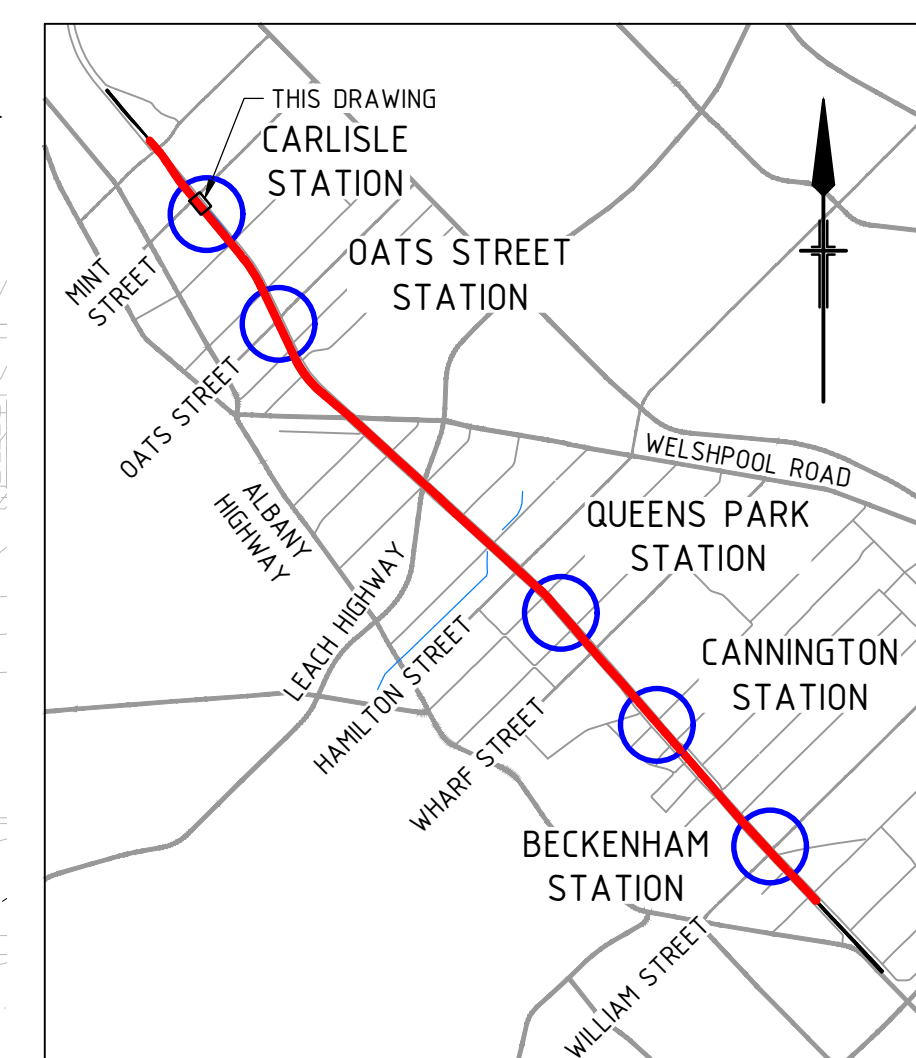


Appendix M – Drainage General Arrangement Plans prepared by ALUA



NOTES

- ## LEGEND

- RAIL CORRIDOR DRAINAGE:

- U/S INV 14.600
200φ / 11.47%

- ToVP DRAINAGE:**
- 
- ToVP DRAINAGE PIPE
ToVP MANHOLE
ToVP COMBINATION PIT

- HYDRAULIC SERVICES

- DESIGN CONTOUR
 ————20————— DESIGN MAJOR CONTOUR
 - - - - -20.1- - - - - DESIGN MINOR CONTOUR

- EXISTING DRAINAGE:**
- | | |
|---|---------------------------------|
|  | EXISTING PIT AND PIPE |
|  | EXISTING DRAINAGE TO BE REMOVED |
|  | EXISTING OPEN CHANNEL |
|  | EXISTING CONCRETE CHANNEL |

- EXISTING DRAINAGE PIPE INFORMATION

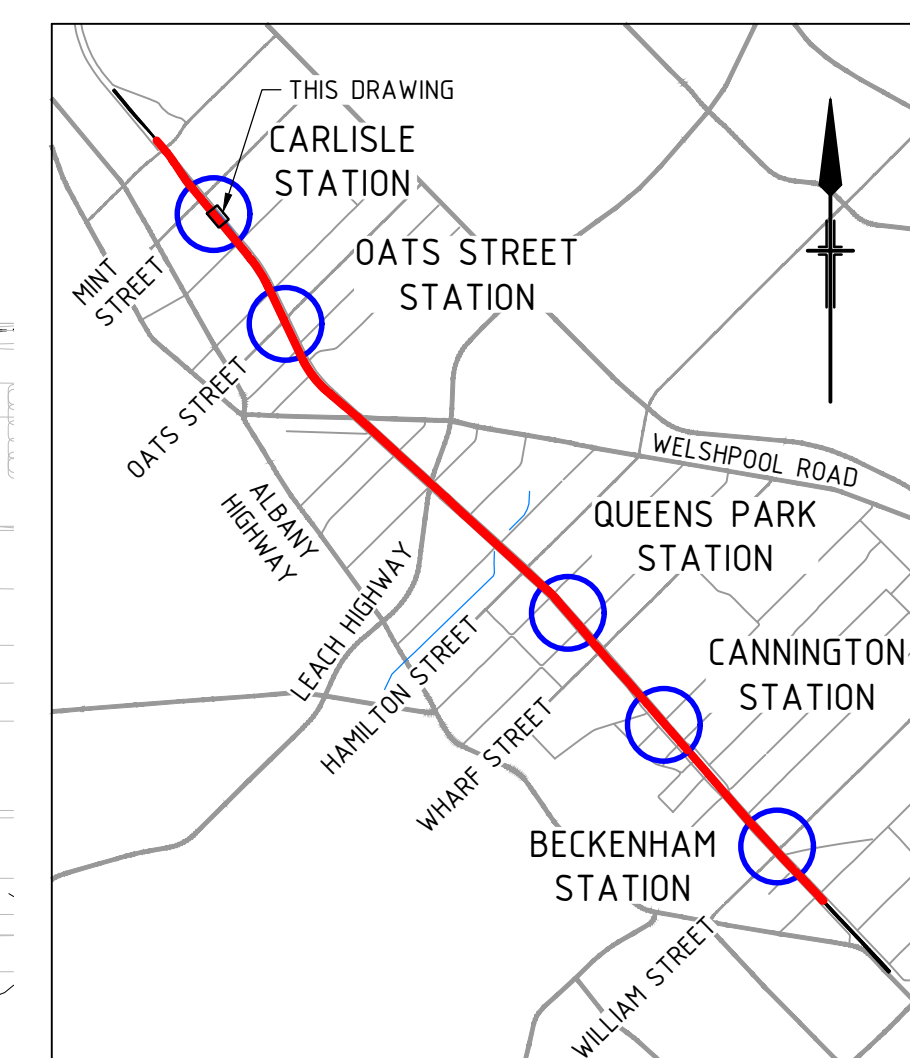
Government of Western Australia
Public Transport Authority

PTA Drawing No:	04-C-23-0087	Rev:	B1.01
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[illegible]

Contractor No: LXR-P1-Z0-GN-CI-DR-DWG-00205

REFERENCES	SCALE		DESIGNED	J.LIM
	1:200 (@A1)		DRAWN	L.CHEN
			CHECKED	B.SASHEGYI
	DATUM		APPROVED F.WATERVOORT DATE	
	HORIZONTAL: PCG20			
VERTICAL: AHD71				



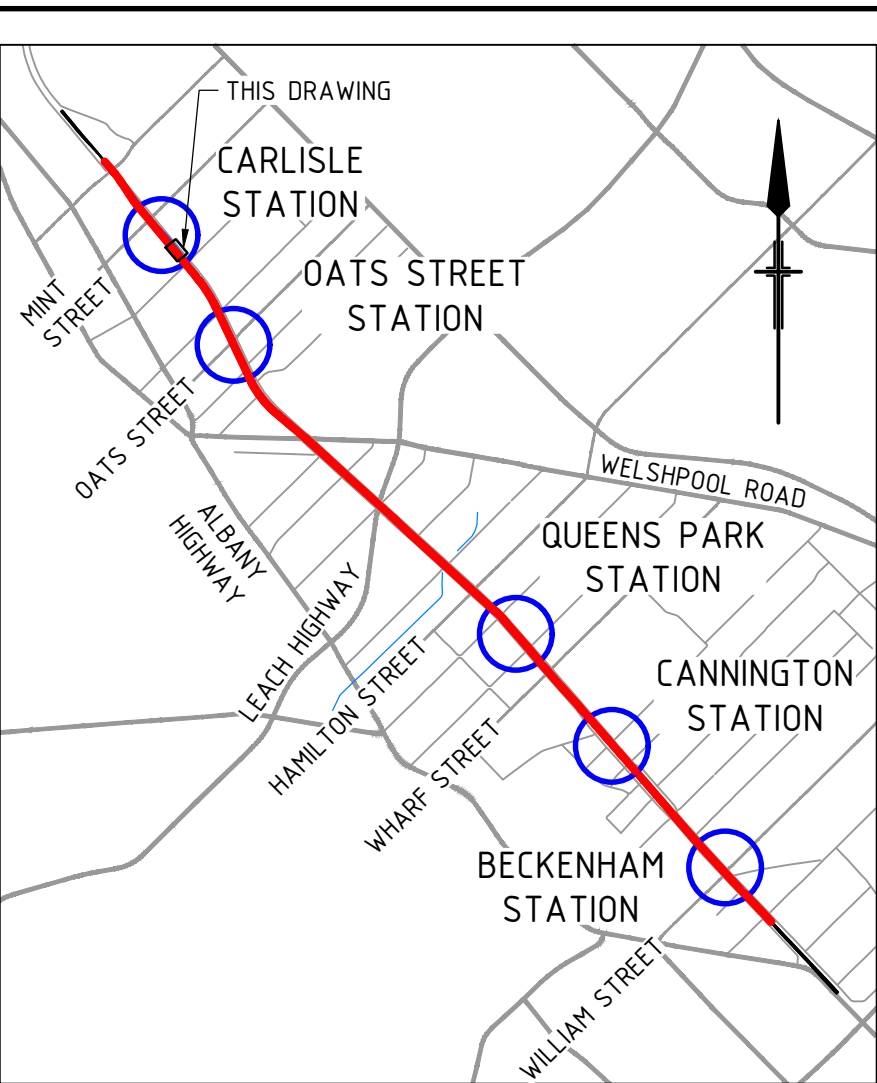
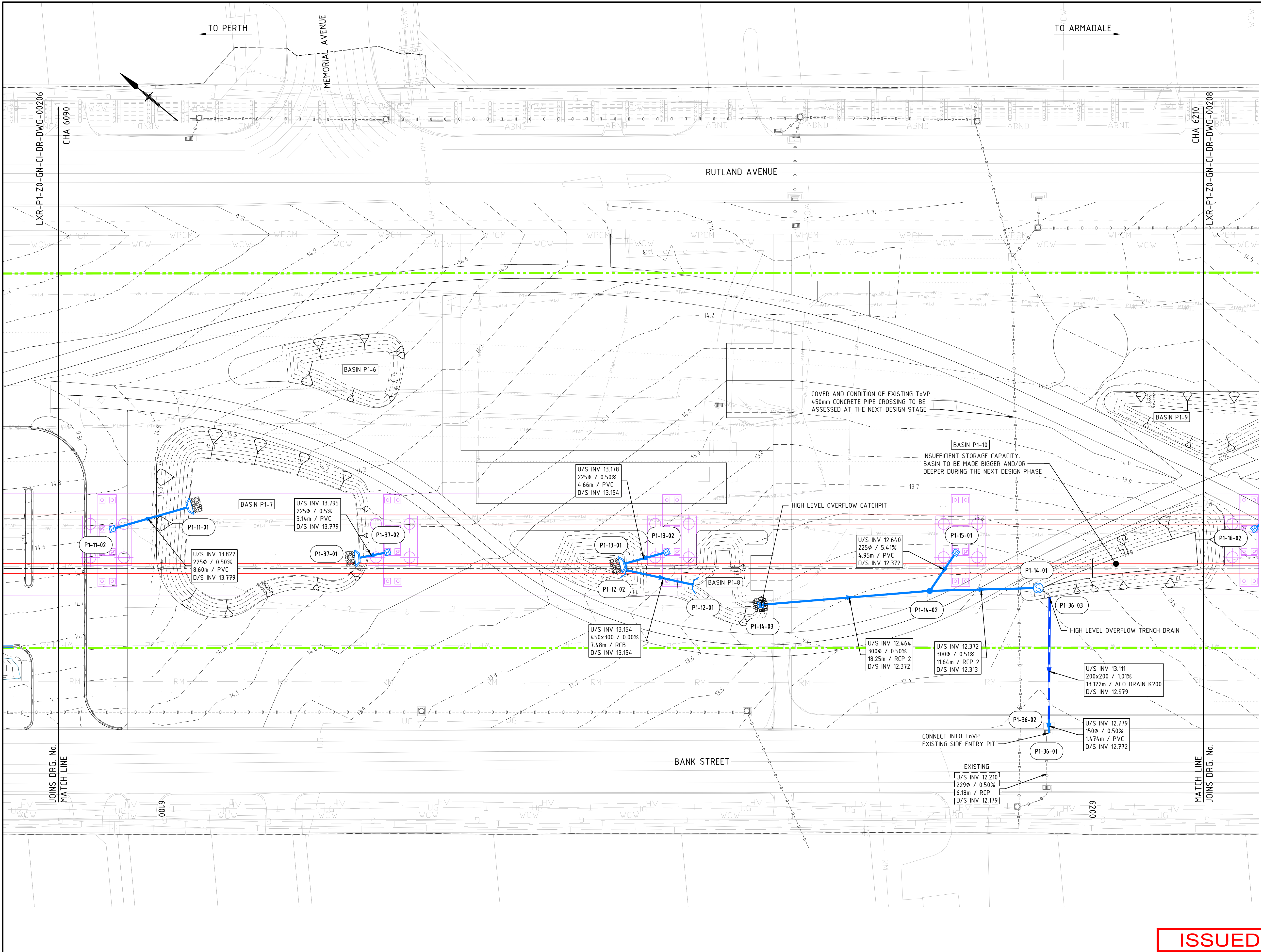
EXISTING DRAINAGE PIPE INFORMATION

PTA Drawing No:	04-C-23-0088	Rev: B1.01
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[illegible]

Contractor No: LXR-P1-Z0-GN-CI-DR-DWG-00206

REFERENCES	SCALE	DESIGNED	J.LIM
	1:200 (@A1)	DRAWN	L.CHEN
		CHECKED	B.SASHEGYI
	DATUM	APPROVED	
	HORIZONTAL: PCG20 VERTICAL: AHD71	F.WATERVOORT	DATE



- NOTES**
- FOR GENERAL NOTES AND LEGEND, REFER TO DRAWING LXR-PW-ZO-GN-CI-DR-DWG-00004.
 - DRAINAGE PIT AND PIPE NETWORKS HAVE NOT BEEN ASSESSED. THESE WILL BE ASSESSED DURING THE NEXT DESIGN PHASE.
 - TRENCH DRAIN PIT HAS ONLY BEEN PROVIDED AT THE DOWNSTREAM ENDS. THE REQUIREMENT OF PIT ALONG THE TRENCH DRAIN HAS NOT BEEN ASSESSED. THIS WILL BE ASSESSED DURING THE NEXT DESIGN PHASE.
 - REFER TO DRAWINGS LXR-P1-Z1-ML-CI-DR-DWG-000201, LXR-P1-Z2-OL-CI-DR-DWG-00211 AND LXR-P1-Z2-WL-CI-DR-DWG-00221 FOR ROADS DRAINAGE DESIGN OUTSIDE THE RAIL CORRIDOR.
 - PERMEABLE PAVING FOR HARD LANDSCAPING AREAS TO BE CONSIDERED DURING THE NEXT DESIGN PHASE TO REDUCE REQUIRED BASIN VOLUME.
 - PIER DRAINAGE OUTLET SYSTEM IS SUBJECT TO PIER IN-SITU HEIGHT AND TO BE CONFIRMED DURING THE NEXT DESIGN PHASE.

