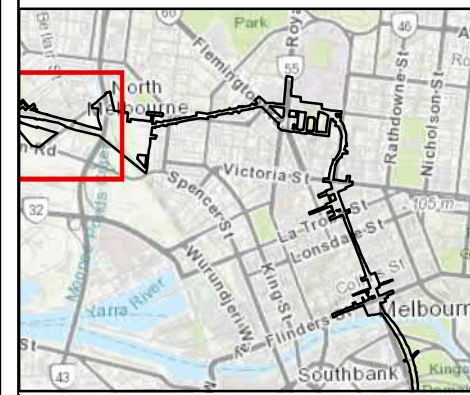
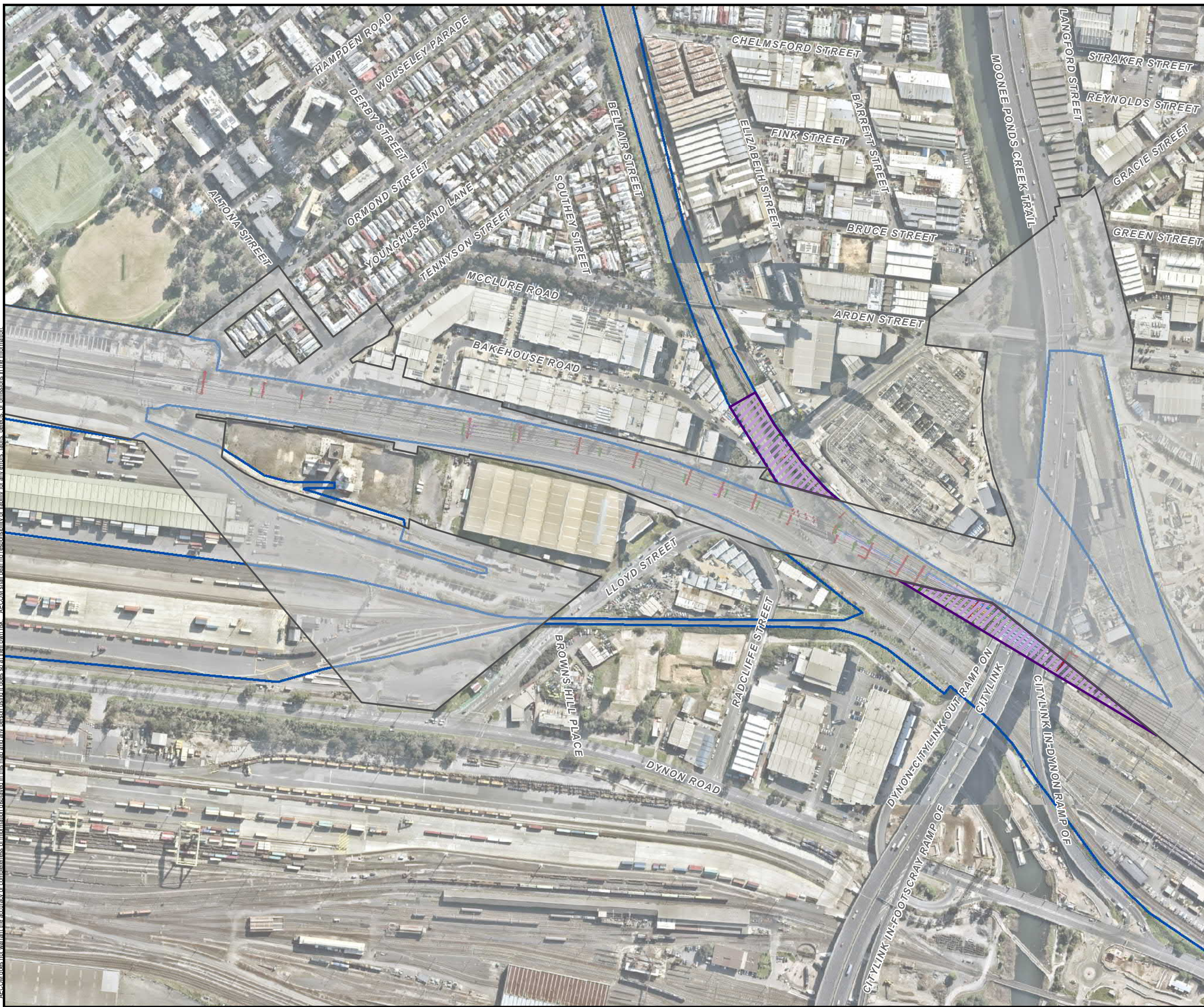


- LEGEND**
- Project Land (GC82)
 - Area of Works Outside the Project Boundary
 - Victrack Land
 - Existing Infrastructure
 - OHLEs New
 - OHLEs Removed
 - Drainage Alignment
 - Concept Signal Location
- Treatment Type Overlay**
- Type 1 Re-use Existing Formation
 - Type 2 - Renew Ballast
 - Type 3 - Renew Ballast and Capping
 - Civil Construction

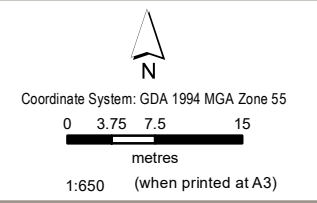


Site Location Overview

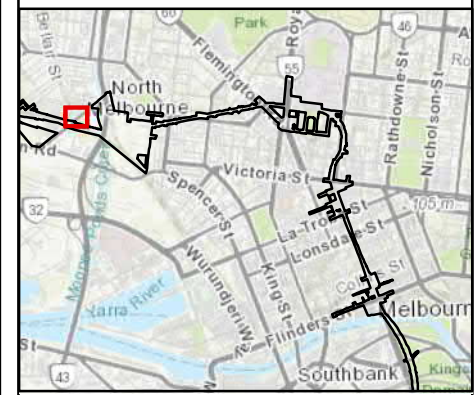
Rail Projects Victoria
 Western Portal Stage 3
 Melbourne, VIC

Figure F1a

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- LEGEND**
- Project Land (GC82)
 - Area of Works Outside the Project Boundary
 - Victrack Land
 - Existing Infrastructure
 - OHLEs New
 - OHLEs Removed
 - Concept Signal Location

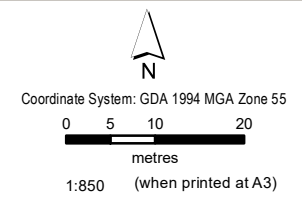


Site Location North

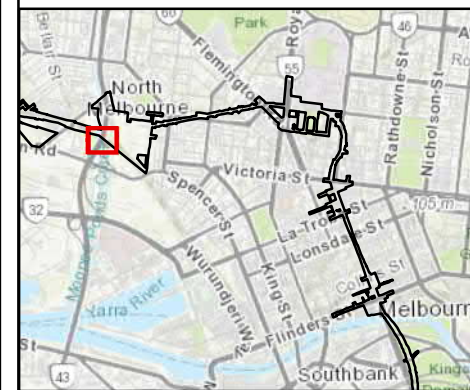
Rail Projects Victoria
 Western Portal Stage 3
 Melbourne, VIC

Figure F1b

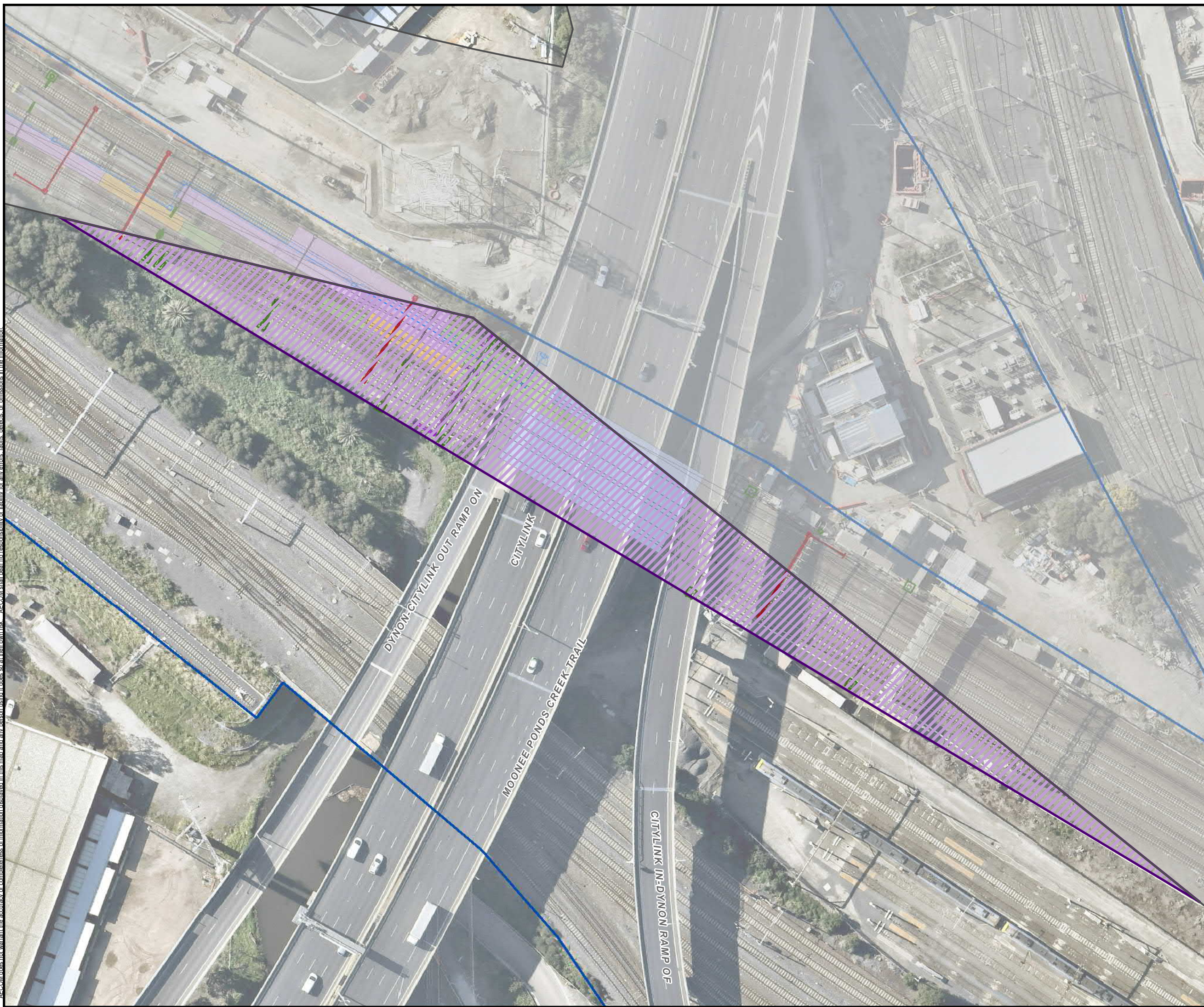
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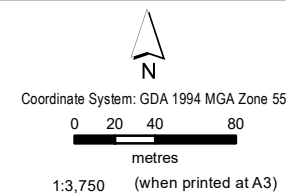
- LEGEND**
- Project Land (GC82)
 - Area of Works Outside the Project Boundary
 - Victrack Land
 - Existing Infrastructure
 - OHLEs New
 - OHLEs Removed
 - Drainage Alignment
 - Concept Signal Location
- Treatment Type Overlay**
- Type 1 Re-use Existing Formation
 - Type 2 - Renew Ballast
 - Type 3 - Renew Ballast and Capping
 - Civil Construction



Site Location East

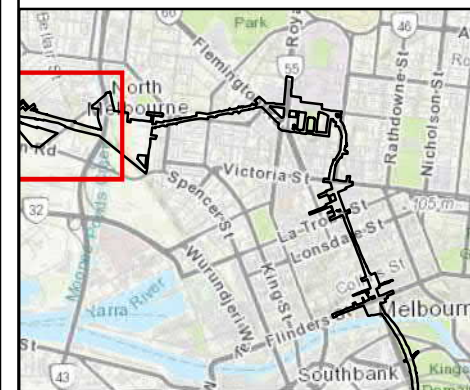
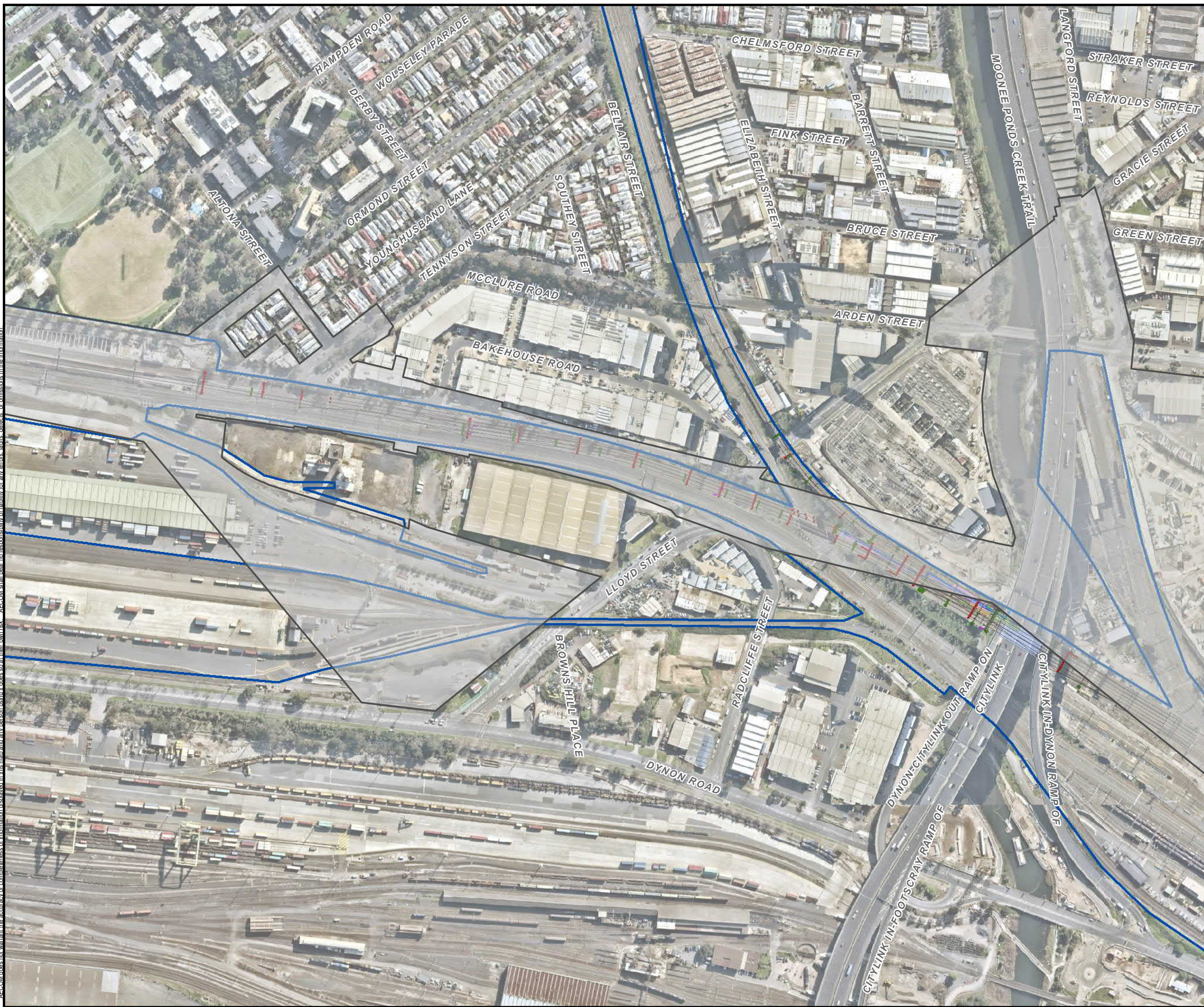


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LEGEND

- Project Land (GC82)
 - Victrack Land
 - Existing Infrastructure
 - OHLEs New
 - OHLEs Removed
 - Drainage Alignment
 - Concept Signal Location
- Treatment Type Overlay**
- Type 1 Re-use Existing Formation
 - Type 2 - Renew Ballast
 - Type 3 - Renew Ballast and Capping
 - Civil Construction

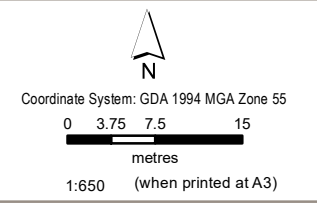


Site Location Overview

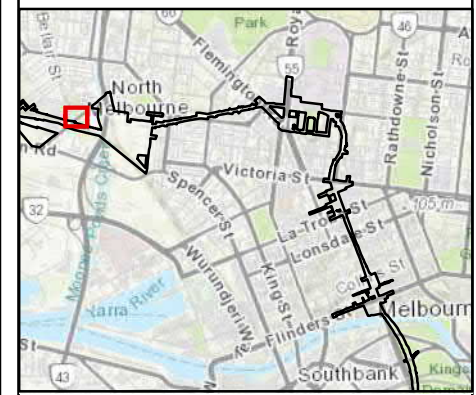
Rail Projects Victoria
 Western Portal Stage 3
 Melbourne, VIC

Figure F1a

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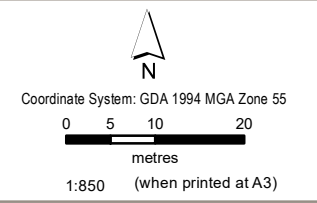


- LEGEND**
- Project Land (GC82)
 - Victrack Land
 - Existing Infrastructure
 - OHLEs New
 - OHLEs Removed
 - Concept Signal Location

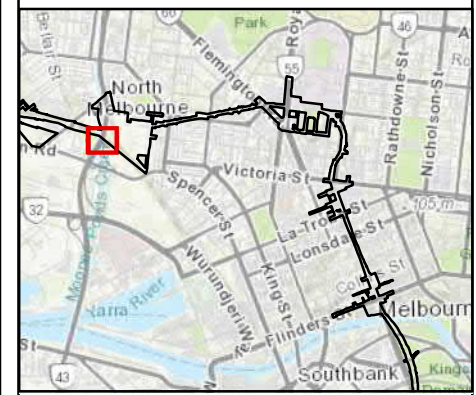
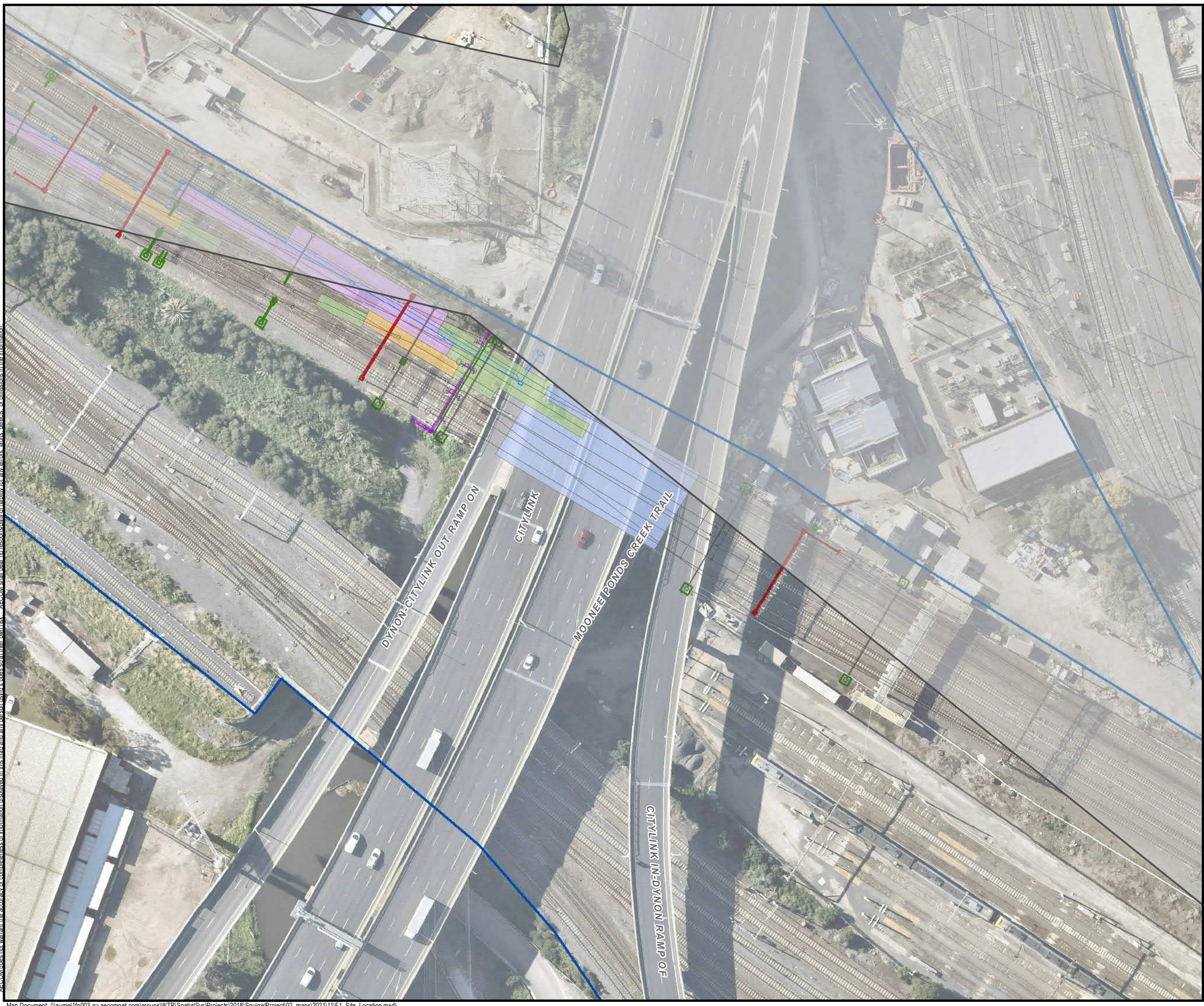


