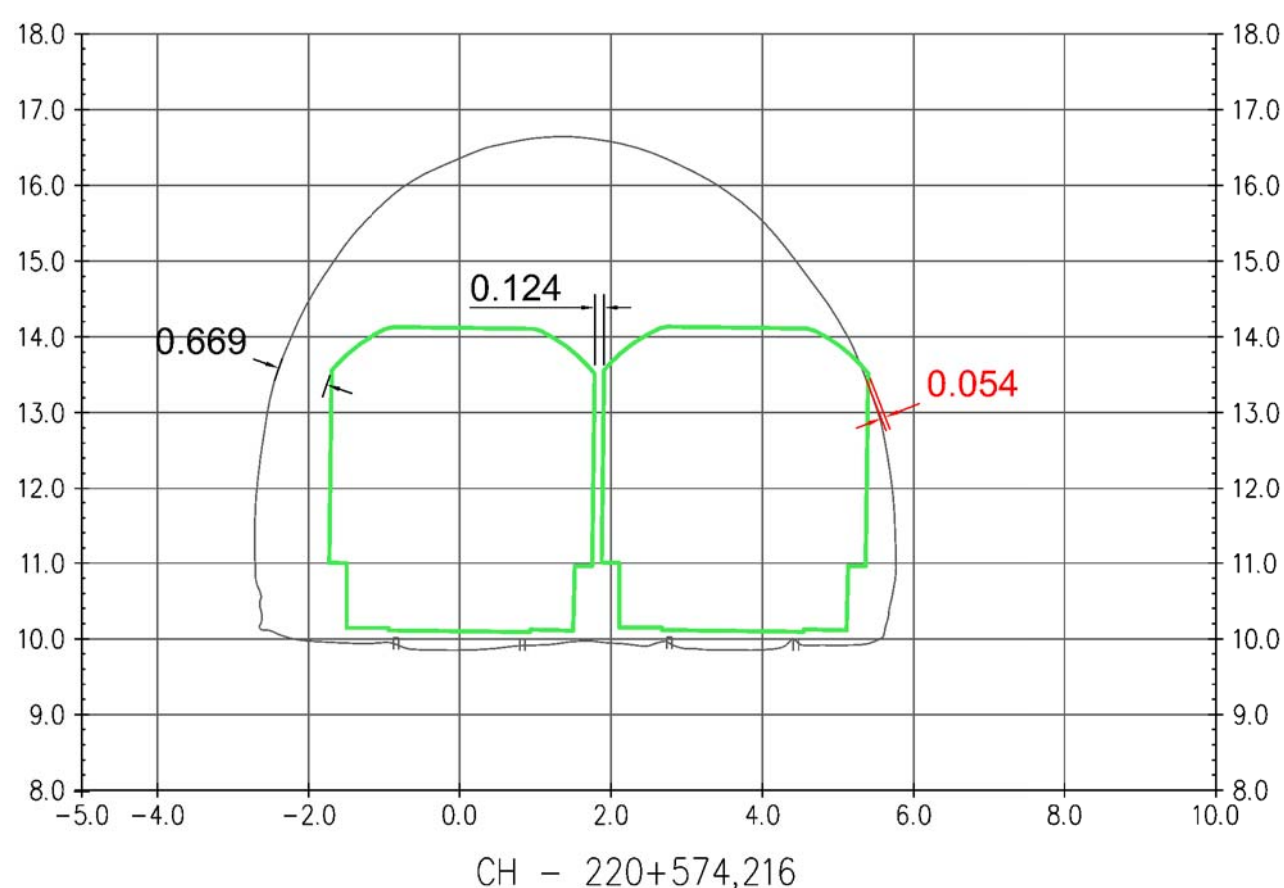
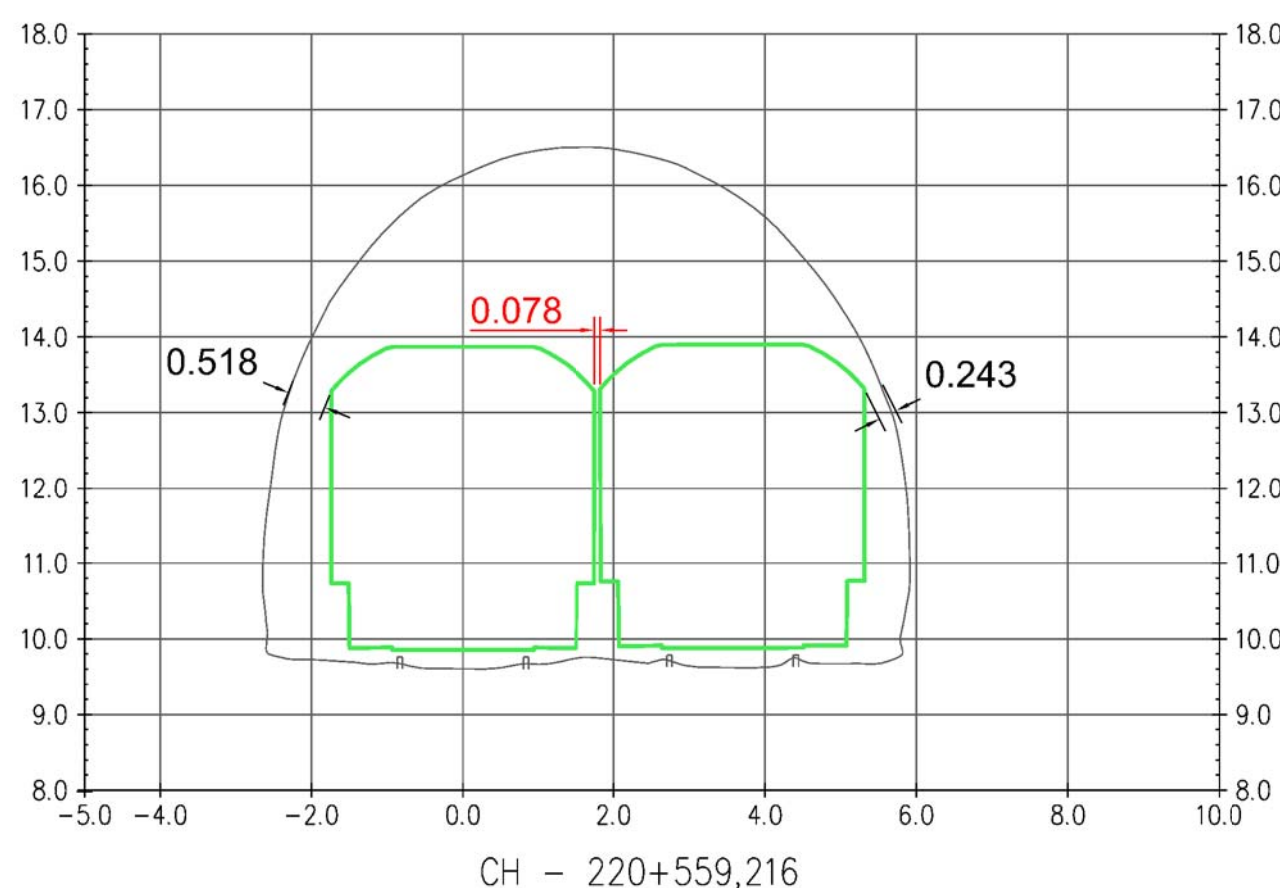
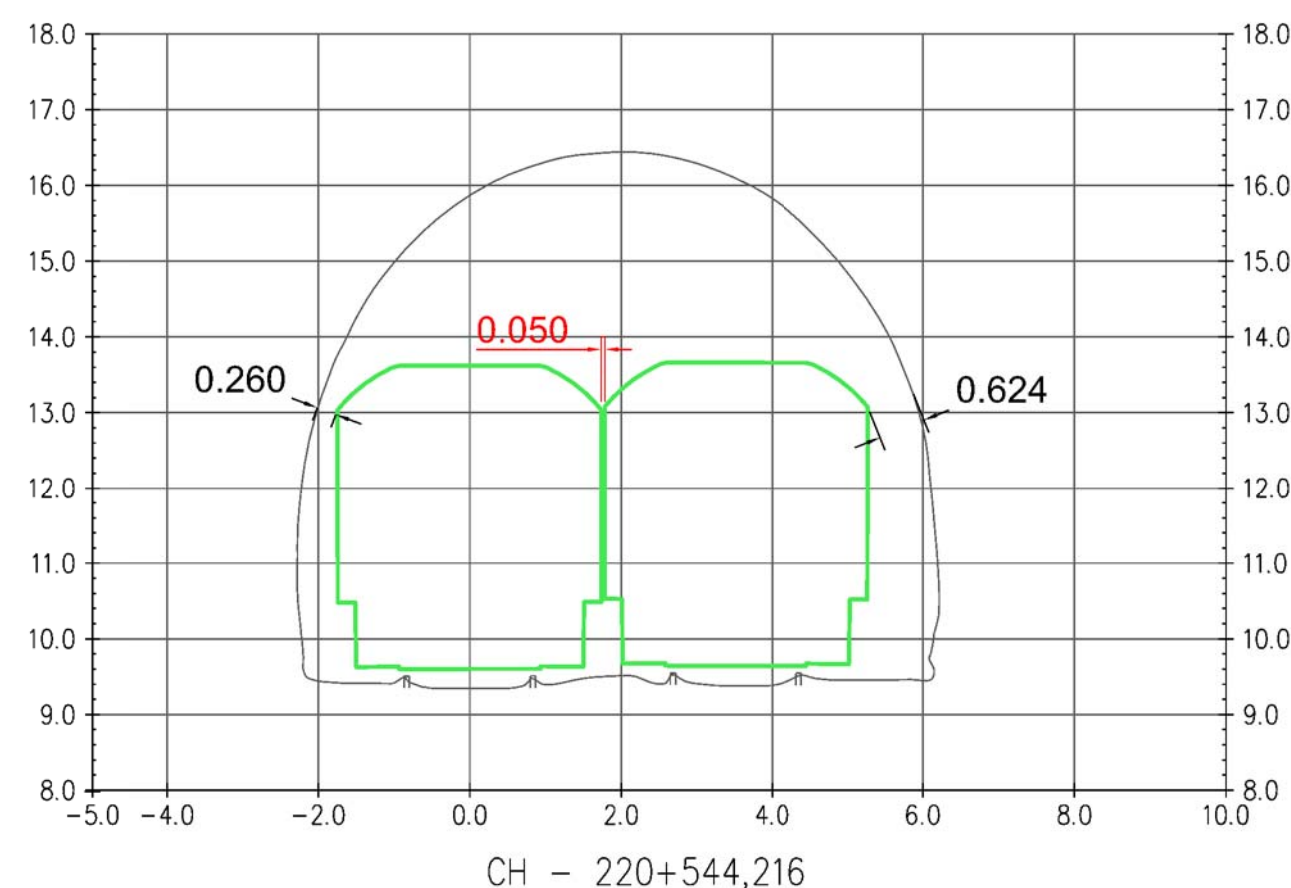
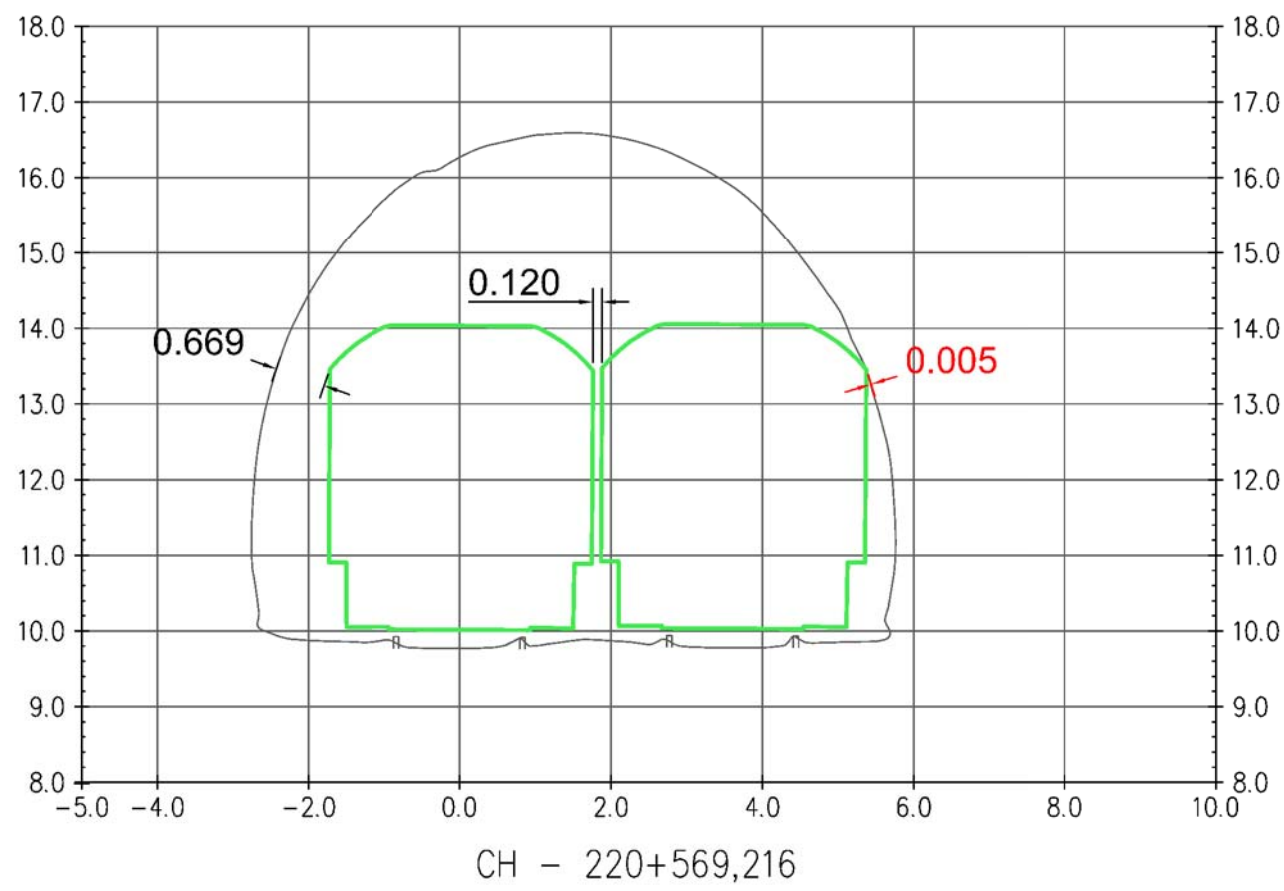
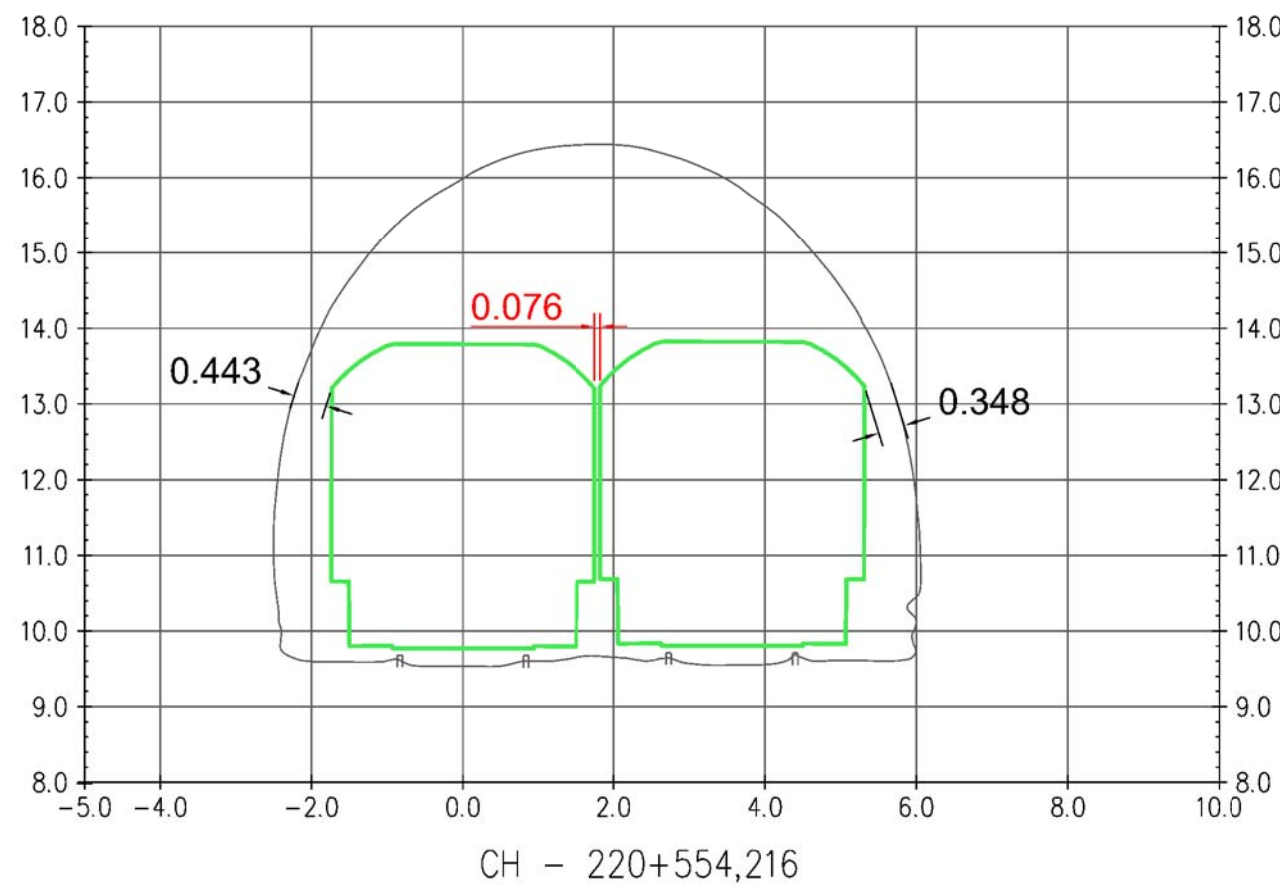
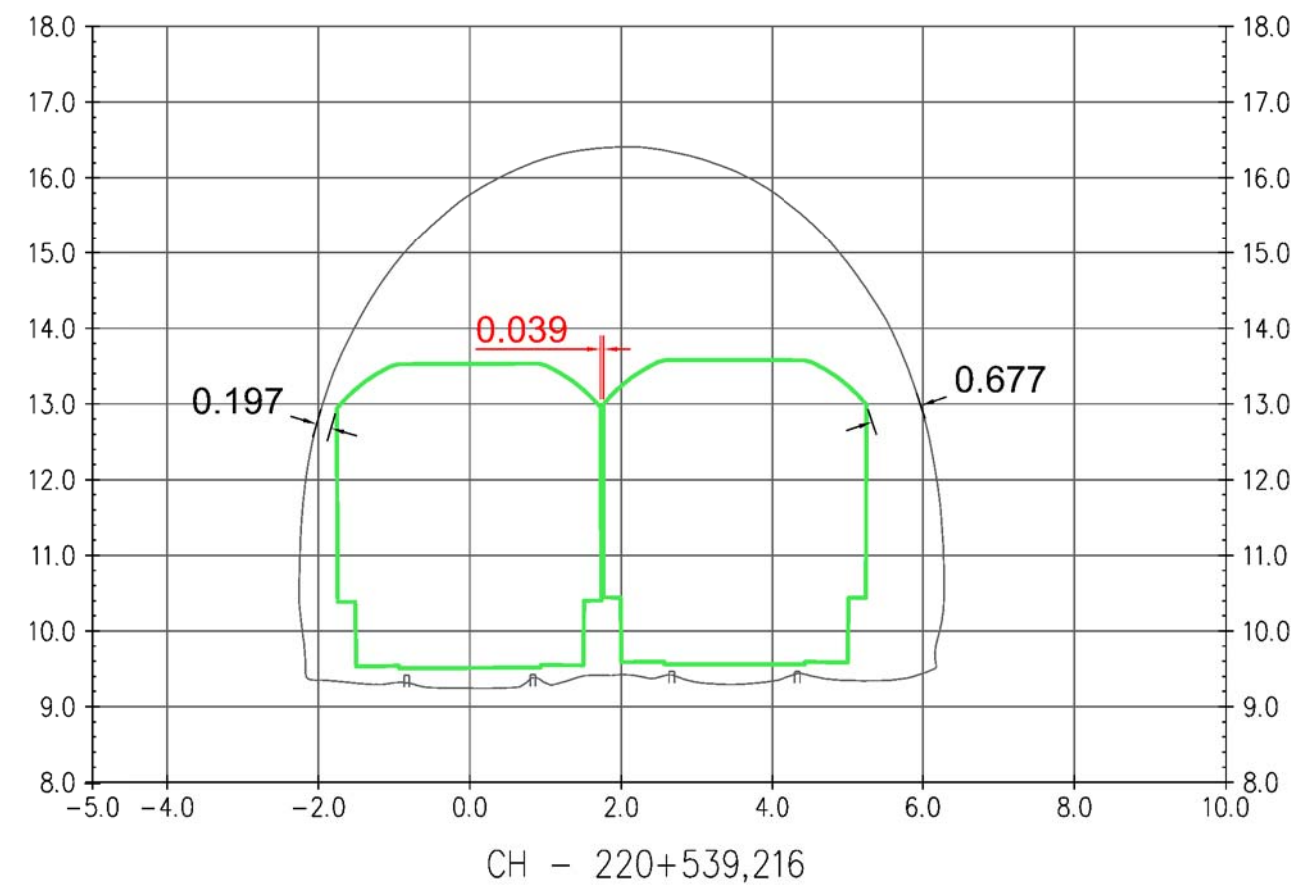
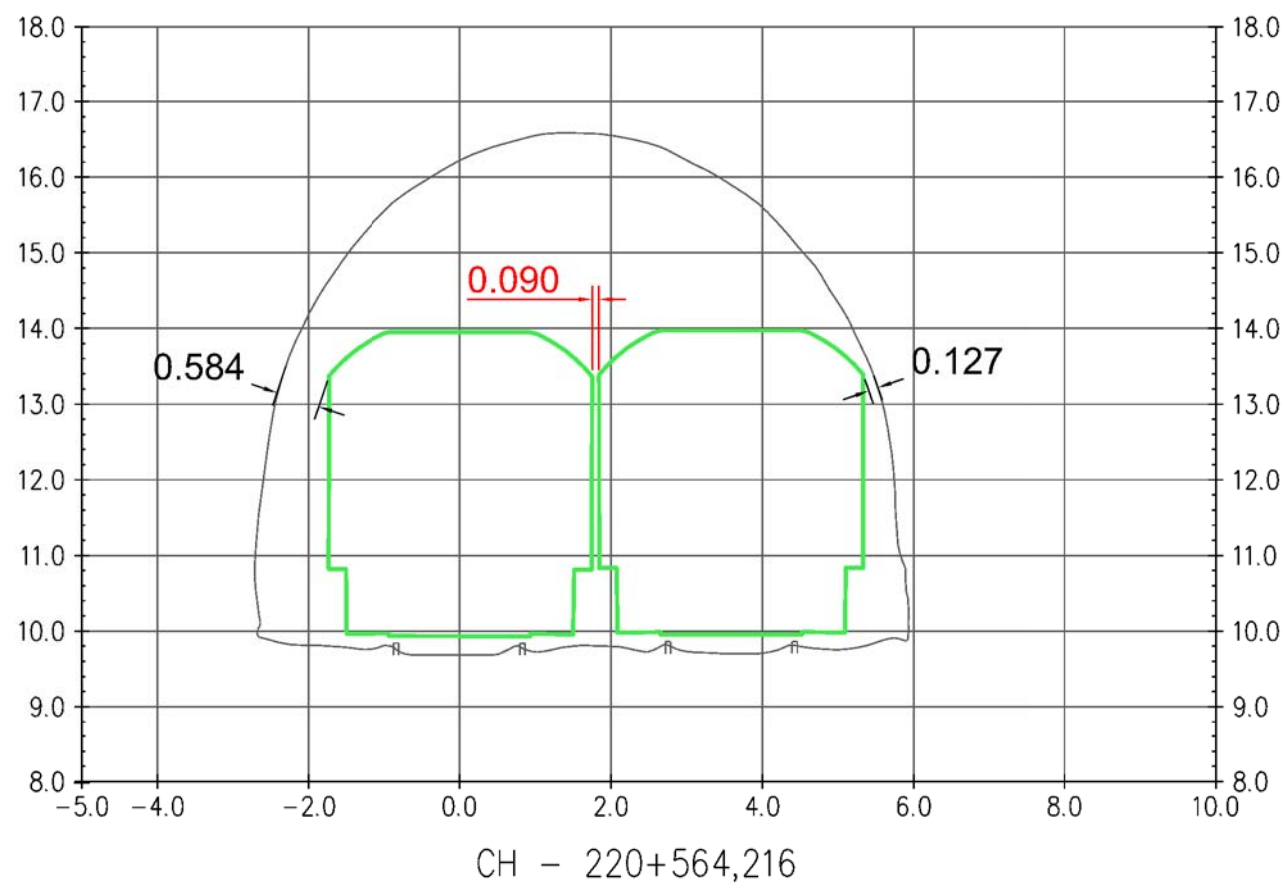
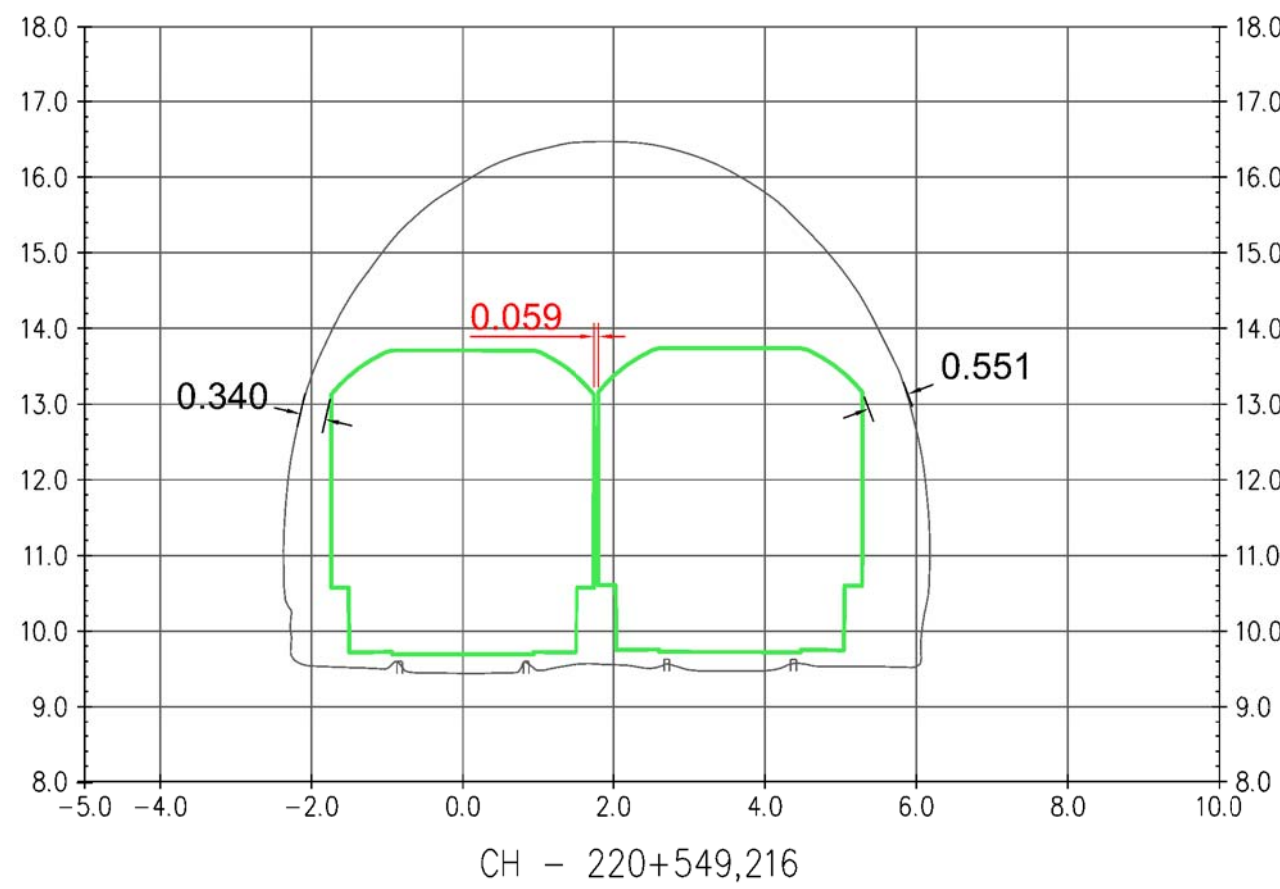
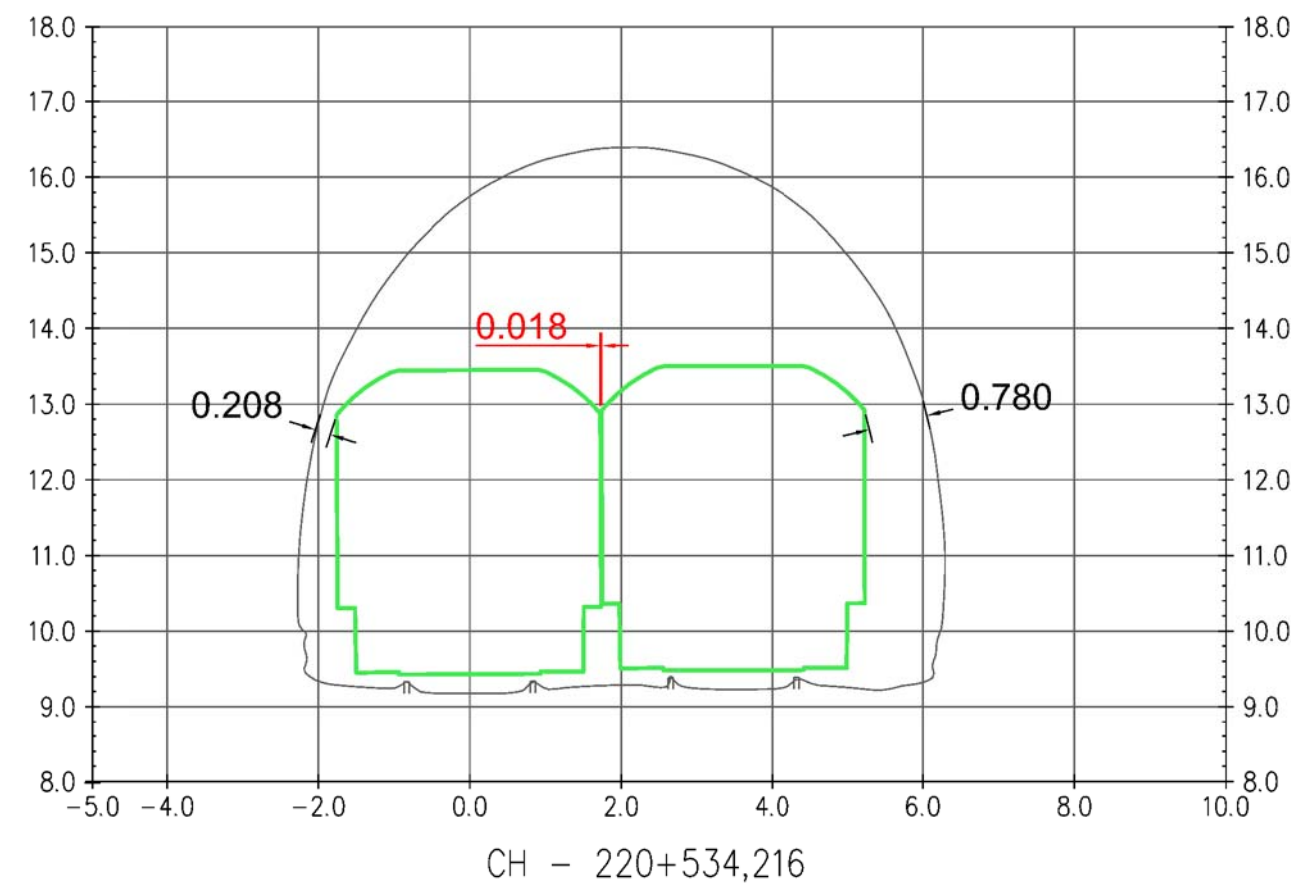