- LEGEND**
- RAIL CORRIDOR DRAINAGE:**
- DRAINAGE STRUCTURE NUMBER
 - STATION PLAZA AREA BOUNDARY
 - RAIL RESERVE BOUNDARY
 - VIADUCT
 - DRAINAGE PIPE
 - MANHOLE
 - GULLY PIT
 - CATCHPIT
 - END TREATMENT
 - PVC FITTING
 - KERB OPENING
 - ROCK PROTECTION
 - DRAINAGE BASIN
 - OPEN CHANNEL
 - SOAKWELL
 - TRENCH DRAIN
 - DRAINAGE PIPE INFORMATION
- ToVP DRAINAGE:**
- ToVP DRAINAGE PIPE
 - ToVP MANHOLE
 - ToVP COMBINATION PIT
- HYDRAULIC SERVICES**
- HYDRAULIC SERVICES
- DESIGN CONTOUR**
- 20 - DESIGN MAJOR CONTOUR
 - 20.1 - DESIGN MINOR CONTOUR
- EXISTING DRAINAGE:**
- EXISTING PIT AND PIPE
 - EXISTING DRAINAGE TO BE REMOVED
 - EXISTING OPEN CHANNEL
 - EXISTING CONCRETE CHANNEL
 - EXISTING DRAINAGE PIPE INFORMATION

ISSUED FOR INFORMATION

Government of Western Australia
Public Transport Authority

VICTORIA PARK TO CANNING
LEVEL CROSSING REMOVAL

ARMADALE LINE - DRAINAGE
CORRIDOR - PACKAGE 1
GENERAL ARRANGEMENT - SHEET 7

PTA Drawing No: 04-C-23-0089 Rev: B1.01

B1.01	31.08.22	ISSUED FOR REFERENCE DESIGN	JL	LC	BS	FW
REV	DATE	AMENDMENT	DSN	DRN	CHK	APP
A1						

0 10 20 30 40 50 100mm

AT ORIGINAL PLOT SIZE

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ARMADALE LINE UPGRADE ALLIANCE

Innovation to Reality

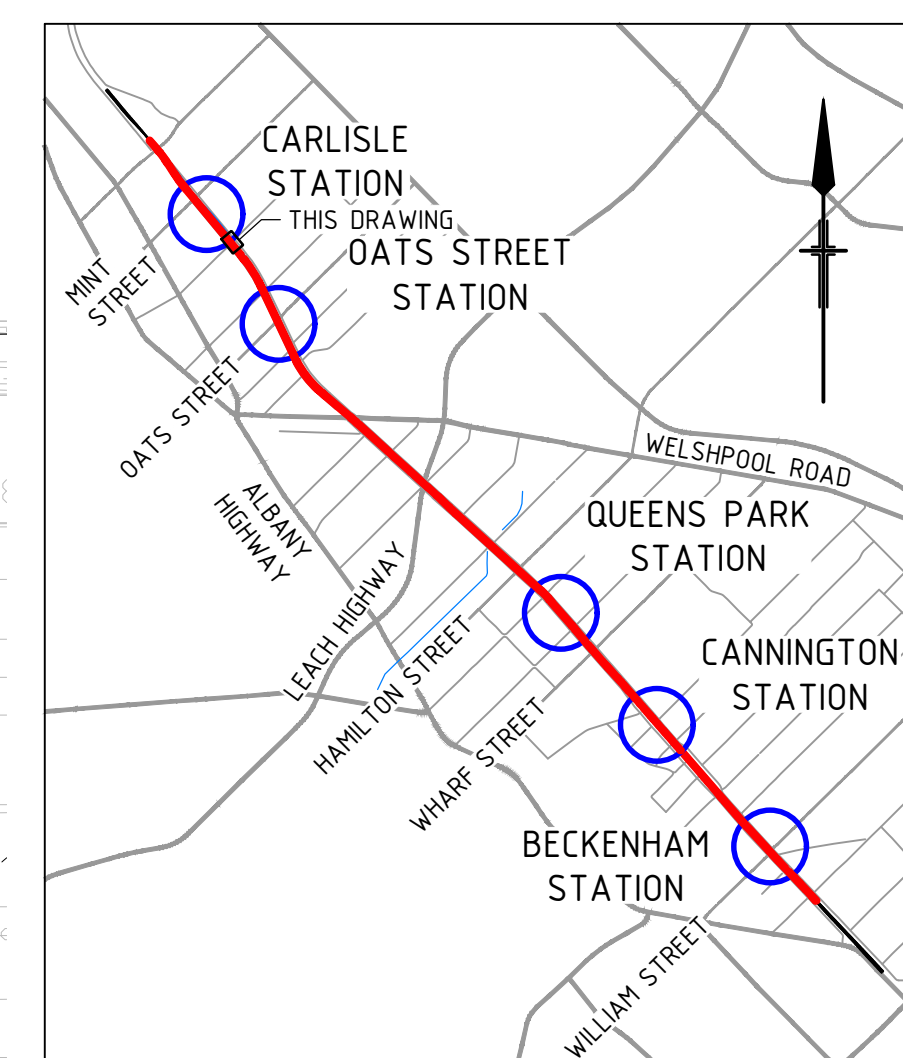
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REFERENCES	SCALE	DESIGNED
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		DRAWN
		L.CHEN
		CHECKED
		B.SASHEGYI
		APPROVED
		F.WATERVOORT
		DATE

DATUM

HORIZONTAL: PCG20

VERTICAL: AHD71



NOTES

1. FOR GENERAL NOTES AND LEGEND, REFER TO DRAWING LXR-PW-Z0-GN-CI-RD-DWG-00004.
2. DRAINAGE PIT AND PIPE NETWORKS HAVE NOT BEEN ASSESSED. THESE WILL BE ASSESSED DURING THE NEXT DESIGN PHASE.
3. TRENCH DRAIN PIT HAS ONLY BEEN PROVIDED AT THE DOWNSTREAM ENDS. THE REQUIREMENT OF PIT ALONG THE TRENCH DRAIN HAS NOT BEEN ASSESSED. THIS WILL BE ASSESSED DURING THE NEXT DESIGN PHASE.
4. REFER TO DRAWINGS LXR-P1-Z1-ML-CI-RD-DWG-000201, LXR-P1-Z2-OL-CI-RD-DWG-00211 AND LXR-P1-Z2-WL-CI-RD-DWG-00221 FOR LOADS DRAINAGE OUTLET OUTSIDE THE ROAD CORRIDOR.
5. PERMEABLE PAVING FOR HARD LANDSCAPING AREAS TO BE CONSIDERED DURING THE NEXT DESIGN PHASE TO REDUCE REQUIRED BASIN VOLUME.
6. PIER DRAINAGE OUTLET SYSTEM IS SUBJECT TO PIER IN-SITU HEIGHT AND TO BE CONFIRMED DURING THE NEXT DESIGN PHASE.

LEGEND



(P2-03-48-1) DRAINAGE STRUCTURE NUMBER
 --- STATION PLAZA AREA BOUNDARY
 --- RAIL RESERVE BOUNDARY

RAIL CORRIDOR DRAINAGE:

	DRAINAGE PIPE
	MANHOLE
	GULLY PIT
	CATCHPIT
	END TREATMENT
	PVC FITTING
	KERB OPENING
	ROCK PROTECTION
	DRAINAGE BASIN
	OPEN CHANNEL
	SOAKWELL
	TRENCH DRAIN

U/S INV 14.600
200Ø / 11.47%
256-1 DVS

TOVP DRAINAGE:

TOVP DRAINAGE:
 TOVP DRAINAGE PIPE
 TOVP MANHOLE
 TOVP COMBINATION PIT

HYDRAULIC SERVICES

HYDRAULIC SERVICES

DESIGN CONTOUR

DESIGN CONTOUR

—————20————— DESIGN MAJOR CONTOUR

-----20.1----- DESIGN MINOR CONTOUR

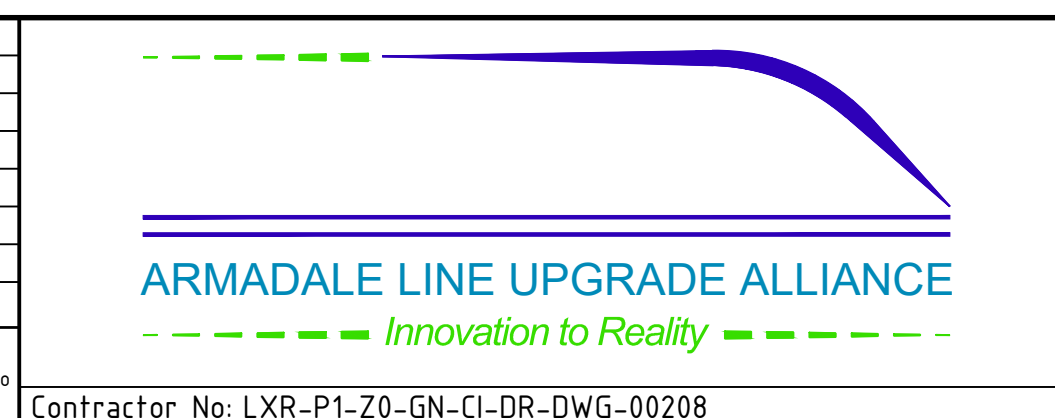
EXISTING DRAINAGE:

EXISTING DRAINAGE:

-  EXISTING PIT AND PIPE
-  EXISTING DRAINAGE TO BE REMOVED
- EXISTING OPEN CHANNEL
-  EXISTING CONCRETE CHANNEL

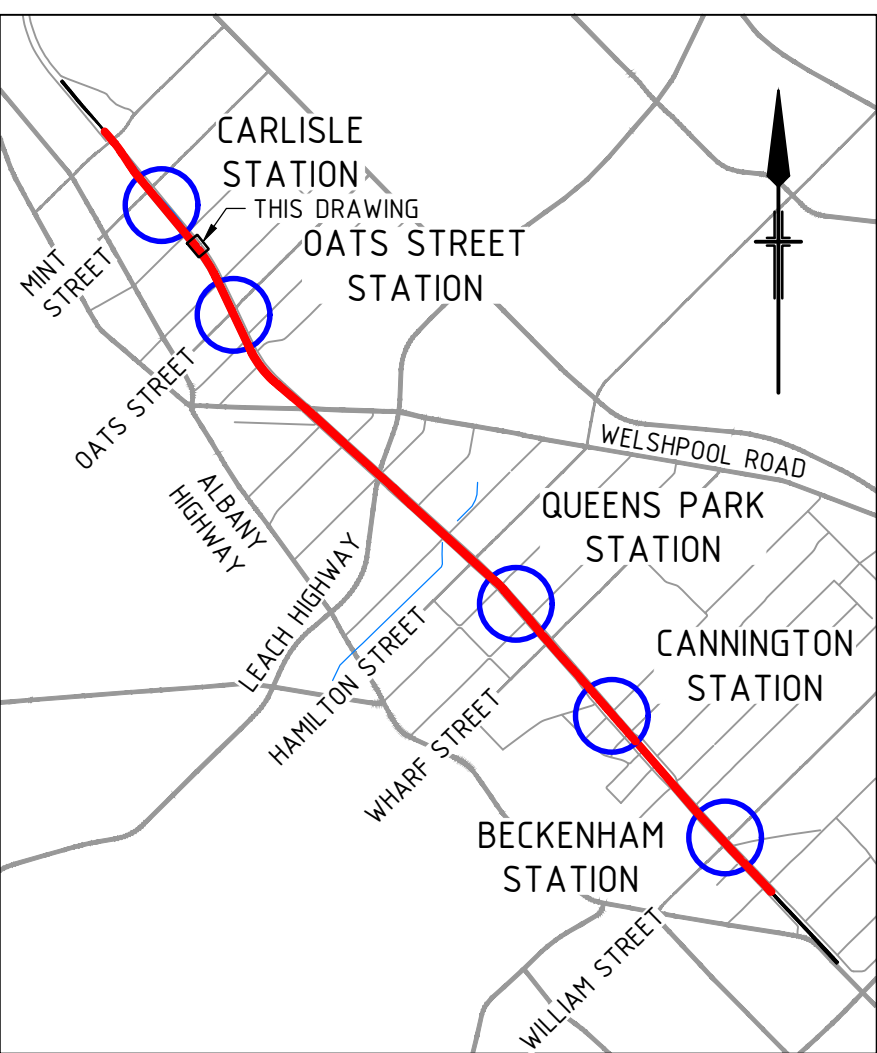
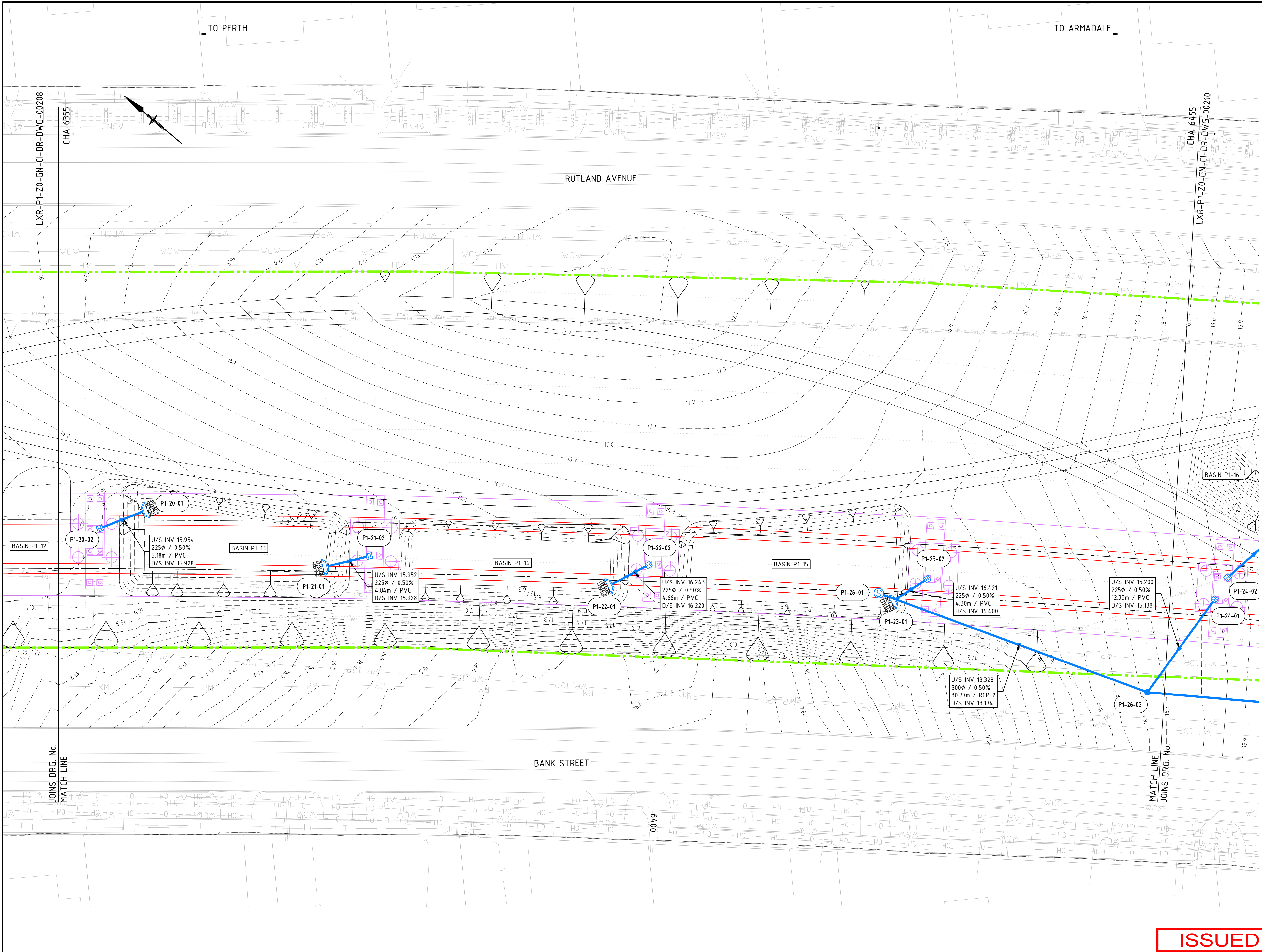
EXISTING	EXISTING CONCRETE CHANNEL
U/S INV 14.600	
200Ø / 11.47%	EXISTING DRAINAGE PIPE INFORMATION
2.56m / PVC	
D/S INV 14.306	