Site Location North

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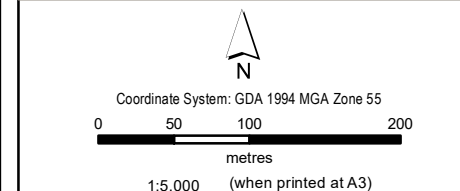


- LEGEND**
- Project Land (GC82)
 - Victrack Land
 - Existing Infrastructure
 - OHLEs New
 - OHLEs Removed
 - Drainage Alignment
 - Concept Signal Location
- Treatment Type Overlay**
- Type 1 - Re-use Existing Formation
 - Type 2 - Renew Ballast
 - Type 3 - Renew Ballast and Capping
 - Civil Construction



Site Location East

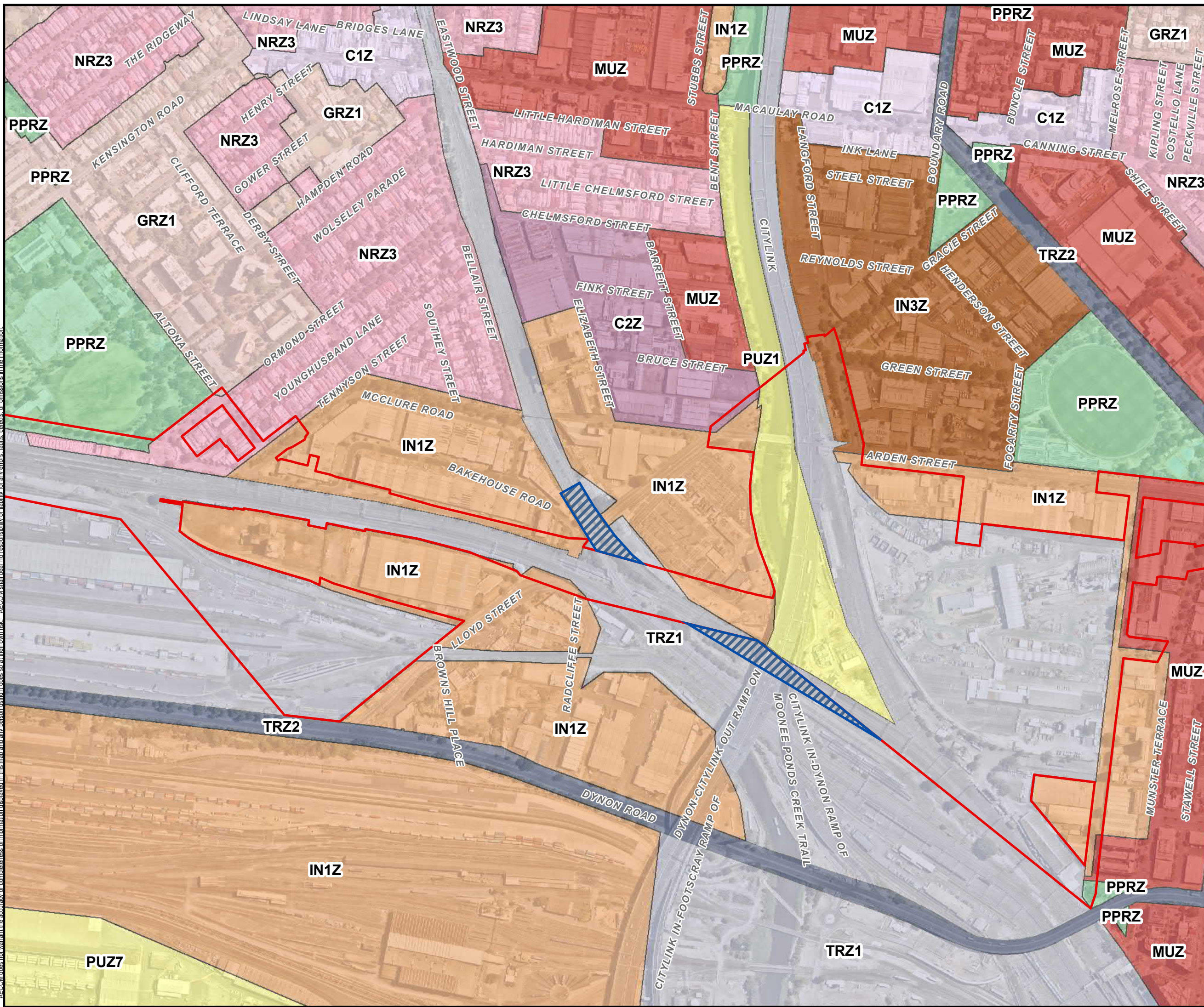
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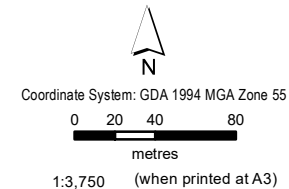
- LEGEND**
- Planning Scheme Amendment GC82
 - Area or Works Outside the Project Boundary
 - Planning Zones**
 - C1Z - Commercial 1
 - C2Z - Commercial 2
 - GRZ - General Residential
 - IN1Z - Industrial 1
 - IN3Z - Industrial 3
 - MUZ - Mixed Use
 - NRZ - Neighbourhood Residential
 - PPRZ - Public Park & Recreation
 - PUZ1 - Public Use - Service and Utility
 - PUZ7 - Public Use - Other Public Use
 - TRZ1 - State Transport Infrastructure
 - TRZ2 - Principal Road Network



Planning Zones

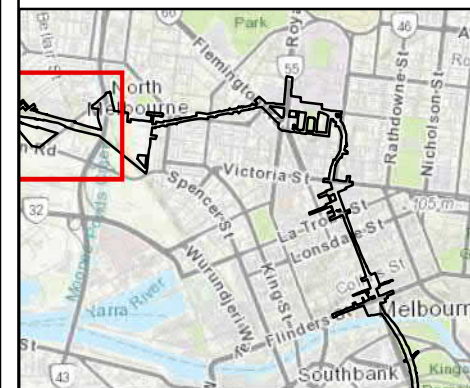


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LEGEND

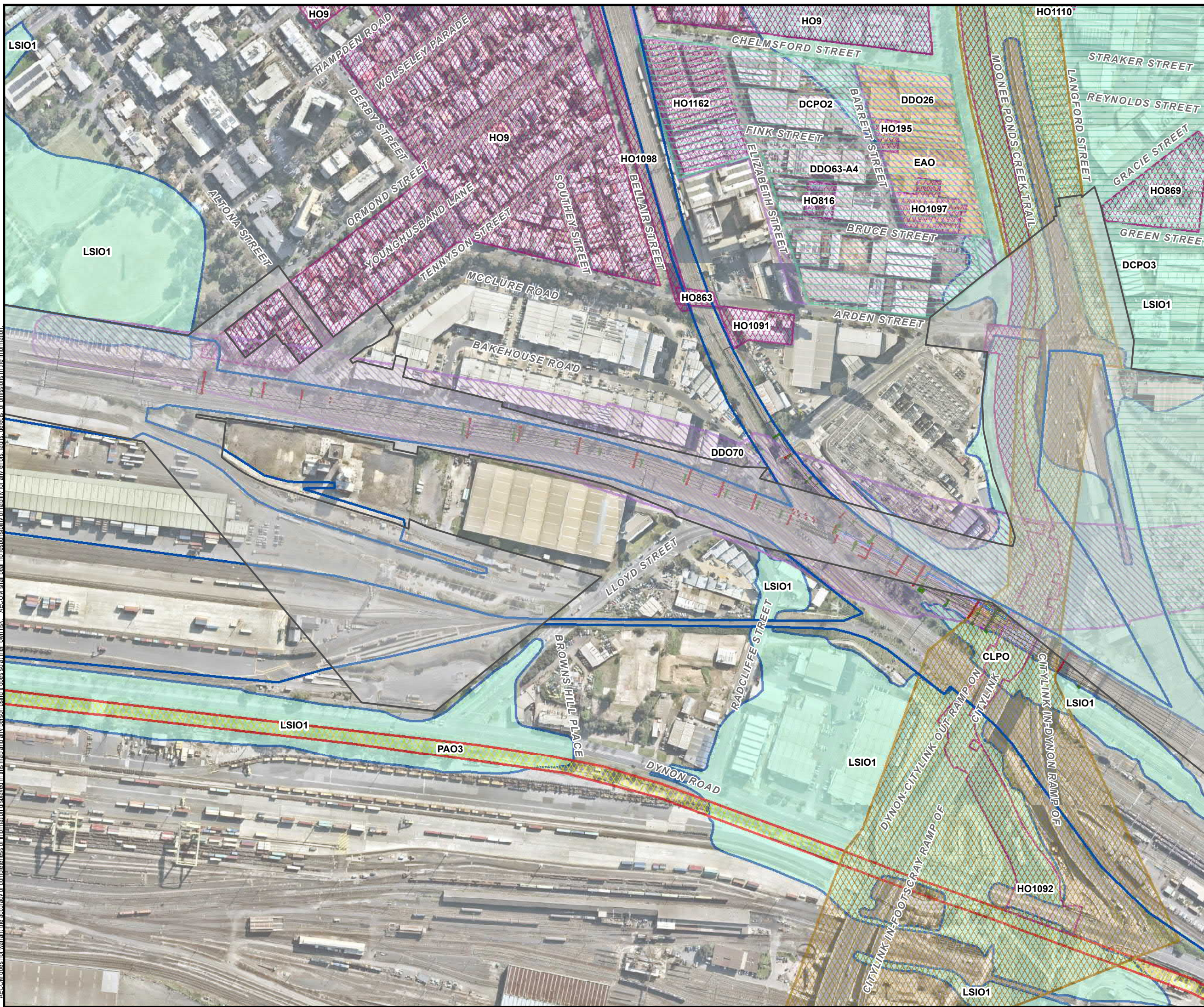
- Project Land (GC82)
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- OHLEs New
- OHLEs Removed
- Drainage Alignment
- Concept Signal Location
- Treatment Type Overlay**
- Type 1 Re-use Existing Formation
- Type 2 - Renew Ballast
- Type 3 - Renew Ballast and Capping
- Civil Construction
- Planning Overlay**
- CLPO - City Link Management
- DCPO - Development Contributions Plan
- DDO - Design & Development
- EAO - Environmental Audit
- HO - Heritage Overlay
- LSI01 - Land Subject to Inundation
- PAO - Public Acquisition



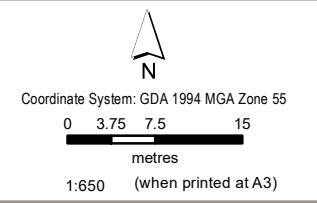
Planning Overlays Overview

Rail Projects Victoria
 Western Portal Stage 3
 Melbourne, VIC

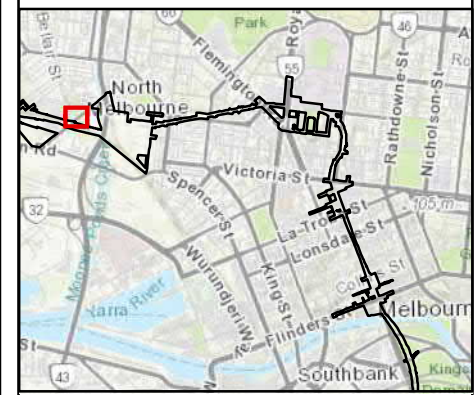
Figure
F3a



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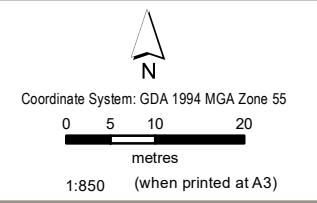


- LEGEND**
- Project Land (GC82)
 - Victrack Land
 - Existing Infrastructure
 - OHLEs New
 - OHLEs Removed
 - Concept Signal Location
- Planning Overlay**
- DDO - Design & Development
 - HO - Heritage Overlay
 - LSIO - Land Subject to Inundation

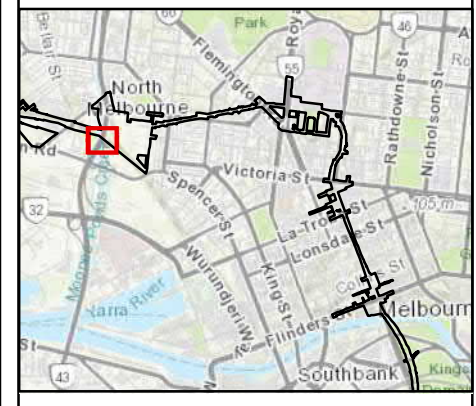
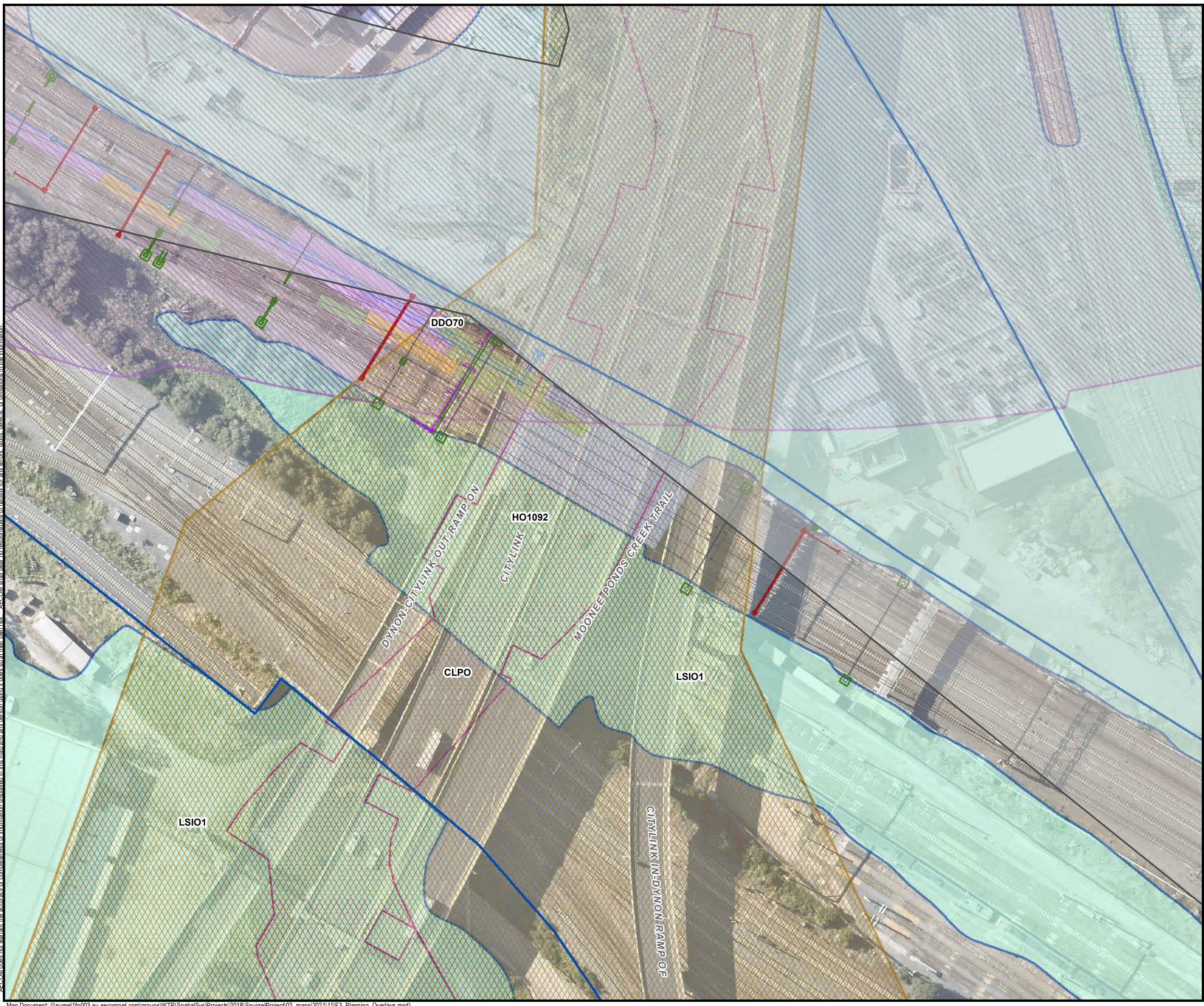


Planning Overlays North

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- LEGEND**
- Project Land (GC82)
 - Victrack Land
 - Existing Infrastructure
 - OHLEs New
 - OHLEs Removed
 - Drainage
 - Concept Signal Location
 - Treatment Type Overlay**
 - Type 1 Re-use Existing
 - Type 2 - Renew Ballast
 - Type 3 - Renew Ballast and
 - Civil Construction
 - Planning Overlay**
 - CLPO - City Link
 - DCPO - Development Contributions Plan
 - DDO - Design &
 - HO - Heritage Overlay
 - LSIO - Land Subject to



