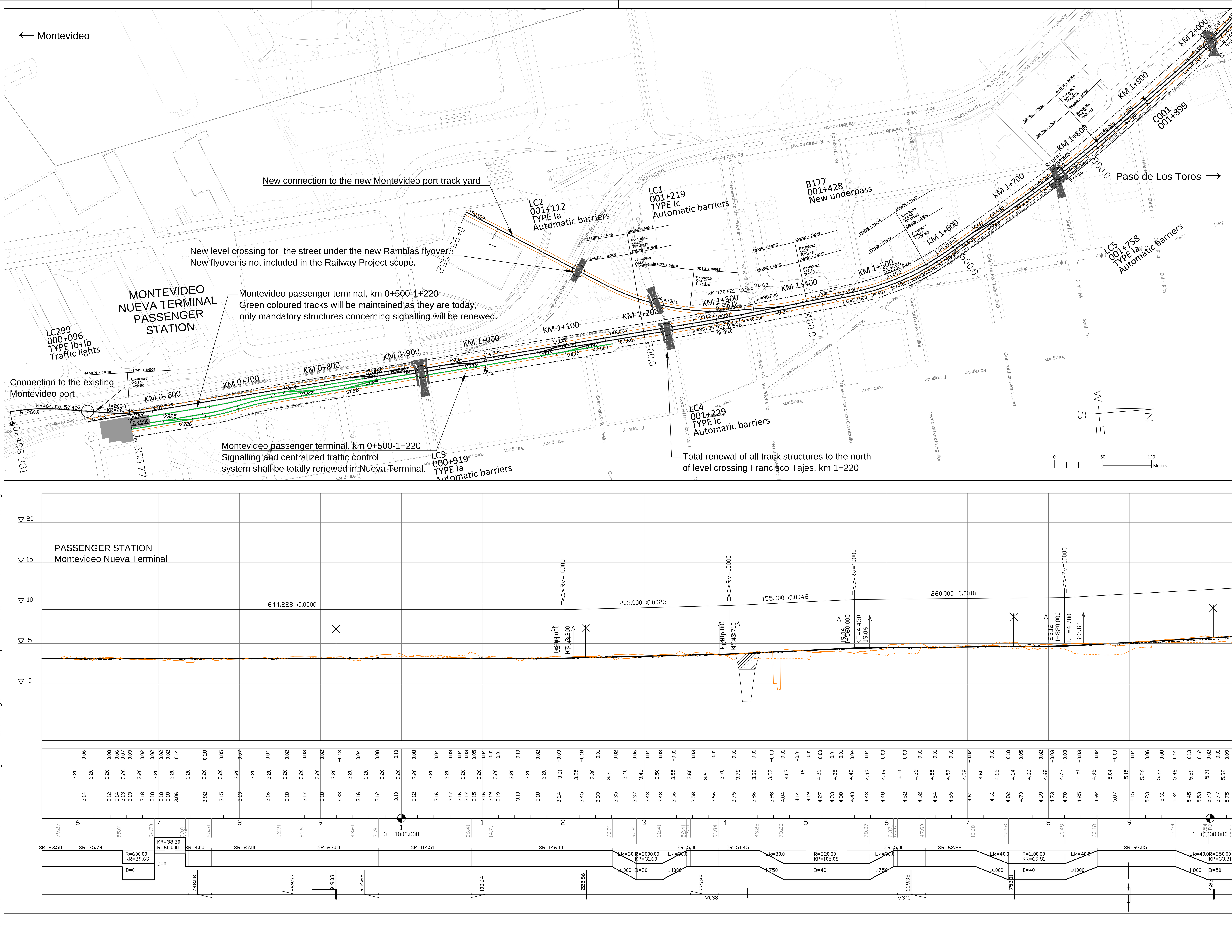

LEGEND, MAP

- New railway alignment
- Existing railway alignment (not in the Railway Project scope)
- Railway Area borderline
- Secondary Side Tracks - Horizontal geometry pre-designed (Secondary side tracks and their switches will be designed and constructed based on Appendix Q)
- Removal track
- Street or road modification area in level crossings or underpasses/flyovers
- Modification needed to the property access
- Affected parallel roads and streets and maintenance roads
- Road closing down
- Limit of designed soil cut (open cut or cut with a retaining wall)
- Limit of designed embankment fill, not including possible ditch
- Existing stations or passenger platforms
- New passenger platforms
- Symbols

BXXX BXXX

Railway bridge or underpass, Flyover

CXXX

Culvert

LCXXX

Level crossing

Track alignment with design geometry figures

- R= curve radius (m)
- KR= length of curve (m)
- D= track cant (mm)
- Lk= length of transition curve (m)
- Rv= radius of vertical curve
- K= elevation
- TG= lenght of tangent
- 123.345= length of straight line (m)

SPT-sounding, terminated at cobble, boulder, or bedrock contact.

- y. 2016= year of investigation, location of 2016 soundings not accurate
- 1, 217= point number

Disturbed Sample

- y. 2017= year of investigation
- TR02= point number

LEGEND, PROFILE

- Vertical railway alignment (S=radius of vertical curve, KT=elevation point)
- Ground surface
- Ground elevation on the left side of track centre line (-20m) and on the right side of track centre line (+20m)
- Culvert location (elevation will be designed in detailed design phase)
- Level crossing
- Overpass bridge, railway or underpass bridge
- Elevation figures
- Difference between existing ground and designed track elevation
- Designed track elevation (the running surface of the rail)
- Existing ground elevation
- Km stationing

1
0 +1000.000

Horizontal alignment, schematic

- SR= length of straight line (m)
- R= curve radius (m)
- KR= length of curve (m)
- D= track cant (mm)
- Lk= length of transition curve (m)

Version 15.12.2017

Revision	Explanation	Date	Designer	Date	Acceptor

Customer: MINISTERIO DE TRANSPORTE Y OBRAS PÚBLICAS	Project: Railway Project
	Design phase: Pre-engineering, Phase 2
Supplier: VR TRACK	Content: Track map and profile Km 0+0000 - 2+0000

Drawer	15.12.2017	UPa
Designer	15.12.2017	HMa / MLe
Supervisor	15.12.2017	SVi
Accept.		
Owner acc.		

Scale	map 1:2000, profile 1:2000 / 1:200
Coordinate system Elevation reference system	WGS 84 UTM 21 S, Local orthometric height
Railway line	Montevideo - Paso de Los Toros

Archive	Type	Number	Rev.	Sheet	Sheets total
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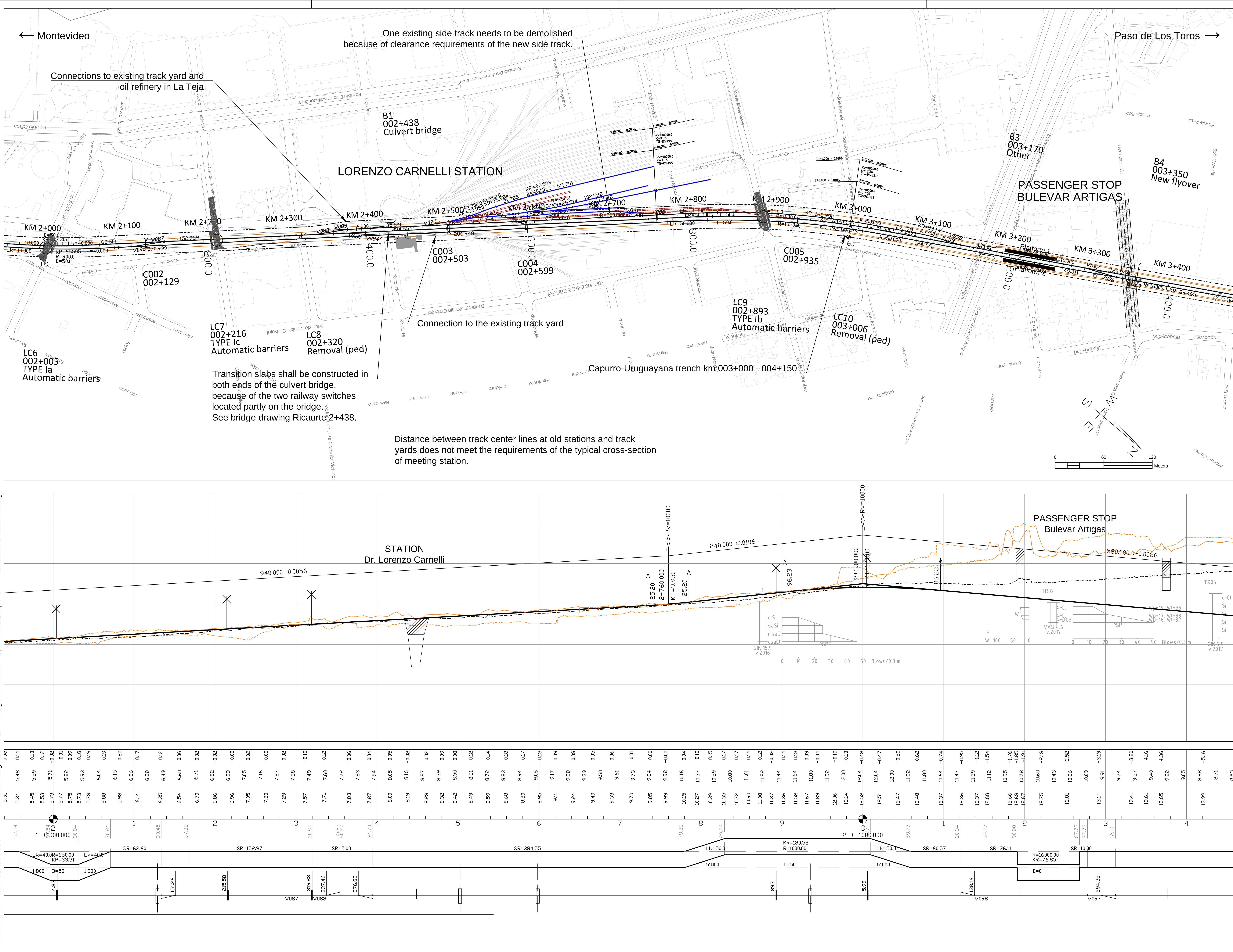

LEGEND, MAP

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- Existing stations or passenger platforms
- New passenger platforms
- Symbols: BXXX BXXX — Railway bridge or underpass, Flyover
- CXXX — Culvert
- LCXXX — Level crossing
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  - R= curve radius (m)
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  - K= elevation
  - TG= length of tangent
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- SPT-sounding, terminated at cobble, boulder, or bedrock contact.
  - y. 2016= year of investigation, location of 2016 soundings not accurate
  - 1, 217= point number
- Disturbed Sample
  - y. 2017= year of investigation
  - TR02= point number

LEGEND, PROFILE

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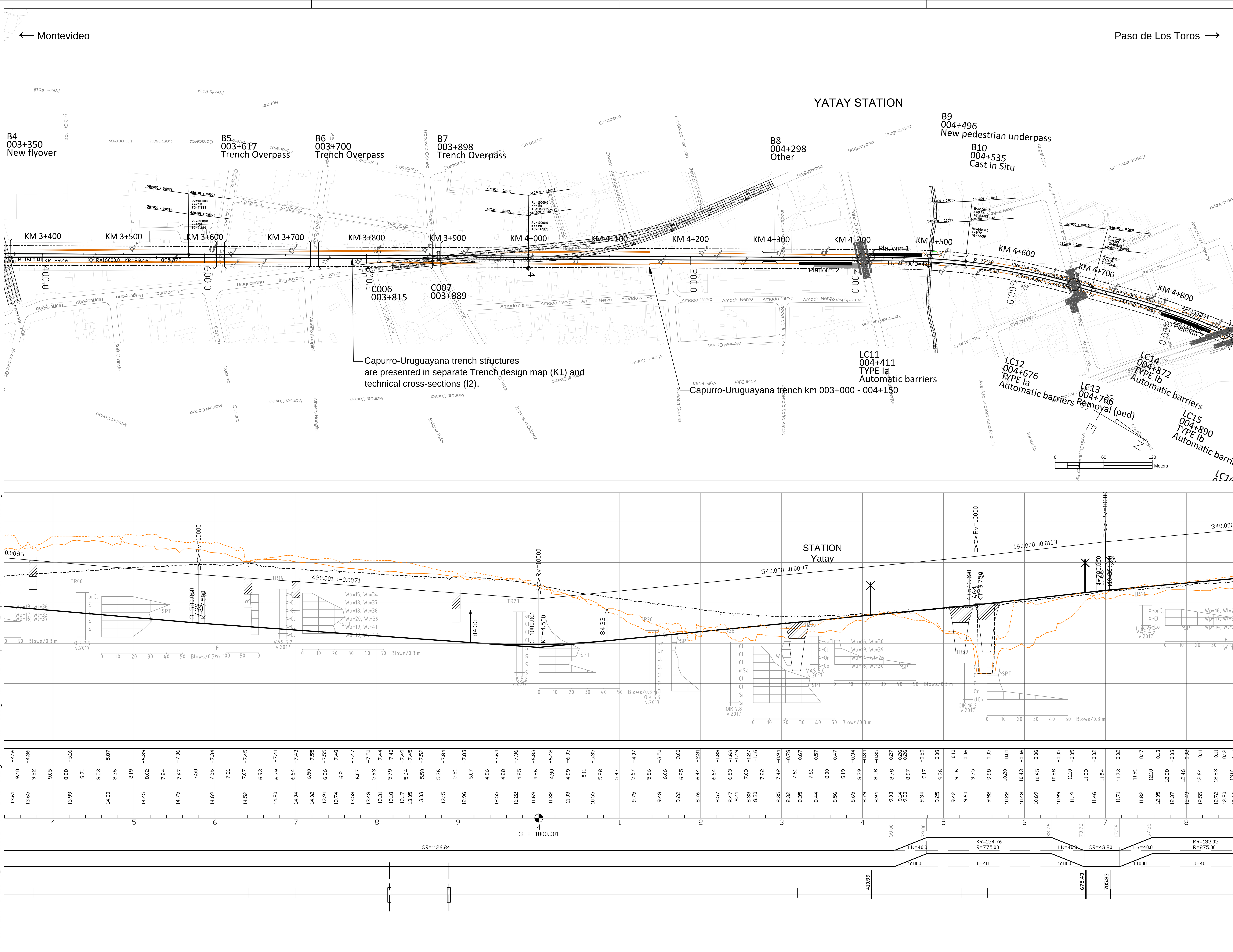
- Elevation figures
  - Difference between existing ground and designed track elevation
  - Designed track elevation (the running surface of the rail)
  - Existing ground elevation
- Km stationing (1 0 +1000.000)
- Horizontal alignment, schematic
  - SR= length of straight line (m)
  - R= curve radius (m)
  - KR= length of curve (m)
  - D= track cant (mm)
  - Lk= length of transition curve (m)

Version 15.12.2017

Revision	Explanation	Date	Designer	Date	Acceptor

Customer: MINISTERIO DE TRANSPORTE Y OBRAS PÚBLICAS	Project: Railway Project
	Design phase: Pre-engineering, Phase 2
	Content: Track map and profile, Km 2+0000 - 3+0400
Supplier: VR TRACK	Scale: map 1:2000, profile 1:2000 / 1:200
Drawer: 15.12.2017 UPa	Coordinate system / Elevation reference system: WGS 84 UTM 21 S, Local orthometric height
Designer: 15.12.2017 HMa / MLe	Railway line: Montevideo - Paso de Los Toros
Supervisor: 15.12.2017 SVi	Archive / Type / Number / Rev. - / Sheet 2 / Sheets total 195
Accept.	
Owner acc.	



LEGEND, MAP

- New railway alignment
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  - y. 2016= year of investigation, location of 2016 soundings not accurate
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- Disturbed Sample
  - y. 2017= year of investigation
  - TR02= point number

LEGEND, PROFILE

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- Elevation figures
  - Difference between existing ground and designed track elevation
  - Designed track elevation (the running surface of the rail)
  - Existing ground elevation
- Km stationing (0 +1000.000)
- Horizontal alignment, schematic
  - SR= length of straight line (m)
  - R= curve radius (m)
  - KR= length of curve (m)
  - D= track cant (mm)
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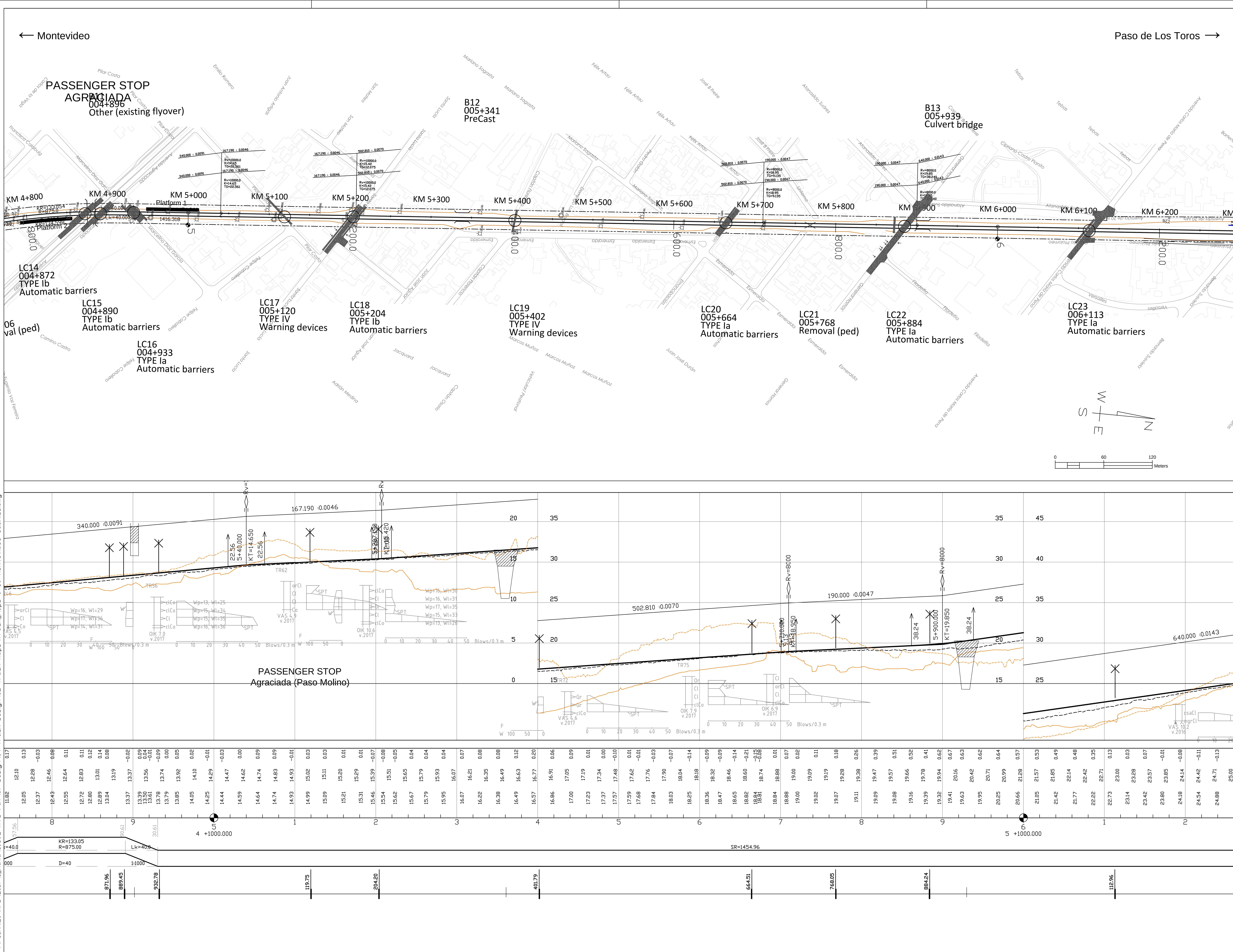
Version 15.12.2017

Revision	Explanation	Date	Designer	Date	Acceptor

Customer	MINISTERIO DE TRANSPORTE Y OBRAS PÚBLICAS
Project	Railway Project
Design phase	Pre-engineering, Phase 2
Content	Track map and profile Km 3+0400 - 4+0800
Supplier	VR TRACK
Scale	map 1:2000, profile 1:2000 / 1:200
Coordinate system / Elevation reference system	WGS 84 UTM 21 S, Local orthometric height
Railway line	Montevideo - Paso de Los Toros
Drawer	15.12.2017 UPa
Designer	15.12.2017 HMa / MLe
Supervisor	15.12.2017 SVi
Accept.	
Owner acc.	
Archive / Type / Number / Rev. / Sheet / Sheets total	- / 3 / 195



LEGEND, MAP

New railway alignment

Existing railway alignment (not in the Railway Project scope)

Railway Area borderline

Secondary Side Tracks - Horizontal geometry pre-designed
(Secondary side tracks and their switches will be designed and constructed based on Appendix Q)

Removal track

Street or road modification area in level crossings or underpasses/flyovers

Modification needed to the property access

Affected parallel roads and streets and maintenance roads

Road closing down

Limit of designed soil cut (open cut or cut with a retaining wall)

Limit of designed embankment fill, not including possible ditch

Existing stations or passenger platforms

New passenger platforms

Symbols

Railway bridge or underpass, Flyover

Culvert

Level crossing

Track alignment with design geometry figures
- R= curve radius (m)
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- K= elevation
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- y. 2016= year of investigation, location of 2016 soundings not accurate
- 1, 217= point number

Disturbed Sample
- y. 2017= year of investigation
- TR02= point number

LEGEND, PROFILE

Vertical railway alignment
(S=radius of vertical curve, KT=elevation point)

Ground surface

Ground elevation on the left side of track centre line (-20m) and on the right side of track centre line (+20m)

Culvert location (elevation will be designed in detailed design phase)

Level crossing

Overpass bridge, railway or underpass bridge

Elevation figures

Difference between existing ground and designed track elevation

Designed track elevation (the running surface of the rail)

Existing ground elevation

Km stationing

Horizontal alignment, schematic
- SR= length of straight line (m)
- R= curve radius (m)
- KR= length of curve (m)
- D= track cant (mm)
- Lk= length of transition curve (m)

Version 15.12.2017

Revision	Explanation	Date	Designer	Date	Acceptor

Customer: MINISTERIO DE TRANSPORTE Y OBRAS PÚBLICAS

Supplier: VR TRACK

Project: Railway Project

Design phase: Pre-engineering, Phase 2

Content: Track map and profile

Km 4+0800 - 6+0200

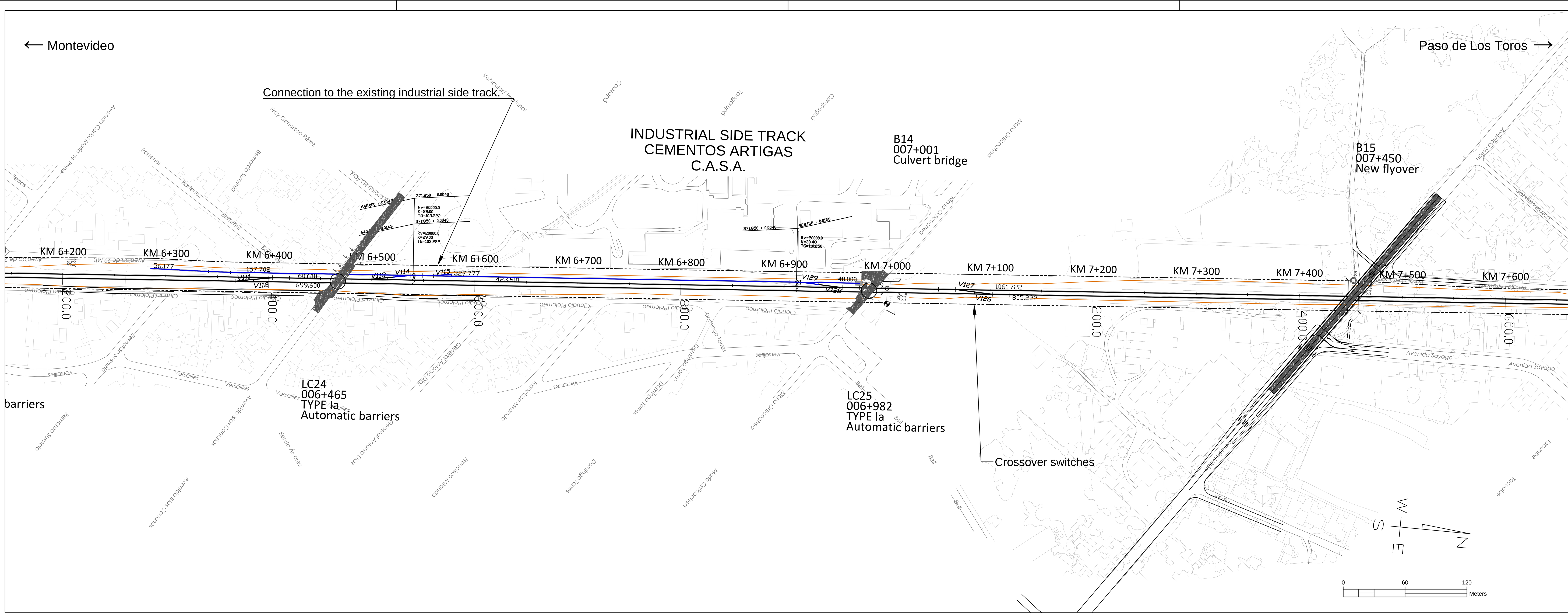
Drawer	15.12.2017	UPa
Designer	15.12.2017	HMa / MLe
Supervisor	15.12.2017	SVi
Accept.		
Owner acc.		

