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# HOMEBUSH BAY BRIDGE

## CONCEPT DESIGN

### COVER SHEET AND DRAWING INDEX

#### DRAWING INDEX

##### BRIDGE STRUCTURE

S01-CST-700	PROPOSED BRIDGE - COVER SHEET AND DRAWING INDEX
S11-CST-700	PROPOSED BRIDGE - GENERAL ARRANGEMENT PLAN AND ELEVATION
S12-CST-700	PROPOSED BRIDGE - GENERAL ARRANGEMENT DETAILS
S25-CST-700	PROPOSED BRIDGE - FOUNDATION DETAILS DRIVEN PRECAST PILE OPTION
S26-CST-700	PROPOSED BRIDGE - FOUNDATION DETAILS DRIVEN STEEL PILE OPTION

##### BRIDGE STRUCTURE - TEMPORARY WORKS

S101-CST-700	PROPOSED BRIDGE - CONSTRUCTION SEQUENCE SHEET 1
S102-CST-700	PROPOSED BRIDGE - CONSTRUCTION SEQUENCE SHEET 2
S151-CST-700	PROPOSED BRIDGE - GENERAL ARRANGEMENT WORKSITE AREAS

##### DRAINAGE DESIGN

D101-CST-700	CONSTRUCTION STORMWATER - MANAGEMENT SYSTEM
D102-CST-700	OPERATIONAL STORMWATER - MANAGEMENT SYSTEM

No.	BY	DATE	DESCRIPTION	APPD	

Do not scale

15/08/2011	A.P.T.	J.K.	M.C.
Date	Drawn	Design	Appd

Client  
FAIRMEAD BUSINESS PTY LIMITED

Job Title  
HOMEBUSH BAY BRIDGE

Scale at A1

Discipline

ARUP

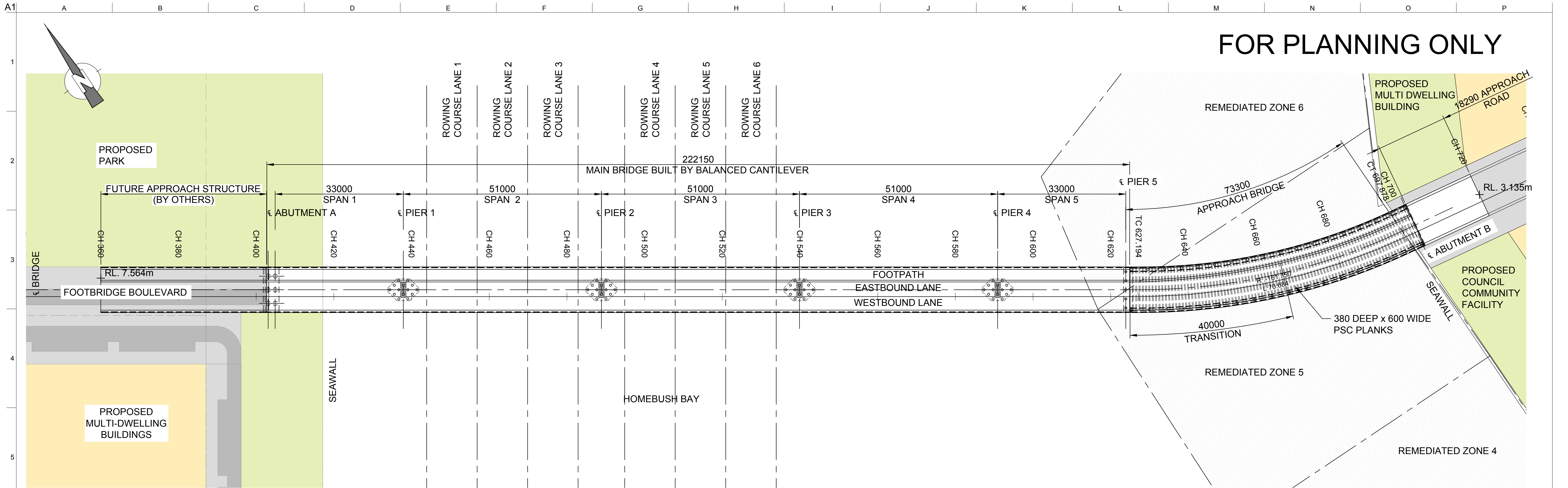
LEVEL 10, 201 KENT STREET  
SYDNEY, NSW 2000  
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Drawing Title  
PROPOSED BRIDGE  
COVER SHEET  
DRAWING INDEX

