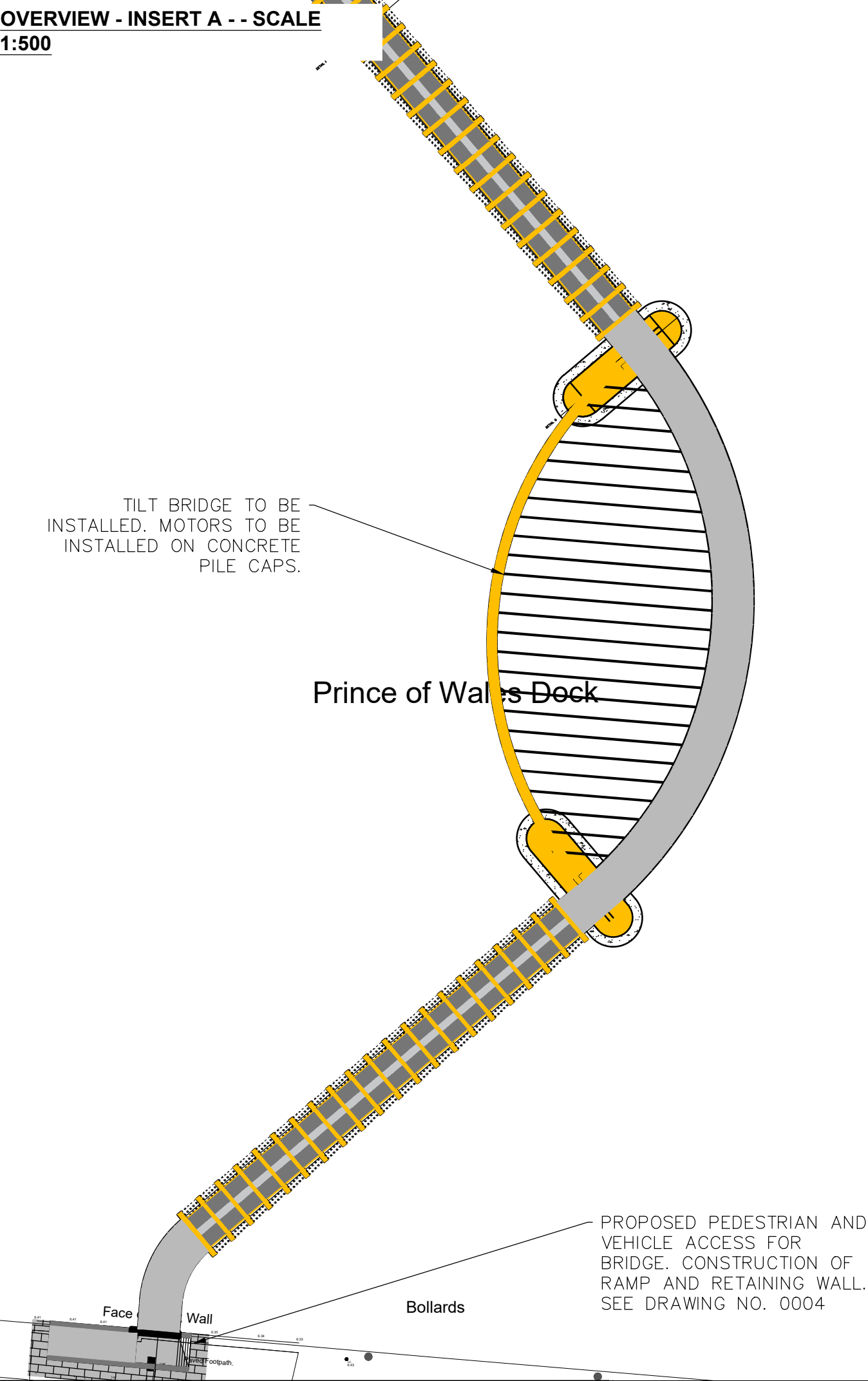
PROPOSED BRIDGE IMPROVEMENT -  
OVERVIEW - SCALE 1:1000



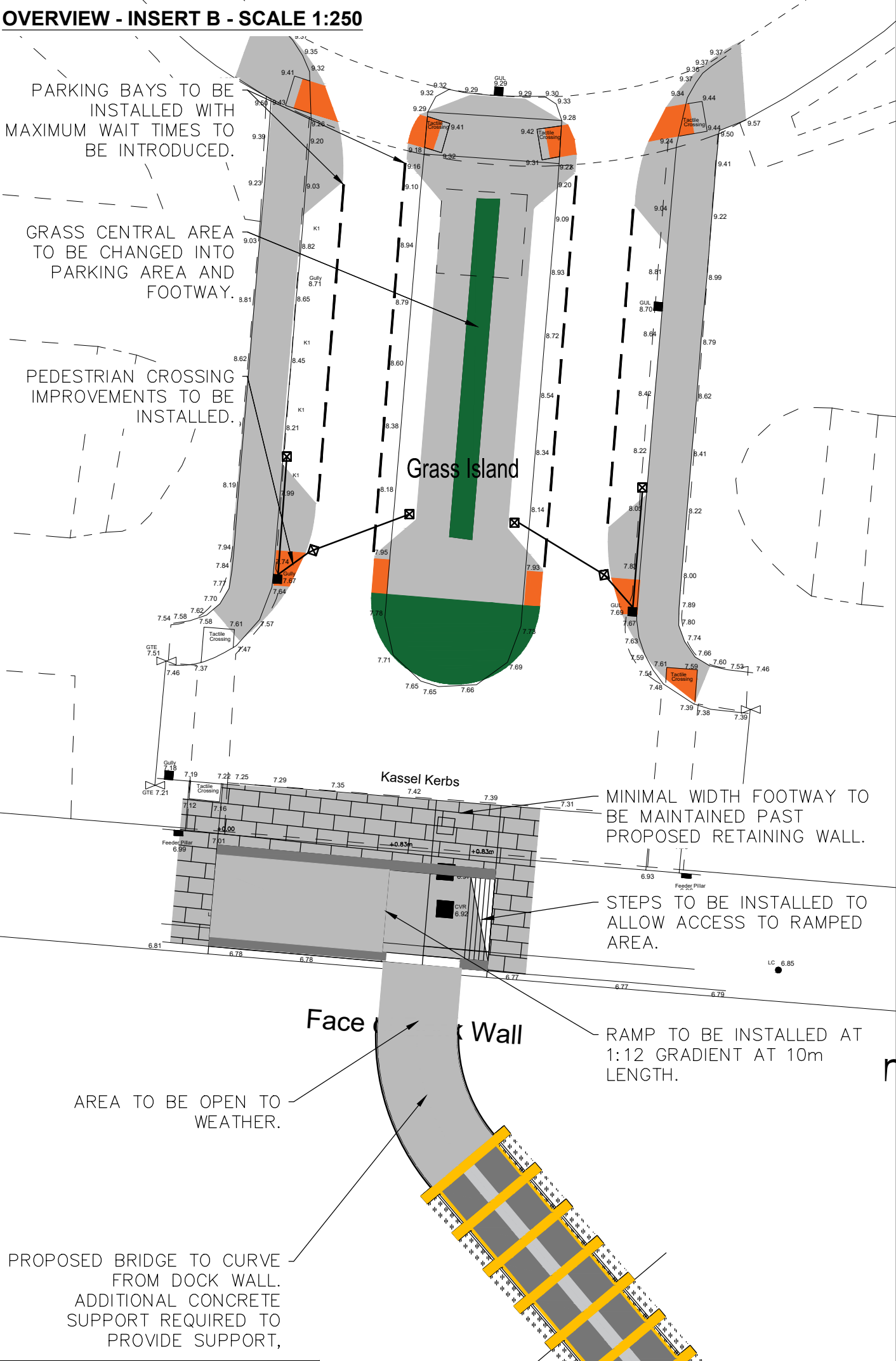
LOCATION PLAN - SCALE 1:5000



OVERVIEW - INSERT A - - SCALE  
1:500



OVERVIEW - INSERT B - SCALE 1:250



DRAWING TITLE  
**PROPOSED BRIDGE DESIGN OVERVIEW  
WITH ACCESS AND PARKING PROVISION  
ON LANGDON ROAD**

|          |     |       |       |       |
|----------|-----|-------|-------|-------|
| DRAWN BY | RM  | 11/22 | SCALE | SHOWN |
| CHECKED  | XXX | x/xx  |       |       |

PROJECT TITLE  
**ACBA6003 - SPRINGFIELD DESIGNS -  
PEDESTRIAN BRIDGE**

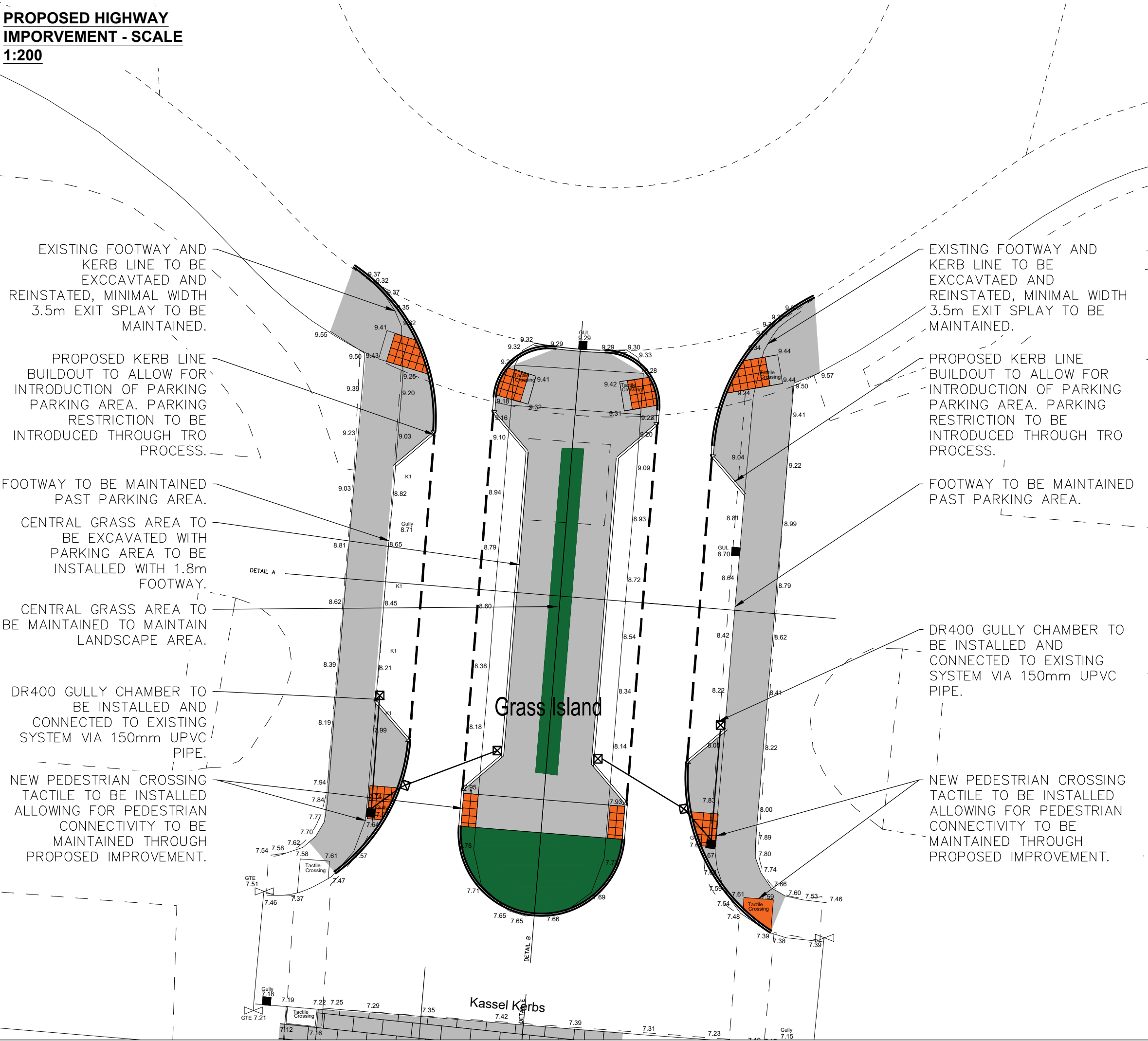
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|---------------|-------|------|
| CAD REF.      | CAD   |      |
| PROJECT PHASE | PHASE | REV. |

DRAWING No.  
**6003-UWTS-PP-PP-SP-A-00002**

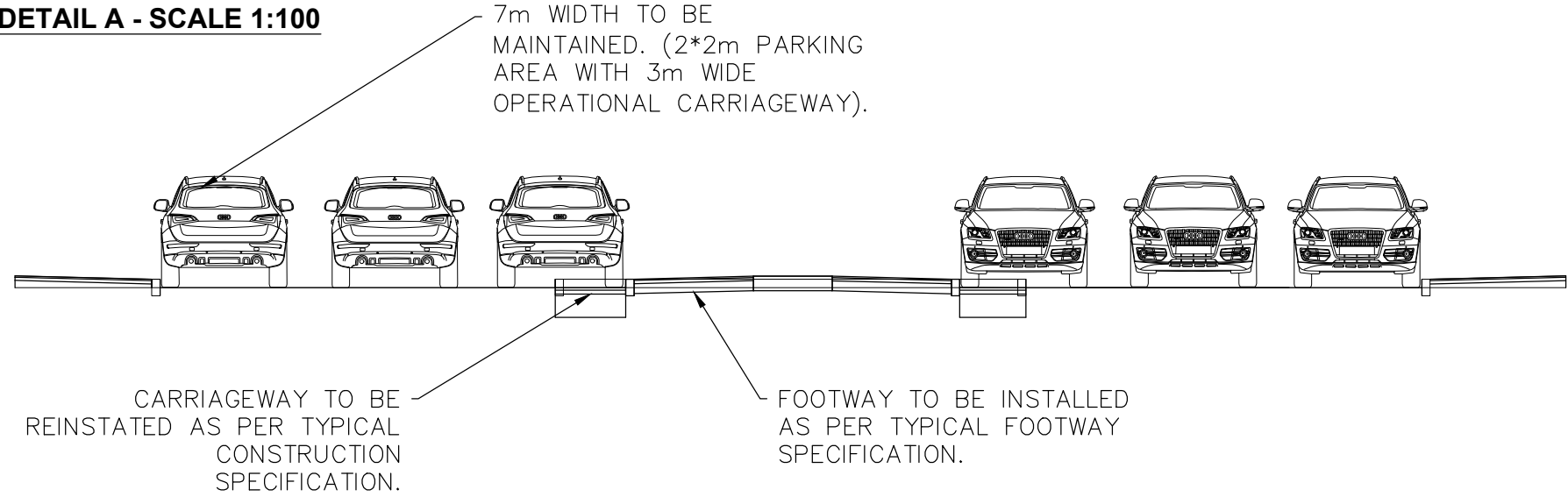
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|------|-------------|----|------|
| REV. | DESCRIPTION | BY | DATE |
|      |             |    |      |
|      |             |    |      |
|      |             |    |      |

# SPRINGFIELD DESIGNS Ltd

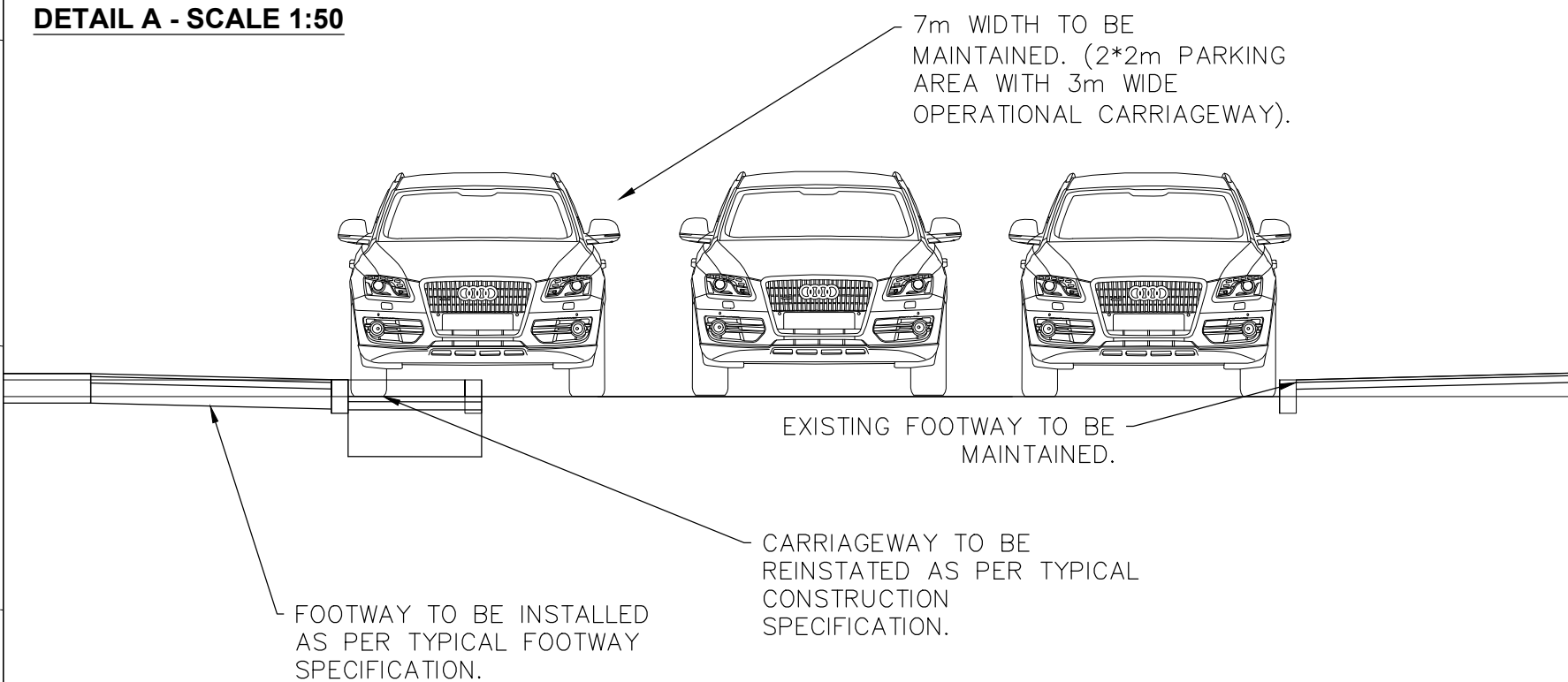
PROPOSED HIGHWAY IMPORVEMENT - SCALE 1:200



DETAIL A - SCALE 1:100



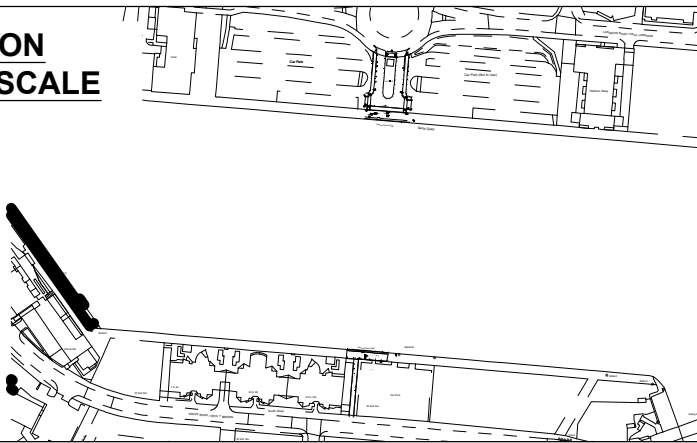
DETAIL A - SCALE 1:50



DETAIL B - SCALE 1:150



LOCATION PLAN - SCALE 1:5000



DRAWING TITLE

PROPOSED HIGHWAY IMPROVEMENT -  
LANGDON ROAD - PARKING PROVISION  
FOR VEHICLES

DRAWN BY RM 11/22  
CHECKED XXX x/xx

SCALE

SHOWN

PROJECT TITLE

ACBA6003 - SPRINGFIELD DESIGNS -  
PEDESTRIAN BRIDGE

CAD REF.

CAD

PROJECT  
PHASE

PHASE

REV.

DRAWING No.

6003-UWTS-SD-ZZ-ZZ-SP-A-00002

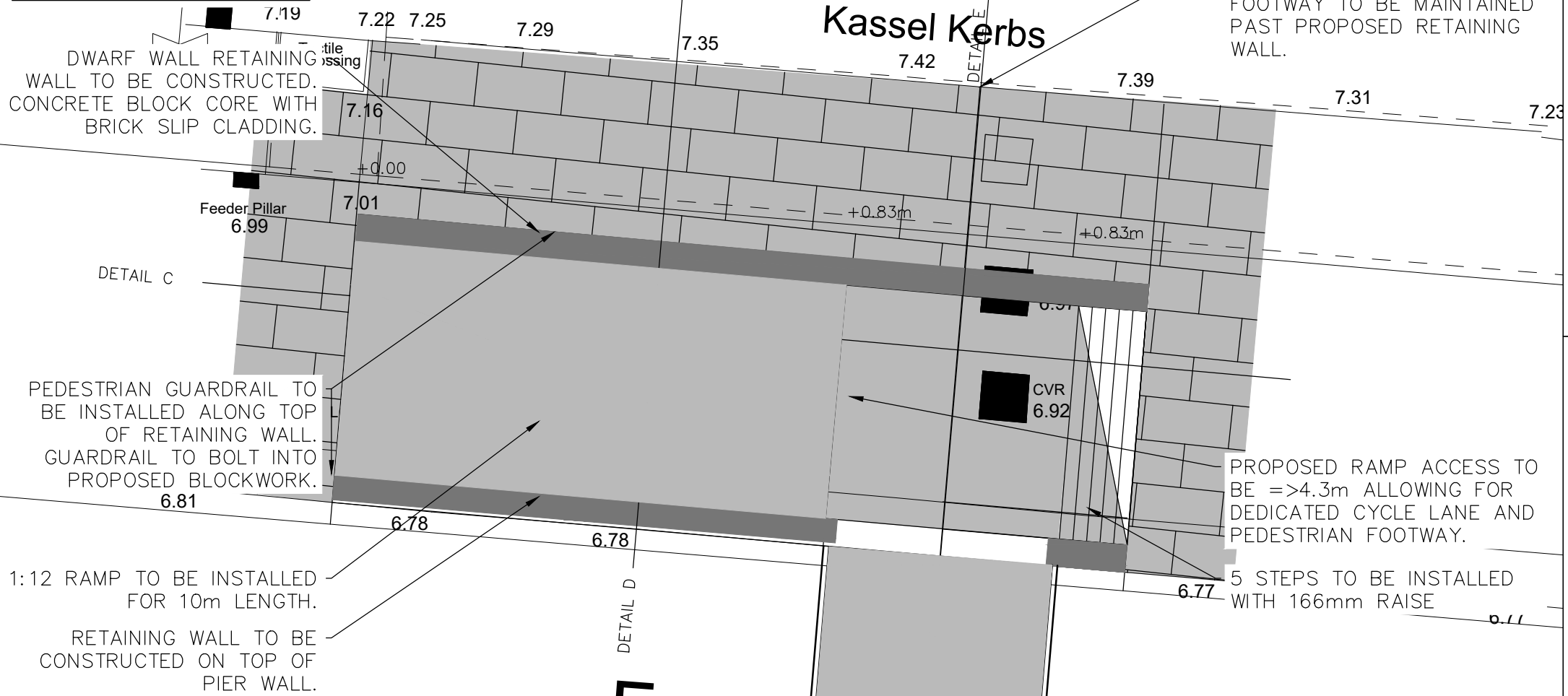
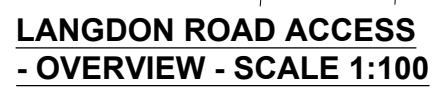
REV.