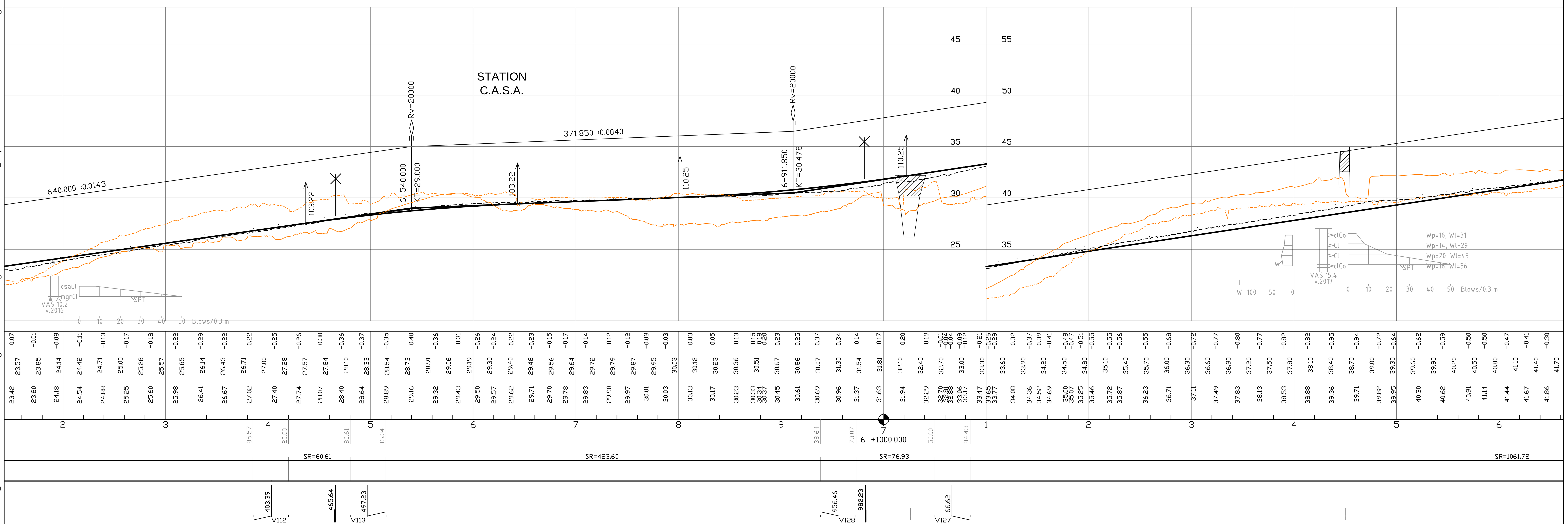
Scale: map 1:2000, profile 1:2000 / 1:200

Coordinate system / Elevation reference system: WGS 84 UTM 21 S, Local orthometric height

Railway line: Montevideo - Paso de Los Toros

Archive	Type	Number	Rev.	Sheet	Sheets total
			-	4	195





LEGEND, MAP

New railway alignment

Existing railway alignment (not in the Railway Project scope)

Railway Area borderline

Secondary Side Tracks - Horizontal geometry pre-designed
(Secondary side tracks and their switches will be designed and constructed based on Appendix Q)

Removal track

Street or road modification area in level crossings or underpasses/flyovers

Modification needed to the property access

Affected parallel roads and streets and maintenance roads

Road closing down

Limit of designed soil cut (open cut or cut with a retaining wall)

Limit of designed embankment fill, not including possible ditch

Existing stations or passenger platforms

New passenger platforms

Symbols

BXXX BXXX

Railway bridge or underpass, Flyover

CXXX

Culvert

LCXXX

Level crossing

Track alignment with design geometry figures
R= curve radius (m)
KR= length of curve (m)
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TG= lenght of tangent
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SPT-sounding, terminated at cobble, boulder, or bedrock contact.
y. 2016= year of investigation, location of 2016 soundings not accurate
1, 217= point number

Disturbed Sample
y. 2017= year of investigation
TR02= point number

LEGEND, PROFILE

Vertical railway alignment
(S=radius of vertical curve, KT=elevation point)

Ground surface

Ground elevation on the left side of track centre line (-20m) and on the right side of track centre line (+20m)

Culvert location (elevation will be designed in detailed design phase)

Level crossing

Overpass bridge, railway or underpass bridge

Elevation figures

Difference between existing ground and designed track elevation

Designed track elevation (the running surface of the rail)

Existing ground elevation

Km stationing

Horizontal alignment, schematic
SR= length of straight line (m)
R= curve radius (m)
KR= length of curve (m)
D= track cant (mm)
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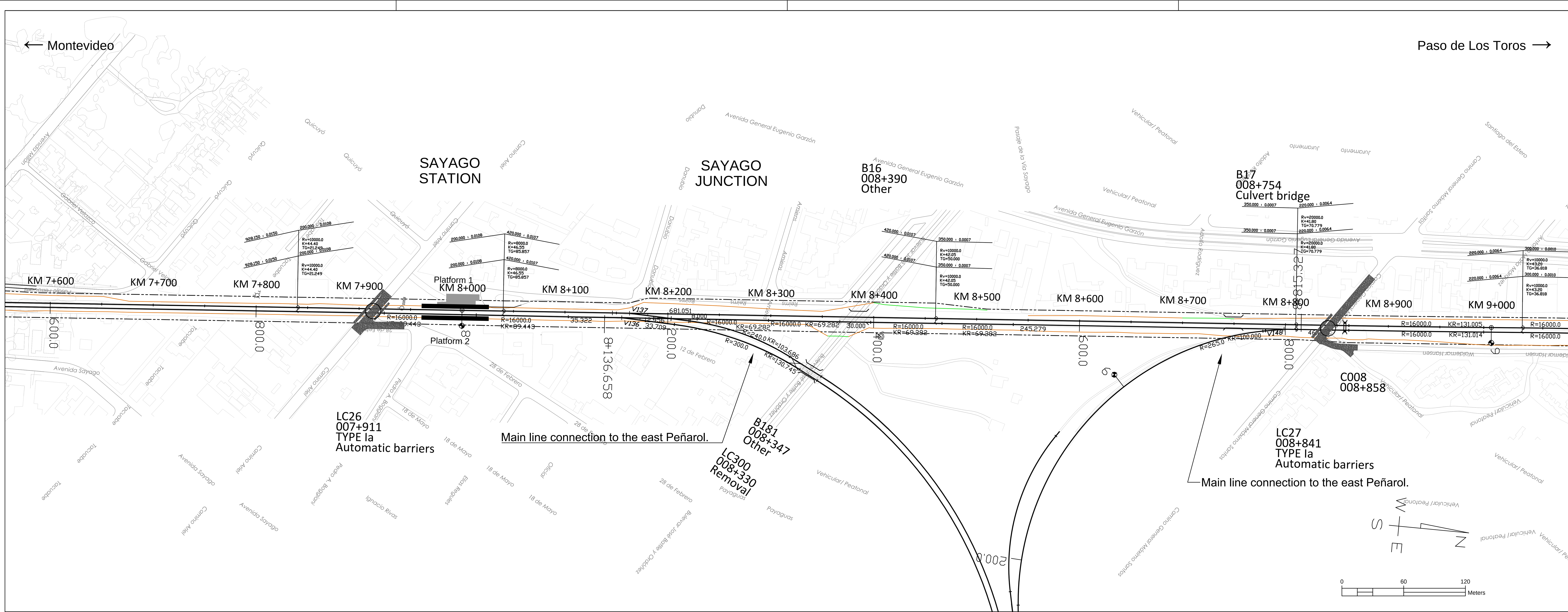
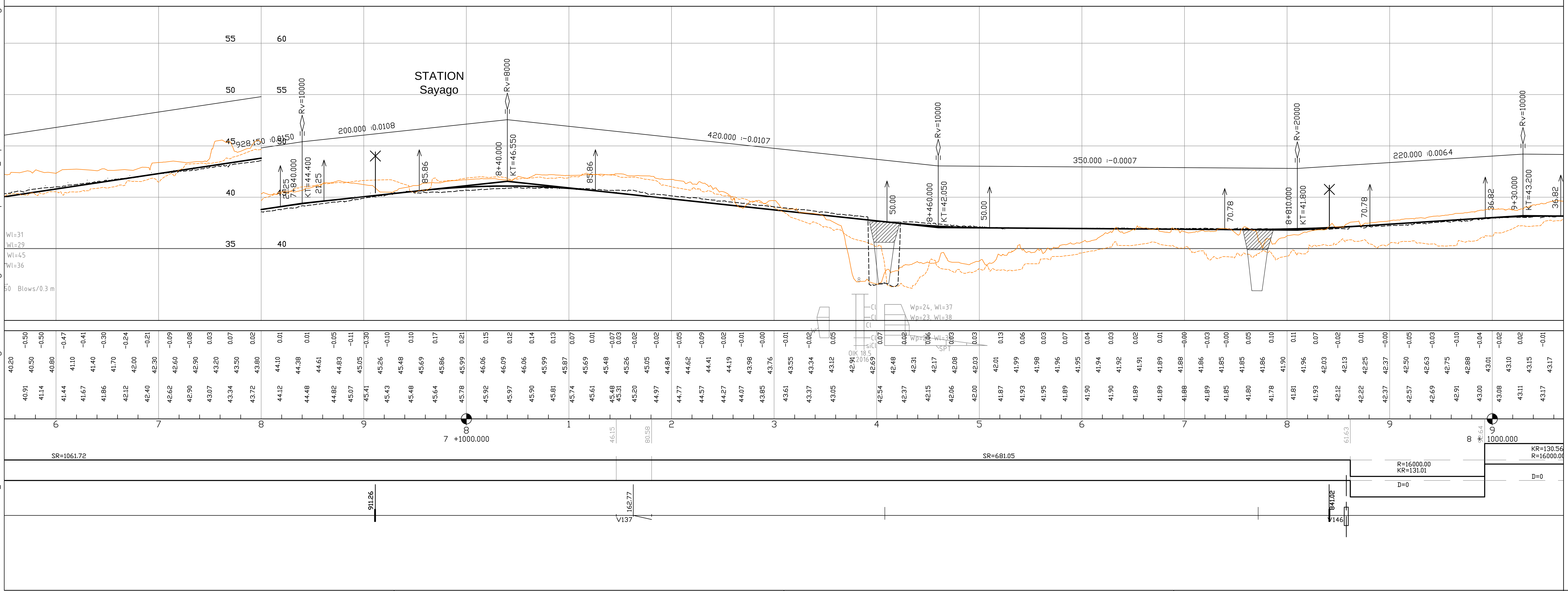
Version 15.12.2017

Revision	Explanation	Date	Designer	Date	Acceptor

Customer: MINISTERIO DE TRANSPORTE Y OBRAS PÚBLICAS	Project: Railway Project
	Design phase: Pre-engineering, Phase 2
Supplier: VR TRACK	Content: Track map and profile Km 6+0200 - 7+0600
Drawer 15.12.2017 UPa	Scale: map 1:2000, profile 1:2000 / 1:200
Designer 15.12.2017 HMa / MLe	Coordinate system / Elevation reference system: WGS 84 UTM 21 S, Local orthometric height
Supervisor 15.12.2017 SVi	Railway line: Montevideo - Paso de Los Toros
Accept.	Archive / Type / Number / Rev. - / Sheet 5 / Sheets total 195
Owner acc.	





LEGEND, MAP

- New railway alignment
- Existing railway alignment (not in the Railway Project scope)
- Railway Area borderline
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- Road closing down
- Limit of designed soil cut (open cut or cut with a retaining wall)
- Limit of designed embankment fill, not including possible ditch
- Existing stations or passenger platforms
- New passenger platforms
- Symbols
- BXXX BXXX Railway bridge or underpass, Flyover
- CXXX Culvert
- LCXXX Level crossing
- Track alignment with design geometry figures
  - R= curve radius (m)
  - KR= length of curve (m)
  - D= track cant (mm)
  - Lk= length of transition curve (m)
  - Rv= radius of vertical curve
  - K= elevation
  - TG= lenght of tangent
  - 123.345= length of straight line (m)
- y. 2016 1, y. 2016 217: SPT-sounding, terminated at cobble, boulder, or bedrock contact.
  - y. 2016= year of investigation, location of 2016 soundings not accurate
  - 1, 217= point number
- y. 2017 TR02: Disturbed Sample
  - y. 2017= year of investigation
  - TR02= point number

LEGEND, PROFILE

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- Designed track elevation (the running surface of the rail)
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- Km stationing (1, 0 +1000.000)
- Horizontal alignment, schematic
  - SR= length of straight line (m)
  - R= curve radius (m)
  - KR= length of curve (m)
  - D= track cant (mm)
  - Lk= length of transition curve (mm)

Version 15.12.2017

Revision	Explanation	Date	Designer	Date	Acceptor

Customer: MINISTERIO DE TRANSPORTE Y OBRAS PÚBLICAS

Supplier: VR TRACK

Project: Railway Project

Design phase: Pre-engineering, Phase 2

Content: Track map and profile

Km 7+0600 - 9+0000

Drawer	15.12.2017	UPa
Designer	15.12.2017	HMa / MLe
Supervisor	15.12.2017	SVi
Accept.		
Owner acc.		

Scale: map 1:2000, profile 1:2000 / 1:200

Coordinate system / Elevation reference system: WGS 84 UTM 21 S, Local orthometric height

Railway line: Montevideo - Paso de Los Toros

Archive	Type	Number	Rev.	Sheet	Sheets total
			-	6	195

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← Montevideo

Paso de Los Toros →

PASSENGER STOP
EDISON

B18
009+618
Culvert bridge

C009
009+240

LC28
009+247
Removal (ped)

LC29
009+311
TYPE Ia
Automatic barriers

LC30
009+780
TYPE Ia
Automatic barriers

C010
010+078

LC31
010+131
TYPE Ia
Automatic barriers

KM 9+000 KM 9+100 KM 9+200 KM 9+300 KM 9+400 KM 9+500 KM 9+600 KM 9+700 KM 9+800 KM 9+900 KM 10+000 KM 10+100 KM 10+200 KM 10+300 KM 10+400

Platform 1

Platform 2

0 60 120 Meters

LEGEND, MAP

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LEGEND, PROFILE

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Version 15.12.2017

Revision	Explanation	Date	Designer	Date	Acceptor

Customer: MINISTERIO DE TRANSPORTE Y OBRAS PÚBLICAS

Supplier: VR TRACK

Project: Railway Project

Design phase: Pre-engineering, Phase 2

Content: Track map and profile

Km 9+0000 - 10+0400

Drawer	15.12.2017	UPa
Designer	15.12.2017	HMa / MLe
Supervisor	15.12.2017	SVi
Accept.		
Owner acc		

Scale: map 1:2000, profile 1:2000 / 1:200

Coordinate system / Elevation reference system: WGS 84 UTM 21 S, Local orthometric height

Railway line: Montevideo - Paso de Los Toros

Archive	Type	Number	Rev.	Sheet	Sheets total
			-	7	195

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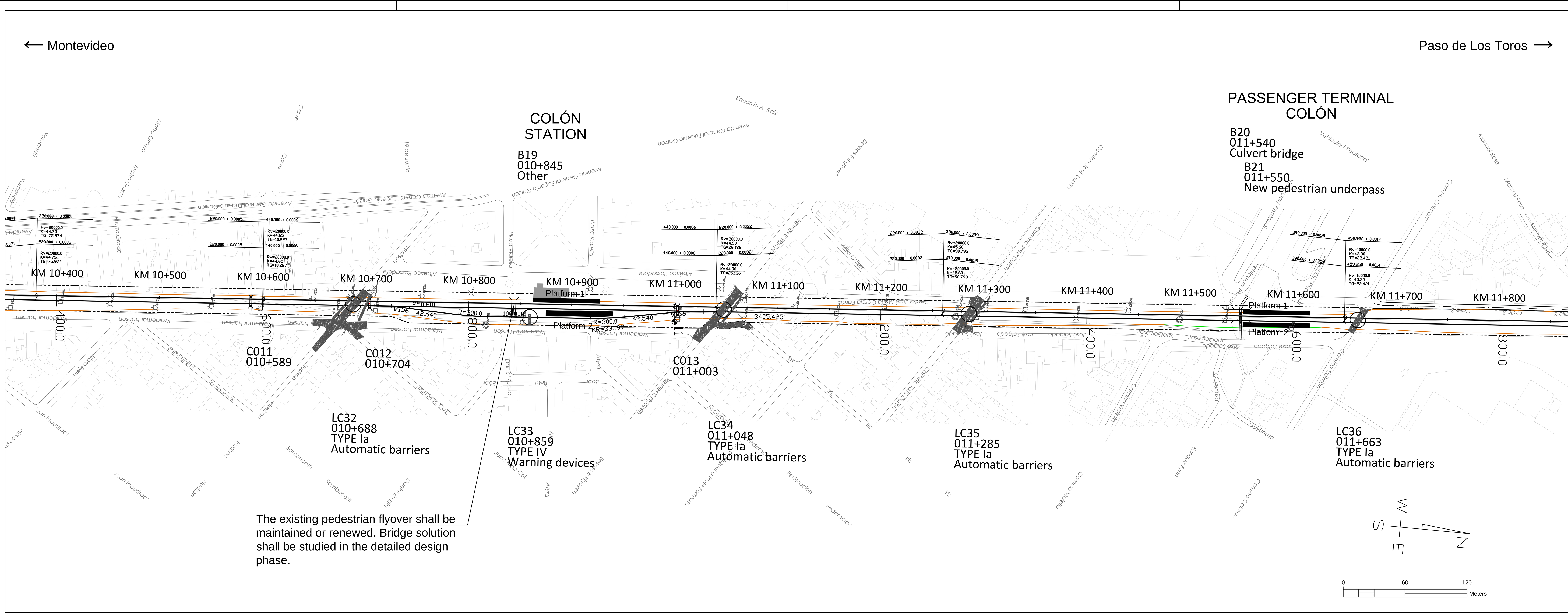

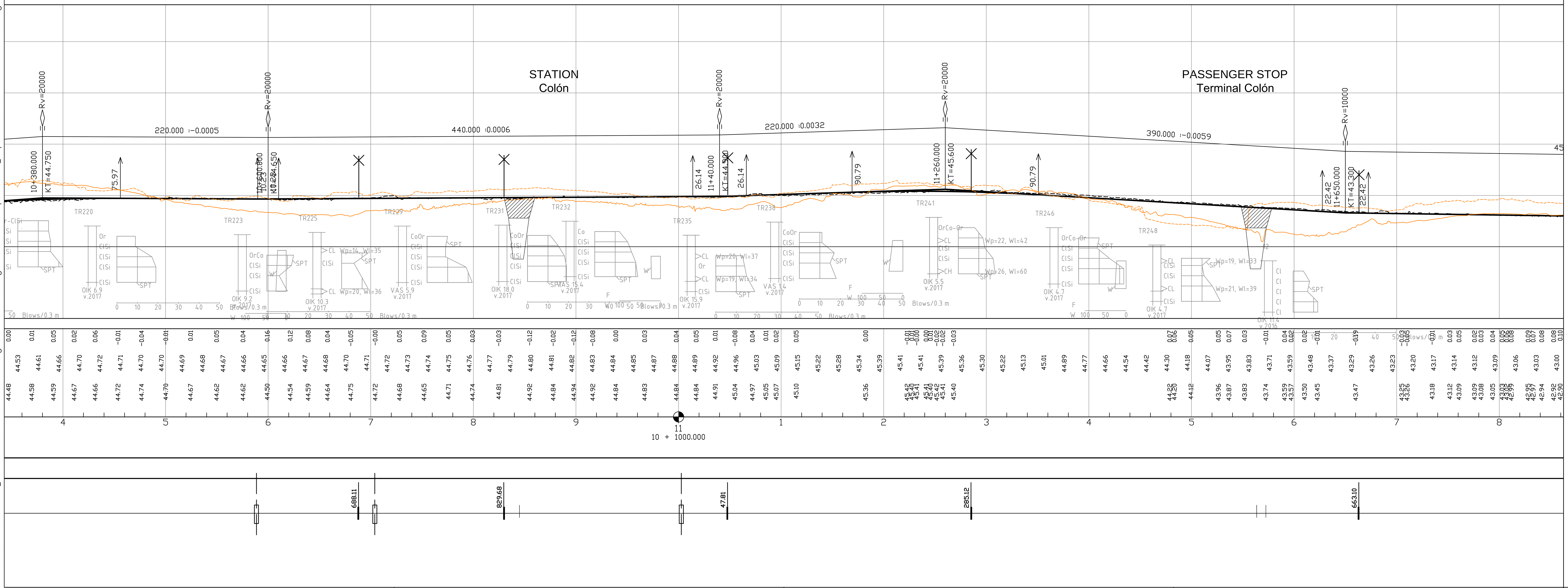

LEGEND, MAP

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LEGEND, PROFILE

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Version 15.12.2017

Revision	Explanation	Date	Designer	Date	Acceptor

Customer: MINISTERIO DE TRANSPORTE Y OBRAS PÚBLICAS	Project: Railway Project
	Design phase: Pre-engineering, Phase 2
Supplier: VR TRACK	Content: Track map and profile
	Km 10+0400 - 11+0800
Drawer: 15.12.2017 UPa	Scale: map 1:2000, profile 1:2000 / 1:200
Designer: 15.12.2017 HMa / MLe	Coordinate system / Elevation reference system: WGS 84 UTM 21 S, Local orthometric height
Supervisor: 15.12.2017 SVi	Railway line: Montevideo - Paso de Los Toros
Accept.	Archive / Type / Number / Rev. - / Sheet 8 / Sheets total 195
Owner acc.	