ISSUED FOR INFORMATION

[illegible]

REFERENCES	SCALE 1:200 (@A1)	DESIGNED	J.LIM
		DRAWN	L.CHEN
		CHECKED	B.SASHEGYI
	DATUM	APPROVED	F.WATERVOORT
	HORIZONTAL: PCG20 VERTICAL: AHD71	DATE	

 Government of Western Australia Public Transport Authority	VICTORIA PARK TO CANNING LEVEL CROSSING REMOVAL	
	ARMADALE LINE - DRAINAGE	
	CORRIDOR - PACKAGE 1	
	GENERAL ARRANGEMENT - SHEET 8	
PTA Drawing No: 04-C-23-0090		Rev: B1.01



LOCALITY PLAN

- NOTES**
- FOR GENERAL NOTES AND LEGEND, REFER TO DRAWING LXR-PW-ZO-GN-CL-DR-DWG-00004.
 - DRAINAGE PIT AND PIPE NETWORKS HAVE NOT BEEN ASSESSED. THESE WILL BE ASSESSED DURING THE NEXT DESIGN PHASE.
 - TRENCH DRAIN PIT HAS ONLY BEEN PROVIDED AT THE DOWNSTREAM ENDS. THE REQUIREMENT OF PIT ALONG THE TRENCH DRAIN HAS NOT BEEN ASSESSED. THIS WILL BE ASSESSED DURING THE NEXT DESIGN PHASE.
 - REFER TO DRAWINGS LXR-P1-Z1-ML-CL-DR-DWG-000201, LXR-P1-Z2-OL-CL-DR-DWG-00211 AND LXR-P1-Z2-WL-CL-DR-DWG-00221 FOR ROADS DRAINAGE DESIGN OUTSIDE THE RAIL CORRIDOR.
 - PERMEABLE PAVING FOR HARD LANDSCAPING AREAS TO BE CONSIDERED DURING THE NEXT DESIGN PHASE TO REDUCE REQUIRED BASIN VOLUME.
 - PIER DRAINAGE OUTLET SYSTEM IS SUBJECT TO PIER IN-SITU HEIGHT AND TO BE CONFIRMED DURING THE NEXT DESIGN PHASE.

LEGEND

RAIL CORRIDOR DRAINAGE:

- DRAINAGE STRUCTURE NUMBER
- STATION PLAZA AREA BOUNDARY
- RAIL RESERVE BOUNDARY
- VIADUCT
- DRAINAGE PIPE
- MANHOLE
- GULLY PIT
- CATCHPIT
- END TREATMENT
- PVC FITTING
- KERB OPENING
- ROCK PROTECTION
- DRAINAGE BASIN
- OPEN CHANNEL
- SOAKWELL
- TRENCH DRAIN
- DRAINAGE PIPE INFORMATION

ToVP DRAINAGE:

- ToVP DRAINAGE PIPE
- ToVP MANHOLE
- ToVP COMBINATION PIT

HYDRAULIC SERVICES

- HYDRAULIC SERVICES

DESIGN CONTOUR

- DESIGN MAJOR CONTOUR
- DESIGN MINOR CONTOUR

EXISTING DRAINAGE:

- EXISTING PIT AND PIPE
- EXISTING DRAINAGE TO BE REMOVED
- EXISTING OPEN CHANNEL
- EXISTING CONCRETE CHANNEL
- EXISTING DRAINAGE PIPE INFORMATION

ISSUED FOR INFORMATION

Government of Western Australia
Public Transport Authority

VICTORIA PARK TO CANNING
LEVEL CROSSING REMOVAL

ARMADALE LINE - DRAINAGE
CORRIDOR - PACKAGE 1
GENERAL ARRANGEMENT - SHEET 9
PTA Drawing No: 04-C-23-0091 Rev: B1.01

B1.01	ISSUED FOR REFERENCE DESIGN	JL	LC	BS	FW
A	31.08.22	JL	LC	BS	FW
REV	DATE	DSN	DRN	CHK	APP
ORIG SIZE	AMENDMENT				
A1	AT ORIGINAL PLOT SIZE				

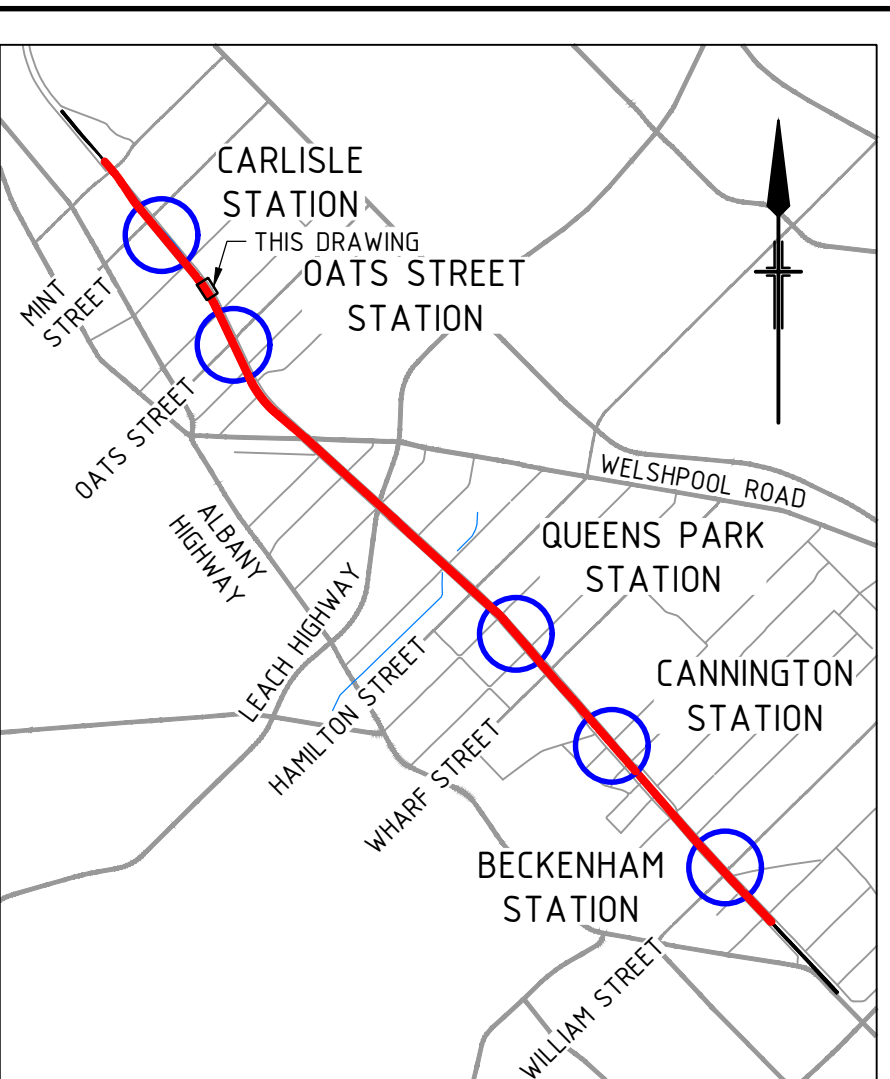
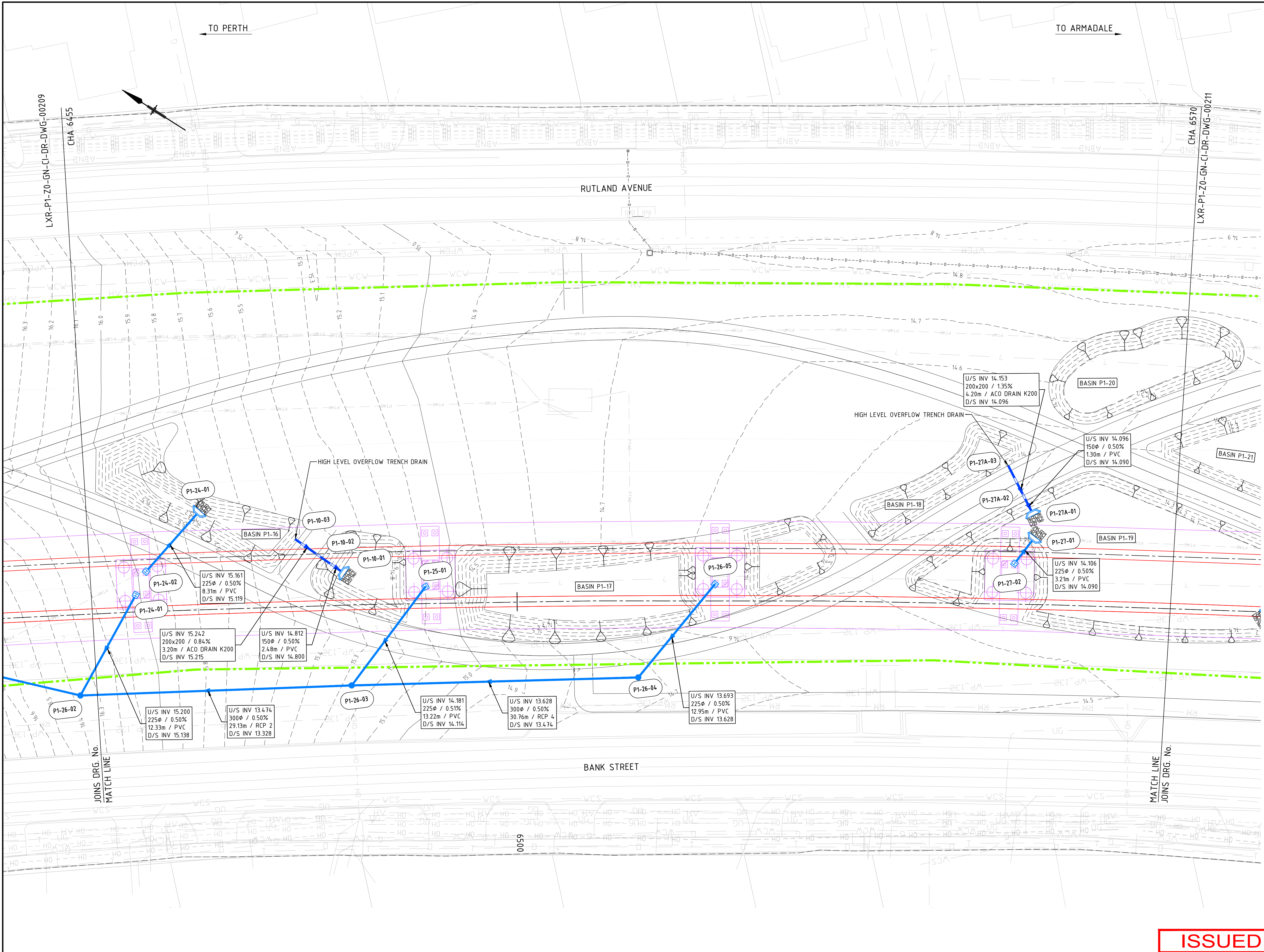
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ARMADALE LINE UPGRADE ALLIANCE

Innovation to Reality

Contractor No: LXR-P1-ZO-GN-CL-DR-DWG-00209

REFERENCES	SCALE	DESIGNED	J.LIM
	1:200 (@A1)	DRAWN	L.CHEN
	DATUM	CHECKED	B.SASHEGYI
HORIZONTAL: PCG20		APPROVED	F.WATERVOORT
VERTICAL: AHD71		DATE	



- NOTES**
- FOR GENERAL NOTES AND LEGEND, REFER TO DRAWING LXR-PW-ZO-GN-CI-DR-DWG-00004.
 - DRAINAGE PIT AND PIPE NETWORKS HAVE NOT BEEN ASSESSED. THESE WILL BE ASSESSED DURING THE NEXT DESIGN PHASE.
 - TRENCH DRAIN PIT HAS ONLY BEEN PROVIDED AT THE DOWNSTREAM ENDS. THE REQUIREMENT OF PIT ALONG THE TRENCH DRAIN HAS NOT BEEN ASSESSED. THIS WILL BE ASSESSED DURING THE NEXT DESIGN PHASE.
 - REFER TO DRAWINGS LXR-P1-Z1-ML-CI-DR-DWG-000201, LXR-P1-Z2-OL-CI-DR-DWG-00211 AND LXR-P1-Z2-WL-CI-DR-DWG-00221 FOR ROADS DRAINAGE DESIGN OUTSIDE THE RAIL CORRIDOR.
 - PERMEABLE PAVING FOR HARD LANDSCAPING AREAS TO BE CONSIDERED DURING THE NEXT DESIGN PHASE TO REDUCE REQUIRED BASIN VOLUME.
 - PIER DRAINAGE OUTLET SYSTEM IS SUBJECT TO PIER IN-SITU HEIGHT AND TO BE CONFIRMED DURING THE NEXT DESIGN PHASE.