SECTION BETWEEN 220+489,216/220+644,216 (2)

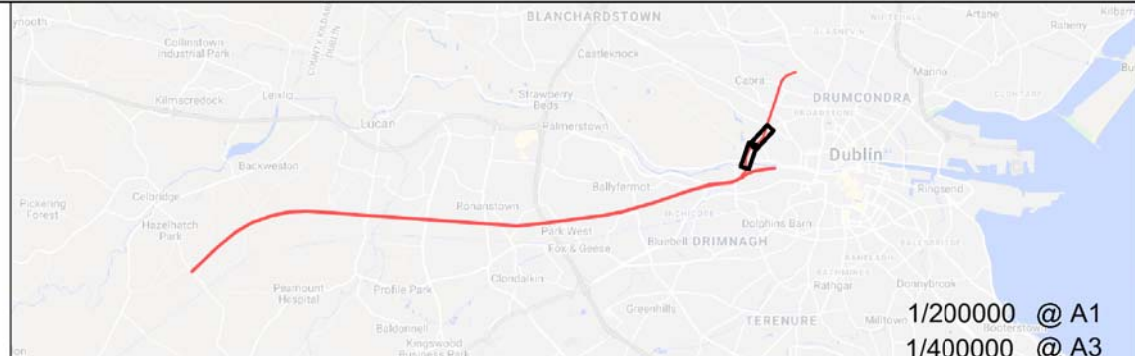


NOTE:
In Option 0 a gauging assessment of the existing track is demonstrated
Existing track is ballasted
All distances in metres unless otherwise stated
IRL2 reference profile (Standard CME-TMS-327 Vehicle Gauging) is used to assess the gauge in existing structures
Track maintenance tolerances for ballast track are added to the reference profile (Standard I-PWY-1101 Requirements for Track and Structures Clearances):
- Track position: 25 mm
- Gauge widening: 8 mm
- Crosslevel error: 20 mm
- Vertical alignment variation: 20 mm
Clearance between Reference Profile (+ Track Maintenance Tolerance) and railway operational structure to be 150mm as a minimum. It is assumed no windows for staff or passengers to lean out.
Vehicle passing clearance between References Profiles (+ Track Maintenance Tolerance) to be 100mm as a minimum. It is assumed no windows for staff or passengers to lean out.

— IRL2 Reference Profile + Track Maintenance Tolerances

NOTE:
INFORMATION IS PRESENTED FOR PUBLIC CONSULTATION NO. 1.
NOT ALL DESIGN DETAIL OR CONSTRUCTION RELATED DETAIL ARE KNOWN AT THIS TIME, E.G. SUBSTATION LOCATIONS, CONSTRUCTION COMPOUNDS, TEMPORARY BRIDGE REQUIREMENTS, TEMPORARY UTILITY DIVERSIONS AND OTHER ELEMENTS
POTENTIAL INTERFERENCE WITH PROPERTY RIGHTS IS BASED ON THE LEVEL OF INFORMATION AND DESIGN AVAILABLE AT THIS TIME. FURTHER WORK INCLUDING DETAILED DESIGN AND TECHNICAL AND CONSTRUCTION RELATED SOLUTIONS WILL SEEK TO MINIMISE POTENTIAL INTERFERENCE WITH PROPERTY RIGHTS

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All elevations are in metres and relate to OSi Geoid Model (OSGM02) Mean Head as defined by existing Project Control.
All Co-ordinates are in Irish Transverse Mercator Grid (ITM) as defined by OSi active GPS station Tallaght College (TLLG).