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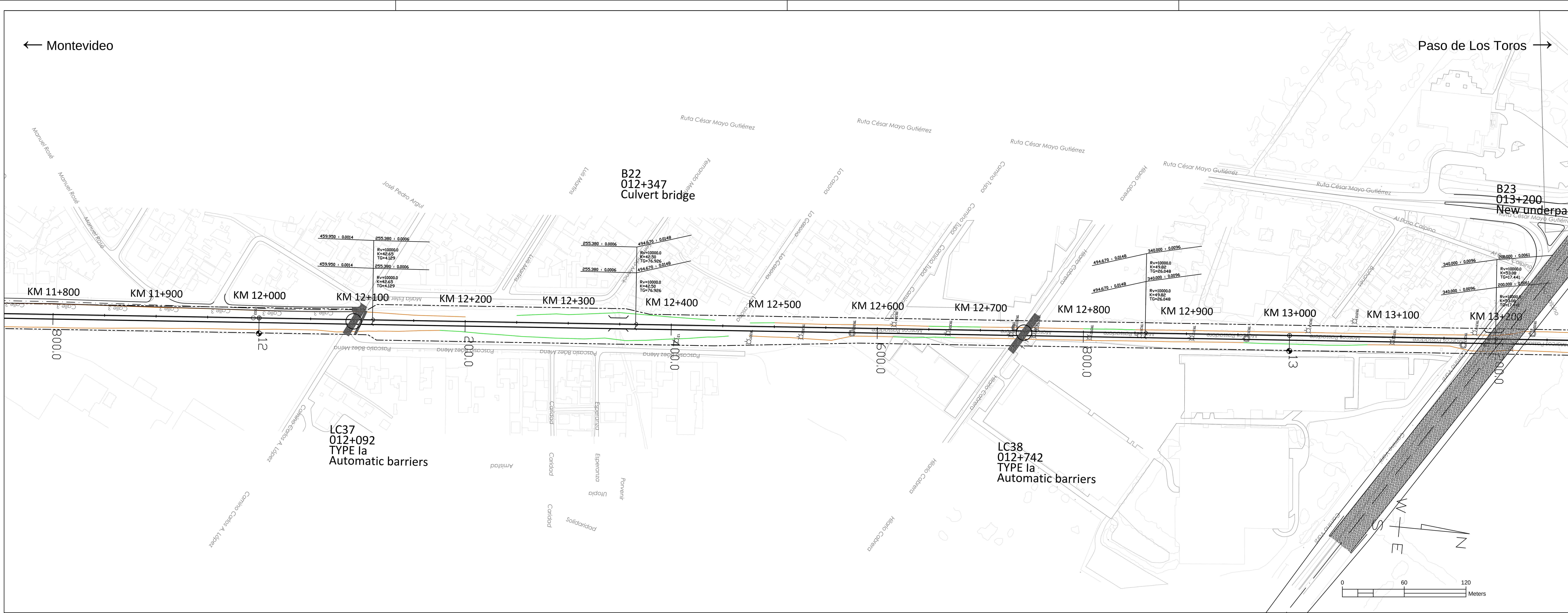

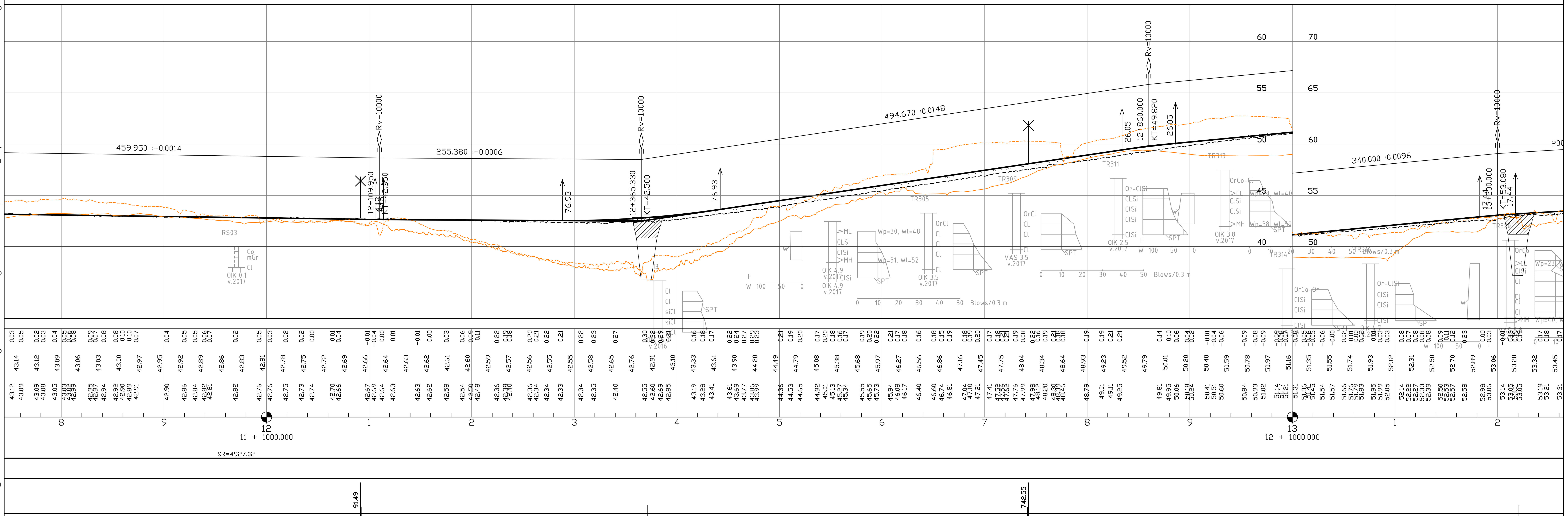

LEGEND, MAP

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- Existing railway alignment (not in the Railway Project scope)
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- Existing stations or passenger platforms
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- Symbols
  - BXXX BXXX — Railway bridge or underpass, Flyover
  - CXXX — Culvert
  - LCXXX — Level crossing
- Track alignment with design geometry figures
  - R= curve radius (m)
  - KR= length of curve (m)
  - D= track cant (mm)
  - Lk= length of transition curve (m)
  - Rv= radius of vertical curve
  - K= elevation
  - TG= lenght of tangent
  - 123.345= length of straight line (m)
- SPT-sounding, terminated at cobble, boulder, or bedrock contact.
  - y. 2016= year of investigation, location of 2016 soundings not accurate
  - 1, 217= point number
- Disturbed Sample
  - y. 2017= year of investigation
  - TR02= point number

LEGEND, PROFILE

- Vertical railway alignment (S=radius of vertical curve, KT=elevation point)
- Ground surface
- Ground elevation on the left side of track centre line (-20m) and on the right side of track centre line (+20m)
- Culvert location (elevation will be designed in detailed design phase)
- Level crossing
- Overpass bridge, railway or underpass bridge
- Elevation figures
  - Difference between existing ground and designed track elevation
  - Designed track elevation (the running surface of the rail)
  - Existing ground elevation
- Km stationing
- Horizontal alignment, schematic
  - SR= length of straight line (m)
  - R= curve radius (m)
  - KR= length of curve (m)
  - D= track cant (mm)
  - Lk= length of transition curve (m)

Version 15.12.2017

Revision	Explanation	Date	Designer	Date	Acceptor

Customer: MINISTERIO DE TRANSPORTE Y OBRAS PÚBLICAS	Project: Railway Project
	Design phase: Pre-engineering, Phase 2
	Content: Track map and profile
Supplier: VR TRACK	Km 11+0800 - 13+0200
Drawer: 15.12.2017 UPa	Scale: map 1:2000, profile 1:2000 / 1:200
Designer: 15.12.2017 HMa / MLe	Coordinate system / Elevation reference system: WGS 84 UTM 21 S, Local orthometric height
Supervisor: 15.12.2017 SVi	Railway line: Montevideo - Paso de Los Toros
Accept.	Archive / Type / Number / Rev. - / Sheet 9 / Sheets total 195
Owner acc.	

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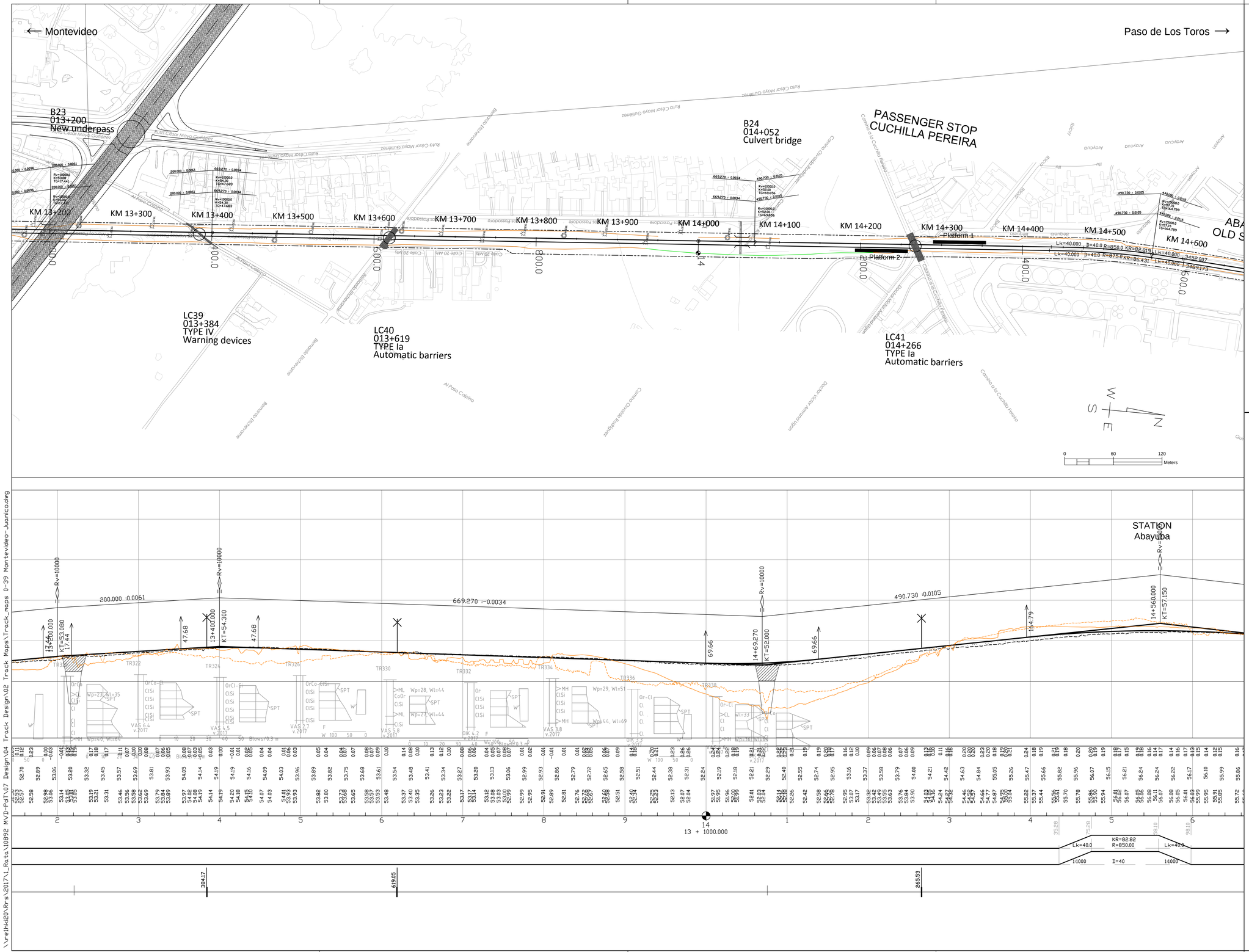

LEGEND, MAP

- New railway alignment
- Existing railway alignment (not in the Railway Project scope)
- Railway Area borderline
- Secondary Side Tracks - Horizontal geometry pre-designed (Secondary side tracks and their switches will be designed and constructed based on Appendix Q)
- Removal track
- Street or road modification area in level crossings or underpasses/flyovers
- Modification needed to the property access
- Affected parallel roads and streets and maintenance roads
- Road closing down
- Limit of designed soil cut (open cut or cut with a retaining wall)
- Limit of designed embankment fill, not including possible ditch
- Existing stations or passenger platforms
- New passenger platforms

Symbols

- BXXX — Railway bridge or underpass, Flyover
- CXXX — Culvert
- Level crossing
- LCXXX

Track alignment with design geometry figures

R= curve radius (m)
KR= length of curve (m)
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1, 217= point number

Disturbed Sample
y. 2017= year of investigation
TR02= point number

LEGEND, PROFILE

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- Overpass bridge, railway or underpass bridge

Elevation figures

- Difference between existing ground and designed track elevation
- Designed track elevation (the running surface of the rail)
- Existing ground elevation

Km stationing

Horizontal alignment, schematic

SR= length of straight line (m)
R= curve radius (m)
KR= length of curve (m)
D= track cant (mm)
Lk= length of transition curve (m)

Version 15.12.2017

Revision	Explanation	Date	Designer	Date	Acceptor

Customer: MINISTERIO DE TRANSPORTE Y OBRAS PÚBLICAS

Supplier: VR TRACK

Project: Railway Project

Design phase: Pre-engineering, Phase 2

Content: Track map and profile

Km 13+0200 - 14+0600

Drawer	15.12.2017	UPa
Designer	15.12.2017	HMa / MLe
Supervisor	15.12.2017	SVi
Accept.		
Owner acc		

Scale: map 1:2000, profile 1:2000 / 1:200

Coordinate system / Elevation reference system: WGS 84 UTM 21 S, Local orthometric height

Railway line: Montevideo - Paso de Los Toros

Archive	Type	Number	Rev.	Sheet	Sheets total
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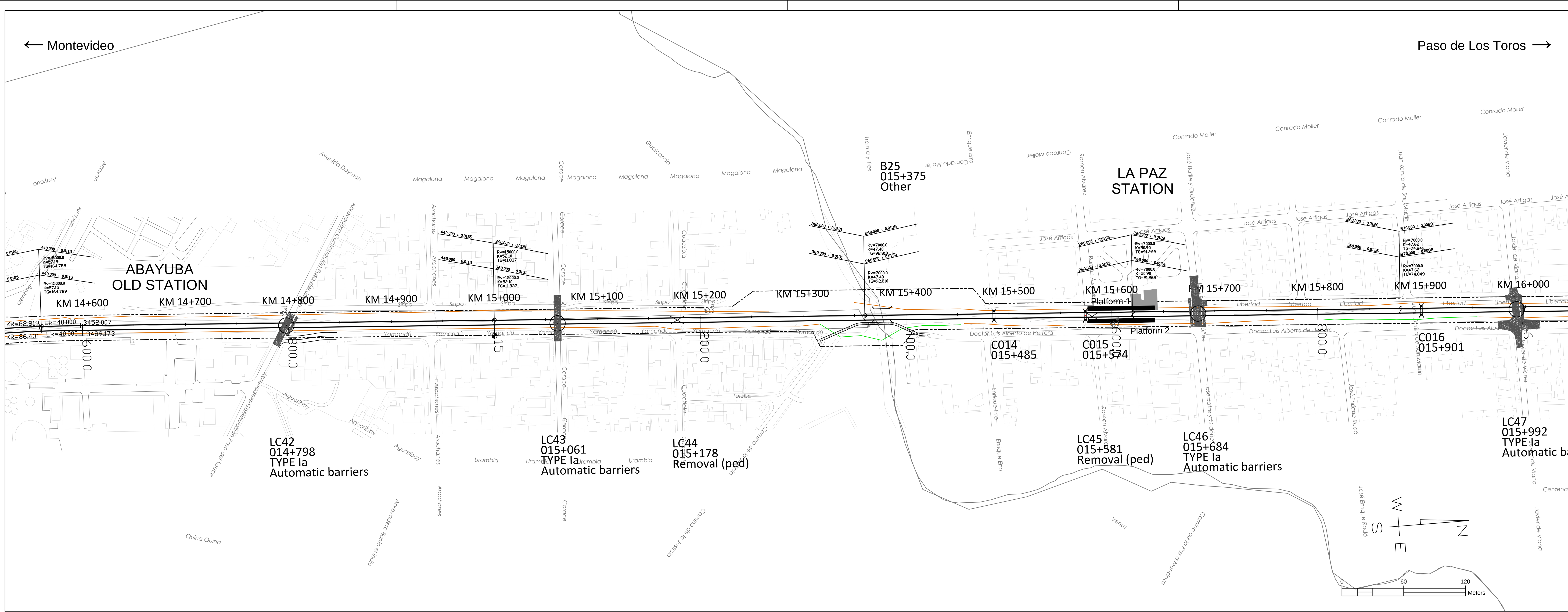

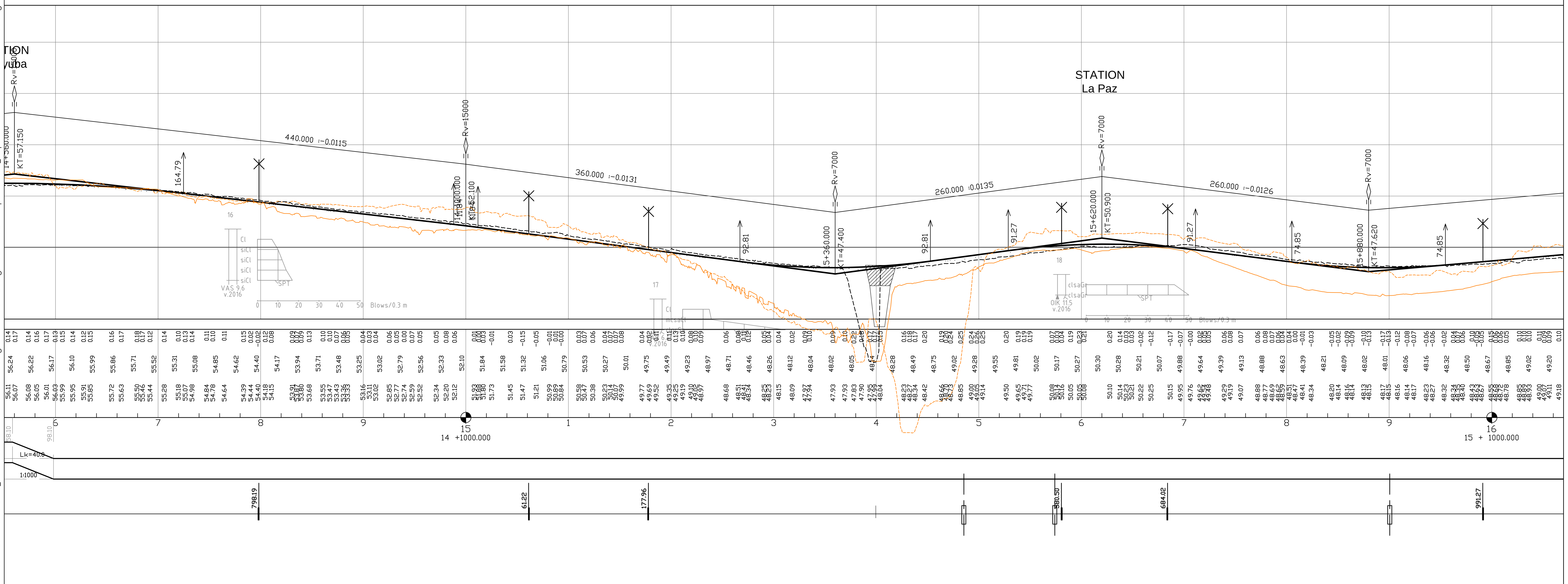

LEGEND, MAP

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- Existing stations or passenger platforms
- New passenger platforms
- Symbols
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- CXXX — Culvert
- LCXXX — Level crossing
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  - R= curve radius (m)
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  - K= elevation
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- y. 2016 1, y. 2016 217 — SPT-sounding, terminated at cobble, boulder, or bedrock contact.
  - y. 2016= year of investigation, location of 2016 soundings not accurate
  - 1, 217= point number
- y. 2017 TR02 — Disturbed Sample
  - y. 2017= year of investigation
  - TR02= point number

LEGEND, PROFILE

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- Elevation figures
  - 0.17 — Difference between existing ground and designed track elevation
  - 92.32 — Designed track elevation (the running surface of the rail)
  - 92.15 — Existing ground elevation
- 1 0 +1000.000 — Km stationing
- Horizontal alignment, schematic
  - SR= length of straight line (m)
  - R= curve radius (m)
  - KR= length of curve (m)
  - D= track cant (mm)
  - Lk= length of transition curve (m)

Version 15.12.2017

Revision	Explanation	Date	Designer	Date	Acceptor

Customer: MINISTERIO DE TRANSPORTE Y OBRAS PÚBLICAS	Project: Railway Project
	Design phase: Pre-engineering, Phase 2
Supplier: VR TRACK	Content: Track map and profile Km 14+0600 - 16+0000
Drawer 15.12.2017 UPa	Scale: map 1:2000, profile 1:2000 / 1:200
Designer 15.12.2017 HMa / MLe	Coordinate system WGS 84 UTM 21 S, Local orthometric height; Elevation reference system
Supervisor 15.12.2017 SVI	Railway line: Montevideo - Paso de Los Toros
Accept.	Archive / Type / Number / Rev. / Sheet / Sheets total: - 11 195
Owner acc.	