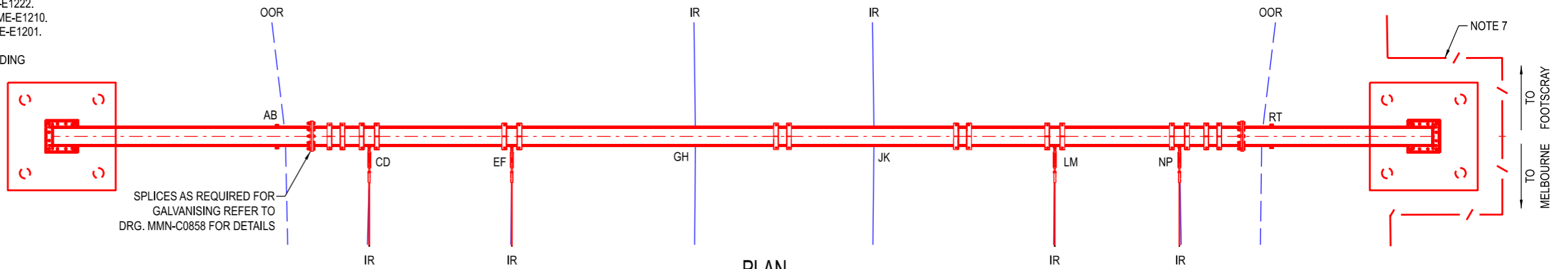
Planning Overlays East

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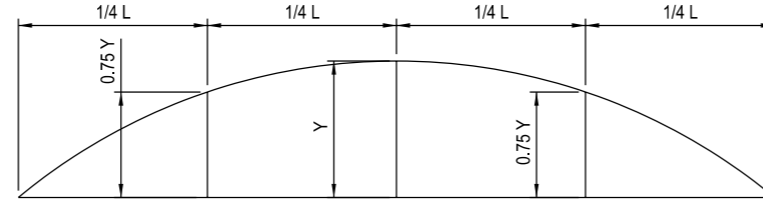
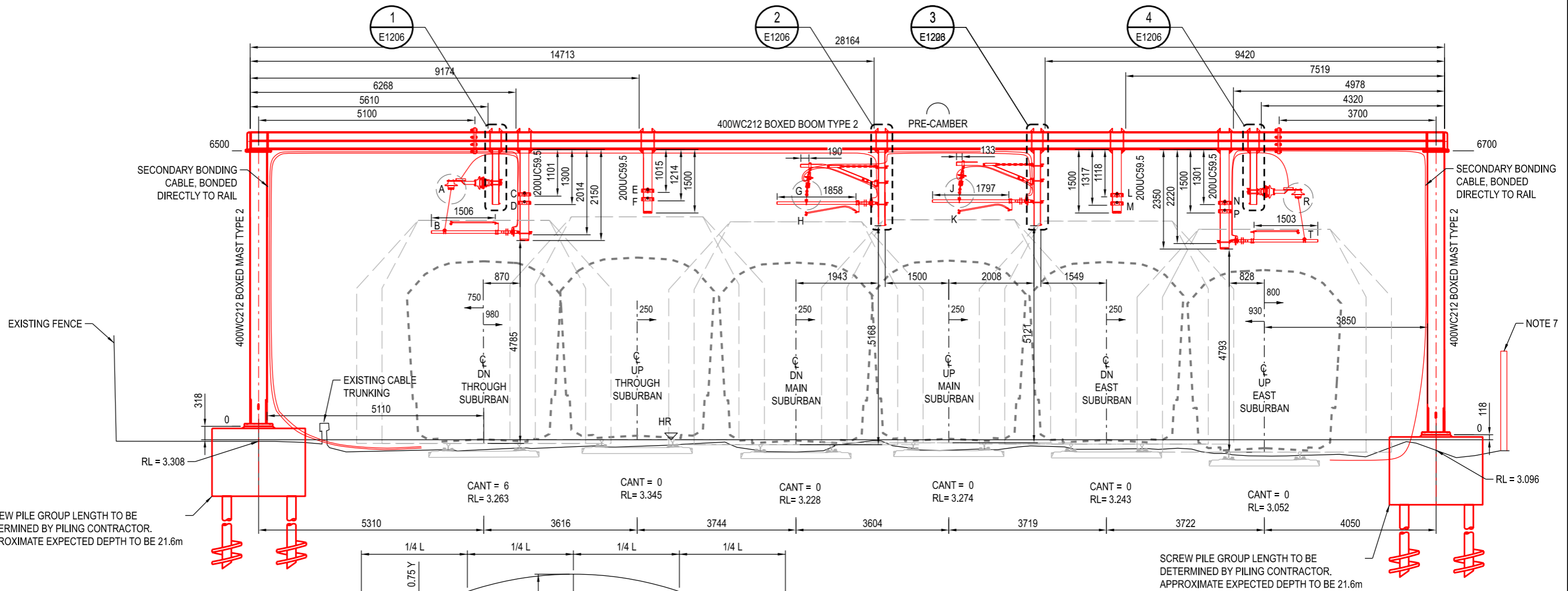
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NOTES

1. FOR STAGE 1 OVERHEAD LAYOUT PLAN REFER TO DRG. NME-E0001.
2. FOR FINAL OHLE CROSS-SECTION REFER TO DRG. NME-E1222.
3. FOR FINAL OVERHEAD LAYOUT PLAN REFER TO DRG. NME-E1210.
4. FOR GENERAL NOTES AND LEGEND REFER TO DRG. NME-E1201.
5. FOR FOOTING SCHEDULE REFER TO DRG. NME-C1186.
6. FOR STAGE 1 OVERHEAD WIRING ALLOCATION AND LOADING TABLE REFER TO DRG. NME-E0008.
7. REFER TO DRG. NME-E1190 FOR FENCE AND BOLLARD DETAILS.
8. STRUCTURE AND FOUNDATIONS DESIGNED CONSIDERING WORST CASE LOADING AMONGST SHOWN ON THIS DRAWING AND DRG. NME-E0008 AND FUTURE LOADS OF 4 x 181mm² FEEDERS PER TRACK AND 1 x ELECTROLYSIS WIRE PER MAST.



PLAN
SCALE 1:100

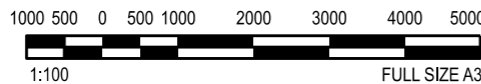


PORTAL BOOM CAMBER DIAGRAM
N.T.S.

B126+67
SCALE 1:100



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PLANNING PERMIT SUBMISSION

12:38:41 PM

6/12/2021

Revised By	In Serv	Rev	Date	Description	Designed	Checked	Ind. Review	Approved
RIA		19/11/21	ISSUED FOR PLANNING PERMIT	V TORRES	A PATIL	T DRESSER		
RIA		20/08/21	ISSUED FOR GATE 1 SUBMISSION	V TORRES	A PATIL	T DRESSER		

CHECK PRINT	READY FOR ISSUE	INITIAL	DATE
DISCIPLINE			
DISCIPLINE			
DISCIPLINE			
DISCIPLINE			
BACKDRAFTED/CORRECTED			
CONFIRMED			

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Project Title RAIL INFRASTRUCTURE ALLIANCE			Project Drawing Number RIA-MGA-WPZ-ZWD-SKT-EOH-NME-E0020		Rev B	
TRAIN ELECTRICAL NETWORK			PUBLIC TRANSPORT VICTORIA			
NORTH MELBOURNE			PT			
WESTERN PORTAL - STAGE 3			File Name RIA-AEC-SKT-110-820-1110-NME-0020			
OVERHEAD CROSS SECTION			Sheet No. 01 of 01			
B126+67			In Serv.			
Up Location East. North. ID#	Down Location East. North. ID#	Datum MGA Z55	Scale 1:100			Sheet Size A3
Drawn By B REALICA		Designed By V TORRES		Checked By A PATIL		
Approved T DRESSER		Approval Date 19/11/21		Drawing Number		
				Revision		

NOTES

1. FOR STAGE 1 OVERHEAD LAYOUT PLAN REFER TO DRG. NME-E0001.
2. FOR FINAL OHLE CROSS-SECTION REFER TO DRG. NME-E1224.
3. FOR FINAL OVERHEAD LAYOUT PLAN REFER TO DRG. NME-E1210.
4. FOR GENERAL NOTES AND LEGEND REFER TO DRG. NME-E1201.
5. FOR FOOTING SCHEDULE REFER TO DRG. NME-C1186.
6. FOR STAGE 1 OVERHEAD WIRING ALLOCATION AND LOADING TABLE REFER TO DRG. NME-E0009.
7. FOR FENCE AND BOLLARD DETAILS REFER TO DRG. NME-C1191.
8. STRUCTURE AND FOUNDATIONS DESIGNED CONSIDERING WORST CASE LOADING AMONGST SHOWN ON THIS DRAWING AND DRG. NME-E0009 AND FUTURE LOADS OF 4 x 181mm² FEEDERS PER TRACK AND 1 x ELECTROLYSIS WIRE PER MAST.

SPLICES AS REQUIRED FOR GALVANISING REFER TO DRG. MMN-C0858 FOR DETAILS

PLAN
SCALE 1:100

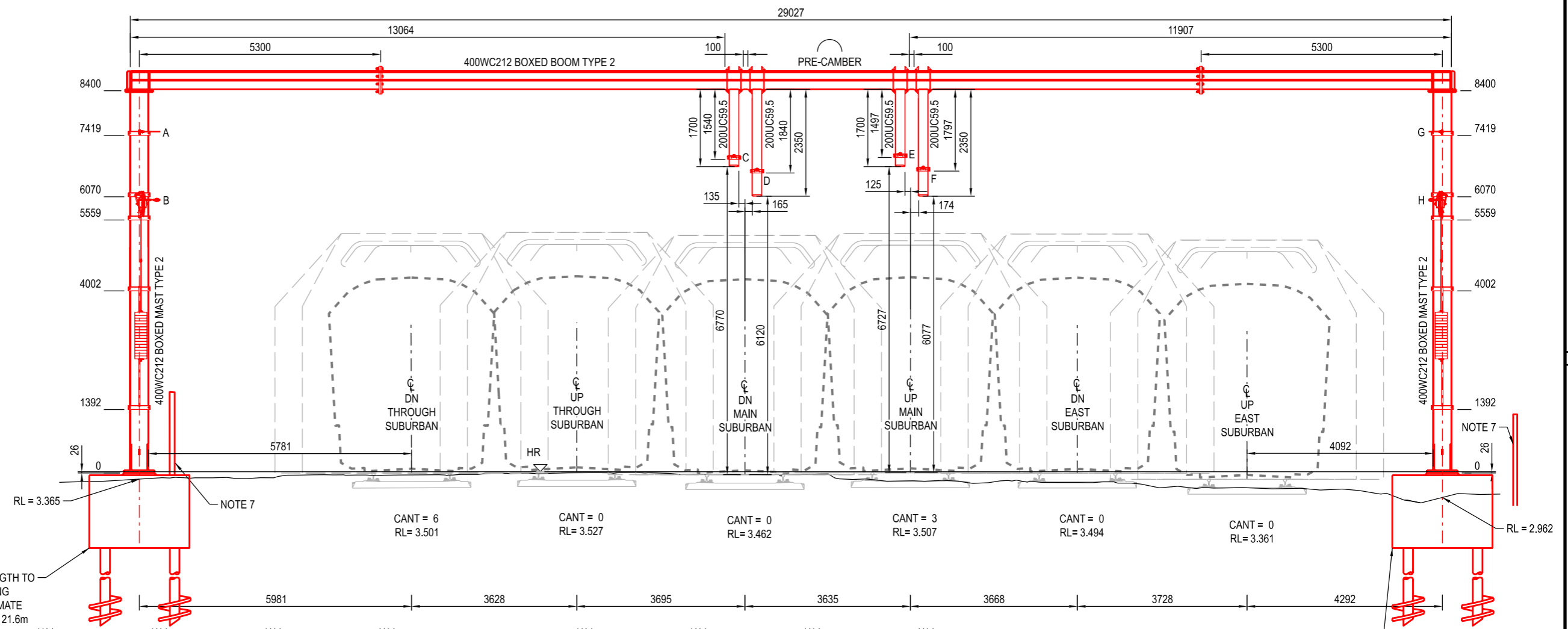
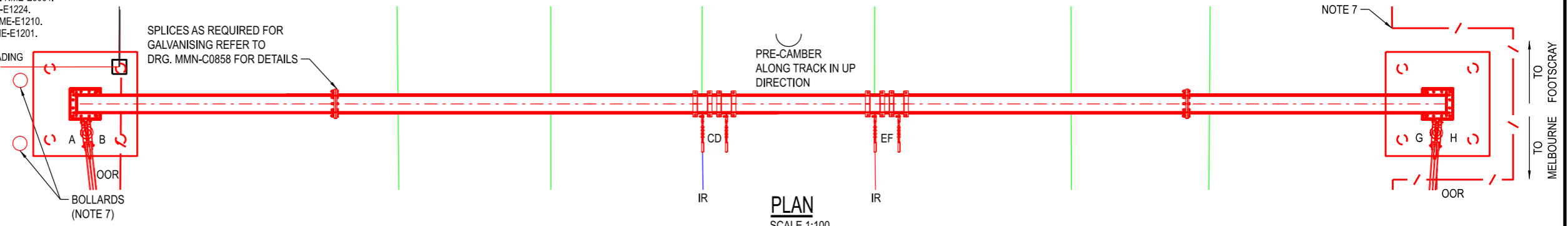
NOTE 7

(DATE)

(SIGNATURE)

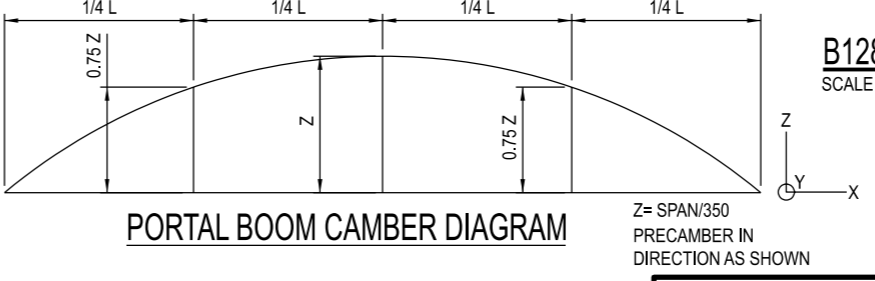
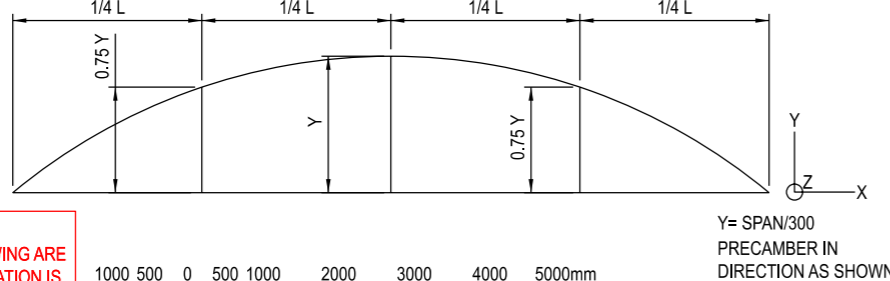
(BLOCK LETTERS)

Certified By:



SCREW PILE GROUP LENGTH TO BE DETERMINED BY PILING CONTRACTOR. APPROXIMATE EXPECTED DEPTH TO BE 21.6m

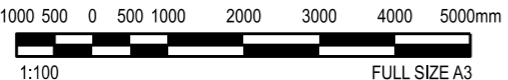
SCREW PILE GROUP LENGTH TO BE DETERMINED BY PILING CONTRACTOR. APPROXIMATE EXPECTED DEPTH TO BE 21.6m



B128+15
SCALE 1:100



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PLANNING PERMIT SUBMISSION

12:25:58 PM

6/12/2021

Revised By	In Serv	Rev	Date	Description	Designed	Checked	Ind. Review	Approved
RIA		19/11/21		ISSUED FOR PLANNING PERMIT	V TORRES	A PATIL		T DRESSER
RIA		20/08/21		ISSUED FOR GATE 1 SUBMISSION	V TORRES	A PATIL		T DRESSER

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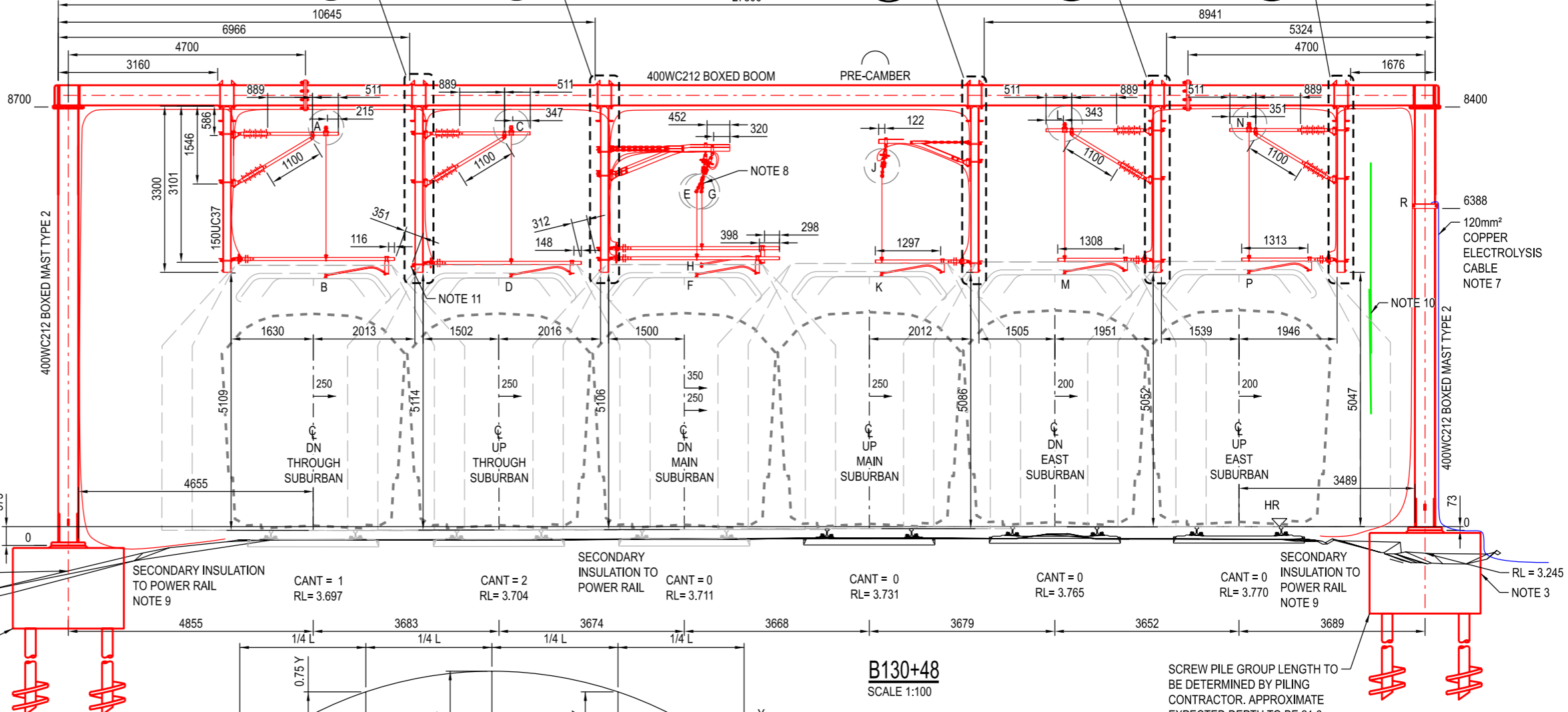
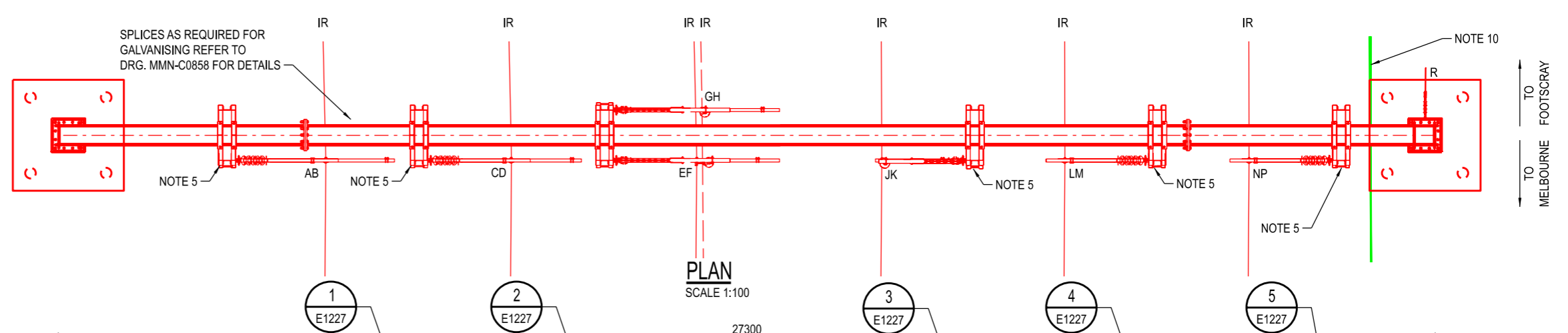
Franchisee / Lessee

Project Title RAIL INFRASTRUCTURE ALLIANCE			Project Drawing Number RIA-MGA-WPZ-ZWD-SKT-EOH-NME-E0021		Rev B
TRAIN ELECTRICAL NETWORK NORTH MELBOURNE WESTERN PORTAL - STAGE 3 OVERHEAD CROSS SECTION B128+15					Drawn By B REALICA Designed By V TORRES
			Checked By A PATIL Ind. Review		Approved T DRESSER Approval Date 19/11/21
Up Location East. North. ID#			Down Location East. North. ID#		Datum MGA Z55
File Name RIA-AEC-SKT-110-820-1110-NME-0021			Sheet No. 01 of 01		Drawing Number Revision
In Serv.			Scale 1:100 Sheet Size A3		

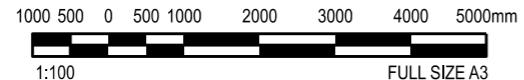
(DATE)
(SIGNATURE)
(BLOCK LETTERS)
Certified By:

NOTES

- FOR OVERHEAD LAYOUT PLAN REFER TO DRG. NME-E1211.
- FOR GENERAL NOTES AND LEGEND REFER TO DRG. NME-E1201.
- PILE CAP SHOWN INDICATIVELY ONLY. REFER TO DRG. NME-C1186 FOR FOOTING SCHEDULE.
- FOR OVERHEAD WIRING ALLOCATION AND LOADING TABLE REFER TO DRG. NME-E1227.
- PROCURE DOUBLE DROP VERTICAL ASSEMBLY WITH ONLY 1 DROP VERTICAL AS SHOWN.
- THIS STRUCTURE HAS BEEN DESIGNED TO WITHSTAND THE LOADING FROM 4 x AUXILIARY FEEDERS PER TRACK, AND 1 ELECTROLYSIS WIRE PER MAST.
- REFER TO EXISTING ELECTROLYSIS DIAGRAM DRG. No. NME_E0003. EXISTING ELECTROLYSIS CABLE TO BE RELOCATED AND CONNECTED TO THE TAIL OF THE ELECTROLYSIS WIRE TERMINATED ON THIS STRUCTURE. CONSTRUCTION TO CHECK AND ADOPT COPPER CABLE TO ALUMINIUM WIRE CONNECTION SIMILAR TO EXISTING.
- NON-STANDARD CATENARY SUPPORT. USE 1 x LONG 'U-SHACKLE', 1 x SHORT 'U-SHACKLE' AND 2 LINKS AT THE LOWER END OF THE INSULATOR.
- SECONDARY INSULATION BOND CONNECTIONS TO BE IN SEPARATE GROUPS FOR EACH CORRIDOR.
- BACK GUY FROM EXISTING OHLE AND SIGNALLING GANTRY B130+57 TO BE REMOVED.
- BACKING ANGLE FOR D TO BE INSTALLED IN ORIENTATION SHOWN IN DETAIL 1 ON NME-E1227.



