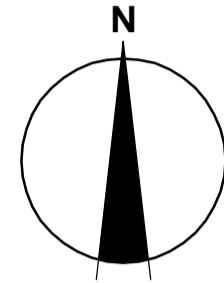


Estuary

Stage 1

City Of Greater Geelong



LOCALITY PLAN
MELWAYS REF: 468 C5



Principal

Leopold Developments Pty Ltd
Level 1, 6 Riverside Quay
Southbank, Victoria 3006



Level 1, 47 Pakington Street,
Geelong West, VIC, 3218
Tel: +61 3 5228 3100
Fax: +61 3 5228 3199
A.B.N. 99 124 206 819

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Standard Construction Notes

1. GENERAL

- 1.1 **Drawings** - The drawings are to be read in conjunction with the contract specification and the responsible Authorities standard drawings and current specifications for Roadworks and Drainage. Any observed discrepancy to be referred to the Superintendent prior to start of work.
- 1.2 **Responsible Authority Documentation Availability** - A set of the respective responsible Authority standard construction documentation including drawings and specification/s are to be provided by the Contractor and made available on-site for the duration of the construction period.
- 1.3 **Conformity with Drawings** - All works are to be finished in conformity with the lines, grades, thicknesses and cross sections shown in the drawings.
- 1.4 **Materials and Workmanship** - Materials and workmanship to comply with responsible Authority specifications and relevant SAA Codes.
- 1.5 **Tolerances** - Works are to be constructed in compliance with tolerances specified by the relevant responsible Authorities.
- 1.6 **Minimum Standards** - The standards of work and materials stated in the drawings and specification are the minimum acceptable irrespective of relevant responsible Authority minimum standards.
- 1.7 **Sewer/Water Supply** - Construction notes specific to sewer and water supply asset construction are incorporated in the drawings approved by the Water Company as attached hereto.

2. EXISTING CONDITIONS

- 2.1 **Discrepancy with Drawings** - Any discrepancy observed/identified between the drawings and existing conditions and site features are to be referred to the Superintendent prior to start of any related work.
- 2.2 **Municipal Assets & Infrastructure** - The condition of existing Council assets potentially affected by the works is to be assessed by a joint site inspection with Council Officers prior to the start of works. Asset conditions are to be recorded and witnessed by Council and the Contractor. The Contractor is to arrange and record site inspections and is liable for all rectification/reinstatement costs for damage to existing assets.
- 2.3 **Utility Services** - The locations of existing utility services, as shown in the drawings, are not guaranteed. Exact service locations are to be proven prior to start of works. Service location works are to comply with the requirements of the relevant responsible Authority. The Contractor is liable for rectification/reinstatement costs for damage to existing utility services.

3. NOTIFICATIONS

- 3.1 **Council** - Minimum notification periods are:
 - (a) **two (2) days** written notice of intention to start works
 - (b) **two (2) days** notice to inspect condition of existing Council assets
 - (c) **twenty four (24) hours** notice for weekend work
 - (d) **twenty four (24) hours** notice for:
 - inspection of drainage works
 - inspection of sub-soil drains
 - proof roll of prepared sub-grade or constructed pavement
 - inspection of prepared base for concrete works
 - other works as stated in the drawings or specified

Or as otherwise agreed with Council Officers.

- 3.2 **Property Owners/Tenants** - Seven (7) days written notice to property owners/tenants affected by the works.

4. OCCUPATION OF PUBLIC ROADS

All roadworks signage to comply with VicRoads Worksite Traffic Management Code incorporating AS 1742.3.

- 4.1 **Roads under VicRoads jurisdiction** - The Contractor is to arrange VicRoads consent via "Application for Consent - Works within Road Reserves" (refer VicRoads web site).

- 4.2 **Roads under Council control** - The Contractor is to arrange and acquire requisite Road Closure Permits via Council's Traffic Officer.

5. SET OUT

- 5.1 **Survey Stations and Reference Marks** - The locations of survey stations and reference marks are to be verified prior to start of works.
- 5.2 **Road Chainages** - Road chainages as shown in the drawings are to road centreline, unless otherwise stated.
- 5.3 **Kerb & Channel** - Kerb and channel radii and levels relate to edge of channel, unless otherwise stated.
- 5.4 **Drainage Pits** - The locations and orientation of drainage pits are to be accurately set out from co ordinates and/or offsets as stated.
- 5.5 **Pipe Drains** - Drainage lines are to be accurately set out from coordinates and/or offsets as stated. Further to Standard Note 5.4 drainage lines at pits are to be accurately set out to ensure that the outlet pipe is aligned directly opposite the inlet pipe (where deflection angles are 45o or less) or as otherwise stated in the drawings or directed.

6. TOPSOIL

- 6.1 **Stripping Limits** - Clearing and stripping of topsoil to be restricted to areas to be excavated/filled as stated in the drawings or limits as otherwise directed by the Superintendent.
- 6.2 **Surplus Material** - Surplus topsoil must be re-used on-site unless otherwise stated in the drawings or directed by the Superintendent.

7. EXISTING VEGETATION

All existing trees and significant vegetation within and external to the worksite are to be retained, preserved and protected unless otherwise stated in the drawings or directed by the Superintendent.

8. EXCAVATION/TRENCHING

- 8.1 **Trenching** - Trenching operations exceeding 1.5 metres depth are to comply with the provisions of the Mines (Trenches) Regulations 1982.
- 8.2 **Work close to Trees and Vegetation** - Excavation work within the drip line of trees is not to be performed unless otherwise stated in the drawings or approved by the Superintendent.
- 8.3 **Unstable Sub-Grade** - Unstable sub-grade/"soft spots" to be excavated to a sound proof-rolled base and backfilled with material approved by Council.