LEGEND

RAIL CORRIDOR DRAINAGE:

- DRAINAGE STRUCTURE NUMBER
- STATION PLAZA AREA BOUNDARY
- RAIL RESERVE BOUNDARY
- VIADUCT

RAIL CORRIDOR DRAINAGE:

- DRAINAGE PIPE
- MANHOLE
- GULLY PIT
- CATCHPIT
- END TREATMENT
- PVC FITTING
- KERB OPENING
- ROCK PROTECTION
- DRAINAGE BASIN
- OPEN CHANNEL
- SOAKWELL
- TRENCH DRAIN

TOVP DRAINAGE:

- ToVP DRAINAGE PIPE
- ToVP MANHOLE
- ToVP COMBINATION PIT

HYDRAULIC SERVICES

- HYDRAULIC SERVICES

DESIGN CONTOUR

- DESIGN MAJOR CONTOUR
- DESIGN MINOR CONTOUR

EXISTING DRAINAGE:

- EXISTING PIT AND PIPE
- EXISTING DRAINAGE TO BE REMOVED
- EXISTING OPEN CHANNEL
- EXISTING CONCRETE CHANNEL

EXISTING DRAINAGE PIPE INFORMATION

- EXISTING DRAINAGE PIPE INFORMATION

ISSUED FOR INFORMATION

Government of Western Australia
Public Transport Authority

VICTORIA PARK TO CANNING
LEVEL CROSSING REMOVAL

ARMADALE LINE - DRAINAGE
CORRIDOR - PACKAGE 1
GENERAL ARRANGEMENT - SHEET 10
PTA Drawing No: 04-C-23-0092 Rev: B1.01

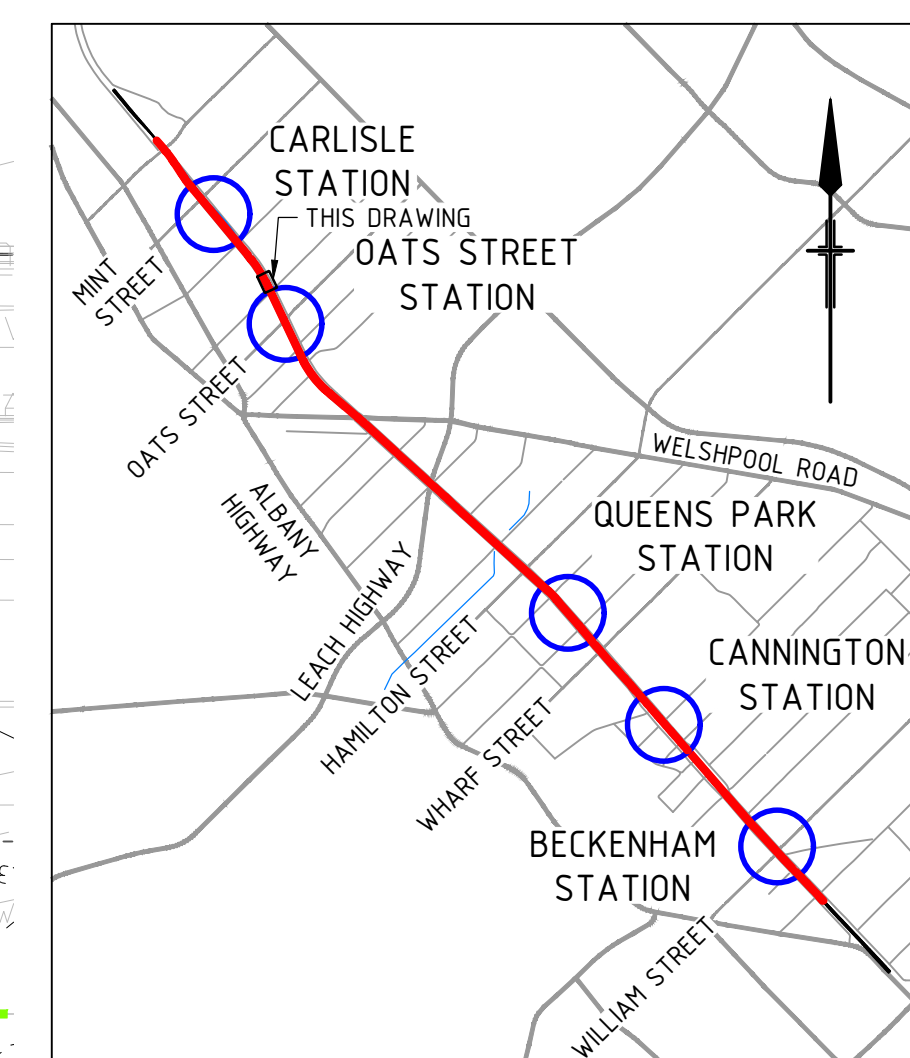
B1.01	31.08.22	ISSUED FOR REFERENCE DESIGN	JL	LC	BS	FW
REV	DATE	AMENDMENT	DSN	DRN	CHK	APP
ORIG SIZE	A1	AT ORIGINAL PLOT SIZE				

ARMADALE LINE UPGRADE ALLIANCE

Innovation to Reality

Contractor No: LXR-P1-ZO-GN-CI-DR-DWG-00210

REFERENCES	SCALE	DESIGNED	J.LIM
	1:200 (@A1)	DRAWN	L.CHEN
	DATUM	CHECKED	B.SASHEGYI
	HORIZONTAL: PCG20	APPROVED	F.WATERVOORT
	VERTICAL: AHD71	DATE	



NOTES

1. FOR GENERAL NOTES AND LEGEND, REFER TO DRAWING LXR-PW-Z0-GN-CI-RD-DWG-00004.
2. DRAINAGE PIT AND PIPE NETWORKS HAVE NOT BEEN ASSESSED. THESE WILL BE ASSESSED DURING THE NEXT DESIGN PHASE.
3. TRENCH DRAIN PIT HAS ONLY BEEN PROVIDED AT THE DOWNSTREAM ENDS. THE REQUIREMENT OF PIT ALONG THE TRENCH DRAIN HAS NOT BEEN ASSESSED. THIS WILL BE ASSESSED DURING THE NEXT DESIGN PHASE.
4. REFER TO DRAWINGS LXR-P1-Z1-ML-CI-RD-DWG-000201, LXR-P1-Z2-OL-CI-RD-DWG-00271 AND LXR-P1-Z2-WL-CI-RD-DWG-00272 FOR DRAINAGE DESIGN OUTSIDE THE ROAD CORRIDOR.
5. PERMEABLE PAVING FOR ROAD LANDSCAPING AREAS IS TO BE CONSIDERED DURING THE NEXT DESIGN PHASE TO REDUCE REQUIRED BASIN VOLUME.
6. PIER DRAINAGE OUTLET SYSTEM IS SUBJECT TO PIER IN-SITU HEIGHT AND TO BE CONFIRMED DURING THE NEXT DESIGN PHASE.

 DRAINAGE STRUCTURE NUMBER
 STATION PLAZA AREA BOUNDARY
 RAIL RESERVE BOUNDARY
 VIADUCT

	DRAINAGE PIPE
	MANHOLE
	GULLY PIT
	CATCHPIT
	END TREATMENT
	PVC FITTING
	KERB OPENING
	ROCK PROTECTION
	DRAINAGE BASIN
	OPEN CHANNEL
	SOAKWELL
	TRENCH DRAIN

U/S INV 14.600
200 ϕ / 11.47%
2.56m / PVC

 ToVP DRAINAGE PIPE
 ToVP MANHOLE
 ToVP COMBINATION PIT

HYDRAULIC SERVICES

—————20————— DESIGN MAJOR CONTOUR
 - - - - -20.1- - - - - DESIGN MINOR CONTOUR

EXISTING DRAINAGE:

- EXISTING PIT AND PIPE
- EXISTING DRAINAGE TO BE REMOVED
- EXISTING OPEN CHANNEL
- EXISTING CONCRETE CHANNEL

EXISTING
[U/S INV 14.600
200φ / 11.47%]

 Government of **Western Australia**
Public Transport Authority

VICTORIA PARK TO CANNING LEVEL CROSSING REMOVAL

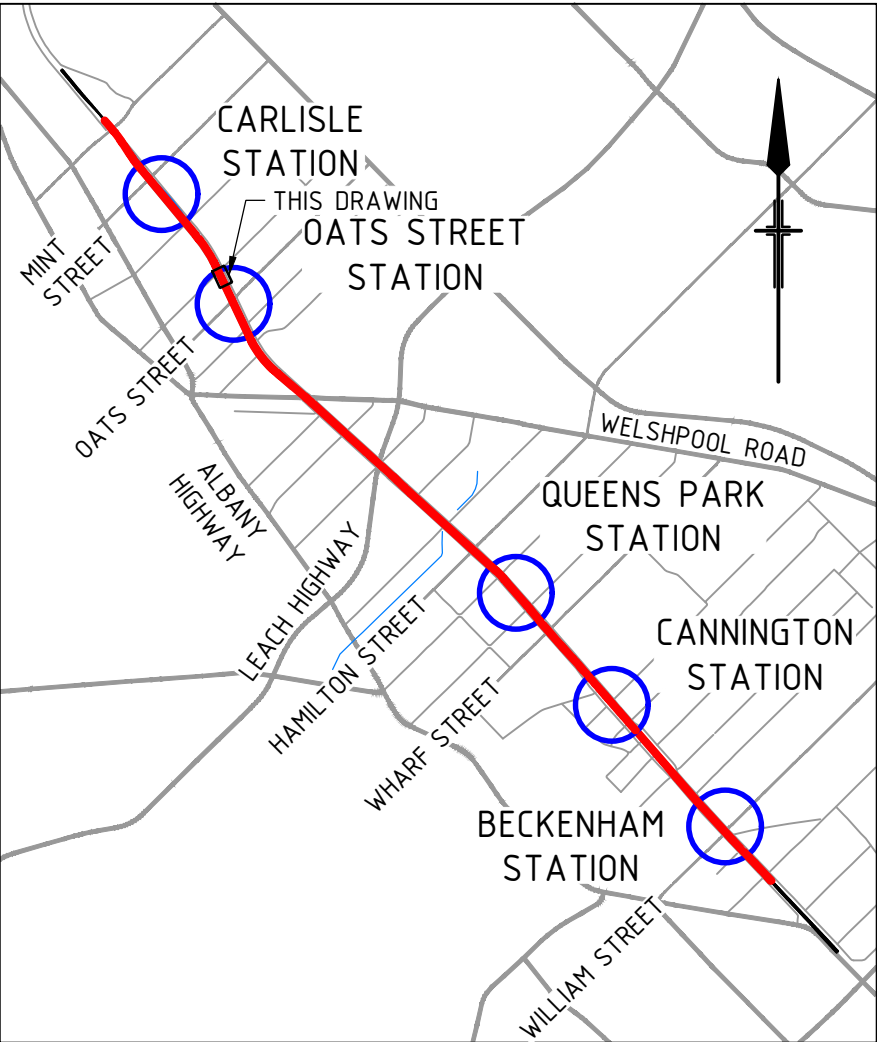
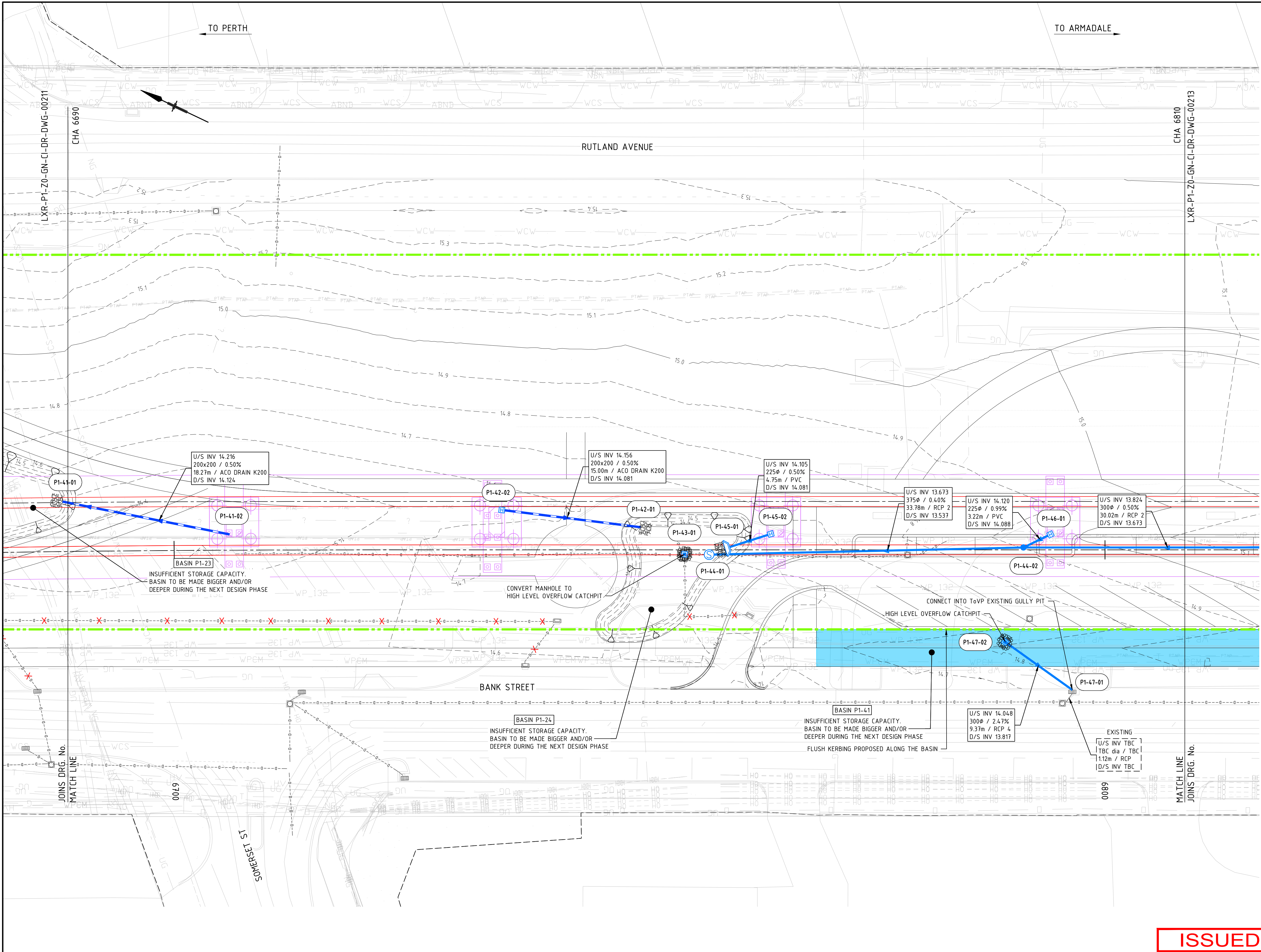
GENERAL ARRANGEMENT - SHEET 11

PTA Drawing No:	04-C-23-0093	Rev:	B1.01
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[illegible]

Contractor No: LXR-P1-Z0-GN-CI-DR-DWG-00211

REFERENCES	SCALE	DESIGNED	J.LIM
	1:200 (@A1)	DRAWN	L.CHEN
	DATUM	CHECKED	B.SASHEGYI
	HORIZONTAL: PCG20	APPROVED	F.WATERVOORT
	VERTICAL: AHD71	DATE	



- NOTES**
- FOR GENERAL NOTES AND LEGEND, REFER TO DRAWING LXR-PW-ZO-GN-CI-DR-DWG-00004.
 - DRAINAGE PIT AND PIPE NETWORKS HAVE NOT BEEN ASSESSED. THESE WILL BE ASSESSED DURING THE NEXT DESIGN PHASE.
 - TRENCH DRAIN PIT HAS ONLY BEEN PROVIDED AT THE DOWNSTREAM ENDS. THE REQUIREMENT OF PIT ALONG THE TRENCH DRAIN HAS NOT BEEN ASSESSED. THIS WILL BE ASSESSED DURING THE NEXT DESIGN PHASE.
 - REFER TO DRAWINGS LXR-P1-Z1-ML-CI-DR-DWG-000201, LXR-P1-Z2-OL-CI-DR-DWG-00211 AND LXR-P1-Z2-WL-CI-DR-DWG-00221 FOR ROADS DRAINAGE DESIGN OUTSIDE THE RAIL CORRIDOR.
 - PERMEABLE PAVING FOR HARD LANDSCAPING AREAS TO BE CONSIDERED DURING THE NEXT DESIGN PHASE TO REDUCE REQUIRED BASIN VOLUME.
 - PIER DRAINAGE OUTLET SYSTEM IS SUBJECT TO PIER IN-SITU HEIGHT AND TO BE CONFIRMED DURING THE NEXT DESIGN PHASE.