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PORTAL BOOM CAMBER DIAGRAM
N.T.S.

Y= SPAN/400
PRECAMBER IN DIRECTION AS SHOWN

PLANNING PERMIT SUBMISSION

12:26:26 PM
6/12/2021

Revised By	In Serv	Rev	Date	Description	Designed	Checked	Ind. Review	Approved
RIA		19/11/21		ISSUED FOR PLANNING PERMIT	V TORRES	A PATIL		T DRESSER
RIA		20/08/21		ISSUED FOR GATE 1 SUBMISSION	V TORRES	A PATIL		T DRESSER

Franchisee / Lessee

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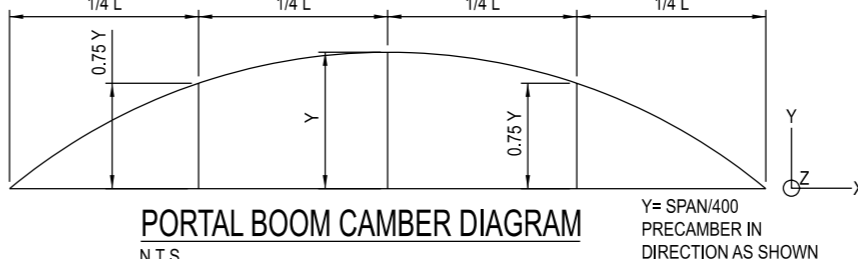
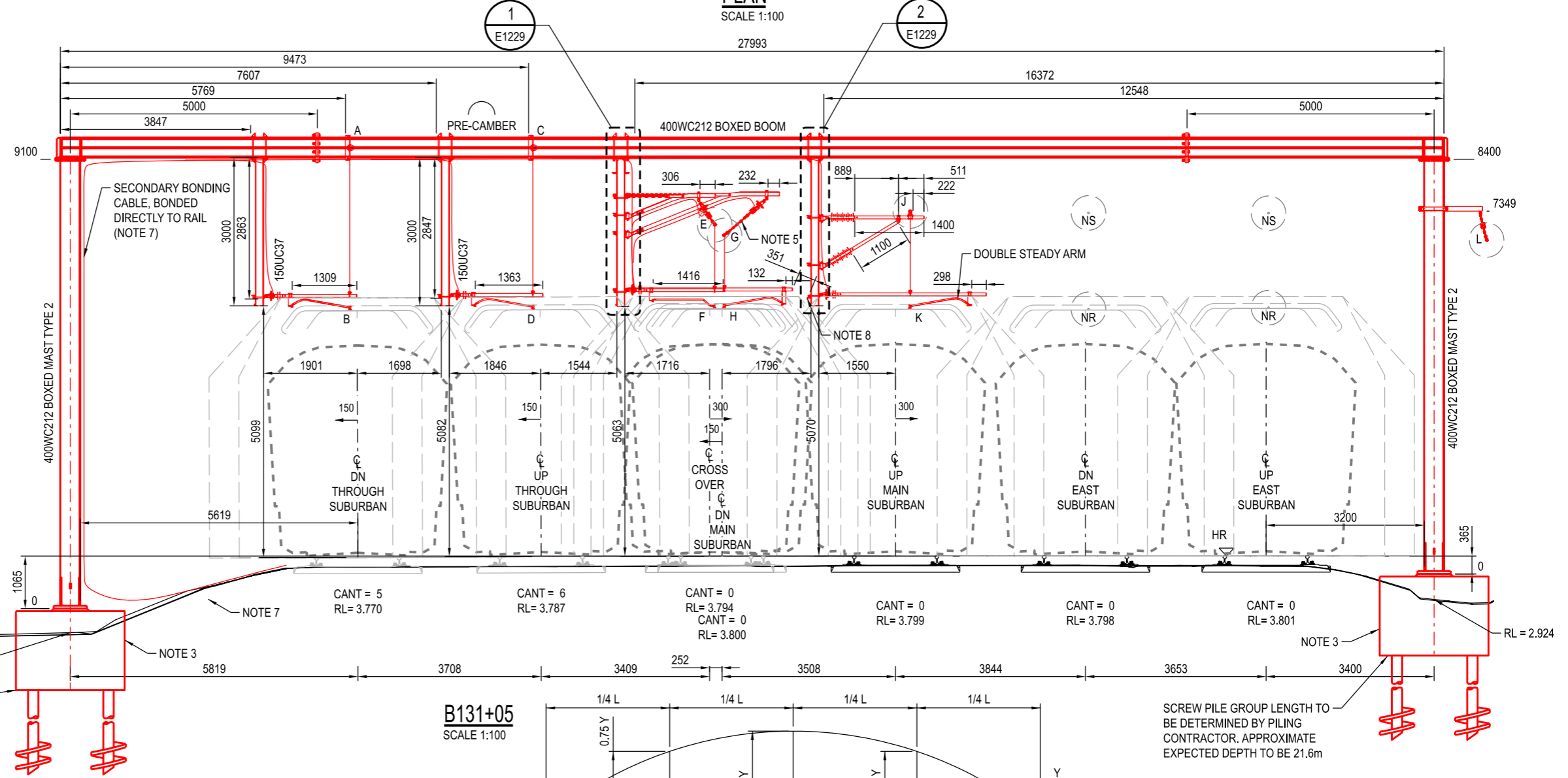
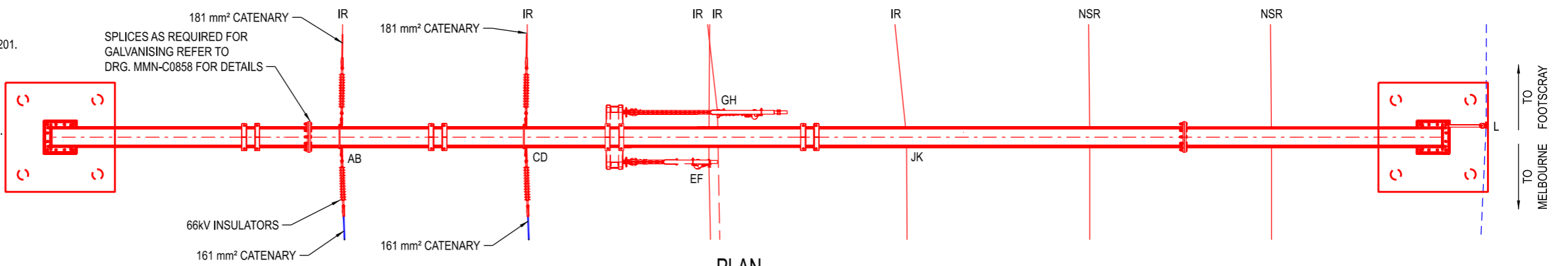
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Project Title RAIL INFRASTRUCTURE ALLIANCE		Project Drawing Number RIA-MGA-WPZ-ZWD-SKT-EOH-NME-E0022		Rev B
TRAIN ELECTRICAL NETWORK NORTH MELBOURNE WESTERN PORTAL - STAGE 3 OVERHEAD CROSS SECTION B130+48			PUBLIC TRANSPORT VICTORIA	
Up Location East. North. ID#	Down Location East. North. ID#	Datum MGA Z55		
Drawn By B REALICA Checked By A PATIL Approved T DRESSER Drawing Number		Designed By V TORRES Ind. Review Approval Date 19/11/21 Revision		
File Name RIA-AEC-SKT-110-820-1110-NME-0022 Sheet No. 01 of 01 In Serv.		Scale 1:100 Sheet Size A3		

(DATE)
(SIGNATURE)
(BLOCK LETTERS)
Certified By:

NOTES

- FOR OVERHEAD LAYOUT PLAN REFER TO DRG. NME-E1211.
- FOR GENERAL NOTES AND LEGEND REFER TO DRG. NME-E1201.
- PILE CAP SHOWN INDICATIVELY ONLY. REFER TO DRG. NME-C1186 FOR FOOTING SCHEDULE.
- FOR OVERHEAD WIRING ALLOCATION AND LOADING TABLE REFER TO DRG. NME-E1229.
- NON-STANDARD CATENARY SUPPORT. USE 2 x LONG 'U-SHACKLES' AND 8 LINKS AT THE BOTTOM OF THE INSULATOR. THIS STRUCTURE HAS BEEN DESIGNED TO WITHSTAND THE LOADING FROM 4 x AUXILIARY FEEDERS PER TRACK, AND 1 ELECTROLYSIS WIRE PER MAST.
- SECONDARY INSULATION BOND CONNECTIONS TO BE IN SEPARATE GROUPS FOR EACH CORRIDOR.
- BACKING ANGLE FOR K TO BE INSTALLED IN ORIENTATION SHOWN IN DETAIL 2 ON NME-E1229.

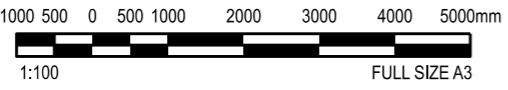


SCREW PILE GROUP LENGTH TO BE DETERMINED BY PILING CONTRACTOR. APPROXIMATE EXPECTED DEPTH TO BE 21.6m

SCREW PILE GROUP LENGTH TO BE DETERMINED BY PILING CONTRACTOR. APPROXIMATE EXPECTED DEPTH TO BE 21.6m



WARNING
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PLANNING PERMIT SUBMISSION

6/12/2021	12:26:47 PM										
RIA	19/11/21	ISSUED FOR PLANNING PERMIT	V TORRES	A PATIL	T DRESSER						
RIA	20/08/21	ISSUED FOR GATE 1 SUBMISSION	V TORRES	A PATIL	T DRESSER						
Revised By	In Serv	Rev	Date	Description	Designed	Checked	Ind. Review	Approved			

Franchisee / Lessee

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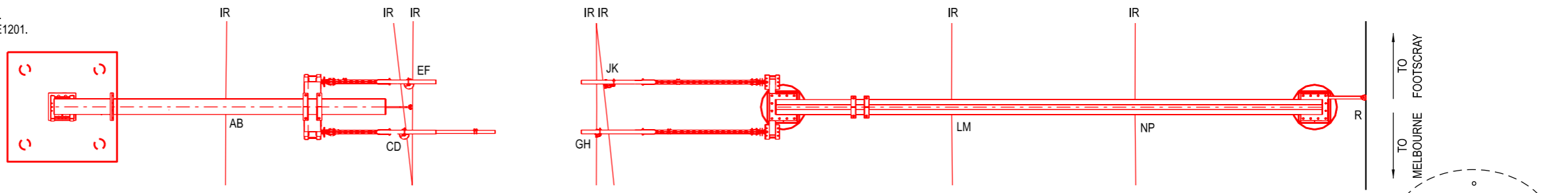
Project Title RAIL INFRASTRUCTURE ALLIANCE		
Project Drawing Number RIA-MGA-WPZ-ZWD-SKT-EOH-NME-E0023		
Rev B		
TRAIN ELECTRICAL NETWORK		
NORTH MELBOURNE		
WESTERN PORTAL - STAGE 3		
OVERHEAD CROSS SECTION		
B131+05		
Up Location East. North. ID#	Down Location East. North. ID#	Datum MGA Z55

Drawn By B REALICA	Designed By V TORRES
Checked By A PATIL	Ind. Review
Approved T DRESSER	Approval Date 19/11/21
Drawing Number	Revision
File Name RIA-AEC-SKT-110-820-1110-NME-0023	Sheet No. 01 of 01
In Serv.	Scale 1:100
Sheet Size A3	

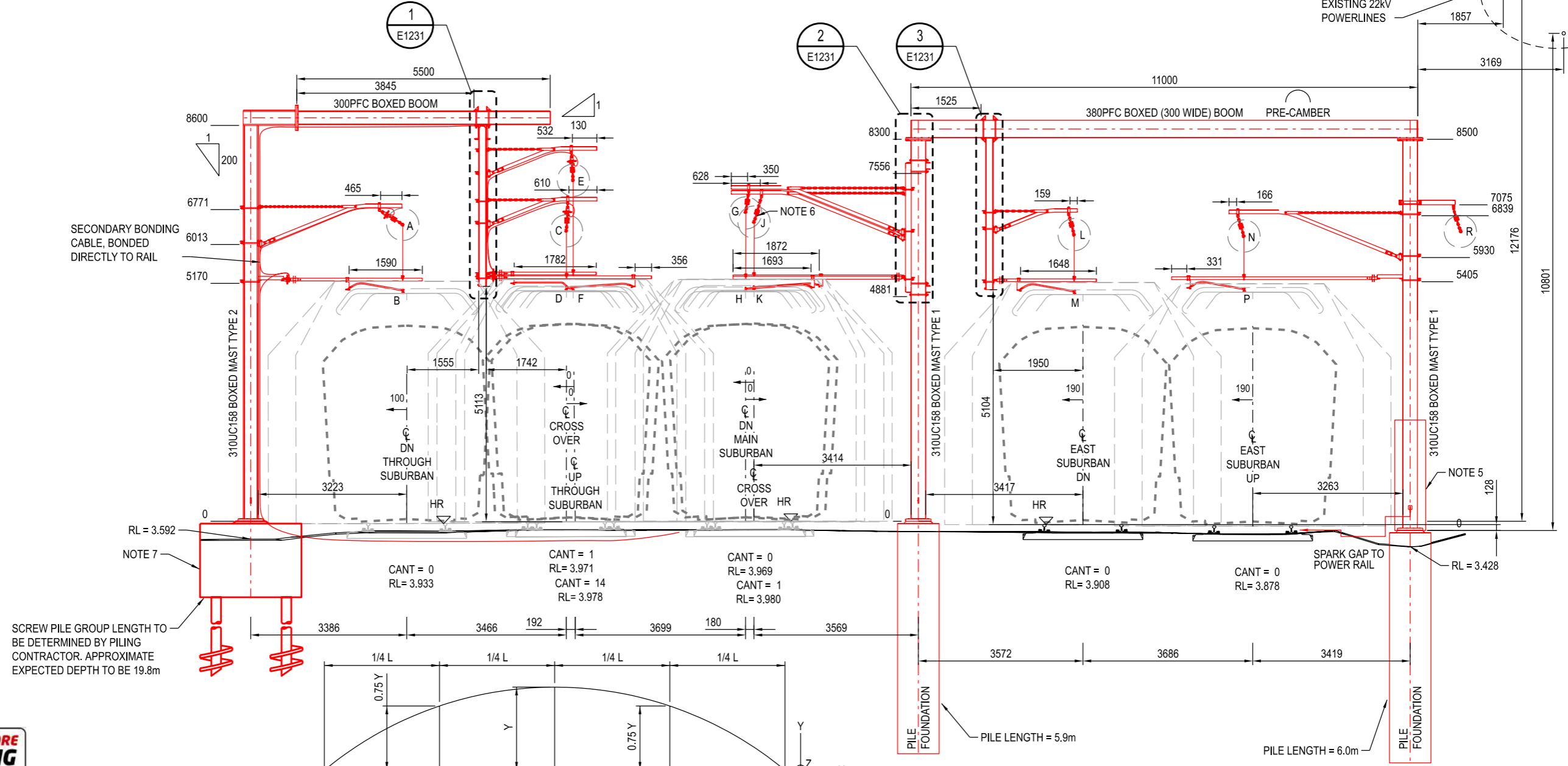
(DATE)
 (SIGNATURE)
 (BLOCK LETTERS)
 Certified By:

NOTES

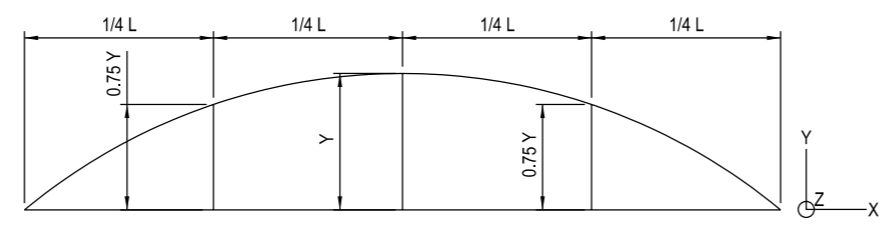
1. FOR OVERHEAD LAYOUT PLAN REFER TO DRG. NME-E1211.
2. FOR GENERAL NOTES AND LEGEND REFER TO DRG. NME-E1201.
3. REFER TO DRG. NME-C1179 FOR FOOTING SCHEDULE.
4. FOR OVERHEAD WIRING ALLOCATION AND LOADING TABLE REFER TO DRG. NME-E1231.
5. HDPE CLADDING TO BE INSTALLED AT A MIN. 2400mm ABOVE BASE PLATE.
6. NON-STANDARD CATENARY SUPPORT. USE 2 x LONG 'U-SHACKLE' AND 1 x SHORT 'U-SHACKLE' AT THE TOP OF THE INSULATOR.
7. PILE CAP SHOWN INDICATIVELY ONLY. REFER TO DRG. NME-C1186 FOR FOOTING SCHEDULE.



PLAN
SCALE 1:100



SCREW PILE GROUP LENGTH TO BE DETERMINED BY PILING CONTRACTOR. APPROXIMATE EXPECTED DEPTH TO BE 19.8m

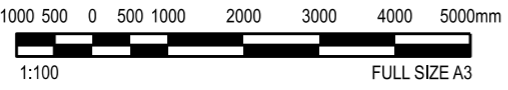


PORTAL BOOM CAMBER DIAGRAM
N.T.S.

B132+19
SCALE 1:100



WARNING
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PLANNING PERMIT SUBMISSION

12:27:10 PM
 6/12/2021

Revised By	In Serv	Rev	Date	Description	Designed	Checked	Ind. Review	Approved
RIA			19/11/21	ISSUED FOR PLANNING PERMIT	V TORRES	A PATIL	T DRESSER	
RIA			20/08/21	ISSUED FOR GATE 1 SUBMISSION	V TORRES	A PATIL	T DRESSER	

Franchisee / Lessee

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Project Title RAIL INFRASTRUCTURE ALLIANCE			Project Drawing Number RIA-MGA-WPZ-ZWD-SKT-EOH-NME-E0024		Rev B
TRAIN ELECTRICAL NETWORK			PUBLIC TRANSPORT VICTORIA		Drawn By B REALICA
NORTH MELBOURNE			PT		Designed By V TORRES
WESTERN PORTAL - STAGE 3			File Name RIA-AEC-SKT-110-820-1110-NME-0024		Checked By A PATIL
OVERHEAD CROSS SECTION			Sheet No. 01 of 01		Approved T DRESSER
B132+19			In Serv.		Approval Date 19/11/21
Up Location East. North. ID#	Down Location East. North. ID#	Datum MGA Z55	Scale 1:100		Drawing Number
			Sheet Size A3		Revision

Certified By:

(BLOCK LETTERS)

(SIGNATURE)

(DATE)

WIRE RUN NUMBER	POINT OF LOADING	WIRE HEIGHT (m)	ADJ SPANS x 1/2 (m)	WEIGHT LOADING (kN)	WIND LOADING AT 28 m/s (kN)	RADIAL LOADING AT 20°C (kN)	TENSION AT 20°C UP DIRECTION (kN)	TENSION AT 20°C DN DIRECTION (kN)	WIRE SIZE (mm ²)
9	A	6.48	30.14	0.95	0.26	← 0.06	12	12	181
9	B	5.00	30.14	-	0.22	← 0.06	11.2	11.2	161
5A	C	6.28	37.62	1.11	0.33	← 0.56	19.6	19.6	181
5A	D	4.98	37.62	-	0.27	← 0.32	11.2	11.2	161

NOTES

- FOR OVERHEAD LAYOUT PLAN REFER TO DRG. NME-E1211.
- FOR GENERAL NOTES AND LEGEND REFER TO DRG. NME-E1201.
- FOR FOOTING SCHEDULE REFER TO DRG. NME-C1179.
- NON-STANDARD CATENARY SUPPORT. USE 1 x LONG 'U-SHACKLE', 1 x SHORT 'U-SHACKLE', AND 2 LINKS AT THE BOTTOM OF THE INSULATOR.
- SINGLE SET STEADY ARM D3819/4 (MOD) TO BE PROCURED WITH ITEM 4 ALLOCATION D3818/1200.