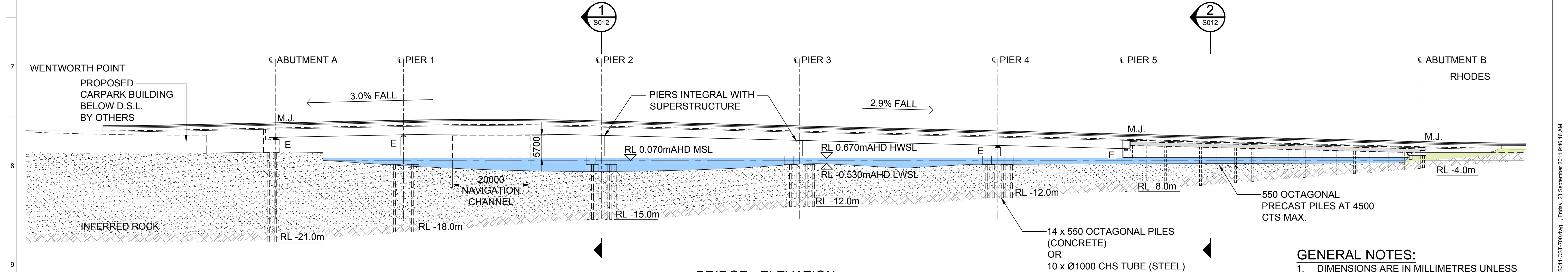
Drawing Status  
CONCEPT DESIGN

Job No	Drawing No	Issue
221379	S001-CST-700	-





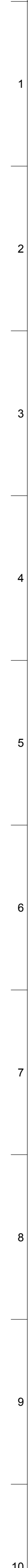
BRIDGE - PLAN  
SCALE 1:500



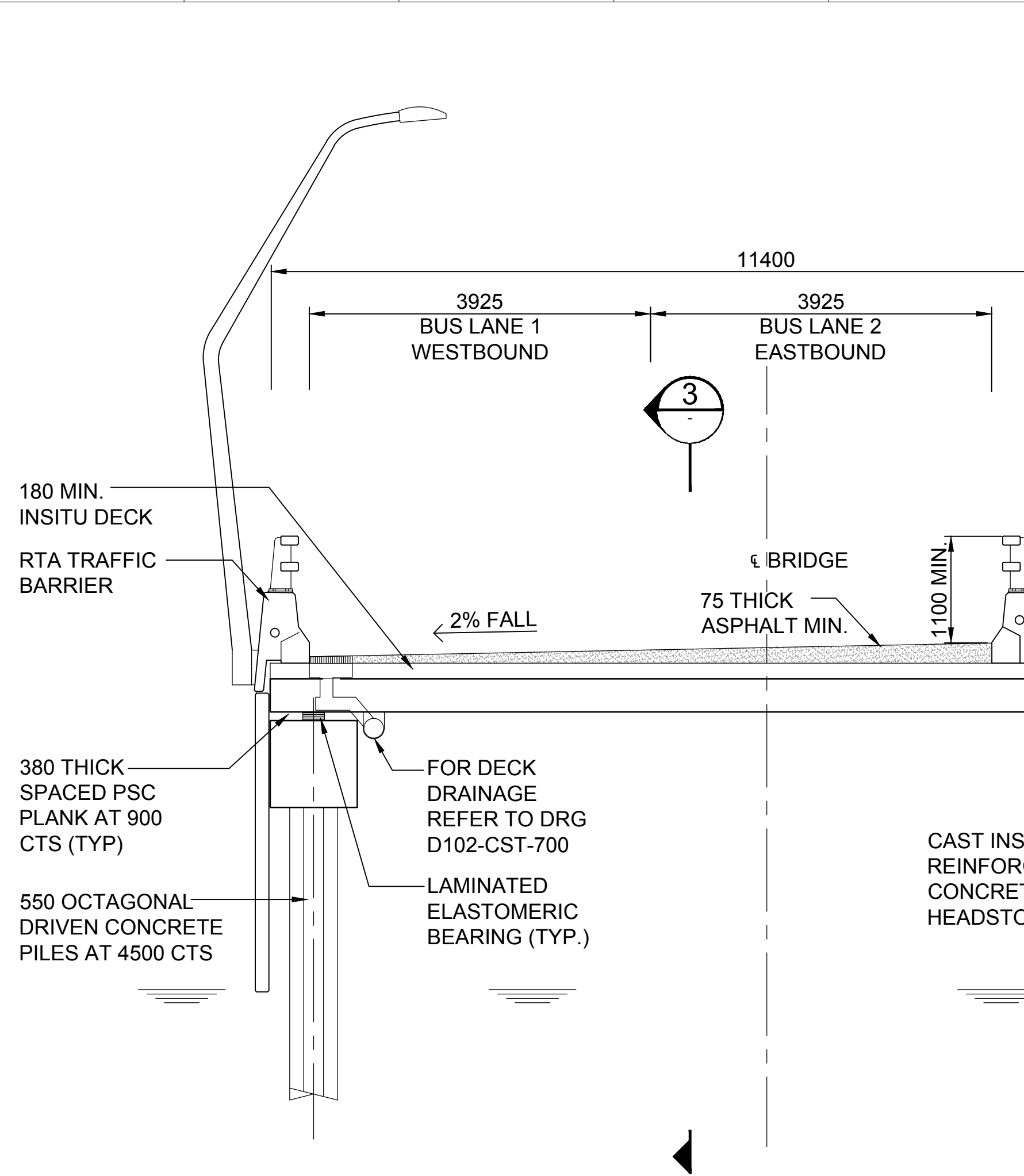
BRIDGE - ELEVATION  
SCALE 1:500

- GENERAL NOTES:**
- DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
  - ALL LEVELS ARE IN METERS RELATIVE TO AHD
  - DESIGN LOADING - T44 TO 'AUSTRAD 96'
  - DESIGN SPEED = 50km/H
  - EARTHQUAKE DESIGN CATEGORY = BEDC-1
  - M.J. DENOTES MOVEMENT JOINT
  - E. GUIDED POT BEARINGS.
  - FOR ROAD PROFILES REFER TO DRG No'S C101-CST-700 AND C102.
  - SPAN LENGTHS ARE SHOWN ALONG CONTROL LINE MC00.

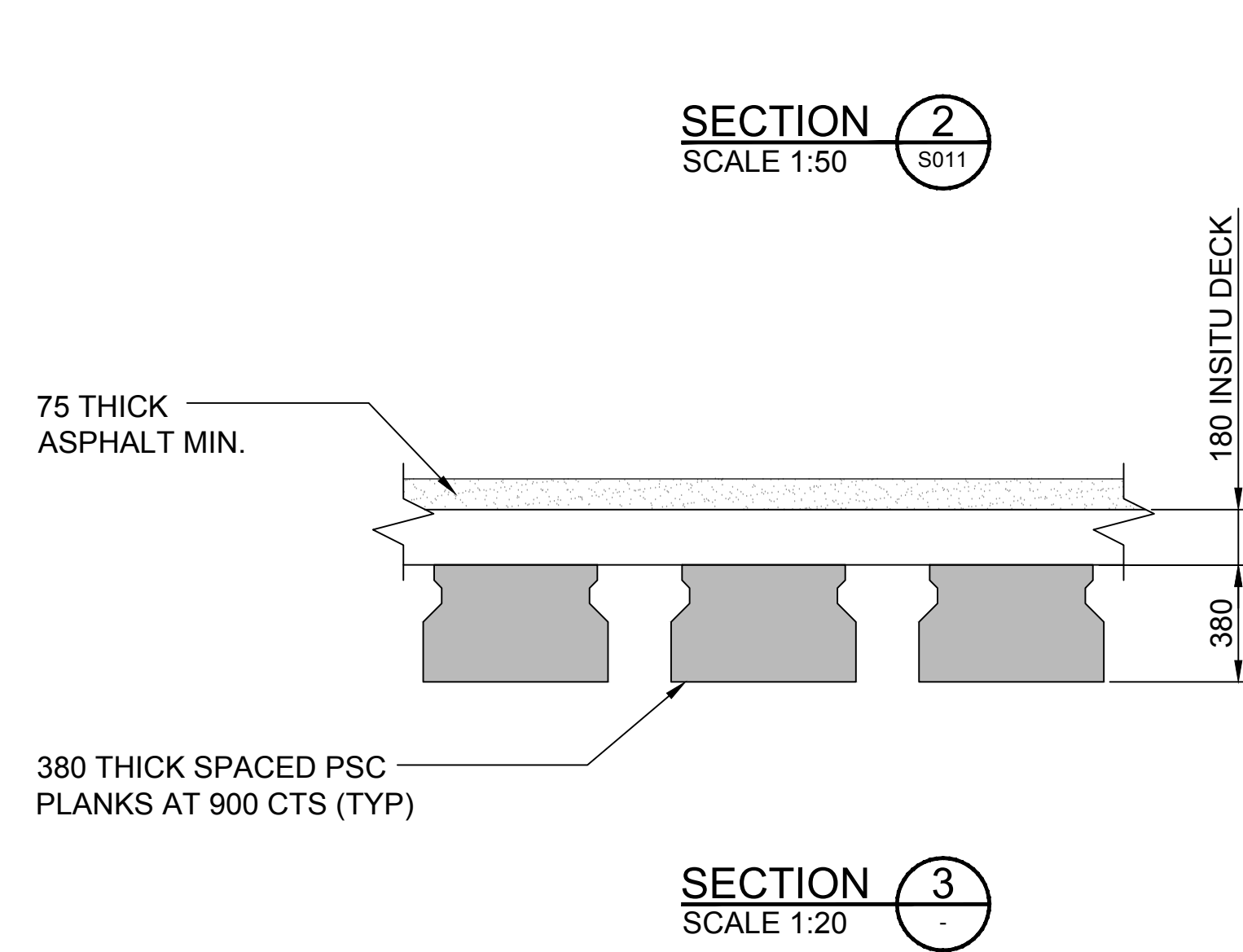
0 10 20 30 40 50 SCALE 1:500m					Client FAIRMEAD BUSINESS PTY LIMITED		Job Title HOMEBUSH BAY BRIDGE		Drawing Title PROPOSED BRIDGE GENERAL ARRANGEMENT PLAN AND ELEVATION	
15/08/2011 A.P.T. J.K. M.C. Date Drawn Design Appd					Scale at A1 Discipline		Job No 221379		Drawing No S011-CST-700	
No. BY DATE DESCRIPTION APPD					LEVEL 10, 201 KENT STREET SYDNEY, NSW 2000 T: +61 02 9320 9320 F: +61 02 9320 9321 www.arup.com		Drawing Status CONCEPT DESIGN		Issue -	