9. SOIL EROSION

The Contractor must install necessary protection works to effectively manage and limit soil erosion within the worksite. Works to include, but are not limited to:

- 9.1 **Silt Fences** - downstream of all exposed areas.
- 9.2 **Silt Barriers** - upstream of all pits

10. DRAINAGE WORK

- 10.1 **Existing Drains** - The location of existing drainage assets to be verified prior to start of works.
- 10.2 **Pipe Class** - Pipes to be, unless otherwise stated in the drawings:
 - (a) Roads & Reserves - Class 2 Rubber Ring Jointed RCP
 - (b) Easements - Rubber Ring Jointed RCP/FRP or Sewer Class Solvent Cement UPVC
- 10.3 **Pit Covers** - Pit covers are to be placed to match actual finished surface profiles - level and cross fall - of adjacent structures/surfaces. Finished surface levels stated in the drawings are indicative, for depth range purposes, and are not to be used as the basis for setting final pit cover levels
- 10.4 **Pit Construction** - Precast standard pits are to be installed. Cast in-situ standard pits are only to be constructed where approved by the Superintendent.
- 10.5 **Sub-Soil Drains**
 - (a) Entry to pits to be trimmed flush with inner wall and effectively mortared in place through the full pit wall thickness.
 - (b) Details of granular filter material including source to be submitted to the Superintendent prior to start of sub-soil drainage works.

11. BACKFILL MATERIAL

- 11.1 **Trenches under all pavement, edgings/kerb sections & Nature Strips** - 20mm Class 3 Fine Crushed Rock or other material as approved by Council.
- 11.2 **Allotments/Reserves/** - Selected best quality excavated in-situ material or other material as approved by Council.

12. COMPACTION STANDARDS

Compaction standards are to be checked and proven in accordance with the requirements of AS 1289. Where unspecified by the responsible Authority, the following minimum standards will apply:

12.1 Structural Fill

- (a) Fill base - top 150mm 95% standard compaction
- (b) Fill zone - 95% standard compaction
- (c) Under road pavement - zone less than 450mm under road pavement surface 98% standard compaction

12.2 Road Pavement

- (a) Road sub-grade - top 150mm 98% standard compaction
- (b) Pavement materials - 98% modified compaction

12.3 Trench Backfill

- (a) Granular under all pavement & edgings/kerb sections - 98% modified compaction
- (b) Granular behind kerbing - 95% modified compaction
- (c) Earth around structures - 95% standard compaction

13. CONCRETE WORK

- 13.1 **Minimum Strength**
 - Concrete for drainage pits to have a minimum compressive strength of 32 MPa at 28 days.
 - Concrete for all other applications to have a minimum compressive strength of 25 MPa at 28 days
- 13.2 **Bar Chairs** - All reinforcement in footpaths, vehicle crossings and roads to be supported by appropriately sized bar chairs.
- 13.3 **Slump** - Concrete to have 75mm maximum slump.
- 13.4 **Kerb Cement Content** - Concrete for kerb extrusion machines to have a minimum cement content of 280 kg/m3.
- 13.5 **Services Distribution Mains & Conduits** - Mains and conduits are to be installed prior to kerb section construction works.
- 13.6 **Footpaths** - All footpaths are to be a minimum of 125mm thick with F62 reinforcement, bedded on min of 75mm compacted Class 3 FCR. Bedding to extend 100mm beyond the edges of the footpath. Contraction joints to be constructed at 12.5m intervals. Class 4 FCR is to be used where filling is required under footpath Class 3 FCR bedding material.
- 13.7 **Continuous Kerb** - To allow for a continuous concrete kerb and channel pour the "Gatic" HD concrete surround is to be in place prior to the pour commencing. If the pit surrounds are not in place then the initial kerb and channel pour is to stop one metre either side of pit.

14. ROAD PAVEMENT WORK

- 14.1 **Pavement Composition** - The minimum standard of pavement composition is stated in the drawings for the respective road sections.
- 14.2 **Road surfacing** - Road surfacing must not be performed until all other works have been completed.

15. IDENTIFICATION MARKING

All identification marking figures are to be a minimum of 50mm high.

- 15.1 **Conduits** - Letter "W", "G" "E" or "T" for water, gas, electricity or telecommunications conduit to be stamped into face of kerb sections at frontage of lot served.
- 15.2 **House Drain Connections** - Letter "H" to be stamped into face of kerb sections opposite street drain connection point.

- 15.3 **Lot Nos.** - Lot Nos. to be stenciled in white paint on face of kerb sections at lot frontages.

16. TESTING

- 16.1 **Specified Testing** - Testing will be conducted in compliance with specified requirements. The Contractor is liable for all costs.
- 16.2 **Proof-Rolling** - Pneumatic tyred plant minimum weight 20 tonne with minimum ground contact pressure 450 kPa per tyre.

17. EXPOSED SURFACES RESTORATION

- 17.1 **Topsoiling** - All exposed residual surface areas at completion of civil works to be topsoiled with 100mm depth of best available material.
- 17.2 **Allotments/Reserves** - Allotments and reserves are to be evenly graded at a minimum gradient of 1 in 100 to their nominated drainage connection points.
- 17.3 **Nature Strips** - Nature strip surfaces are to be trimmed to grade between adjacent surfaces. Top-soiling and compaction operations are to ensure there is no later settlement/subsidence.
- 17.4 **Top-Dressing** - Undisturbed grassed areas are to be top-dressed and evenly graded as directed by the Superintendent.
- 17.5 **Hydroseeding** - At completion of the above works all prepared exposed surfaces are to be well watered and hydroseeded.

- 17.6 **Batter Slopes** - Batter slopes shall be a maximum of 1 in 5 for fill and 1 in 3 for cut unless otherwise shown.