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← Montevideo

Paso de Los Toros →

PASSENGER STOP
VIALE

B26
016+972
Culvert bridge

KM 16+000 | KM 16+100 | KM 16+200 | KM 16+300 | KM 16+400 | KM 16+500 | KM 16+600 | KM 16+700 | KM 16+800 | KM 16+900 | KM 17+000 | KM 17+100 | KM 17+200 | KM 17+300 | KM 17+400

Platform 1

Platform 2

C017
016+276

LC47
015+992
TYPE Ia
Automatic barriers

LC48
016+271
TYPE Ia
Automatic barriers

LC49
016+469
TYPE IV
Warning devices

LC50
016+766
TYPE Ia
Automatic barriers

LC51
017+185
TYPE IV
Warning devices

LC52
017+386
TYPE Ia
Automatic barriers

0 60 120 Meters

LEGEND, MAP

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- New passenger platforms
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- Culvert
- Level crossing

Track alignment with design geometry figures

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Disturbed Sample
y. 2017= year of investigation
TR02= point number

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Version 15.12.2017

Revision	Explanation	Date	Designer	Date	Acceptor

Customer: MINISTERIO DE TRANSPORTE Y OBRAS PÚBLICAS

Supplier: VR TRACK

Project: Railway Project

Design phase: Pre-engineering, Phase 2

Content: Track map and profile

Km 16+0000 - 17+0400

Drawer	15.12.2017	UPa
Designer	15.12.2017	HMa / MLe
Supervisor	15.12.2017	SVi
Accept.		
Owner acc		

Scale: map 1:2000, profile 1:2000 / 1:200

Coordinate system: WGS 84 UTM 21 S, Local orthometric height
Elevation reference system:

Railway line: Montevideo - Paso de Los Toros

Archive	Type	Number	Rev.	Sheet	Sheets total
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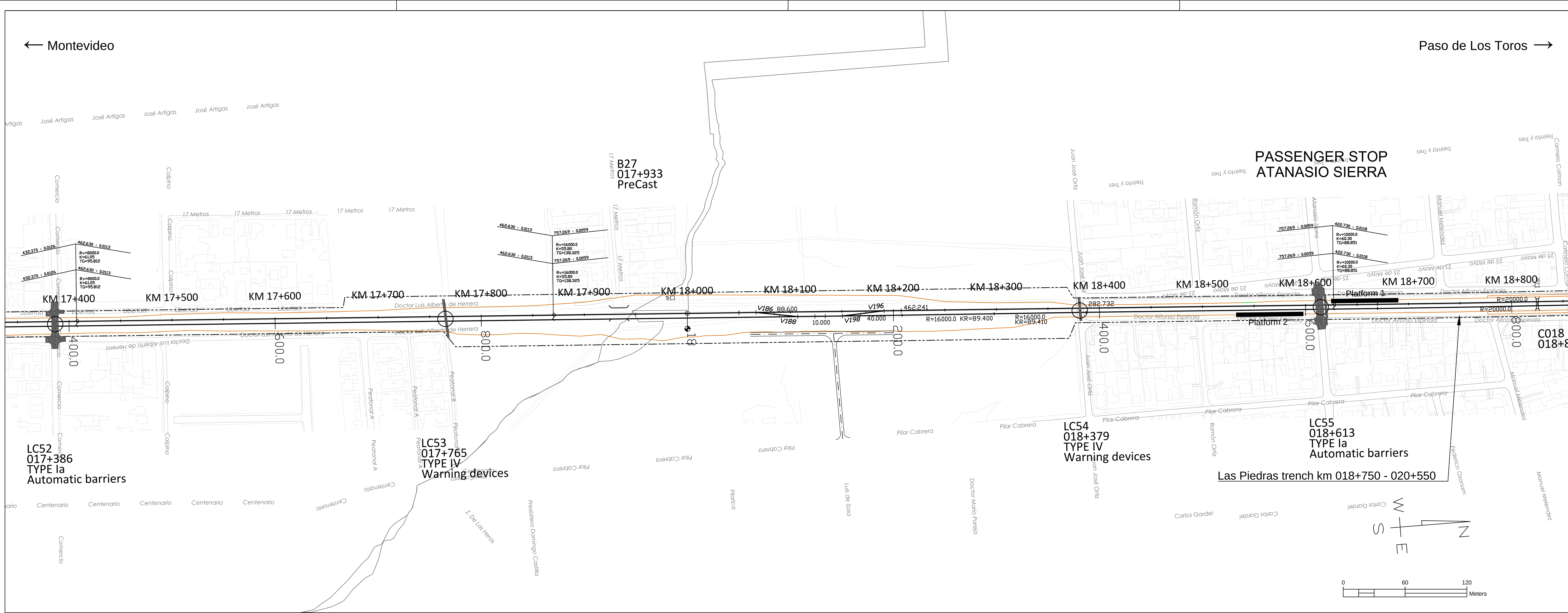

LEGEND, MAP

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LEGEND, PROFILE

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  - D= track cant (mm)
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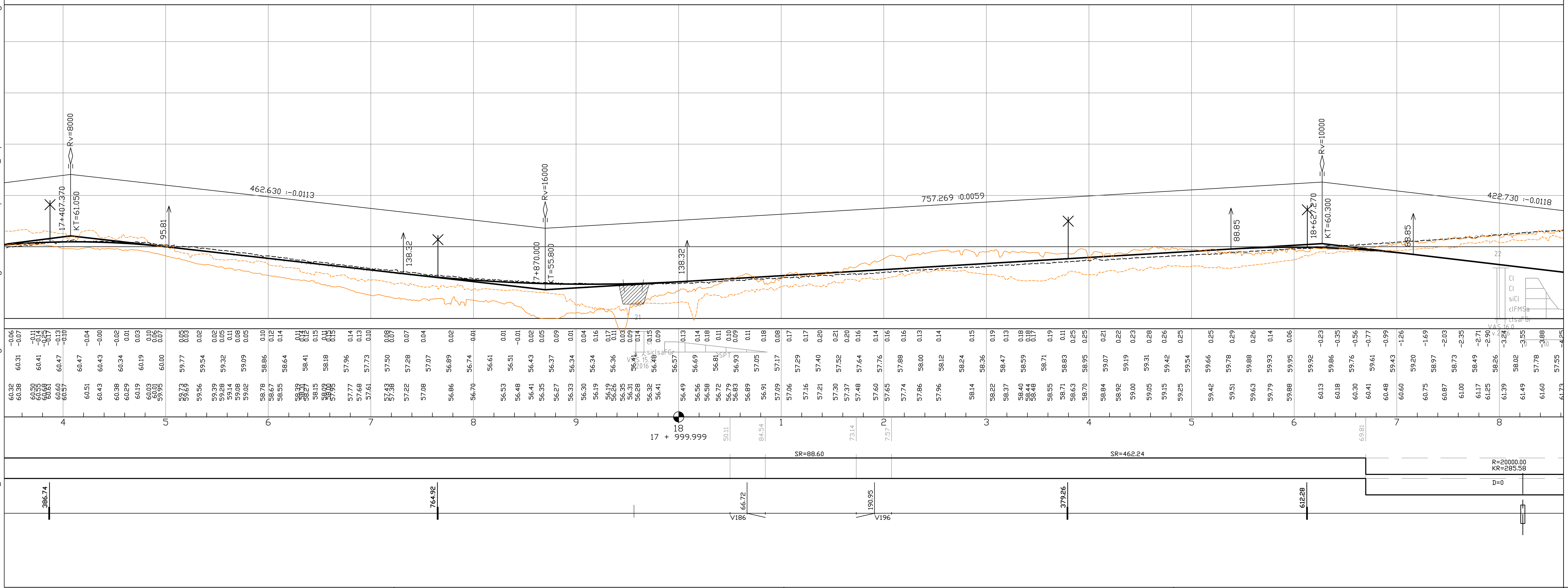

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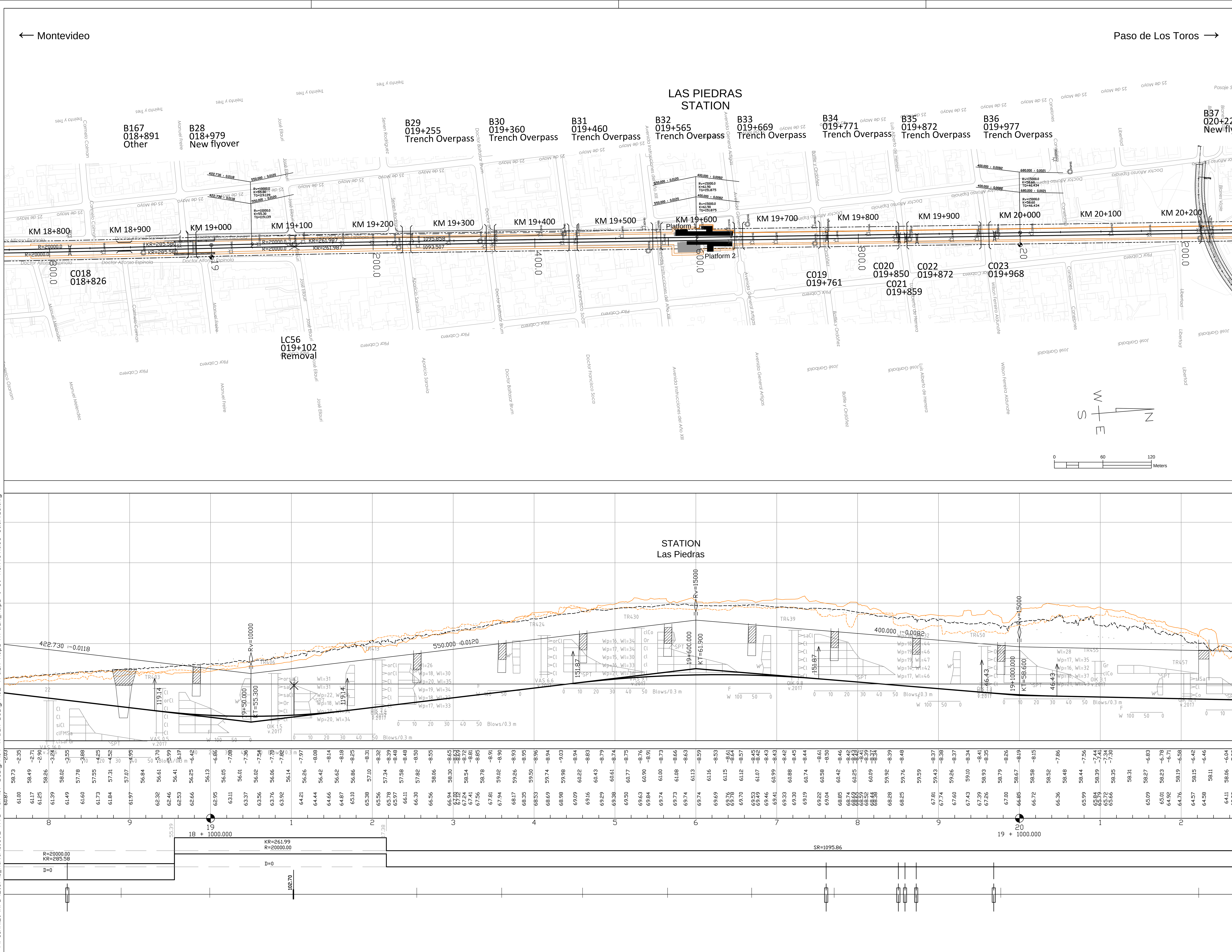
Version 15.12.2017

Revision	Explanation	Date	Designer	Date	Acceptor

Customer: MINISTERIO DE TRANSPORTE Y OBRAS PÚBLICAS	Project: Railway Project
	Design phase: Pre-engineering, Phase 2
Supplier: VR TRACK	Content: Track map and profile Km 17+0400 - 18+0800
Drawer 15.12.2017 UPa	Scale: map 1:2000, profile 1:2000 / 1:200
Designer 15.12.2017 HMa / MLe	Coordinate system / Elevation reference system: WGS 84 UTM 21 S, Local orthometric height
Supervisor 15.12.2017 SVi	Railway line: Montevideo - Paso de Los Toros
Accept.	Archive / Type / Number / Rev. - / Sheet 13 / Sheets total 195
Owner acc.	



LEGEND, MAP

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LEGEND, PROFILE

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Version 15.12.2017

Revision	Explanation	Date	Designer	Date	Acceptor

Customer: MINISTERIO DE TRANSPORTE Y OBRAS PÚBLICAS	Project: Railway Project
	Design phase: Pre-engineering, Phase 2
Supplier: VR TRACK	Content: Track map and profile Km 18+0800 - 20+0200
Drawer: 15.12.2017 UPa	Scale: map 1:2000, profile 1:2000 / 1:200
Designer: 15.12.2017 HMa / MLe	Coordinate system / Elevation reference system: WGS 84 UTM 21 S, Local orthometric height
Supervisor: 15.12.2017 SVi	Railway line: Montevideo - Paso de Los Toros
Accept.:	Archive / Type / Number / Rev. / Sheet / Sheets total: - 14 195
Owner acc.:	

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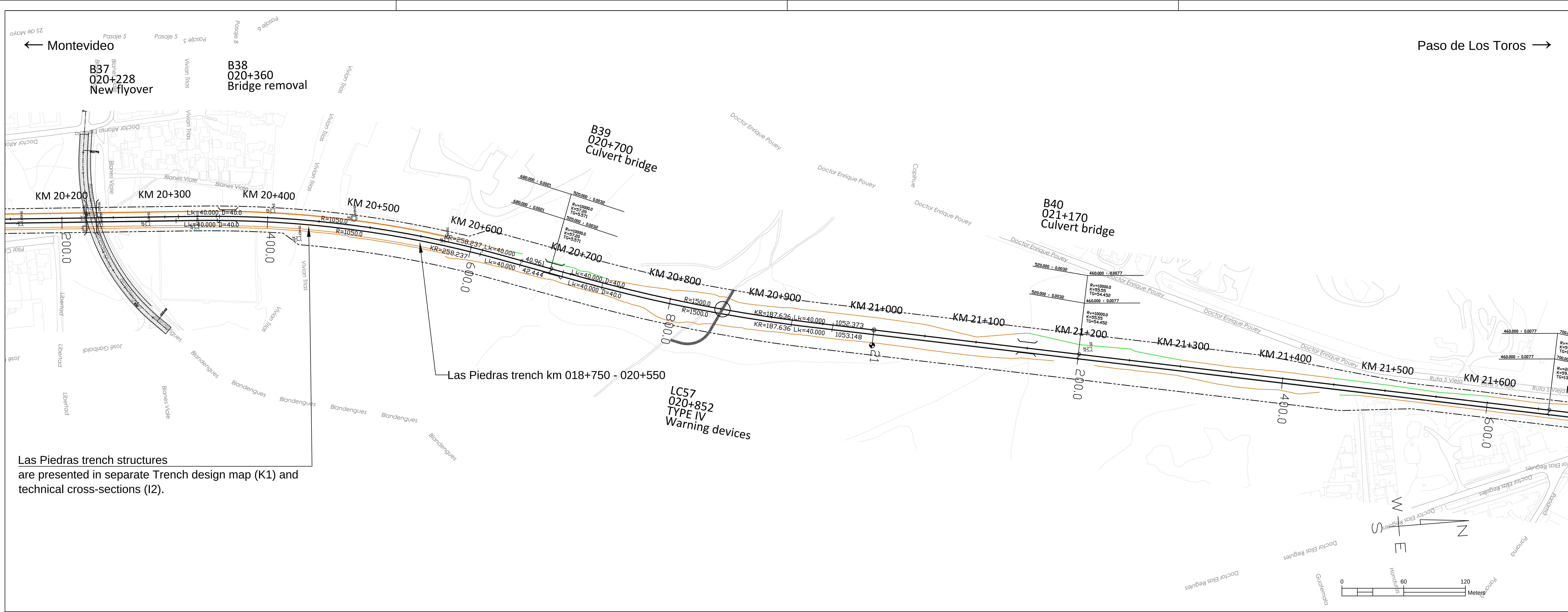

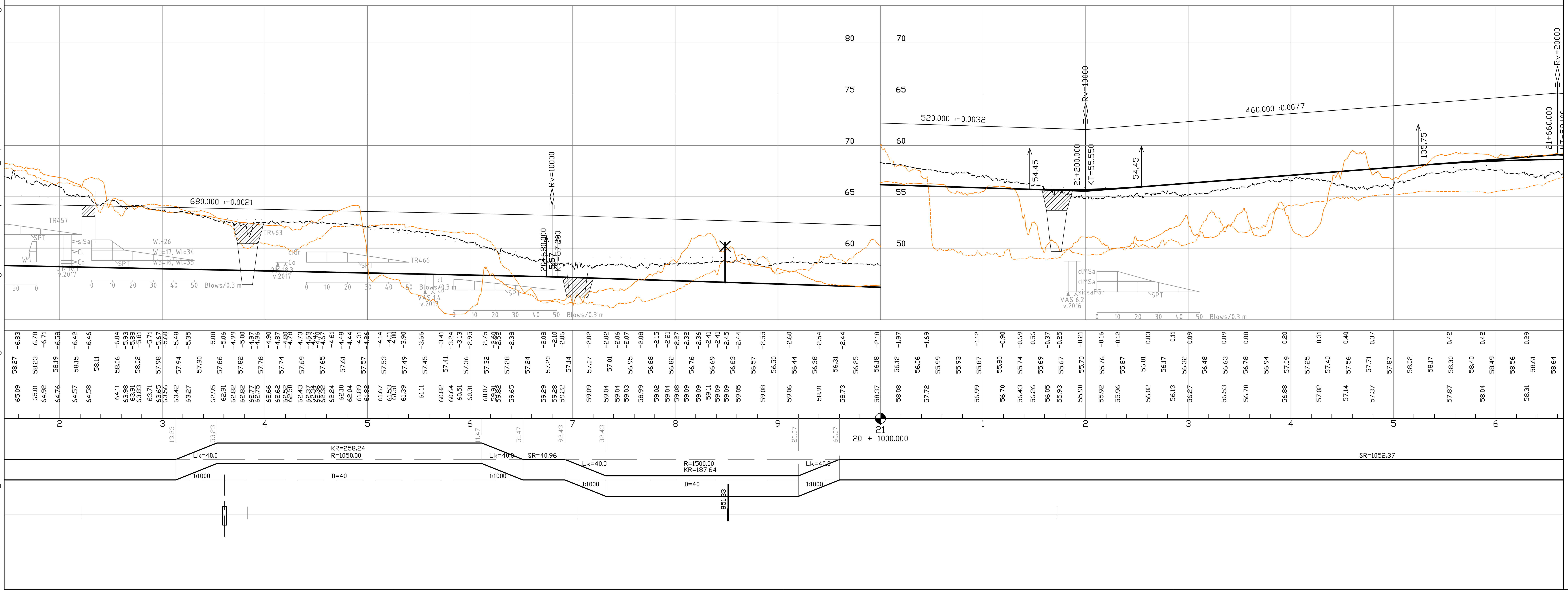

LEGEND, MAP

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LEGEND, PROFILE

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Version 15.12.2017

Revision	Explanation	Date	Designer	Date	Acceptor

Customer: MINISTERIO DE TRANSPORTE Y OBRAS PÚBLICAS	Project: Railway Project
	Design phase: Pre-engineering, Phase 2
	Content: Track map and profile
Supplier: VR TRACK	Km 20+0200 - 21+0600
Drawer: 15.12.2017 UPa	Scale: map 1:2000, profile 1:2000 / 1:200
Designer: 15.12.2017 HMa / MLe	Coordinate system / Elevation reference system: WGS 84 UTM 21 S, Local orthometric height
Supervisor: 15.12.2017 SVi	Railway line: Montevideo - Paso de Los Toros
Accept.	Archive / Type / Number / Rev. - / Sheet 15 / Sheets total 195
Owner acc.	