1  
S011



2  
S011



1. BEARINGS ARE NOT SHOWN.  
FOR BEARING ARRANGEMENT,  
REFER TO DRG No.'S S051.
2. SUPERSTRUCTURE CONCRETE  
GRADE IS 50MPa.

Do not scale

15/08/2011 A.P.T.		J.K.	M.C.
Date	Drawn	Design	Appd

Client  
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Job Title  
HOMEBUSH BAY BRIDGE

Scale at A1
Discipline

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Drawing Title  
PROPOSED BRIDGE  
GENERAL ARRANGEMENT  
DETAILS - SHEET 1 OF 2

Drawing Status  
**CONCEPT DESIGN**

Job No	Drawing No	Issue
<b>221379</b>	<b>S012-CST-700</b>	-



No.	BY	DATE	DESCRIPTION	APPD

Job Title  
HOMEBUSH BAY BRIDGE

Discipline

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## CONCEPT DESIGN

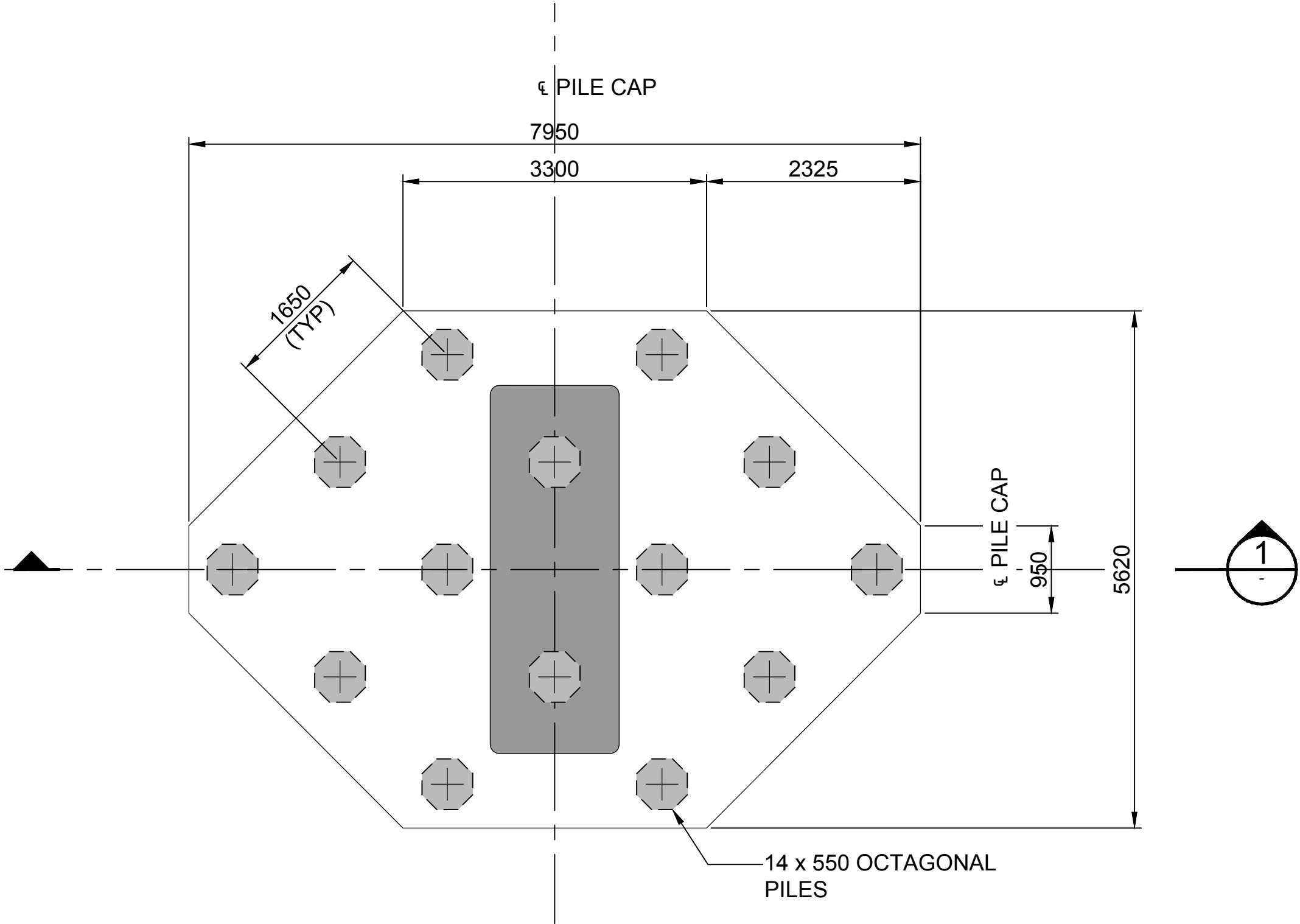
Job No <b>221379</b>	Drawing No <b>S026-CST-700</b>	Issue <b>-</b>
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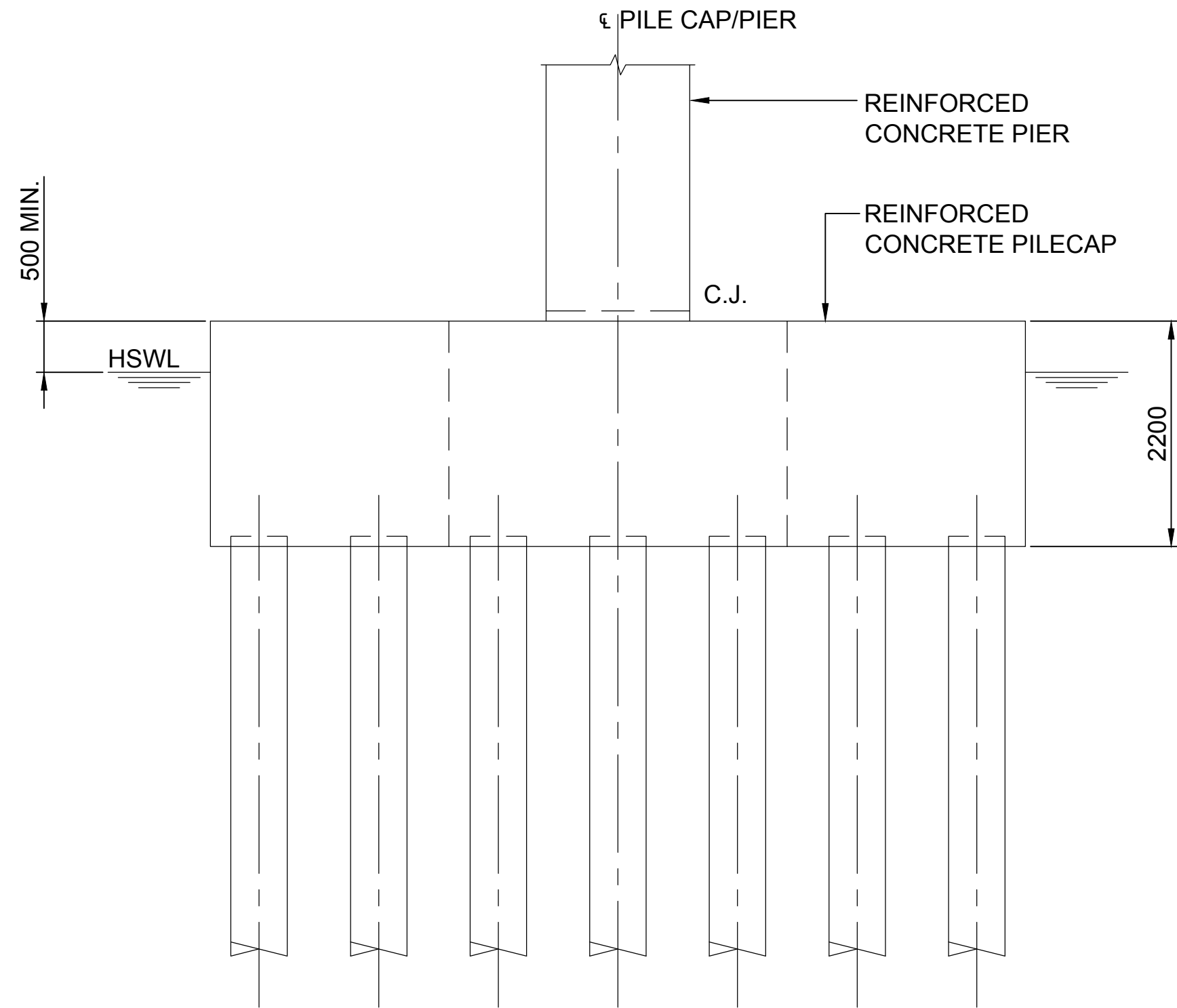
FOR PLANNING ONLY