18. FINAL WORKS PRESENTATION

At Practical Completion the following minimum standards of presentation will apply:

- 18.1 **Roads/Paved Areas** - All roads and paved areas are to be swept/washed down to produce clean surfaces free of all deleterious materials.
- 18.2 **Pipe Systems** - All pipe systems are to be flushed and cleared of all accumulated debris and deleterious materials.
- 18.3 **Site** - The site is to be prepared to a state acceptable for presentation to the public for sale purposes and is to be in a condition satisfactory to the Superintendent with completion of, at least, the following activities:
 - (a) all incidental and minor works
 - (b) site clean up operations
 - (c) site cleared of all facilities, temporary structures, plant, litter, surplus materials, etc. that are to be removed off-site.

- 18.4 **Reserve Frontages** - Round topped treated pipe bollards (0.6m high) are to be placed across reserve frontages at 1.5m centres. A demountable section for vehicle access consisting of an appropriate length of 50mm diameter (2.3mm wall thickness) galvanised water pipe, short section of chain (3 links) welded to each end. Two galvanised steel bollards - one each side of the entry, with one end to have a D20 padlock, which locks in to a link, which has been welded onto the bollard. Unless otherwise stated on plans.

- 18.5 **Street Signs** - Street signs are to be located as indicated on the plans and installed in accordance with Vicroads Traffic Engineering Manual Volume 2. Mounting height is to be to the underside of the sign and is to be a minimum of 2.1m and maximum of 3.0m

- 18.6 **No Through Road** - No through road signs are to be install below the street sign where applicable.

19. MAINTENANCE WORKS

The Contractor must responsibly repair/remediate defective works as directed during the maintenance period.

- 19.1 **Council Assets** - for Maintenance Period of 3 months
- 19.2 **Water Company Assets** - for Defects Liability Period of 12 months and Maintenance Period of 2 years
- 19.3 **Inspection & General Maintenance Activities** - the Contractor must undertake regular site inspections of all completed works. Special attention must be given to the adequacy of the following soil protection works:

- (a) Silt fences
- (b) Silt barriers
- (c) Areas hydroseeded



Principal Leopold Developments Pty Ltd
Level 1, 6 Riverside Quay
Southbank, Victoria 3006

| | | | |
|---|--------------------|----------|-------|
| | | | |
| | | | |
| | | | |
| | | | |
| B | COUNCIL AMENDMENTS | 23.12.09 | |
| A | ISSUED TO COUNCIL | 23.10.09 | |
| | REVISION | DATE | APP'D |

DRAWING NOTES

- 1. Do not scale drawings - use only dimensions stated.
- 2. Dimensions - Dimensions are in metres [m] unless otherwise stated.
- 3. Australian Height Datum - Reduced levels are to Australian Height (AHD) unless otherwise stated.

Scale@A1



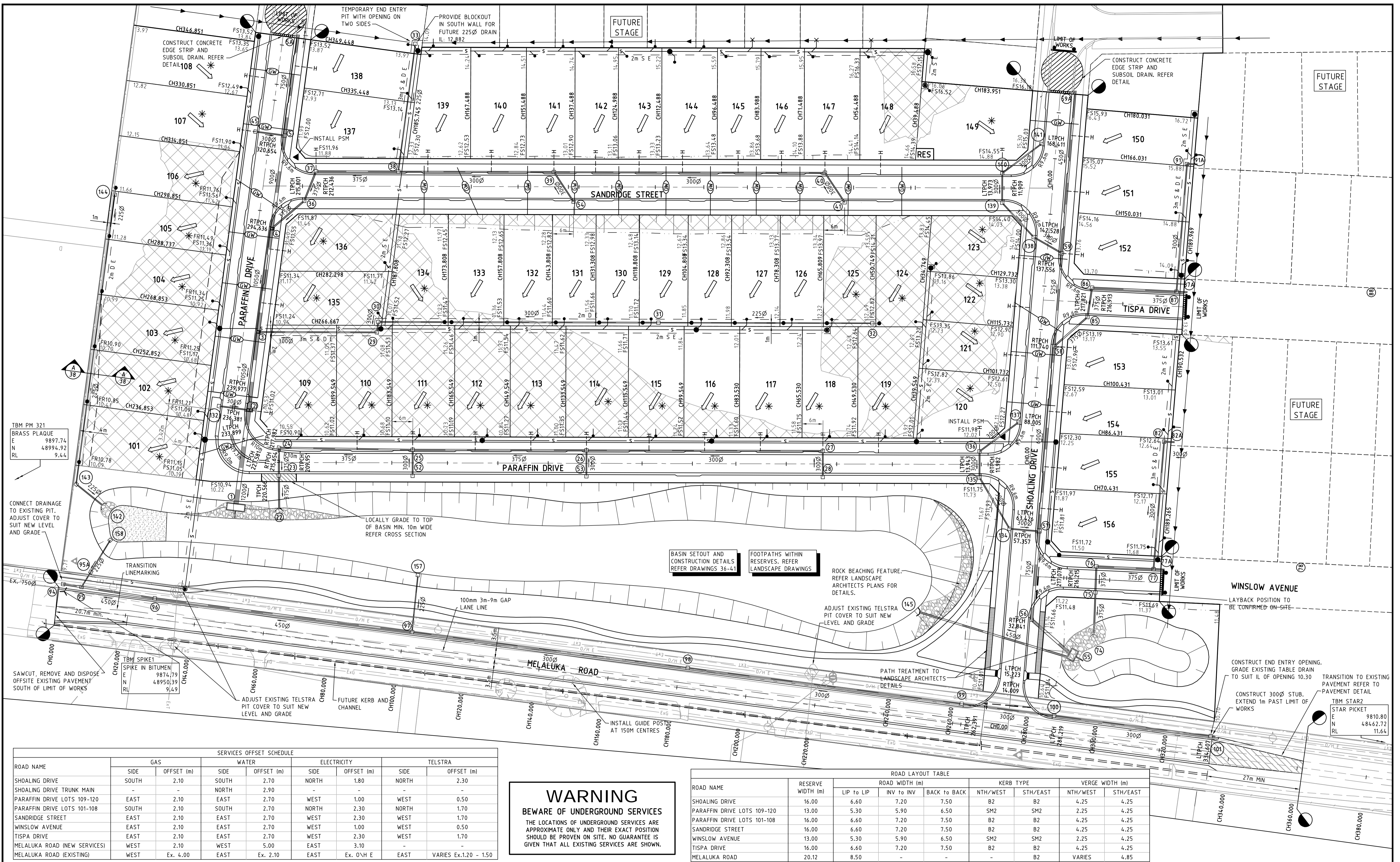
| | | |
|----------|------------|-----------|
| Designed | C. Barker | July 2009 |
| Drawn | M.Wilks | July 2009 |
| Checked | C. Birkett | July 2009 |
| Approved | J. Golden | July 2009 |