DESCRIPTION

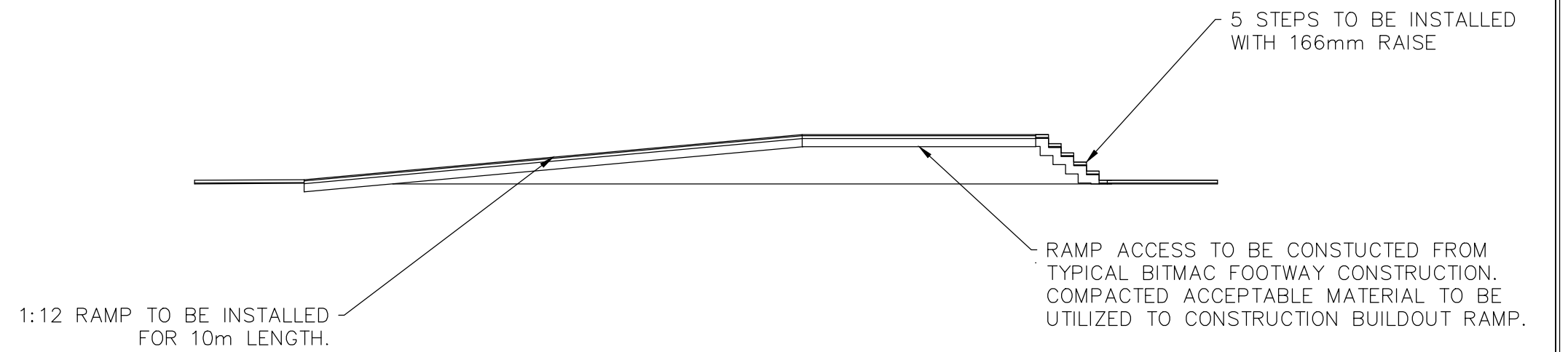
BY

DATE

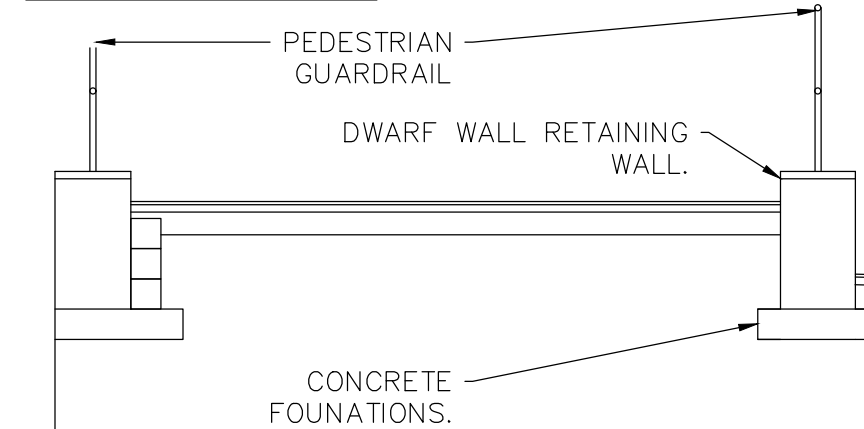
# SPRINGFIELD DESIGNS Ltd



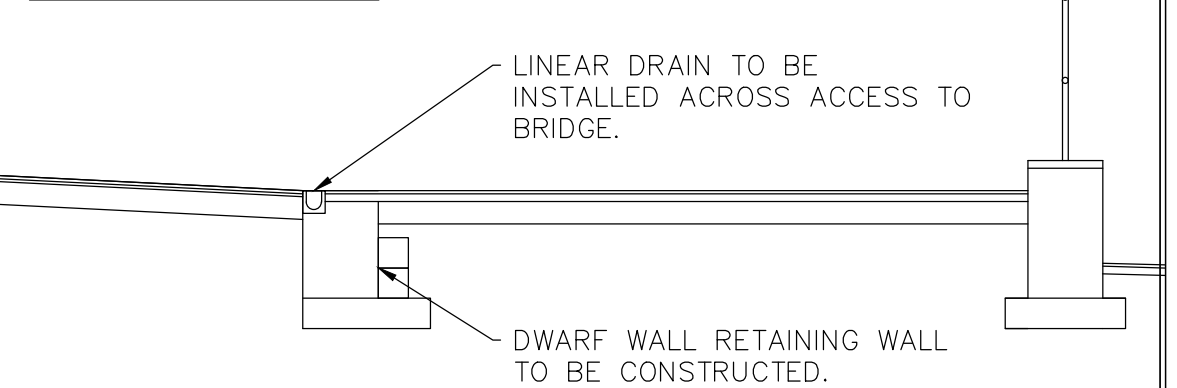
**DETAIL C - SCALE 1:50**



**DETAIL D - SCALE 1:50**



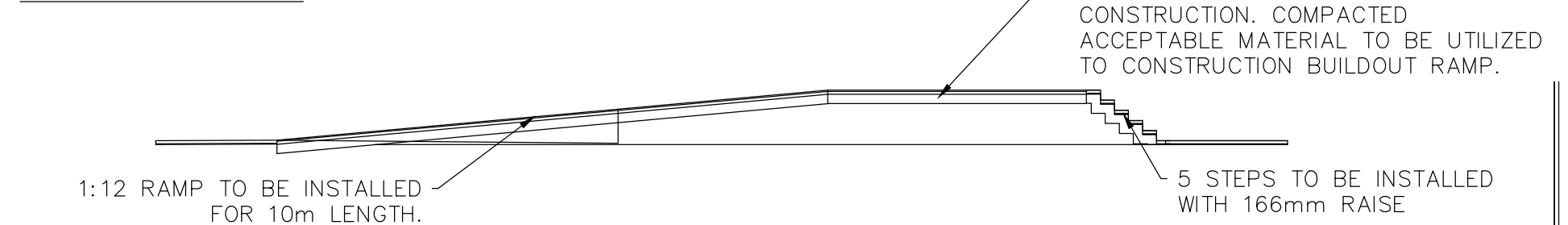
**DETAIL E - SCALE 1:50**



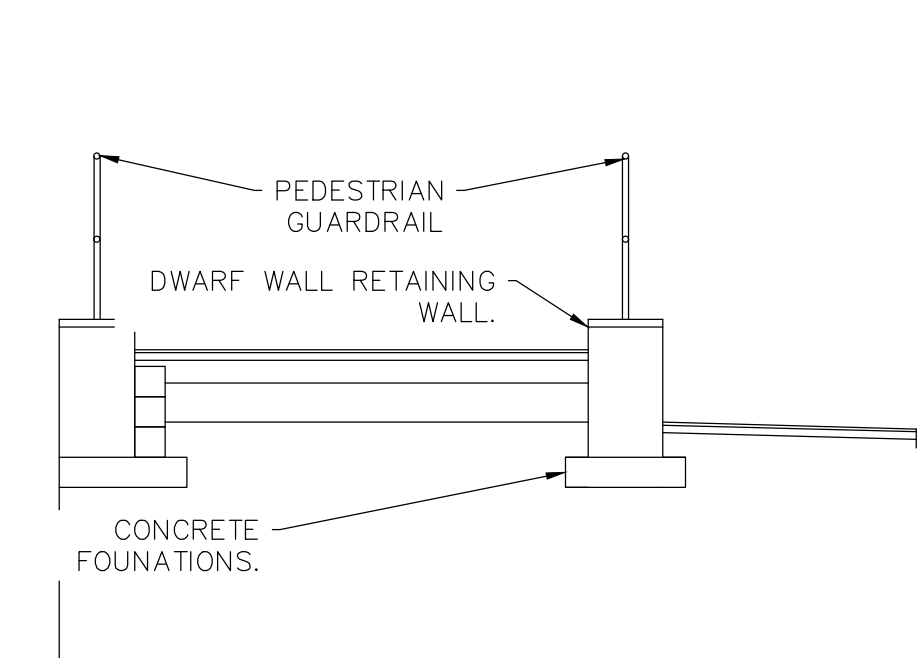
**KINGS ROAD ACCESS -  
OVERVIEW - SCALE 1:100**



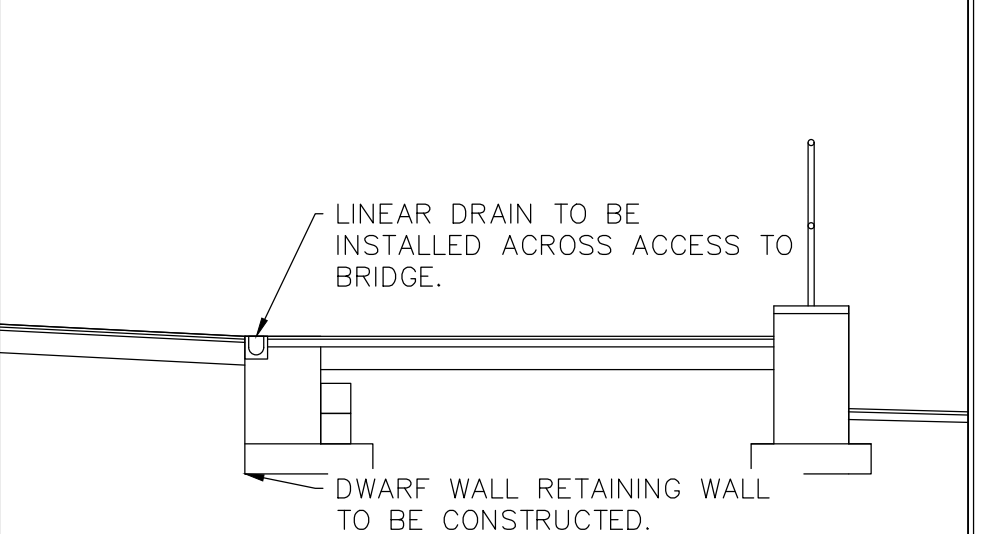
**DETAIL H - SCALE 1:50**



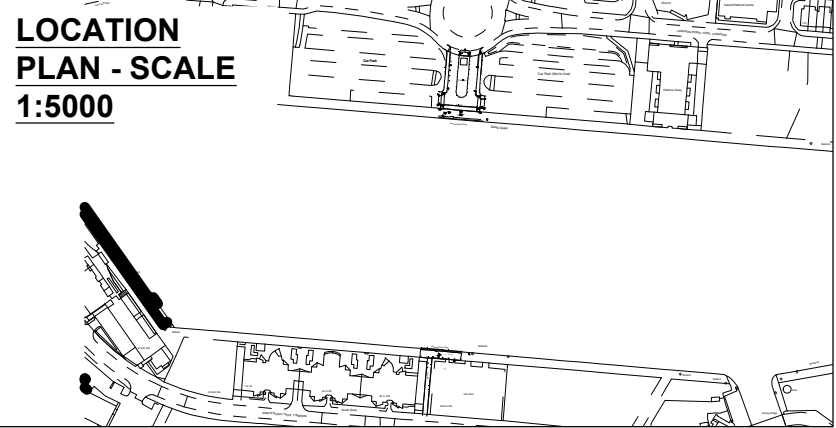
**DETAIL I - SCALE 1:50**



**DETAIL J - SCALE 1:50**



**LOCATION**  
**PLAN - SCALE**  
**1:5000**



DRAWING TITLE

**PROPOSED RAMPED AND STEPPED  
ACCESS AT LANGDON ROAD AND KINGS  
ROAD  
PROPOSED RAMPS AND RETAINING  
WALLS.**

|                 |     |       |                    |
|-----------------|-----|-------|--------------------|
| <i>DRAWN BY</i> | RM  | 11/22 | SCALE<br><br>SHOWN |
| <i>CHECKED</i>  | xxx | x/xx  |                    |

PROJECT TITLE

## ACBA6003 - SPRINGFIELD DESIGNS - PEDESTRIAN BRIDGE

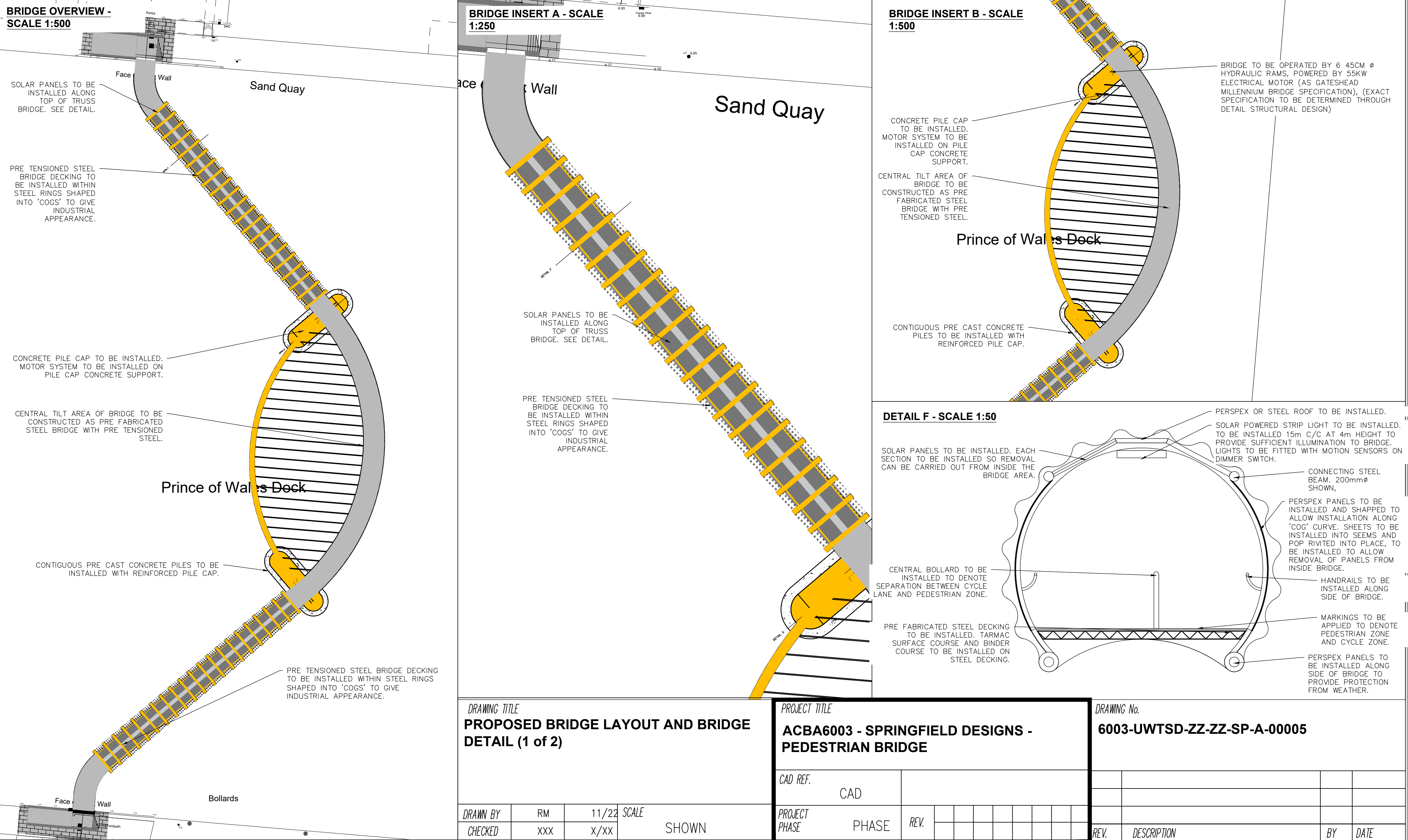
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DRAWING No.

6003-UWTSD-ZZ-ZZ-SP-A-00004

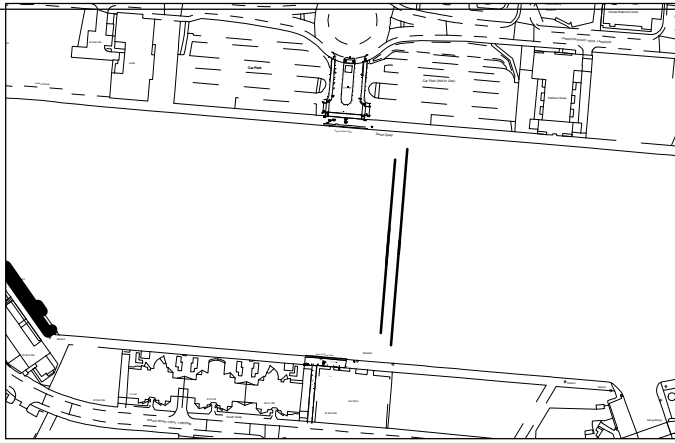
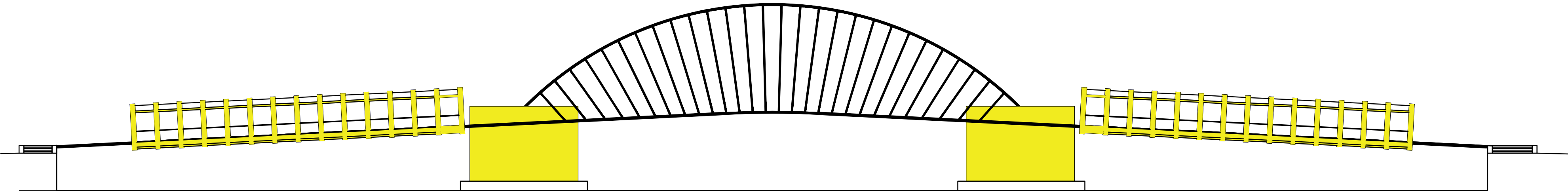
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|      |             |    |      |
|      |             |    |      |
|      |             |    |      |
| REV. | DESCRIPTION | BY | DATE |

# SPRINGFIELD DESIGNS Ltd



# SPRINGFIELD DESIGNS Ltd

BRIDGE ELEVATION -  
A1-A1 - NTS



DRAWING TITLE  
**PROPOSED BRIDGE LAYOUT AND BRIDGE  
DETAIL (2 of 2)  
BRIDGE FOUNDATION DETAIL AND  
ELEVATIONS**

|          |     |       |       |       |
|----------|-----|-------|-------|-------|
| DRAWN BY | RM  | 11/22 | SCALE | SHOWN |
| CHECKED  | XXX | X/XX  |       |       |

PROJECT TITLE  
**ACBA6003 - SPRINGFIELD DESIGNS -  
PEDESTRIAN BRIDGE**

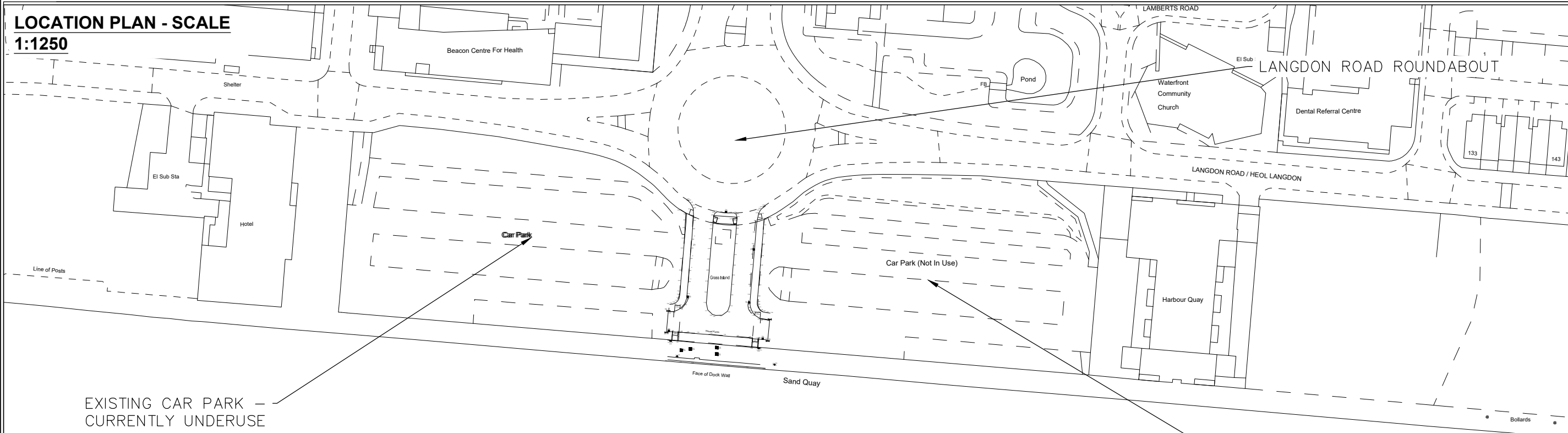
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|---------------|-------|------|
| CAD REF.      | CAD   |      |
| PROJECT PHASE | PHASE | REV. |

DRAWING No.  
**PED2-SPR-DR-C-0006-S1**

|      |             |    |      |
|------|-------------|----|------|
| REV. | DESCRIPTION | BY | DATE |
|------|-------------|----|------|

# SPRINGFIELD DESIGNS Ltd

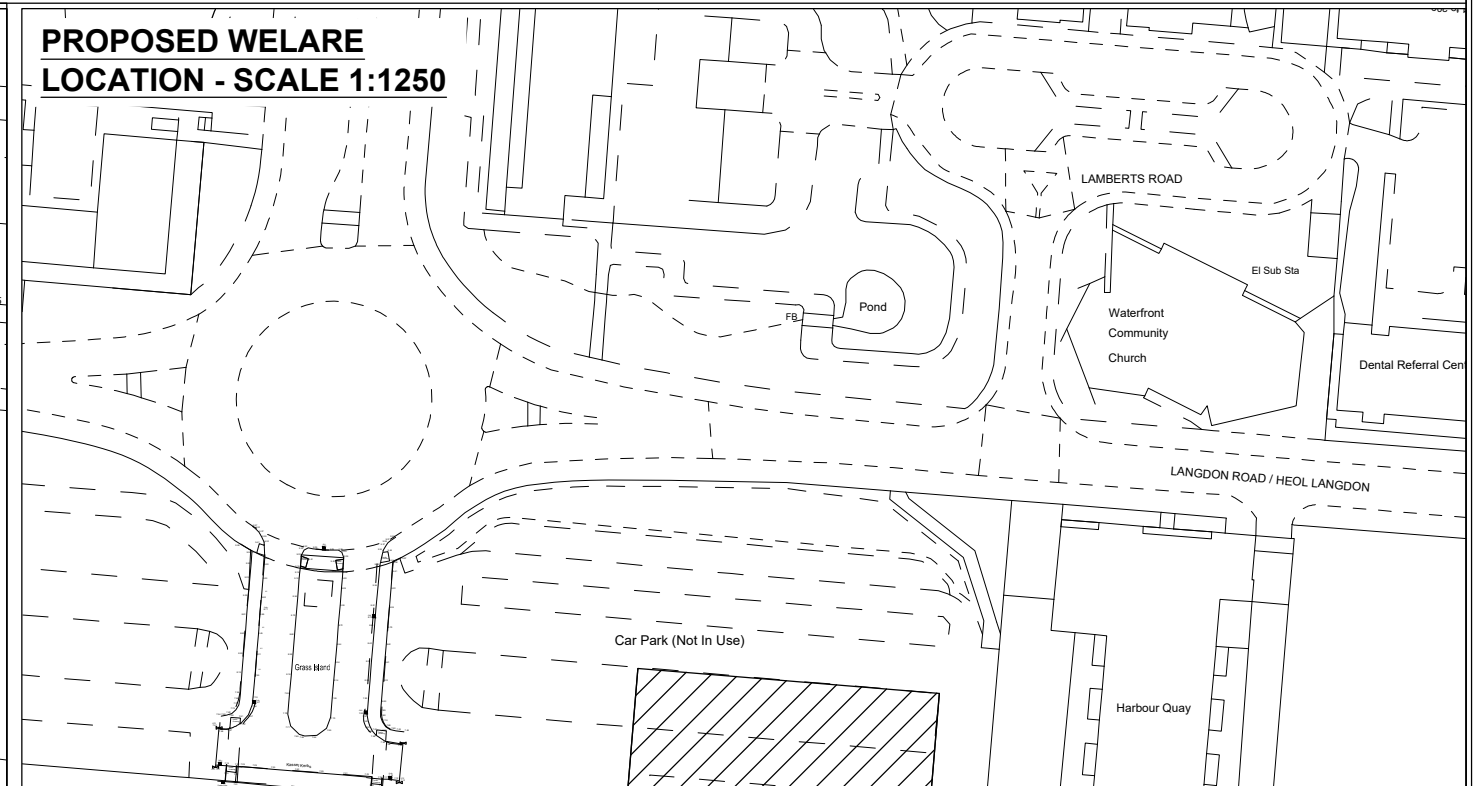
**LOCATION PLAN - SCALE**  
**1:1250**



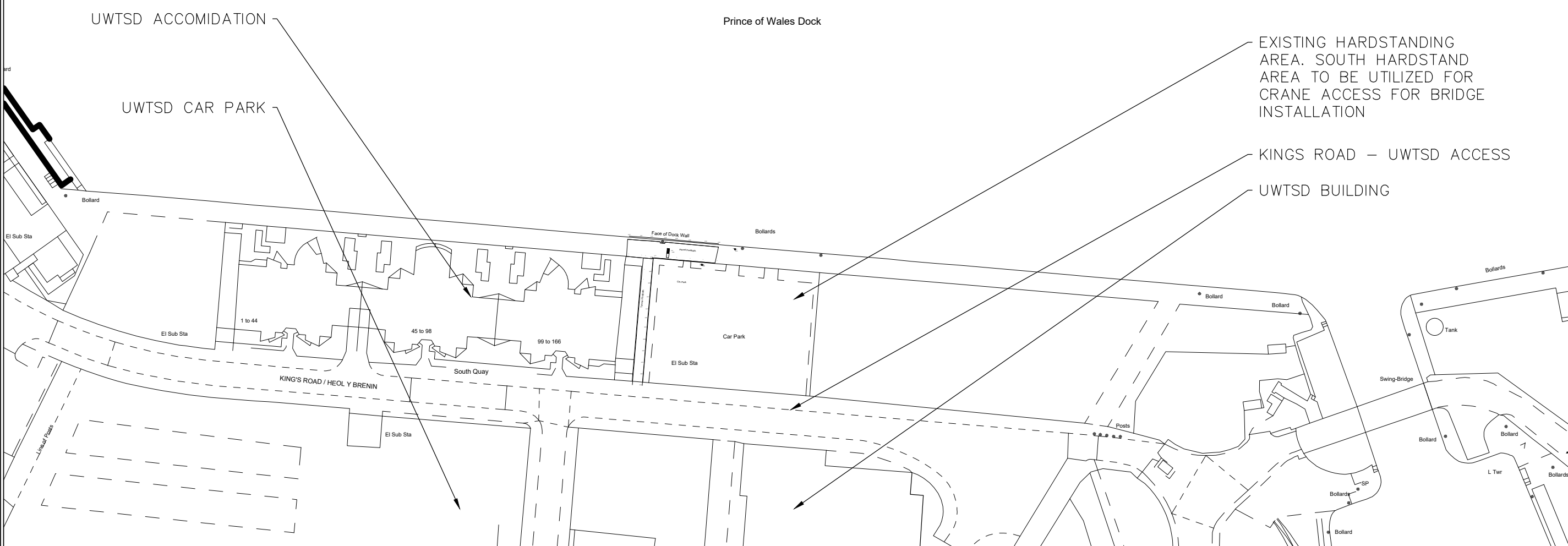
EXISTING CAR PARK –  
CURRENTLY UNDERUSE

EXISTING HARDSTANDING AREA, CAR  
PARK AREA. CURRENTLY NOT  
UNDER USE – PROPOSED LOCATION  
FOR WELFARE AND MATERIAL  
STORAGE