DART+ South West



Rev	Date	Dm	Chk'd	App'd	Description
v01	21/04/2021	JYM	FJC	AG	FOR PUBLIC CONSULTATION No1

Client
Iarnród Éireann Irish Rail

Date
Scale
@ A1
@ A3

Project Code
ATK

Engineering Designer
ATKINS
Supported by:
rps

Drawn
JYM

Checked
FJC

Approved
AG

QMS Code

Project Title
DART + SOUTH WEST

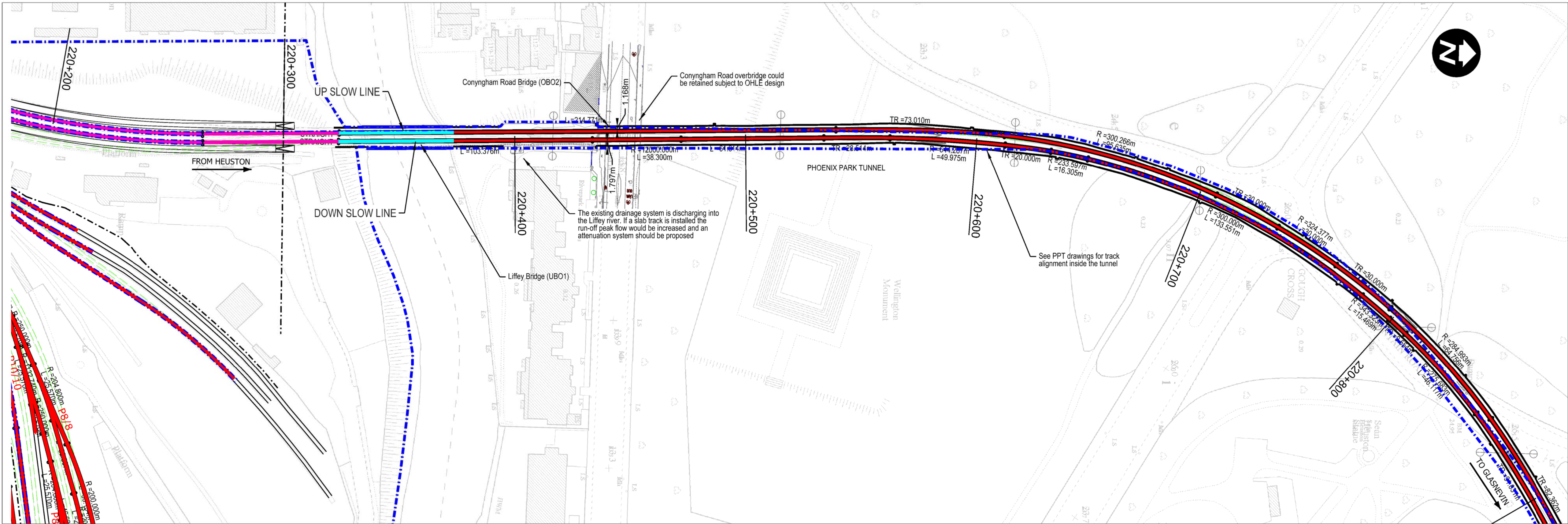
Drawing Title
PHOENIX PARK TUNNEL CROSS SECTIONS (SHEET 2 of 2) OPTION 0

Drawing File Name
DP-04-23-DWG-PW-TTA-35757

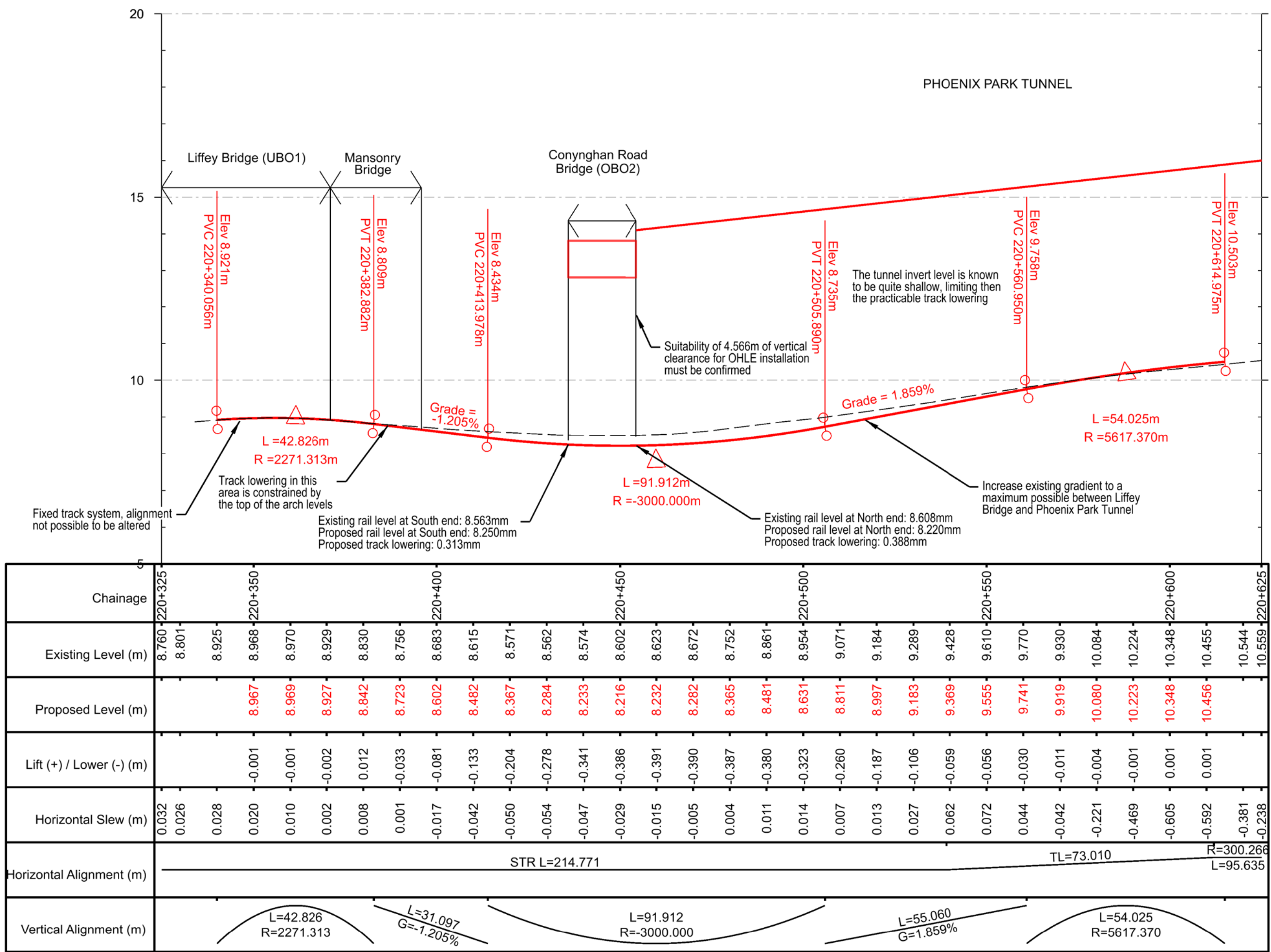
Version
V01

Status
S3

DO NOT SCALE USE FIGURED DIMENSIONS ONLY



Plan Scale 1:1000



Profile Scale 1:1000 / 1:100

- Legend:
- Renewed Track / Slewled Track
 - Existing Track to be Retained (Main Lines)
 - Existing Track to be Retained (Not Main Lines)
 - Existing Track to be Removed
 - IE Property Boundary
 - Proposed Boundary Limit - Permanent Works
 - Design Zone interface / Chainage interface
 - Proposed Retaining Wall
 - P8/8 Type of turnout

- Design is based on topographical survey 09272_C2_3D_R2 2009 in ITM coordinates
- All distances in metres unless otherwise stated.
- The layout shows the Permanent Way Option 3 for Conyngham Road Bridge (OBO2).
- It is assumed that the proposed slab track section (that is required within the Phoenix Park Tunnel) will be extended up to the Liffey River underbridge.

- Proposed vertical alignment
- Existing vertical alignment

NOTE:

INFORMATION IS PRESENTED FOR PUBLIC CONSULTATION NO. 1

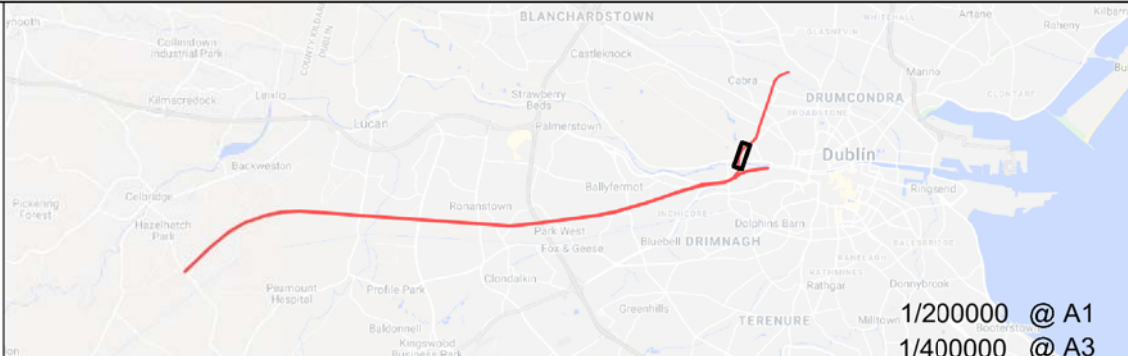
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Rev	Date	Dm	Chk'd	App'd	Description
v01	21/04/2021	JYM	FJC	AG	FOR PUBLIC CONSULTATION No1

Client

Iarnród Éireann
Irish Rail

Date: 21/04/2021

Scale: @ A1, @ A3

Project Code: ATK

Engineering Designer

ATKINS
TYPSA
Member of the SNC-Lavalin Group

Supported by: **rps**

Drawn: JYM, Checked: FJC, Approved: AG

QMS Code

Project Title

DART + SOUTH WEST

Drawing Title

**CONYNGHAM ROAD BRIDGE (OBO2)
TRACK PLAN LAYOUT AND LONGITUDINAL PROFILE
OPTION 1**

Drawing File Name

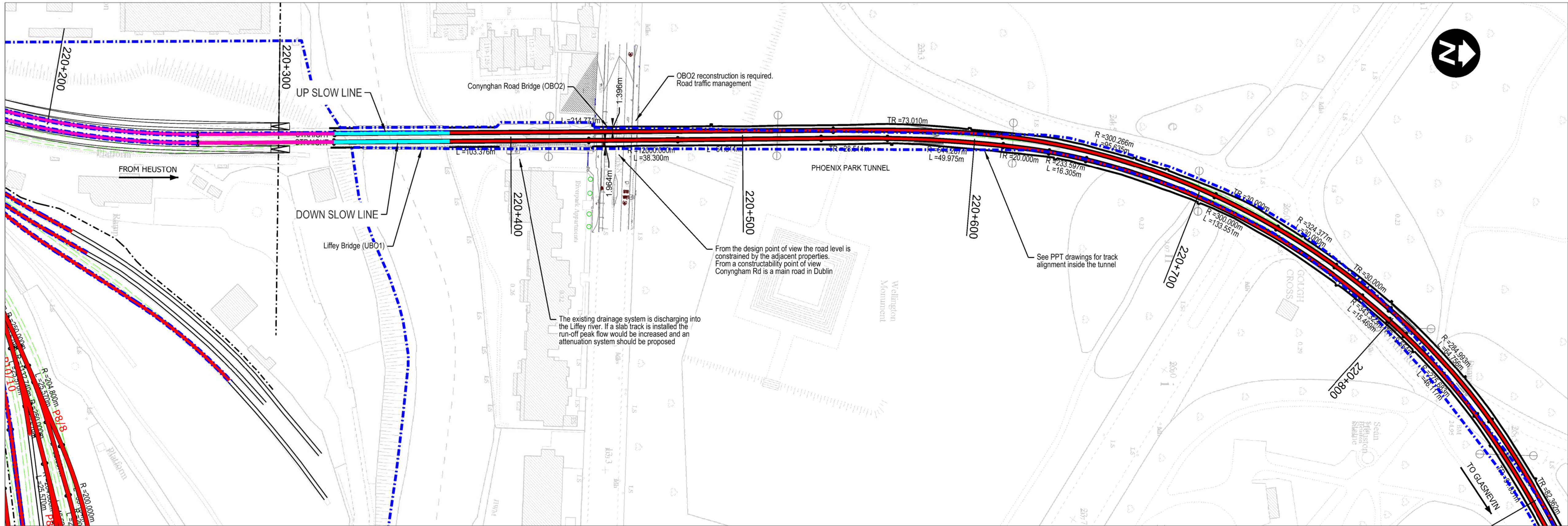
DP-04-23-DWG-PW-TTA-35742

Version

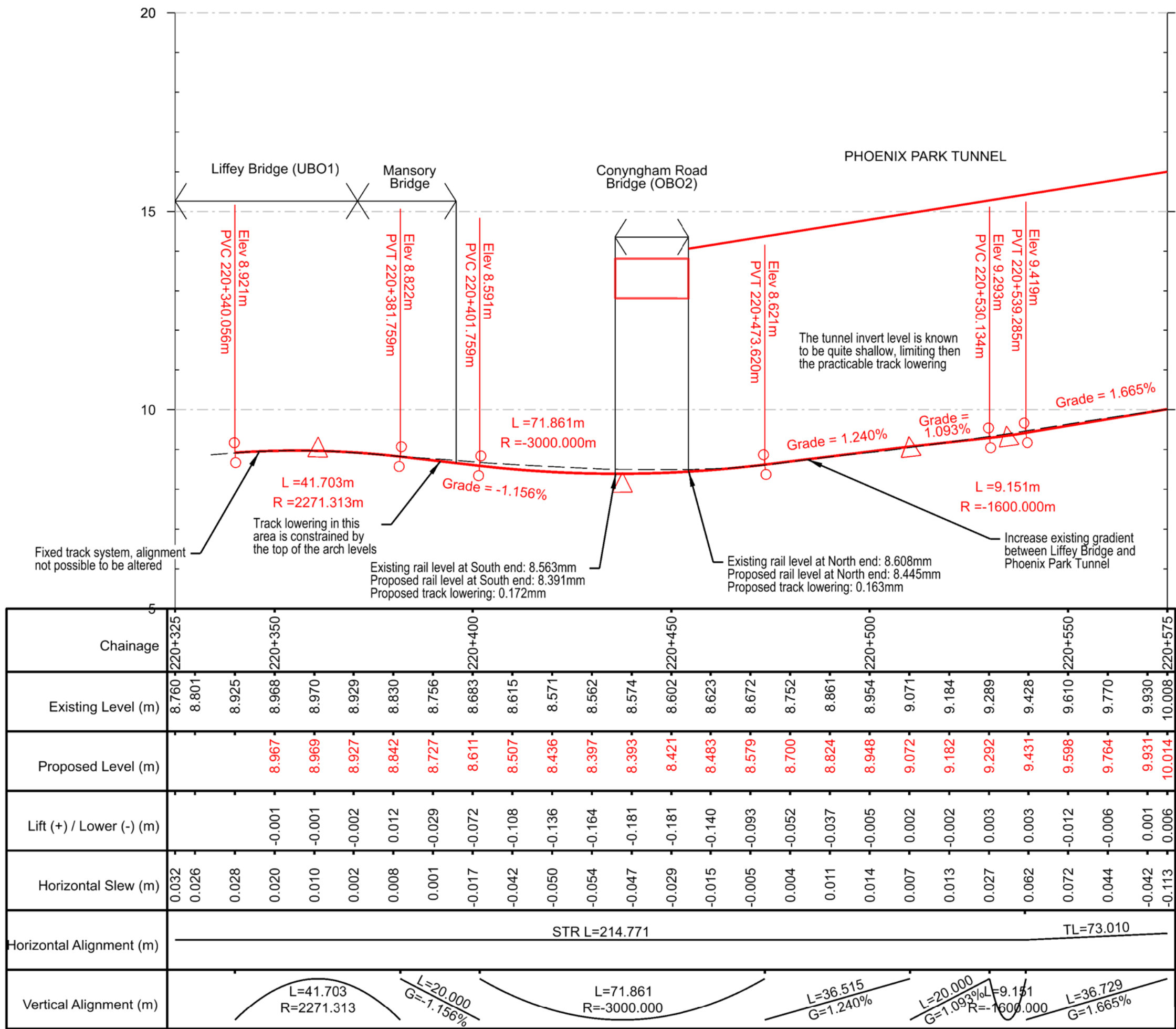
V01

Status

S3



Plan Scale 1:1000



Profile Scale 1:1000 / 1:100

Legend:

- Renewed Track / Slew'd Track
- Existing Track to be Retained (Main Lines)
- Existing Track to be Retained (Not Main Lines)
- Existing Track to be Removed
- IE Property Boundary
- Proposed Boundary Limit - Permanent Works
- Design Zone interface / Chainage interface
- Proposed Retaining Wall
- P8/8 Type of turnout

1. Design is based on topographical survey 09272_C2_R2 2009 in ITM coordinates
2. All distances in metres unless otherwise stated.
3. The layout shows the Permanent Way Option 1 for Conyngham Road Bridge (OBO2).
4. It is assumed that the proposed slab track section (that is required within the Phoenix Park Tunnel) will be extended up to the Liffey River underbridge.

- Proposed vertical alignment
- Existing vertical alignment

NOTE:

INFORMATION IS PRESENTED FOR PUBLIC CONSULTATION NO. 1

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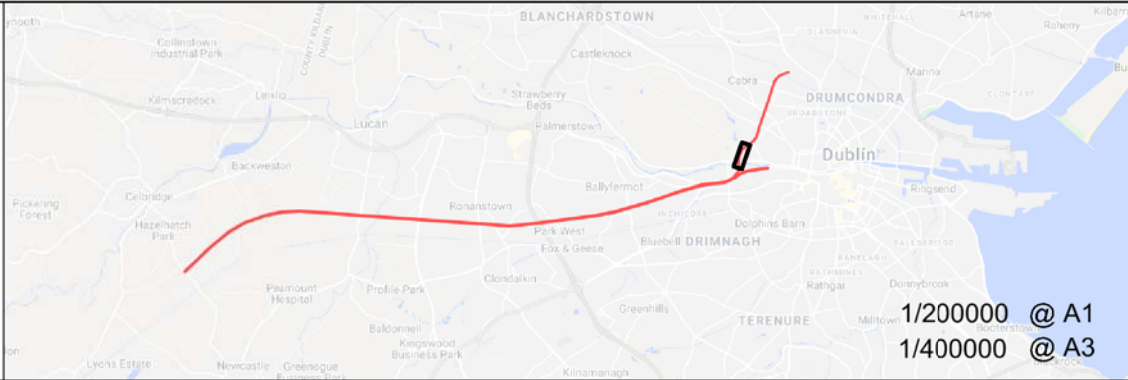
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Rev	Date	Dm	Chk'd	App'd	Description
v01	21/04/2021	JYM	FJC	AG	FOR PUBLIC CONSULTATION No1