Estuary
Stage 1
City Of Greater Geelong
Roadworks and Drainage
General Notes

Drawing No. 0250EHL-01-02 Rev B

Sheet No. 2 of 40

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| ROAD NAME | GAS | | WATER | | ELECTRICITY | | TELSTRA | |
|------------------------------|-------|------------|-------|------------|-------------|------------|---------|-----------------------|
| | SIDE | OFFSET (m) | SIDE | OFFSET (m) | SIDE | OFFSET (m) | SIDE | OFFSET (m) |
| SHOALING DRIVE | SOUTH | 2.10 | SOUTH | 2.70 | NORTH | 1.80 | NORTH | 2.30 |
| SHOALING DRIVE TRUNK MAIN | - | - | NORTH | 2.90 | - | - | - | - |
| PARAFFIN DRIVE LOTS 109-120 | EAST | 2.10 | EAST | 2.70 | WEST | 1.00 | WEST | 0.50 |
| PARAFFIN DRIVE LOTS 101-108 | SOUTH | 2.10 | SOUTH | 2.70 | NORTH | 2.30 | NORTH | 1.70 |
| SANDRIDGE STREET | EAST | 2.10 | EAST | 2.70 | WEST | 2.30 | WEST | 1.70 |
| WINSLOW AVENUE | EAST | 2.10 | EAST | 2.70 | WEST | 1.00 | WEST | 0.50 |
| TISPA DRIVE | EAST | 2.10 | EAST | 2.70 | WEST | 2.30 | WEST | 1.70 |
| MELALUKA ROAD (NEW SERVICES) | WEST | 2.10 | WEST | 5.00 | EAST | 3.10 | - | - |
| MELALUKA ROAD (EXISTING) | WEST | Ex. 4.00 | EAST | Ex. 2.10 | EAST | Ex. 0.1H E | EAST | VARIES Ex.1.20 - 1.50 |

WARNING
BWARE OF UNDERGROUND SERVICES
 THE LOCATIONS OF UNDERGROUND SERVICES ARE APPROXIMATE ONLY AND THEIR EXACT POSITION SHOULD BE PROVEN ON SITE. NO GUARANTEE IS GIVEN THAT ALL EXISTING SERVICES ARE SHOWN.

| ROAD NAME | RESERVE WIDTH (m) | ROAD WIDTH (m) | | | | KERB TYPE | | VERGE WIDTH (m) | |
|-----------------------------|-------------------|----------------|------------|--------------|----------|-----------|----------|-----------------|--|
| | | LIP TO LIP | INV TO INV | BACK TO BACK | NTH/WEST | STH/EAST | NTH/WEST | STH/EAST | |
| SHOALING DRIVE | 16.00 | 6.60 | 7.20 | 7.50 | B2 | B2 | 4.25 | 4.25 | |
| PARAFFIN DRIVE LOTS 109-120 | 13.00 | 5.30 | 5.90 | 6.50 | SM2 | SM2 | 2.25 | 4.25 | |
| PARAFFIN DRIVE LOTS 101-108 | 16.00 | 6.60 | 7.20 | 7.50 | B2 | B2 | 4.25 | 4.25 | |
| SANDRIDGE STREET | 16.00 | 6.60 | 7.20 | 7.50 | B2 | B2 | 4.25 | 4.25 | |
| WINSLOW AVENUE | 13.00 | 5.30 | 5.90 | 6.50 | SM2 | SM2 | 2.25 | 4.25 | |
| TISPA DRIVE | 16.00 | 6.60 | 7.20 | 7.50 | B2 | B2 | 4.25 | 4.25 | |
| MELALUKA ROAD | 20.12 | 8.50 | - | - | - | B2 | VARIES | 4.85 | |

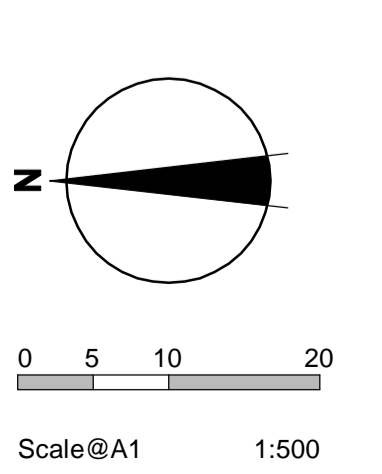
estuary leopold
 Principal Leopold Developments Pty Ltd
 Level 1, 6 Riverside Quay
 Southbank, Victoria 3006

| REVISION | DATE | APP'D |
|----------------------------------|----------|-------|
| G PATH LAYOUT IN RESERVE AMENDED | 08.06.10 | |
| F BASIN AMENDED | 31.05.10 | |
| E MINOR AMENDMENTS | 29.03.10 | |
| D DRAINAGE AND AMENDED | 11.03.10 | |
| C MINOR AMENDMENTS | 15.01.10 | |
| B COUNCIL AMENDMENTS | 23.12.09 | |
| A ISSUED TO COUNCIL | 23.10.09 | |