**PROPOSED WELARE**  
**LOCATION - SCALE 1:1250**



PROPOSED WELFARE LOCATION.  
AREA TO REQUIRE 3RD PARTY  
CONSULTATION TO UTILISE  
HARDSTANDING. AREA 1200M<sup>2</sup>  
SHOWN



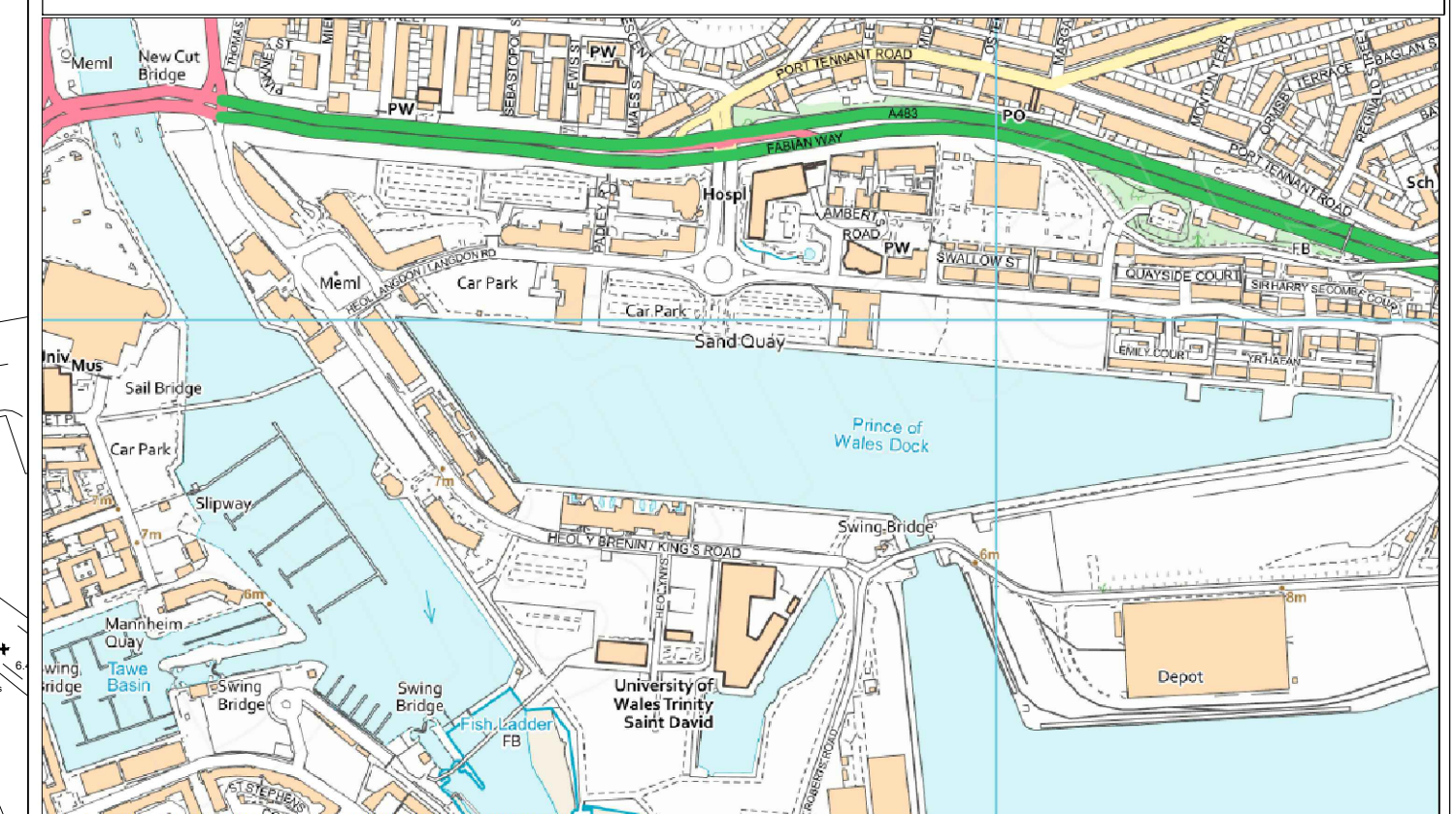
UWTSD ACCOMIDATION

UWTSD CAR PARK

EXISTING HARDSTANDING  
AREA. SOUTH HARDSTAND  
AREA TO BE UTILIZED FOR  
CRANE ACCESS FOR BRIDGE  
INSTALLATION

KINGS ROAD - UWTSO ACCESS

UWTSD BUILDING



*DRAWING TITLE*

## LOCATION PLAN AND PROPOSED WELFARE LOCATION

DRAWN BY

RM

---

11/22

SCALE

SHOWN

PROJECT TITLE

## ACBA6003 - SPRINGFIELD DESIGNS - PEDESTRIAN BRIDGE

CAD REF.

CAD

PROJECT

PHASE

REV.

DRAWING No.

**6003-UWTSD-ZZ-ZZ-SP-A-00001**

REV.

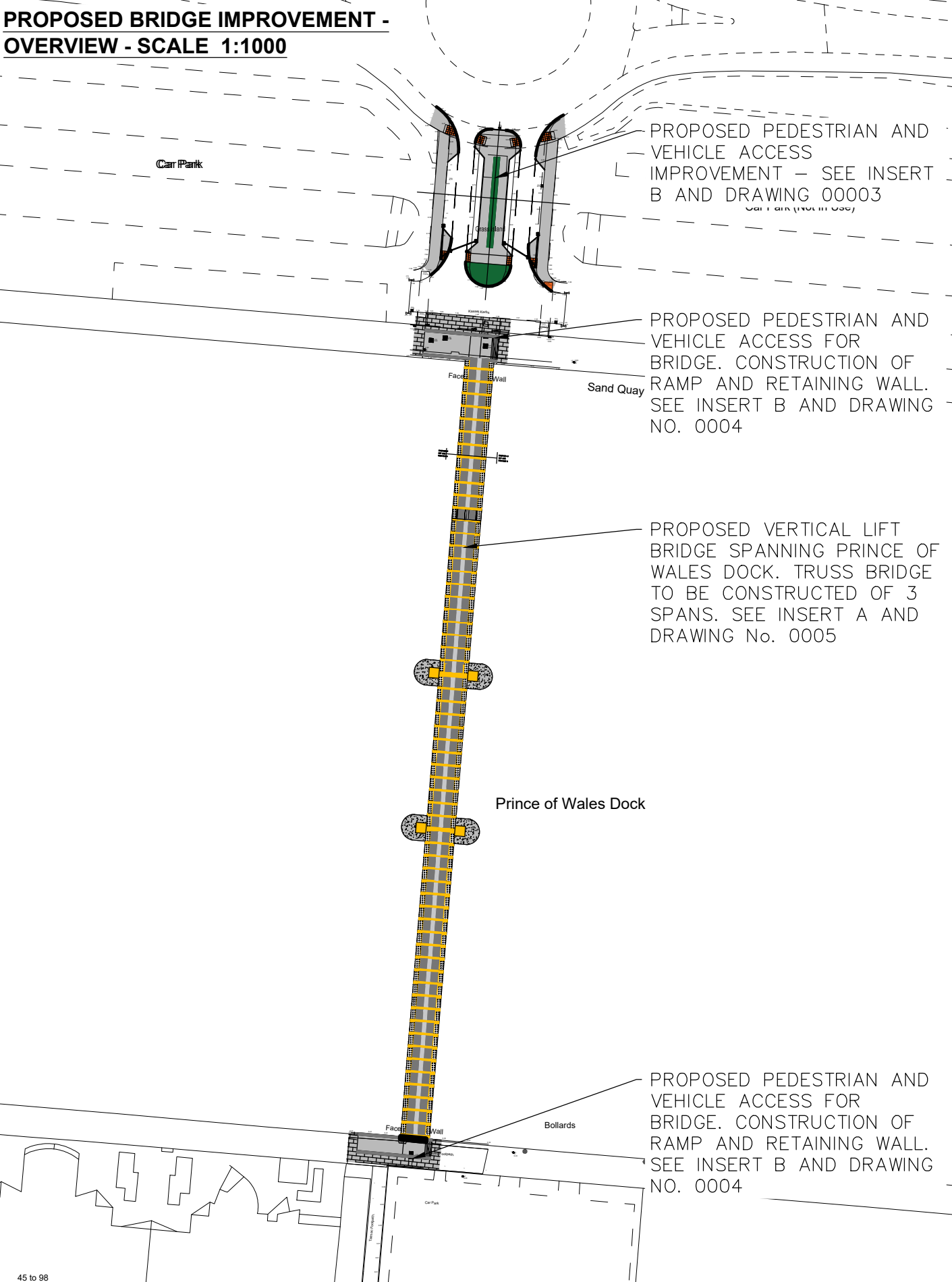
| DESCRIPTION |
|-------------|
|-------------|

BY

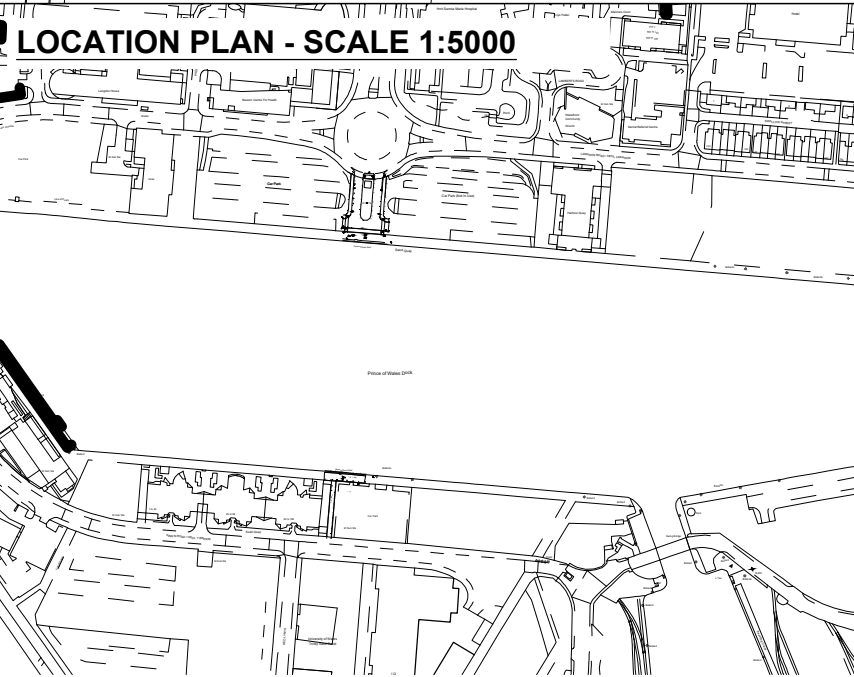
DATE \_\_\_\_\_

# SPRINGFIELD DESIGNS Ltd

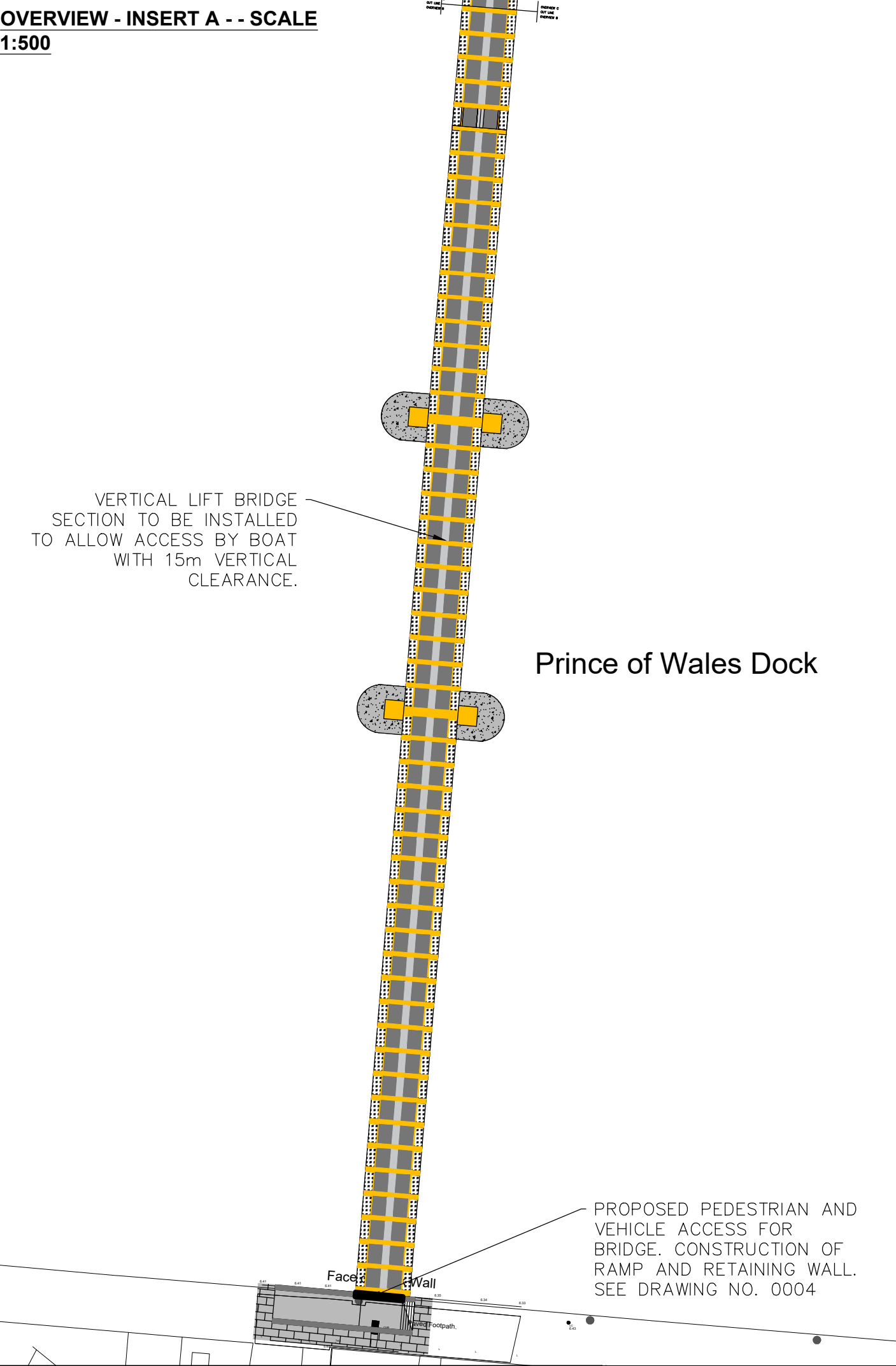
PROPOSED BRIDGE IMPROVEMENT -  
OVERVIEW - SCALE 1:1000



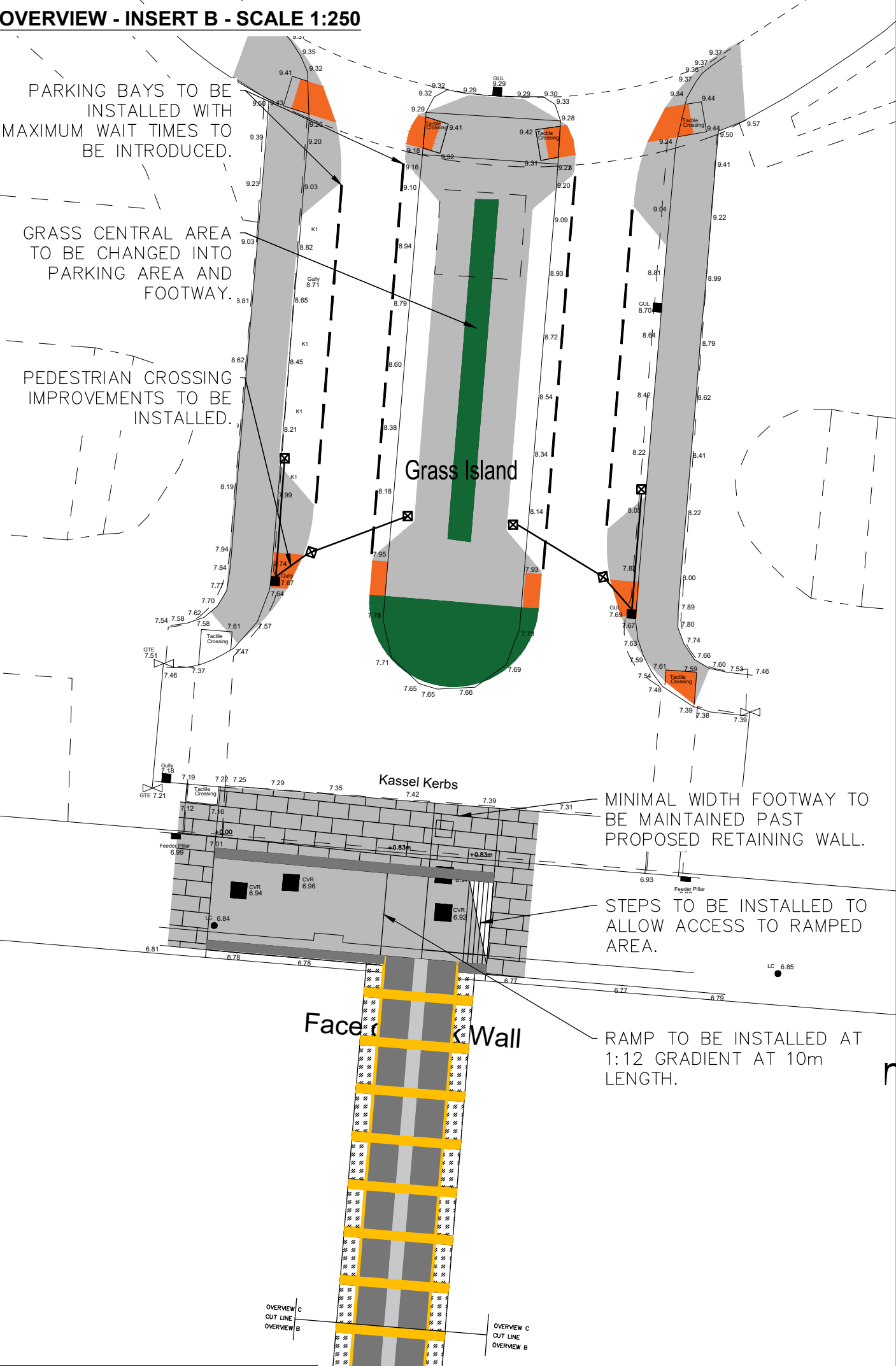
LOCATION PLAN - SCALE 1:5000



OVERVIEW - INSERT A - - SCALE  
1:500



OVERVIEW - INSERT B - SCALE 1:250



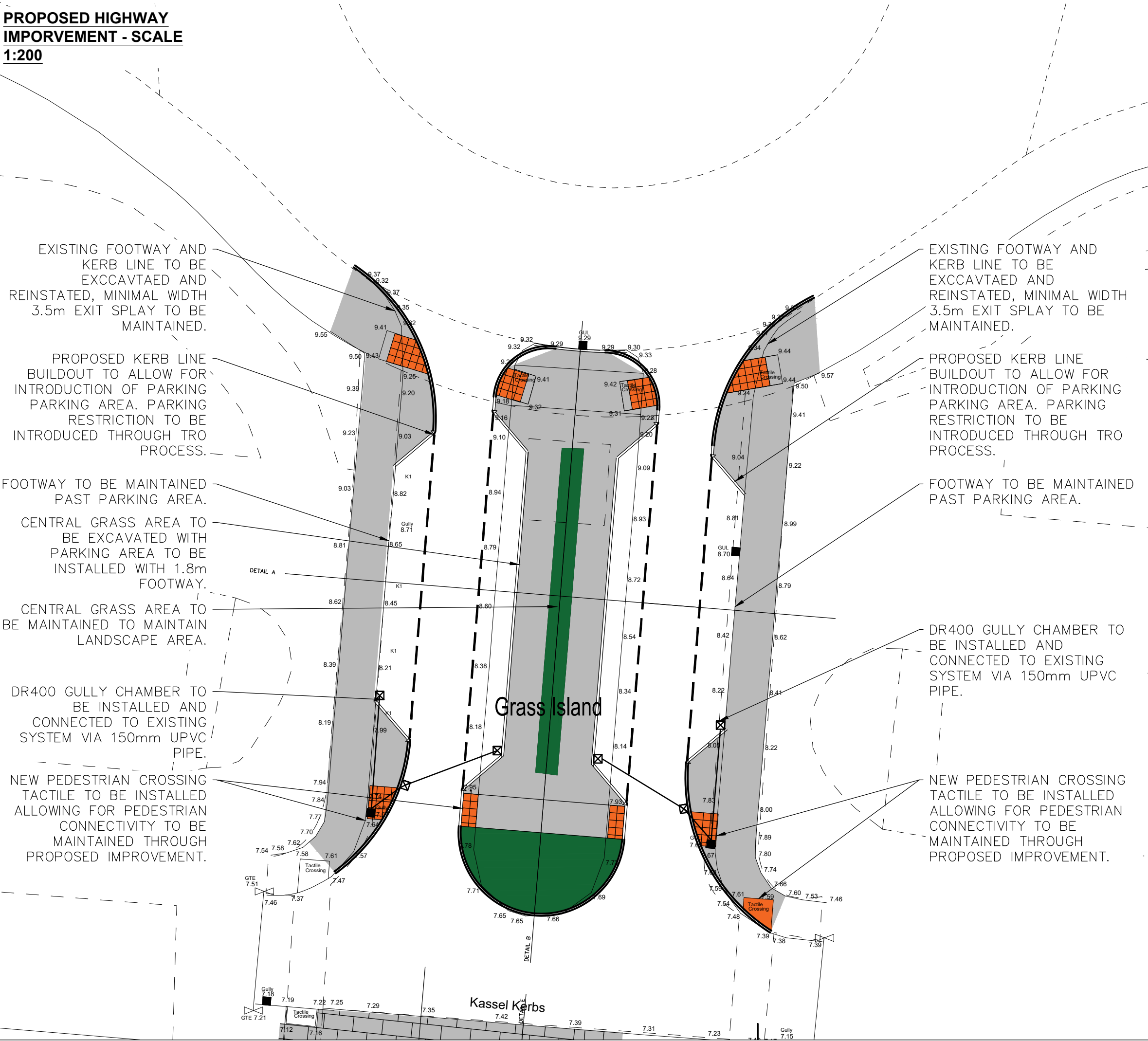
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| PROPOSED BRIDGE DESIGN OVERVIEW<br>WITH ACCESS AND PARKING PROVISION<br>ON LANGDON ROAD |     |       |       |       |
| DRAWN BY                                                                                | RM  | 11/22 | SCALE | SHOWN |
| CHECKED                                                                                 | XXX | x/xx  |       |       |

|                                                       |       |      |  |  |
|-------------------------------------------------------|-------|------|--|--|
| PROJECT TITLE                                         |       |      |  |  |
| ACBA6003 - SPRINGFIELD DESIGNS -<br>PEDESTRIAN BRIDGE |       |      |  |  |
| CAD REF.                                              | CAD   |      |  |  |
| PROJECT PHASE                                         | PHASE | REV. |  |  |

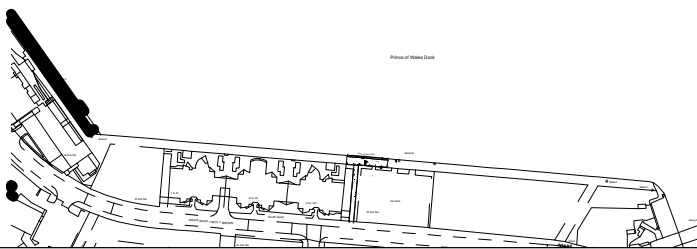
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| DRAWING No.                     |             |    |      |  |
| 6003-UWTS- ZZ- ZZ- SP- A- 00002 |             |    |      |  |
| REV.                            | DESCRIPTION | BY | DATE |  |
|                                 |             |    |      |  |
|                                 |             |    |      |  |
|                                 |             |    |      |  |

# SPRINGFIELD DESIGNS Ltd

PROPOSED HIGHWAY IMPORVEMENT - SCALE 1:200



LOCATION PLAN - SCALE 1:5000



DRAWING TITLE

PROPOSED HIGHWAY IMPROVEMENT -  
LANGDON ROAD - PARKING PROVISION  
FOR VEHICLES

DRAWN BY RM 11/22  
CHECKED XXX x/xx

SCALE

SHOWN

PROJECT TITLE

ACBA6003 - SPRINGFIELD DESIGNS -  
PEDESTRIAN BRIDGE

CAD REF.

CAD

PROJECT  
PHASE

PHASE

REV.

1 2 3 4 5 6 7 8 9 10 11 12

DRAWING No.