- LEGEND**
- RAIL CORRIDOR DRAINAGE:**
- DRAINAGE STRUCTURE NUMBER
 - STATION PLAZA AREA BOUNDARY
 - RAIL RESERVE BOUNDARY
 - VIADUCT
 - DRAINAGE PIPE
 - MANHOLE
 - GULLY PIT
 - CATCHPIT
 - END TREATMENT
 - PVC FITTING
 - KERB OPENING
 - ROCK PROTECTION
 - DRAINAGE BASIN
 - OPEN CHANNEL
 - SOAKWELL
 - TRENCH DRAIN
 - DRAINAGE PIPE INFORMATION
- ToVP DRAINAGE:**
- ToVP DRAINAGE PIPE
 - ToVP MANHOLE
 - ToVP COMBINATION PIT
- HYDRAULIC SERVICES**
- HYDRAULIC SERVICES
- DESIGN CONTOUR**
- DESIGN MAJOR CONTOUR
 - DESIGN MINOR CONTOUR
- EXISTING DRAINAGE:**
- EXISTING PIT AND PIPE
 - EXISTING DRAINAGE TO BE REMOVED
 - EXISTING OPEN CHANNEL
 - EXISTING CONCRETE CHANNEL
 - EXISTING DRAINAGE PIPE INFORMATION

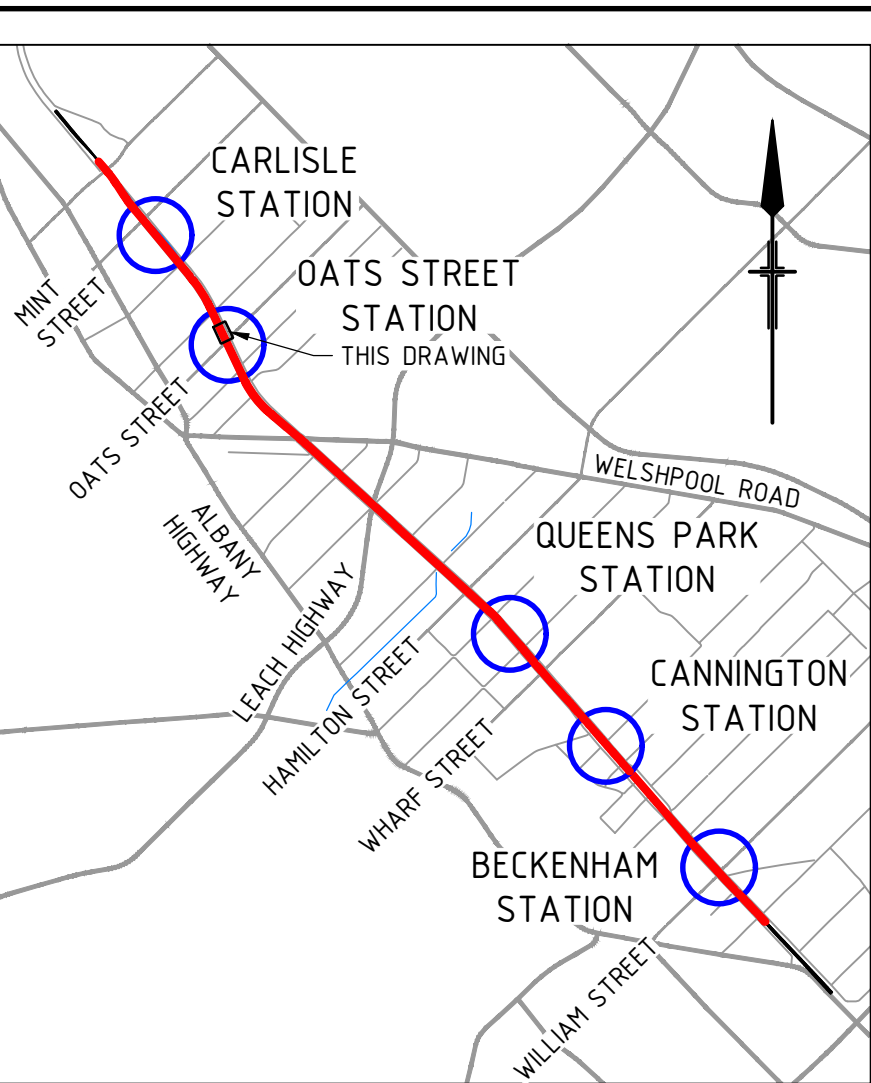
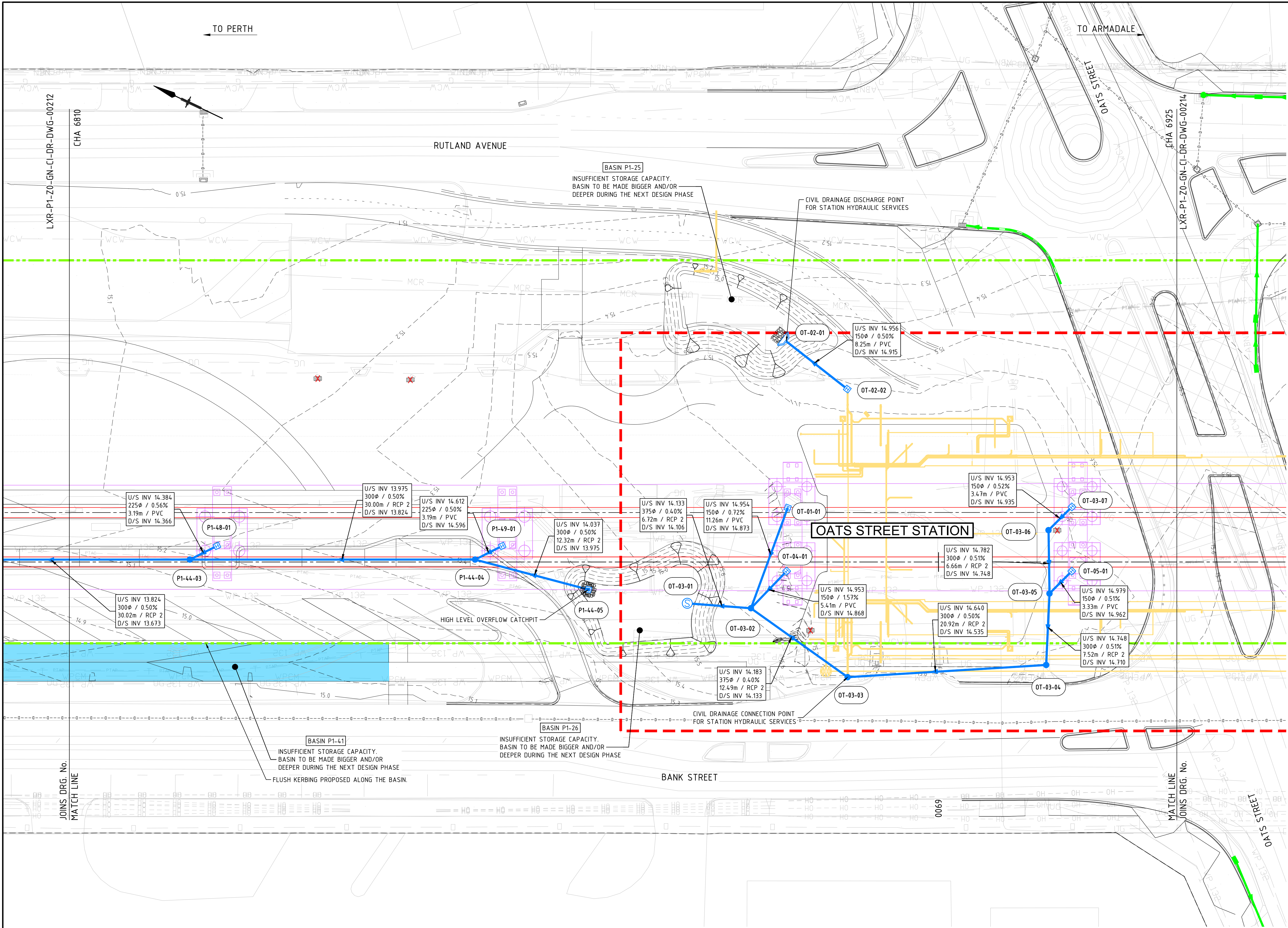
ISSUED FOR INFORMATION

Government of Western Australia
Public Transport Authority

VICTORIA PARK TO CANNING
LEVEL CROSSING REMOVAL

ARMADALE LINE - DRAINAGE
CORRIDOR - PACKAGE 1
GENERAL ARRANGEMENT - SHEET 12
PTA Drawing No: 04-C-23-0094 Rev: B1.01

B1.01					
A 31.08.22					
REV DATE					
ORIG SIZE					
A1					
ISSUED FOR REFERENCE DESIGN					
AMENDMENT					
0 10 20 30 40 50 100mm					
AT ORIGINAL PLOT SIZE					
This document must not be copied without PTA's written permission, and the contents thereof must not be imparted to a third party nor be used for any unauthorised purpose.					
JL LC BS FW					
JL LC BS FW					
DSN DRN CHK APP					
Contractor No: LXR-P1-ZO-GN-CI-DR-DWG-00212					
REFERENCES					
SCALE					
1:200 (@A1)					
DESIGNED J.LIM					
DRAWN L.CHEN					
CHECKED B.SASHEGYI					
APPROVED F.WATEROORT					
DATE					
DATING					
HORIZONTAL: PCG20					
VERTICAL: AHD71					



- ### NOTES
- FOR GENERAL NOTES AND LEGEND, REFER TO DRAWING LXR-PW-ZO-GN-CI-DR-DWG-00004.
 - DRAINAGE PIT AND PIPE NETWORKS HAVE NOT BEEN ASSESSED. THESE WILL BE ASSESSED DURING THE NEXT DESIGN PHASE.
 - TRENCH DRAIN PIT HAS ONLY BEEN PROVIDED AT THE DOWNSTREAM ENDS. THE REQUIREMENT OF PIT ALONG THE TRENCH DRAIN HAS NOT BEEN ASSESSED. THIS WILL BE ASSESSED DURING THE NEXT DESIGN PHASE.
 - REFER TO DRAWINGS LXR-P1-Z1-ML-CI-DR-DWG-000201, LXR-P1-Z2-OL-CI-DR-DWG-00211 AND LXR-P1-Z2-WL-CI-DR-DWG-00221 FOR ROADS DRAINAGE DESIGN OUTSIDE THE RAIL CORRIDOR.
 - PERMEABLE PAVING FOR HARD LANDSCAPING AREAS TO BE CONSIDERED DURING THE NEXT DESIGN PHASE TO REDUCE REQUIRED BASIN VOLUME.
 - PIER DRAINAGE OUTLET SYSTEM IS SUBJECT TO PIER IN-SITU HEIGHT AND TO BE CONFIRMED DURING THE NEXT DESIGN PHASE.

LEGEND

(P2-03-48-1) DRAINAGE STRUCTURE NUMBER

STATION PLAZA AREA BOUNDARY

RAIL RESERVE BOUNDARY

VIADUCT

RAIL CORRIDOR DRAINAGE:

- DRAINAGE PIPE
- MANHOLE
- GULLY PIT
- CATCHPIT
- END TREATMENT
- PVC FITTING
- KERB OPENING
- ROCK PROTECTION
- DRAINAGE BASIN
- OPEN CHANNEL
- SOAKWELL
- TRENCH DRAIN

TOVP DRAINAGE:

- TOVP DRAINAGE PIPE
- TOVP MANHOLE
- TOVP COMBINATION PIT

HYDRAULIC SERVICES

- HYDRAULIC SERVICES

DESIGN CONTOUR

- 20
- 20.1

EXISTING DRAINAGE:

- EXISTING PIT AND PIPE
- EXISTING DRAINAGE TO BE REMOVED
- EXISTING OPEN CHANNEL
- EXISTING CONCRETE CHANNEL

EXISTING DRAINAGE PIPE INFORMATION

U/S INV 14.600
200Ø / 11.47%
2.56m / PVC
D/S INV 14.306

ISSUED FOR INFORMATION

**VICTORIA PARK TO CANNING
LEVEL CROSSING REMOVAL**

**ARMADALE LINE - DRAINAGE
CORRIDOR - PACKAGE 1
GENERAL ARRANGEMENT - SHEET 13**

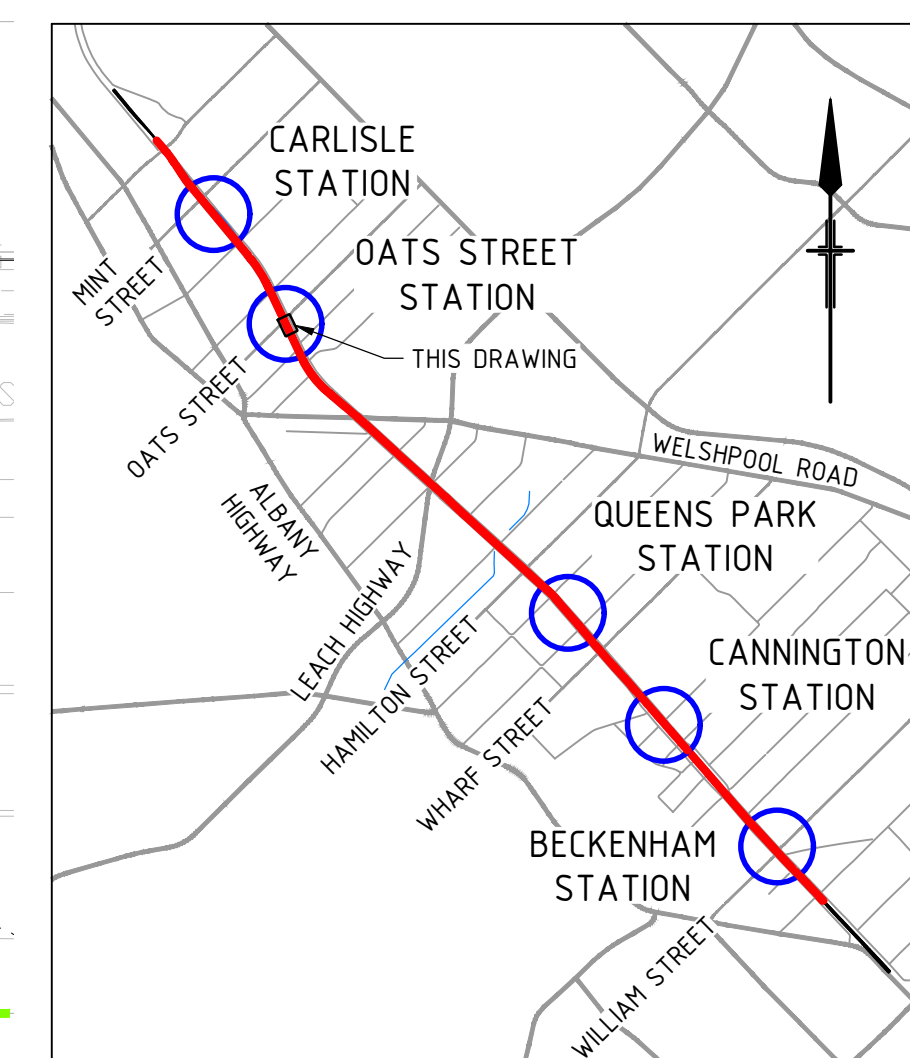
PTA Drawing No: **04-C-23-0095** Rev: **B1.01**