Client

Iarnród Éireann
Irish Rail

Date

Scale

@ A1
@ A3

Project Code

Issuer

ATK

Engineering Designer

ATKINS
Member of the SNC-Lavalin Group

Supported by:

rps

Drawn

Checked

Approved

JYM

FJC

AG

QMS Code

Project Title

DART + SOUTH WEST

Drawing Title

**CONYNGHAM ROAD BRIDGE (OBO2)
TRACK PLAN LAYOUT AND LONGITUDINAL PROFILE
OPTION 2**

Drawing File Name

DP-04-23-DWG-PW-TTA-35743

Version

V01

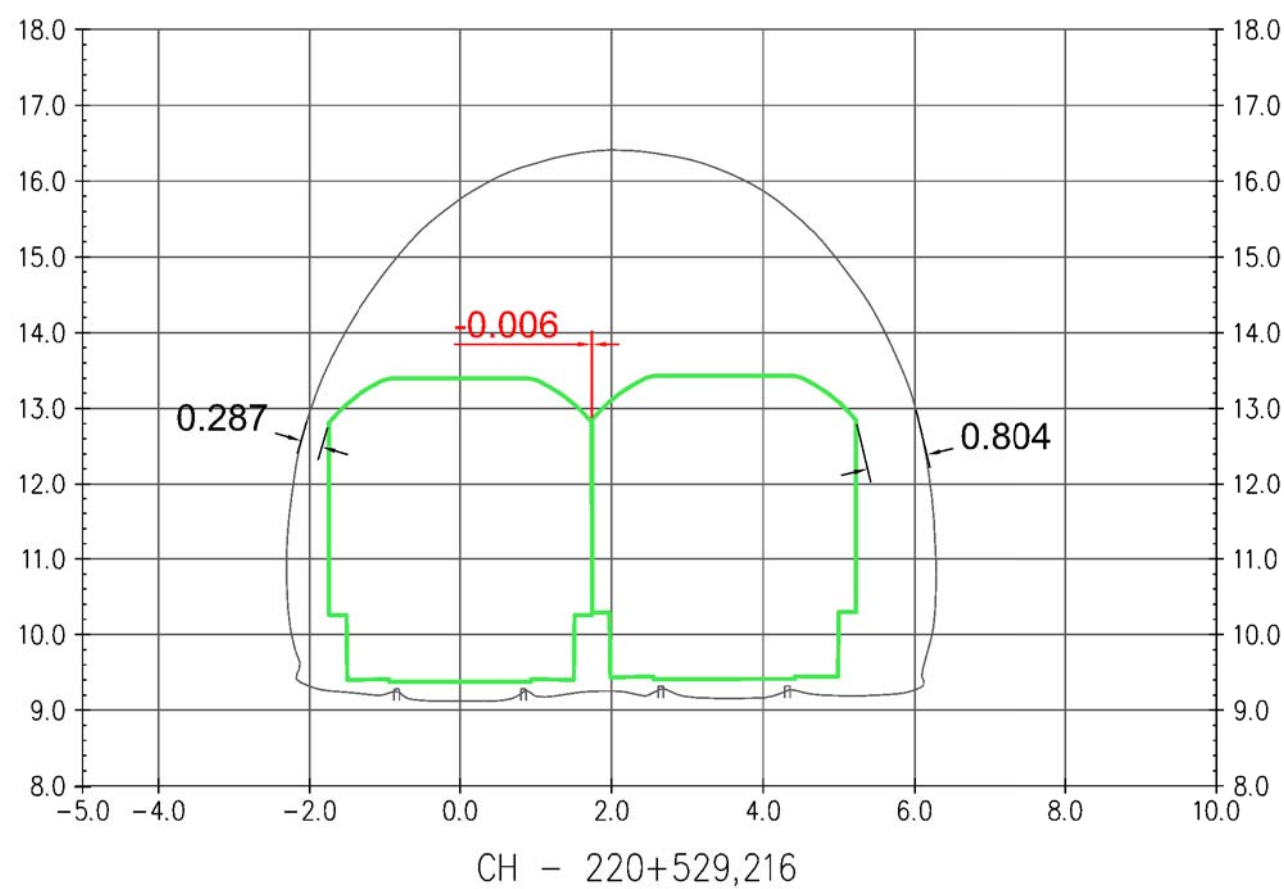
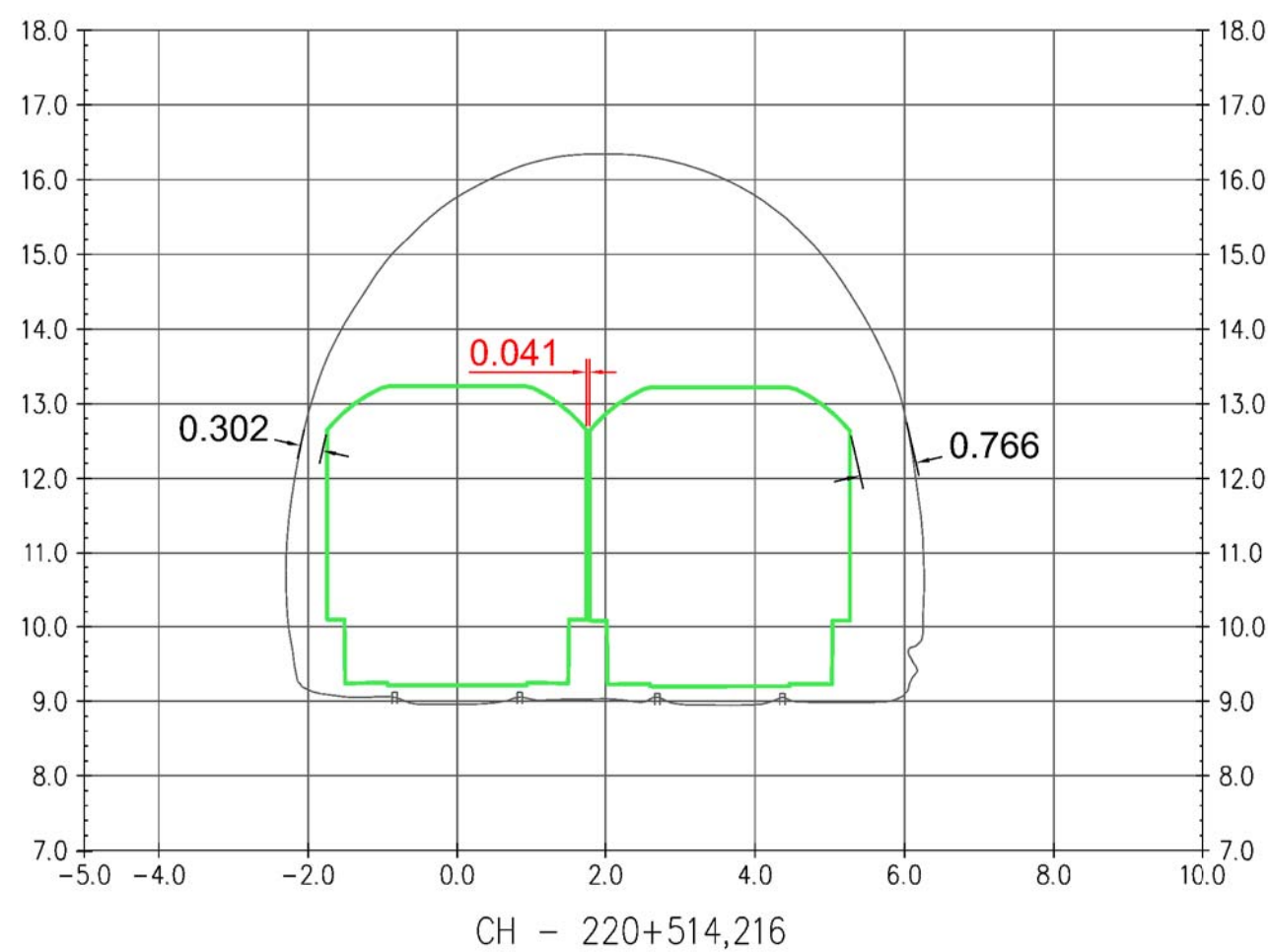
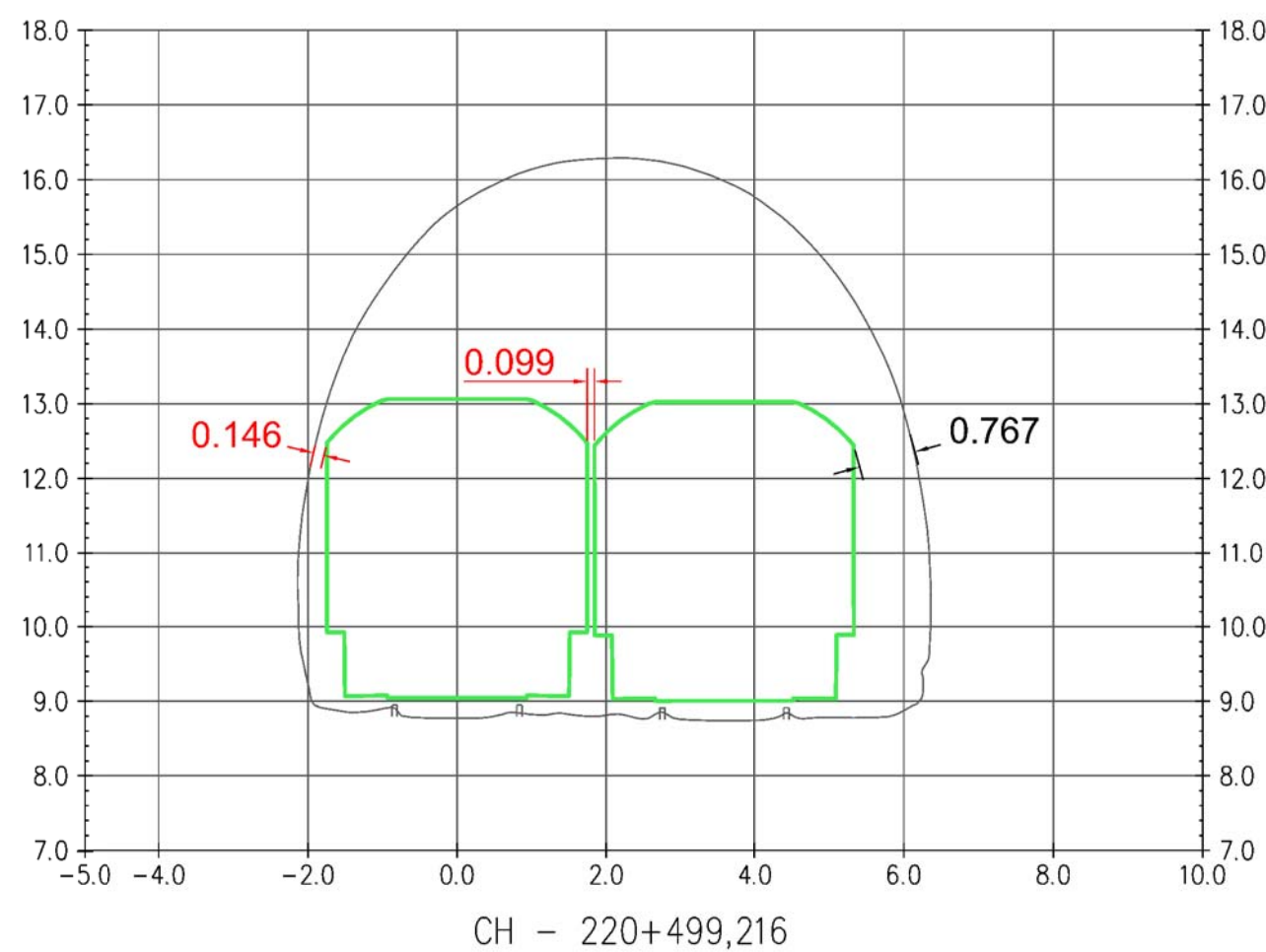
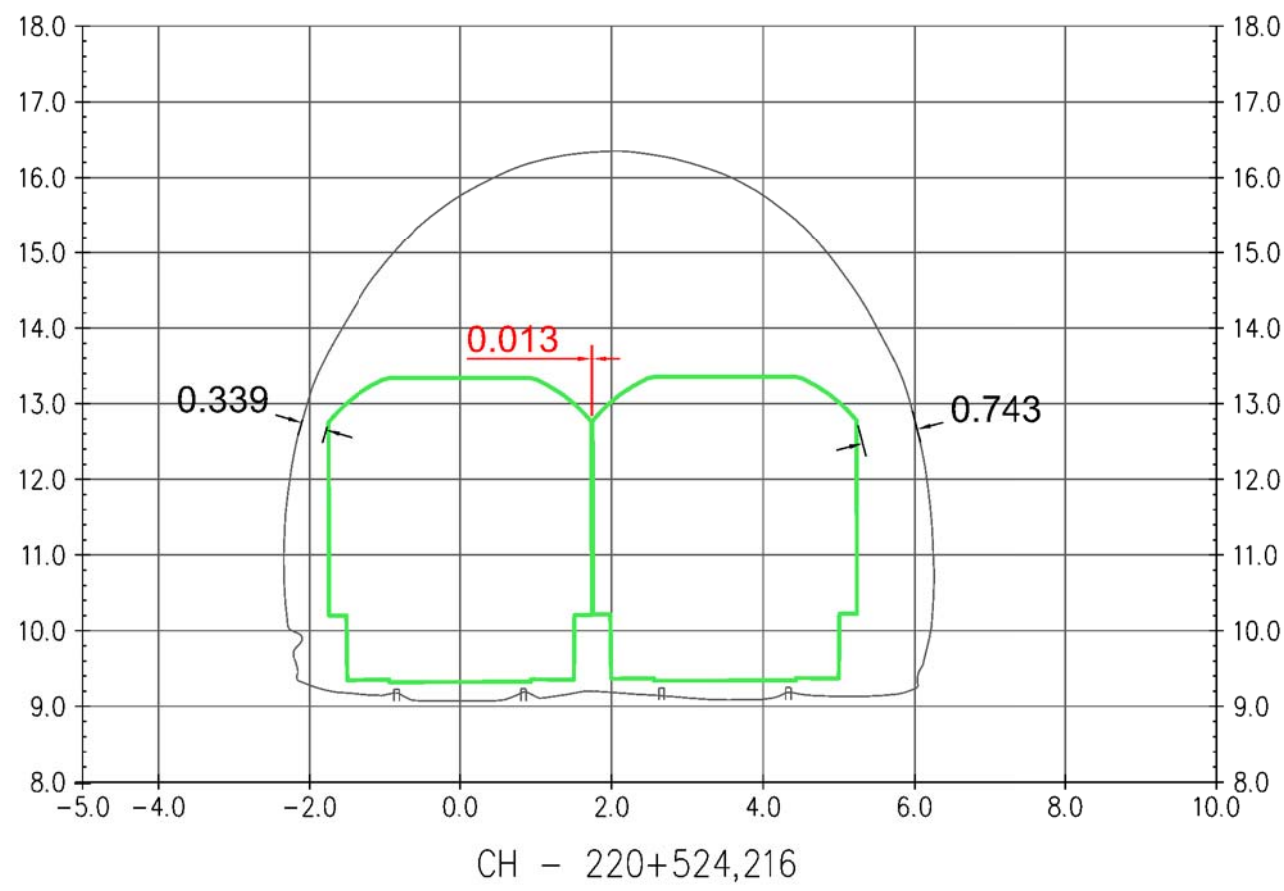
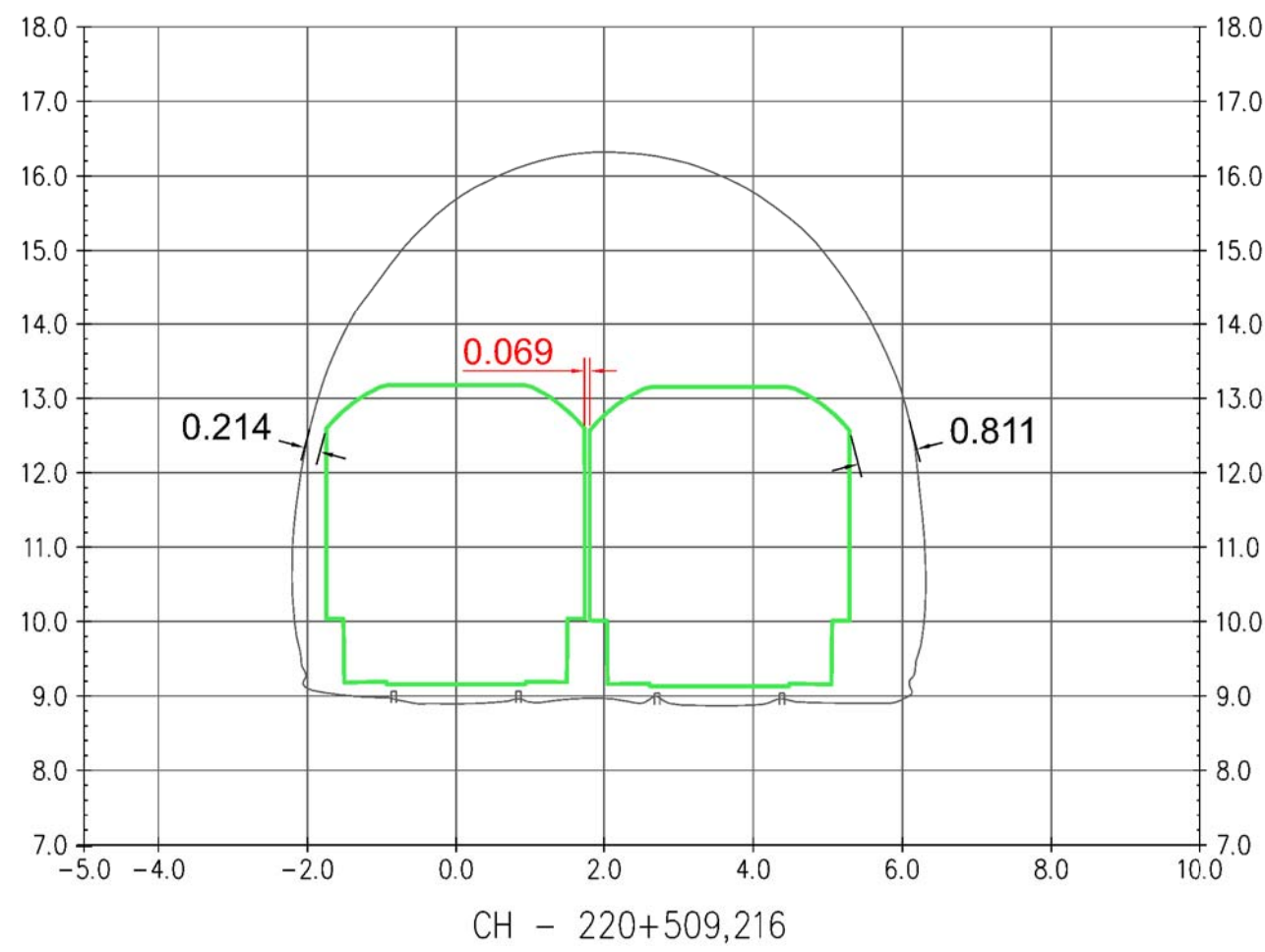
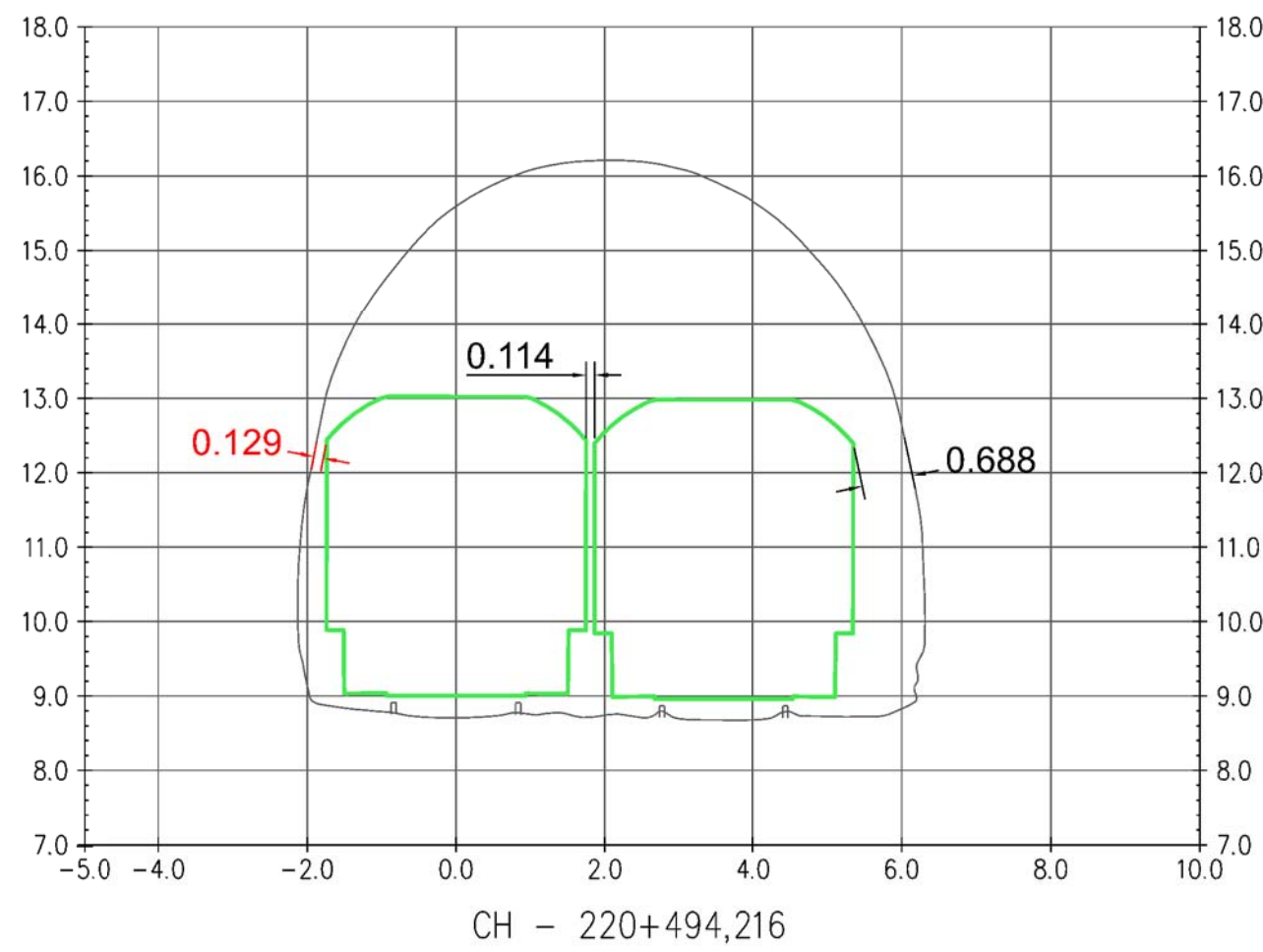
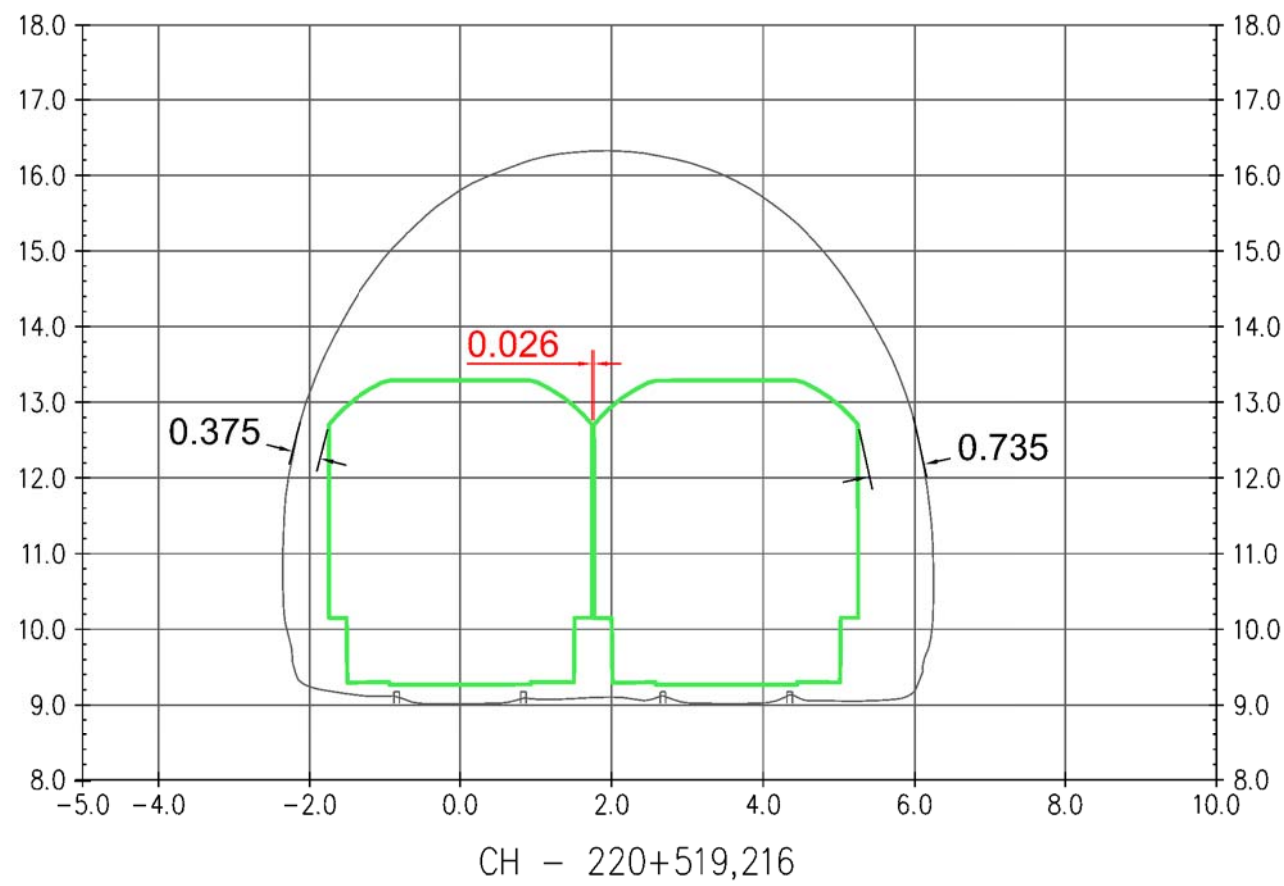
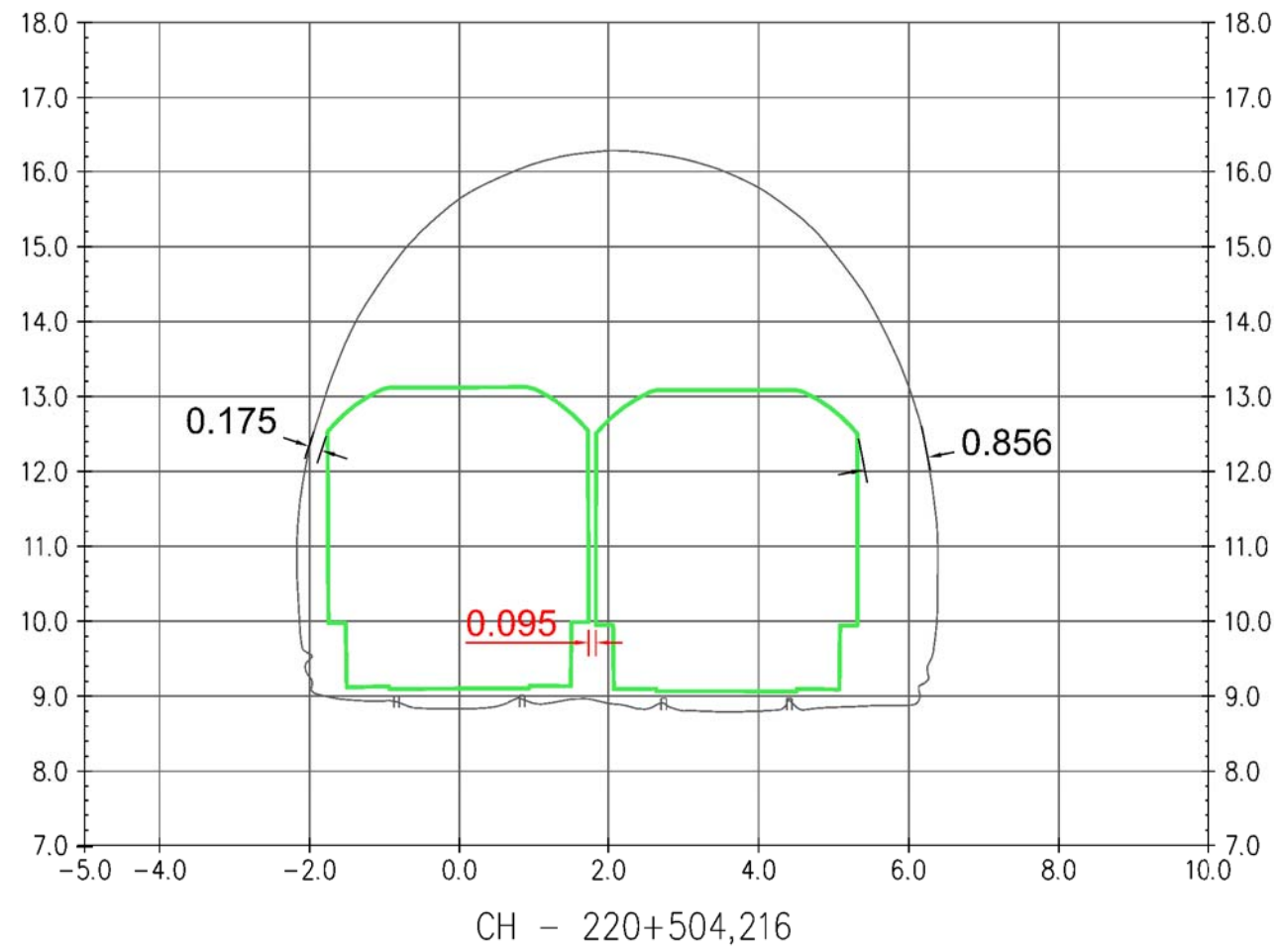
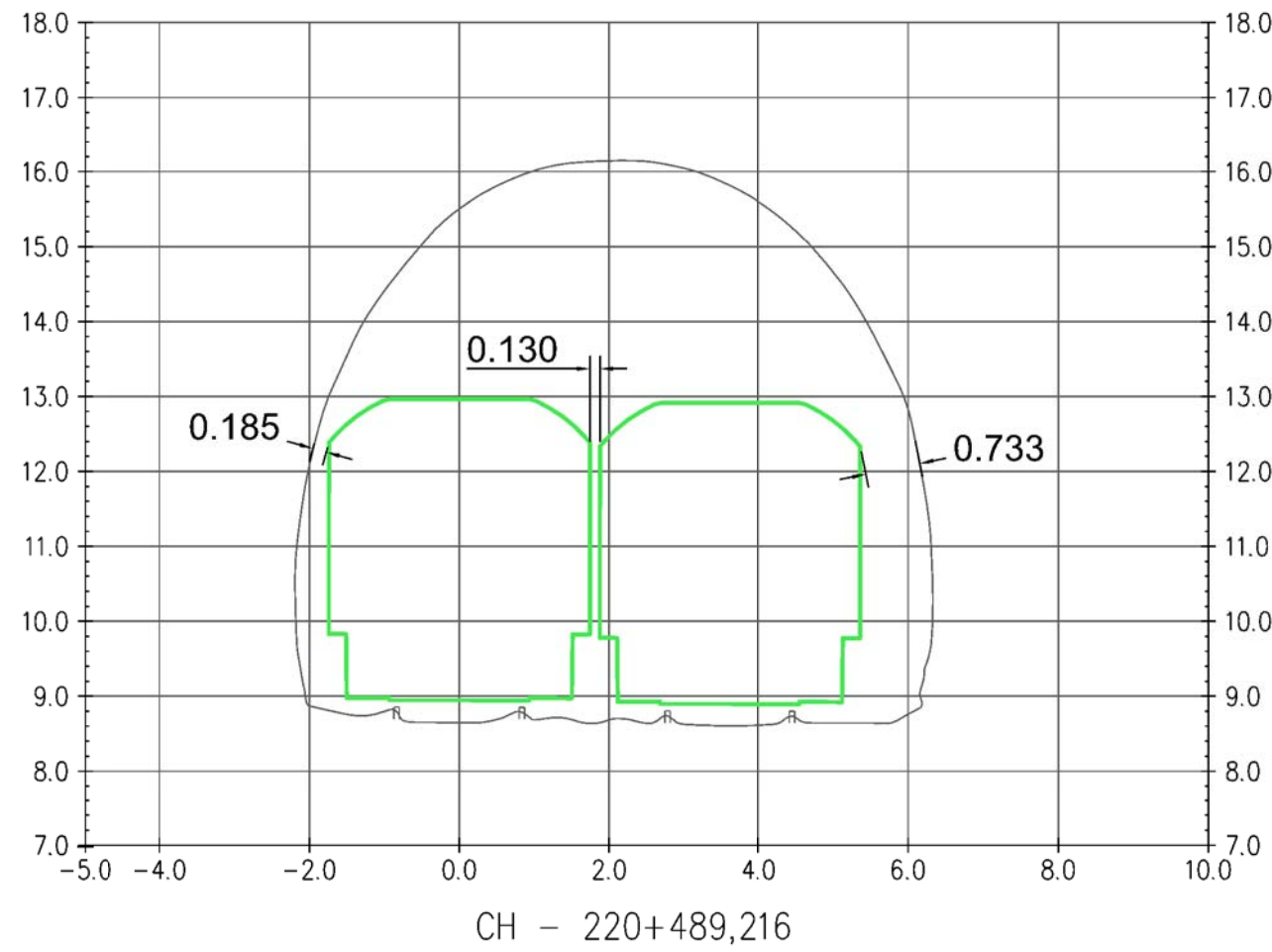
Status