LEGEND

- E — Existing Electricity (Underground)
- G — Existing Gas
- T — Existing Telstra
- W — Existing Water
- S — Existing Sewer
- H — Existing House Drain
- GW — Existing Gas & Water Conduits
- T — Tactile Paver - Directional
- H — Tactile Paver - Hazard
- Ex E — Existing Electricity (Overhead)
- Ex G — Existing Gas
- Ex T — Existing Telstra
- Ex W — Existing Water
- Ex S — Existing Sewer
- Ex H — Existing House Drain
- Ex GW — Existing Gas & Water Conduits
- Ex T — Existing Tree to be Removed
- Ex S — Existing Swale Drain

- 141.34 Existing Surface Level
- FS14.35 Finished Building Line Level
- FR157.40 Finished Ridge Line Level
- TW159.30 Top of Retaining Wall
- BW159.30 Bottom of Retaining Wall
- Retaining Wall
- Intersection Threshold Treatment
- Structural Fill > 150mm Deep
- Ex. Structural Fill > 150mm Deep
- Proposed Driveway
- * Allotment to be graded evenly in direction of fall to levels indicated
- Direction of Fall
- Overland Flow
- Permanent Survey Mark
- Temporary Bench Mark
- Concrete Edge Strip with Subsoil Drain underneath "No Road" sign and Barrier
- Zero Lot Lines
- Limit of Works

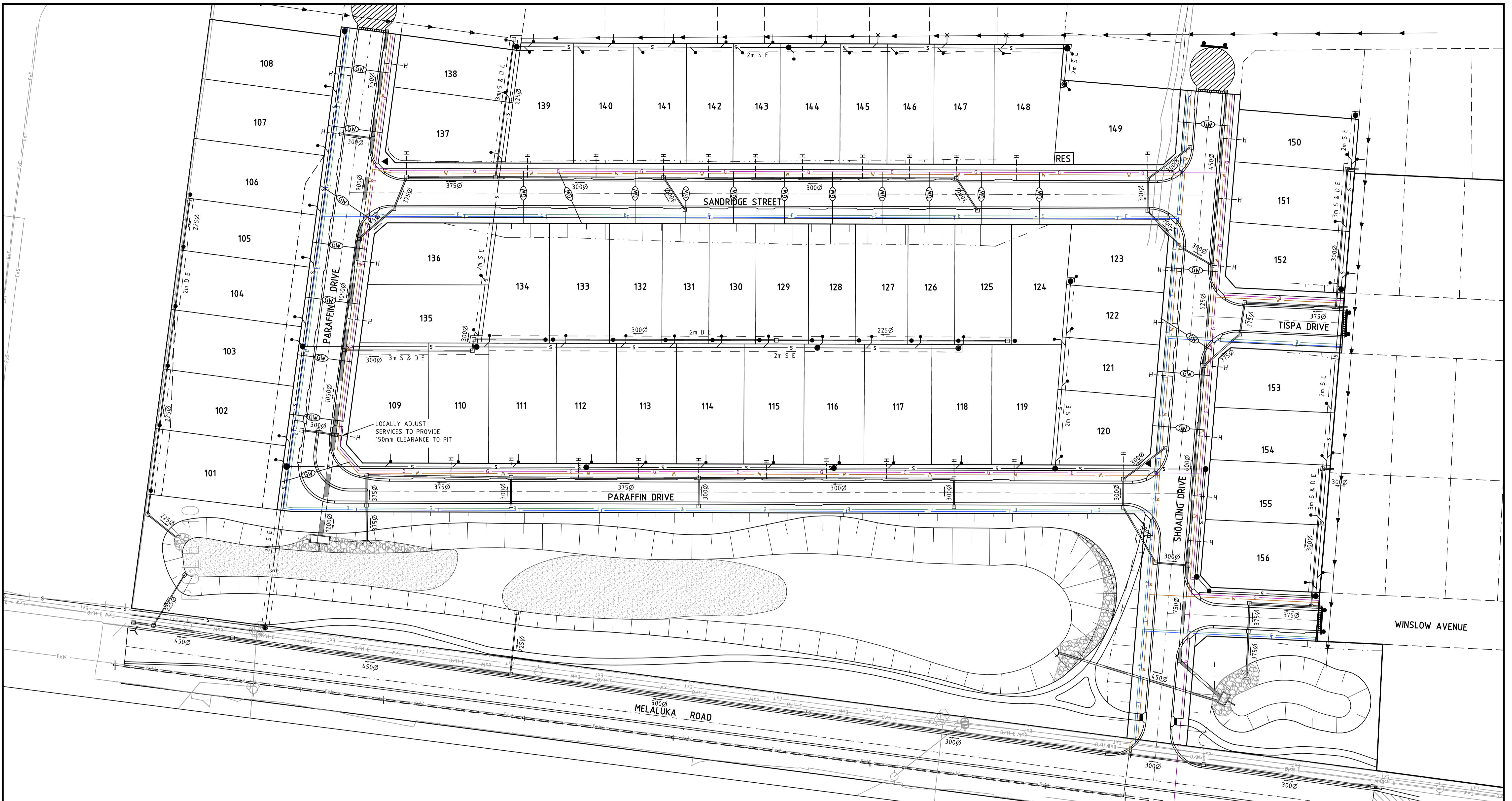


smec urban
 consulting group
 Geelong Tel +61 3 5228 3100

Designed C. Barker July 2009
 Drawn M. Wilks July 2009
 Checked C. Birkett July 2009
 Approved J. Golden July 2009