GENERAL NOTES:

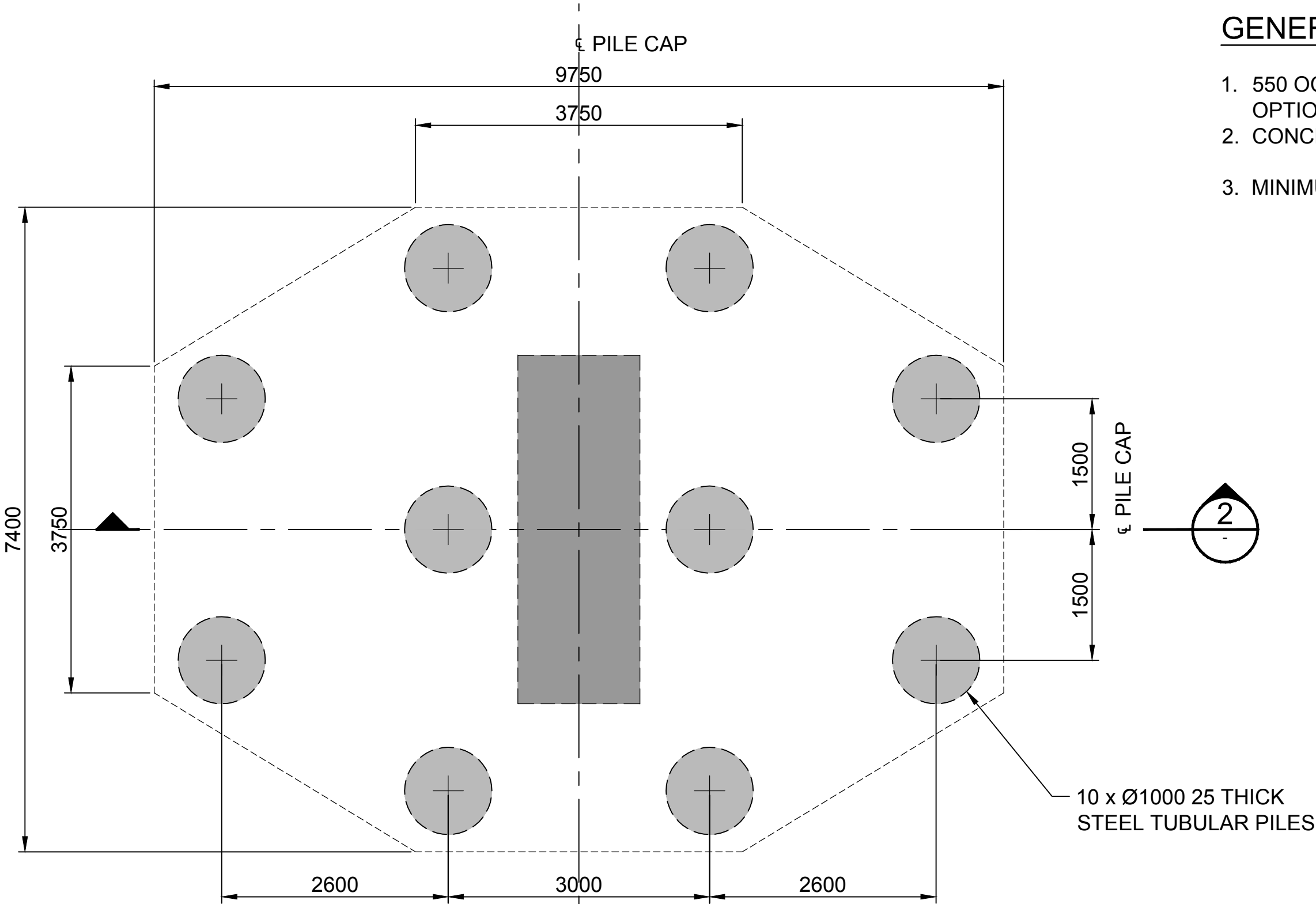
- 1. 550 OCTAGONAL PRECAST CONCRETE DRIVEN PILE OPTION SHOWN.
- 2. CONCRETE GRADE IS 50MPa (PRECAST) 40MPa (CAST INSITU)
- 3. MINIMUM PILE SPACING CTS = 1650mm