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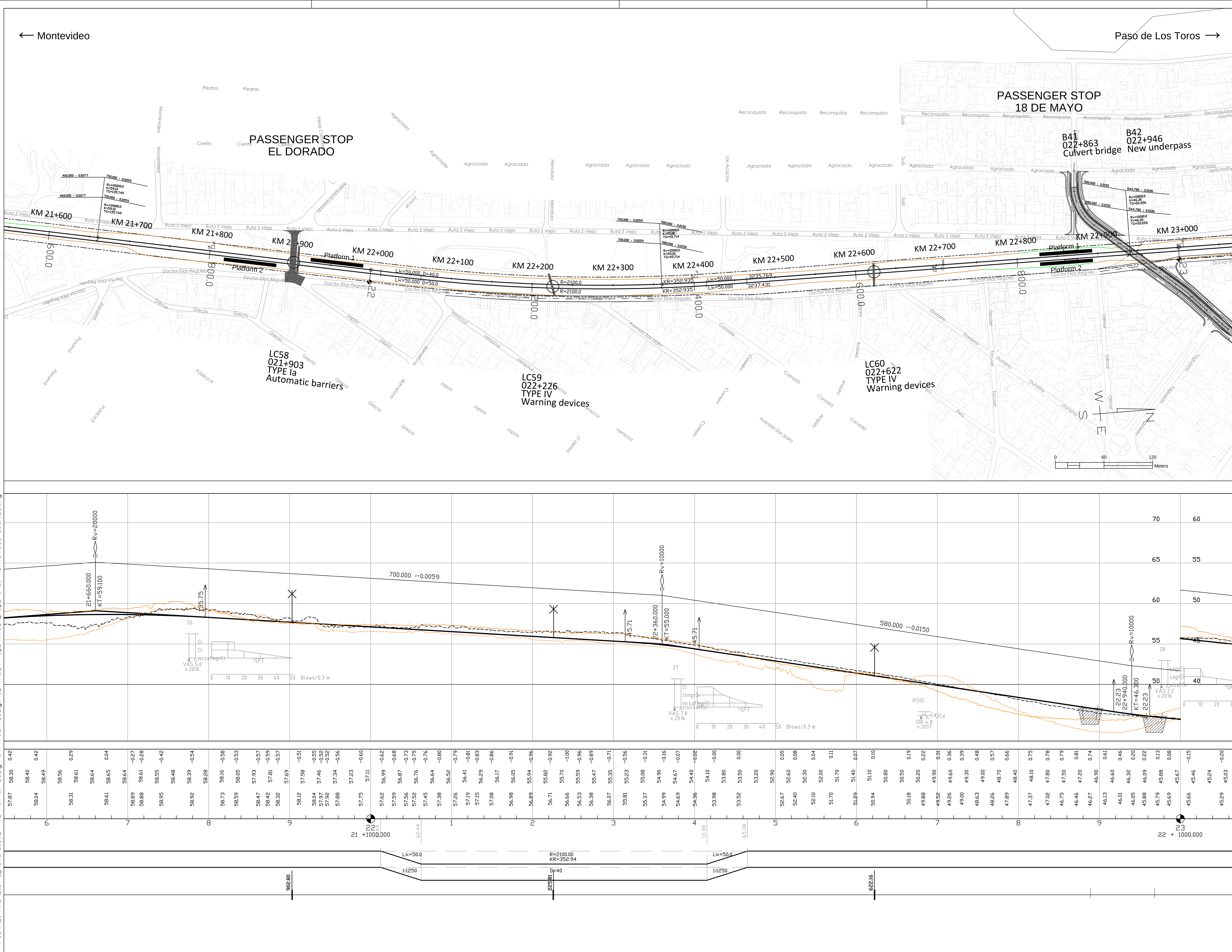

LEGEND, MAP

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LEGEND, PROFILE

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Version 15.12.2017

Revision	Explanation	Date	Designer	Date	Acceptor

Customer: MINISTERIO DE TRANSPORTE Y OBRAS PÚBLICAS

Supplier: VR TRACK

Project: Railway Project

Design phase: Pre-engineering, Phase 2

Content: Track map and profile

Km 21+0600 - 23+0000

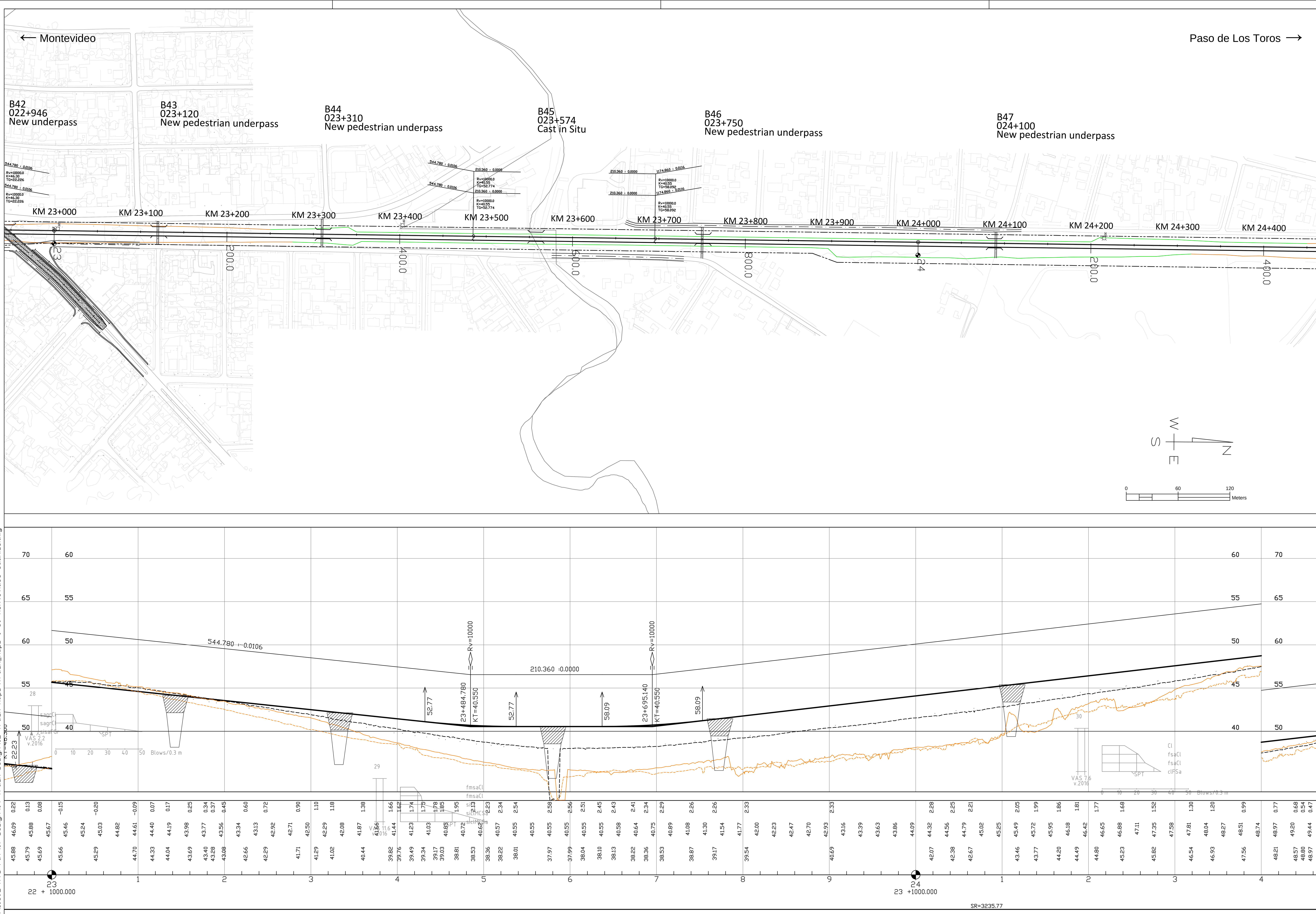
Drawer	15.12.2017	UPa	
Designer	15.12.2017	HMa / MLe	
Supervisor	15.12.2017	SVi	
Accept.			
Owner acc.			

Scale: map 1:2000, profile 1:2000 / 1:200

Coordinate system / Elevation reference system: WGS 84 UTM 21 S, Local orthometric height

Railway line: Montevideo - Paso de Los Toros

Archive	Type	Number	Rev.	Sheet	Sheets total
			-	16	195



LEGEND, MAP

New railway alignment

Existing railway alignment (not in the Railway Project scope)

Railway Area borderline

Secondary Side Tracks - Horizontal geometry pre-designed (Secondary side tracks and their switches will be designed and constructed based on Appendix Q)

Removal track

Street or road modification area in level crossings or underpasses/flyovers

Modification needed to the property access

Affected parallel roads and streets and maintenance roads

Road closing down

Limit of designed soil cut (open cut or cut with a retaining wall)

Limit of designed embankment fill, not including possible ditch

Existing stations or passenger platforms

New passenger platforms

Symbols

BXXX BXXX

Railway bridge or underpass, Flyover

CXXX

Culvert

LCXXX

Level crossing

Track alignment with design geometry figures

R= curve radius (m)
KR= length of curve (m)
D= track cant (mm)
Lk= length of transition curve (m)
Rv= radius of vertical curve
K= elevation
TG= lenght of tangent
123.345= length of straight line (m)

SPT-sounding, terminated at cobble, boulder, or bedrock contact.
y. 2016= year of investigation, location of 2016 soundings not accurate
1, 217= point number

Disturbed Sample
y. 2017= year of investigation
TR02= point number

LEGEND, PROFILE

Vertical railway alignment (S=radius of vertical curve, KT=elevation point)

Ground surface

Ground elevation on the left side of track centre line (-20m) and on the right side of track centre line (+20m)

Culvert location (elevation will be designed in detailed design phase)

Level crossing

Overpass bridge, railway or underpass bridge

Elevation figures

Difference between existing ground and designed track elevation

Designed track elevation (the running surface of the rail)

Existing ground elevation

Km stationing

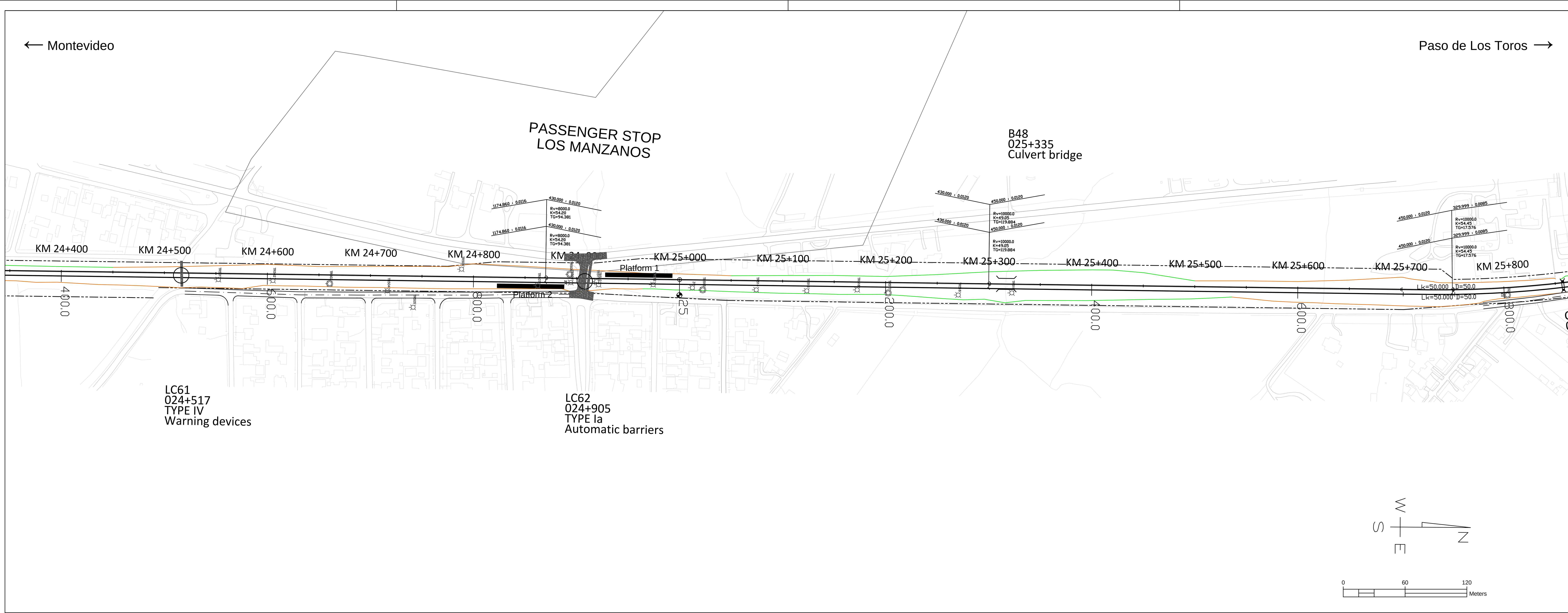
1
0 +1000.000

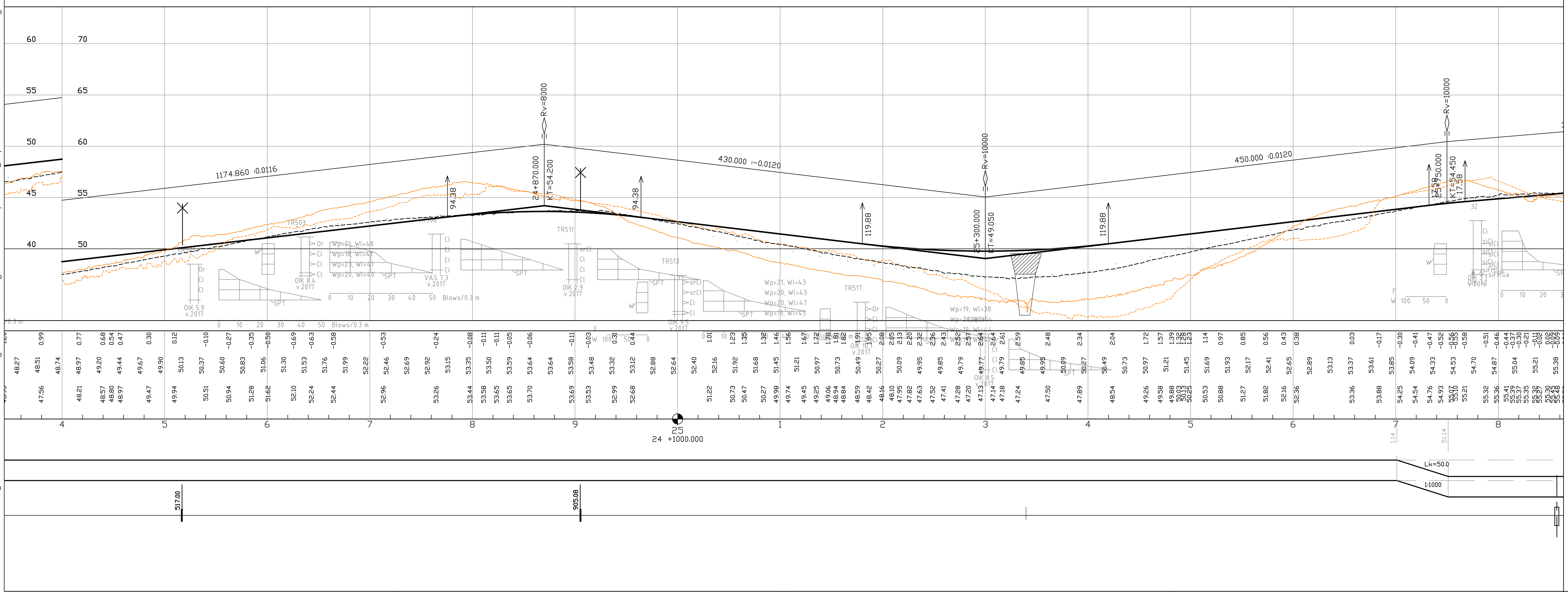
Horizontal alignment, schematic
SR= length of straight line (m)
R= curve radius (m)
KR= length of curve (m)
D= track cant (mm)
Lk= length of transition curve (m)

Version 15.12.2017

Revision	Explanation	Date	Designer	Date	Acceptor

Customer: MINISTERIO DE TRANSPORTE Y OBRAS PÚBLICAS	Project: Railway Project
	Design phase: Pre-engineering, Phase 2
Supplier: VR TRACK	Content: Track map and profile Km 23+0000 - 24+0400
Drawer 15.12.2017 UPa	Scale: map 1:2000, profile 1:2000 / 1:200
Designer 15.12.2017 HMa / MLe	Coordinate system / Elevation reference system: WGS 84 UTM 21 S, Local orthometric height
Supervisor 15.12.2017 SVi	Railway line: Montevideo - Paso de Los Toros
Accept.	Archive / Type / Number / Rev. / Sheet / Sheets total: - 17 195
Owner acc.	





LEGEND, MAP

New railway alignment

Existing railway alignment (not in the Railway Project scope)

Railway Area borderline

Secondary Side Tracks - Horizontal geometry pre-designed
(Secondary side tracks and their switches will be designed and constructed based on Appendix Q)

Removal track

Street or road modification area in level crossings or underpasses/flyovers

Modification needed to the property access

Affected parallel roads and streets and maintenance roads

Road closing down

Limit of designed soil cut (open cut or cut with a retaining wall)

Limit of designed embankment fill, not including possible ditch

Existing stations or passenger platforms

New passenger platforms

Symbols

BXXX BXXX
Railway bridge or underpass, Flyover

CXXX
Culvert

LCXXX
Level crossing

Track alignment with design geometry figures
R= curve radius (m)
KR= length of curve (m)
D= track cant (mm)
Lk= length of transition curve (m)
Rv= radius of vertical curve
K= elevation
TG= lenght of tangent
123.345= length of straight line (m)

SPT-sounding, terminated at cobble, boulder, or bedrock contact.
y. 2016= year of investigation, location of 2016 soundings not accurate
1, 217= point number

Disturbed Sample
y. 2017= year of investigation
TR02= point number

LEGEND, PROFILE

Vertical railway alignment
(S=radius of vertical curve, KT=elevation point)

Ground surface

Ground elevation on the left side of track centre line (-20m) and on the right side of track centre line (+20m)

Culvert location (elevation will be designed in detailed design phase)

Level crossing

Overpass bridge, railway or underpass bridge

Elevation figures

Difference between existing ground and designed track elevation

Designed track elevation (the running surface of the rail)

Existing ground elevation

Km stationing

Horizontal alignment, schematic
SR= length of straight line (m)
R= curve radius (m)
KR= length of curve (m)
D= track cant (mm)
Lk= length of transition curve (m)

Version 15.12.2017

Revision	Explanation	Date	Designer	Date	Acceptor

Customer: MINISTERIO DE TRANSPORTE Y OBRAS PÚBLICAS

Supplier: VR TRACK

Project: Railway Project

Design phase: Pre-engineering, Phase 2

Content: Track map and profile

Km 24+0400 - 25+0800

Drawer	15.12.2017	UPa	
Designer	15.12.2017	HMa / MLe	
Supervisor	15.12.2017	SVi	
Accept.			
Owner acc.			

Scale: map 1:2000, profile 1:2000 / 1:200

Coordinate system / Elevation reference system: WGS 84 UTM 21 S, Local orthometric height

Railway line: Montevideo - Paso de Los Toros

Archive	Type	Number	Rev.	Sheet	Sheets total
			-	18	195

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← Montevideo

Paso de Los Toros →

PROGRESO STATION

B49
027+083
Culvert bridge

LC68
027+210
TYPE Ia
Automatic barriers

LC67
026+891
TYPE Ia
Automatic barriers

LC66
026+526
TYPE Ia
Automatic barriers

LC65
026+442
TYPE IV
Warning devices

LC64
026+371
Removal (ped)

LC63
026+087
TYPE Ia
Automatic barriers

C027
026+508

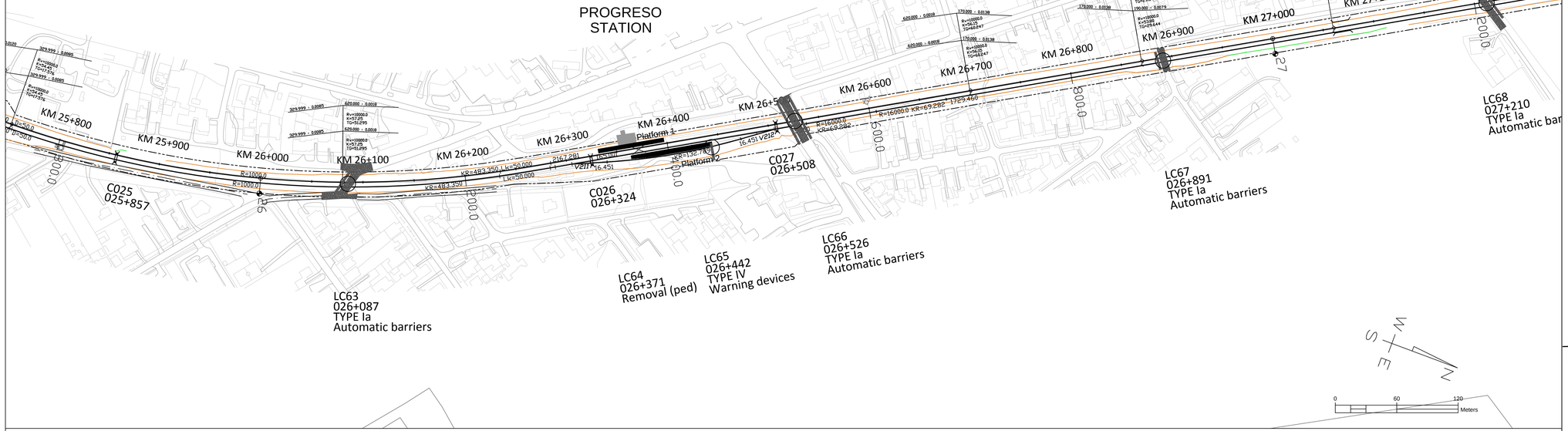
C026
026+324

C025
025+857

Platform 1

Platform 2

KM 25+800 KM 25+900 KM 26+000 KM 26+100 KM 26+200 KM 26+300 KM 26+400 KM 26+500 KM 26+600 KM 26+700 KM 26+800 KM 26+900 KM 27+000 KM 27+100 KM 27+200



0 60 120 Meters

LEGEND, MAP

- New railway alignment
- Existing railway alignment (not in the Railway Project scope)
- Railway Area borderline
- Secondary Side Tracks - Horizontal geometry pre-designed (Secondary side tracks and their switches will be designed and constructed based on Appendix Q)
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- Modification needed to the property access
- Affected parallel roads and streets and maintenance roads
- Road closing down
- Limit of designed soil cut (open cut or cut with a retaining wall)
- Limit of designed embankment fill, not including possible ditch
- Existing stations or passenger platforms
- New passenger platforms
- Symbols
  - BXXX BXXX — Railway bridge or underpass, Flyover
  - CXXX — Culvert
  - Level crossing
  - LCXXX

Track alignment with design geometry figures

R= curve radius (m)
KR= length of curve (m)
D= track cant (mm)
Lk= length of transition curve (m)
Rv= radius of vertical curve
K= elevation
TG= lenght of tangent
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y. 2016= year of investigation, location of 2016 soundings not accurate
1, 217= point number

Disturbed Sample
y. 2017= year of investigation
TR02= point number

LEGEND, PROFILE

Vertical railway alignment
(S=radius of vertical curve, KT=elevation point)

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Level crossing

Overpass bridge, railway or underpass bridge

Elevation figures

Difference between existing ground and designed track elevation

Designed track elevation (the running surface of the rail)

Existing ground elevation

Km stationing

Horizontal alignment, schematic
SR= length of straight line (m)
R= curve radius (m)
KR= length of curve (m)
D= track cant (mm)
Lk= length of transition curve (m)

Version 15.12.2017

Revision	Explanation	Date	Designer	Date	Acceptor

Customer: MINISTERIO DE TRANSPORTE Y OBRAS PÚBLICAS

Supplier: VR TRACK

Project: Railway Project

Design phase: Pre-engineering, Phase 2

Content: Track map and profile

Km 25+0800 - 27+0200

Drawer	15.12.2017	UPa
Designer	15.12.2017	HMa / MLe
Supervisor	15.12.2017	SVi
Accept.		
Owner acc.		