B1.01						JL	LC	BS	FW
A	31.08.22	ISSUED FOR REFERENCE DESIGN				JL	LC	BS	FW
REV	DATE	AMENDMENT				DSN	DRN	CHK	APP
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A1		AT ORIGINAL PLOT SIZE							

**ARMADALE LINE UPGRADE ALLIANCE**
Innovation to Reality

Contractor No: LXR-P1-ZO-GN-CI-DR-DWG-00213

REFERENCES		SCALE		DESIGNED	
		1:200 (@A1)		J.LIM	
		DATUM		DRAWN	
HORIZONTAL: PCG20				L.CHEN	
VERTICAL: AHD71				CHECKED	
				B.SASHEGYI	
				APPROVED	
				F.WATERVOORT	
				DATE	



NOTES

- ## LEGEND

- RAIL CORRIDOR DRAINAGE:

- | | |
|---|-----------------|
|  | DRAINAGE PIPE |
|  | MANHOLE |
|  | GULLY PIT |
|  | CATCHPIT |
| | END TREATMENT |
|  | PVC FITTING |
|  | KERB OPENING |
|  | ROCK PROTECTION |
|  | DRAINAGE BASIN |
|  | OPEN CHANNEL |
|  | SOAKWELL |
|  | TRENCH DRAIN |

- U/S INV 14.600
200φ / 11.47%
2.56' / 1.00'

- ToVP DRAINAGE:**
- 
- ToVP DRAINAGE PIPE
ToVP MANHOLE
ToVP COMBINATION PIT

- HYDRAULIC SERVICES

- DESIGN CONTOUR
 ————20—————
 - - - - 20.1 - - - -
 DESIGN MAJOR CONTOUR
 DESIGN MINOR CONTOUR

- EXISTING DRAINAGE:**
- | | |
|---|---------------------------------|
|  | EXISTING PIT AND PIPE |
|  | EXISTING DRAINAGE TO BE REMOVED |
|  | EXISTING OPEN CHANNEL |
|  | EXISTING CONCRETE CHANNEL |

- EXISTING
U/S INV 14.600
200Ø / 11.47%
2.56m / PVC
D/S INV 14.306
- EXISTING CONCRETE CHANNEL
- EXISTING DRAINAGE PIPE INFORMATION

 Government of **Western Australia**
Public Transport Authority

VICTORIA PARK TO CANNING LEVEL CROSSING REMOVAL

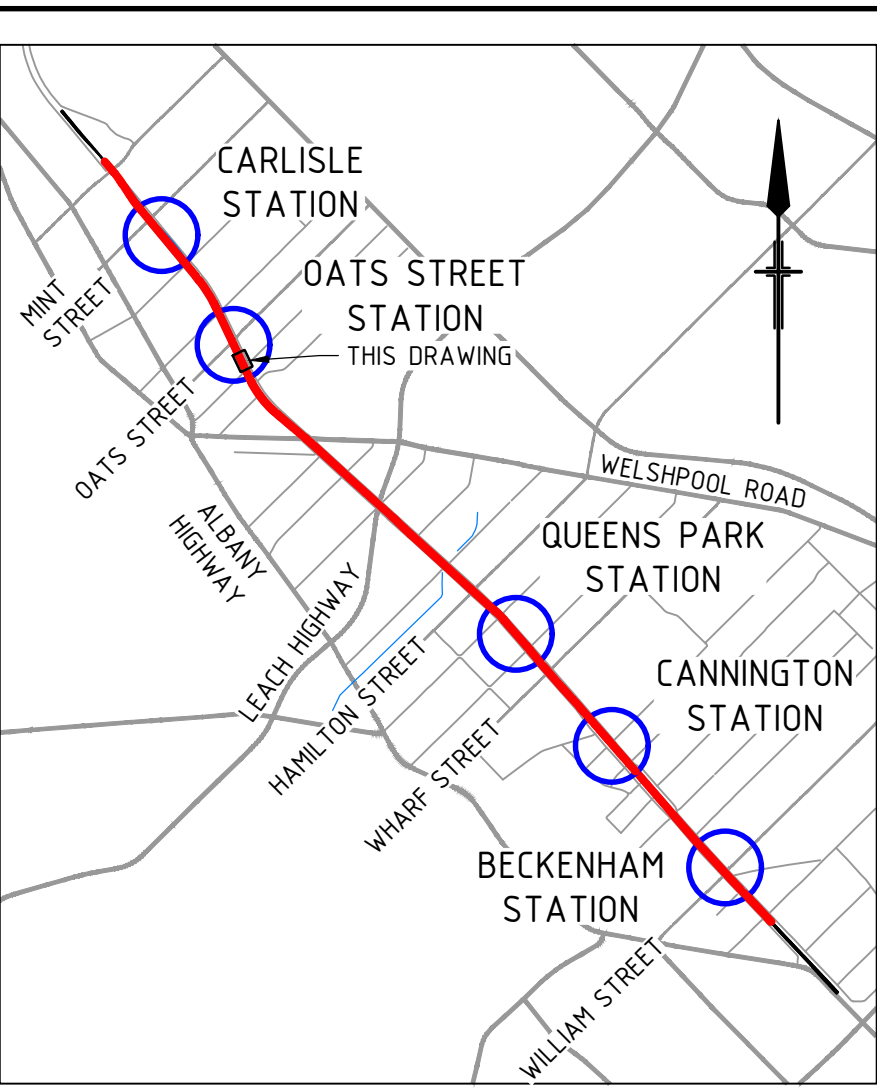
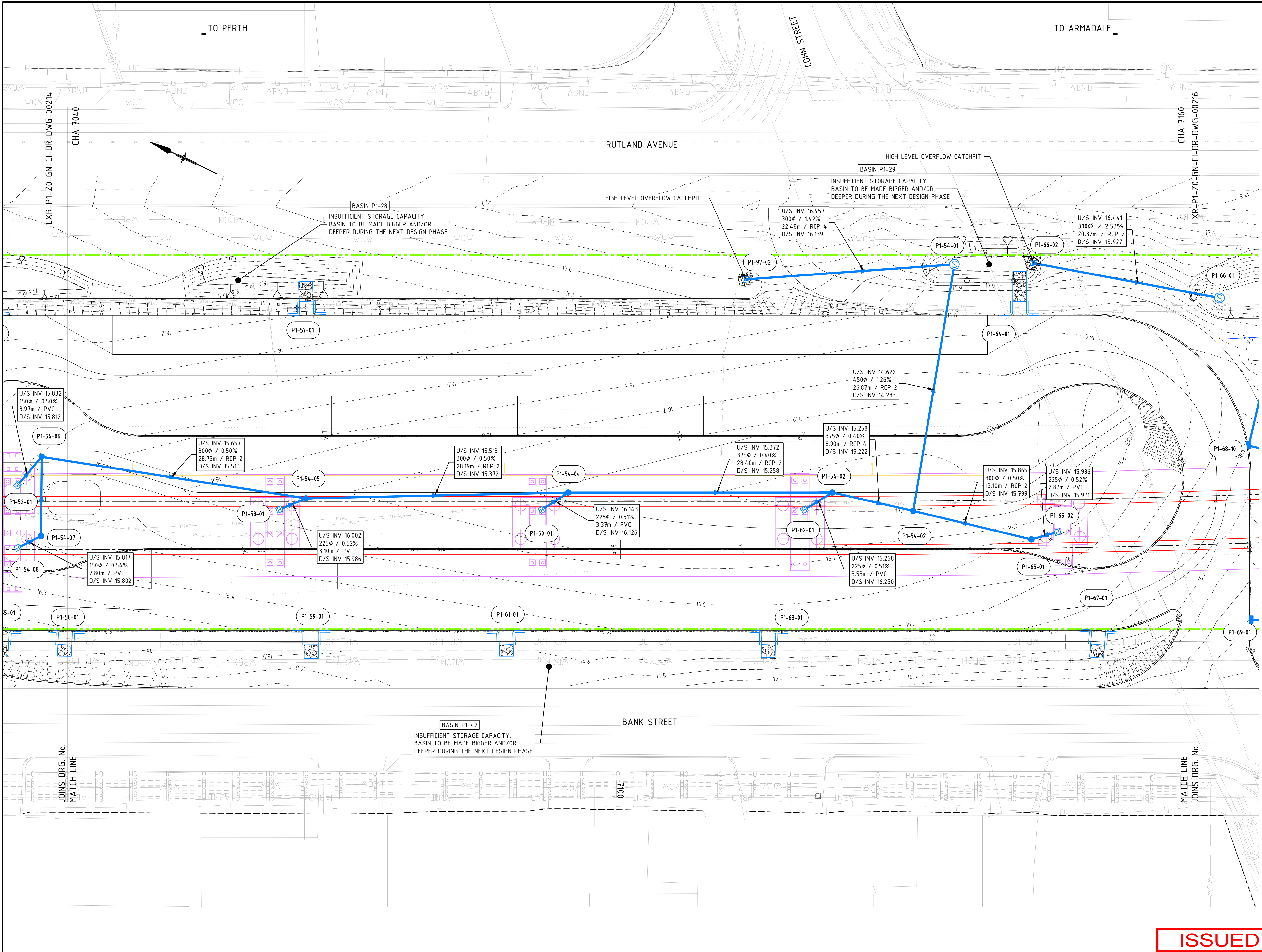
GENERAL ARRANGEMENT - SHEET 14

PTA Drawing No:	04-C-23-0096	Rev:	B1.01
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[illegible]

Contractor No: LXR-P1-Z0-GN-CI-DR-DWG-00214

REFERENCES	SCALE 1:200 (@A1)	DESIGNED	J.LIM
		DRAWN	L.CHEN
		CHECKED	B.SASHEGYI
	DATUM	APPROVED	F.WATERVOORT
	HORIZONTAL: PCG20 VERTICAL: AHD71	DATE	



- NOTES**
- FOR GENERAL NOTES AND LEGEND, REFER TO DRAWING LXR-PW-ZO-GN-CI-DR-DWG-00004.
 - DRAINAGE PIT AND PIPE NETWORKS HAVE NOT BEEN ASSESSED. THESE WILL BE ASSESSED DURING THE NEXT DESIGN PHASE.
 - TRENCH DRAIN PIT HAS ONLY BEEN PROVIDED AT THE DOWNSTREAM ENDS. THE REQUIREMENT OF PIT ALONG THE TRENCH DRAIN HAS NOT BEEN ASSESSED. THIS WILL BE ASSESSED DURING THE NEXT DESIGN PHASE.
 - REFER TO DRAWINGS LXR-P1-Z1-ML-CI-DR-DWG-000201, LXR-P1-Z2-OL-CI-DR-DWG-00211 AND LXR-P1-Z2-WL-CI-DR-DWG-00221 FOR ROADS DRAINAGE DESIGN OUTSIDE THE RAIL CORRIDOR.
 - PERMEABLE PAVING FOR HARD LANDSCAPING AREAS TO BE CONSIDERED DURING THE NEXT DESIGN PHASE TO REDUCE REQUIRED BASIN VOLUME.
 - PIER DRAINAGE OUTLET SYSTEM IS SUBJECT TO PIER IN-SITU HEIGHT AND TO BE CONFIRMED DURING THE NEXT DESIGN PHASE.

LEGEND

(P2-03-48-1) DRAINAGE STRUCTURE NUMBER

STATION PLAZA AREA BOUNDARY

RAIL RESERVE BOUNDARY

VIADUCT

RAIL CORRIDOR DRAINAGE:

DRAINAGE PIPE

MANHOLE

GULLY PIT

CATCHPIT

END TREATMENT

PVC FITTING

KERB OPENING

ROCK PROTECTION

DRAINAGE BASIN

OPEN CHANNEL

SOAKWELL

TRENCH DRAIN

ToVP DRAINAGE:

ToVP DRAINAGE PIPE

ToVP MANHOLE

ToVP COMBINATION PIT

HYDRAULIC SERVICES

HYDRAULIC SERVICES

DESIGN CONTOUR

20 DESIGN MAJOR CONTOUR

20.1 DESIGN MINOR CONTOUR

EXISTING DRAINAGE:

EXISTING PIT AND PIPE

EXISTING DRAINAGE TO BE REMOVED

EXISTING OPEN CHANNEL

EXISTING CONCRETE CHANNEL

EXISTING DRAINAGE PIPE INFORMATION

ISSUED FOR INFORMATION

Government of Western Australia
Public Transport Authority

VICTORIA PARK TO CANNING
LEVEL CROSSING REMOVAL

ARMADALE LINE - DRAINAGE
CORRIDOR - PACKAGE 1
GENERAL ARRANGEMENT - SHEET 15
PTA Drawing No: 04-C-23-0097 Rev: B1.01

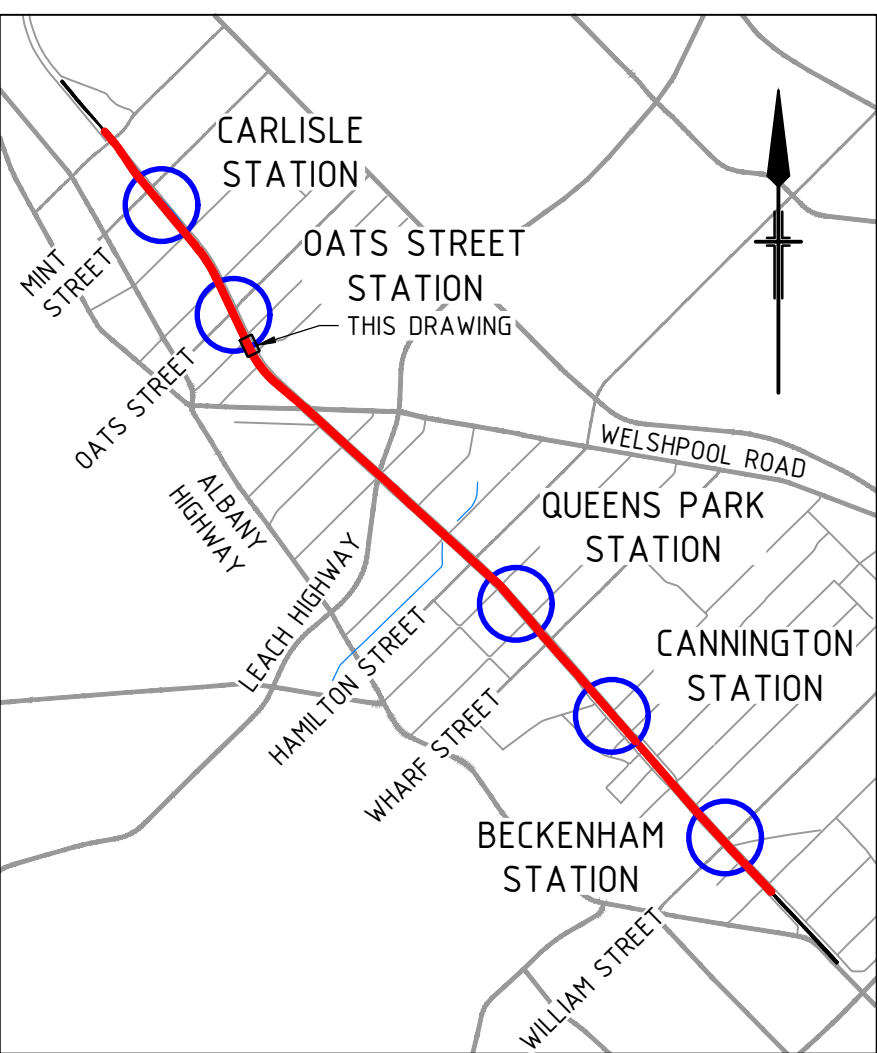
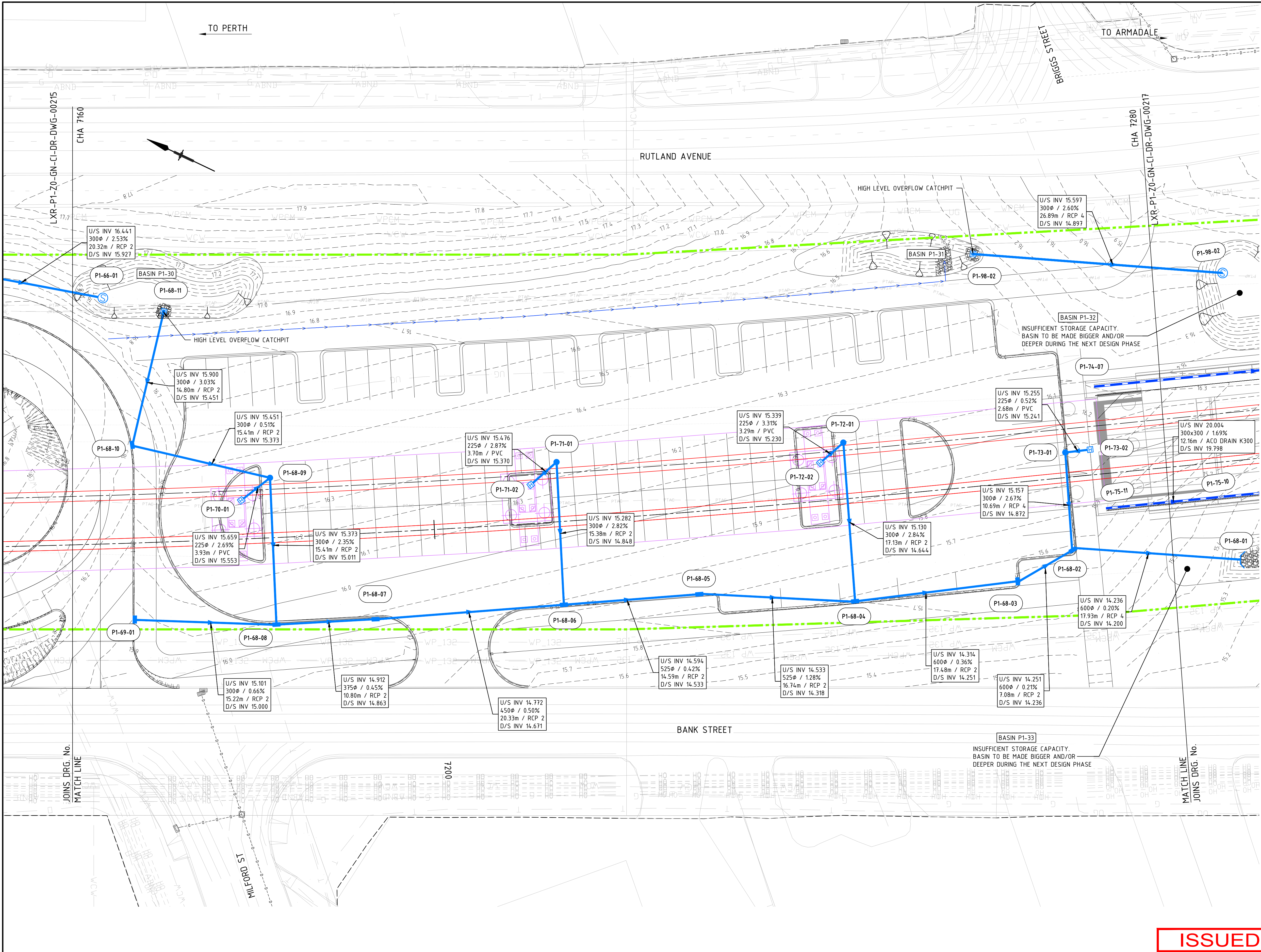
B1.01	31.08.22	ISSUED FOR REFERENCE DESIGN	JL	LC	BS	FW
REV	DATE	AMENDMENT	DSN	DRN	CHK	APP
ORIG SIZE	A1	AT ORIGINAL PLOT SIZE				

ARMADALE LINE UPGRADE ALLIANCE

Innovation to Reality

Contractor No: LXR-P1-ZO-GN-CI-DR-DWG-00215

REFERENCES	SCALE	DESIGNED	J.LIM
	1:200 (@A1)	DRAWN	L.CHEN
	DATUM	CHECKED	B.SASHEGYI
HORIZONTAL: PCG20		APPROVED	F.WATERVOORT
VERTICAL: AHD71		DATE	



- NOTES**
- FOR GENERAL NOTES AND LEGEND, REFER TO DRAWING LXR-PW-Z0-GN-CI-DR-DWG-00004.
 - DRAINAGE PIT AND PIPE NETWORKS HAVE NOT BEEN ASSESSED. THESE WILL BE ASSESSED DURING THE NEXT DESIGN PHASE.
 - TRENCH DRAIN PIT HAS ONLY BEEN PROVIDED AT THE DOWNSTREAM ENDS. THE REQUIREMENT OF PIT ALONG THE TRENCH DRAIN HAS NOT BEEN ASSESSED. THIS WILL BE ASSESSED DURING THE NEXT DESIGN PHASE.
 - REFER TO DRAWINGS LXR-P1-Z1-ML-CI-DR-DWG-000201, LXR-P1-Z2-OL-CI-DR-DWG-00211 AND LXR-P1-Z2-WL-CI-DR-DWG-00221 FOR ROADS DRAINAGE DESIGN OUTSIDE THE RAIL CORRIDOR.
 - PERMEABLE PAVING FOR HARD LANDSCAPING AREAS TO BE CONSIDERED DURING THE NEXT DESIGN PHASE TO REDUCE REQUIRED BASIN VOLUME.
 - PIER DRAINAGE OUTLET SYSTEM IS SUBJECT TO PIER IN-SITU HEIGHT AND TO BE CONFIRMED DURING THE NEXT DESIGN PHASE.

LEGEND

RAIL CORRIDOR DRAINAGE:

- Drainage Structure Number (P2-03-48-1)
- Station Plaza Area Boundary (Red dashed line)
- Rail Reserve Boundary (Green dashed line)
- Viaduct (Blue dashed line)
- Drainage Pipe (Blue line)
- Manhole (Blue circle)
- Gully Pit (Blue square)
- Catchpit (Blue circle with cross)
- End Treatment (Blue triangle)
- PVC Fitting (Blue square with cross)
- Kerb Opening (Blue rectangle)
- Rock Protection (Blue rectangle with cross)
- Drainage Basin (Blue rectangle)
- Open Channel (Blue line with cross)
- Soakwell (Blue circle with cross)
- Trench Drain (Blue line with cross)
- Drainage Pipe Information (Blue line with cross)

ToVP DRAINAGE:

- ToVP Drainage Pipe (Blue line)
- ToVP Manhole (Blue circle)
- ToVP Combination Pit (Blue square)

HYDRAULIC SERVICES

- Hydraulic Services (Blue line)

DESIGN CONTOUR

- Design Major Contour (Blue line)
- Design Minor Contour (Blue line)

EXISTING DRAINAGE:

- Existing Pit and Pipe (Blue line)
- Existing Drainage to be Removed (Blue line with cross)
- Existing Open Channel (Blue line with cross)
- Existing Concrete Channel (Blue line with cross)
- Existing Drainage Pipe Information (Blue line with cross)

ISSUED FOR INFORMATION

Government of Western Australia
Public Transport Authority

VICTORIA PARK TO CANNING
LEVEL CROSSING REMOVAL

ARMADALE LINE - DRAINAGE
CORRIDOR - PACKAGE 1
GENERAL ARRANGEMENT - SHEET 16
PTA Drawing No: 04-C-23-0098 Rev: B1.01

B1.01	31.08.22	ISSUED FOR REFERENCE DESIGN	JL	LC	BS	FW
REV	DATE	AMENDMENT	DSN	DRN	CHK	APP
A1						

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AT ORIGINAL PLOT SIZE

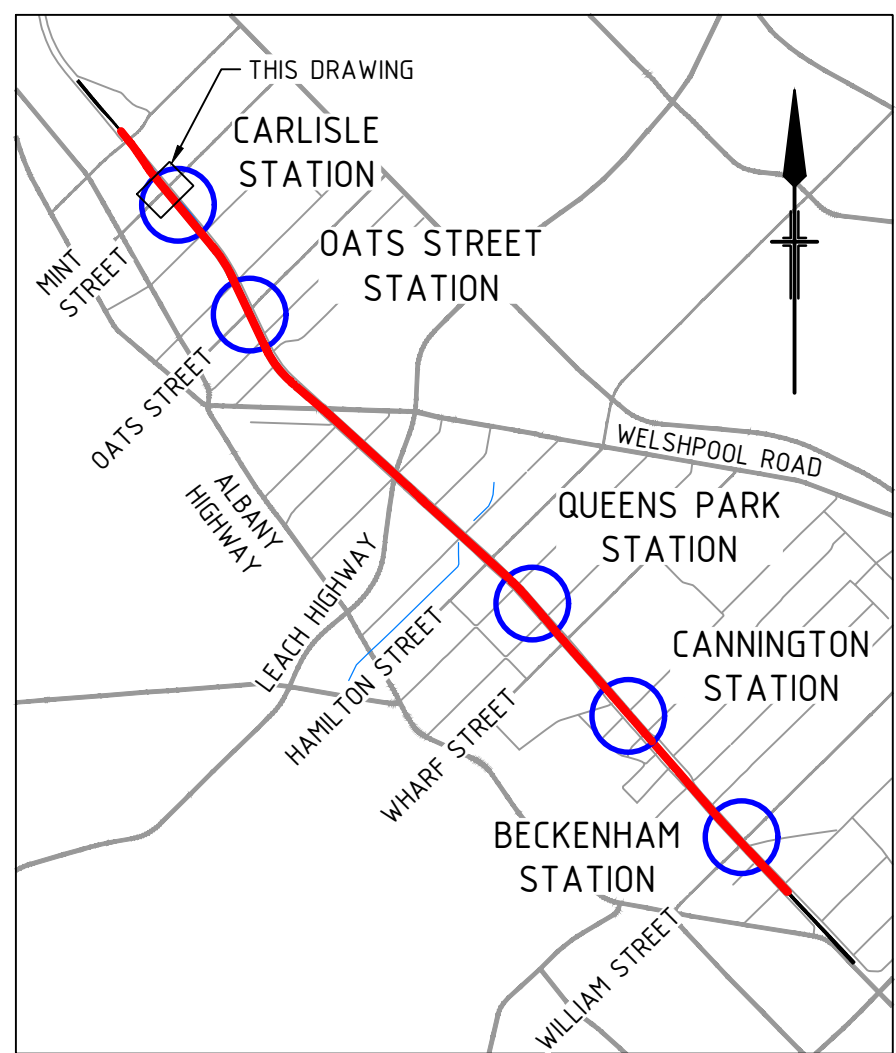
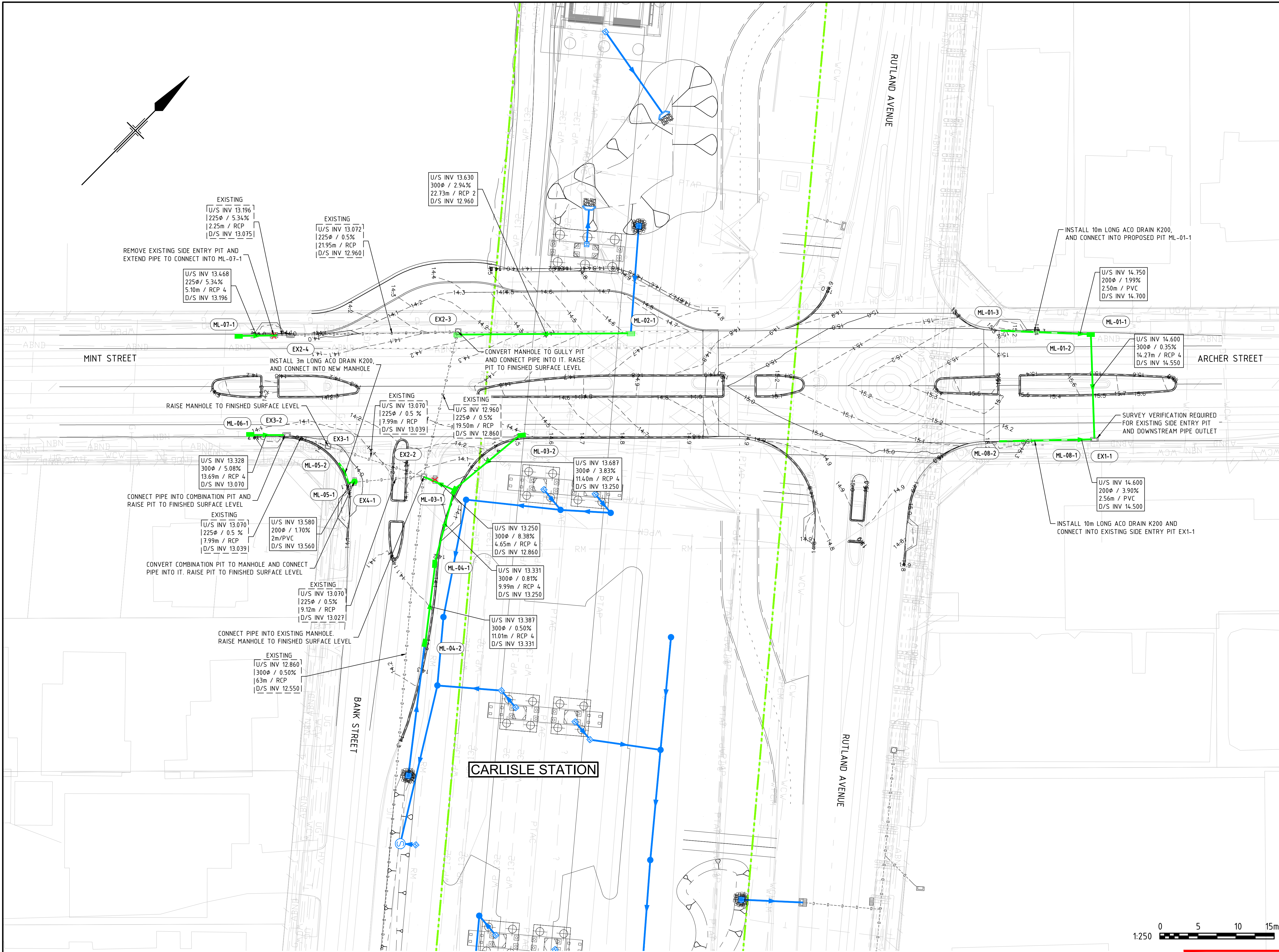
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ARMADALE LINE UPGRADE ALLIANCE