6003-UWTS-SD-ZZ-ZZ-SP-A-00002

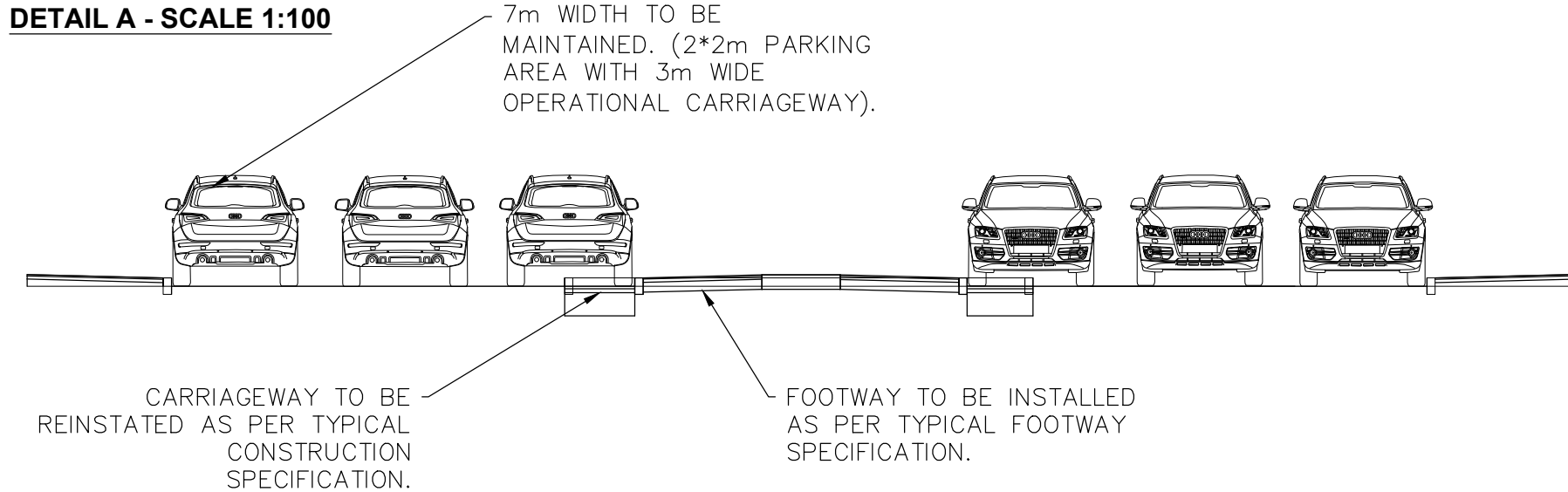
REV.

DESCRIPTION

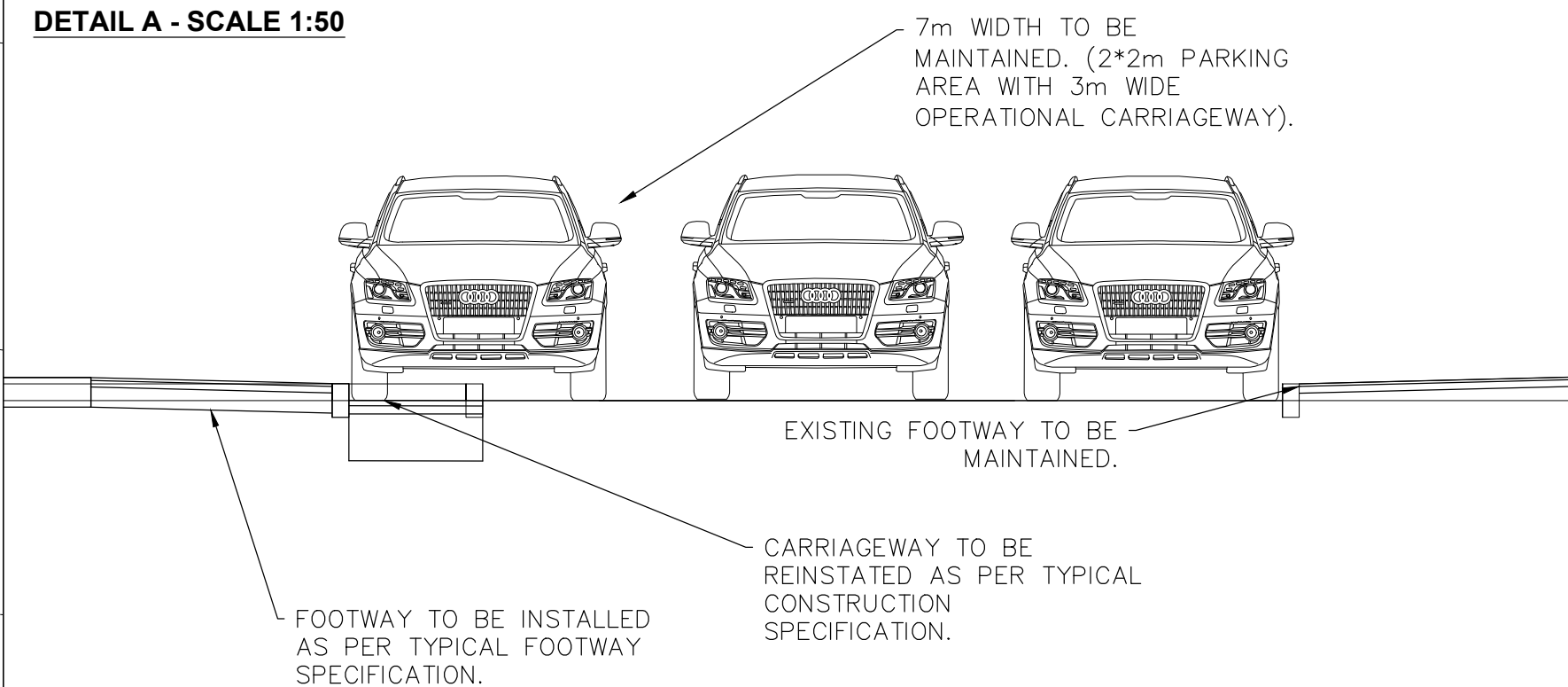
BY

DATE

DETAIL A - SCALE 1:100



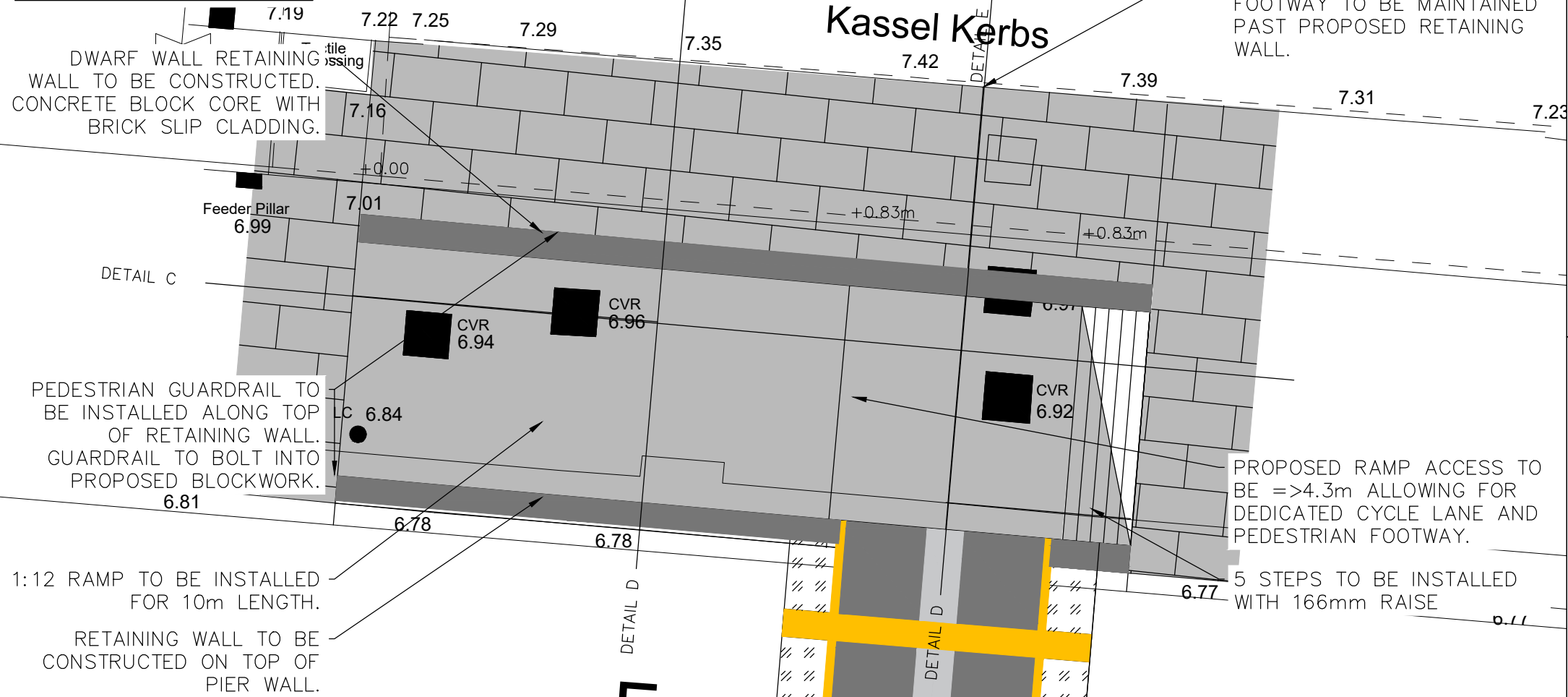
DETAIL A - SCALE 1:50



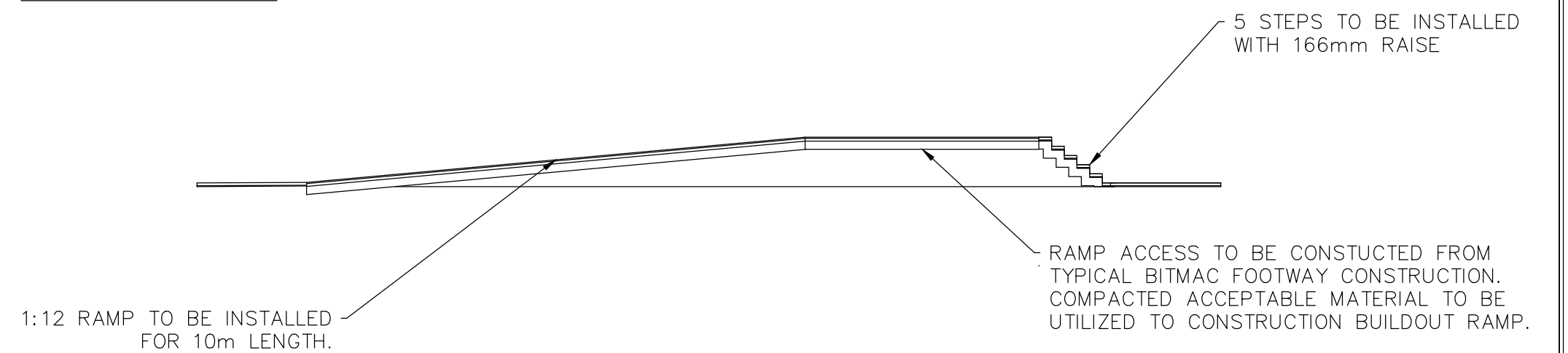
DETAIL B - SCALE 1:150



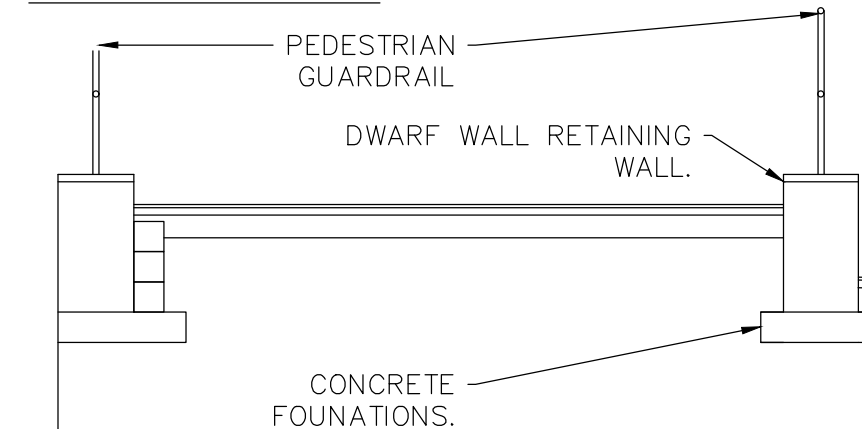
# SPRINGFIELD DESIGNS Ltd



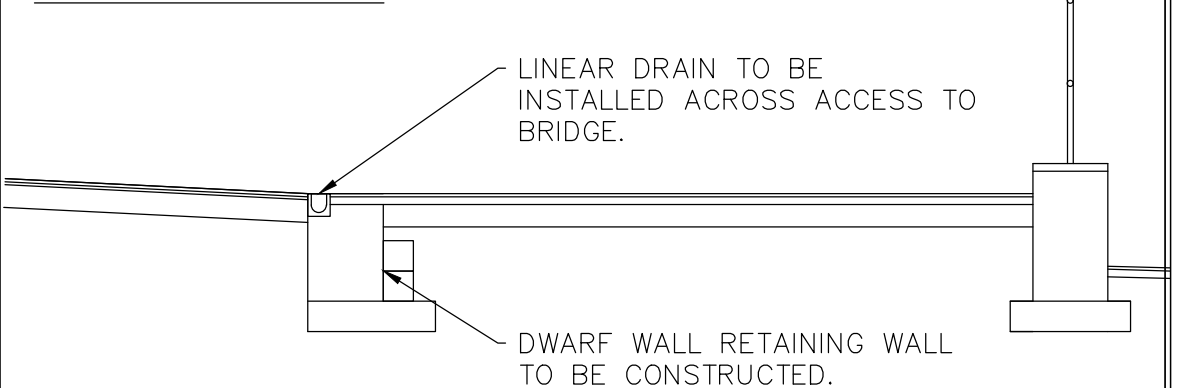
**DETAIL C - SCALE 1:50**



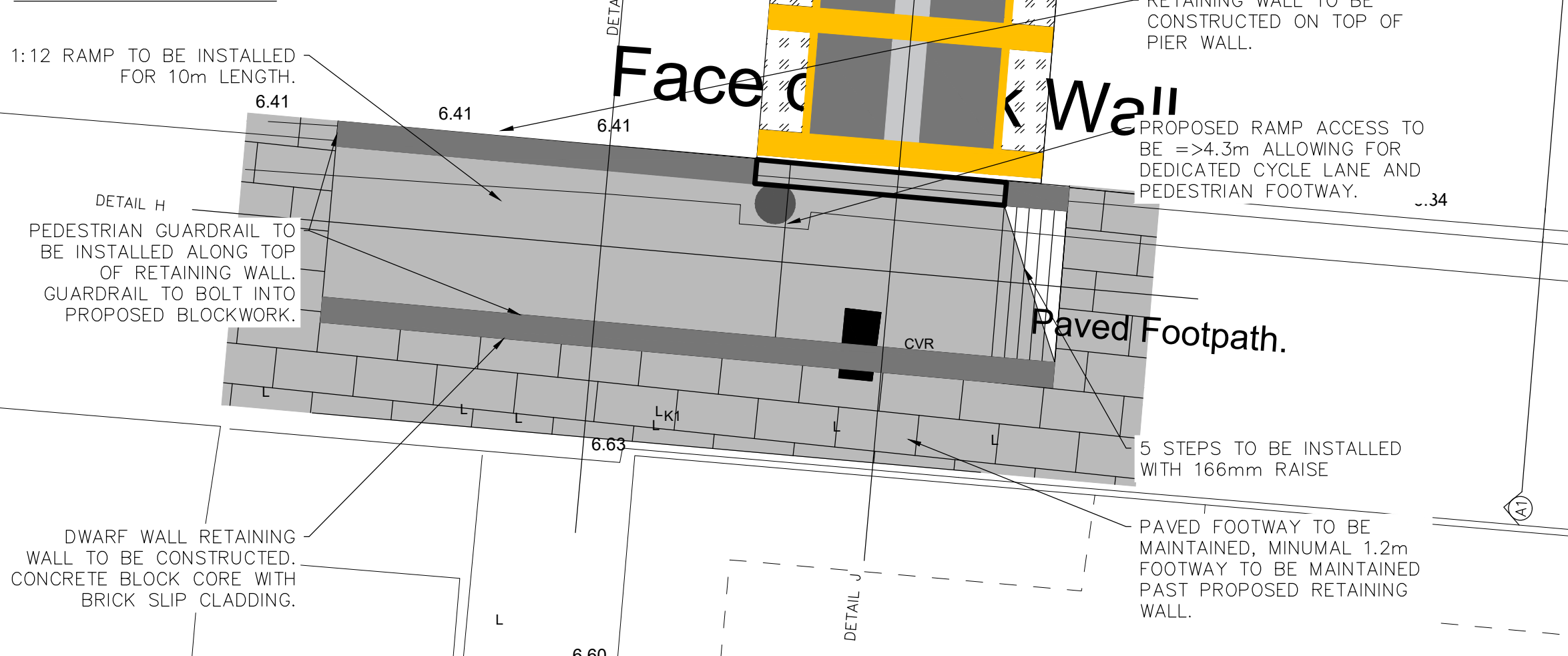
**DETAIL D - SCALE 1:50**



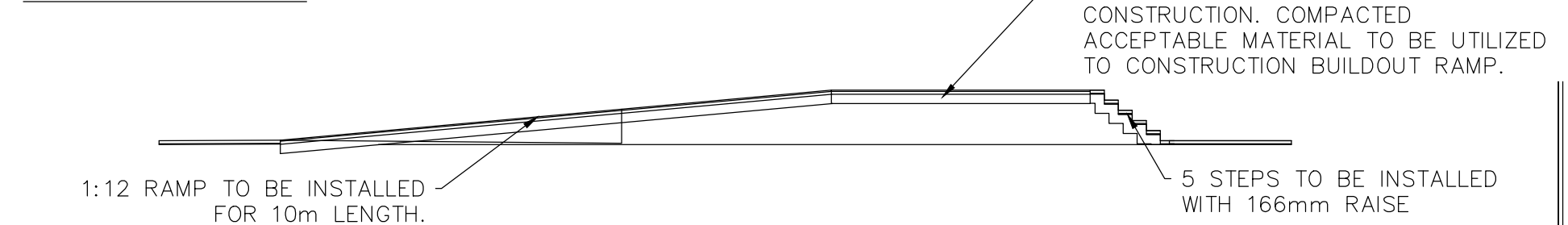
**DETAIL E - SCALE 1:50**



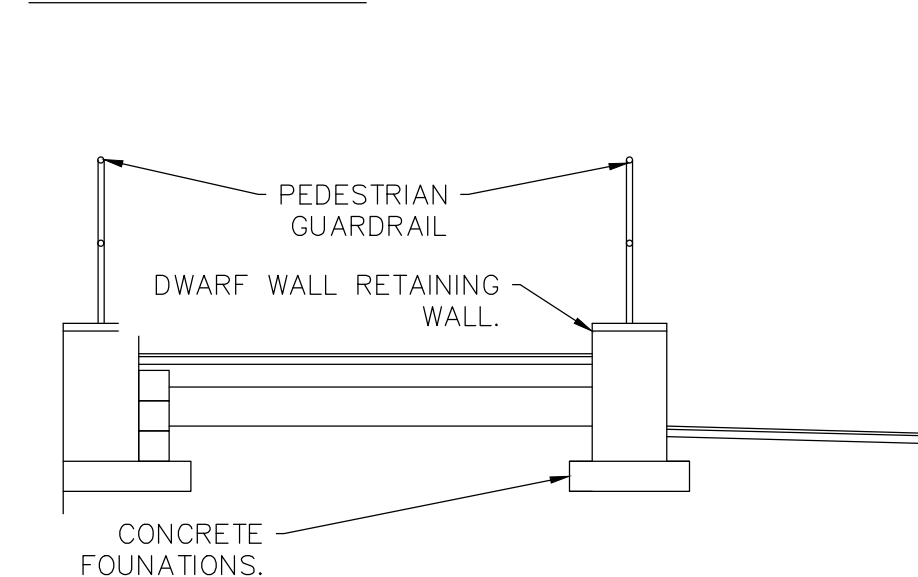
**KINGS ROAD ACCESS -  
OVERVIEW - SCALE 1:100**



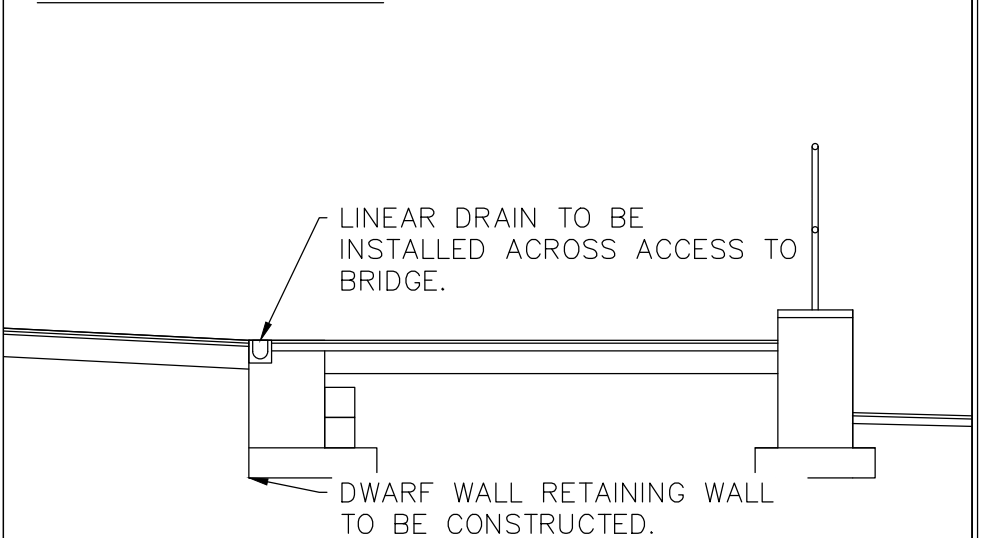
**DETAIL H - SCALE 1:50**



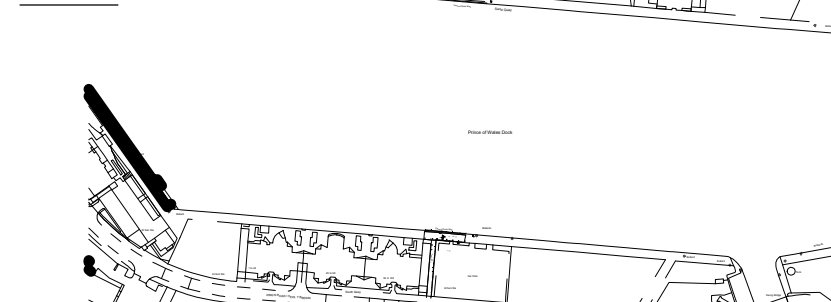
**DETAIL I - SCALE 1:50**



**DETAIL J - SCALE 1:50**



**LOCATION**  
**PLAN - SCALE**  
**1:5000**



*DRAWING TITLE*

**PROPOSED RAMPED AND STEPPED  
ACCESS AT LANGDON ROAD AND KINGS  
ROAD  
PROPOSED RAMPS AND RETAINING  
WALLS.**

|                 |     |       |                    |
|-----------------|-----|-------|--------------------|
| <i>DRAWN BY</i> | RM  | 11/22 | SCALE<br><br>SHOWN |
| <i>CHECKED</i>  | xxx | x/xx  |                    |

PROJECT TITLE

**ACBA6003 - SPRINGFIELD DESIGNS -  
PEDESTRIAN BRIDGE**

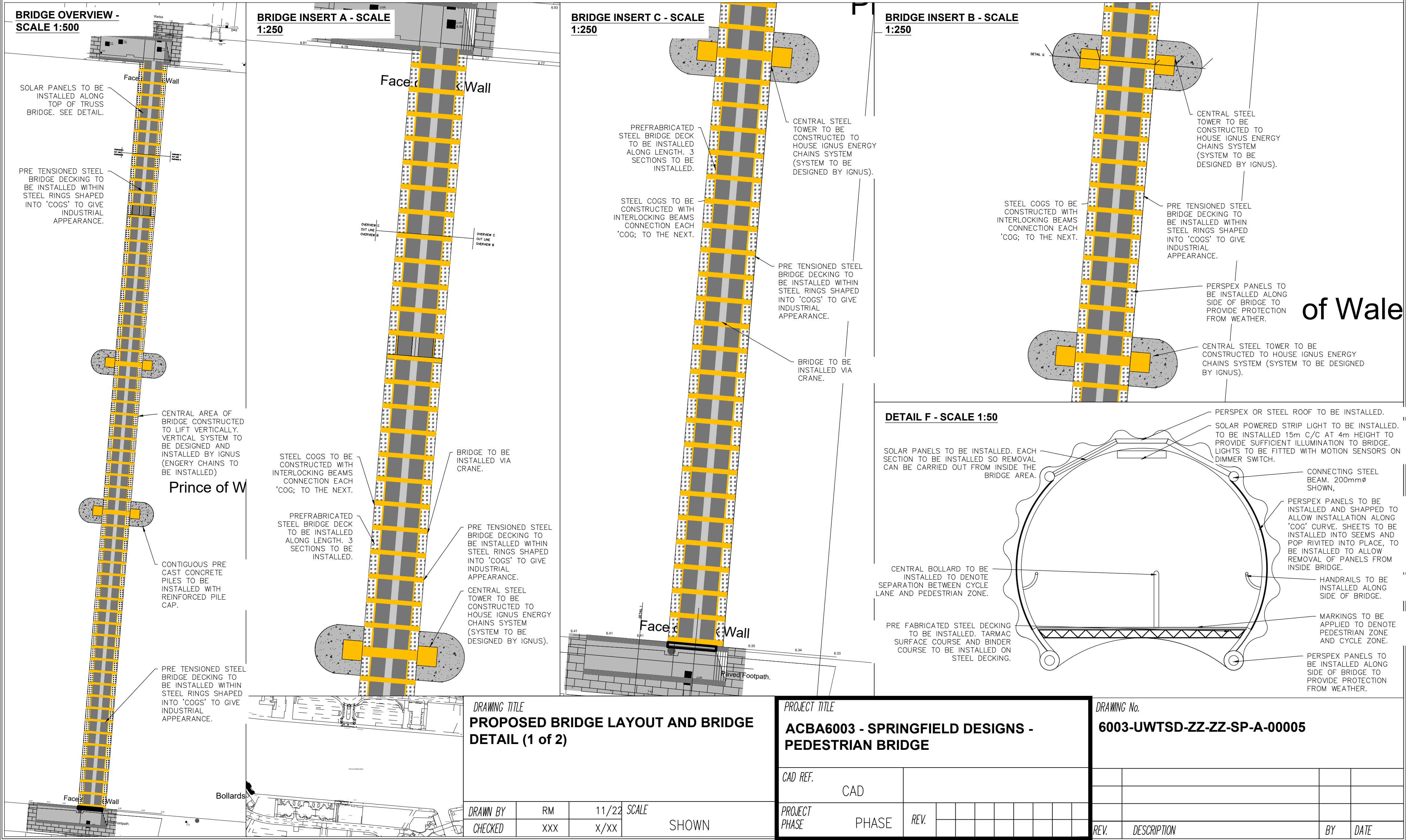
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DRAWING No.