Scale: map 1:2000, profile 1:2000 / 1:200

Coordinate system / Elevation reference system: WGS 84 UTM 21 S, Local orthometric height

Railway line: Montevideo - Paso de Los Toros

Archive	Type	Number	Rev.	Sheet	Sheets total
			-	19	195

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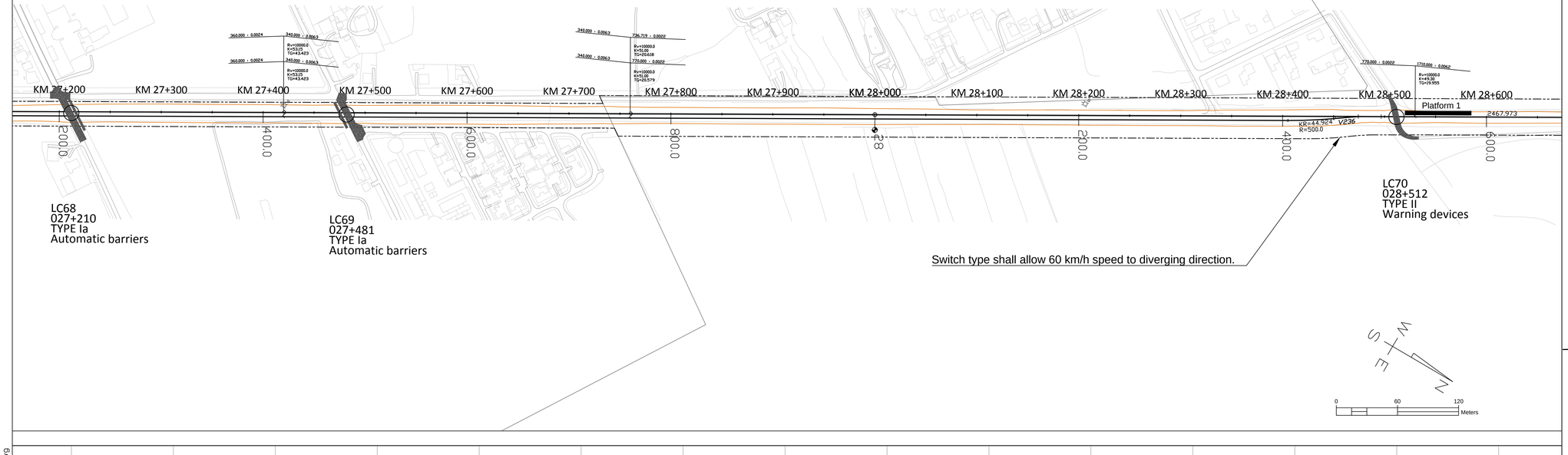
← Montevideo

Paso de Los Toros →

PASSENGER STOP
SAN PEDRO

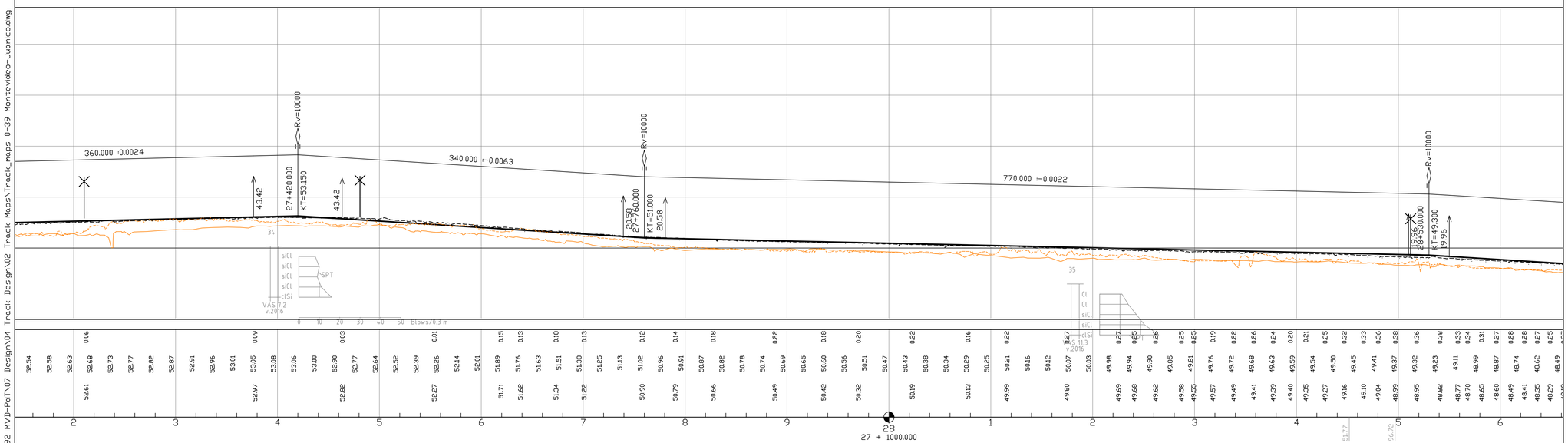


LC68
027+210
TYPE Ia
Automatic barriers

LC69
027+481
TYPE Ia
Automatic barriers

Switch type shall allow 60 km/h speed to diverging direction.

LC70
028+512
TYPE II
Warning devices



LEGEND, MAP

- New railway alignment
- Existing railway alignment (not in the Railway Project scope)
- Railway Area borderline
- Secondary Side Tracks - Horizontal geometry pre-designed
  (Secondary side tracks and their switches will be designed and constructed based on Appendix Q)
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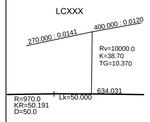
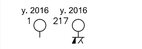
- Modification needed to the property access
- Affected parallel roads and streets and maintenance roads
- Road closing down
- Limit of designed soil cut (open cut or cut with a retaining wall)
- Limit of designed embankment fill, not including possible ditch
- Existing stations or passenger platforms
- New passenger platforms
- Symbols
  - BXXX — Railway bridge or underpass, Flyover
  - CXXX — Culvert
  - Level crossing
- Track alignment with design geometry figures



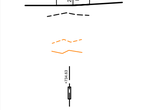
R= curve radius (m)
KR= length of curve (m)
D= track cant (mm)
Lk= length of transition curve (m)
Rv= radius of vertical curve
K= elevation
TG= lenght of tangent
123.345= length of straight line (m)



SPT-sounding, terminated at cobble, boulder, or bedrock contact.
y. 2016= year of investigation, location of 2016 soundings not accurate
1, 217= point number

Disturbed Sample
y. 2017= year of investigation
TR02= point number

LEGEND, PROFILE



Vertical railway alignment
(S=radius of vertical curve, KT=elevation point)

Ground surface

Ground elevation on the left side of track centre line (-20m) and on the right side of track centre line (+20m)

Culvert location (elevation will be designed in detailed design phase)

Level crossing

Overpass bridge, railway or underpass bridge

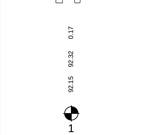
Elevation figures

Difference between existing ground and designed track elevation

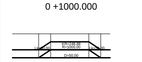
Designed track elevation (the running surface of the rail)

Existing ground elevation

Km stationing



Horizontal alignment, schematic
SR= length of straight line (m)
R= curve radius (m)
KR= length of curve (m)
D= track cant (mm)
Lk= length of transition curve (m)



Version 15.12.2017

Revision	Explanation	Date	Designer	Date	Acceptor

Customer: MINISTERIO DE TRANSPORTE Y OBRAS PÚBLICAS

Supplier: VR TRACK

Project: Railway Project

Design phase: Pre-engineering, Phase 2

Content: Track map and profile

Km 27+0200 - 28+0600

Drawer	15.12.2017	UPa
Designer	15.12.2017	HMa / MLe
Supervisor	15.12.2017	SVi
Accept.		
Owner acc.		

Scale: map 1:2000, profile 1:2000 / 1:200

Coordinate system / Elevation reference system: WGS 84 UTM 21 S, Local orthometric height

Railway line: Montevideo - Paso de Los Toros

Archive	Type	Number	Rev.	Sheet	Sheets total
			-	20	195

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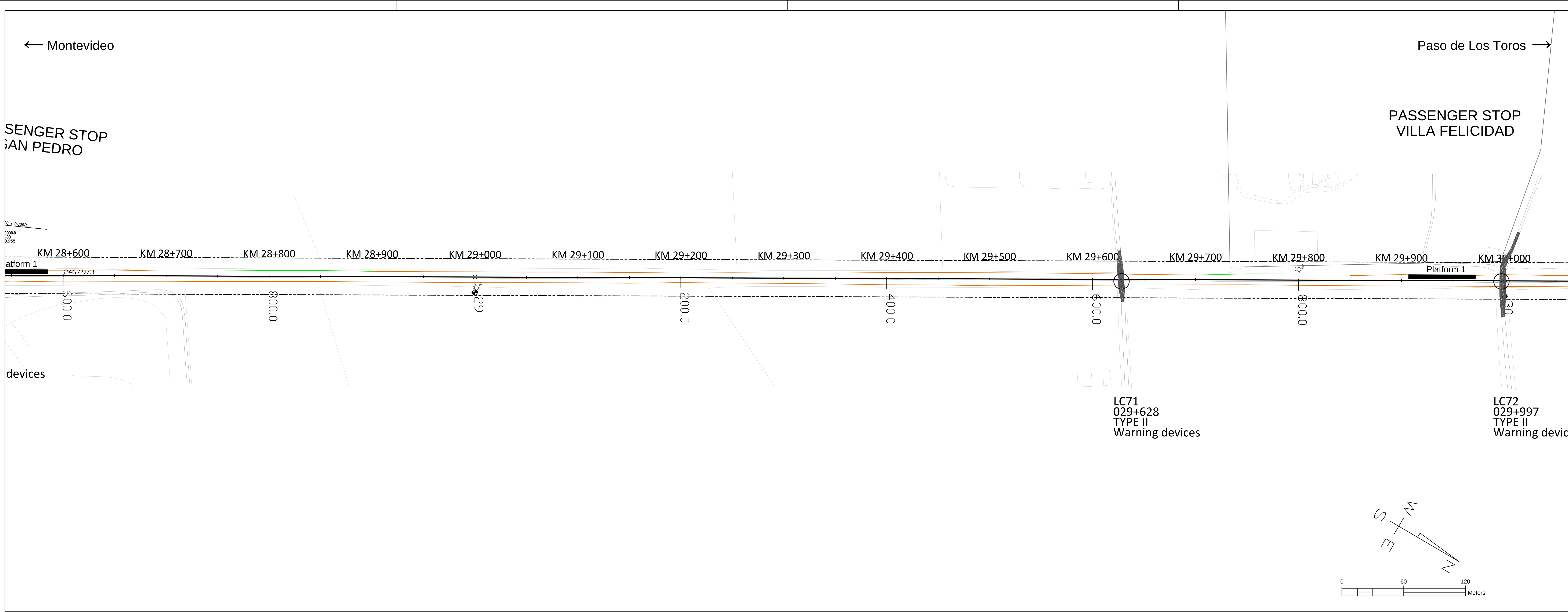

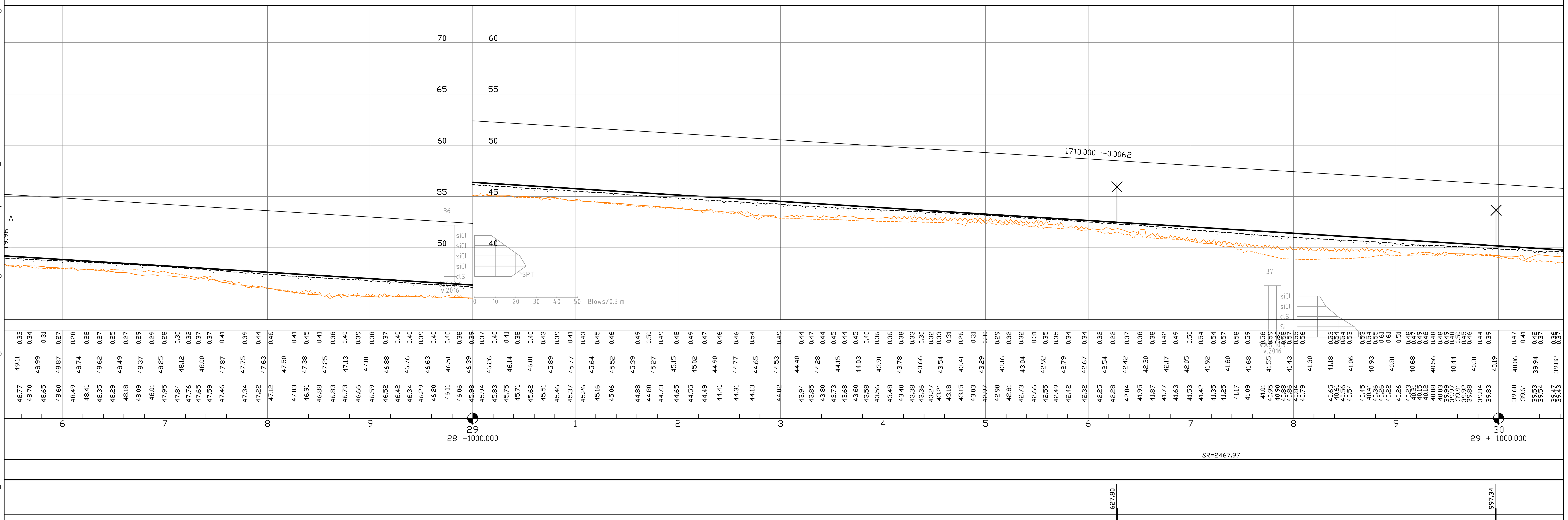

LEGEND, MAP

New railway alignment

Existing railway alignment (not in the Railway Project scope)

Railway Area borderline

Secondary Side Tracks - Horizontal geometry pre-designed
(Secondary side tracks and their switches will be designed and constructed based on Appendix Q)

Removal track

Street or road modification area in level crossings or underpasses/flyovers

Modification needed to the property access

Affected parallel roads and streets and maintenance roads

Road closing down

Limit of designed soil cut (open cut or cut with a retaining wall)

Limit of designed embankment fill, not including possible ditch

Existing stations or passenger platforms

New passenger platforms

Symbols

BXXX BXXX

Railway bridge or underpass, Flyover

CXXX

Culvert

LCXXX

Level crossing

Track alignment with design geometry figures
R= curve radius (m)
KR= length of curve (m)
D= track cant (mm)
Lk= length of transition curve (m)
Rv= radius of vertical curve
K= elevation
TG= lenght of tangent
123.345= length of straight line (m)

y. 2016 y. 2016

SPT-sounding, terminated at cobble, boulder, or bedrock contact.
y. 2016= year of investigation, location of 2016 soundings not accurate
1, 217= point number

y. 2017
TR02

Disturbed Sample
y. 2017= year of investigation
TR02= point number

LEGEND, PROFILE

Vertical railway alignment
(S=radius of vertical curve, KT=elevation point)

Ground surface

Ground elevation on the left side of track centre line (-20m) and on the right side of track centre line (+20m)

Culvert location (elevation will be designed in detailed design phase)

Level crossing

Overpass bridge, railway or underpass bridge

Elevation figures

Difference between existing ground and designed track elevation

Designed track elevation (the running surface of the rail)

Existing ground elevation

Km stationing

1
0 +1000.000

Horizontal alignment, schematic
SR= length of straight line (m)
R= curve radius (m)
KR= length of curve (m)
D= track cant (mm)
Lk= length of transition curve (m)

Version 15.12.2017

Revision	Explanation	Date	Designer	Date	Acceptor

Customer: MINISTERIO DE TRANSPORTE Y OBRAS PÚBLICAS	Project: Railway Project
	Design phase: Pre-engineering, Phase 2
Supplier: VR TRACK	Content: Track map and profile Km 28+0600 - 30+0000
Drawer 15.12.2017 UPa	Scale: map 1:2000, profile 1:2000 / 1:200
Designer 15.12.2017 HMa / MLe	Coordinate system / Elevation reference system: WGS 84 UTM 21 S, Local orthometric height
Supervisor 15.12.2017 SVi	Railway line: Montevideo - Paso de Los Toros
Accept.	Archive / Type / Number / Rev. - / Sheet 21 / Sheets total 195
Owner acc.	

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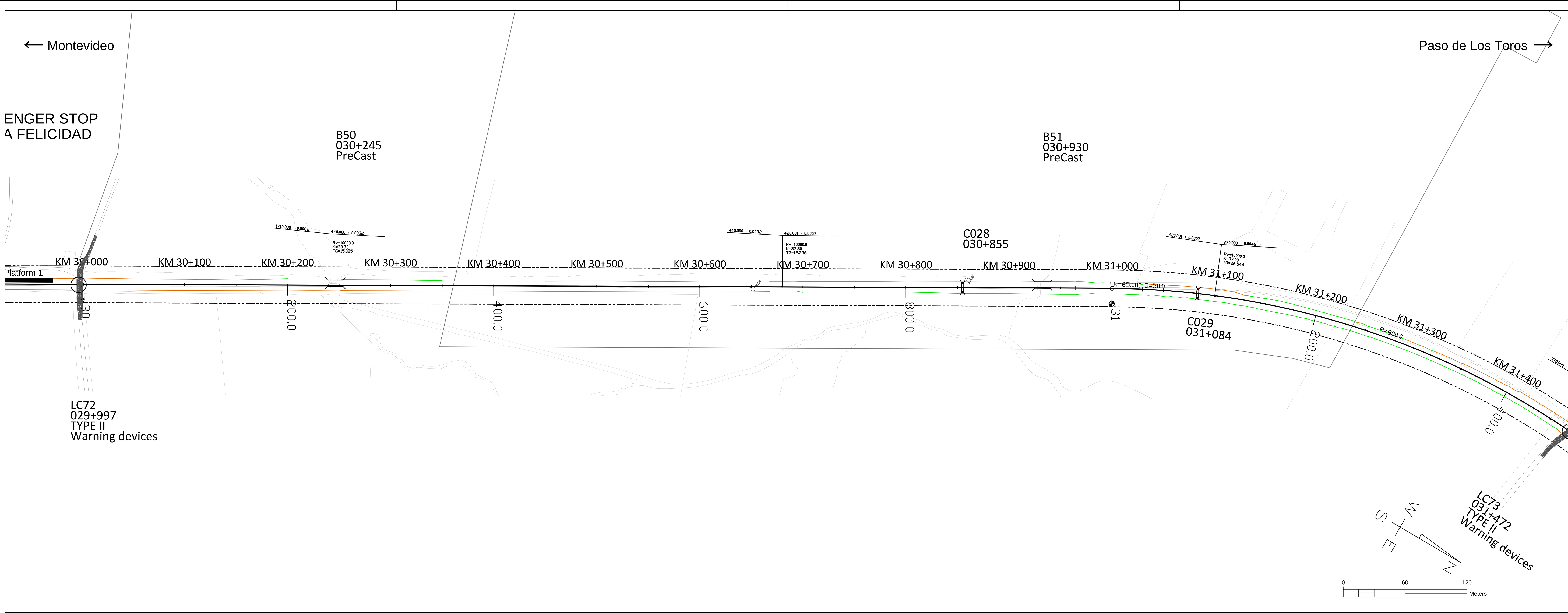

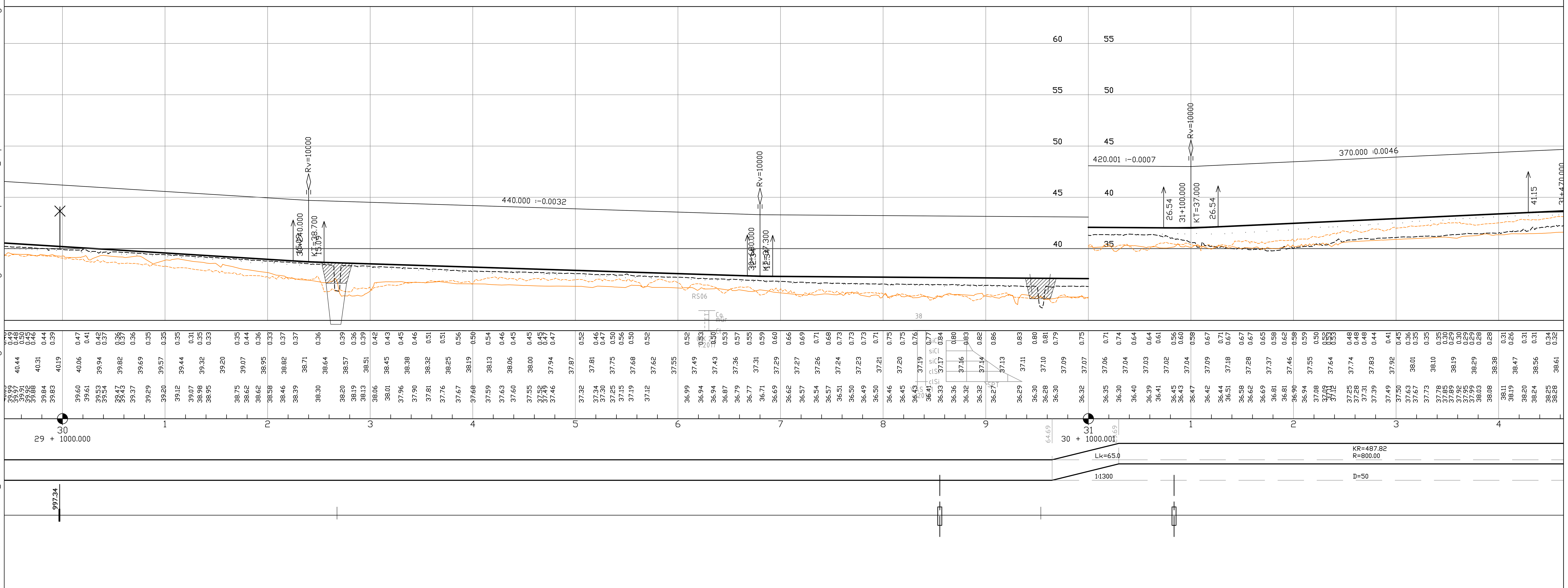

LEGEND, MAP

New railway alignment

Existing railway alignment (not in the Railway Project scope)

Railway Area borderline

Secondary Side Tracks - Horizontal geometry pre-designed
(Secondary side tracks and their switches will be designed and constructed based on Appendix Q)

Removal track

Street or road modification area in level crossings or underpasses/flyovers

Modification needed to the property access

Affected parallel roads and streets and maintenance roads

Road closing down

Limit of designed soil cut (open cut or cut with a retaining wall)

Limit of designed embankment fill, not including possible ditch

Existing stations or passenger platforms

New passenger platforms

Symbols

BXXX BXXX

Railway bridge or underpass, Flyover

CXXX

Culvert

LCXXX

Level crossing

Track alignment with design geometry figures

R= curve radius (m)
KR= length of curve (m)
D= track cant (mm)
Lk= length of transition curve (m)
Rv= radius of vertical curve
K= elevation
TG= lenght of tangent
123.345= length of straight line (m)

y. 2016 1 y. 2016 217

SPT-sounding, terminated at cobble, boulder, or bedrock contact.
y. 2016= year of investigation, location of 2016 soundings not accurate
1, 217= point number

y. 2017 TR02

Disturbed Sample
y. 2017= year of investigation
TR02= point number

LEGEND, PROFILE

Vertical railway alignment
(S=radius of vertical curve, KT=elevation point)

Ground surface

Ground elevation on the left side of track centre line (-20m) and on the right side of track centre line (+20m)

Culvert location (elevation will be designed in detailed design phase)

Level crossing

Overpass bridge, railway or underpass bridge

Elevation figures

Difference between existing ground and designed track elevation

Designed track elevation (the running surface of the rail)

Existing ground elevation

Km stationing

1 0 +1000.000

Horizontal alignment, schematic
SR= length of straight line (m)
R= curve radius (m)
KR= length of curve (m)
D= track cant (mm)
Lk= length of transition curve (m)

Version 15.12.2017

Revision	Explanation	Date	Designer	Date	Acceptor

Customer: MINISTERIO DE TRANSPORTE Y OBRAS PÚBLICAS	Project: Railway Project
	Design phase: Pre-engineering, Phase 2
	Content: Track map and profile
Supplier: VR TRACK	Km 30+0000 - 31+0400

Drawer	15.12.2017	UPa	Scale: map 1:2000, profile 1:2000 / 1:200
Designer	15.12.2017	HMa / MLe	Coordinate system / Elevation reference system: WGS 84 UTM 21 S, Local orthometric height
Supervisor	15.12.2017	SVi	Railway line: Montevideo - Paso de Los Toros
Accept.			Archive / Type / Number / Rev. - / Sheet 22 / Sheets total 195
Owner acc.			