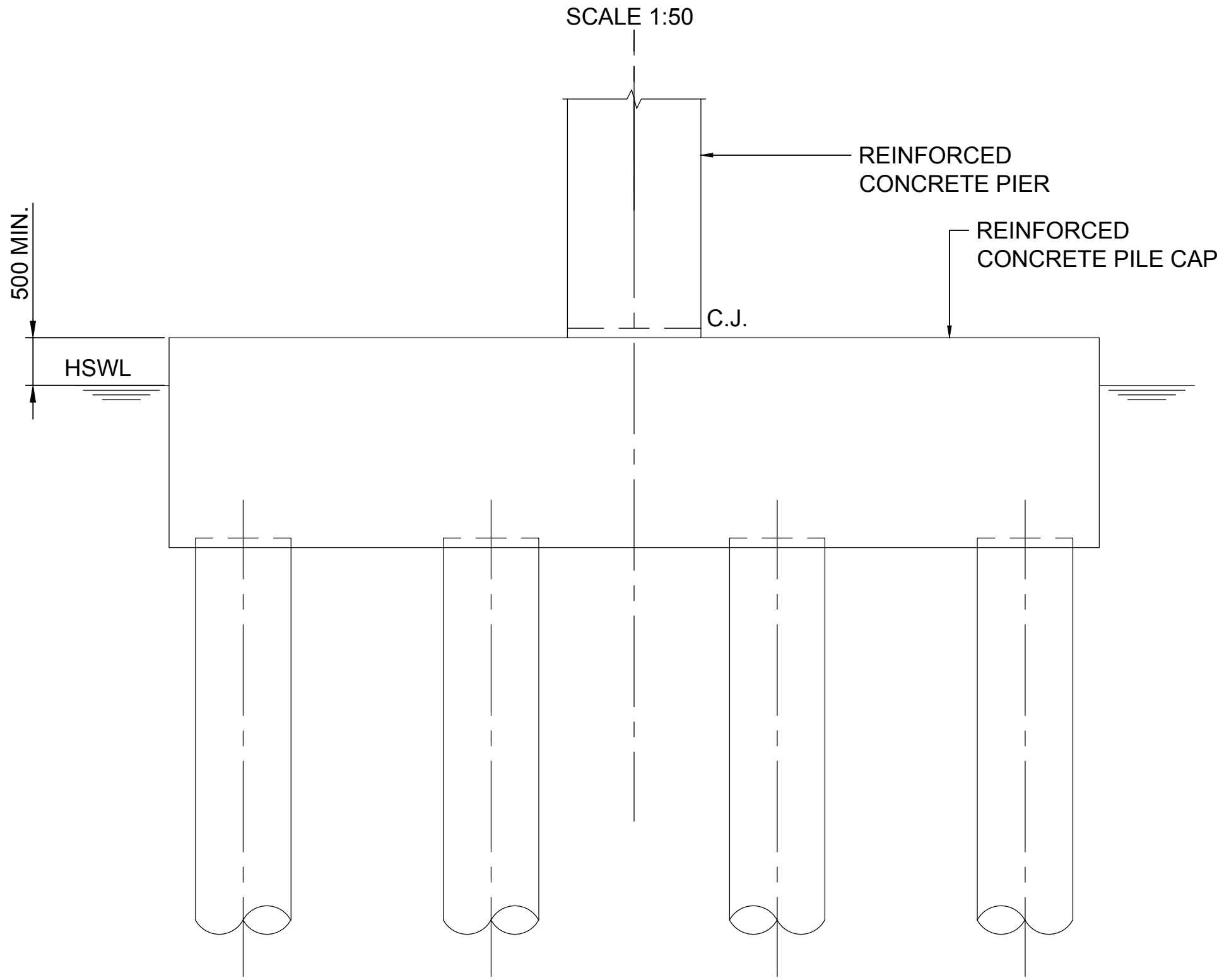
14 DRIVEN CONCRETE PILE PLAN  
SCALE 1:50



DRIVEN PILE SECTION 1  
SCALE 1:50



10 DRIVEN STEEL TUBULAR PILE PLAN  
SCALE 1:50



STEEL TUBULAR SECTION 2  
SCALE 1:50

No.	BY	DATE	DESCRIPTION	APPD	

0 1 2 3 4 5  
SCALE 1:50m

15/08/2011	A.P.T.	J.K.	M.C.
Date	Drawn	Design	Appd

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FAIRMEAD BUSINESS PTY LIMITED

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HOMEBUSH BAY BRIDGE

Scale at A1  
Discipline

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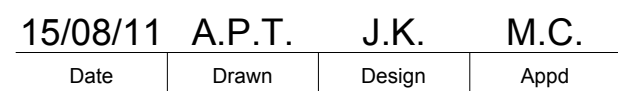
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SYDNEY, NSW 2000  
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Drawing Title  
PROPOSED BRIDGE  
FOUNDATION DETAILS  
DRIVEN PILE OPTIONS

Drawing Status  
CONCEPT DESIGN

Job No 221379	Drawing No S025-CST-700	Issue -
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Scale at A1

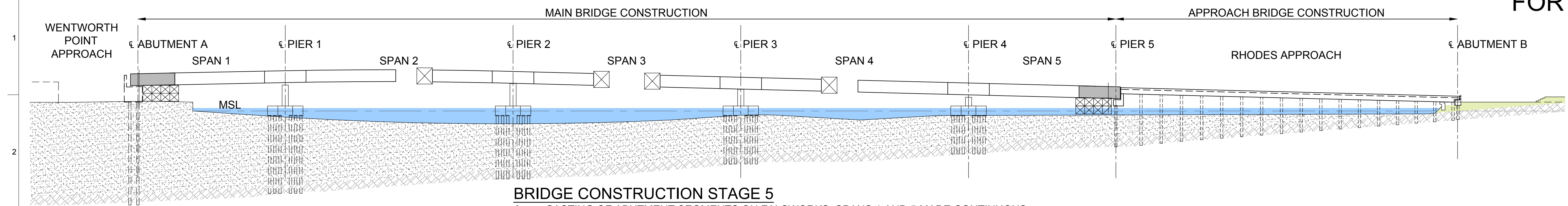
Discipline

Drawing Title		
PROPOSED BRIDGE CONSTRUCTION SEQUENCE SHEET 1		
Drawing Status		
CONCEPT DESIGN		
Job No	Drawing No	Issue
<b>221379</b>	<b>S101-CST-700</b>	-