**6003-UWTSD-ZZ-ZZ-SP-A-00004**

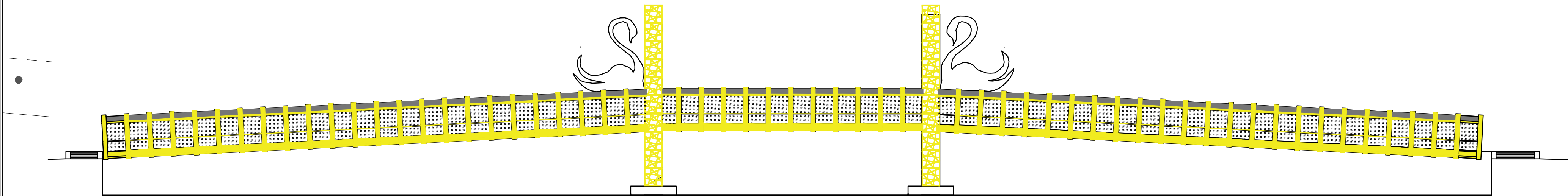
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|     |             |    |      |
|     |             |    |      |
| REV | DESCRIPTION | BY | DATE |

# SPRINGFIELD DESIGNS Ltd

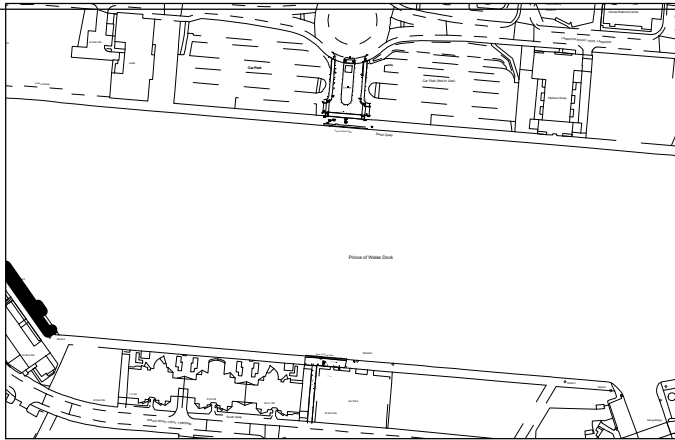
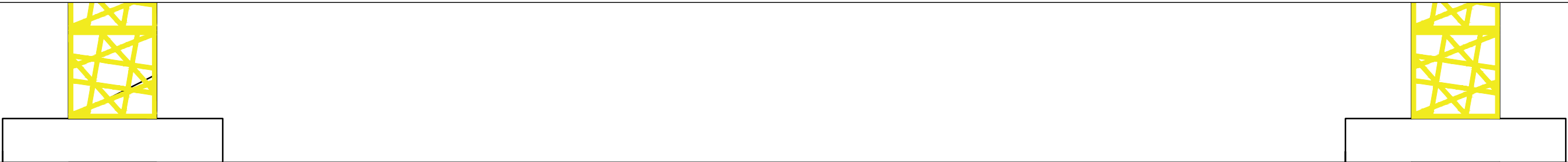


# SPRINGFIELD DESIGNS Ltd

BRIDGE ELEVATION -  
A1-A1 - NTS



SUPERSTRUCTURE  
DETAIL - SCALE 1:100



DRAWING TITLE  
**PROPOSED BRIDGE LAYOUT AND BRIDGE  
DETAIL (2 of 2)  
BRIDGE FOUNDATION DETAIL AND  
ELEVATIONS**

|          |     |       |       |       |
|----------|-----|-------|-------|-------|
| DRAWN BY | RM  | 11/22 | SCALE | SHOWN |
| CHECKED  | XXX | X/XX  |       |       |

PROJECT TITLE  
**ACBA6003 - SPRINGFIELD DESIGNS -  
PEDESTRIAN BRIDGE**

|                  |       |      |  |  |  |  |  |  |  |  |  |
|------------------|-------|------|--|--|--|--|--|--|--|--|--|
| CAD REF.         |       |      |  |  |  |  |  |  |  |  |  |
| CAD              |       |      |  |  |  |  |  |  |  |  |  |
| PROJECT<br>PHASE | PHASE | REV. |  |  |  |  |  |  |  |  |  |
|                  |       |      |  |  |  |  |  |  |  |  |  |

DRAWING No.  
**6003-UWTSD-ZZ-ZZ-SP-A-00006**

|      |             |    |      |
|------|-------------|----|------|
| REV. | DESCRIPTION | BY | DATE |
|      |             |    |      |
|      |             |    |      |
|      |             |    |      |

# Building Information

## Modelling (BIM) Execution Plan (BEP)

Project Name: Pedestrian Footbridge with Minor Highway Works

Project Address: Prince of Wales Dock

Swansea

Pembrokeshire,

SA1 1LY

Project Number: 6003

Date: 26/10/2022

Work Undertaken by Richard Murray will be highlighted Yellow

Document No: 1

Date: Oct 2022

Revision: v1.0

Status: Draft

| Contents                                 | Page No |
|------------------------------------------|---------|
| Notes                                    | 3       |
| 1.0 Project Information                  | 4       |
| 2.0 Management                           | 5       |
| 2.1 Roles and Responsibilities           | 5-6     |
| 3.0 Planning and Documenta-<br>tion      | 7       |
| 4.0 Standards, Methods and<br>Procedures | 8-9     |
| 5.0 IT Solutions                         | 10      |

## Notes

The BIM Execution Plan (BEP) has been produced and structured with headings to correspond to the requirements outlined by BS EN ISO 19650-2 (formally PAS1192-2) (British Standards Institute, 2018).

| Rev. | Status | Page Nos. | Amendment | Date      | By  |
|------|--------|-----------|-----------|-----------|-----|
| 1.0  | Draft  |           | Draft     | 14/1/2023 | SPR |
|      |        |           |           |           |     |
|      |        |           |           |           |     |
|      |        |           |           |           |     |
|      |        |           |           |           |     |
|      |        |           |           |           |     |
|      |        |           |           |           |     |

## 1.0 Project Information

In accordance with the requirement for BS EN ISO 19650-2 5.1.2 (British Standards Institute, 2018) the project information is shown below. For future correspondence the project will use this information where applicable.

|                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Project Name        | Pedestrian Footbridge with Minor Highway Works                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Project Number      | 6003                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Project Description | Design a pedestrian footbridge from the kings road to Langdon Roundabout. Proposed footway to have vehicle access at Langdon Roundabout.                                                                                                                                                                                                                                                                                                                                                                                                   |
| Site Name           | Prince of Wales Dock Adjacent to Kings Road and Langdon Road                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Site Description    | <p>Prince of Wales Dock is currently a dry dock within the city of Swansea located between Kings Road which is the current location of Swansea University Campus and Langdon Roundabout. The location is currently a large body of water where pedestrians must use a lengthy footway around the dock.</p> <p>Student Accommodation located on southern side for UWTSD Campus and business nad parking facilities located to the north. Northern area proposed to undergo building improvement with proposed levelling up of location.</p> |

## 2.0 Management

The points below outline how information will be managed as well as the roles and responsibilities of those working within the project in accordance with BS EN ISO 19650-2 (British Standards Institute, 2018).

### 2.1 Roles and Responsibilities

| Name            | Company                 | Role                     | Resources  | Contact Information                                                          |
|-----------------|-------------------------|--------------------------|------------|------------------------------------------------------------------------------|
| Gavin Taylor    | UWTSD                   | Client                   | Client1    | g.traylor@uwtsd.ac.uk                                                        |
| Debroah Hughes  | UWTSD                   | Client                   | Client 2   | d.hughes@uwtsd.ac.uk                                                         |
| Brett Thomas    | Springfield Designs Ltd | Project Manger           | PManager1  | 1807835@student.uwtsd.ac.uk                                                  |
| Richard Murray  | Springfield Designs Ltd | Design Engineer - Civils | Civil1     | 0851739@student.uwtsd.ac.uk                                                  |
| Jonathan Triggs | Springfield Designs Ltd | Quantity Surveyor        | QSurveyor1 | <a href="mailto:1807834@student.uwtsd.ac.uk">1807834@student.uwtsd.ac.uk</a> |
| Benjamin Davies | Springfield Designs Ltd | Planning Engineer        | PEngineer1 | <a href="mailto:2012775@student.uwtsd.ac.uk">2012775@student.uwtsd.ac.uk</a> |
| Rhys Ratner     | Springfield Designs Ltd | Site Engineer            | SEngineer1 | 1803424@student.uwtsd.ac.uk                                                  |

Lead Designer responsibilities apply to the individuals below;

| Responsibility                               | Resource |
|----------------------------------------------|----------|
|                                              |          |
| Coordinate Deliver of all Design Information | Civil1   |
| Manage Information development for approvals | Civil1   |
| Confirm Design Deliverables                  | Civil1   |
| Overall Lead for Configuration Management    | Civil1   |

|                                                  |        |
|--------------------------------------------------|--------|
| Confirm Status and approve information for issue | Civill |
| Approve design changes as required               | Civill |

The task teams responsibilities will be as follows

|                                                           |                         |
|-----------------------------------------------------------|-------------------------|
| Responsibility                                            | Resource Civil Engineer |
|                                                           |                         |
| Production of Design                                      | Civill                  |
| Approve Information                                       | Civill                  |
| Direct the production of information                      | Civill                  |
| Direct the production of information using agreed systems | Civill                  |
| Confirm Information is suitable                           | Civill                  |
| Managed Coordination on behalf of task team               | Civill                  |
| Proposed coordination on behalf of task team              | Civill                  |
| Develop constituent part of the information model         | Civill                  |
| Production of Project Outputs                             | Civill                  |

## **3.0 Planning and Documentation**

### ***3.1 Collaboration and Information Modelling***

All software exchanges will be undertaken utilising the standards outlined in 4.0.

Project will be designed utilising Civils 3D to generate basic corridor modelling information with subsequent 2D plans for site specific mechanisms, these 2D Drawings will be supported by an Asset Inventory Database which will confirm the proposed assets as well as their associated information.

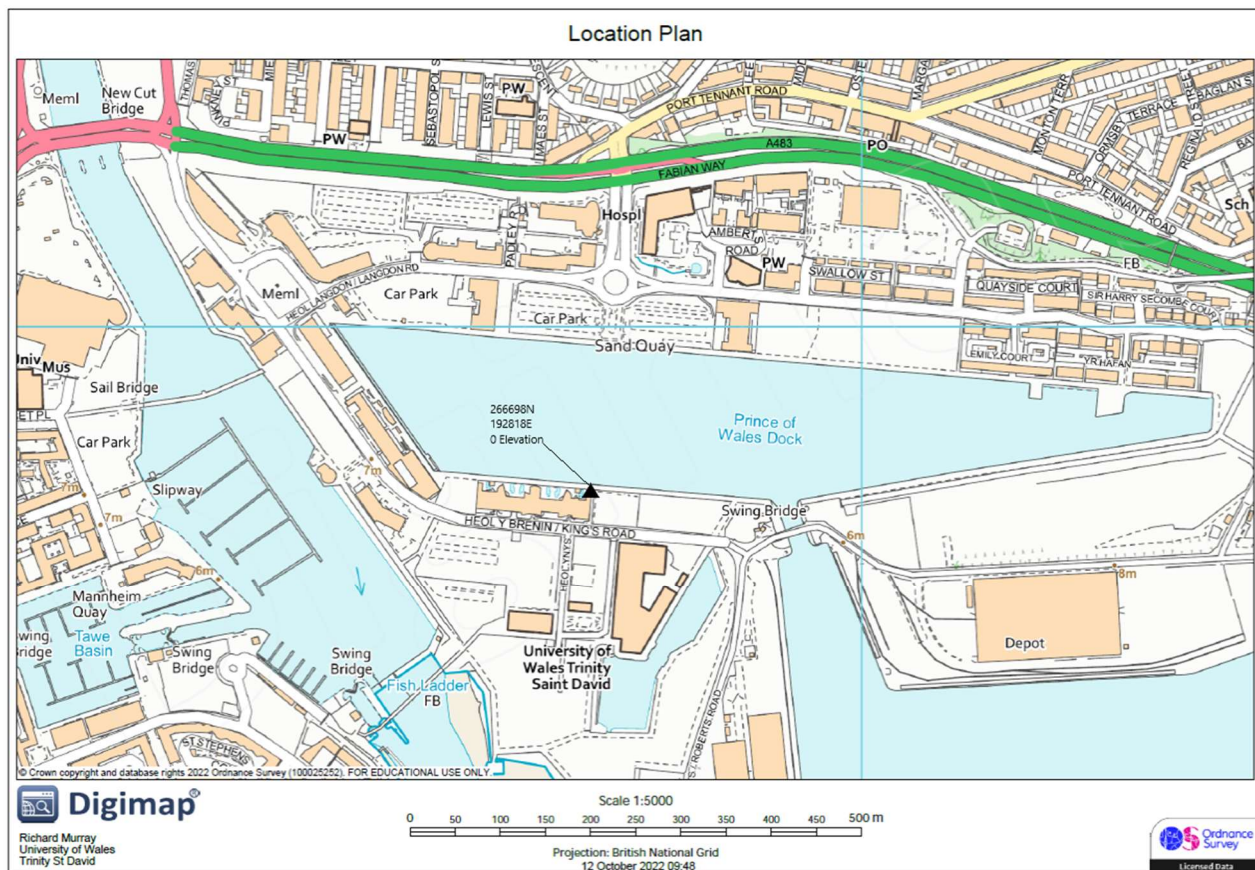
The designs of the scheme will be undertaken on Topographical Survey of the existing ground level of the site. All drawing design will be utilised Civils 3D with collaboration achieved through shared portal on Microsoft Teams. The project base point will be utilised and outlined with 4.0. All naming conventions will be utilised and in accordance with requirements outlined in BS EN ISO 19650-2 (British Standards Institute, 2018).

## 4.0 Standards, Methods and Procedures

This section will cover the requirements outlined in BS EN ISO 19650-2 5.4.1 (British Standards Institute, 2018).

### 4.1 Origin and Orientation

The project base point will be as outlined below.



| Reference          | Position       |
|--------------------|----------------|
| Project Base Point | 266698, 192818 |
| Elevation          | 0.000          |

## 4.2 File Naming Conventions

| Project | Originator | Zone | Level | Type | Role       | Number                      | Description            | Suitability                  | Revision |
|---------|------------|------|-------|------|------------|-----------------------------|------------------------|------------------------------|----------|
| PED1    | SPR        | XX   |       | DR   | CIVIL<br>1 | See BS<br>EN ISO<br>19650-2 | Brief Descrip-<br>tion | See BS EN<br>ISO 19650-<br>2 | Rev No.  |
| PED2    |            |      |       |      |            |                             |                        |                              |          |
|         |            |      |       |      |            |                             |                        |                              |          |

## 4.3 Drawing Sheet Template

All drawings produced will utilise the following splash page and title block in order to ensure compliance with BS EN ISO 19650-2 (British Standards Institute, 2018).

|                                                                                                                   |     |       |       |                                                                                |       |      |  |                                             |             |    |      |
|-------------------------------------------------------------------------------------------------------------------|-----|-------|-------|--------------------------------------------------------------------------------|-------|------|--|---------------------------------------------|-------------|----|------|
| DRAWING TITLE<br><b>PROPOSED BRIDGE DESIGN OVERVIEW<br/>WITH ACCESS AND PARKING PROVISION<br/>ON LANGDON ROAD</b> |     |       |       | PROJECT TITLE<br><b>ACBA6003 - SPRINGFIELD DESIGNS -<br/>PEDESTRIAN BRIDGE</b> |       |      |  | DRAWING No.<br><b>PED2-SPR-DR-C-0002-S1</b> |             |    |      |
| CAD REF. CAD                                                                                                      |     |       |       |                                                                                |       |      |  |                                             |             |    |      |
| DRAWN BY                                                                                                          | RM  | 11/22 | SCALE | PROJECT                                                                        | PHASE | REV. |  |                                             |             |    |      |
| CHECKED                                                                                                           | XXX | X/XX  | SHOWN |                                                                                |       |      |  |                                             |             |    |      |
|                                                                                                                   |     |       |       |                                                                                |       |      |  | REV.                                        | DESCRIPTION | BY | DATE |

Splash Page AND Title Block

## 5.0 IT Solutions

This section is to ensure all parties are utilising the same software and version and adhering to the same exchange formats to ensure correct compatibility across all users in accordance with BS EN ISO 19650-2 (British Standards Institute, 2018).

### 5.1 Software Versions

| Company          | Purpose            | Software           | Version      |
|------------------|--------------------|--------------------|--------------|
| Autodesk         | 2D Modelling       | AutoCAD            | Civils 2020  |
| Autodesk         | 3D Modelling       | AutoCAD            | Civils 2020  |
| Microsoft Office | Inventory Database | Microsoft Excel    | Office 2019  |
| Microsoft Office | Programme of Works | Microsoft Projects | Project 2019 |

### 5.2 Exchange Formats

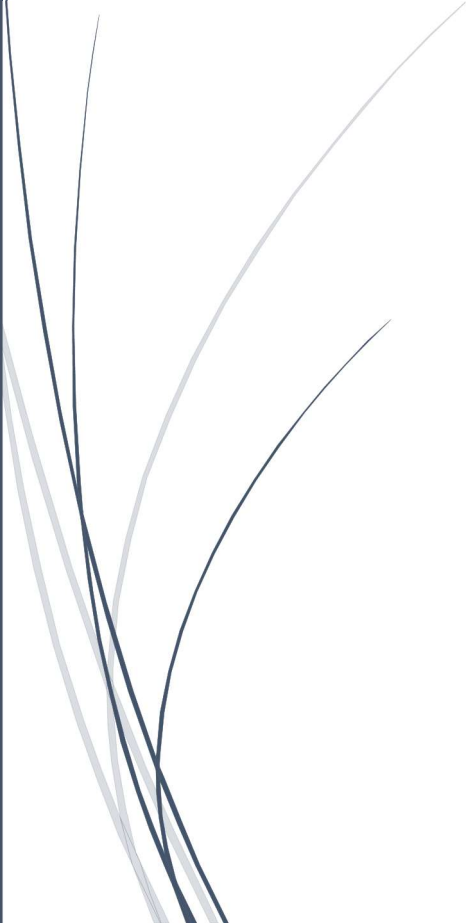
| Export Software   | Format          | Version      |
|-------------------|-----------------|--------------|
| AutoCAD           | .dwg            | 2020         |
| AutoCAD           | .pdf            |              |
| Microsoft Excel   | .xlsx           | Office 2019  |
| Microsoft Project | .mpp and/or PDF | Project 2019 |

A dark blue vertical bar runs down the left side of the page. A blue arrow points to the right from this bar, containing the date 5/2/2023.

5/2/2023

# Aesthetics

Springfield Designs – Swansea  
Pedestrian Bridge

Several thin, curved lines in dark blue and light grey originate from the bottom left and sweep upwards and to the right.

RICHARD MURRAY

SPRINGFIELD DESIGNS LTD

WORK UNDERTAKEN BY RICHARD MURRAY WILL BE HIGHLIGHTED

YELLOW

## Contents

|                                                                       |   |
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## Introduction

The term aesthetics as defined by Roger. S & Munro. T (2023) is the physiological study of beauty and taste. When applied to a building this means how the building is perceived by members of the public or users which would utilise the building, also how the building or feature flows into the natural character of the landscape, or the buildings around it if in a built up environment. The term aesthetics is where we get the term 'an ugly building', or a where a structure would stick out, or look out of place with it's surroundings, in this case these could be said to have low aesthetics.

It is however also important to note that sometimes the building wants to have a certain level of aesthetics appeal, or to stand out in the crowd. A land mark feature should not blend into its surroundings, as it needs to be an symbol which is seen, not missed. As such the requirements of the brief are important when discussing the aesthetics appeal of the proposal.

## Brief

The brief provided by the client is shown below;

To meet the desired access requirements of the pedestrian traffic anticipated within the new development, your company is required to provide road access at the Langdon road roundabout (adjacent to Beacon Health Centre) to the Prince of Wales Dock, and a pedestrian foot bridge crossing this dock from the plot site A14B to the plot B5. This bridge should be innovative in aesthetic and a landmark structure, it is also required to be have a design inspired by the industrial heritage of the city.

It is also required that this footbridge is illuminated at nightfall. You are also required to provide walkway-linked moorings for the berthing of 60 motorboats on the eastern side of this bridge, within the Prince of Wales dock.

## Brief Requirements

As such from the brief above the main aesthetics qualities that need to be met could be listed as below;

- Illumination
- Land Mark Feature
- Inspired by Industrial Heritage of the city

## Aesthetics

The aesthetics of the project will be met by the below;

## Illumination

This will be provided by including Solar Lights to provide illumination to the moorings, these in turn will be mounted on 76.1mm steel posts which will be bolted to the bridge were possible. These will ensure that the moorings are illuminated at night with a low level light, and increases to usable levels when required. (See figure 1 for proposed lanterns).

### Defender



Figure 1 - Acrospire Defender (no date)

Meanwhile inside the bridge illumination will be provided by the inclusion of lights installed along the handrails, (see figure 2). These will be mains powered and provide adequate lighting, this in turn linked with the Perspex material will provide full illumination of the bridge during night-time hours.

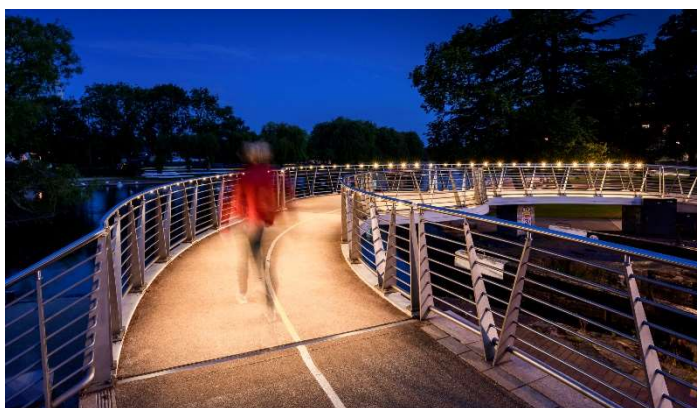


Figure 2- Acrospire Hand Rail (no date)



Figure 3- Acrospire Hand Rail (no date)

These will both provide adequate illumination and ensure that the bridge is seen and illuminated for users utilising the bridge.

### Land Mark Feature & Inspired by Industrial Heritage of the city

These go hand in hand in the development process, as each will have a large effect on the other.

Firstly in order for the pedestrian bridge to be a land mark, the definition of a land mark must first be identified. A land mark is a building or feature which is noticed easily and allows for the user to define their location from it, an example of famous landmarks would be Big Ben, or the Eiffel Tower. However the aesthetic quality of the construction is that the bridge must also be linked to the industrial heritage of Swansea, which means its Copper Works.

In order to ensure that these 2 processes are followed, it is proposed that the cladding of the bridge or appearance of any steel work be coloured copper, this in turn would match the existing Copper developments currently being developed throughout Swansea as shown in BBC (2022).

Meanwhile the landmark feature would be served by the copper appearance, as well as by utilising a unique feature. This feature as outlined in the concept design would be one of the below;

- Tilt Bridge
- Vertical Lift Bridge

Both of the above proposals would create a landmark structure which would be instantly identifiable as Swansea, in part due to fact that these types of bridges are not widely utilised due to their construction, but by utilising the copper appearance.

As the client has elected to develop a Vertical Lift bridge, additional measures would be felt to be included in the design or further accentuate the industrial nature of the proposal. As such by incorporating 'cogs' into the design, this would produce a bridge with similarities to a Truss, however would produce a tube effect when coupled with the Perspex, furthermore by widening the cogs in succession, then decreasing the width once the user is past the half way point, this would provide an organic appearance to the bridge which in turn would only further accentuate the visual appearance, and beauty of the proposed design.