Innovation to Reality

Contractor No: LXR-P1-Z0-GN-CI-DR-DWG-00216

REFERENCES	SCALE	DESIGNED	J.LIM
	1:200 (@A1)	DRAWN	L.CHEN
	DATUM	CHECKED	B.SASHEGYI
HORIZONTAL: PCG20		APPROVED	F.WATEROORT
VERTICAL: AHD71		DATE	



NOTES

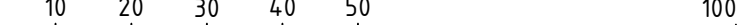
- REFER TO DRAWINGS LXR-P1-Z0-GN-CI-DR-DWG-00201 TO 000227 FOR THE PACKAGE 1 RAIL CORRIDOR DRAINAGE DESIGN OUTSIDE THE INTERSECTION.
- FOR GENERAL NOTES AND LEGEND, REFER TO DRAWING LXR-PW-Z0-GN-CI-RD-DWG-00004.
- REFER TO DRAWING LXR-PW-Z0-GN-CI-DR-DWG-00001 FOR ToVP COMBINATION PIT DETAIL.
- REFER TO MRWA DRAWING No. 200231-094-3 FOR ToVP GULLY PIT DETAIL.
- REFER TO DRAWING LXR-P1-Z1-ML-CI-DR-DWG-00203 FOR DRAINAGE PIT SCHEDULE.

LEGEND

- (P2-03-48-1) STRUCTURE NUMBER
- RAIL RESERVE BOUNDARY
- RAIL CORRIDOR DRAINAGE:
- DRAINAGE PIPE
 - MANHOLE
 - GULLY PIT
 - ⬮ CATCHPIT
 - ⬮ END TREATMENT
 - ⬮ PVC FITTING
 - ⬮ KERB OPENING
 - ⬮ ROCK PROTECTION
 - ▬ DRAINAGE BASIN
 - OPEN CHANNEL
 - ⊙ SOAKWELL
 - TRENCH DRAIN
- ToVP DRAINAGE:
- ToVP DRAINAGE PIPE
 - ToVP MANHOLE
 - ToVP COMBINATION PIT
 - ⬮ ToVP GULLY PIT
 - ToVP TRENCH DRAIN
- U/S INV 14.600
200Ø / 3.90%
2.56m / PVC
D/S INV 14.306
- EXISTING DRAINAGE:
- EXISTING PIT AND PIPE
 - EXISTING DRAINAGE TO BE REMOVED
 - EXISTING
U/S INV 14.600
200Ø / 11.47%
2.56m / PVC
D/S INV 14.306
 - EXISTING DRAINAGE PIPE INFORMATION
- DESIGN CONTOUR
- 20 — DESIGN MAJOR CONTOUR
 - - - 20.1 - - - DESIGN MINOR CONTOUR

1:250 0 5 10 15m

ISSUED FOR INFORMATION

B	01.12.22	ISSUED FOR INTERMEDIATE DETAILED DESIGN			F.S	L.C	J.L	Y.S
A	12.08.22	ISSUED FOR REFERENCE DESIGN			F.S	L.C	J.L	Y.S
REV	DATE	AMENDMENT			DSN	DRN	CHK	APP
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A1								
		AT ORIGINAL PLOT SIZE						

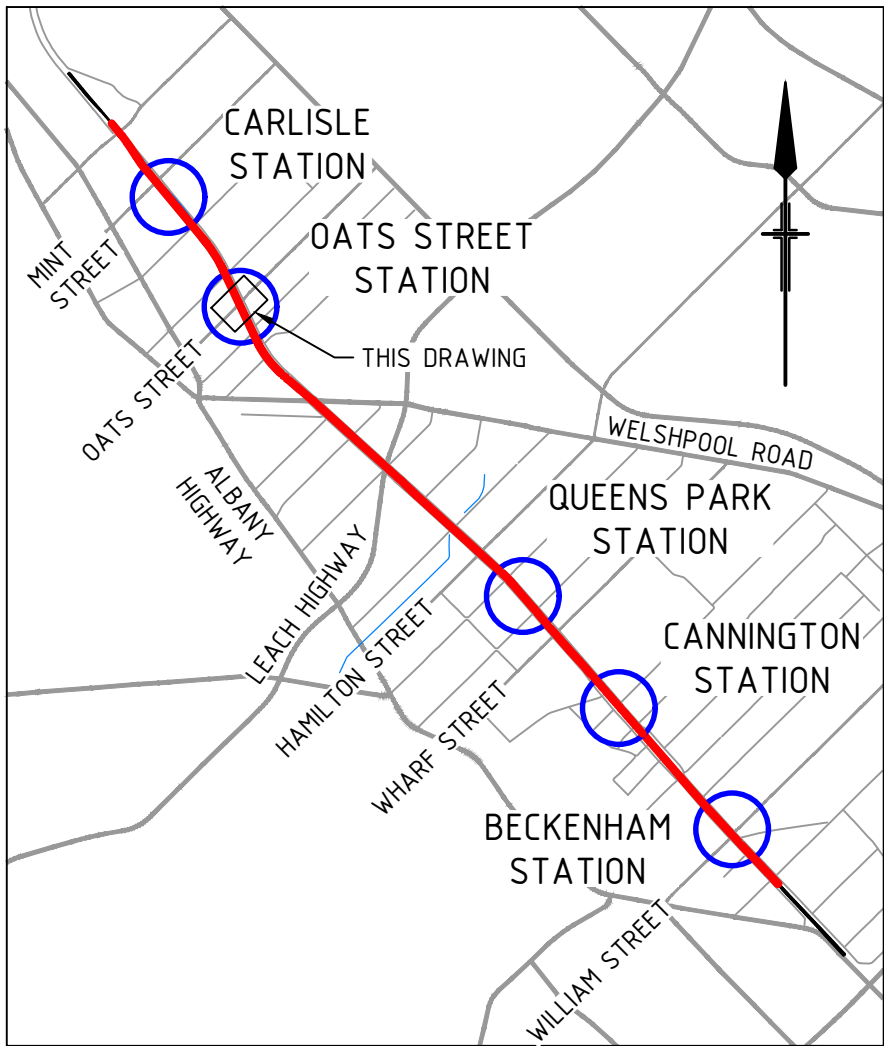
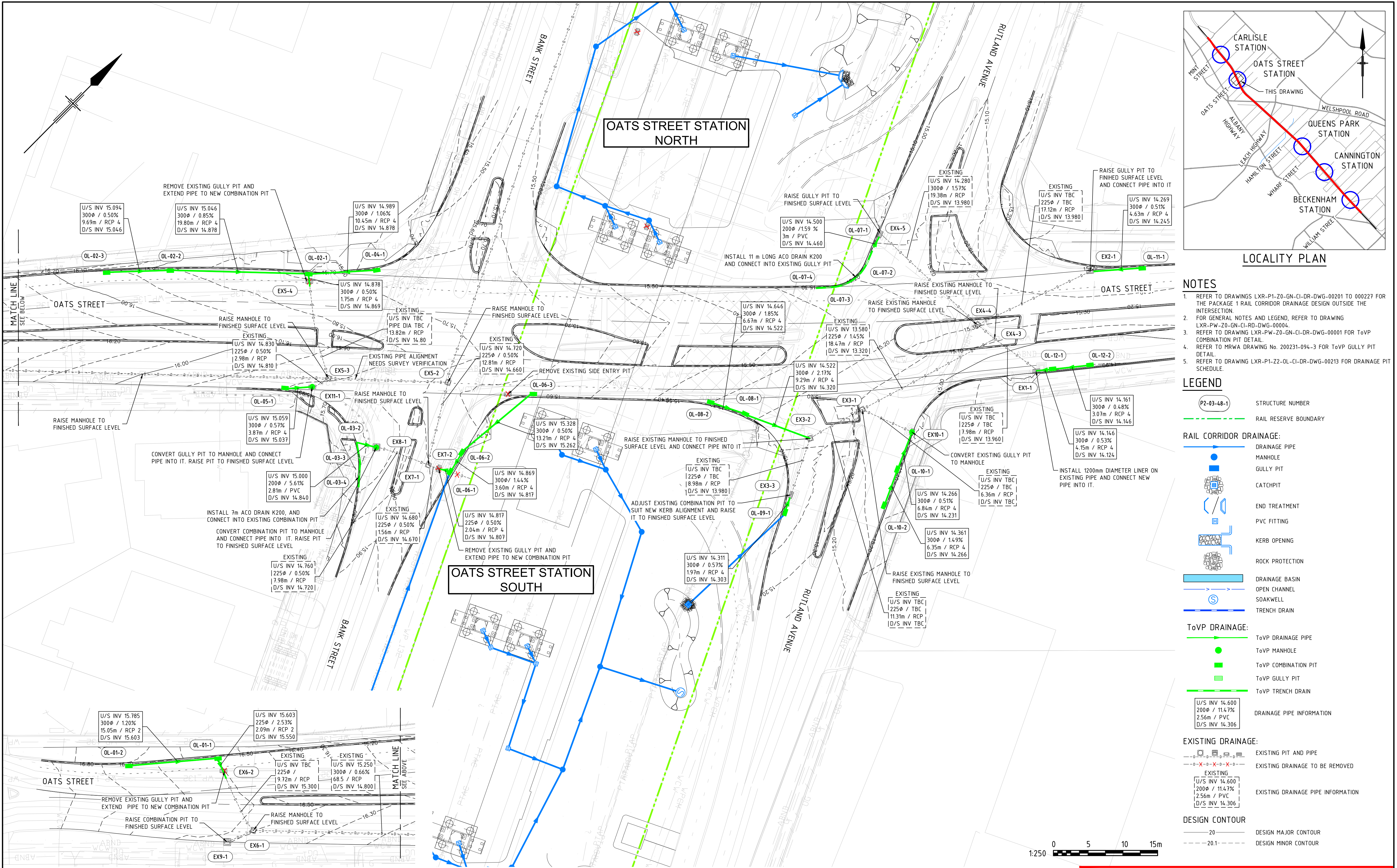
ARMADALE LINE UPGRADE ALLIANCE

Innovation to Reality

Contractor No: LXR-P1-Z1-ML-CI-DR-DWG-00201

REFERENCES	SCALE	DESIGNED
	1:250 (@A1)	F.SHER
		DRAWN
		L.CHEN
		CHECKED
		J.LIM
		APPROVED
		Y.SIDDIQUI
		DATE
		01.12.22

 Government of Western Australia Public Transport Authority		VICTORIA PARK TO CANNING LEVEL CROSSING REMOVAL	
ARMADALE LINE - DRAINAGE			
MINT STREET LEVEL CROSSING - PACKAGE 1			
GENERAL ARRANGEMENT			
PTA Drawing No:			Rev: B



LOCALITY PLAN

- NOTES**
- REFER TO DRAWINGS LXR-P1-Z0-GN-CI-DR-DWG-00201 TO 00227 FOR THE PACKAGE 1 RAIL CORRIDOR DRAINAGE DESIGN OUTSIDE THE INTERSECTION.
 - FOR GENERAL NOTES AND LEGEND, REFER TO DRAWING LXR-PW-Z0-GN-CI-DR-DWG-00004.
 - REFER TO DRAWING LXR-PW-Z0-GN-CI-DR-DWG-00001 FOR ToVP COMBINATION PIT DETAIL.
 - REFER TO MRWA DRAWING No. 200231-094-3 FOR ToVP GULLY PIT DETAIL.
 - REFER TO DRAWING LXR-P1-Z2-OL-CI-DR-DWG-00213 FOR DRAINAGE PIT SCHEDULE.

- LEGEND**
- (P2-03-48-1) STRUCTURE NUMBER
- RAIL RESERVE BOUNDARY
- RAIL CORRIDOR DRAINAGE:**
- DRAINAGE PIPE
 - MANHOLE
 - GULLY PIT
 - CATCHPIT
 - END TREATMENT
 - PVC FITTING
 - KERB OPENING
 - ROCK PROTECTION
 - DRAINAGE BASIN
 - OPEN CHANNEL
 - SOAKWELL
 - TRENCH DRAIN
- ToVP DRAINAGE:**
- ToVP DRAINAGE PIPE
 - ToVP MANHOLE
 - ToVP COMBINATION PIT
 - ToVP GULLY PIT
 - ToVP TRENCH DRAIN
- DRAINAGE PIPE INFORMATION**
- U/S INV 14.600
200Ø / 11.47%
2.56m / PVC
D/S INV 14.306
- EXISTING DRAINAGE:**
- EXISTING PIT AND PIPE
 - EXISTING DRAINAGE TO BE REMOVED
 - EXISTING DRAINAGE PIPE INFORMATION
- DESIGN CONTOUR**
- DESIGN MAJOR CONTOUR
 - DESIGN MINOR CONTOUR

B	01.12.22	ISSUED FOR INTERMEDIATE DETAILED DESIGN	F.S	L.C	J.L	Y.S	
A	28.07.22	ISSUED FOR REFERENCE DESIGN	F.S	L.C	J.L	Y.S	
REV	DATE	AMENDMENT	DSN	DRN	CHK	APP	
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A1							

ARMADALE LINE UPGRADE ALLIANCE

Innovation to Reality

Contractor No: LXR-P1-Z2-OL-CI-DR-DWG-00211

REFERENCES	SCALE	DESIGNED
	1:250 (@A1)	F.SHER
		DRAWN
		L.CHEN
		CHECKED
		J.LIM
		APPROVED
		Y.SIDDIQUI
		DATE
		01.12.22

ISSUED FOR INFORMATION

Government of Western Australia
Public Transport Authority

VICTORIA PARK TO CANNING
LEVEL CROSSING REMOVAL

ARMADALE LINE - DRAINAGE
OATS STREET LEVEL CROSSING - PACKAGE 1
GENERAL ARRANGEMENT - SHEET 1

PTA Drawing No: Rev: B