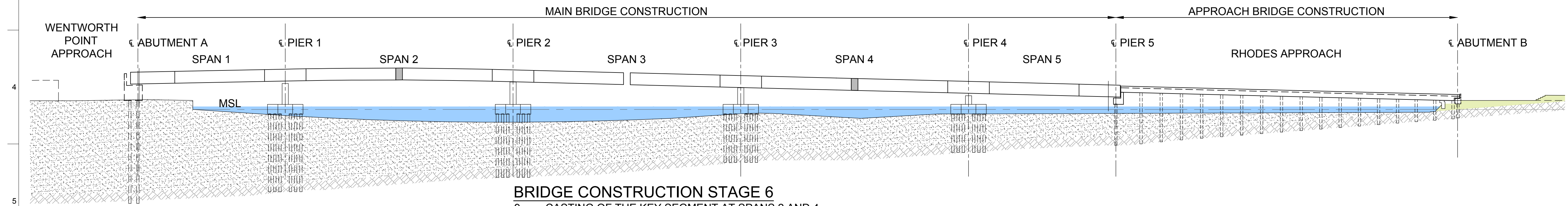
FOR PLANNING ONLY

- NOTES:
- FOR NOTES REFER TO DRG No. S101-CST-700.



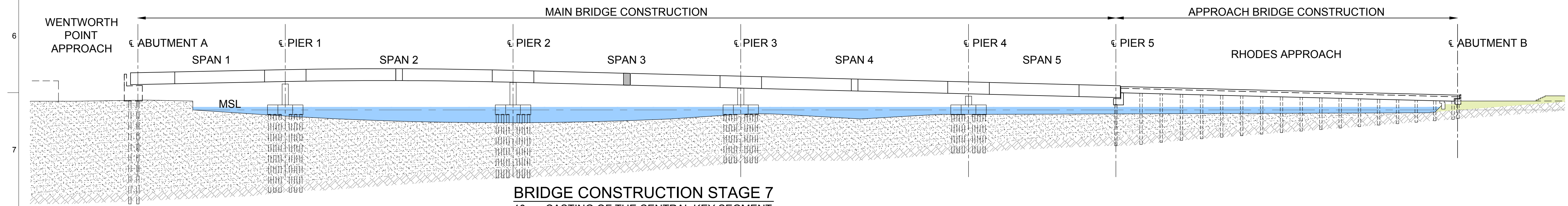
**BRIDGE CONSTRUCTION STAGE 5**

- CASTING OF ABUTMENT SEGMENTS ON FALSWORKS. SPANS 1 AND 5 MADE CONTINUOUS.
- INSTALLATION AND GROUTING OF THE PERMANENT BEARINGS.
- REMOVAL OF THE STABILITY SYSTEM AT THE ARTICULATED PIERS.



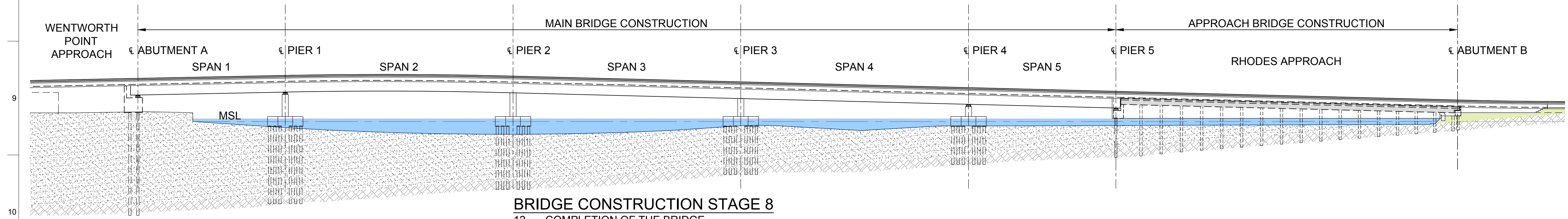
**BRIDGE CONSTRUCTION STAGE 6**

- CASTING OF THE KEY SEGMENT AT SPANS 2 AND 4.



**BRIDGE CONSTRUCTION STAGE 7**

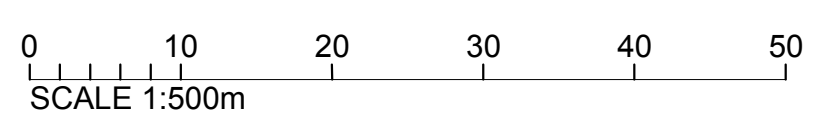
- CASTING OF THE CENTRAL KEY SEGMENT
- INSTALLATION OF THE BRIDGE FURNITURE



**BRIDGE CONSTRUCTION STAGE 8**

- COMPLETION OF THE BRIDGE.

No.	BY	DATE	DESCRIPTION	APPD	



15/08/11	A.P.T.	J.K.	M.C.
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Client  
FAIRMEAD BUSINESS PTY LIMITED

Job Title  
HOMEBUSH BAY BRIDGE

Scale at A1

Discipline

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Drawing Title  
PROPOSED BRIDGE  
CONSTRUCTION SEQUENCE  
SHEET 2