Estuary
 Stage 1
 City of Greater Geelong
 Roadworks and Drainage
 Layout Plan

Drawing No. 0250EHL-01-03 Rev G
 Sheet No. 3 of 40
 © SM Urban Pty Ltd ABN 99 124 206 819



| ROAD NAME | SERVICES OFFSET SCHEDULE | | | | | | | |
|------------------------------|--------------------------|------------|-------|------------|-------------|------------|---------|-----------------------|
| | GAS | | WATER | | ELECTRICITY | | TELSTRA | |
| | SIDE | OFFSET (m) | SIDE | OFFSET (m) | SIDE | OFFSET (m) | SIDE | OFFSET (m) |
| SHOALING DRIVE | SOUTH | 2.10 | SOUTH | 2.70 | NORTH | 1.80 | NORTH | 2.30 |
| SHOALING DRIVE TRUNK MAIN | - | - | NORTH | 2.90 | - | - | - | - |
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| PARAFFIN DRIVE LOTS 101-108 | SOUTH | 2.10 | SOUTH | 2.70 | NORTH | 2.30 | NORTH | 1.70 |
| SANDRIDGE STREET | EAST | 2.10 | EAST | 2.70 | WEST | 2.30 | WEST | 1.70 |
| WINSLOW AVENUE | EAST | 2.10 | EAST | 2.70 | WEST | 1.00 | WEST | 0.50 |
| TISPA DRIVE | EAST | 2.10 | EAST | 2.70 | WEST | 2.30 | WEST | 1.70 |
| MELALUKA ROAD (NEW SERVICES) | WEST | 2.10 | WEST | 5.00 | - | - | - | - |
| MELALUKA ROAD (EXISTING) | WEST | Ex. 4.00 | EAST | Ex. 2.10 | EAST | Ex. 0\N/E | EAST | VARIES Ex.1.20 - 1.50 |

WARNING
BWARE OF UNDERGROUND SERVICES
 THE LOCATIONS OF UNDERGROUND SERVICES ARE APPROXIMATE ONLY AND THEIR EXACT POSITION SHOULD BE PROVEN ON SITE. NO GUARANTEE IS GIVEN THAT ALL EXISTING SERVICES ARE SHOWN.

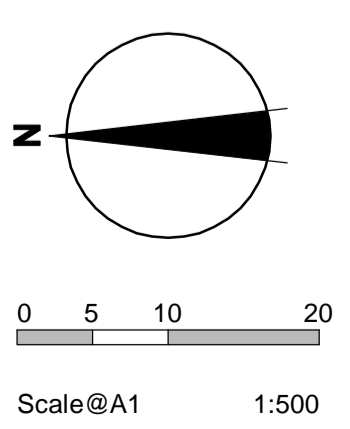
| ROAD NAME | RESERVE WIDTH (m) | ROAD WIDTH (m) | | | KERB TYPE | | VERGE WIDTH (m) | |
|-----------------------------|-------------------|----------------|------------|--------------|-----------|----------|-----------------|----------|
| | | LIP TO LIP | INV TO INV | BACK TO BACK | NTH/WEST | STH/EAST | NTH/WEST | STH/EAST |
| SHOALING DRIVE | 16.00 | 6.60 | 7.20 | 7.50 | B2 | B2 | 4.25 | 4.25 |
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| PARAFFIN DRIVE LOTS 101-108 | 16.00 | 6.60 | 7.20 | 7.50 | B2 | B2 | 4.25 | 4.25 |
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| WINSLOW AVENUE | 13.00 | 5.30 | 5.90 | 6.50 | SM2 | SM2 | 2.25 | 4.25 |
| TISPA DRIVE | 16.00 | 6.60 | 7.20 | 7.50 | B2 | B2 | 4.25 | 4.25 |
| MELALUKA ROAD | 20.12 | 8.50 | - | - | - | B2 | VARIES | 4.85 |

| REVISION | DATE | APP'D |
|----------------------|----------|-------|
| D MINOR AMENDMENTS | 29.03.10 | |
| C MINOR AMENDMENTS | 15.01.10 | |
| B COUNCIL AMENDMENTS | 23.12.09 | |
| A ISSUED TO COUNCIL | 23.10.09 | |

LEGEND

- Electricity (Underground)
- Gas
- Telstra
- Water
- Stormwater Drain, Pit and Property Inlet
- Swale Drain
- Sewer, Maintenance Structures and Property Connection
- House Drain
- Gas & Water Conduits
- Tactile Paver - Directional
- Tactile Paver - Hazard
- Existing Electricity (Underground)
- Existing Electricity (Overhead)
- Existing Gas
- Existing Telstra
- Existing Water
- Existing Stormwater Drain
- Existing Sewer
- Existing House Drain
- Existing Tree to Remain
- Existing Tree to be Removed
- Existing Swale Drain

- Existing Surface Level
- Finished Building Line Level
- Finished Ridge Line Level
- Top of Retaining Wall
- Bottom of Retaining Wall
- Retaining Wall
- Intersection Threshold Treatment
- Structural Fill > 150mm Deep
- Ex. Structural Fill > 150mm Deep
- Proposed Driveway
- Allotment to be graded evenly in direction of fall to levels indicated
- Direction of Fall
- Overland Flow
- Permanent Survey Mark
- Temporary Bench Mark
- Concrete Edge Strip with Subsoil Drain underneath "No Road" sign and Barrier
- Zero Lot Lines
- Limit of Works