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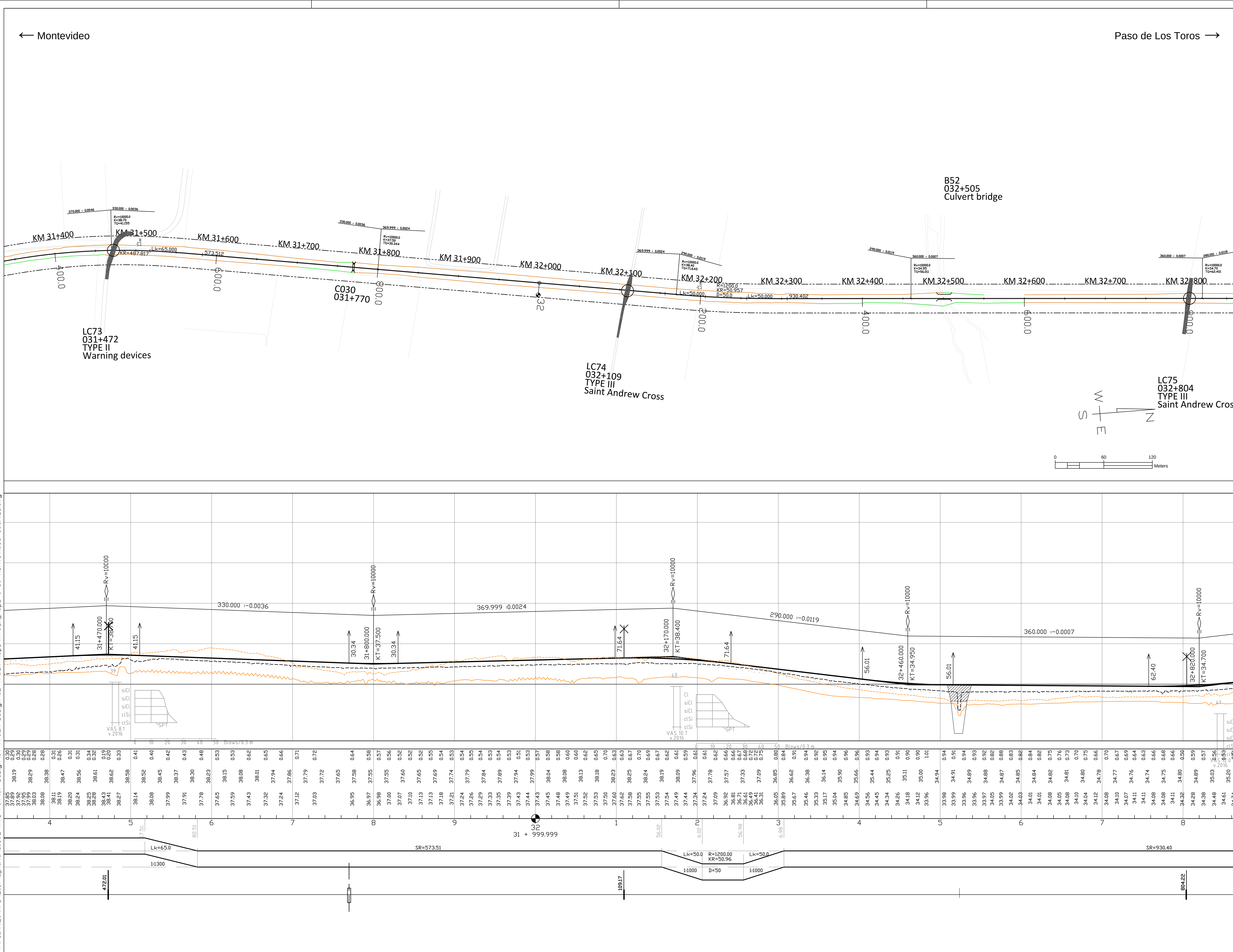

LEGEND, MAP

- New railway alignment
- Existing railway alignment (not in the Railway Project scope)
- Railway Area borderline
- Secondary Side Tracks - Horizontal geometry pre-designed (Secondary side tracks and their switches will be designed and constructed based on Appendix Q)
- Removal track
- Street or road modification area in level crossings or underpasses/flyovers
- Modification needed to the property access
- Affected parallel roads and streets and maintenance roads
- Road closing down
- Limit of designed soil cut (open cut or cut with a retaining wall)
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- Existing stations or passenger platforms
- New passenger platforms
- Symbols
  - BXXX BXXX — Railway bridge or underpass, Flyover
  - CXXX — Culvert
  - LCXXX — Level crossing
- Track alignment with design geometry figures
  - R= curve radius (m)
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  - 123.345= length of straight line (m)
- SPT-sounding, terminated at cobble, boulder, or bedrock contact.
  - y. 2016= year of investigation, location of 2016 soundings not accurate
  - 1, 217= point number
- Disturbed Sample
  - y. 2017= year of investigation
  - TR02= point number

LEGEND, PROFILE

- Vertical railway alignment (S=radius of vertical curve, KT=elevation point)
- Ground surface
- Ground elevation on the left side of track centre line (-20m) and on the right side of track centre line (+20m)
- Culvert location (elevation will be designed in detailed design phase)
- Level crossing
- Overpass bridge, railway or underpass bridge
- Elevation figures
  - Difference between existing ground and designed track elevation
  - Designed track elevation (the running surface of the rail)
  - Existing ground elevation
- Km stationing (0 +1000.000)
- Horizontal alignment, schematic
  - SR= length of straight line (m)
  - R= curve radius (m)
  - KR= length of curve (m)
  - D= track cant (mm)
  - Lk= length of transition curve (m)

Version 15.12.2017

Revision	Explanation	Date	Designer	Date	Acceptor

Customer: MINISTERIO DE TRANSPORTE Y OBRAS PÚBLICAS

Supplier: VR TRACK

Project: Railway Project

Design phase: Pre-engineering, Phase 2

Content: Track map and profile

Km 31+0400 - 32+0800

Drawer	15.12.2017	UPa	
Designer	15.12.2017	HMa / MLe	
Supervisor	15.12.2017	SVi	
Accept.			
Owner acc.			

Scale: map 1:2000, profile 1:2000 / 1:200

Coordinate system / Elevation reference system: WGS 84 UTM 21 S, Local orthometric height

Railway line: Montevideo - Paso de Los Toros

Archive	Type	Number	Rev.	Sheet	Sheets total
			-	23	195

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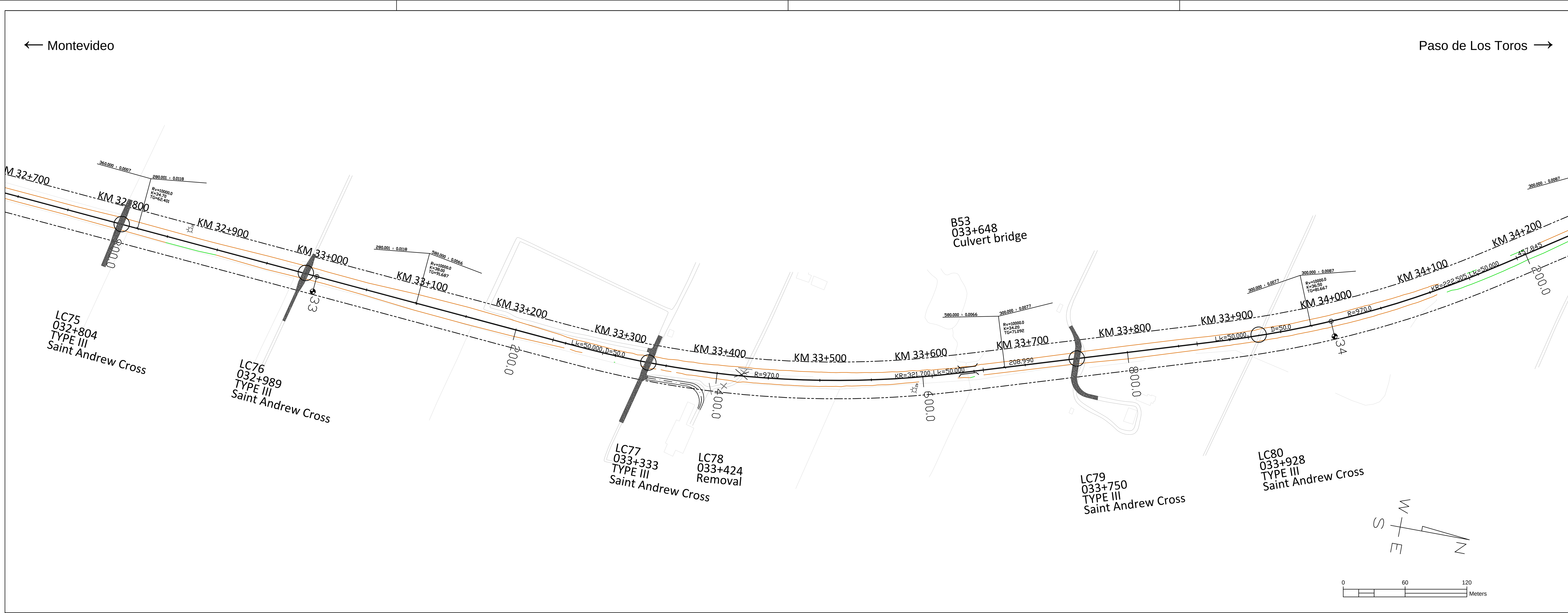

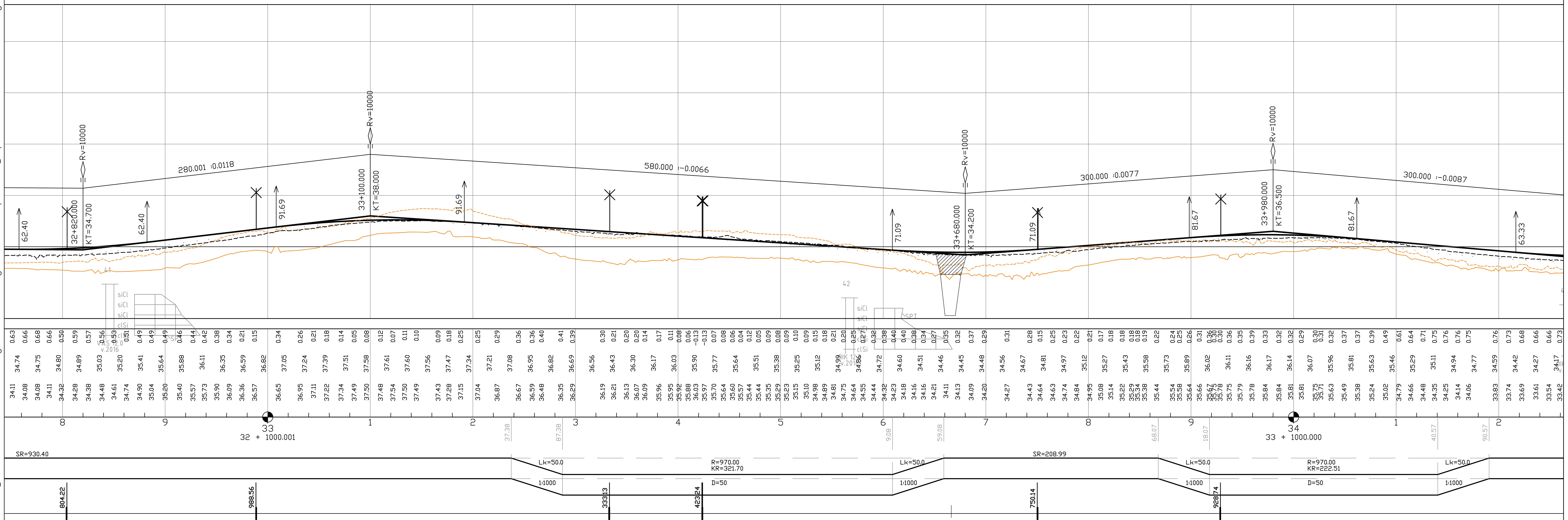

LEGEND, MAP

New railway alignment

Existing railway alignment (not in the Railway Project scope)

Railway Area borderline

Secondary Side Tracks - Horizontal geometry pre-designed
(Secondary side tracks and their switches will be designed and constructed based on Appendix Q)

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Symbols

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Railway bridge or underpass, Flyover

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Culvert

LCXXX

Level crossing

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- R= curve radius (m)
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y. 2016 y. 2016
1 217

SPT-sounding, terminated at cobble, boulder, or bedrock contact.
- y. 2016= year of investigation, location of 2016 soundings not accurate
- 1, 217= point number

y. 2017
TR02

Disturbed Sample
- y. 2017= year of investigation
- TR02= point number

LEGEND, PROFILE

Vertical railway alignment
(S=radius of vertical curve, KT=elevation point)

Ground surface

Ground elevation on the left side of track centre line (-20m) and on the right side of track centre line (+20m)

Culvert location (elevation will be designed in detailed design phase)

Level crossing

Overpass bridge, railway or underpass bridge

Elevation figures

0.17 Difference between existing ground and designed track elevation

92.32 Designed track elevation (the running surface of the rail)

92.15 Existing ground elevation

Km stationing

1
0 +1000.000

Horizontal alignment, schematic
- SR= length of straight line (m)
- R= curve radius (m)
- KR= length of curve (m)
- D= track cant (mm)
- Lk= length of transition curve (m)

Version 15.12.2017

Revision	Explanation	Date	Designer	Date	Acceptor

Customer: MINISTERIO DE TRANSPORTE Y OBRAS PÚBLICAS	Project: Railway Project
	Design phase: Pre-engineering, Phase 2
	Content: Track map and profile
Supplier: VR TRACK	Km 32+0800 - 34+0200
Drawer 15.12.2017 UPa	Scale: map 1:2000, profile 1:2000 / 1:200
Designer 15.12.2017 HMa / MLe	Coordinate system / Elevation reference system: WGS 84 UTM 21 S, Local orthometric height
Supervisor 15.12.2017 SVi	Railway line: Montevideo - Paso de Los Toros
Accept.	Archive / Type / Number / Rev. / Sheet / Sheets total: - , 24 , 195
Owner acc.	

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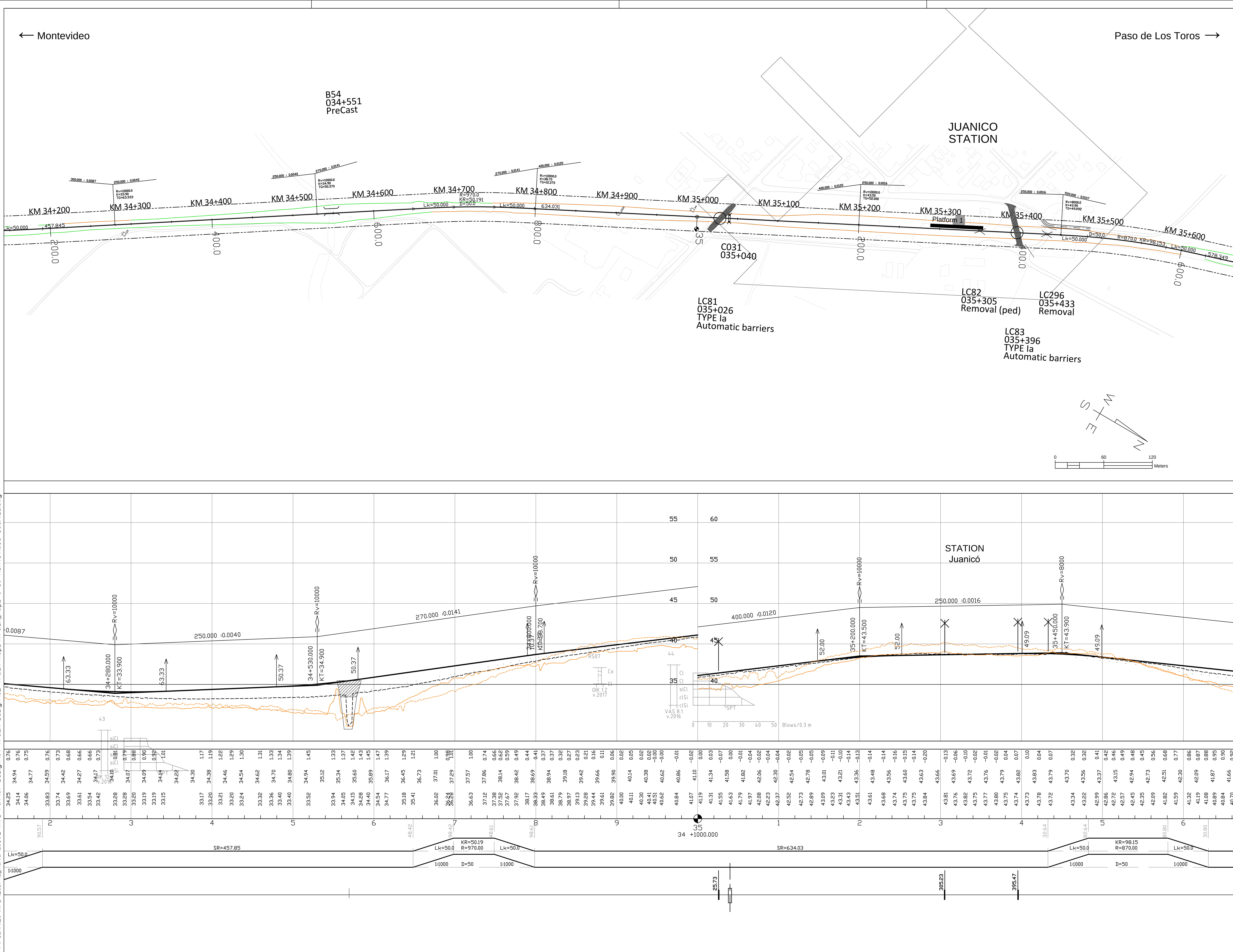


LEGEND, MAP

New railway alignment

Existing railway alignment (not in the Railway Project scope)

Railway Area borderline

Secondary Side Tracks - Horizontal geometry pre-designed
(Secondary side tracks and their switches will be designed and constructed based on Appendix Q)

Removal track

Street or road modification area in level crossings or underpasses/flyovers

Modification needed to the property access

Affected parallel roads and streets and maintenance roads

Road closing down

Limit of designed soil cut (open cut or cut with a retaining wall)

Limit of designed embankment fill, not including possible ditch

Existing stations or passenger platforms

New passenger platforms

Symbols

BXXX BXXX

Railway bridge or underpass, Flyover

CXXX

Culvert

LCXXX

Level crossing

Track alignment with design geometry figures
- R= curve radius (m)
- KR= length of curve (m)
- D= track cant (mm)
- Lk= length of transition curve (m)
- Rv= radius of vertical curve
- K= elevation
- TG= lenght of tangent
- 123.345= length of straight line (m)

y. 2016 y. 2016
1 217

SPT-sounding, terminated at cobble, boulder, or bedrock contact.
- y. 2016= year of investigation, location of 2016 soundings not accurate
- 1, 217= point number

y. 2017
TR02

Disturbed Sample
- y. 2017= year of investigation
- TR02= point number

LEGEND, PROFILE

Vertical railway alignment
(S=radius of vertical curve, KT=elevation point)

Ground surface

Ground elevation on the left side of track centre line (-20m) and on the right side of track centre line (+20m)

Culvert location (elevation will be designed in detailed design phase)