S3

DO NOT SCALE USE FIGURED DIMENSIONS ONLY

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SECTION BETWEEN 220+489,216/220+644,216 (1)



NOTE:
In Option 0 a gauging assessment of the existing track is demonstrated
Existing track is ballasted
All distances in metres unless otherwise stated
IRL2 reference profile (Standard CME-TMS-327 Vehicle Gauging) is used to assess the gauge in existing structures
Track maintenance tolerances for ballast track are added to the reference profile (Standard I-PWY-1101 Requirements for Track and Structures Clearances):
- Track position: 25 mm
- Gauge widening: 8 mm
- Crosslevel error: 20 mm
- Vertical alignment variation: 20 mm
Clearance between Reference Profile (+ Track Maintenance Tolerance) and railway operational structure to be 150mm as a minimum. It is assumed no windows for staff or passengers to lean out.
Vehicle passing clearance between References Profiles (+ Track Maintenance Tolerance) to be 100mm as a minimum. It is assumed no windows for staff or passengers to lean out.

IRL2 Reference Profile + Track Maintenance Tolerances

NOTE:
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All Co-ordinates are in Irish Transverse Mercator Grid (ITM) as defined by OSi active GPS station Tallaght College (TLLG).



DART+ South West

NTA
Oifige Náisiúnaí Iompar
National Transport Authority

2040
Tionscadal Éireann
Project Ireland

EUROPEAN UNION
European Union

Rev	Date	Dm	Chk'd	App'd	Description
v01	21/04/2021	JYM	FJC	AG	FOR PUBLIC CONSULTATION No1