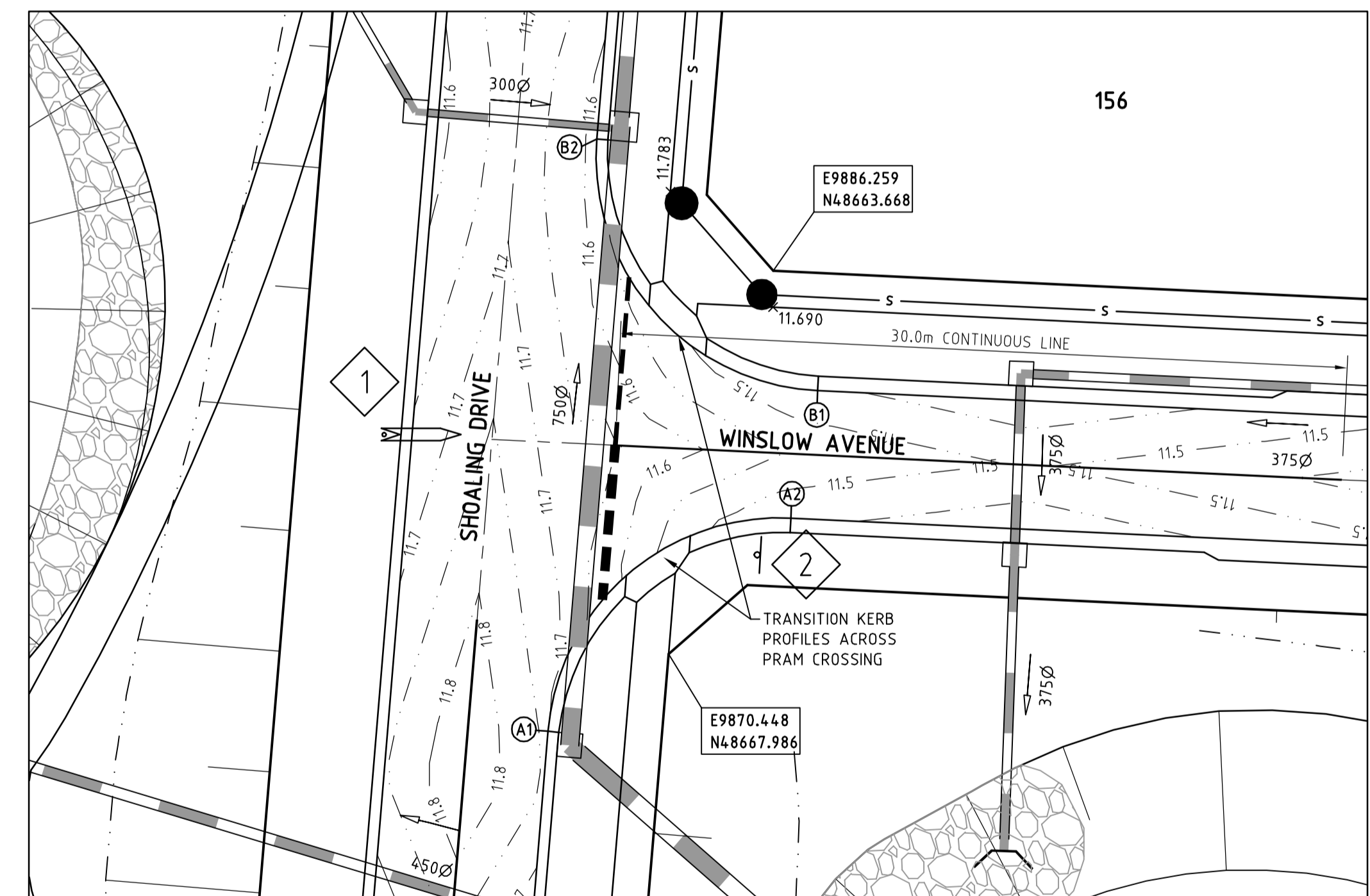
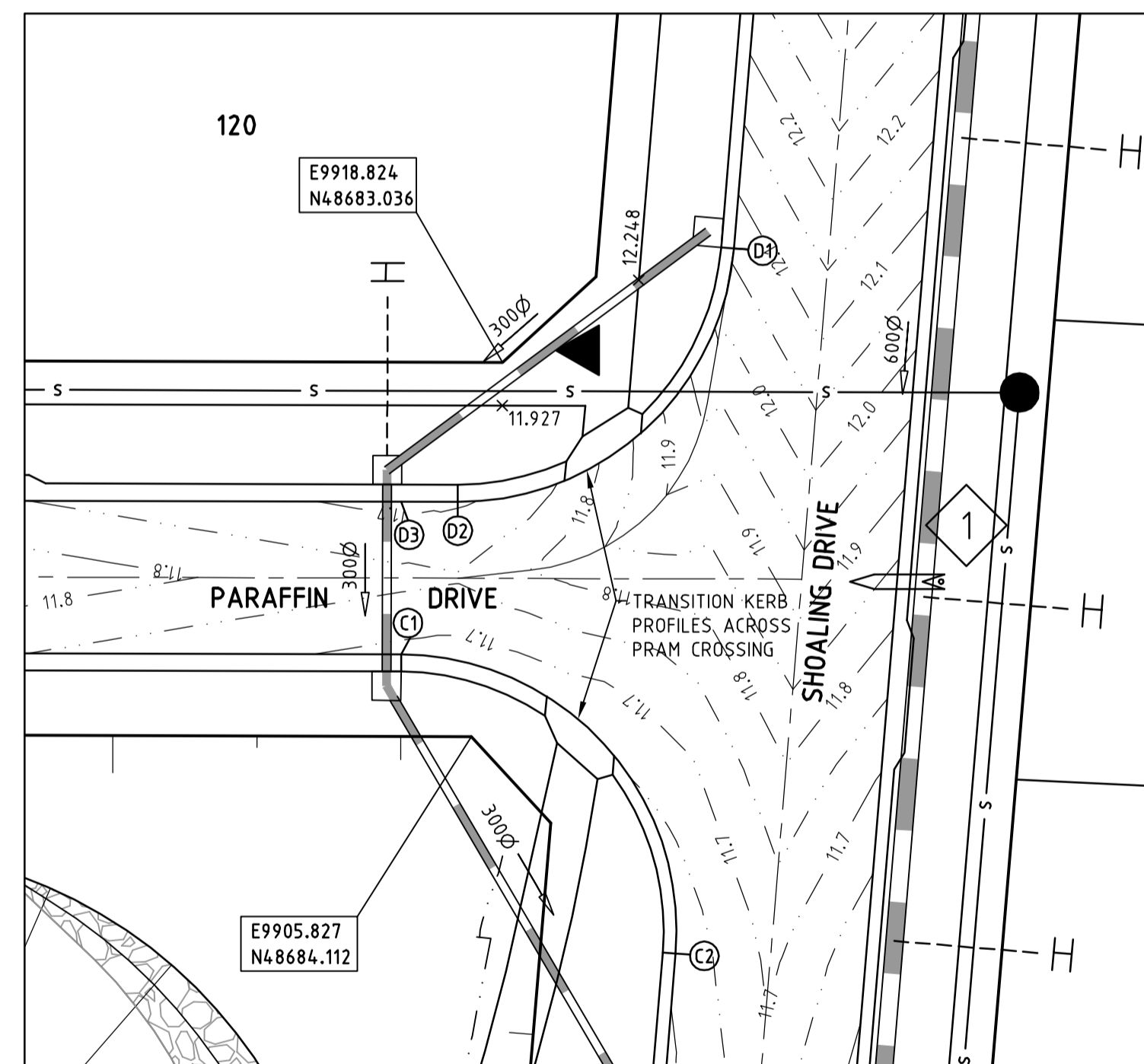