## Conclusion

In conclusion by utilising the above features, this would in turn allow the bridge to fulfil the aesthetic element of the brief by ensuring that the bridge met the below requirements of the brief;

- Illumination
  - Provided by Dedicated Lights along the moorings and by utilisation of handrail lights
- Land Mark Feature
  - By utilising a unique lifting system
- Inspired by Industrial Heritage of the city
  - By utilising the copper appearance within the design and by further utilising cogs and by changing the width and scope of their construction to produce a more organic flow

As such from the designers perspective, the above would satisfy the aesthetic element of the design, however it is important to note, that aesthetics as indicated before is the reaction to the building or item in relation to its physical beauty, as such because beauty is individual and unique to everyone, it is impossible to ensure that everyone will appreciate that proposals, some will in turn feel (much like the Copr developed shown in BBC (2022)) that the development is ugly. As such beauty, or in this case aesthetic is in the eye of the beholder. For visualisations of the completed pedestrian bridge please see plans PED1-SPR-DR-C-0017-S1 & PED1-SPR-DR-C-0018-S1

## Reference List

Roger. S & Munro. T (2023) *Aesthetics* (Available at; <https://www.britannica.com/topic/aesthetics>) (Accessed; 2/5/2023)

Acrospire Defender (no date) Solar Lighting Defender. (Available at: <https://acrospire.co/products/solar-lighting/defender/>) (Accessed 2/5/2023)

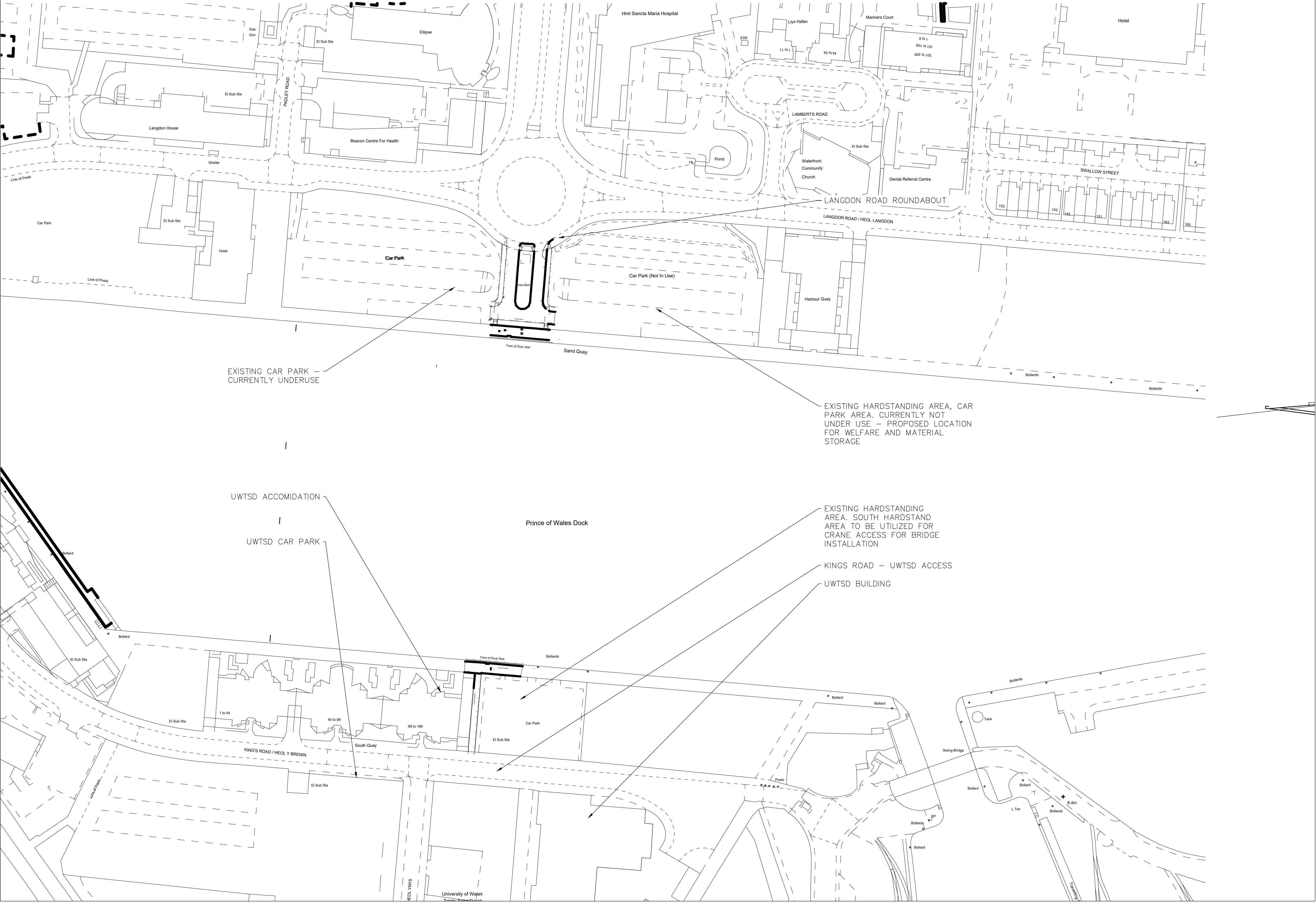
Acrospire Hand Rail (no date) RailLight Affordable Handrail Lighting. (Available at; <https://acrospire.co/products/raillight-handrail-lighting/>) (Accessed 2/5/2023)

BBC (2022) Swansea: £135m Copr Bay district opens to the public. (Available at <https://www.bbc.co.uk/news/uk-wales-60604290>) (Accessed 2/5/2023)

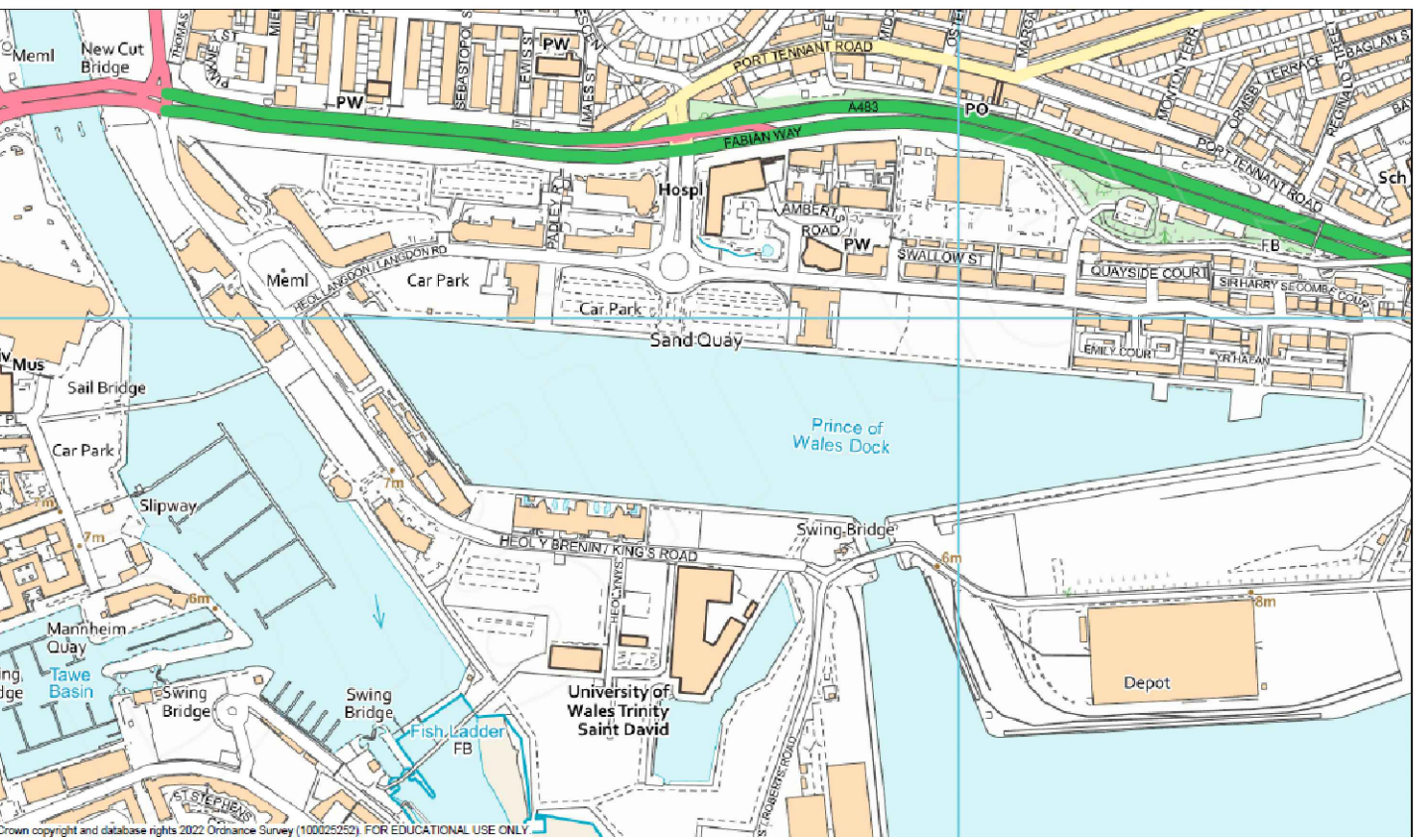
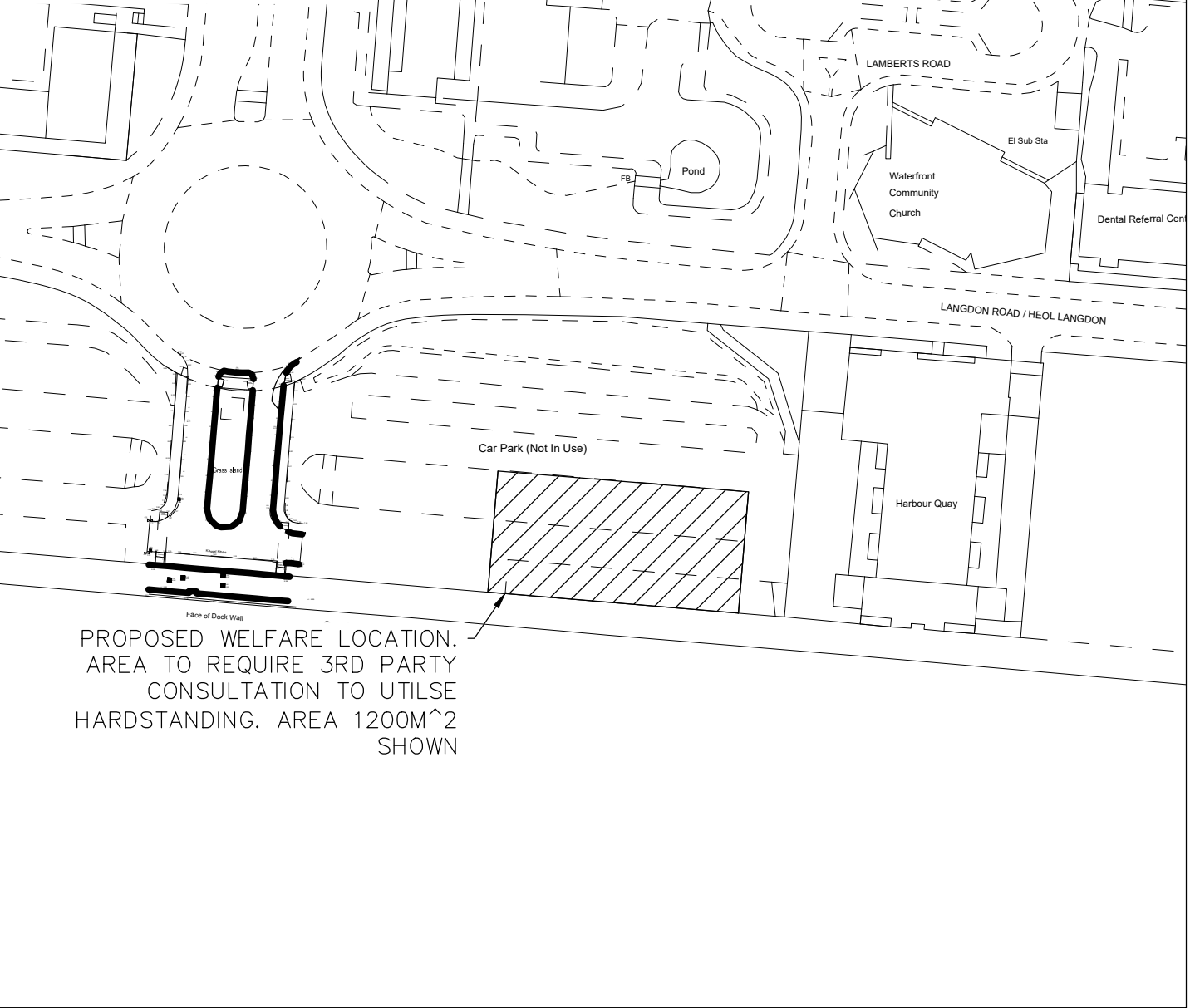
# SPRINGFIELD DESIGNS Ltd

LOCATION PLAN - SCALE 1:1000  
aaa

LOCATION PLAN - SCALE 1:1000



PROPOSED WELARE  
LOCATION - SCALE 1:1250



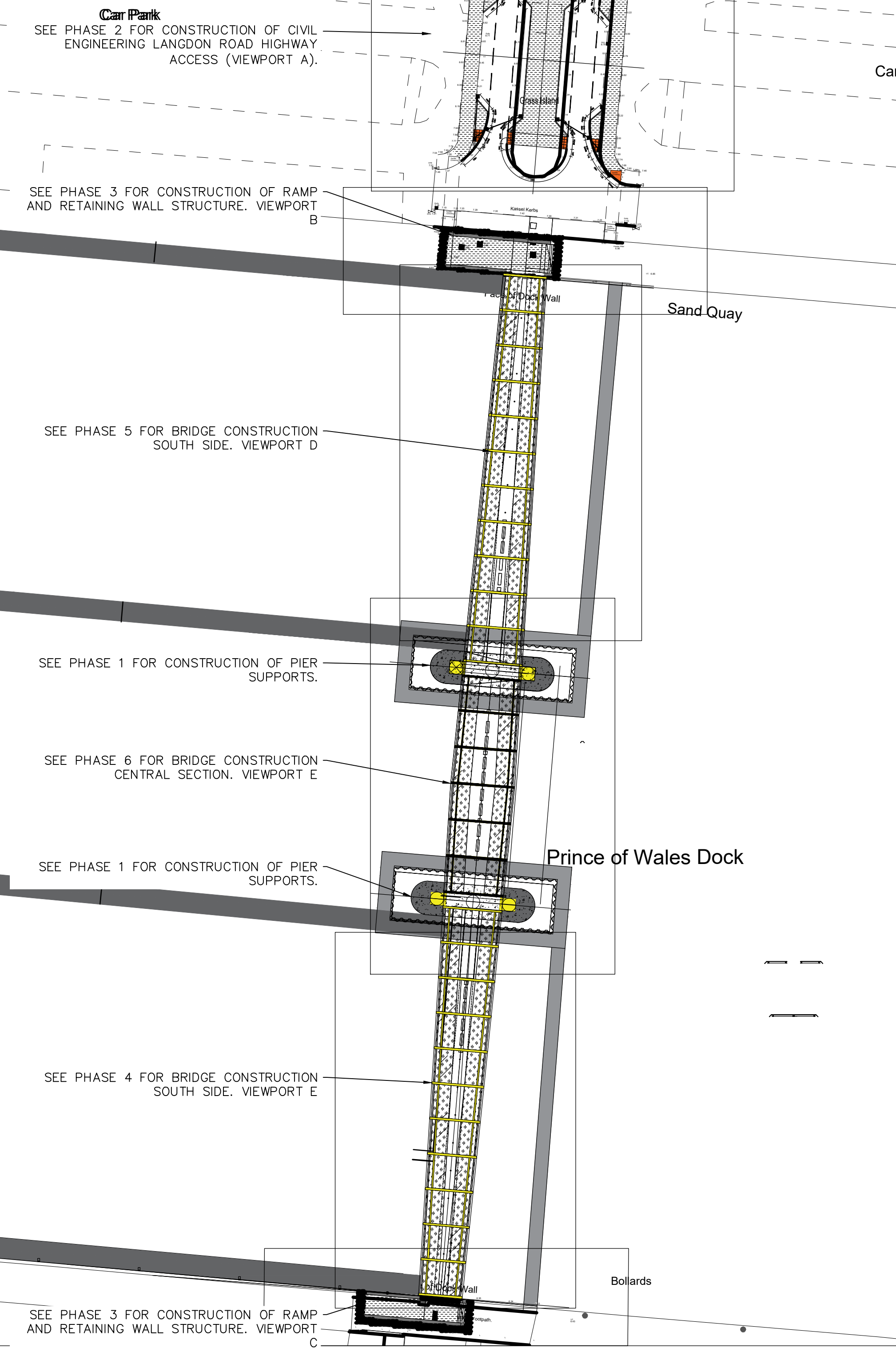
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|---------------------------------------------|-----|-------|-------|-------|
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| DRAWN BY                                    | RM  | 05/23 | SCALE | SHOWN |
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| PROJECT TITLE                                      |       |      |  |  |
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| ACBA6003 - SPRINGFIELD DESIGNS - PEDESTRIAN BRIDGE |       |      |  |  |
| CAD REF.                                           | CAD   |      |  |  |
| PROJECT PHASE                                      | PHASE | REV. |  |  |

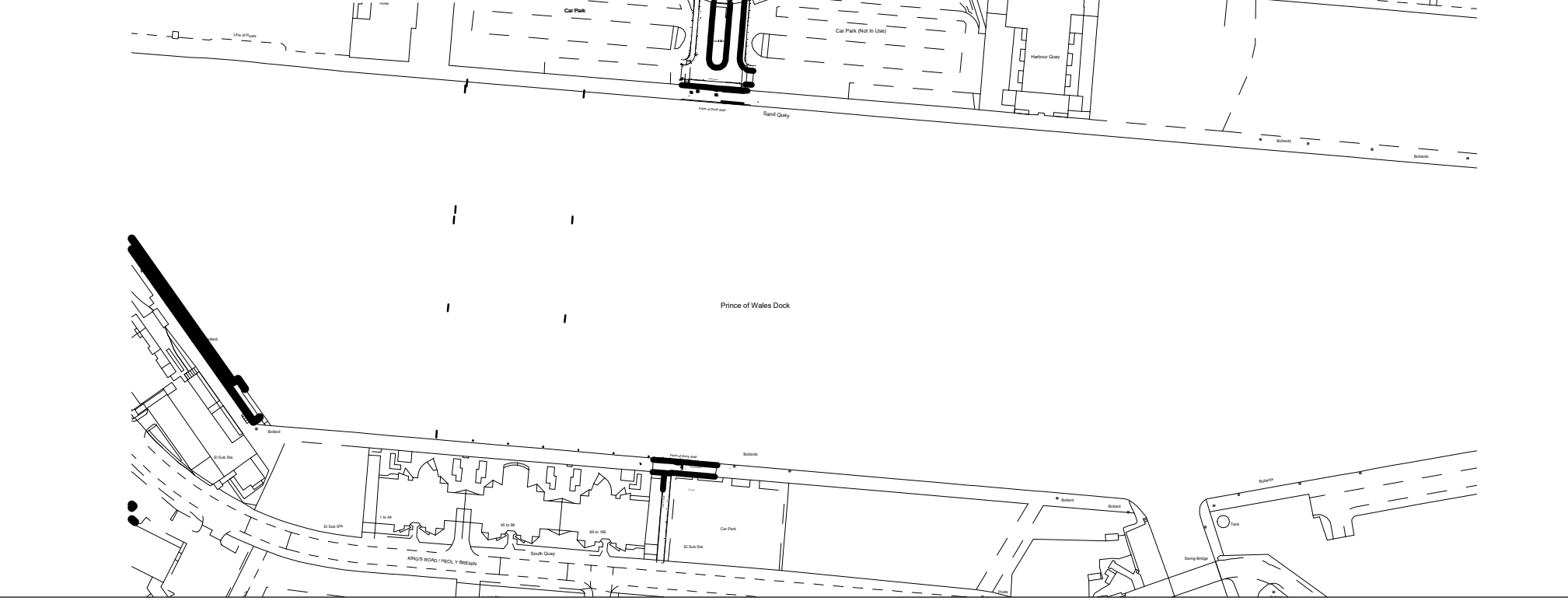
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# SPRINGFIELD DESIGNS Ltd

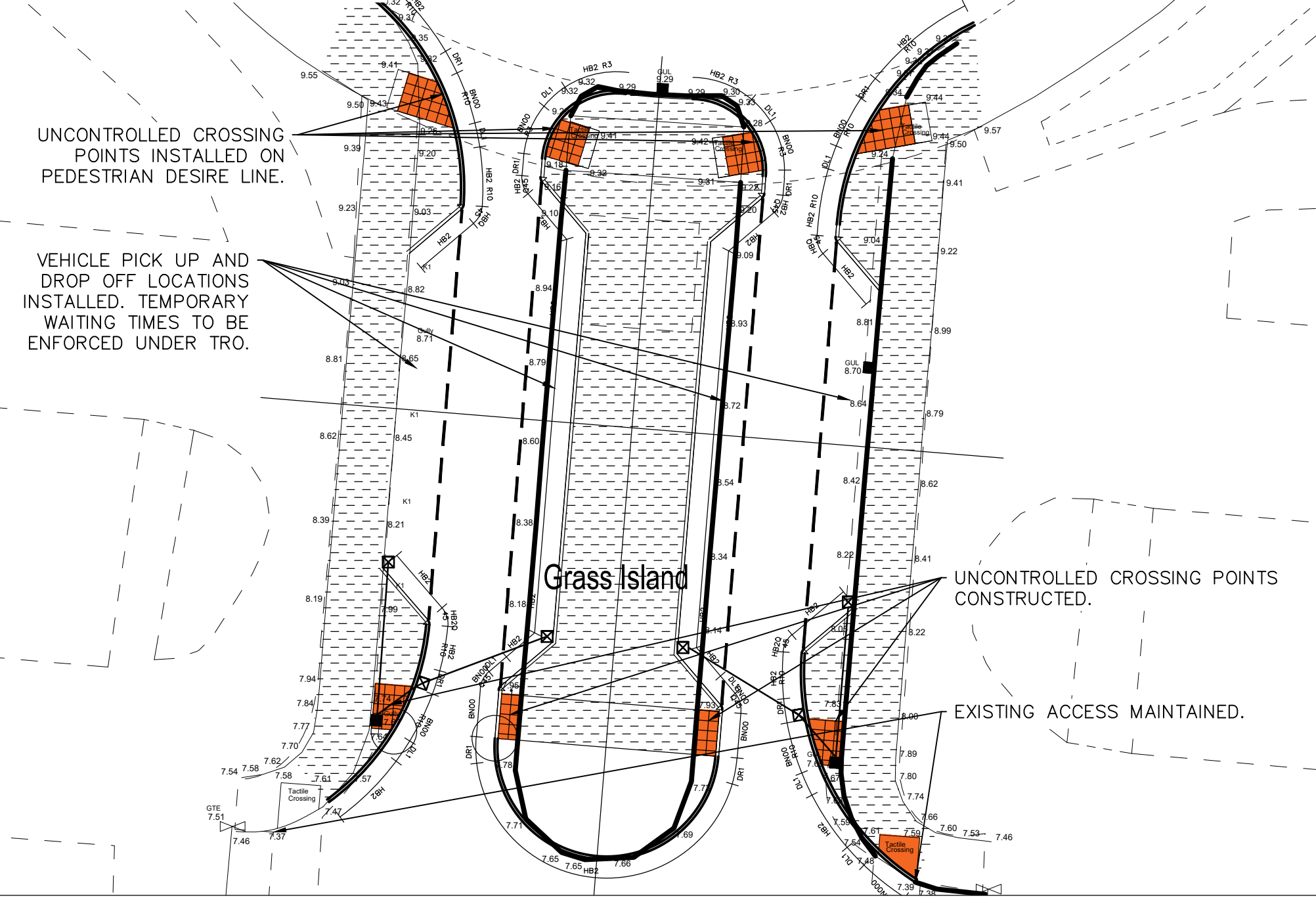
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OVERVIEW - SCALE 1:500