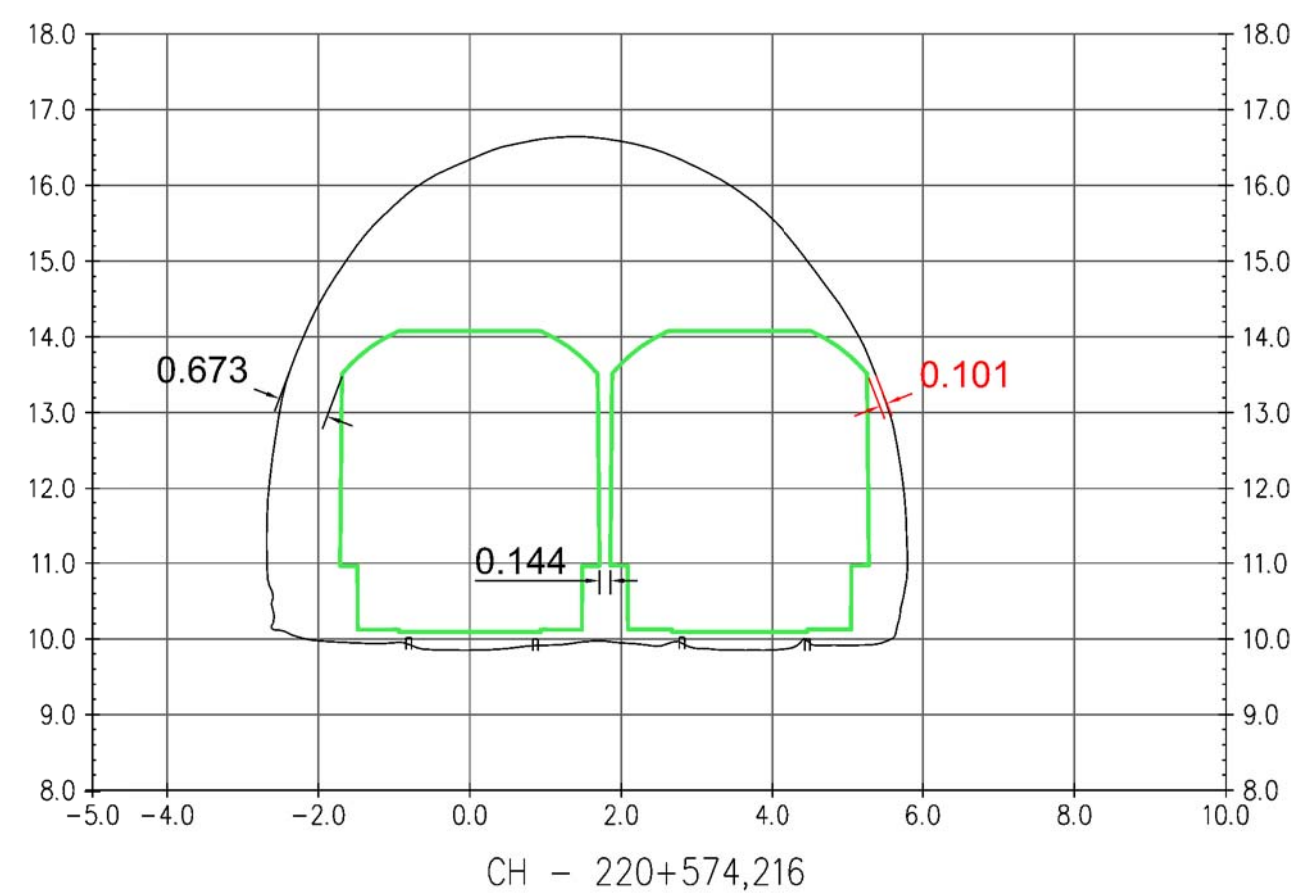
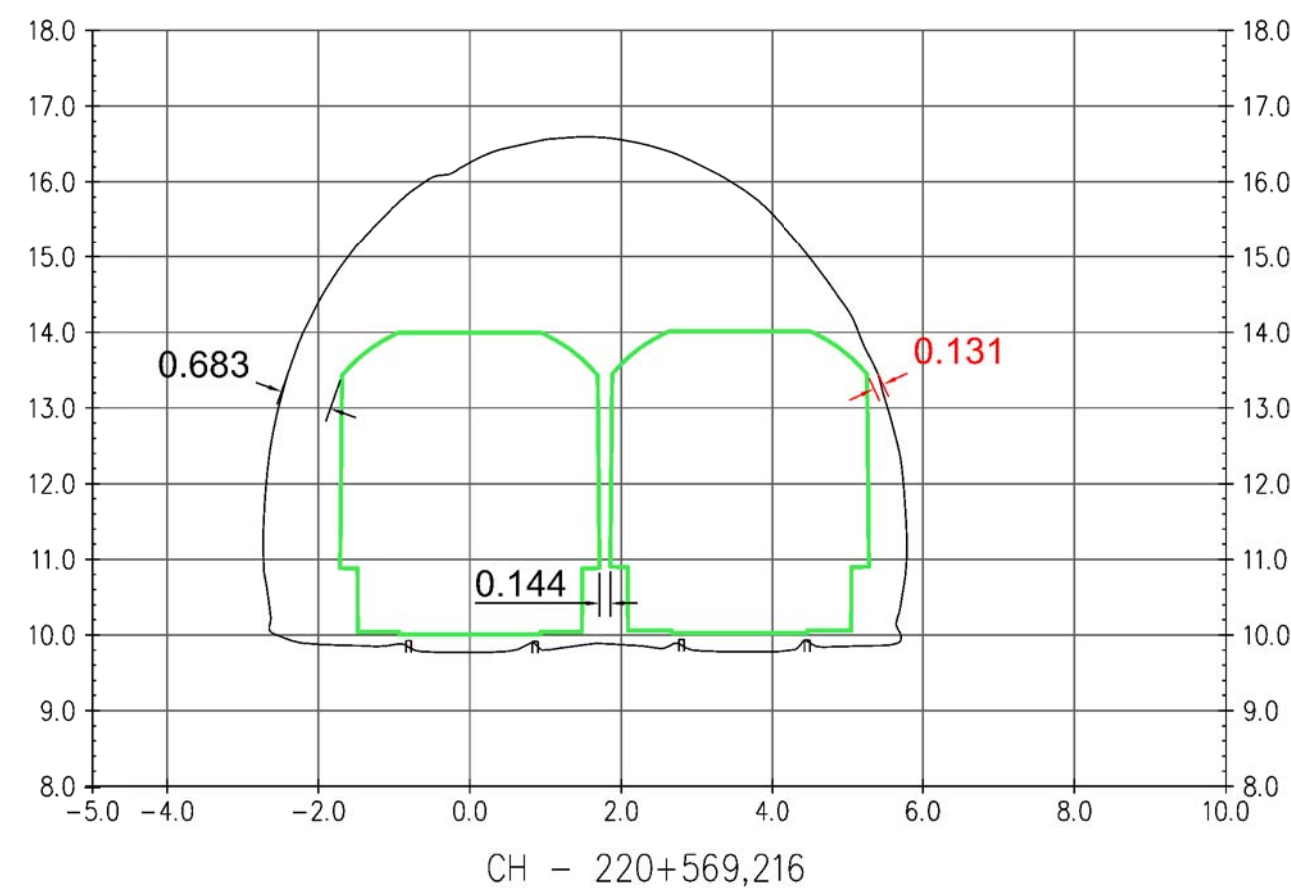
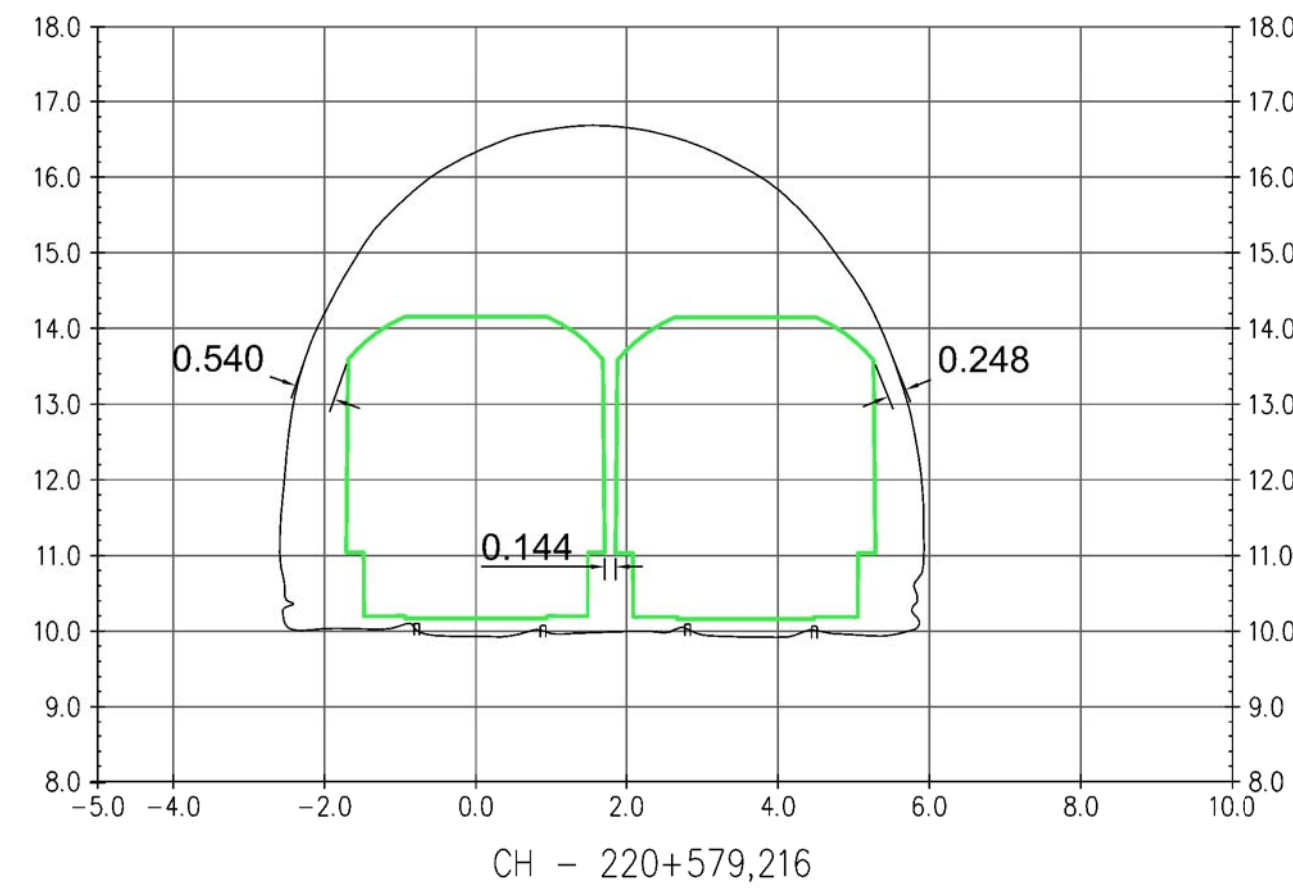
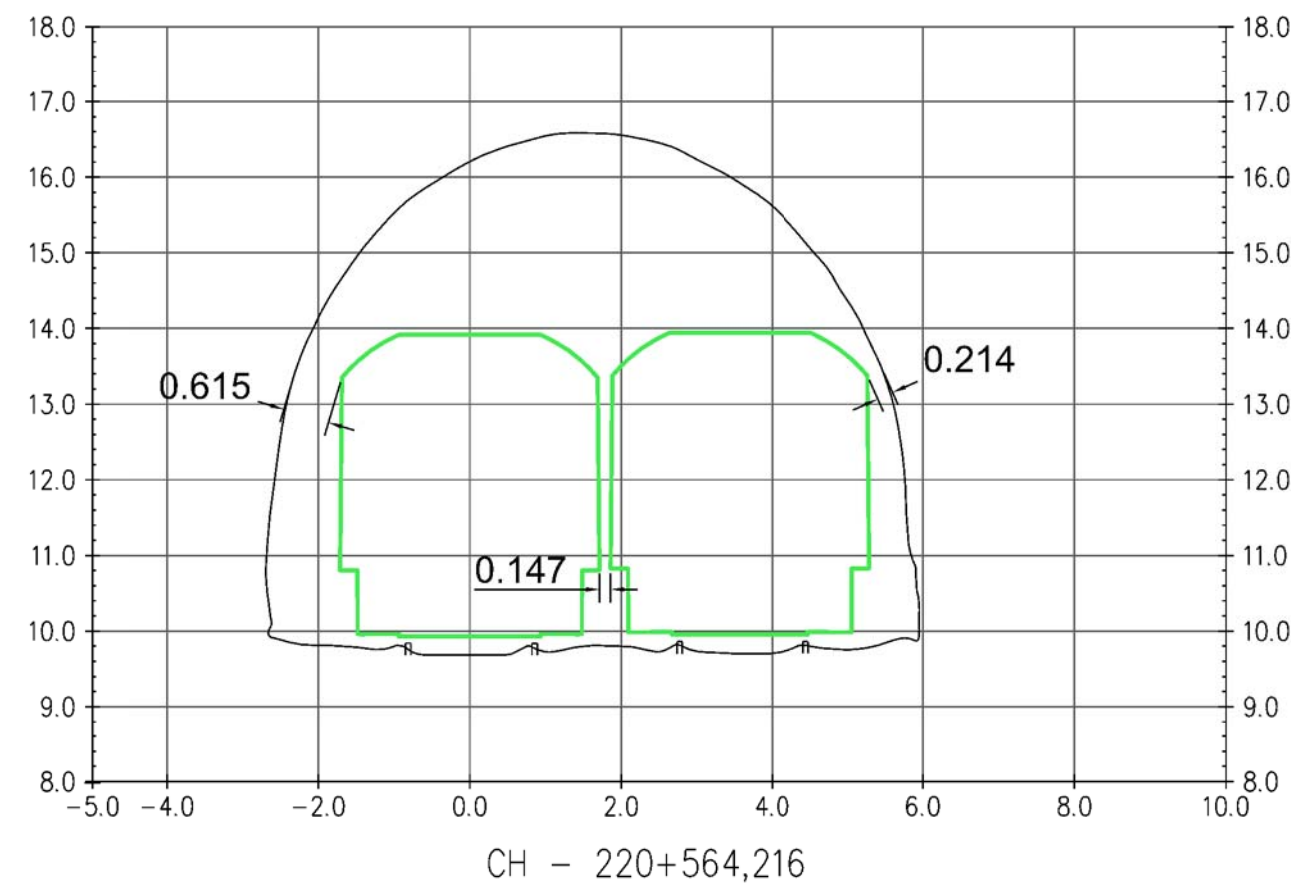
Client		Engineering Designer	
Iarnród Éireann Irish Rail		ATKINS TYPSA Member of the SNC-Lavalin Group	
Date	Scale	@ A1 @ A3	Drawn JYM
Project Code	Issuer	ATK	Checked FJC
		QMS Code	Approved AG

Project Title	
DART + SOUTH WEST	
Drawing Title	
PHOENIX PARK TUNNEL CROSS SECTIONS (SHEET 1 of 2) OPTION 0	
Drawing File Name	
DP-04-23-DWG-PW-TTA-35756	

Version		Status
v01		S3

DO NOT SCALE USE FIGURED DIMENSIONS ONLY

SECTION BETWEEN 220+564,216/220+579,216



NOTE:

In Option 1 an optimised track alignment is proposed to comply with IÉ standards. Slab track is proposed in Option 1.

All distances in metres unless otherwise stated

IRL2 reference profile (Standard CME-TMS-327 Vehicle Gauging)

Coefficients of the slab track tolerances adopted for the kinematic gauge (Standard EN 15273-3. Gauges-Part 3: Structure Gauges):

- Track position,0,005 mm
- Gauge widening,0,008 mm
- Crosslevel error,0,005 mm
- Vertical alignment variation,0,005 mm

Clearance between Reference Profile (+ Track Maintenance Tolerance) and railway operational structure to be 150mm as a minimum. It is assumed no windows for staff or passengers to lean out.

Vehicle passing clearance between References Profiles (+ Track Maintenance Tolerance) to be 100mm as a minimum. It is assumed no windows for staff or passengers to lean out.

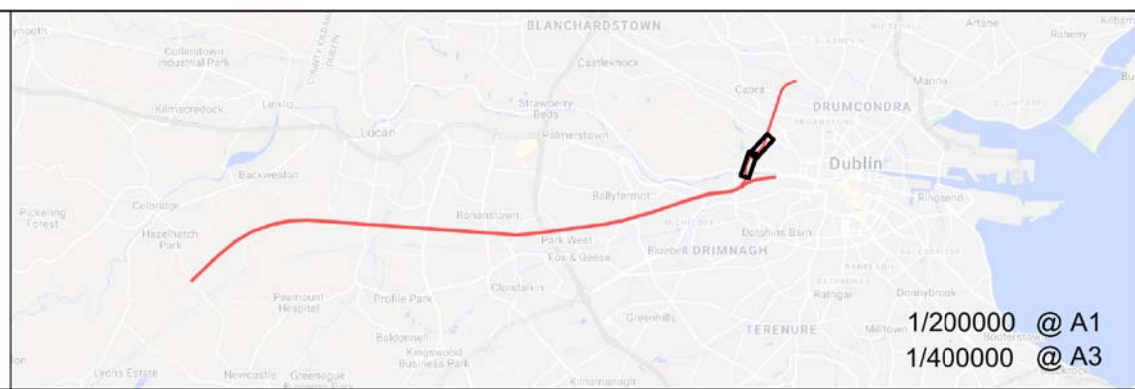
— IRL2 Reference Profile + Track Maintenance Tolerances

NOTE:

**INFORMATION IS PRESENTED FOR
PUBLIC CONSULTATION NO. 1.**

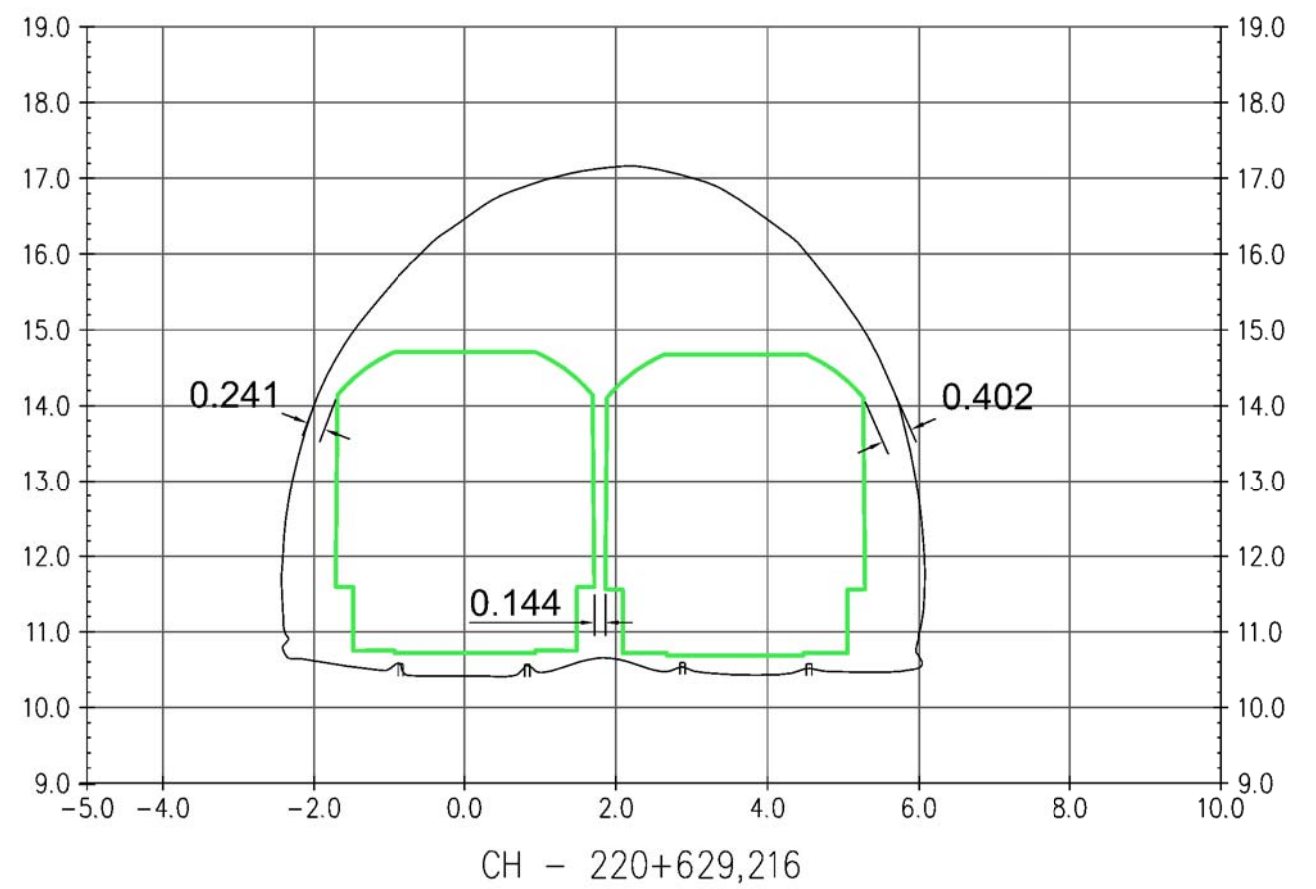
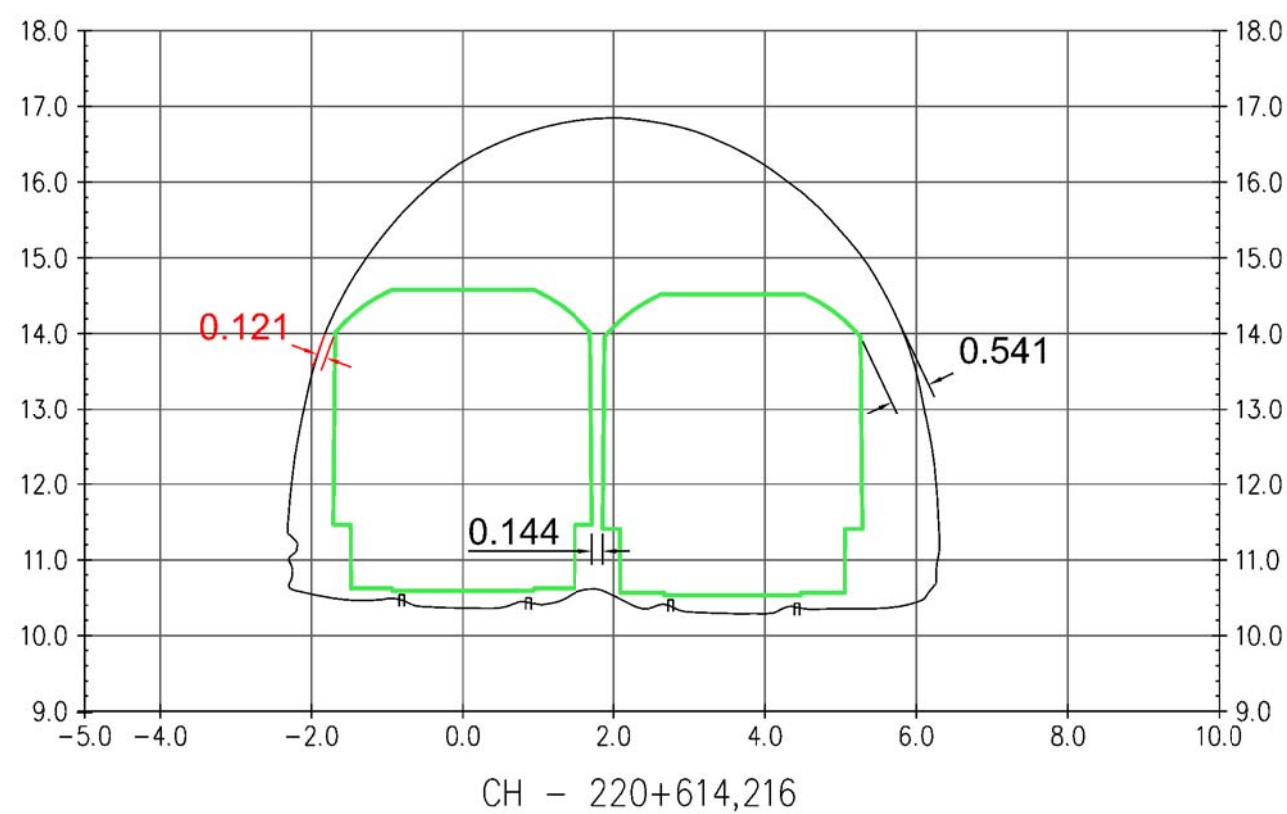
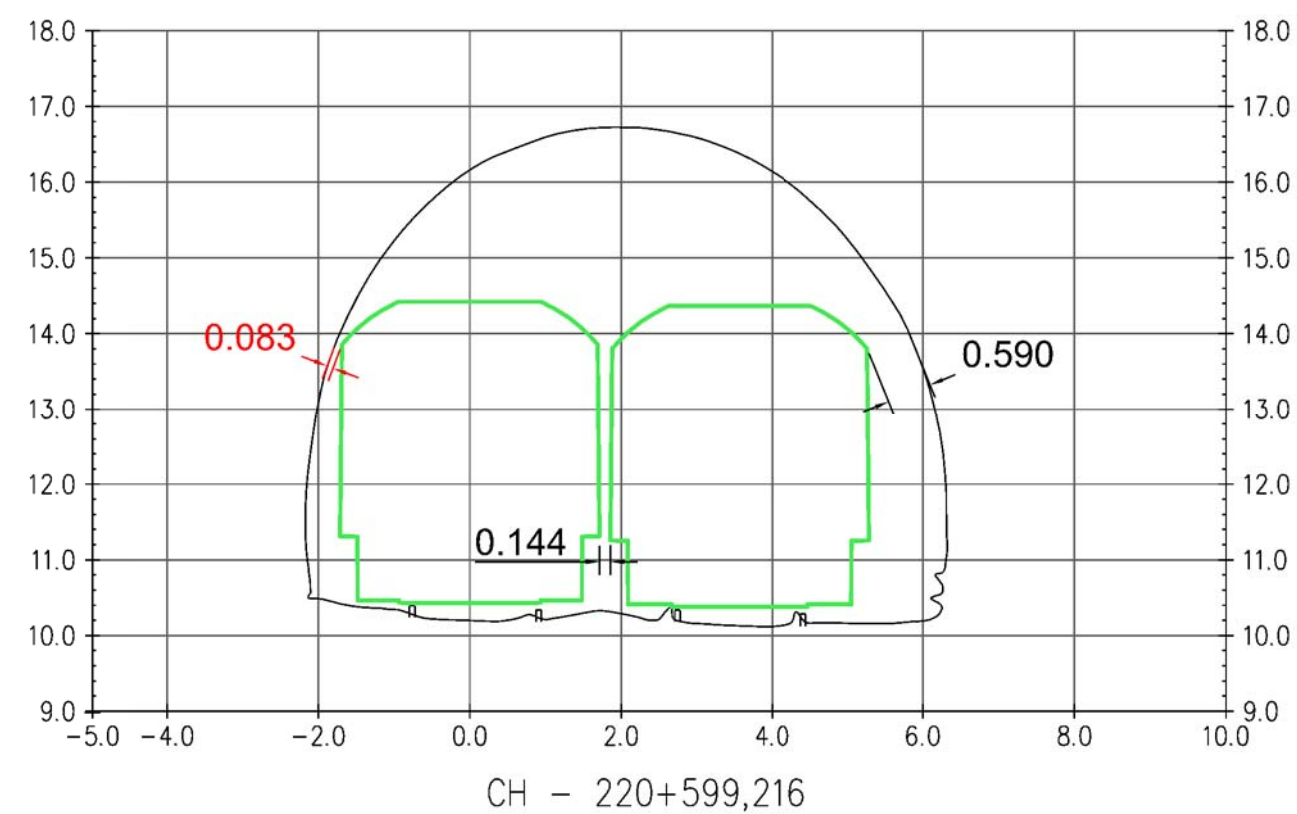
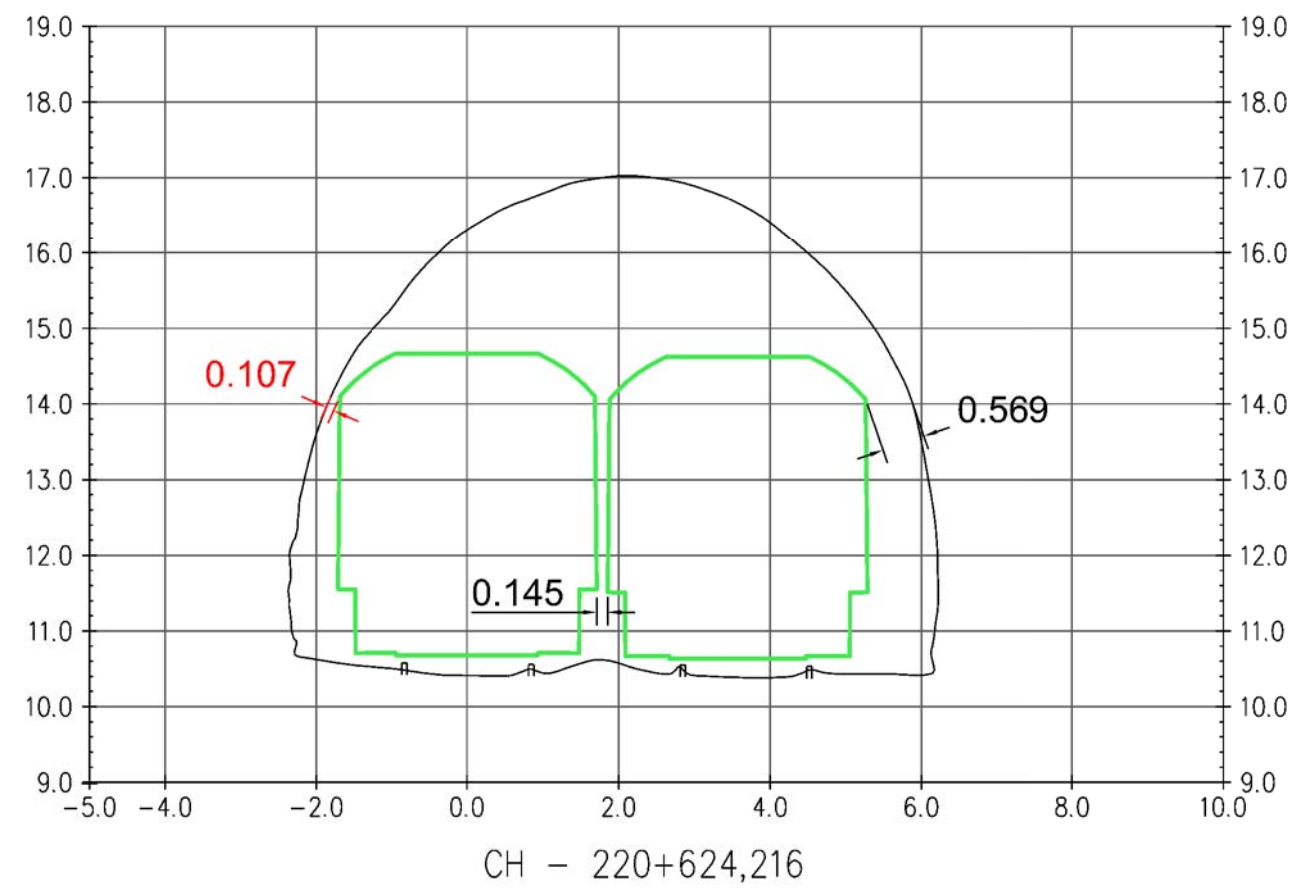
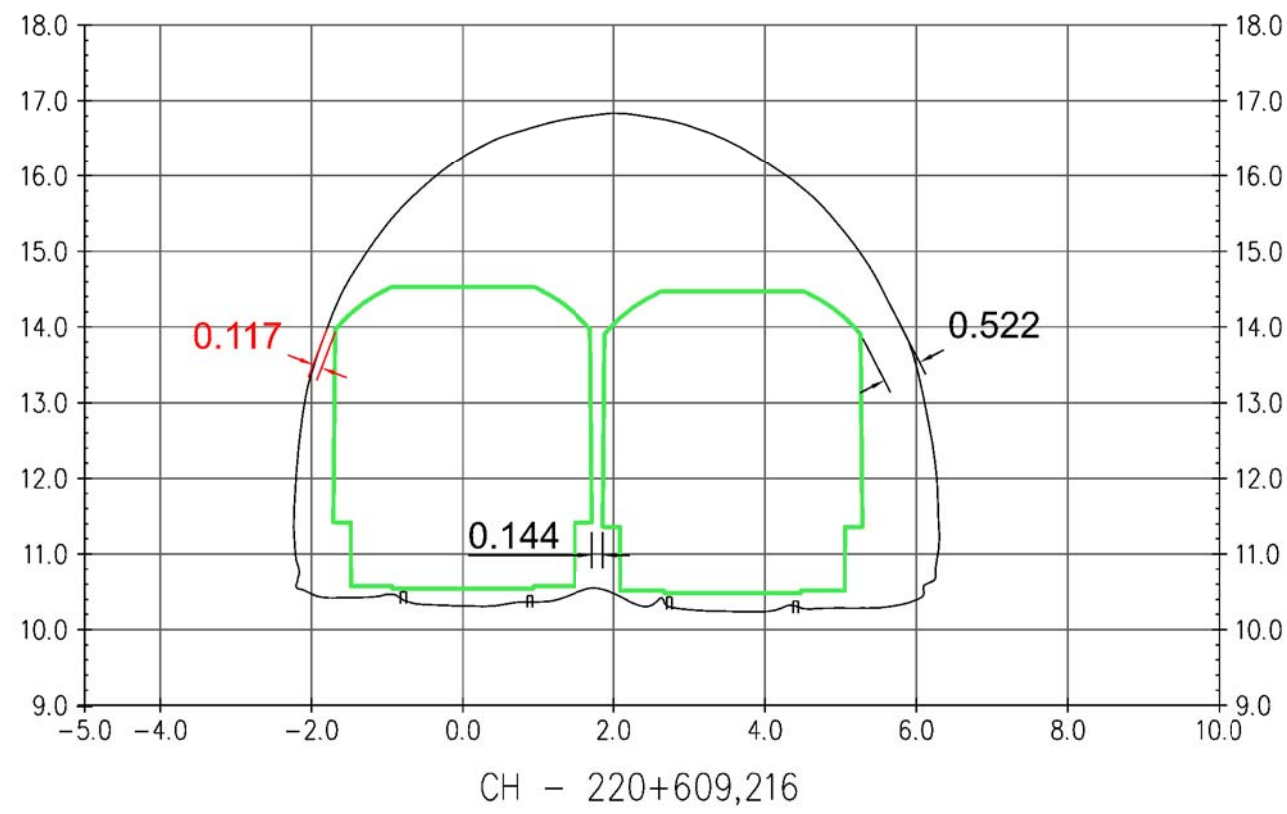
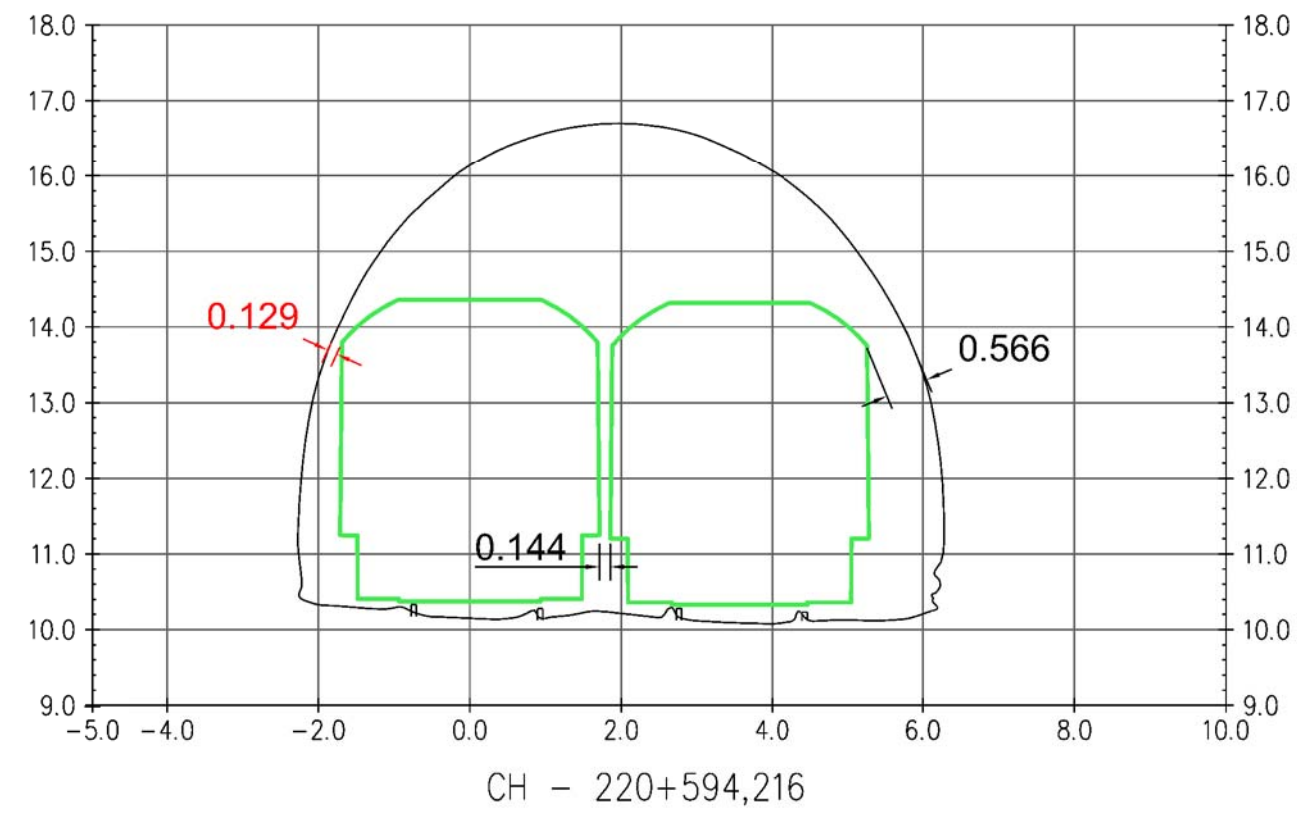
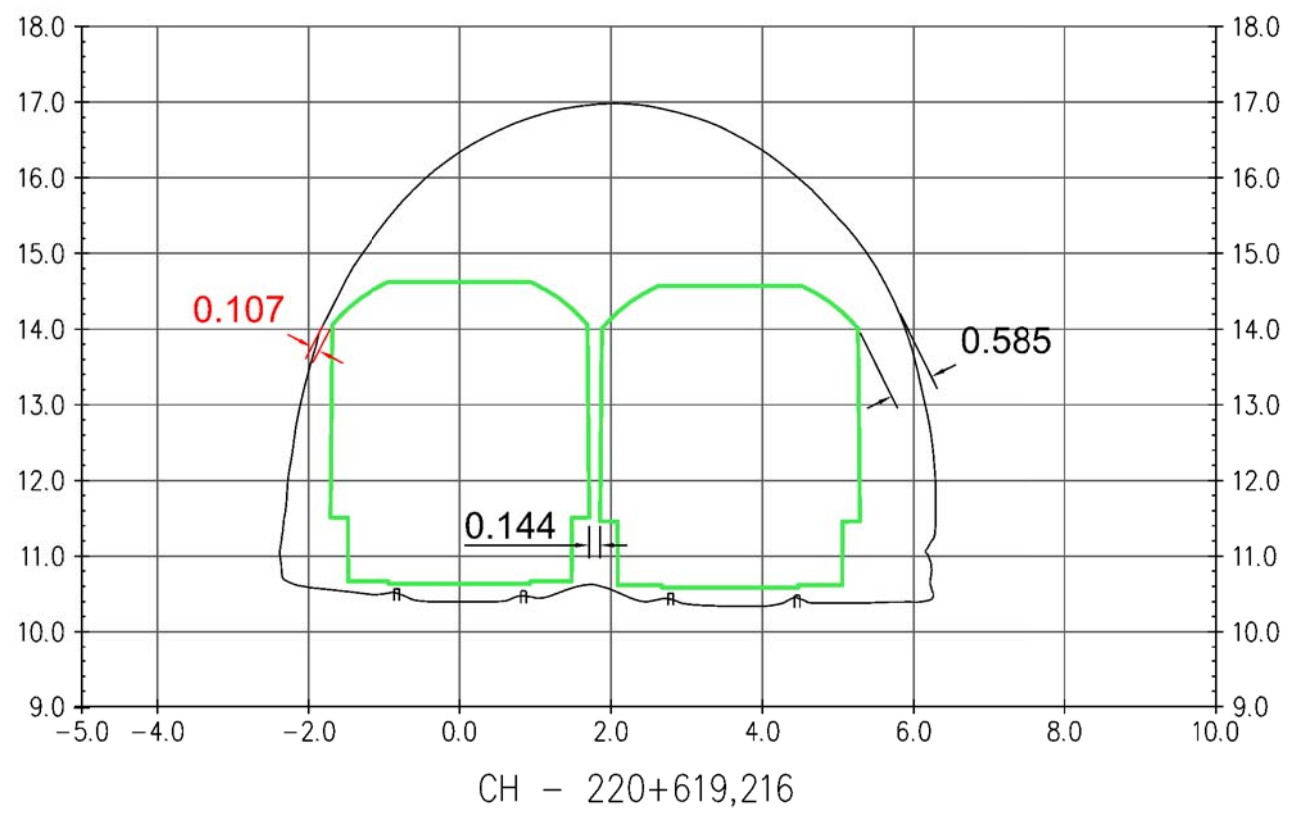
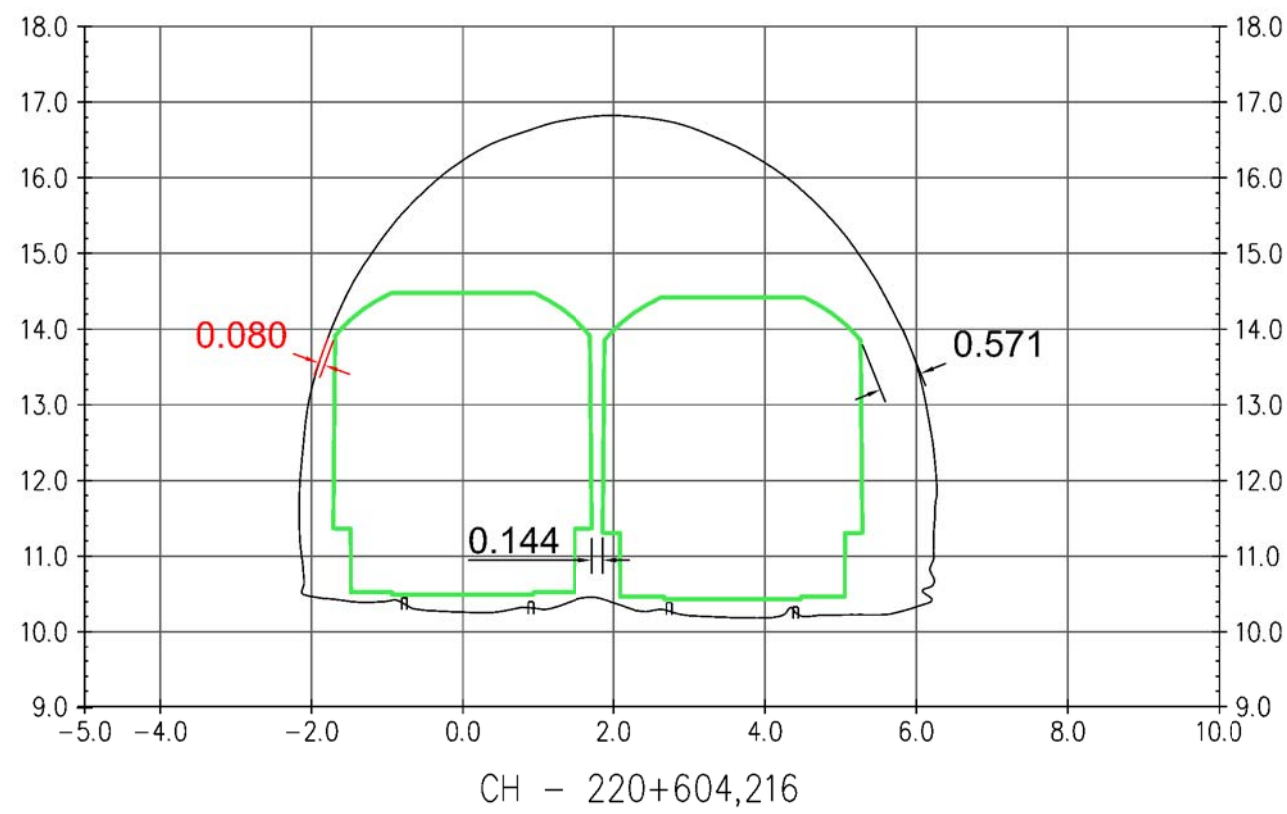
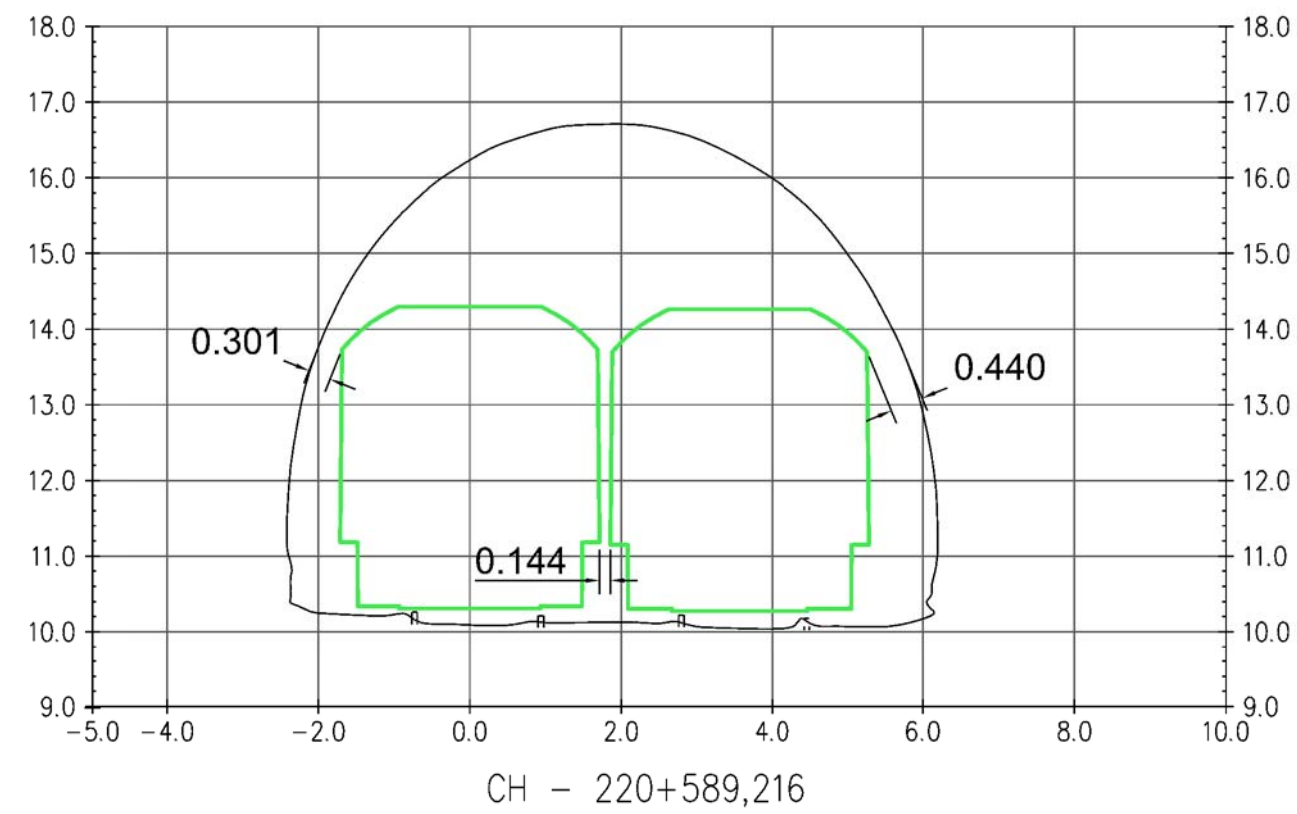
NOT ALL DESIGN DETAIL OR CONSTRUCTION RELATED
DETAIL ARE KNOWN AT THIS TIME, E.G. SUBSTATION
LOCATIONS, CONSTRUCTION COMPOUNDS, TEMPORARY
BRIDGE REQUIREMENTS, TEMPORARY UTILITY
DIVERSIONS AND OTHER ELEMENTS