Level crossing

Overpass bridge, railway or underpass bridge

Elevation figures

0.17 Difference between existing ground and designed track elevation

92.32 Designed track elevation (the running surface of the rail)

92.15 Existing ground elevation

Km stationing

1
0 +1000.000

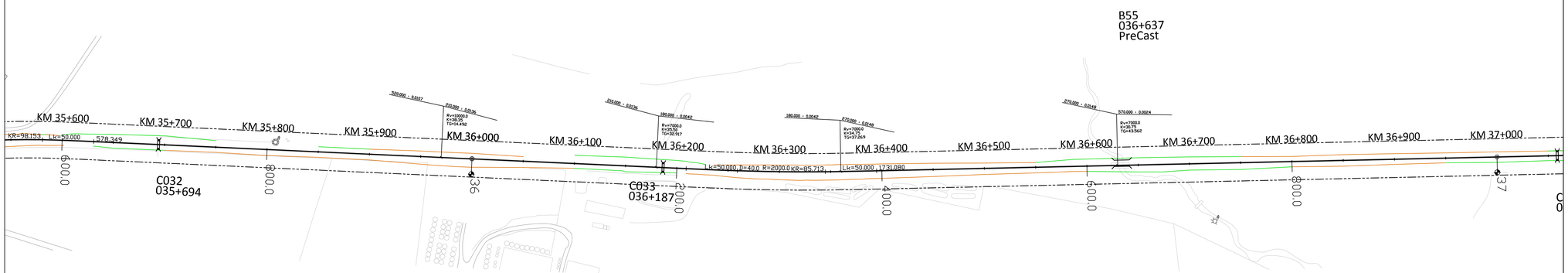
Horizontal alignment, schematic
- SR= length of straight line (m)
- R= curve radius (m)
- KR= length of curve (m)
- D= track cant (mm)
- Lk= length of transition curve (m)

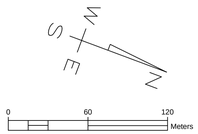
Version 15.12.2017

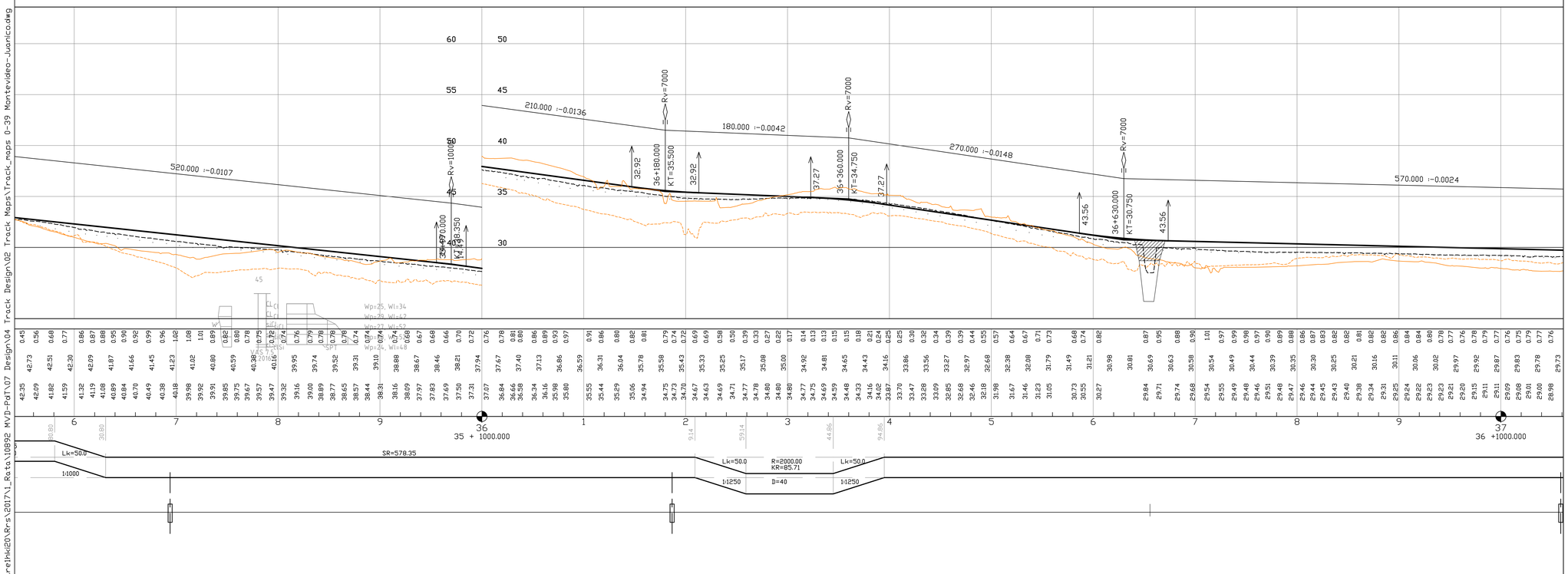
Revision	Explanation	Date	Designer	Date	Acceptor

Customer: MINISTERIO DE TRANSPORTE Y OBRAS PÚBLICAS	Project: Railway Project
	Design phase: Pre-engineering, Phase 2
Supplier: VR TRACK	Content: Track map and profile Km 34+0200 - 35+0600

Drawer	15.12.2017	UPa	Scale: map 1:2000, profile 1:2000 / 1:200
Designer	15.12.2017	HMa / MLe	Coordinate system / Elevation reference system: WGS 84 UTM 21 S, Local orthometric height
Supervisor	15.12.2017	SVi	Railway line: Montevideo - Paso de Los Toros
Accept.			Archive / Type / Number / Rev. - / Sheet 25 / Sheets total 195
Owner acc.			







LEGEND, MAP

New railway alignment

Existing railway alignment (not in the Railway Project scope)

Railway Area borderline

Secondary Side Tracks - Horizontal geometry pre-designed
(Secondary side tracks and their switches will be designed and constructed based on Appendix Q)

Removal track

Street or road modification area in level crossings or underpasses/flyovers

Modification needed to the property access

Affected parallel roads and streets and maintenance roads

Road closing down

Limit of designed soil cut (open cut or cut with a retaining wall)

Limit of designed embankment fill, not including possible ditch

Existing stations or passenger platforms

New passenger platforms

Symbols

BXXX BXXX
Railway bridge or underpass, Flyover

CXXX
Culvert

LCXXX
Level crossing

Track alignment with design geometry figures
R= curve radius (m)
KR= length of curve (m)
D= track cant (mm)
Lk= length of transition curve (m)
Rv= radius of vertical curve
K= elevation
TG= lenght of tangent
123.345= length of straight line (m)

y. 2016 y. 2016
1 217
SPT-sounding, terminated at cobble, boulder, or bedrock contact.
y. 2016= year of investigation, location of 2016 soundings not accurate
1, 217= point number

y. 2017
TR02
Disturbed Sample
y. 2017= year of investigation
TR02= point number

LEGEND, PROFILE

Vertical railway alignment
(S=radius of vertical curve, KT=elevation point)

Ground surface

Ground elevation on the left side of track centre line (-20m) and on the right side of track centre line (+20m)

Culvert location (elevation will be designed in detailed design phase)

Level crossing

Overpass bridge, railway or underpass bridge

Elevation figures

0.17 Difference between existing ground and designed track elevation

92.32 Designed track elevation (the running surface of the rail)

92.15 Existing ground elevation

1
0 +1000.000
Km stationing

Horizontal alignment, schematic
SR= length of straight line (m)
R= curve radius (m)
KR= length of curve (m)
D= track cant (mm)
Lk= length of transition curve (m)

Version 15.12.2017

Revision	Explanation	Date	Designer	Date	Acceptor

Customer
MINISTERIO
DE TRANSPORTE
Y OBRAS PÚBLICAS

Project
Railway Project

Design phase
Pre-engineering, Phase 2

Content
Track map and profile

Km 35+0600 - 37+0000

Supplier
VR TRACK

Drawer	15.12.2017	UPa
Designer	15.12.2017	HMa / MLe
Supervisor	15.12.2017	SVi
Accept.		
Owner acc.		

Scale
map 1:2000, profile 1:2000 / 1:200

Coordinate system WGS 84 UTM 21 S, Local orthometric height
Elevation reference system

Railway line
Montevideo - Paso de Los Toros

Archive	Type	Number	Rev.	Sheet	Sheets total
			-	26	195

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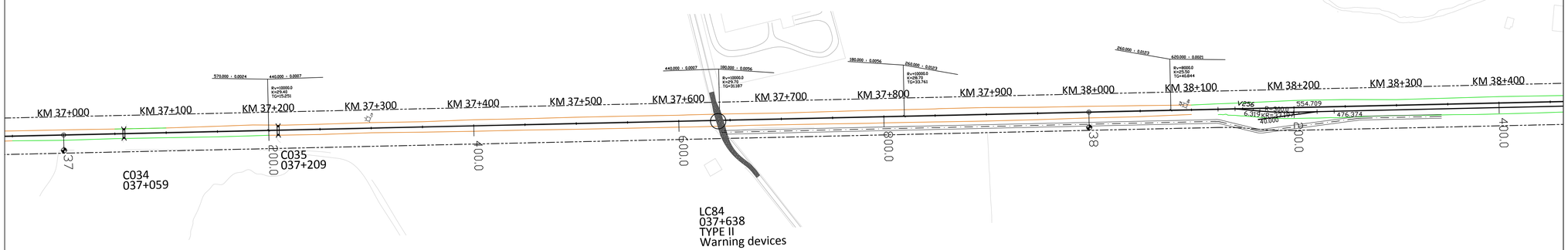
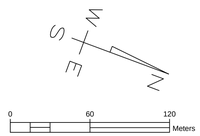
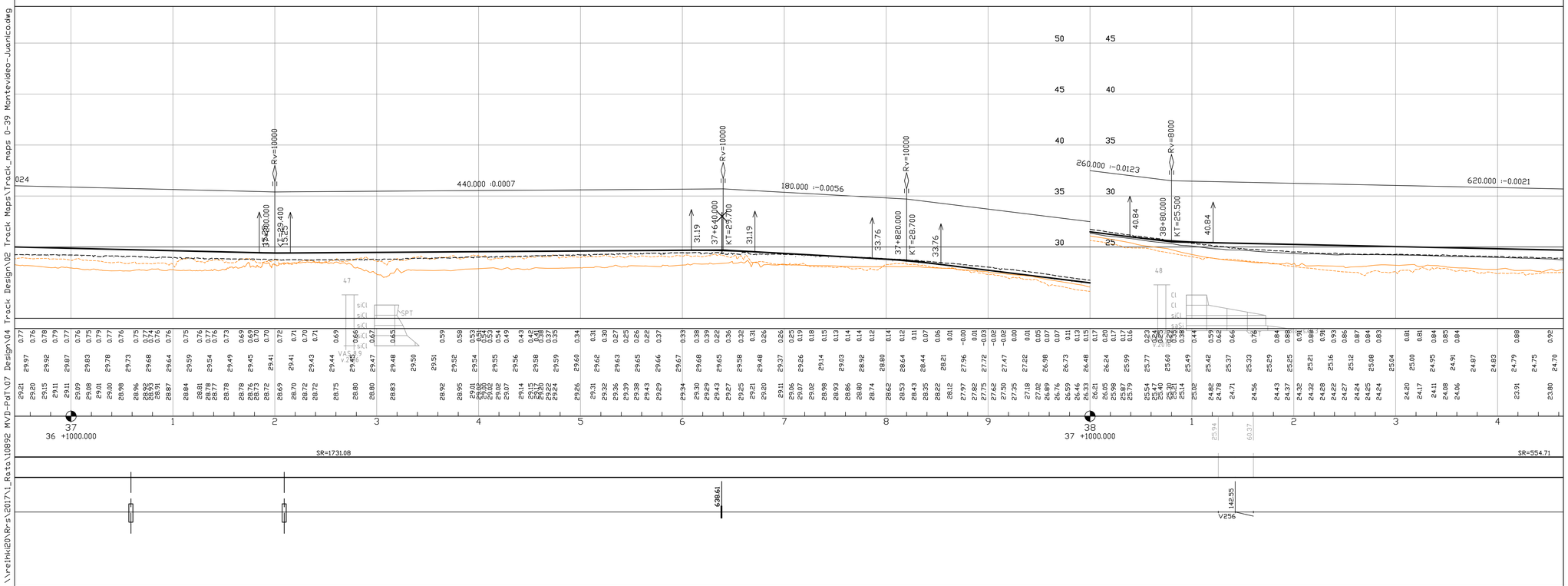
← Montevideo

Paso de Los Toros →







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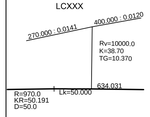
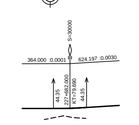
LEGEND, MAP

- New railway alignment
- Existing railway alignment (not in the Railway Project scope)
- Railway Area borderline
- Secondary Side Tracks - Horizontal geometry pre-designed
  (Secondary side tracks and their switches will be designed and constructed based on Appendix Q)
- Removal track
- Street or road modification area in level crossings or underpasses/flyovers
- Modification needed to the property access
- Affected parallel roads and streets and maintenance roads
- Road closing down
- Limit of designed soil cut (open cut or cut with a retaining wall)
- Limit of designed embankment fill, not including possible ditch
- Existing stations or passenger platforms
- New passenger platforms
- Symbols
- BXXX BXXX — Railway bridge or underpass, Flyover
- CXXX — Culvert
- Level crossing
- LCXXX



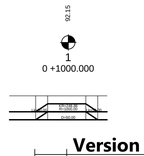
- Track alignment with design geometry figures
  - R= curve radius (m)
  - KR= length of curve (m)
  - D= track cant (mm)
  - Lk= length of transition curve (m)
  - Rv= radius of vertical curve
  - K= elevation
  - TG= lenght of tangent
  - 123.345= length of straight line (m)



- SPT-sounding, terminated at cobble, boulder, or bedrock contact.
  - y. 2016= year of investigation, location of 2016 soundings not accurate
  - 1, 217= point number
- Disturbed Sample
  - y. 2017= year of investigation
  - TR02= point number

LEGEND, PROFILE

- Vertical railway alignment
  (S=radius of vertical curve, KT=elevation point)
- Ground surface
- Ground elevation on the left side of track centre line (-20m) and on the right side of track centre line (+20m)
- Culvert location (elevation will be designed in detailed design phase)
- Level crossing
- Overpass bridge, railway or underpass bridge
- Elevation figures
- Difference between existing ground and designed track elevation
- Designed track elevation (the running surface of the rail)
- Existing ground elevation



- Km stationing
- Horizontal alignment, schematic
  - SR= length of straight line (m)
  - R= curve radius (m)
  - KR= length of curve (m)
  - D= track cant (mm)
  - Lk= length of transition curve (m)

Version 15.12.2017

Revision	Explanation	Date	Designer	Date	Acceptor

Customer: MINISTERIO DE TRANSPORTE Y OBRAS PÚBLICAS

Supplier: VR TRACK

Drawer	15.12.2017	UPa
Designer	15.12.2017	HMa / MLe
Supervisor	15.12.2017	SVi
Accept.		
Owner acc		

Project: Railway Project

Design phase: Pre-engineering, Phase 2

Content: Track map and profile

Km 37+0000 - 38+0400

Scale: map 1:2000, profile 1:2000 / 1:200

Coordinate system: WGS 84 UTM 21 S, Local orthometric height

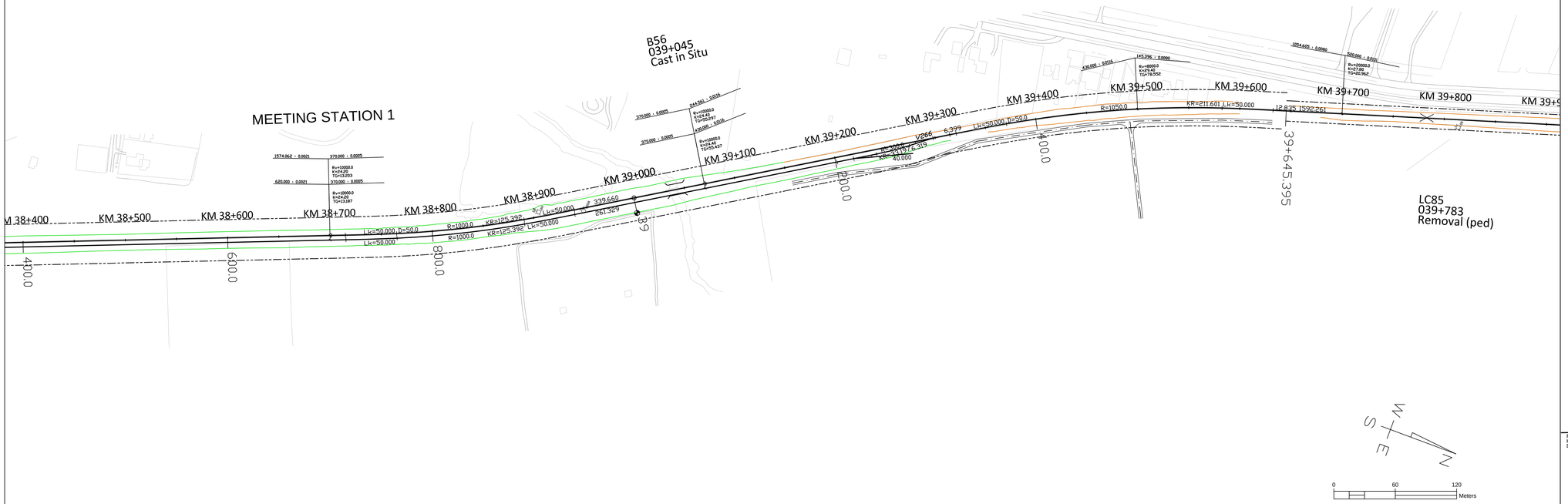
Elevation reference system

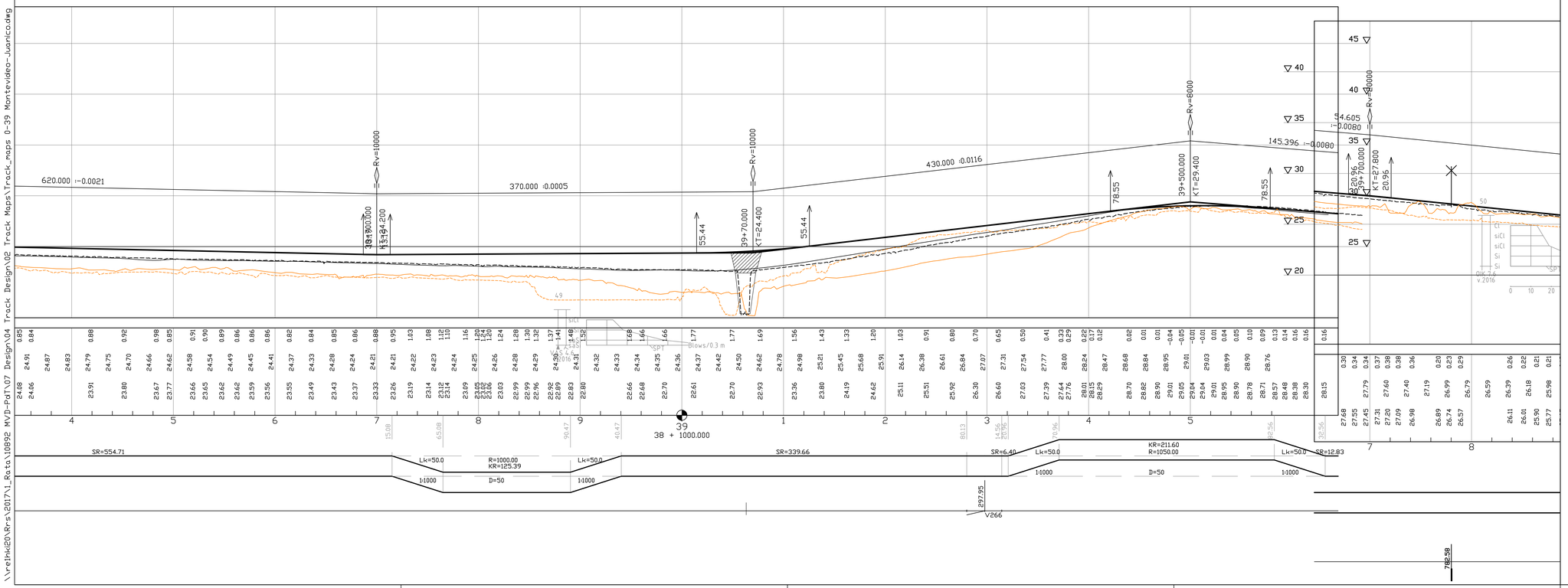
Railway line: Montevideo - Paso de Los Toros

Archive	Type	Number	Rev.	Sheet	Sheets total
			-	27	195

← Montevideo

Paso de Los Toros →





LEGEND, MAP

New railway alignment

Existing railway alignment (not in the Railway Project scope)

Railway Area borderline

Secondary Side Tracks - Horizontal geometry pre-designed
(Secondary side tracks and their switches will be designed and constructed based on Appendix Q)

Removal track

Street or road modification area in level crossings or underpasses/flyovers

Modification needed to the property access

Affected parallel roads and streets and maintenance roads

Road closing down

Limit of designed soil cut (open cut or cut with a retaining wall)

Limit of designed embankment fill, not including possible ditch

Existing stations or passenger platforms

New passenger platforms

Symbols

BXXX BXXX
Railway bridge or underpass, Flyover

CXXX
Culvert

Level crossing

LCXXX

Track alignment with design geometry figures
R= curve radius (m)
KR= length of curve (m)
D= track cant (mm)
Lk= length of transition curve (m)
Rv= radius of vertical curve
K= elevation
TG= lenght of tangent
123.345= length of straight line (m)

SPT-sounding, terminated at cobble, boulder, or bedrock contact.
y. 2016= year of investigation, location of 2016 soundings not accurate
1, 217= point number

Disturbed Sample
y. 2017= year of investigation
TR02= point number

LEGEND, PROFILE

Vertical railway alignment
(S=radius of vertical curve, KT=elevation point)

Ground surface

Ground elevation on the left side of track centre line (-20m) and on the right side of track centre line (+20m)

Culvert location (elevation will be designed in detailed design phase)

Level crossing

Overpass bridge, railway or underpass bridge

Elevation figures

Difference between existing ground and designed track elevation

Designed track elevation (the running surface of the rail)

Existing ground elevation

Km stationing

Horizontal alignment, schematic
SR= length of straight line (m)
R= curve radius (m)
KR= length of curve (m)
D= track cant (mm)
Lk= length of transition curve (m)

Version 15.12.2017

Revision	Explanation	Date	Designer	Date	Acceptor

Customer: MINISTERIO DE TRANSPORTE Y OBRAS PÚBLICAS

Supplier: VR TRACK

Project: Railway Project

Design phase: Pre-engineering, Phase 2

Content: Track map and profile

Km 38+0400 - 39+0800

Drawer	15.12.2017	UPa
Designer	15.12.2017	HMa / MLe
Supervisor	15.12.2017	SVi
Accept.		
Owner acc		

Scale: map 1:2000, profile 1:2000 / 1:200

Coordinate system / Elevation reference system: WGS 84 UTM 21 S, Local orthometric height

Railway line: Montevideo - Paso de Los Toros

Archive	Type	Number	Rev.	Sheet	Sheets total
			-	28	195