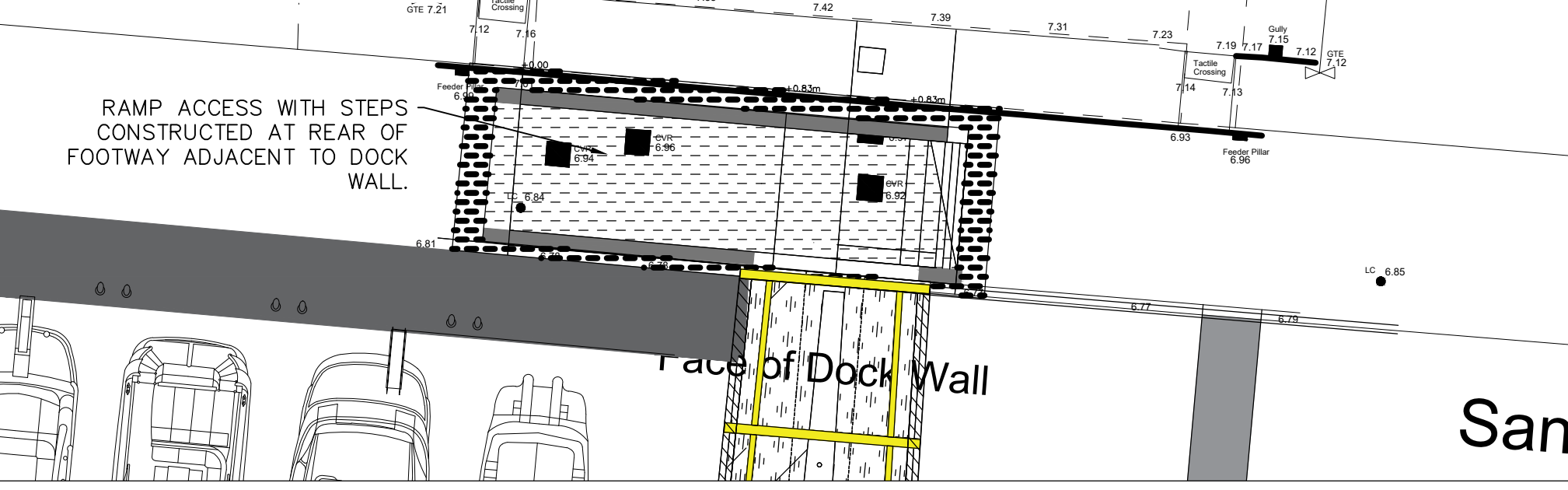
LOCATION PLAN - SCALE 1:2500



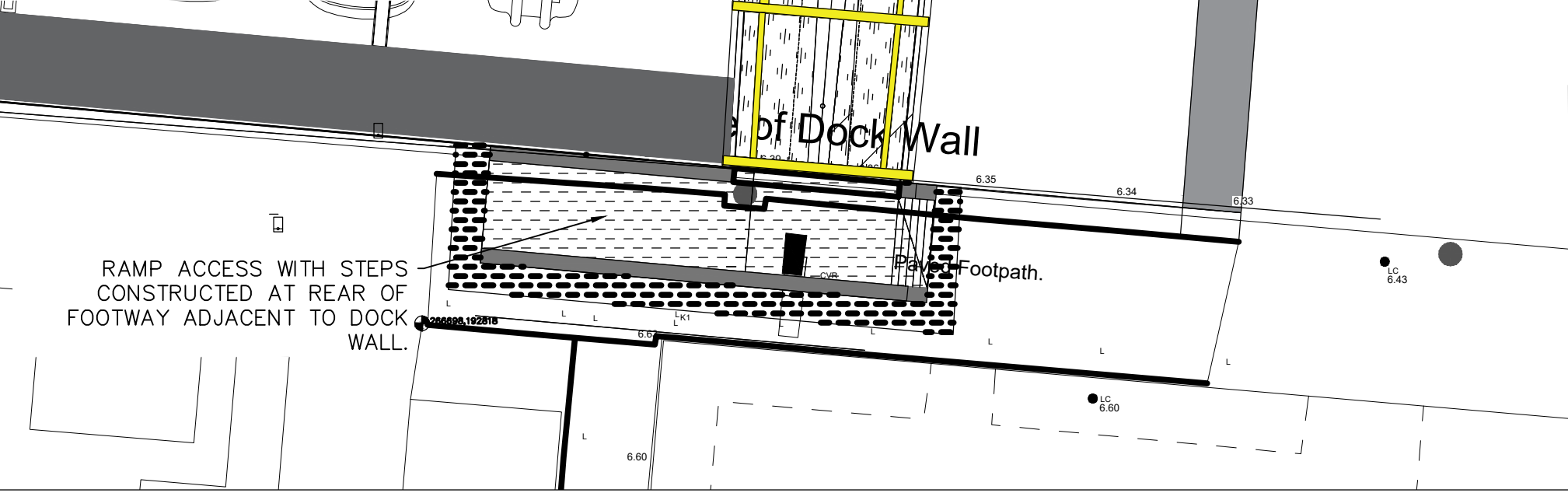
VIEWPORT A - HIGHWAY  
IMPROVEMENT - SCALE 1:200



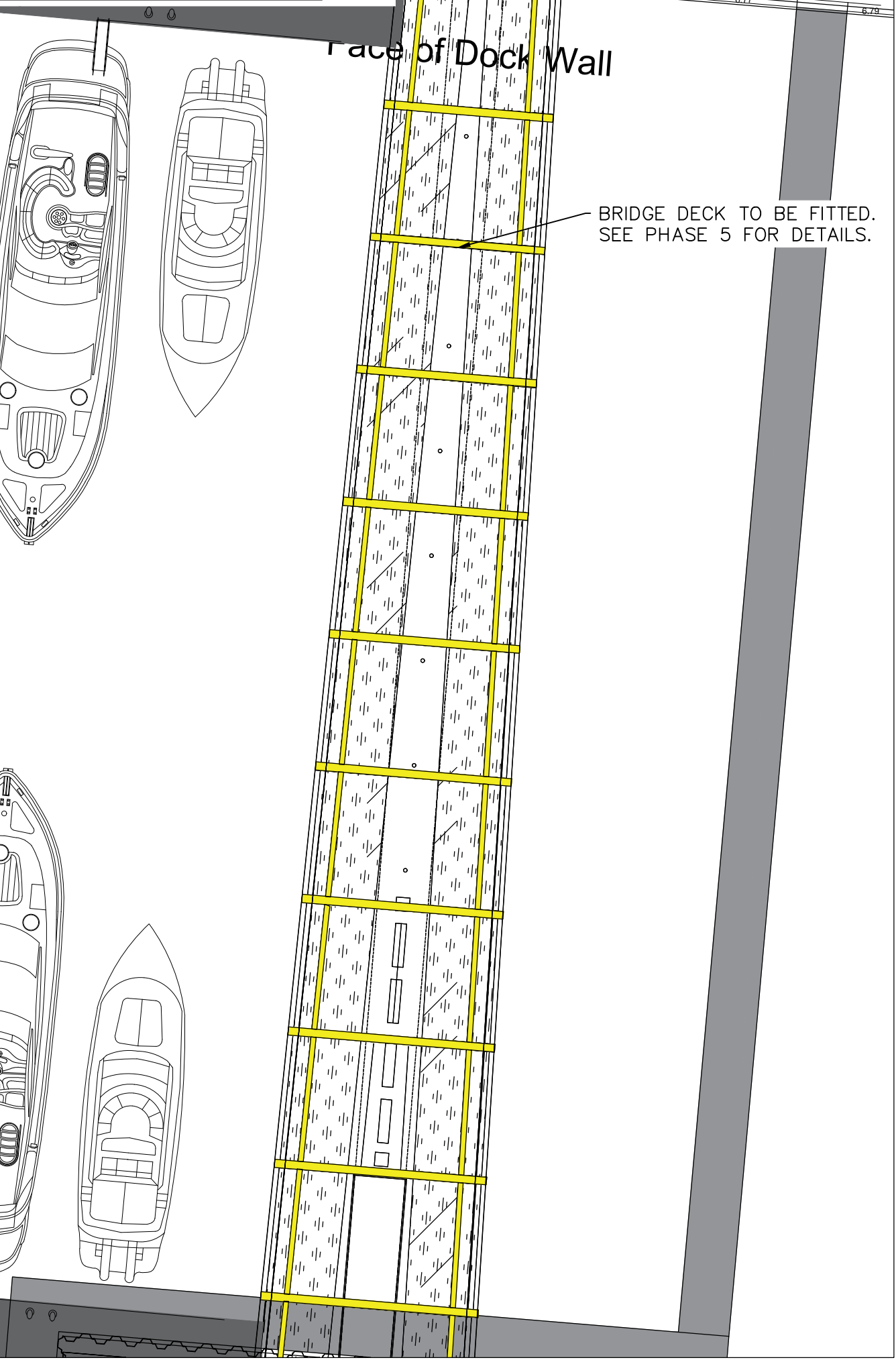
VIEWPORT B - BRIDGE ACCESS  
RAMP - NORTH - SCALE 1:200



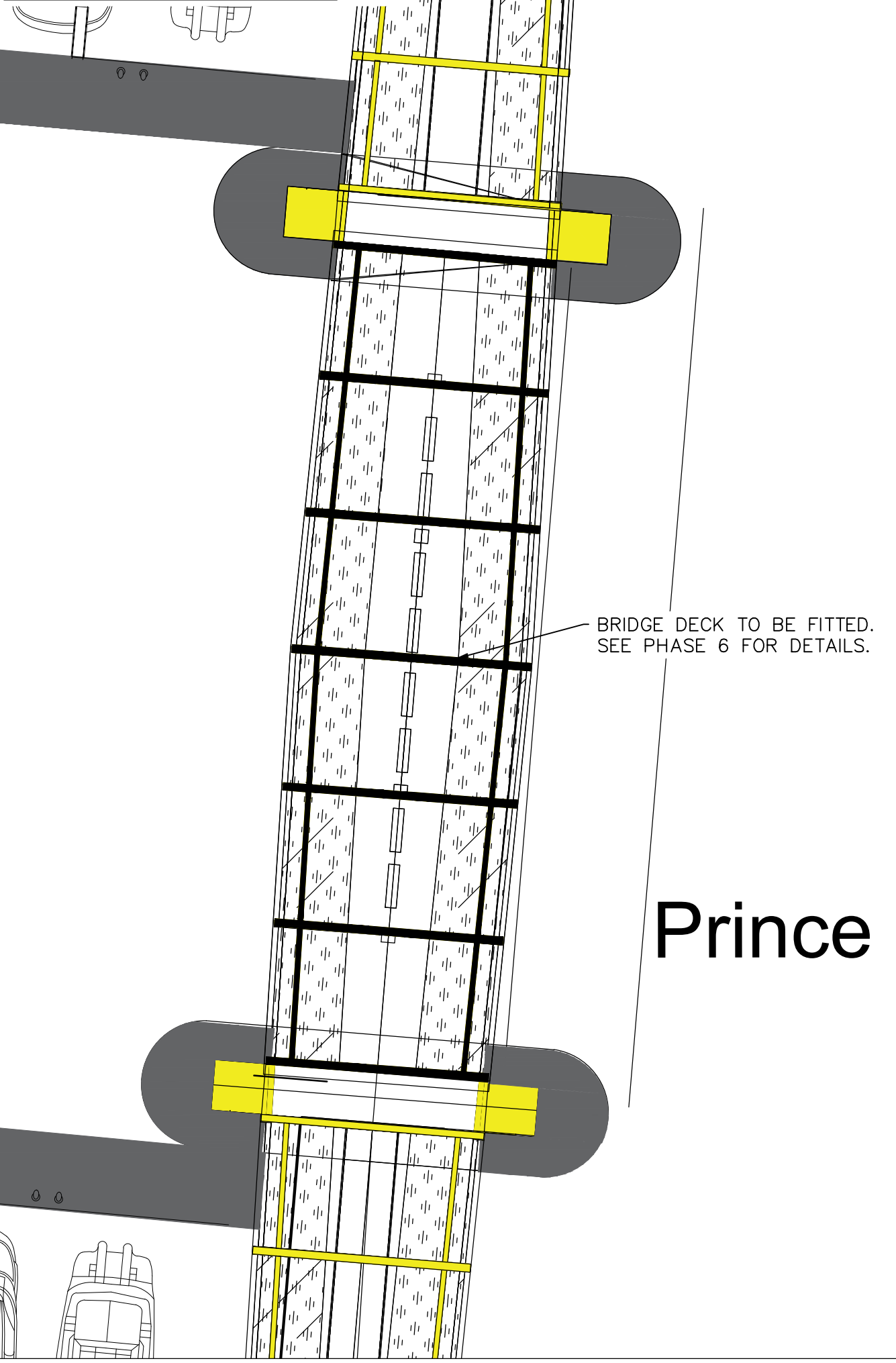
VIEWPORT C - BRIDGE ACCESS  
RAMP SOUTH - SCALE 1:200



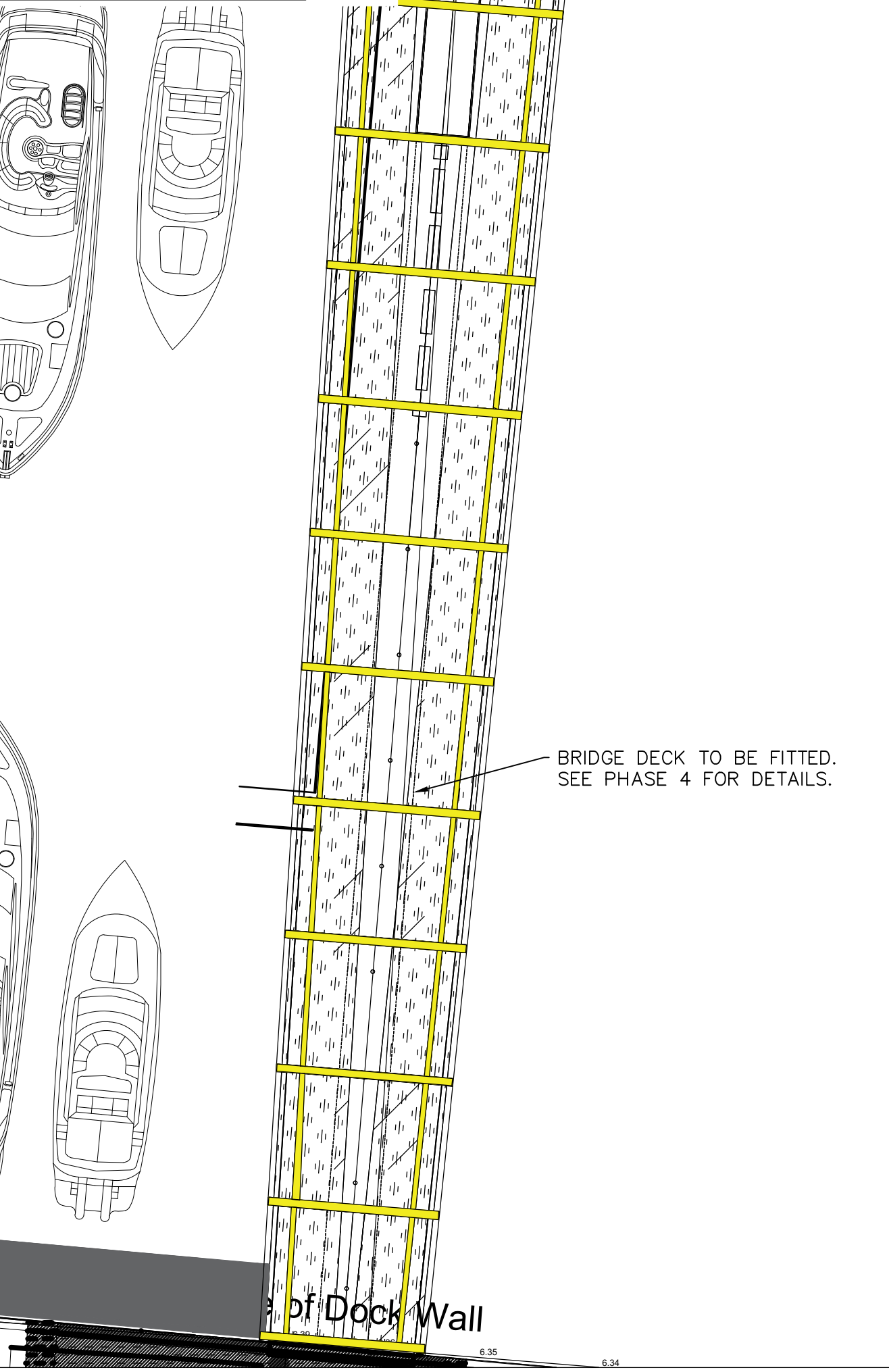
VIEWPORT D - BRIDGE SECTION 3 -  
NORTHERN SPAN - SCALE 1:200



VIEWPORT E - BRIDGE SECTION 2  
CENTRAL SPAN - SCALE 1:200



VIEWPORT F - BRIDGE SECTION 1  
SOUTH SPAN - SCALE 1:200



DRAWING TITLE

PHASE 1 - 7 OVERVIEW  
PROPOSED BRIDGE DESIGN OVERVIEW  
WITH ACCESS AND PARKING PROVISION  
ON LANGDON ROAD

DRAWN BY RM 11/22 SCALE SHOWN  
CHECKED XXX X/XX

PROJECT TITLE

ACBA6003 - SPRINGFIELD DESIGNS -  
PEDESTRIAN BRIDGE

CAD REF.

CAD

PROJECT PHASE

PHASE

REV.

REV.

DRAWING No.

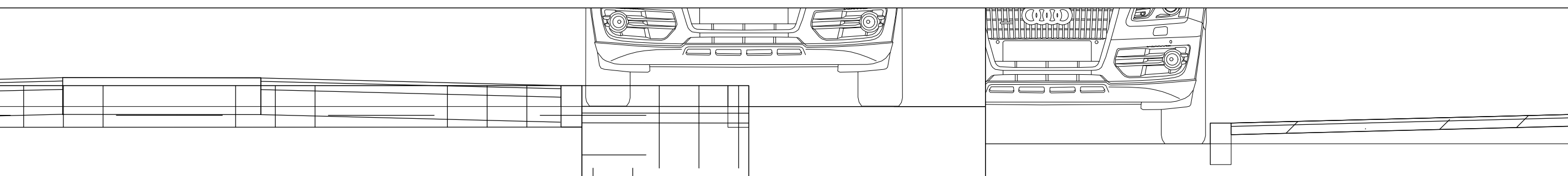
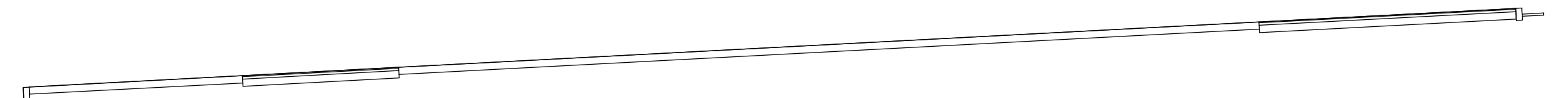
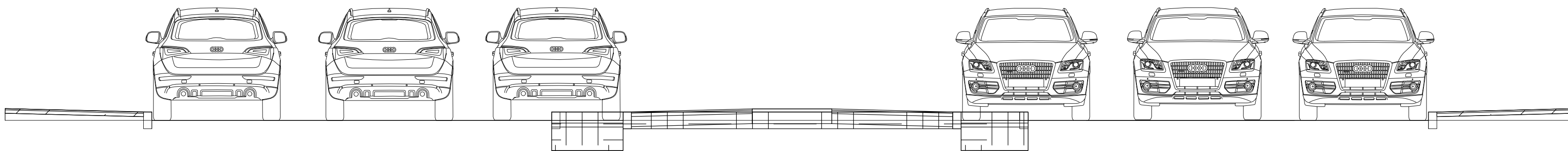
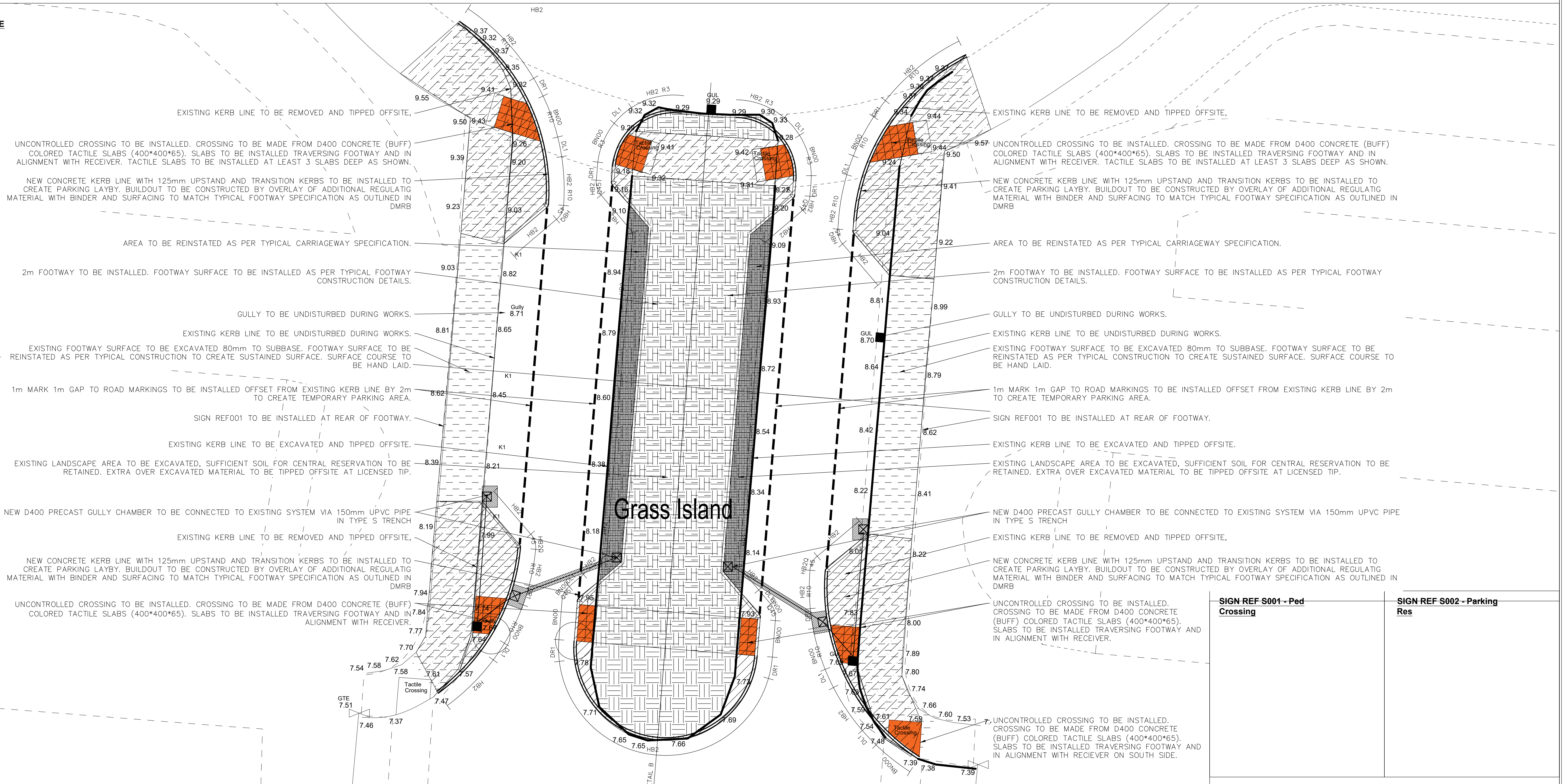
PED1-SPR-DR-C-0002-S1

DESCRIPTION

BY DATE

# SPRINGFIELD DESIGNS Ltd

**PROPOSED HIGHWAY**  
**IMPROVEMENT - SCALE**  
**1:200**



|               |
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| DRAWING TITLE |
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## PHASE 2 - HIGHWAY ACCESS IMPROVEMENT - OVERVIEW

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PROJECT TITLE

**ACBA6003 - SPRINGFIELD DESIGNS -  
PEDESTRIAN BRIDGE**

CAD REF.

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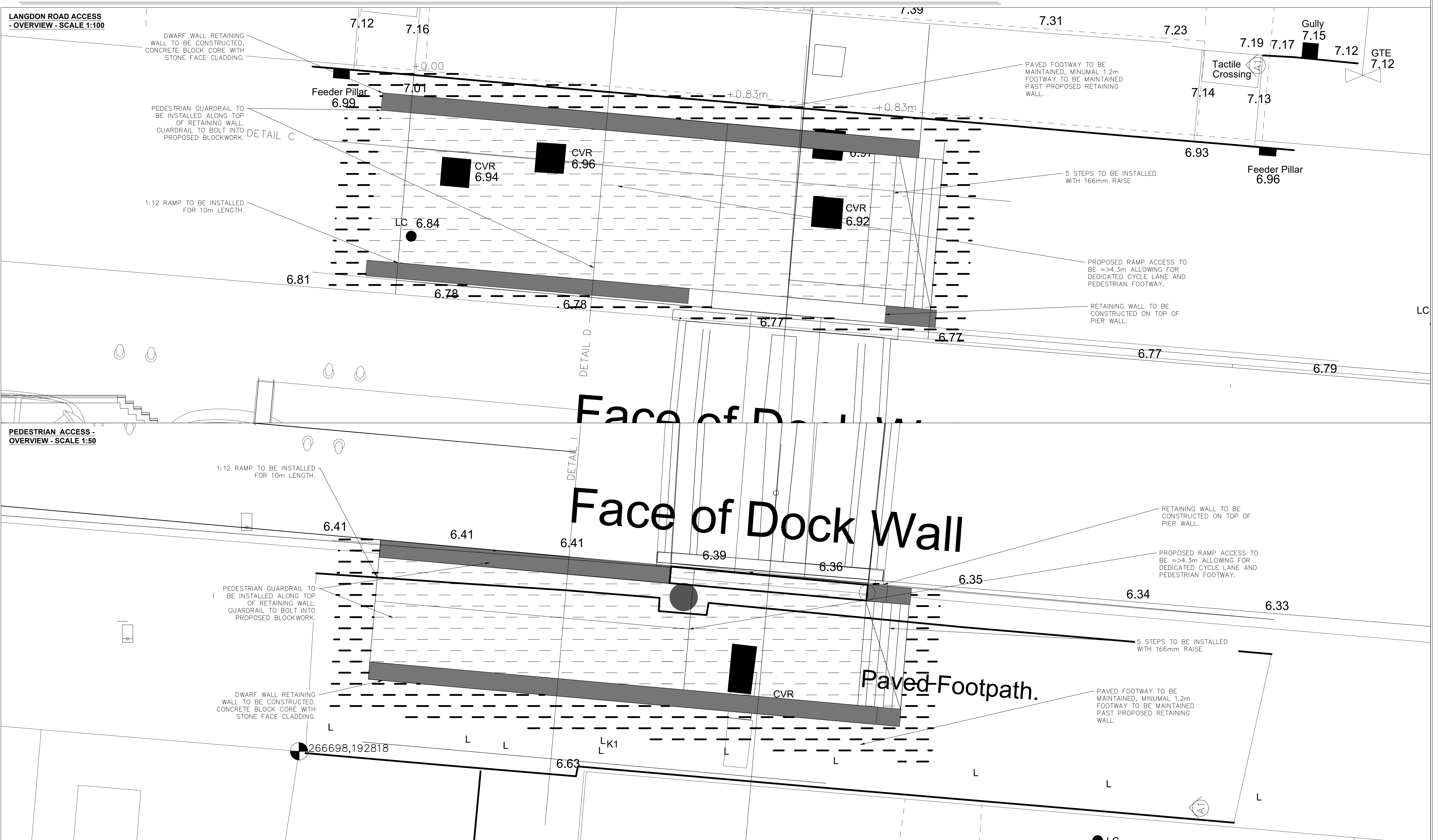
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# SPRINGFIELD DESIGNS Ltd



DRAWING TITLE  
**PHASE 3 - PROPOSED RAMP ACCESS TO  
BRIDGE - OVERVIEW**

PROJECT TITLE  
**ACBA6003 - SPRINGFIELD DESIGNS -  
PEDESTRIAN BRIDGE**

DRAWING No.  
**PED1-SPR-DR-C-0007-S1**

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| REV | DESCRIPTION | BY | DATE |

# SPRINGFIELD DESIGNS Ltd

**BRIDGE SECTION 1 -  
SOUTH - BRIDGE DECK  
SCALE 1:150**

# Print

**BRIDGE SECTION 1 -  
SOUTH - 'COG'  
INSTALLATION - SCALE  
1:150**

# Prin

**TYPICAL DETAIL OF  
BRIDGE DECK - @ A -  
SCALE 1:50**

BRIDGE DECK TO BE LIFTED INTO PLACE BY ON SHORE CRANE AND INSTALLED IN A 60m SECTION WITH 'COGS' INSTALLED SEPARATELY.