B/D	DESCRIPTION	REFERENCE	A/C	QTY.
B/D	STAND-OFF BRACKET MODIFIED*	D8228/2 (MOD)	A	2
A/C	ATTACHMENT BRACKET - 125UC MODIFIED*	D4884/6 (MOD)	A	2
A/C	PIVOT ATTACHMENT BRACKET - 125UC MODIFIED*	D4878/4 (MOD)	A	2
DN	125SHS AIR GAP FRAME	GIN_C0582/2400	A	1
B/D	BOOM CABLE SUPPORT	D3152/2	A	4
B/D	BOOM TUBE REGISTRATION-L=4300mm	D8190/4300	A	2
B	SINGLE STEADY ARM	D3819/4 (MOD)	A	1
D	STEADY ARM-LONG REACH	D3819/3	A	1
A/C	SUSPENSION INSULATOR ASSEMBLY	WGS_E0030/12	A	2
C	CHAIN, 13mm, REGULAR LINK	D4467/1	C	2
C	16mm U-SHACKLE - SHORT	Q3362/2	C	1
C	16mm U-SHACKLE - LONG	F12982/1	C	1
C	CUPHEAD PIN	D3495/50	C	2
C	SPLIT PINS STAINLESS STEEL	D4469/1	C	2
C	CATENARY SUPPORT INCLINED CANTILEVER- TYPE 7	D8243/7	A	1
A	CATENARY SUPPORT INCLINED CANTILEVER- TYPE 3	D8243/3	A	1
DN	DEHN SPARK GAP ASSEMBLY	STD_E0161	A	1
DN	STRUCTURE LABEL	D5403	A	1
DN	FOOTING Ø900 PILE TYPE 1	MMN-C0812/6350	A	1
DN	310 UC 97 BOXED MAST	MMN-C1026/8500	A	1

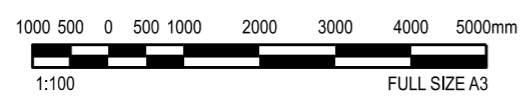
*D = 160mm, BOLT LENGTH = 200mm
 *A = 160mm, BOLT LENGTH = 200mm
 *A = 160mm, BOLT LENGTH = 200mm

NOTE 5

LOCATION	DESCRIPTION	REFERENCE	A/C	QTY.
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WARNING
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Revised By	In Serv	Rev	Date	Description	Designed	Checked	Ind. Review	Approved
RIA			19/11/21	ISSUED FOR PLANNING PERMIT	V TORRES	A PATIL		T DRESSER
RIA			20/08/21	ISSUED FOR GATE 1 SUBMISSION	V TORRES	A PATIL		T DRESSER

Franchisee / Lessee

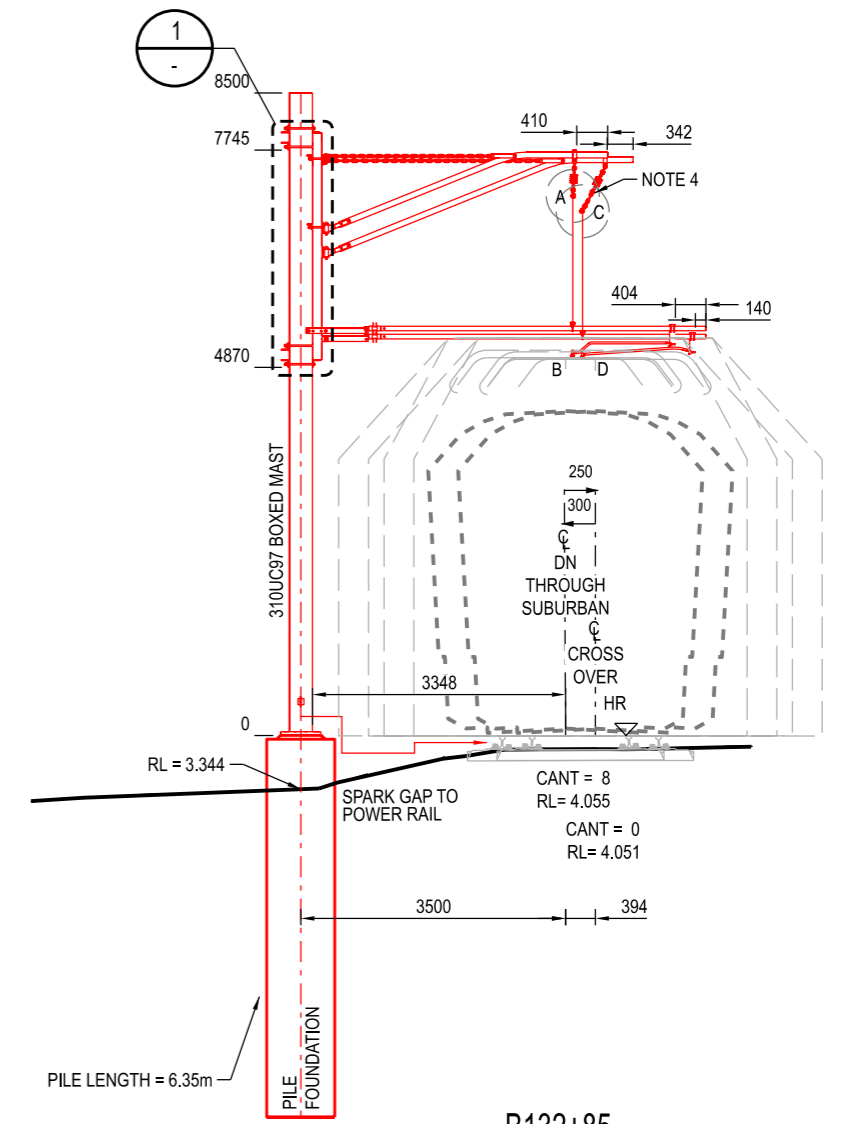
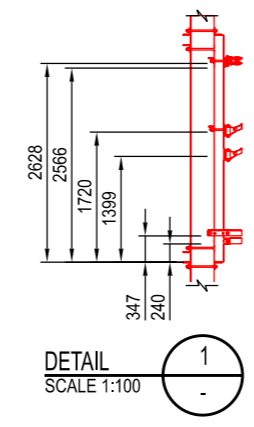
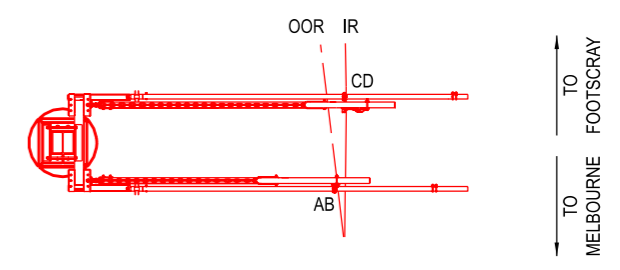
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PLANNING PERMIT SUBMISSION

Project Title RAIL INFRASTRUCTURE ALLIANCE		Project Drawing Number RIA-MGA-WPZ-ZWD-SKT-EOH-NME-E0025		Rev B
TRAIN ELECTRICAL NETWORK		PUBLIC TRANSPORT VICTORIA		Drawn By B REALICA
NORTH MELBOURNE		PT		Designed By V TORRES
WESTERN PORTAL - STAGE 3		File Name RIA-AEC-SKT-110-820-1110-NME-0025		Checked By A PATIL
OVERHEAD CROSS SECTION		Sheet No. 01 of 01		Approved T DRESSER
B132+85		In Serv.		Approval Date 19/11/21
Up Location East. North. ID#	Down Location East. North. ID#	Datum MGA Z55	Scale 1:100	Sheet Size A3
Drawing Number		Revision		



B132+85
SCALE 1:100

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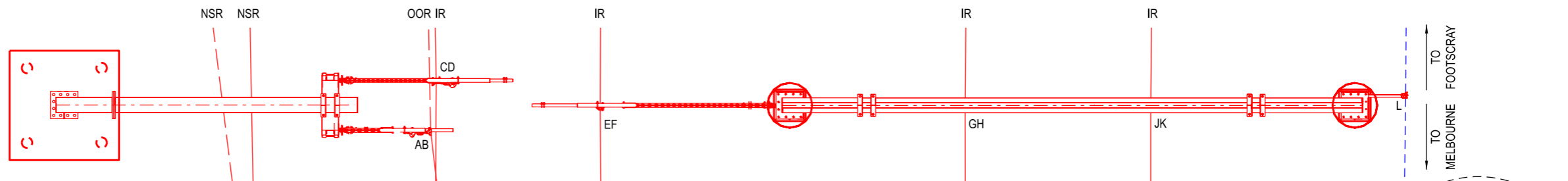
6/12/2021

(DATE)

(SIGNATURE)

(BLOCK LETTERS)

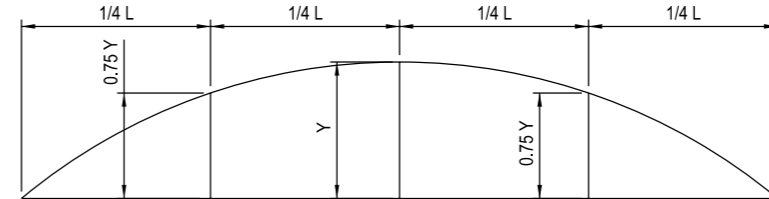
Certified By:



NOTES

- FOR OVERHEAD LAYOUT PLAN REFER TO DRG. NME-E1211.
- FOR GENERAL NOTES AND LEGEND REFER TO DRG. NME-E1201.
- FOR FOOTING SCHEDULE, REFER TO DRG. NME-C1179.
- FOR OVERHEAD WIRING ALLOCATION TABLE REFER TO DRG. NME-E1234.
- NON-STANDARD CATENARY SUPPORT. USE 1 x LONG 'U-SHACKLE', 1 x SHORT 'U-SHACKLE', AND 2 LINKS AT THE BOTTOM OF THE INSULATOR.
- PILE CAP SHOWN INDICATIVELY ONLY. REFER TO DRG. NME-C1186 FOR FOOTING SCHEDULE.

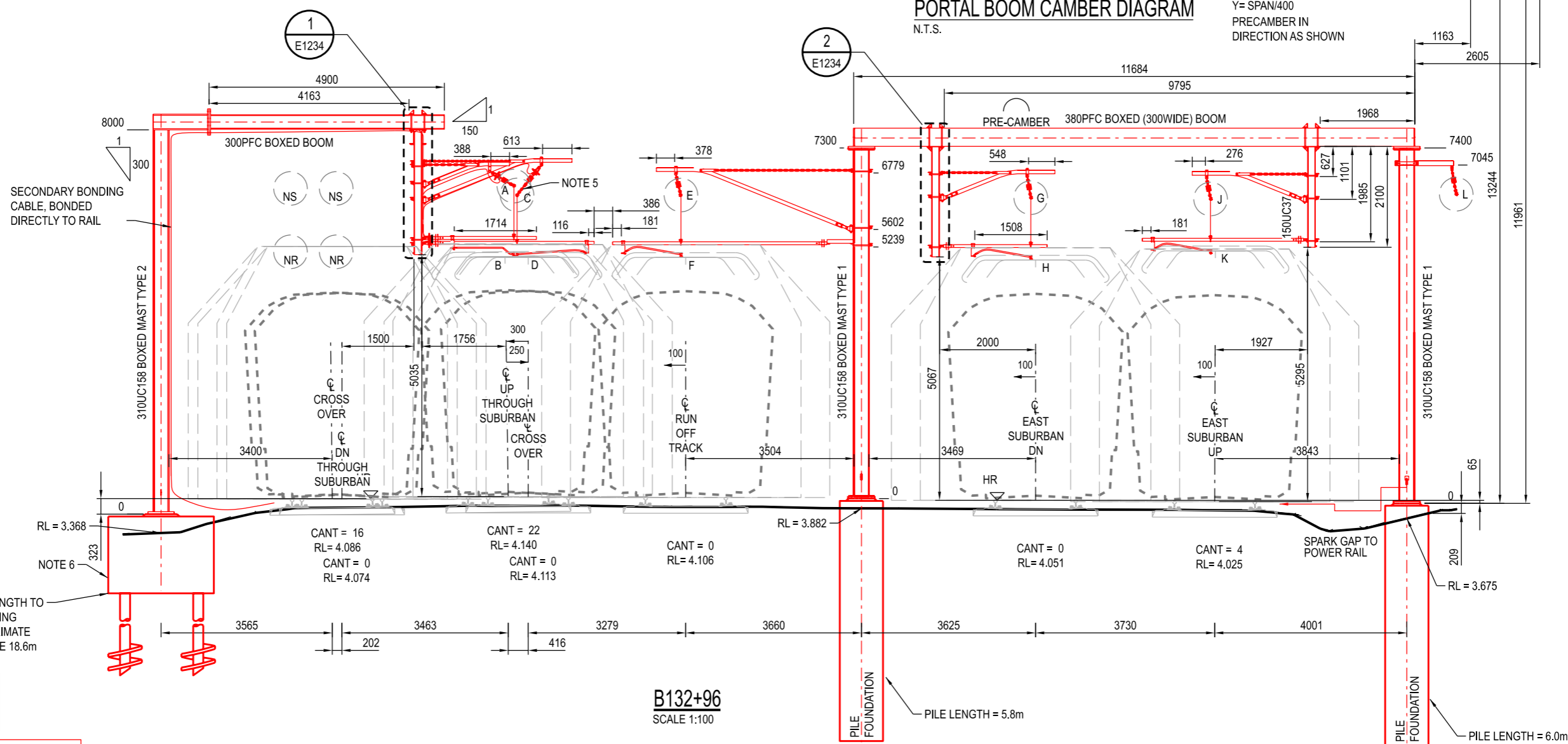
PLAN SCALE 1:100



PORTAL BOOM CAMBER DIAGRAM

N.T.S.

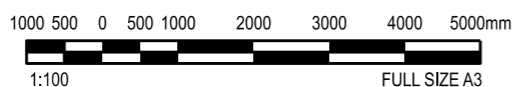
Y=SPAN/400
PRECAMBER IN
DIRECTION AS SHOWN



B132+96
SCALE 1:100



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PLANNING PERMIT SUBMISSION

Project Title RAIL INFRASTRUCTURE ALLIANCE		Project Drawing Number RIA-MGA-WPZ-ZWD-SKT-EOH-NME-E0026		Rev B
TRAIN ELECTRICAL NETWORK			Drawn By B REALICA	Designed By V TORRES
NORTH MELBOURNE			Checked By A PATIL	Ind. Review
WESTERN PORTAL - STAGE 3			Approved T DRESSER	Approval Date 19/11/21
OVERHEAD CROSS SECTION			Sheet No. 01 of 01	
Up Location East. North. ID#	Down Location East. North. ID#	Datum MGA Z55	In Serv.	Drawing Number
Scale 1:100		Sheet Size A3		

Franchisee / Lessee
RAIL PROJECTS VICTORIA

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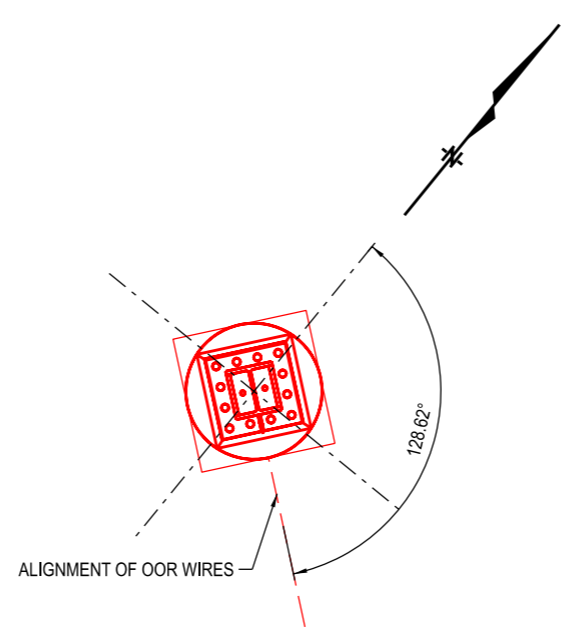
6/12/2021

Revised By	In Serv	Rev	Date	Description	Designed	Checked	Ind. Review	Approved
RIA		19/11/21		ISSUED FOR PLANNING PERMIT	V TORRES	A PATIL		T DRESSER
RIA		20/08/21		ISSUED FOR GATE 1 SUBMISSION	V TORRES	A PATIL		T DRESSER

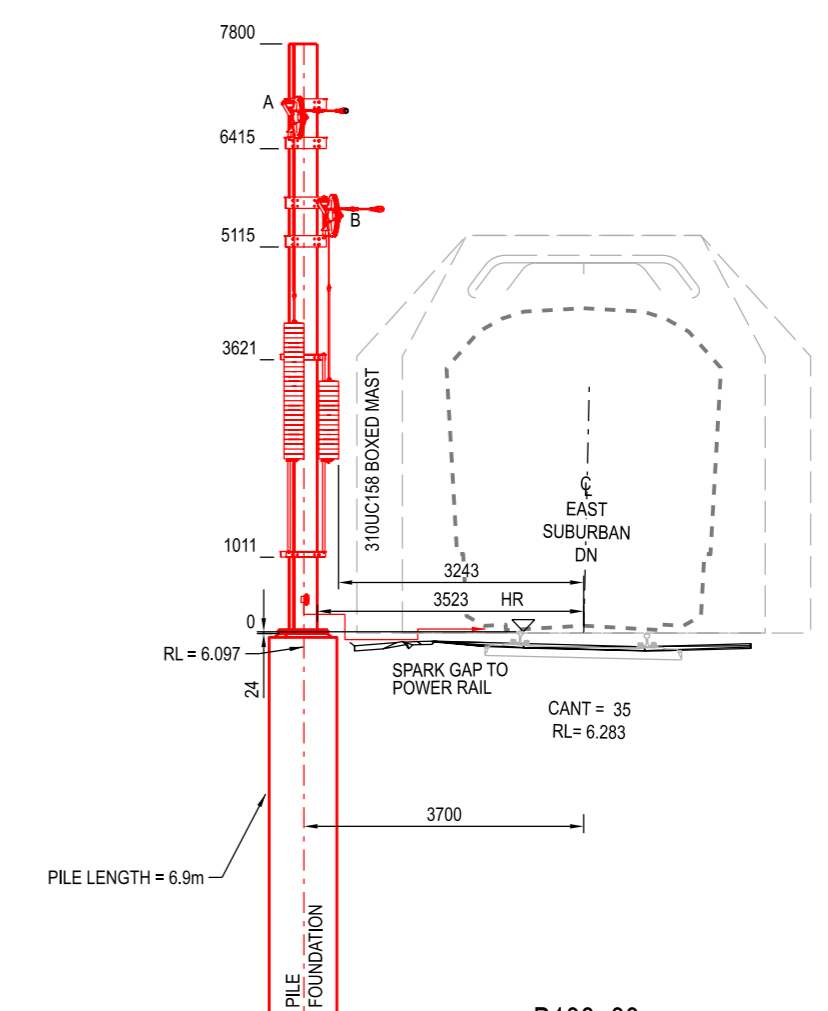
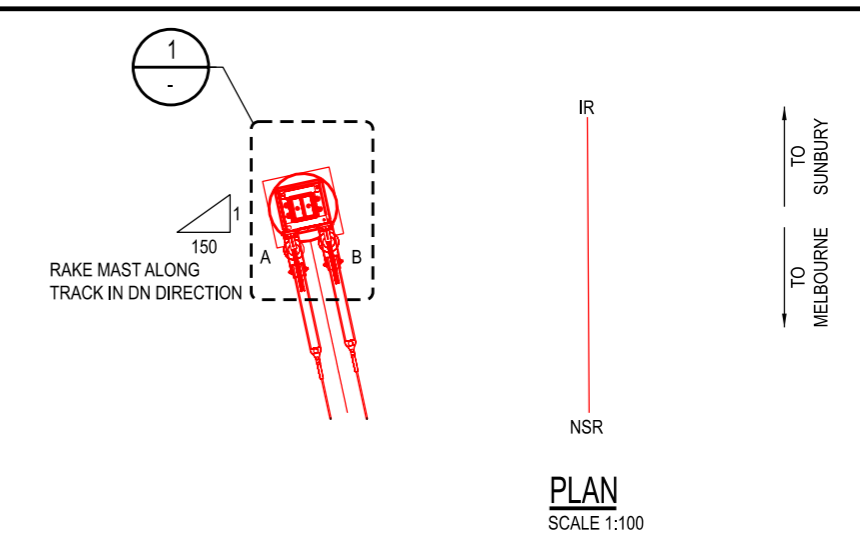
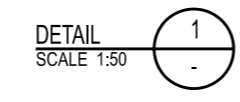
Certified By: (DATE) (SIGNATURE) (BLOCK LETTERS)

WIRE RUN NUMBER	POINT OF LOADING	WIRE HEIGHT (m)	ADJ SPANS x 1/2 (m)	WEIGHT LOADING (kN)	WIND LOADING AT 28 m/s (kN)	RADIAL LOADING AT 20°C (kN)	TENSION AT 20°C UP DIRECTION (kN)	TENSION AT 20°C DN DIRECTION (kN)	WIRE SIZE (mm ²)
3A	A	6.80	7.92	7.20	0.07	0.00	20	-	181
3A	B	5.60	7.92	4.07	0.06	0.00	11.2	-	161

- NOTES**
- FOR OVERHEAD LAYOUT PLAN REFER TO DRG. NME-E1212.
 - FOR GENERAL NOTES AND LEGEND REFER TO DRG. NME-E1201.
 - FOR FOOTING SCHEDULE REFER TO DRG. NME-C1179.
 - WIRE ROPE D5478/8 (ITEM 29) TO BE 5.2m LONG INSTEAD OF 5m LONG IN ALLOCATED FBWA ASSEMBLY D7785/10.