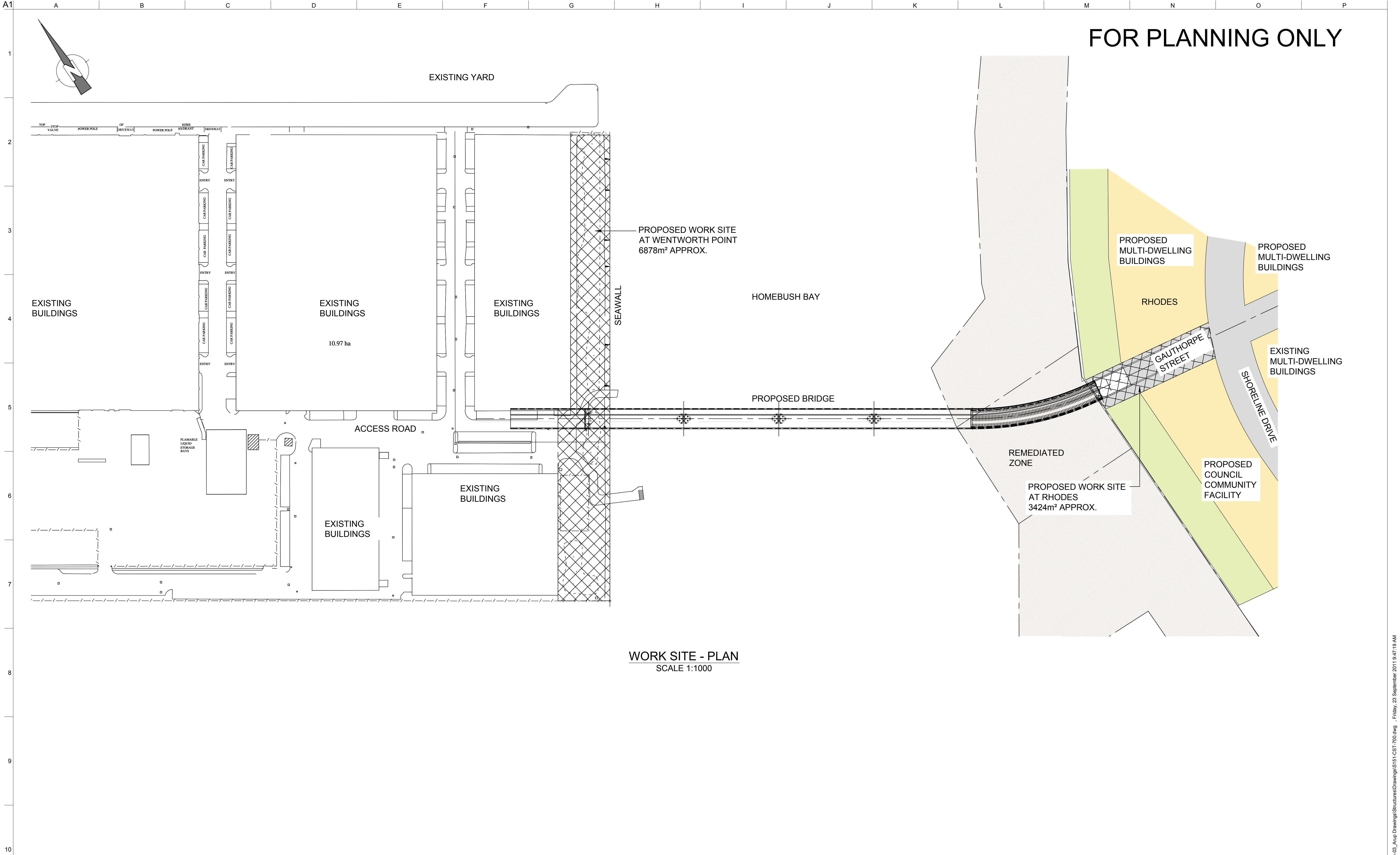
Drawing Status  
CONCEPT DESIGN

Job No  
221379

Drawing No  
S102-CST-700

Issue  
-





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WORK SITE - PLAN  
SCALE 1:1000

No.	BY	DATE	DESCRIPTION	APPD	

Do not scale

0 20 40 60 80 100  
SCALE 1:1000m

15/0/8/2011	A.P.T.	J.K.	M.C.
Date	Drawn	Design	Appd

Client  
FAIRMEAD BUSINESS PTY LIMITED

Job Title  
HOMEBUSH BAY BRIDGE

Scale at A1

Discipline

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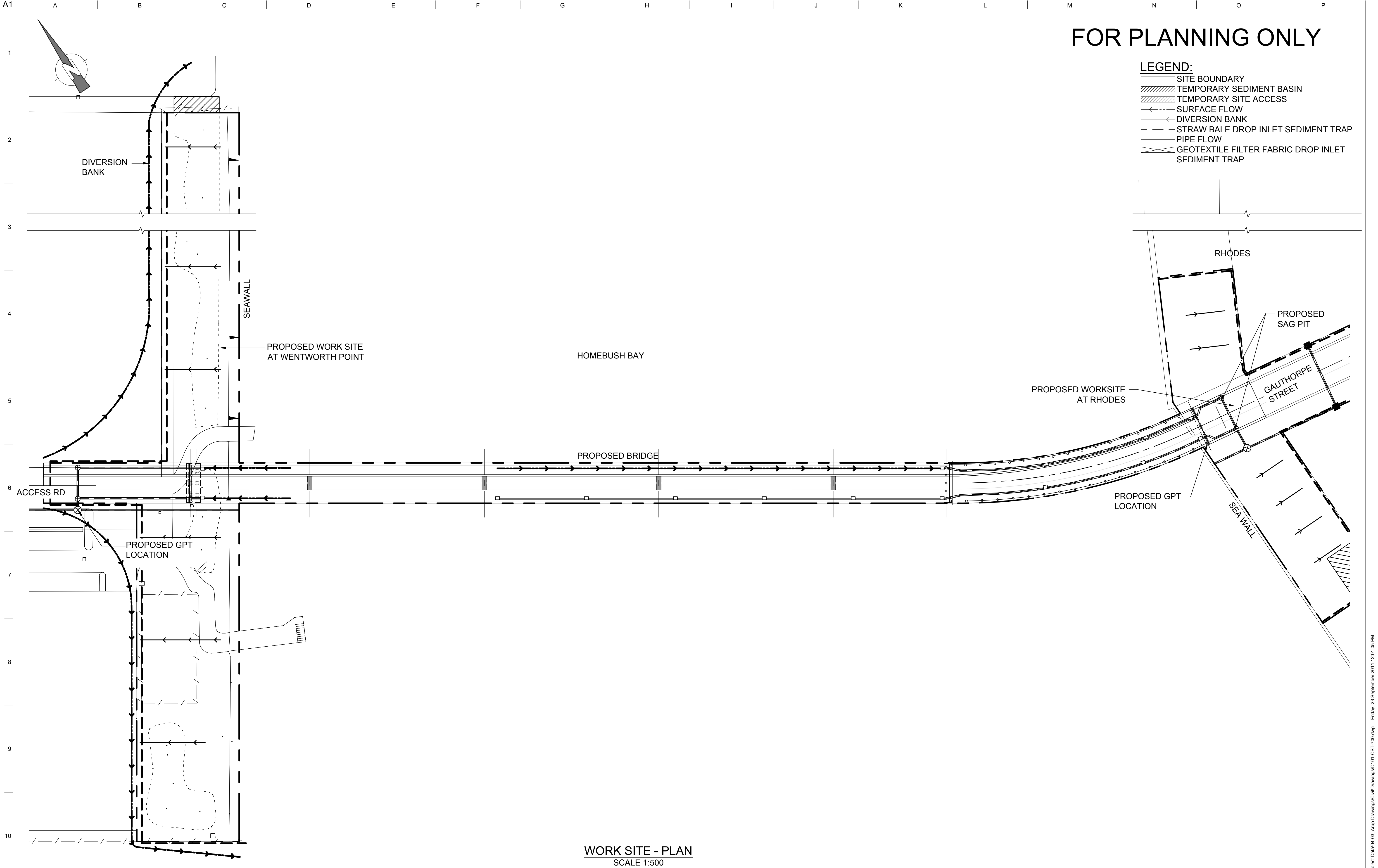
LEVEL 10, 201 KENT STREET  
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www.arup.com