POTENTIAL INTERFERENCE WITH PROPERTY RIGHTS IS
BASED ON THE LEVEL OF INFORMATION AND DESIGN
AVAILABLE AT THIS TIME. FURTHER WORK INCLUDING
DETAILED DESIGN AND TECHNICAL AND CONSTRUCTION
RELATED SOLUTIONS WILL SEEK TO MINIMISE
POTENTIAL INTERFERENCE WITH PROPERTY RIGHTS



Rev	Date	Drn	Chk'd	App'd	Description
v01	21/04/2021	JYM	FJC	AG	FOR PUBLIC CONSULTATION No1

SECTION BETWEEN 220+589,216/220+629,216



NOTE:
In Option 1 an optimised track alignment is proposed to comply with IE standards.
Slab track is proposed in Option 1
All distances in metres unless otherwise stated
IRL2 reference profile (Standard CME-TMS-327 Vehicle Gauging)
Coefficients of the slab track tolerances adopted for the kinematic gauge (Standard EN 15273-3. Gauges-Part 3: Structure Gauges):
- Track position:0,005 mm
- Gauge widening:0,008 mm
- Crosslevel error:0,005 mm
- Vertical alignment variation:0,005 mm
Clearance between Reference Profile (+ Track Maintenance Tolerance) and railway operational structure to be 150mm as a minimum. It is assumed no windows for staff or passengers to lean out.
Vehicle passing clearance between References Profiles (+ Track Maintenance Tolerance) to be 100mm as a minimum. It is assumed no windows for staff or passengers to lean out.

IRL2 Reference Profile + Track Maintenance Tolerances

NOTE:
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All Co-ordinates are in Irish Transverse Mercator Grid (ITM) as defined by OSi active GPS station Tallaght College (TLLG).



DART+ South West

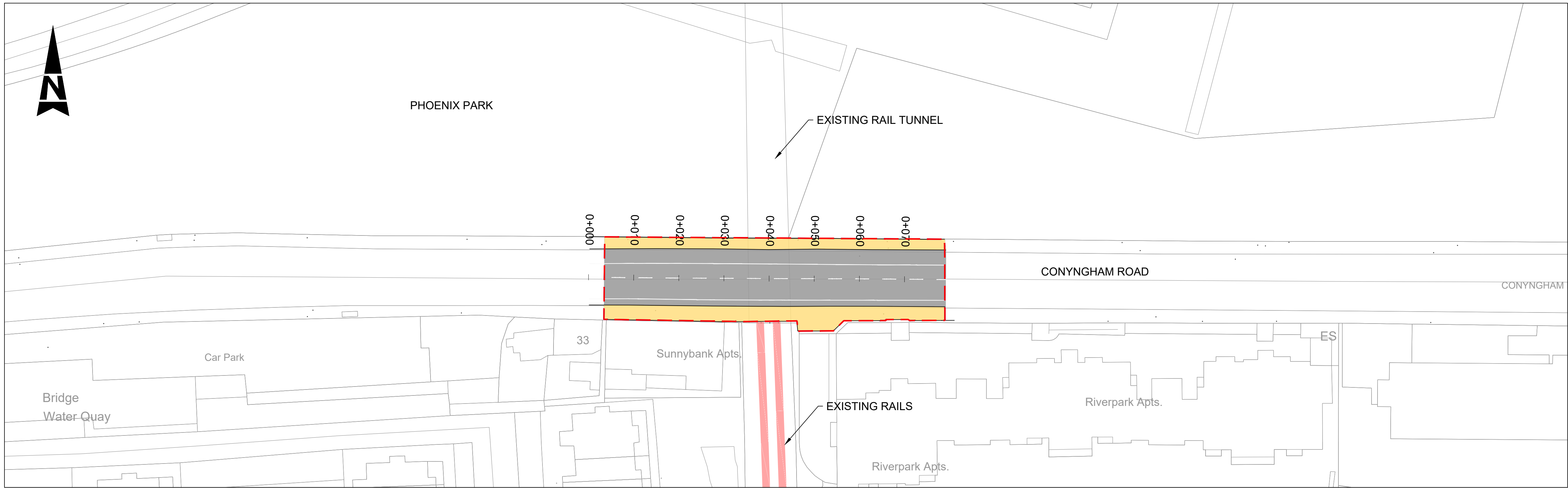
NTA
National Transport Authority
2040
Túscairde Éireann
Project Ireland
European Union

Rev	Date	Dm	Chk'd	App'd	Description
v01	21/04/2021	JYM	FJC	AG	FOR PUBLIC CONSULTATION No1

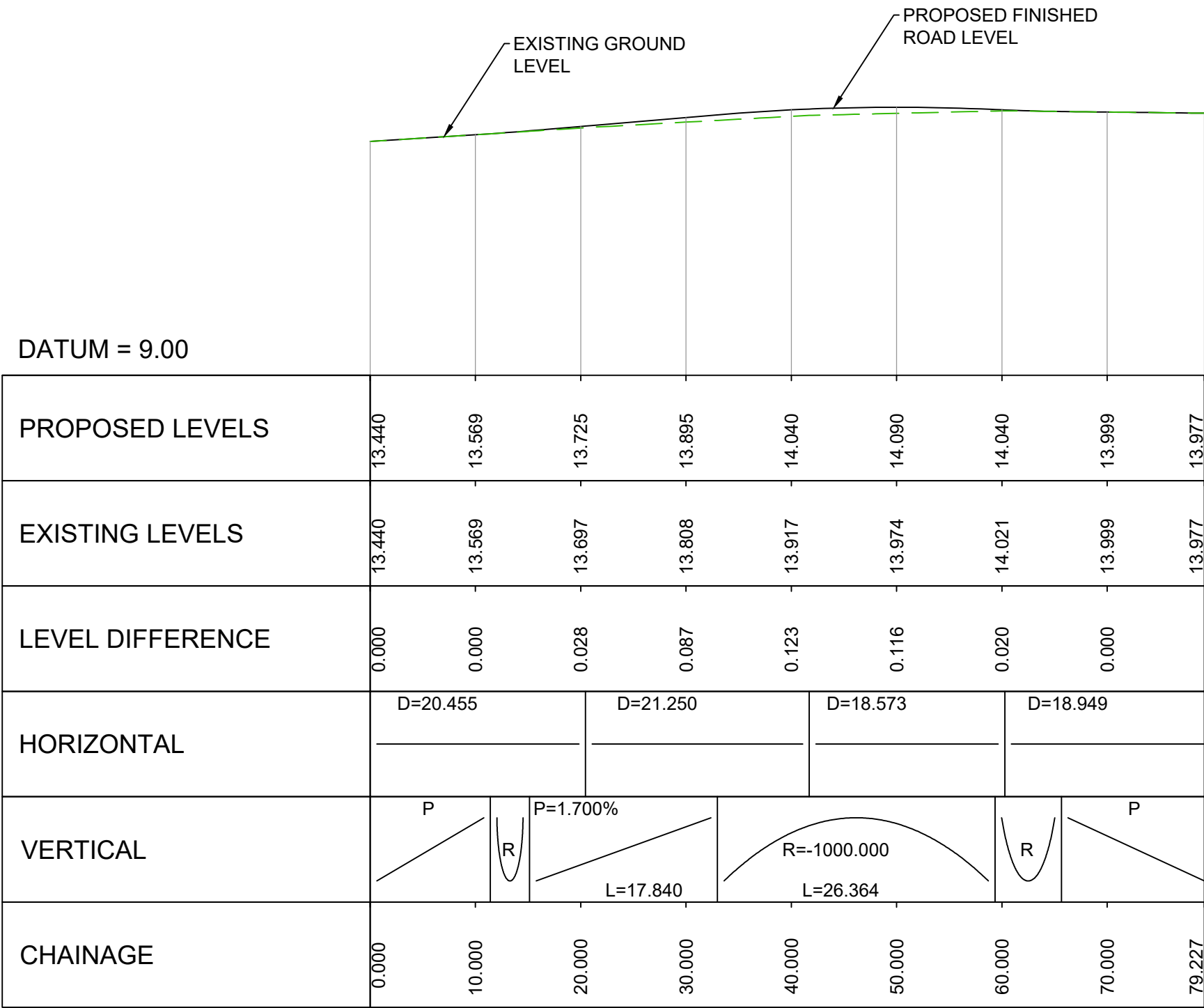
Client Iarnród Éireann Irish Rail		Engineering Designer ATKINS Supported by: rps	
Date	Scale	@ A1 @ A3	Drawn JYM
Project Code	Issuer ATK	QMS Code	Checked FJC
		Approved AG	

Project Title DART + SOUTH WEST		Drawing Title PHOENIX PARK TUNNEL CROSS SECTIONS (SHEET 2 of 2) OPTION 1	
Drawing File Name DP-04-23-DWG-PW-TTA-35760		Version V01	Status S3

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PLAN - CONYNGHAM ROAD BRIDGE (OBO2)
SCALE 1:500



LONGITUDINAL SECTION - CONYNGHAM ROAD BRIDGE (OBO2)
SCALE 1:500 Horizontal, 1:100 Vertical

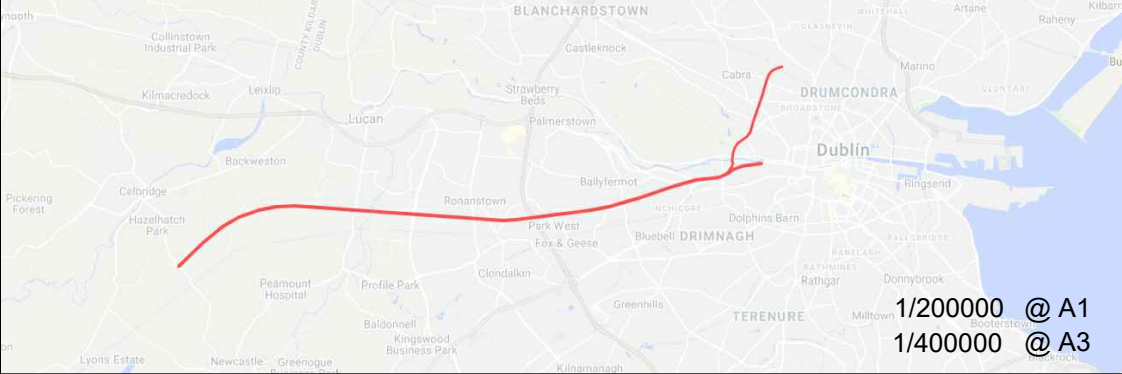
LEGEND:
--- PROPOSED BOUNDARY LIMIT - PERMANENT WORKS

NOTE: INFORMATION IS PRESENTED FOR PUBLIC CONSULTATION NO. 1.

- NOT ALL DESIGN DETAIL OR CONSTRUCTION RELATED DETAILS ARE KNOWN AT THIS TIME, E.G. SUBSTATION LOCATIONS, CONSTRUCTION COMPOUNDS, TEMPORARY BRIDGE REQUIREMENTS, TEMPORARY UTILITY DIVERSIONS AND OTHER ELEMENTS.
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Preferred

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Rev	Date	Drm	Chk'd	App'd	Description
v01	21/04/2021	DB	JX	TM	FOR PUBLIC CONSULTATION No1

Date 02.02.21

Project Code 5199586

Scale AS SHOWN @ A3

Issuer ATK

Client

Engineering Designer

Supported by: TYPESA, Atkins, rps

Drawn DB

Checked JX

Approved TM

Project Title		DART+ SOUTH WEST	
Drawing Title		CONYNGHAM ROAD BRIDGE (OBO2) OPTION 2 PLAN AND PROFILE	
Drawing File Name	DP-04-23-DWG-CV-TTA-35270	Version	v01
Status	S3		

DO NOT SCALE USE FIGURED DIMENSIONS ONLY