FOUNDATION AND STRUCTURE ORIENTATION



B138+33
SCALE 1:100

A/B	DESCRIPTION	REFERENCE	A / C	QTY.
A/B	MAST BRACKETS FOR FBWA ASSEMBLY- 310UC158	D8231/3	A	1
B	BALANCE WEIGHT ANCHOR ASSEMBLY- CONTACT - 11.2 kN	D7785/1	A	1
A	BALANCE WEIGHT ANCHOR ASSEMBLY- CATENARY - 20 kN (MOD)	D7785/10	A	1
DN	DEHN SPARK GAP ASSEMBLY	STD_E0161	A	1
DN	STRUCTURE LABEL	D5403	A	1
DN	FOOTING Ø900 PILE TYPE 2	MMN-C0813/6900	A	1
DN	310 UC 158 BOXED MAST	MMN-C0824/7800	A	1

NOTE 4



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PLANNING PERMIT SUBMISSION

12:28:56 PM
6/12/2021

LOCATION	DESCRIPTION	REFERENCE	A / C	QTY.				
RIA	A	19/11/21	ISSUED FOR PLANNING PERMIT	V TORRES	A PATIL	T DRESSER		
Revised By	In Serv	Rev	Date	Description	Designed	Checked	Ind. Review	Approved

Franchisee / Lessee

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Project Title RAIL INFRASTRUCTURE ALLIANCE		Project Drawing Number RIA-MGA-WPZ-ZWD-SKT-EOH-NME-E0030		Rev A
TRAIN ELECTRICAL NETWORK NORTH MELBOURNE WESTERN PORTAL - STAGE 3 OVERHEAD CROSS SECTION B138+33			PUBLIC TRANSPORT VICTORIA	
Up Location East. North. ID#	Down Location East. North. ID#	Datum MGA Z55	Drawn By B REALICA	Designed By V TORRES
File Name RIA-AEC-SKT-110-820-1110-NME-0030 Sheet No. 01 of 01			Checked By A PATIL	Ind. Review
In Serv.			Approved T DRESSER	Approval Date 19/11/21
Scale 1:100		Sheet Size A3		Drawing Number
				Revision

Certified By:

(BLOCK LETTERS)

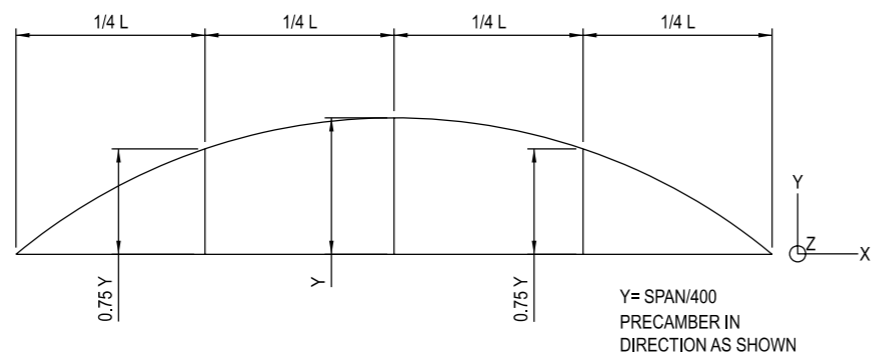
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(DATE)

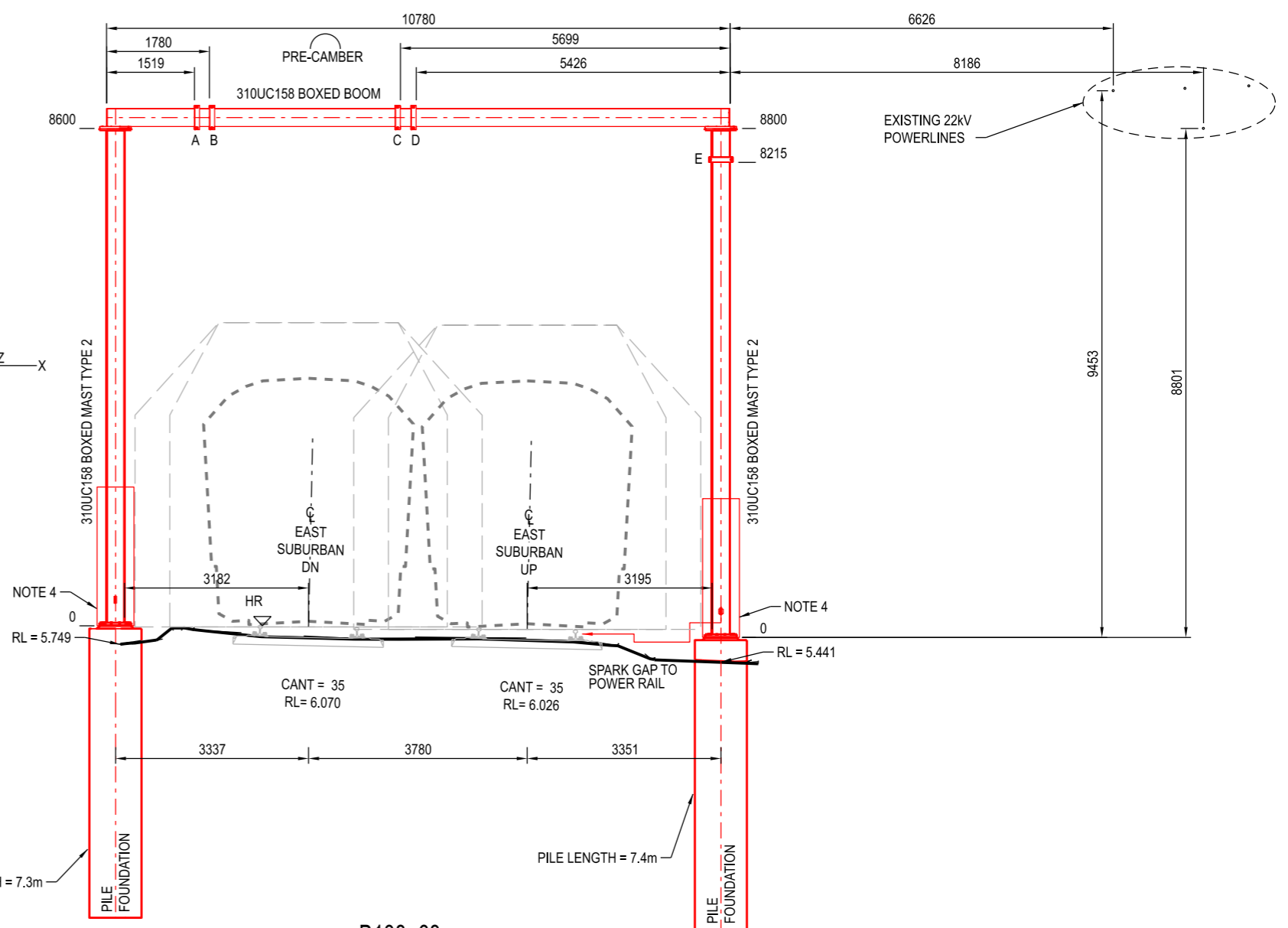
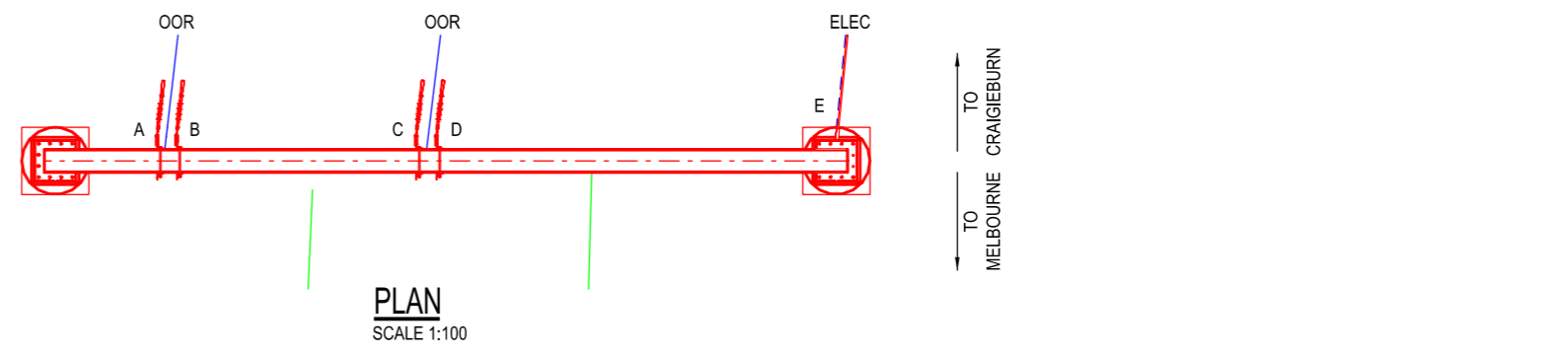
WIRE RUN NUMBER	POINT OF LOADING	WIRE HEIGHT (m)	ADJ SPANS x 1/2 (m)	WEIGHT LOADING (kN)	WIND LOADING AT 28 m/s (kN)	RADIAL LOADING AT 20°C (kN)	TENSION AT 20°C UP DIRECTION (kN)	TENSION AT 20°C DN DIRECTION (kN)	WIRE SIZE (mm ²)
7	A	8.84	38.28	0.57	0.33	→ 1.38	-	12	161
7	B	8.84	38.28	0.50	0.28	→ 1.28	-	11.2	161
8	C	8.88	37.94	0.57	0.33	→ 1.45	-	12	161
8	D	8.88	37.94	0.49	0.28	→ 1.35	-	11.2	161
ELEC	E	8.10	37.27	0.26	0.32	→ 0.28	-	2.8	210

TENSION AT 0°C = 14.6kN
 TENSION AT 0°C = 14.6kN
 NOTE 7 & 8

- NOTES**
- FOR OVERHEAD LAYOUT PLAN REFER TO DRG. NME-E0002.
 - FOR FINAL OHLE CROSS-SECTION REFER TO DRG. NME-E1241.
 - FOR FINAL OVERHEAD LAYOUT PLAN REFER TO DRG. NME-E1212.
 - HDPE CLADDING TO BE INSTALLED AT A MIN. 2400mm ABOVE BASE PLATE.
 - FOR GENERAL NOTES AND LEGEND REFER TO DRG. NME-E1201.
 - FOR FOOTING SCHEDULE REFER TO DRG. NME-C1179.
 - TENSION = 4.32kN @ 0°C, 1.78kN @ 60°C.
 - STRUCTURE AND FOUNDATIONS DESIGNED CONSIDERING WORST CASE LOADING AMONGST SHOWN ON THIS DRAWING AND DRG. NME-E1241 AND FUTURE LOADS OF 4 x 181mm² FEEDERS PER TRACK AND 1 x ELECTROLYSIS WIRE PER MAST.



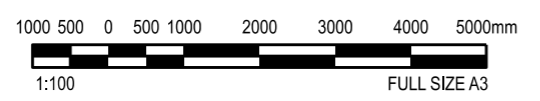
PORTAL BOOM CAMBER DIAGRAM
NTS



LOCATION	DESCRIPTION	REFERENCE	A / C	QTY.
E	ELECTROLYSIS TERMINATION WITH POLYMERIC INSULATOR	D8013/1	A	1
B/D	FIXED TERMINATION 161mm CONTACT ASSEMBLY	STD_E0022/1	A	2
A/C	FIXED TERMINATION 161mm CATENARY ASSEMBLY	STD_E0021/2	A	2
A/B/C/D/E	TERMINATION BRACKET-310UC158	STD_E0126/5	A	5
UP	DEHN SPARK GAP ASSEMBLY	STD_E0161	A	1
DN	STRUCTURE LABEL	D5403	A	1
UP	FOOTING Ø900 PILE TYPE 2	MMN-C0813/7400	A	1
DN	FOOTING Ø900 PILE TYPE 2	MMN-C0813/7300	A	1
DN	310 UC 158 BOXED BOOM	MMN-C0838/10780	A	1
UP	310 UC 158 BOXED MAST TYPE 2	MMN-C0829/8800	A	1
DN	310 UC 158 BOXED MAST TYPE 2	MMN-C0829/8600	A	1



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PILE LENGTH = 7.3m

B138+68
SCALE 1:100

WARNING
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PLANNING PERMIT SUBMISSION

12:27:55 PM

6/12/2021

Revised By	In Serv	Rev	Date	Description	Designed	Checked	Ind. Review	Approved
RIA			19/11/21	ISSUED FOR PLANNING PERMIT	V TORRES	A PATIL		T DRESSER
RIA			20/08/21	ISSUED FOR GATE 1 SUBMISSION	V TORRES	A PATIL		T DRESSER

Franchisee / Lessee

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Project Title
RAIL INFRASTRUCTURE ALLIANCE

TRAIN ELECTRICAL NETWORK
NORTH MELBOURNE
WESTERN PORTAL - STAGE 3
OVERHEAD CROSS SECTION
B138+68

Up Location East North ID#
Down Location East North ID#
Datum MGA Z55

Project Drawing Number
RIA-MGA-WPZ-ZWD-SKT-EOH-NME-E0027

Rev **B**

Drawn By **B REALICA**
Designed By **V TORRES**

Checked By **A PATIL**
Ind. Review

Approved **T DRESSER**
Approval Date **19/11/21**

Drawing Number
Revision

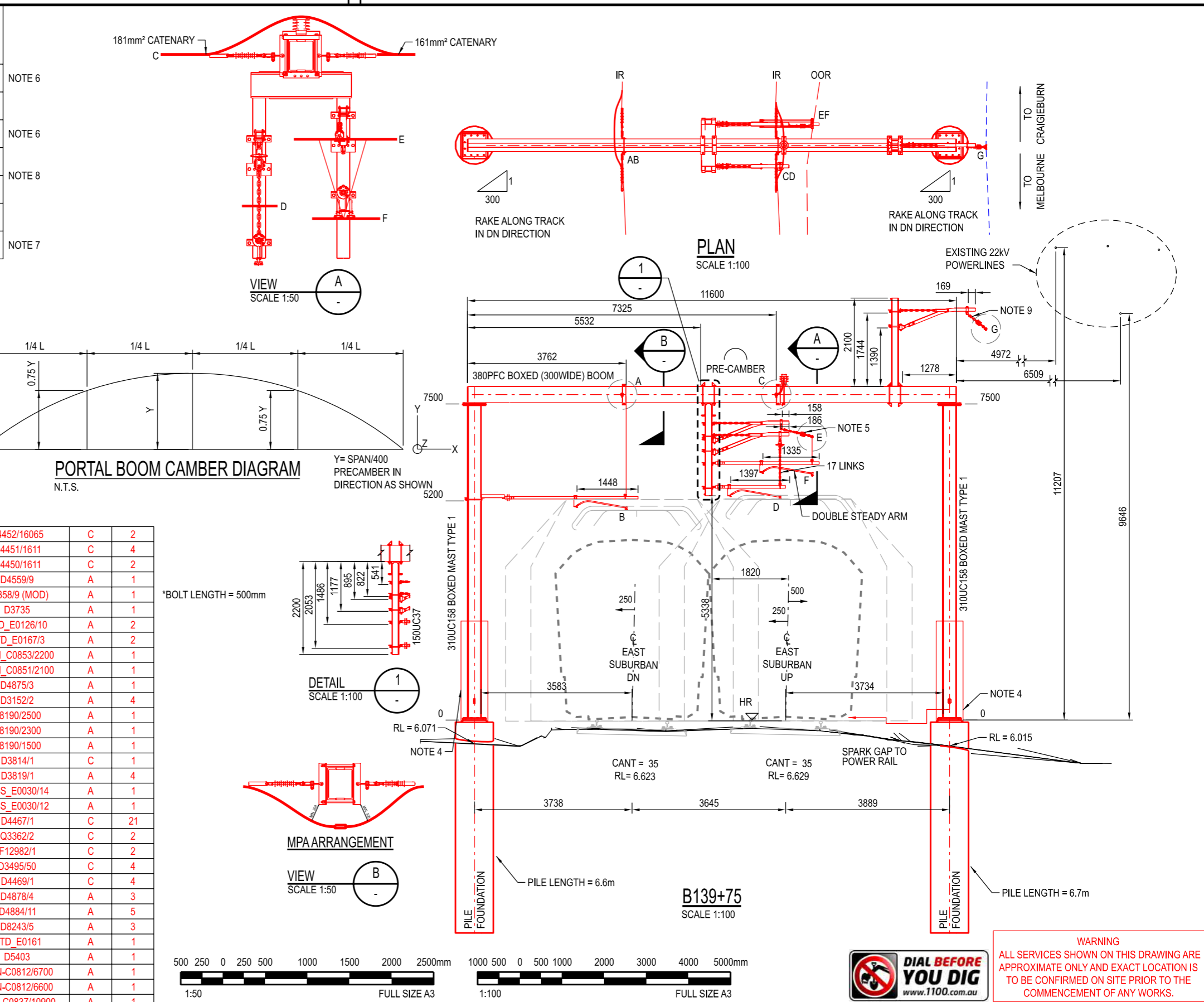
File Name **RIA-AEC-SKT-110-820-1110-NME-0027**
Sheet No. **01 of 01**

In Serv.
Scale **1:100** Sheet Size **A3**

(DATE) (SIGNATURE) (BLOCK LETTERS) Certified By: 12:28:18 PM 6/12/2021

WIRE RUN NUMBER	POINT OF LOADING	WIRE HEIGHT (m)	ADJ SPANS x 1/2 (m)	WEIGHT LOADING (kN)	WIND LOADING AT 28 m/s (kN)	RADIAL LOADING AT 20°C (kN)	TENSION AT 20°C UP DIRECTION (kN)	TENSION AT 20°C DN DIRECTION (kN)	WIRE SIZE (mm ²)
7	A	7.70	30.08	1.08	0.26	0.83	20	12	181/161
7	B	5.00	30.08	-	0.22	0.76	11.2	11.2	161
8	C	7.70	29.98	1.25	0.26	0.90	20	12	181/161
8	D	5.25	29.98	-	0.22	0.97	11.2	11.2	161
4A	E	6.75	29.00	0.72	0.25	3.00	20	20	181
4A	F	5.80	29.00	-	0.21	1.68	11.2	11.2	161
ELEC	G	9.30	29.12	0.12	0.25	0.15	2.8	2.8	210

- NOTES**
- FOR OVERHEAD LAYOUT PLAN REFER TO DRG. NME-E1212.
 - FOR GENERAL NOTES AND LEGEND REFER TO DRG. NME-E1201.
 - FOR FOOTING SCHEDULE REFER TO DRG. NME-C1179.
 - HDPE CLADDING TO BE INSTALLED AT A MIN. 2400mm ABOVE BASE PLATE.
 - NON-STANDARD CATENARY SUPPORT. USE 1 x HIGH RADIAL LOAD BRACKET, 2 x LONG 'U-SHACKLES', 1 x SHORT 'U-SHACKLE', AND 4 LINKS AT THE TOP OF THE INSULATOR.
 - 161mm² FIXED CATENARY TENSION ON DN SIDE AT 0°C = 14.6 kN, 60°C = 8.90kN.
 - TENSION = 4.32kN @ 0°C, 1.78kN @ 60°C.
 - THIS STRUCTURE HAS BEEN DESIGNED TO WITHSTAND THE LOADING FROM 4 x AUXILIARY FEEDERS PER TRACK, AND 1 ELECTROLYSIS WIRE PER MAST.
 - NON-STANDARD CATENARY SUPPORT. USE 2 x LONG 'U-SHACKLES' AND 1 x SHORT 'U-SHACKLE' AT THE TOP OF THE INSULATOR.