PRE TENSIONED 50mm THICK  
STEEL DECKING TO BE  
INSTALLED. DECKING SURFACE  
TO BE TEXTURED.

I BEAM SUPPORTS TO BE INSTALLED  
TRaversing SPAN OF PROPOSED  
BRIDGE SECTION. I BEAMS TO BE  
BOLTED TO BRIDGE DECK WITH STEEL  
TO STEEL CONNECTIONS. I BEAM TO  
SPLIT AT PEDESTRIAN ACCESS POINT.  
I BEAM TO CONNECT TO EXISTING  
STEEL WORK VIA STEEL TO STEEL  
CONNECTIONS.

ADDITIONAL I BEAM SUPPORTS TO BE  
INSTALLED TRAVERSING DECK IN LINE WITH  
'COG' INSTALLATION TO PROVIDE ADDITIONAL  
REISTSNACE TO BENDING FORCES FROM COG

**TYPICAL DETAIL OF  
BRIDGE DECK @ B -  
SCALE 1:50**

BRIDGE DECK TO BE LIFTED  
INTO PLACE BY ON SHORE  
CRANE AND INSTALLED IN A  
60m SECTION WITH 'COGS'  
INSTALLED SEPARATELY.

PRE TENSIONED 50mm THICK  
STEEL DECKING TO BE  
INSTALLED. DECKING SURFACE  
TO BE TEXTURED.

I BEAM SUPPORTS TO BE INSTALLED  
TRaversing SPAN OF PROPOSED  
BRIDGE SECTION. I BEAMS TO BE  
BOLTED TO BRIDGE DECK WITH STEEL  
TO STEEL CONNECTIONS

ADDITIONAL I BEAM SUPPORTS TO BE  
INSTALLED TRAVERSING DECK IN LINE WITH  
'COG' INSTALLATION TO PROVIDE ADDITIONAL  
REISTSNAE TO BENDING FORCES FROM COG

**TYPICAL DETAIL OF COG  
INSTALLATION @ B -  
SCALE 1:50**

200mm THICK STEEL -  
CONCENTRIC COGS TO BE  
INSTALLED. WIDTH OF COGS  
TO INCREASE ALONG BRIDGE  
TO CENTRAL AREA TO  
ACCOMMODATE DECKING  
ACCESS

BRIDGE TO BE INTERNALLY  
LIT BY HANDRAIL LIGHTS  
AFFIXED TO HANDRAIL AT  
EACH SIDE OF BRIDGE

CYCLIST ONLY AREA TO BE -  
INSTALLED ON WEST SIDE OF  
BRIDGE DECK.

PRE TENSIONED 50mm THICK  
STEEL DECKING TO BE  
INSTALLED. DECKING SURF  
TO BE TEXTURED.

I BEAM SUPPORTS TO BE INSTALLED  
TRAVERSING SPAN OF PROPOSED  
BRIDGE SECTION. I BEAMS TO  
BOLTED TO BRIDGE DECK WITH STEEL  
TO STEEL CONNECTORS.

COGS TO HAVE INTERNAL RADIUS OF 200mm FOR EXTRUSIONS, AND 400mm RADIUS FOR INTERNAL RADIUS AREAS

CONNECTING STEEL  
BEAM. 200mm $\phi$ \*5m  
SHOWN,

PEDESTRIAN ONLY ROUTE  
BE INSTALLED ALONG EAST  
SIDE OF BRIDGE.

PERSPEX PANELS TO BE INSTALLED AND SHAPED TO ALLOW INSTALLATION ALONG 'COG' CURVE. SHEETS TO BE INSTALLED INTO SEAMS AND POP RIVETED INTO PLACE. PANELS TO BE INSTALLED TO ALLOW REMOVAL OF PANELS FROM INSIDE BRIDGE.

- HANDRAILS TO BE INSTALLED ALONG SIDE OF BRIDGE. HAND RAILS TO BE BOLTED TO STEEL SUPPORTS AT 5m INTERVALS

ADDITIONAL I BEAM SUPPORTS TO BE  
INSTALLED TRAVERSING DECK IN LINE WITH  
'COG' INSTALLATION TO PROVIDE ADDITIONAL  
RESTRAINT TO BENDING FORCES FROM COG

**DRAWING No.**  
**PED1-SPR-DR-C-0010-S1**

**PROJECT TITLE**  
**ACBA6003 - SPRINGFIELD DESIGNS -**  
**PEDESTRIAN BRIDGE**

CAD REF.

| PROJECT<br>PHASE | PHASE |
|------------------|-------|
|------------------|-------|

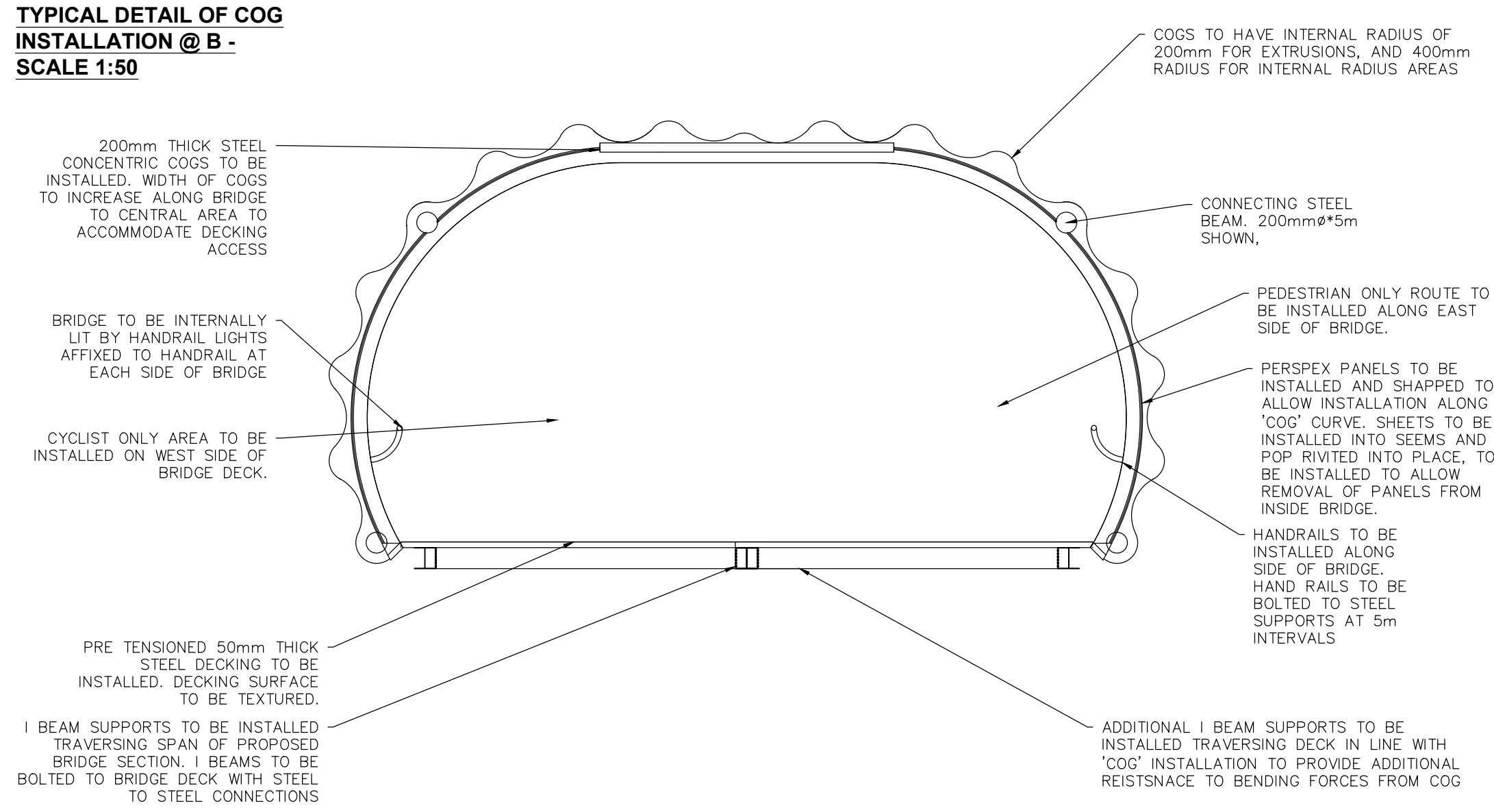
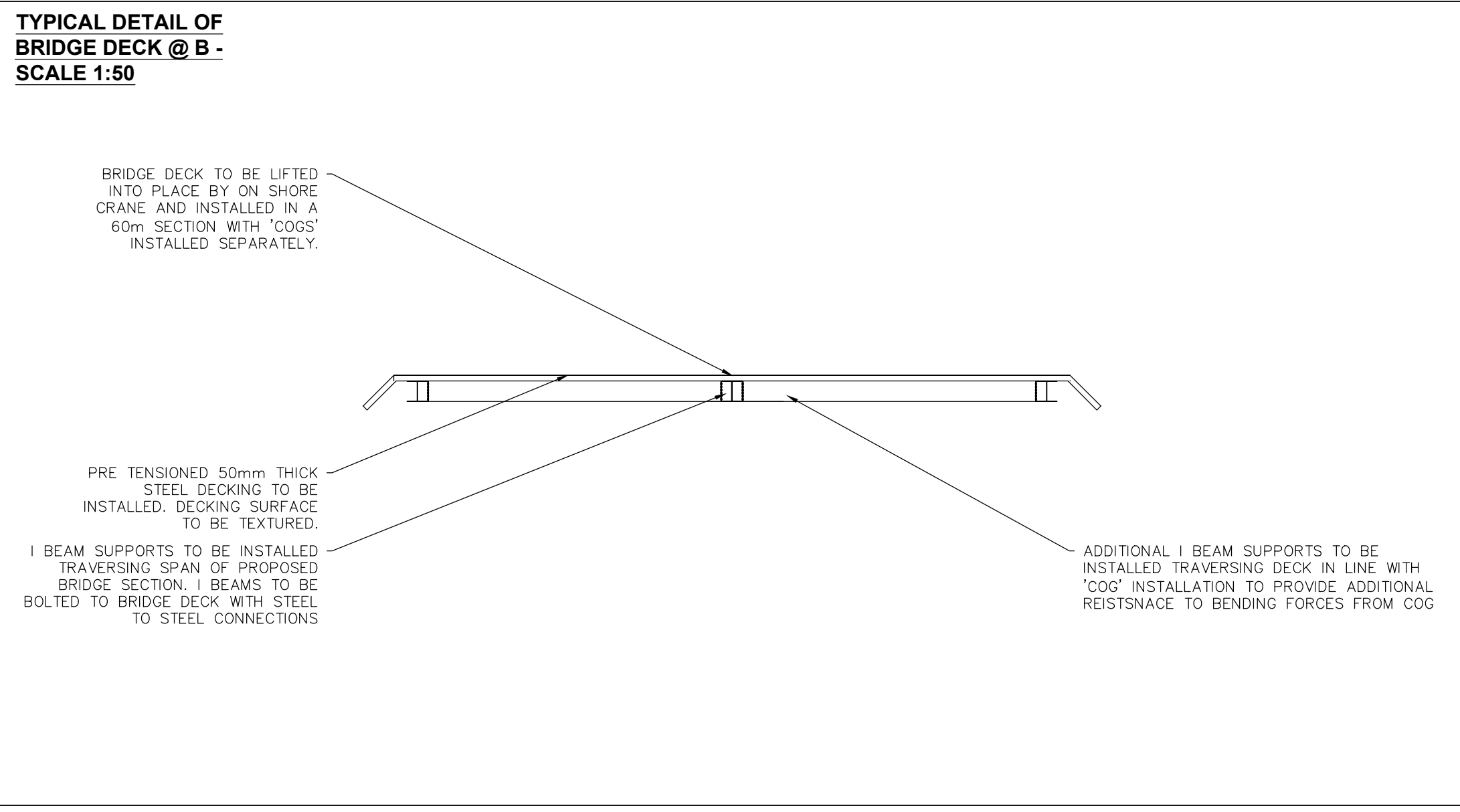
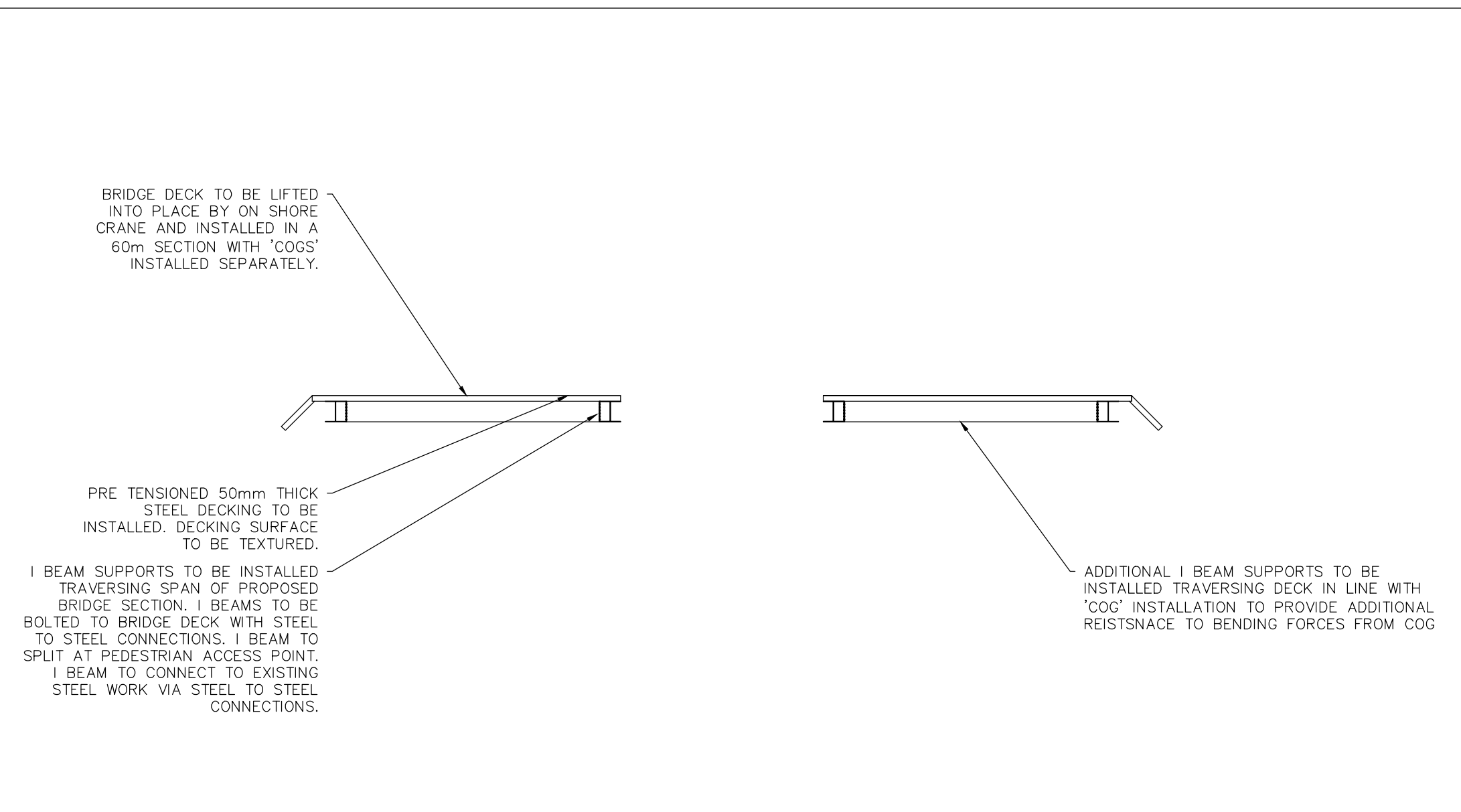
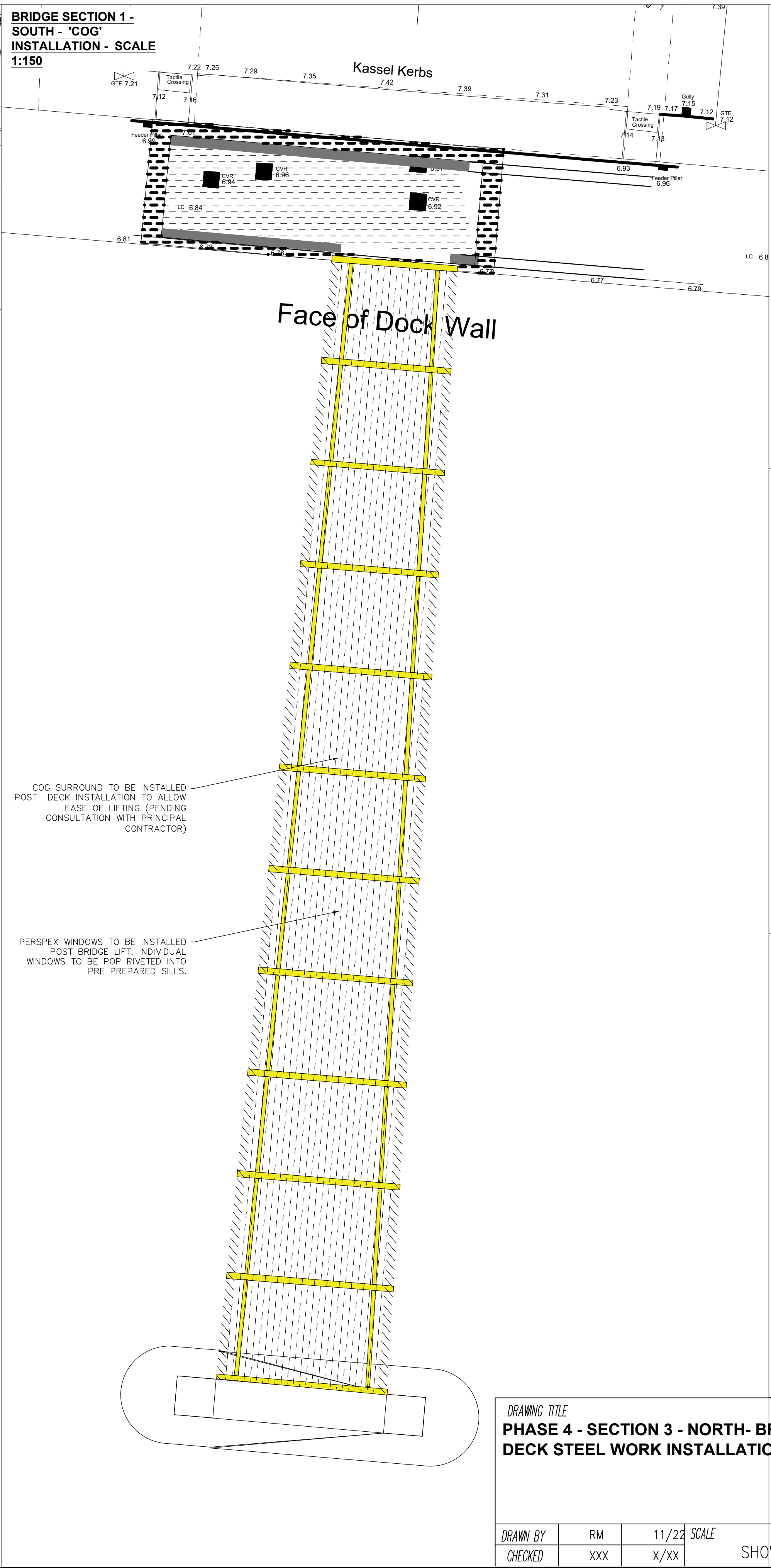
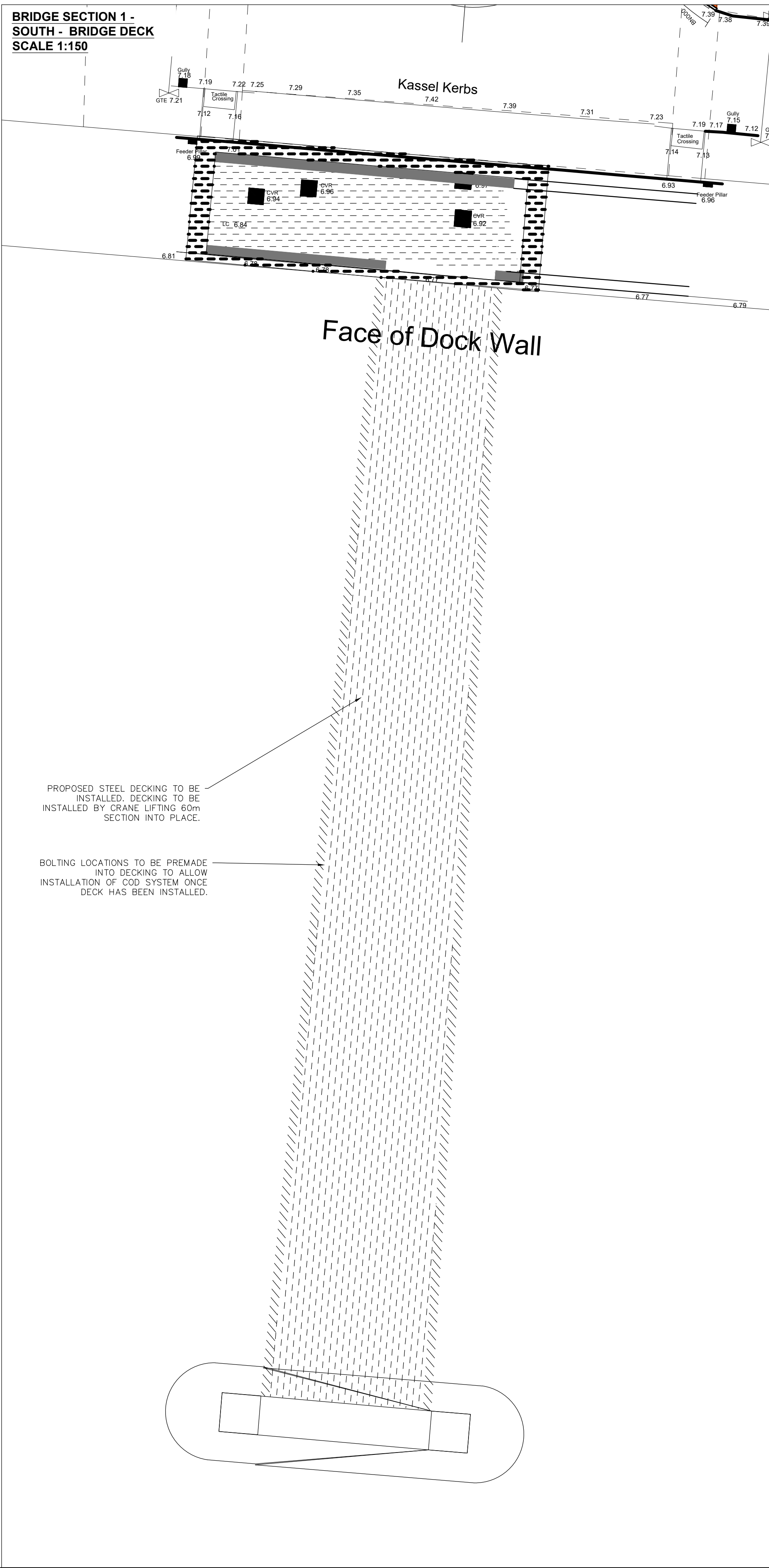
REV.

| REV. | DESCRIPTION | BY | DATE |
|------|-------------|----|------|
|------|-------------|----|------|

**PHASE 4 - SECTION 1 - SOUTH- BRIDGE  
DESK STEEL WORK INSTALLATION**

|          |            |     |      |       |       |
|----------|------------|-----|------|-------|-------|
| DRAWN BY | LC<br>6.60 | RM  | 5/23 | SCALE | SHOWN |
| CHECKED  |            | XXX | X/XX |       |       |

# SPRINGFIELD DESIGNS Ltd



DRAWING TITLE  
**PHASE 4 - SECTION 3 - NORTH- BRIDGE DECK STEEL WORK INSTALLATION**

DRAWN BY RM 11/22 SCALE  
CHECKED xxx x/xx SHOWN

PROJECT TITLE  
**ACBA6003 - SPRINGFIELD DESIGNS - PEDESTRIAN BRIDGE**

CAD REF. CAD  
PROJECT PHASE PHASE REV.

DRAWING No.  
**PED1-SPR-DR-C-0012-S1**

REV. DESCRIPTION BY DATE