Drawing Title  
PROPOSED BRIDGE  
GENERAL ARRANGEMENT  
WORKSITE AREAS

Drawing Status  
CONCEPT DESIGN

Job No 221379	Drawing No S151-CST-700	Issue -
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No.	BY	DATE	DESCRIPTION	APPD	

Do not scale

0 10 20 30 40 50  
SCALE 1:500m

WORK SITE - PLAN  
SCALE 1:500

15/08/2011	A.P.T.	J.K.	M.C.
Date	Drawn	Design	Appd

Client  
FAIRMEAD BUSINESS PTY LIMITED

Job Title  
HOMEBUSH BAY BRIDGE

Scale at A1  
Discipline

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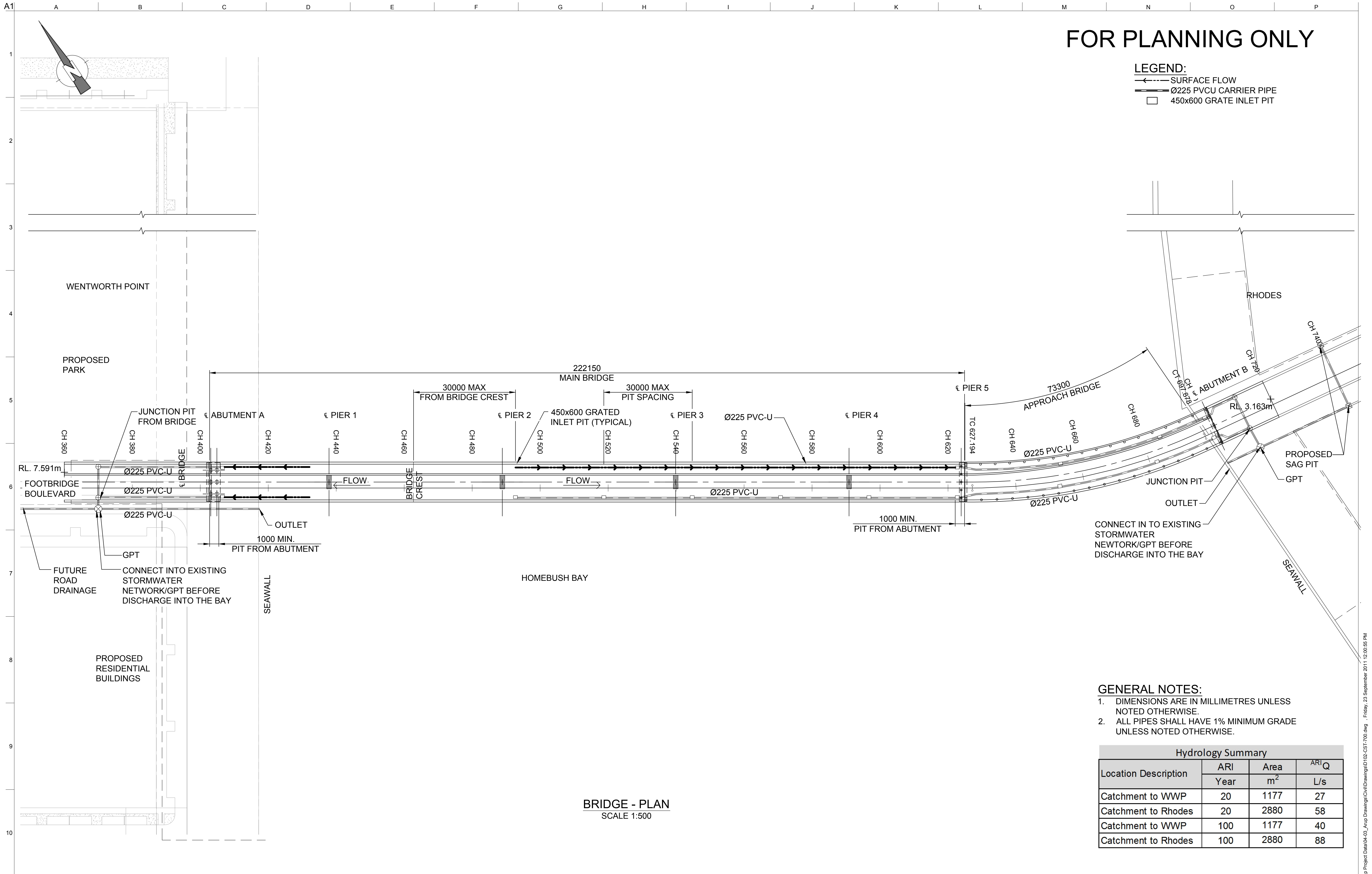
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www.arup.com

Drawing Title  
CONSTRUCTION SEDIMENT  
AND EROSION CONTROL PLAN

Drawing Status  
CONCEPT DESIGN

Job No	Drawing No	Issue
221379	D101-CST-700	-





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- LEGEND:**
- SURFACE FLOW
  - Ø225 PVCU CARRIER PIPE
  - 450x600 GRATE INLET PIT

- GENERAL NOTES:**
- DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
  - ALL PIPES SHALL HAVE 1% MINIMUM GRADE UNLESS NOTED OTHERWISE.

Hydrology Summary			
Location Description	ARI	Area	ARI <sup>Q</sup>
	Year	m <sup>2</sup>	L/s
Catchment to WWP	20	1177	27
Catchment to Rhodes	20	2880	58
Catchment to WWP	100	1177	40
Catchment to Rhodes	100	2880	88

No.	BY	DATE	DESCRIPTION	APPD

Do not scale

0 10 20 30 40 50

SCALE 1:500m

15/08/2011 A.P.T. J.K. M.C.

Date	Drawn	Design	Appd

Client  
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Job Title  
HOMEBUSH BAY BRIDGE

Scale at A1

Discipline

**ARUP**

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Drawing Title  
OPERATIONAL STORMWATER  
MANAGEMENT SYSTEM

Drawing Status  
**CONCEPT DESIGN**

Job No <b>221379</b>	Drawing No <b>D102-CST-700</b>	Issue -
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J:\221379 Homebush Bay Bridge\04-00\_Arup Project Data\04-03\_Arup Drawings\Civil\Drawings\0102-CST-700.dwg Friday, 23 September 2011 12:00:55 PM © Arup