LOCATION	DESCRIPTION	REFERENCE	A/C	QTY.
F	M16 BOLT x 65mm LONG	D4452/16065	C	2
F	M16 NUT	D4451/1611	C	4
F	M16 WASHER	D4450/1611	C	2
C	LINE POST INSULATOR	D4559/9	A	1
C	1 FEEDER OUTRIGGER - SYMMETRICAL MODIFIED*	Q6358/9 (MOD)	A	1
D	BOOM SUPPORT - LOW ENCUMBRANCE	D3735	A	1
A/C	TERMINATION BRACKET-380PFC	STD_E0126/10	A	2
A/C	MPA TERMINATION	STD_E0167/3	A	2
E	TWIN DROP VERTICAL-150UC37	MMN_C0853/2200	A	1
G	SINGLE DROP VERTICAL-150UC37	MMN_C0851/2100	A	1
B	STAND-OFF BRACKET	D4875/3	A	1
B/F	BOOM CABLE SUPPORT	D3152/2	A	4
B	BOOM TUBE REGISTRATION-L=2500mm	D8190/2500	A	1
F	BOOM TUBE REGISTRATION-L=2300mm	D8190/2300	A	1
D	BOOM TUBE REGISTRATION-L=1500mm	D8190/1500	A	1
F	DOUBLE STEADY ARM ADAPTOR FLAT	D3814/1	C	1
B/D/F	STEADY ARM- STANDARD REACH	D3819/1	A	4
E	SUSPENSION INSULATOR ASSEMBLY	WGS_E0030/14	A	1
G	SUSPENSION INSULATOR ASSEMBLY	WGS_E0030/12	A	1
D/E	CHAIN, 13mm, REGULAR LINK	D4467/1	C	21
E/G	16mm U-SHACKLE - SHORT	Q3362/2	C	2
E/G	16mm U-SHACKLE - LONG	F12982/1	C	2
E/G	CUPHEAD PIN	D3495/50	C	4
E/G	SPLIT PINS STAINLESS STEEL	D4469/1	C	4
C/E/G	PIVOT ATTACHMENT BRACKET- 150UC	D4878/4	A	3
C/D/E/F/G	ATTACHMENT BRACKET- 150UC	D4884/11	A	5
C/E/G	CATENARY SUPPORT INCLINED CANTILEVER - TYPE 5	D8243/5	A	3
UP	DEHN SPARK GAP ASSEMBLY	STD_E0161	A	1
DN	STRUCTURE LABEL	D5403	A	1
UP	FOOTING Ø900 PILE TYPE 1	MMN-C0812/6700	A	1
DN	FOOTING Ø900 PILE TYPE 1	MMN-C0812/6600	A	1
DN	380 BOXED (300 WIDE) BOOM	MMN-C0837/10900	A	1
DN/UP	310 UC 158 BOXED MAST TYPE 1	MMN-C0828/7500	A	2

*BOLT LENGTH = 500mm



PLANNING PERMIT SUBMISSION

Project Title RAIL INFRASTRUCTURE ALLIANCE		Project Drawing Number RIA-MGA-WPZ-ZWD-SKT-EOH-NME-E0028		Rev B
TRAIN ELECTRICAL NETWORK		PUBLIC TRANSPORT VICTORIA		Drawn By B REALICA
NORTH MELBOURNE		PT		Designed By V TORRES
WESTERN PORTAL - STAGE 3		File Name RIA-AEC-SKT-110-820-1110-NME-0028		Checked By A PATIL
OVERHEAD CROSS SECTION		Sheet No. 01 of 01		Approved T DRESSER
B139+75		In Serv.		Approval Date 19/11/21
Up Location East. North. ID#	Down Location East. North. ID#	Datum MGA Z55	Drawing Number	Revision
Scale 1:100		Sheet Size A3		

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Franchisee / Lessee
RAIL PROJECTS VICTORIA

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Certified By: (DATE) (SIGNATURE) (BLOCK LETTERS)

WIRE RUN NUMBER	POINT OF LOADING	WIRE HEIGHT (m)	ADJ SPANS x 1/2 (m)	WEIGHT LOADING (kN)	WIND LOADING AT 28 m/s (kN)	RADIAL LOADING AT 20°C (kN)	TENSION AT 20°C UP DIRECTION (kN)	TENSION AT 20°C DN DIRECTION (kN)	WIRE SIZE (mm ²)
7	A	8.00	21.50	0.54	0.19	→ 0.56	12	12	161
7	B	5.04	21.50	-	0.16	→ 0.52	11.2	11.2	161
8	C	7.70	21.31	0.15	0.18	→ 0.35	12	12	161
8	D	5.25	21.31	-	0.15	→ 0.33	11.2	11.2	161
4A	E	7.00	13.17	7.36	0.11	← 1.37	20	-	181
4A	F	6.00	13.17	4.22	0.10	← 0.77	11.2	-	161
ELEC	G	10.00	21.35	0.16	0.18	→ 0.00	2.8	2.8	181

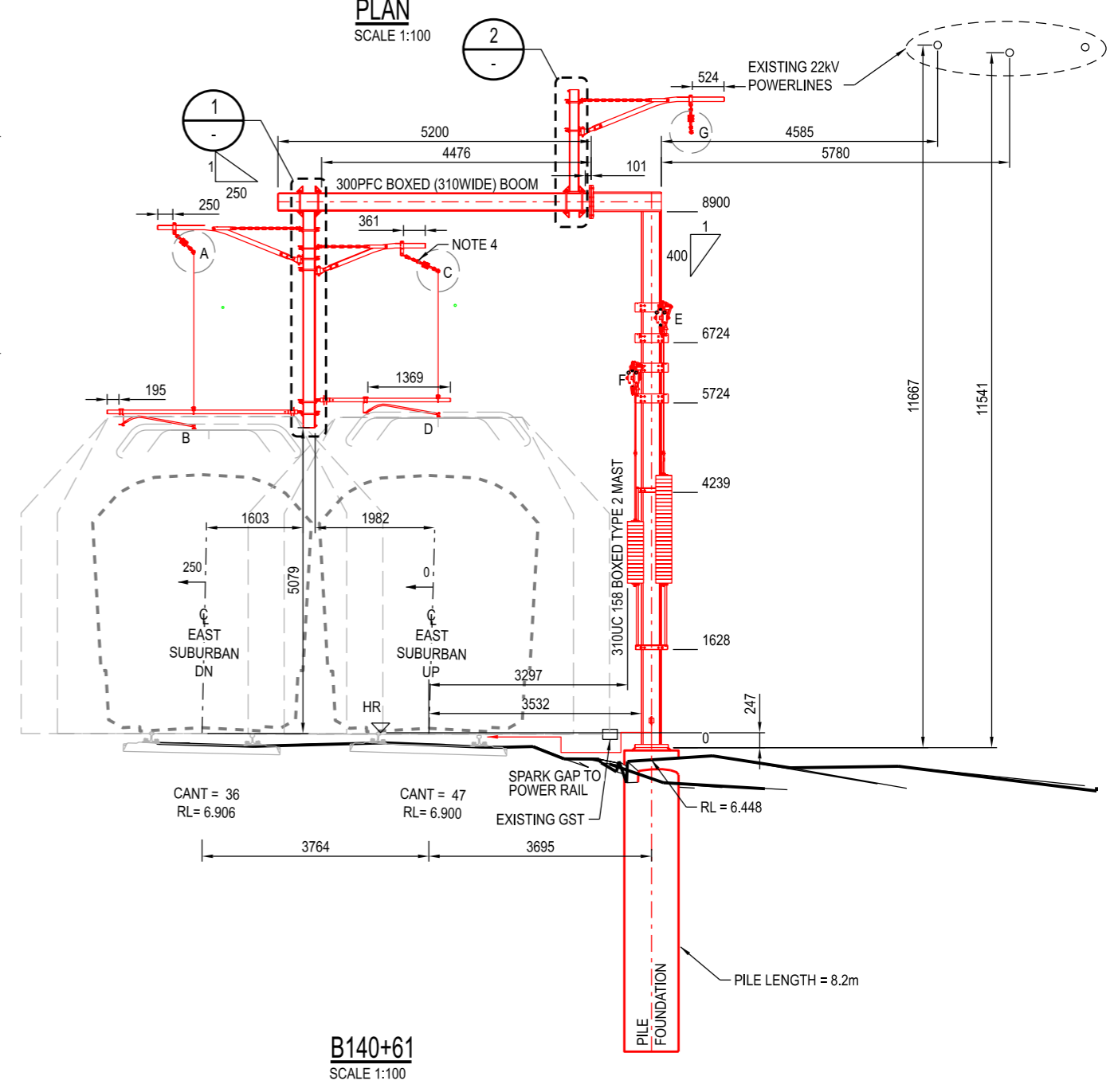
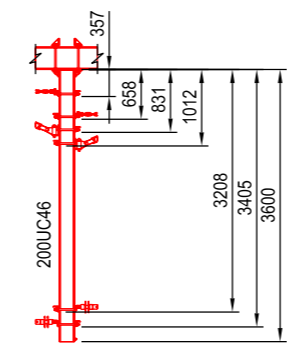
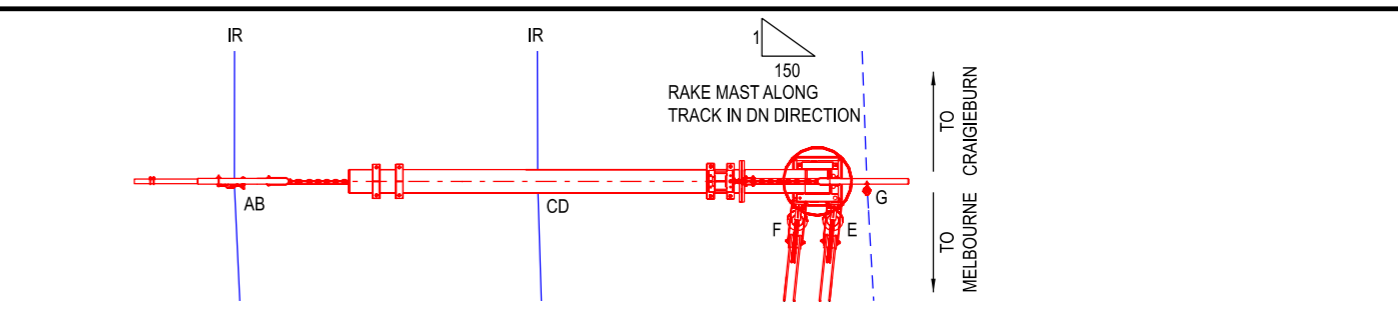
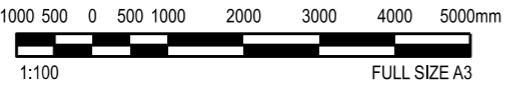
NOTE 6

- NOTES**
- FOR OVERHEAD LAYOUT PLAN REFER TO DRG. NME-E1212.
 - FOR GENERAL NOTES AND LEGEND REFER TO DRG. NME-E1201.
 - FOR FOOTING SCHEDULE REFER TO DRG. NME-C1179.
 - NON-STANDARD CATENARY SUPPORT. USE 1 x HIGH RADIAL LOAD BRACKET, 2 x LONG 'U-SHACKLES', 1 X SHORT 'U-SHACKLE', AND 2 LINKS AT THE TOP OF THE INSULATOR.
 - TENSION = 4.32kN @ 0°C, 1.78kN @ 60°C.
 - THIS STRUCTURE HAS BEEN DESIGNED TO WITHSTAND THE LOADING FROM 4 x AUXILIARY FEEDERS PER TRACK, AND 1 ELECTROLYSIS WIRE PER MAST.

E/F	DESCRIPTION	REFERENCE	A / C	QTY.
E/F	MAST BRACKETS FOR FBWA ASSEMBLY - 310UC158	D8231/3	A	1
F	BALANCE WEIGHT ANCHOR ASSEMBLY- CONTACT - 11.2 kN	D7785/1	A	1
E	BALANCE WEIGHT ANCHOR ASSEMBLY- CATENARY - 20 kN	D7785/10	A	1
A/C	SINGLE DROP VERTICAL-200UC59.5	MMN_C0855/3600	A	1
G	SINGLE DROP VERTICAL-150UC37	MMN_C0851/1700	A	1
B/D	BOOM CABLE SUPPORT	D3152/2	A	4
B	BOOM TUBE REGISTRATION-L=3000mm	D8190/3000	A	1
D	BOOM TUBE REGISTRATION-L=2000mm	D8190/2000	A	1
B/D	STEADY ARM- STANDARD REACH	D3819/1	A	2
C	SUSPENSION INSULATOR ASSEMBLY	WGS_E0030/14	A	1
A/G	SUSPENSION INSULATOR ASSEMBLY	WGS_E0030/12	A	2
C	CHAIN, 13mm, REGULAR LINK	D4467/1	C	2
C	16mm U-SHACKLE - SHORT	Q3362/2	C	1
C	16mm U-SHACKLE - LONG	F12982/1	C	1
C	CUPHEAD PIN	D3495/50	C	2
C	SPLIT PINS STAINLESS STEEL	D4469/1	C	2
A/C	PIVOT ATTACHMENT BRACKET- 200UC	D4878/1	A	2
A/B/C/D	ATTACHMENT BRACKET- 200UC	D4884/1	A	4
G	PIVOT ATTACHMENT BRACKET- 150UC	D4878/4	A	1
G	ATTACHMENT BRACKET- 150UC	D4884/11	A	1
C	CATENARY SUPPORT INCLINED CANTILEVER- TYPE 5	D8243/5	A	1
A/G	CATENARY SUPPORT INCLINED CANTILEVER- TYPE 4	D8243/4	A	2
UP	DEHN SPARK GAP ASSEMBLY	STD_E0161	A	1
UP	STRUCTURE LABEL	D5403	A	1
UP	FOOTING Ø900 PILE TYPE 2	MMN-C0813/8200	A	1
UP	300 PFC BOXED (310 WIDE) BOOM	MMN-C0835/5200	A	1
UP	310 UC 158 BOXED MAST TYPE 2	MMN-C0827/9000	A	1



WARNING
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PLANNING PERMIT SUBMISSION

Revised By	In Serv	Rev	Date	Description	Designed	Checked	Ind. Review	Approved
RIA			19/11/21	ISSUED FOR PLANNING PERMIT	V TORRES	A PATIL		T DRESSER
RIA			20/08/21	ISSUED FOR GATE 1 SUBMISSION	V TORRES	A PATIL		T DRESSER

Franchisee / Lessee

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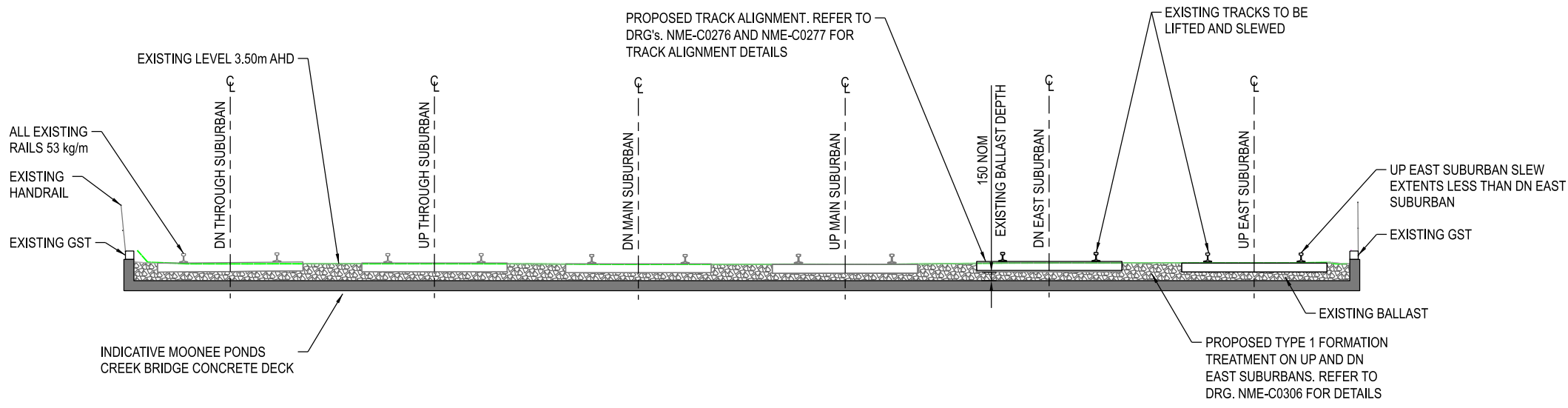
Project Title RAIL INFRASTRUCTURE ALLIANCE		Project Drawing Number RIA-MGA-WPZ-ZWD-SKT-EOH-NME-E0029		Rev B
TRAIN ELECTRICAL NETWORK NORTH MELBOURNE WESTERN PORTAL - STAGE 3 OVERHEAD CROSS SECTION B140+61				
Up Location East. North. ID#	Down Location East. North. ID#	Datum MGA Z55	Drawn By B REALICA	Designed By V TORRES
File Name RIA-AEC-SKT-110-820-1110-NME-0029 Sheet No. 01 of 01			Checked By A PATIL	Ind. Review
In Serv.			Approved T DRESSER	Approval Date 19/11/21
Scale 1:100		Sheet Size A3	Drawing Number	

(DATE)

(SIGNATURE)

(BLOCK LETTERS)

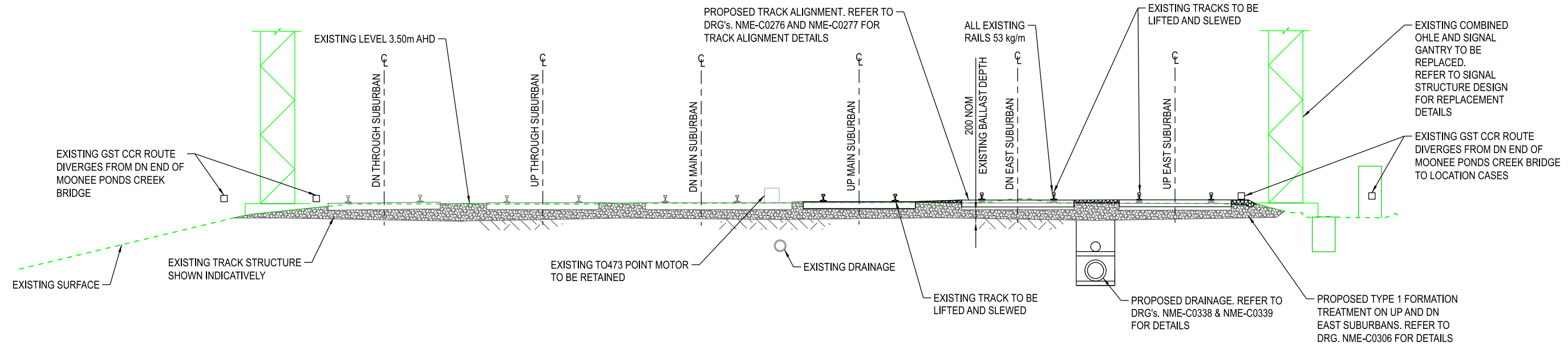
Certified By:



A
TYPICAL SECTION - MOONEE PONDS CREEK BRIDGE
 SCALE 1:100

TYPICAL SECTION / CROSS SECTION LEGEND

	EXISTING TRACK TO REMAIN
	PROPOSED TRACK
	EXISTING TRACK SLEWED
	EXISTING TRACK TO BE REMOVED
	EXISTING BALLAST
	PROPOSED BALLAST
	PROPOSED CAPPING
	STRUCTURAL FILL (IMPORTED)
	EXISTING GENERAL FILL
	EXISTING SURFACE
	PROPOSED DRAINAGE (INDICATIVE ONLY)
	GEOTEXTILE

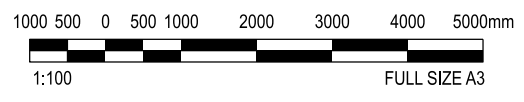


B
TYPICAL SECTION - DN END MOONEE PONDS CREEK BRIDGE
 SCALE 1:100

NOTE
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PLANNING PERMIT SUBMISSION

- NOTES**
1. ALL DIMENSIONS IN MILLIMETERS UNLESS NOTED OTHERWISE.
 2. SECTIONS FACING IN THE DOWN DIRECTION.
 3. EXISTING CAPPING AND BALLAST DEPTHS SHOWN INDICATIVELY ONLY.

11:45:28 PM
 11/24/2021

REVISION IN PROGRESS						
RIA	A	ISSUED FOR PLANNING PERMIT SUBMISSION				
Revised By	In Serv	Rev.	Date	Description	Designed	Checked
					Ind. Review	Approved

CHECK PRINT	READY FOR ISSUE <input type="checkbox"/>
DISCIPLINE	INITIAL DATE
DISCIPLINE	
DISCIPLINE	
DISCIPLINE	
BACKDRAFTED/CORRECTED	
CONFIRMED	

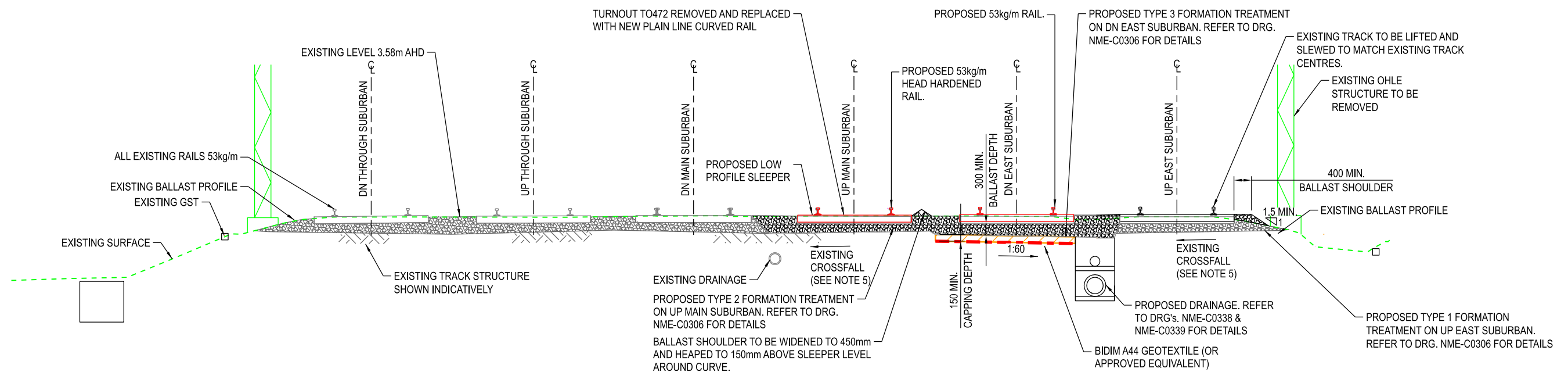
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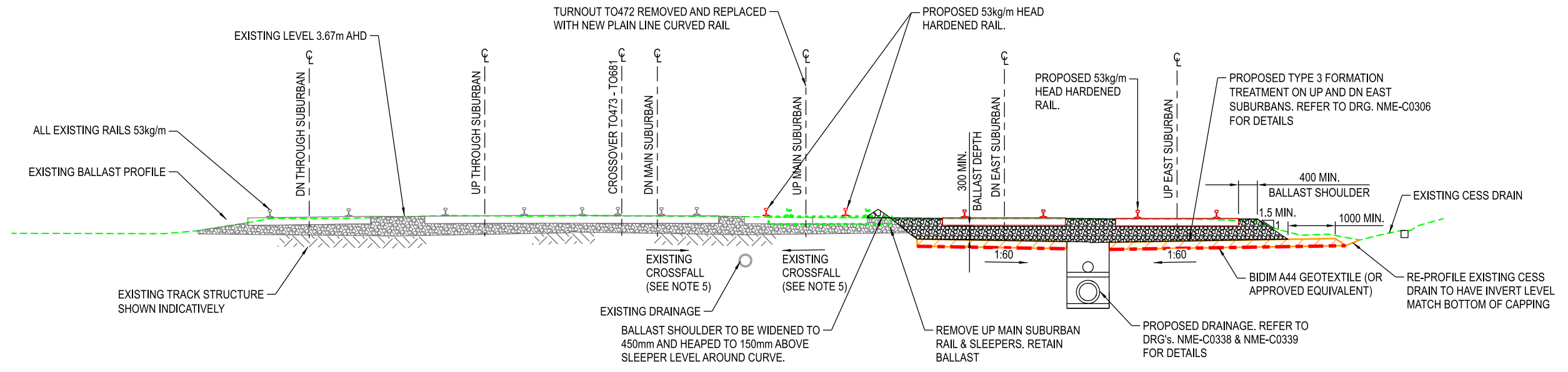
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Project Title RAIL INFRASTRUCTURE ALLIANCE			Project Drawing Number RIA-MGA-WPZ-ZWD-SKT-CRA-NME-C0010		Rev A
RAILWAY TRACK AND CIVIL			PUBLIC TRANSPORT VICTORIA		Drawn By
NORTH MELBOURNE			PT >		Designed By
WESTERN PORTAL			File Name RIA-AEC-SKT-110-315-1108-0010		Checked By
TYPICAL SECTIONS			Sheet No. 01 of 01		Approved
SHEET 1			In Serv.		Approval Date
Up Location East. North. ID#	Down Location East. North. ID#	Datum MGA Z55	Drawing Number		Revision
			Scale 1:100	Sheet Size A3	

(DATE)
(SIGNATURE)
(BLOCK LETTERS)
Certified By:



C TYPICAL SECTION - DN EAST SUBURBAN PROPOSED NEW FORMATION TREATMENT
SCALE 1:100

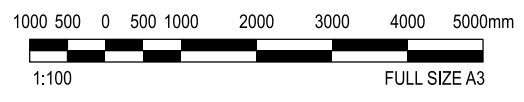


D TYPICAL SECTION - UP AND DN EAST SUBURBAN PROPOSED NEW FORMATION TREATMENT
SCALE 1:100

NOTE
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PLANNING PERMIT SUBMISSION

- NOTES**
1. ALL DIMENSIONS IN MILLIMETERS UNLESS NOTED OTHERWISE.
 2. SECTIONS FACING IN THE DOWN DIRECTION.
 3. EXISTING CAPPING AND BALLAST DEPTHS SHOWN INDICATIVELY ONLY.
 4. CROSSOVERS REMOVED BETWEEN EAST SUBURBANS AND MAIN SUBURBANS NOT SHOWN FOR CLARITY.
 5. EXISTING TRACK FORMATION INFERRED TO FALL TOWARDS EXISTING DRAINAGE BASED ON AS-BUILTS. FOR LEGEND REFER SKT. NME-C0010.
 - 6.

11:44:33 PM
11/24/2021

REVISION IN PROGRESS							CHECK PRINT						
							DISCIPLINE		DISCIPLINE		DISCIPLINE		DISCIPLINE
RIA	A	ISSUED FOR PLANNING PERMIT SUBMISSION											
Revised By	In Serv	Rev.	Date	Description	Designed	Checked	Ind. Review	Approved					

READY FOR ISSUE

INITIAL DATE

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PROJECTS VICTORIA

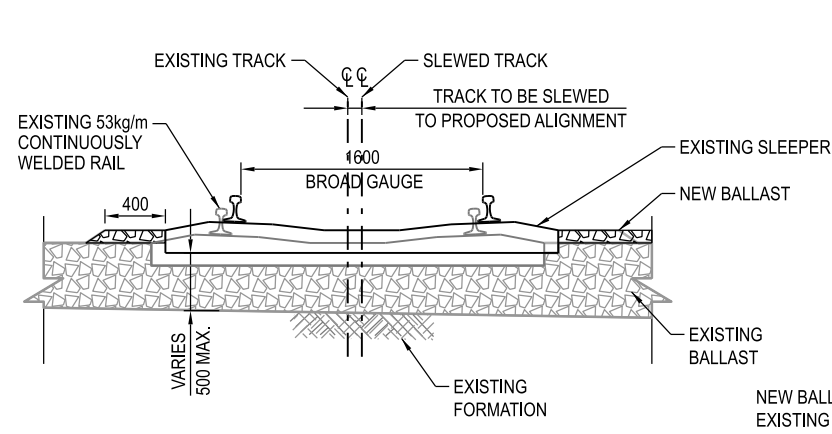
Project Title RAIL INFRASTRUCTURE ALLIANCE			Project Drawing Number RIA-MGA-WPZ-ZWD-SKT-CRA-NME-C0011			Rev A			
RAILWAY TRACK AND CIVIL NORTH MELBOURNE WESTERN PORTAL TYPICAL SECTIONS SHEET 2			PUBLIC TRANSPORT VICTORIA		Drawn By	Designed By			
			PT		Checked By	Ind. Review			
Up Location East, North, ID#					Down Location East, North, ID#			Datum MGA Z55	
Revised By			In Serv			Drawing Number		Revision	
File Name RIA-AEC-SKT-110-315-1108-0011			Sheet No. 01 of 01			In Serv.		Approval Date	
Scale 1:100			Sheet Size A3						

(DATE)

(SIGNATURE)

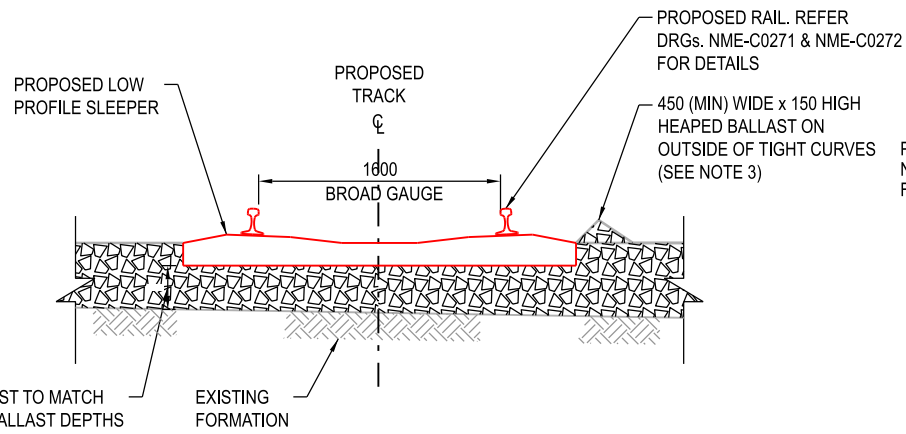
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Certified By:



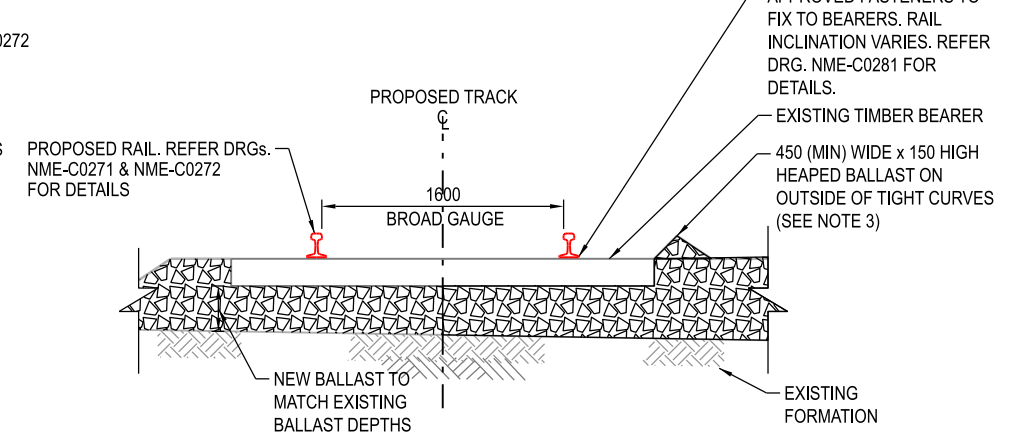
TYPE 1: TAMPING AND SLEWING OF TRACK ON EXISTING FORMATION

SCALE 1:50



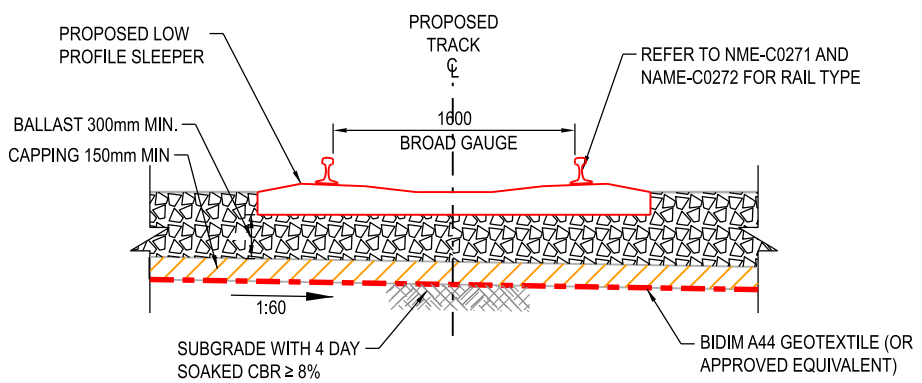
TYPE 2A: NEW TRACK AND BALLAST ON EXISTING FORMATION

SCALE 1:50



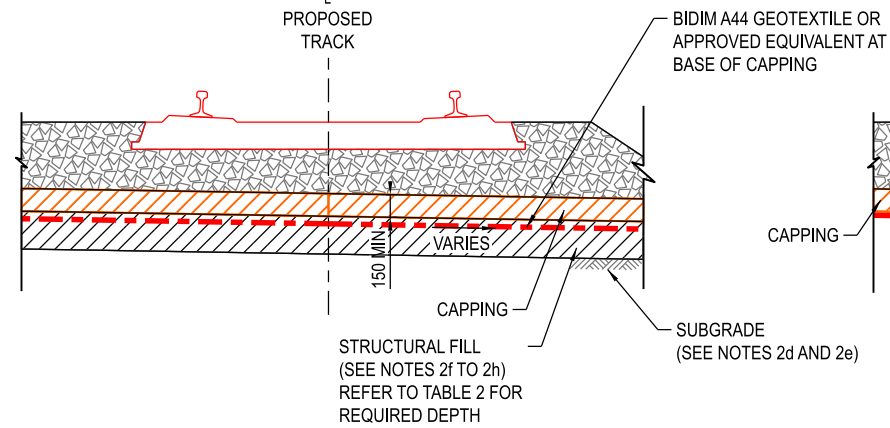
TYPE 2B: NEW RAIL AND BALLAST WITH EXISTING TIMBER BEARERS ON EXISTING FORMATION

SCALE 1:50



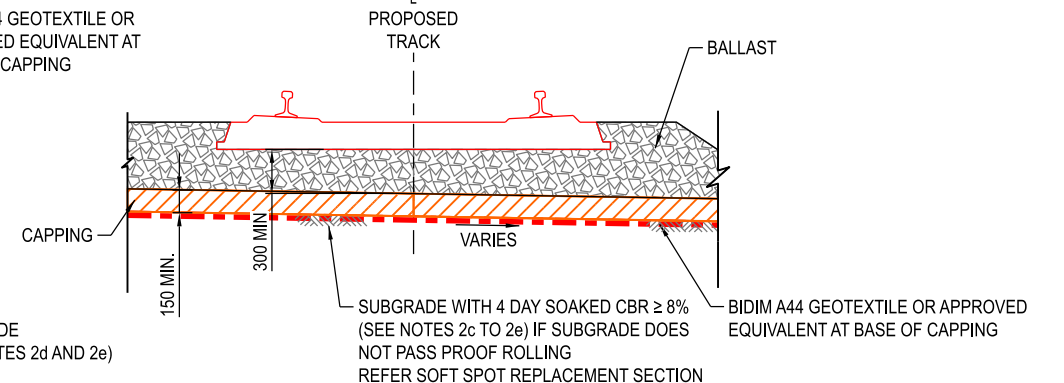
TYPE 3: NEW TRACK AND BALLAST ON NEW FORMATION

SCALE 1:50



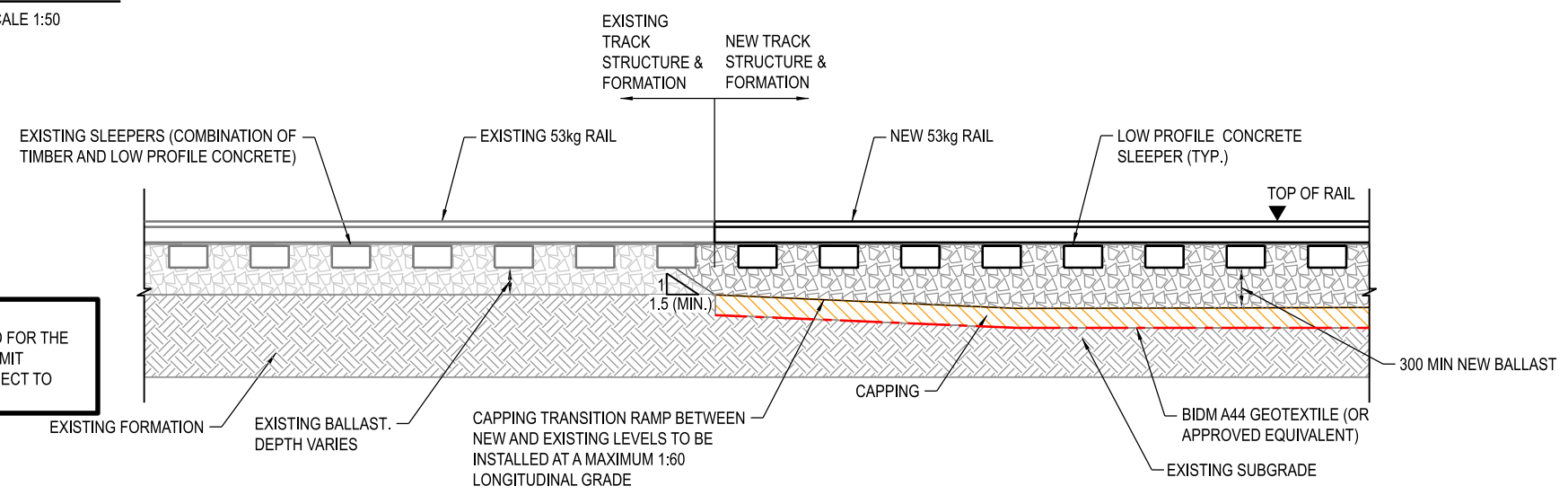
RAIL CORRIDOR TYPICAL FORMATION - SOFT SPOT REPLACEMENT

SCALE 1:50



RAIL CORRIDOR TYPICAL EARTHWORKS AND FORMATION

SCALE 1:50



TYPICAL TYPE 3 TO EXISTING FORMATION TRANSITION DETAIL

SCALE 1:50

TABLE 2: REQUIRED STRUCTURAL FILL DEPTH

EXISTING FILL EMBANKMENT 4 DAY SOAKED CBR	STRUCTURAL FILL DEPTH
≤ 2%	1000mm + STABILISATION
> 2 - < 3%	1000mm
3 - < 8%	500mm
≥ 8%	0mm

NOTE
THESE DRAWINGS ARE INTENDED FOR THE PURPOSE OF THE PLANNING PERMIT SUBMISSION ONLY AND ARE SUBJECT TO FURTHER DEVELOPMENT



WARNING
ALL SERVICES SHOWN ON THIS DRAWING ARE APPROXIMATE ONLY AND EXACT LOCATION IS TO BE CONFIRMED ON SITE PRIOR TO THE COMMENCEMENT OF ANY WORKS.

PLANNING PERMIT SUBMISSION

CHECK PRINT		READY FOR ISSUE <input type="checkbox"/>
DISCIPLINE	INITIAL	DATE
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Project Title RAIL INFRASTRUCTURE ALLIANCE			Project Drawing Number RIA-MGA-WPZ-ZWD-SKT-CRA-NME-C0012		Rev A
RAILWAY TRACK AND CIVIL			PUBLIC TRANSPORT VICTORIA		Drawn By
NORTH MELBOURNE			PT		Designed By
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