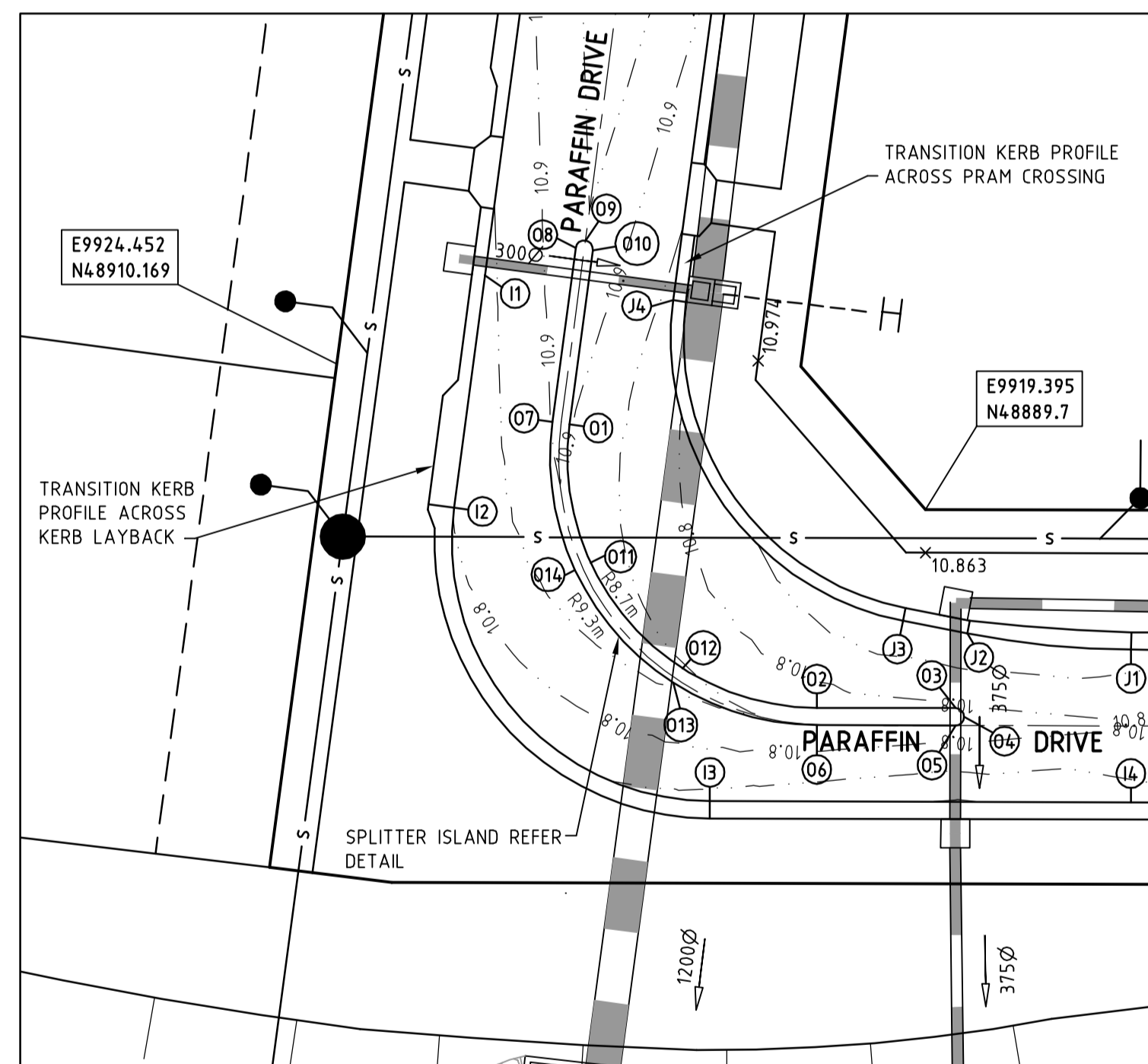
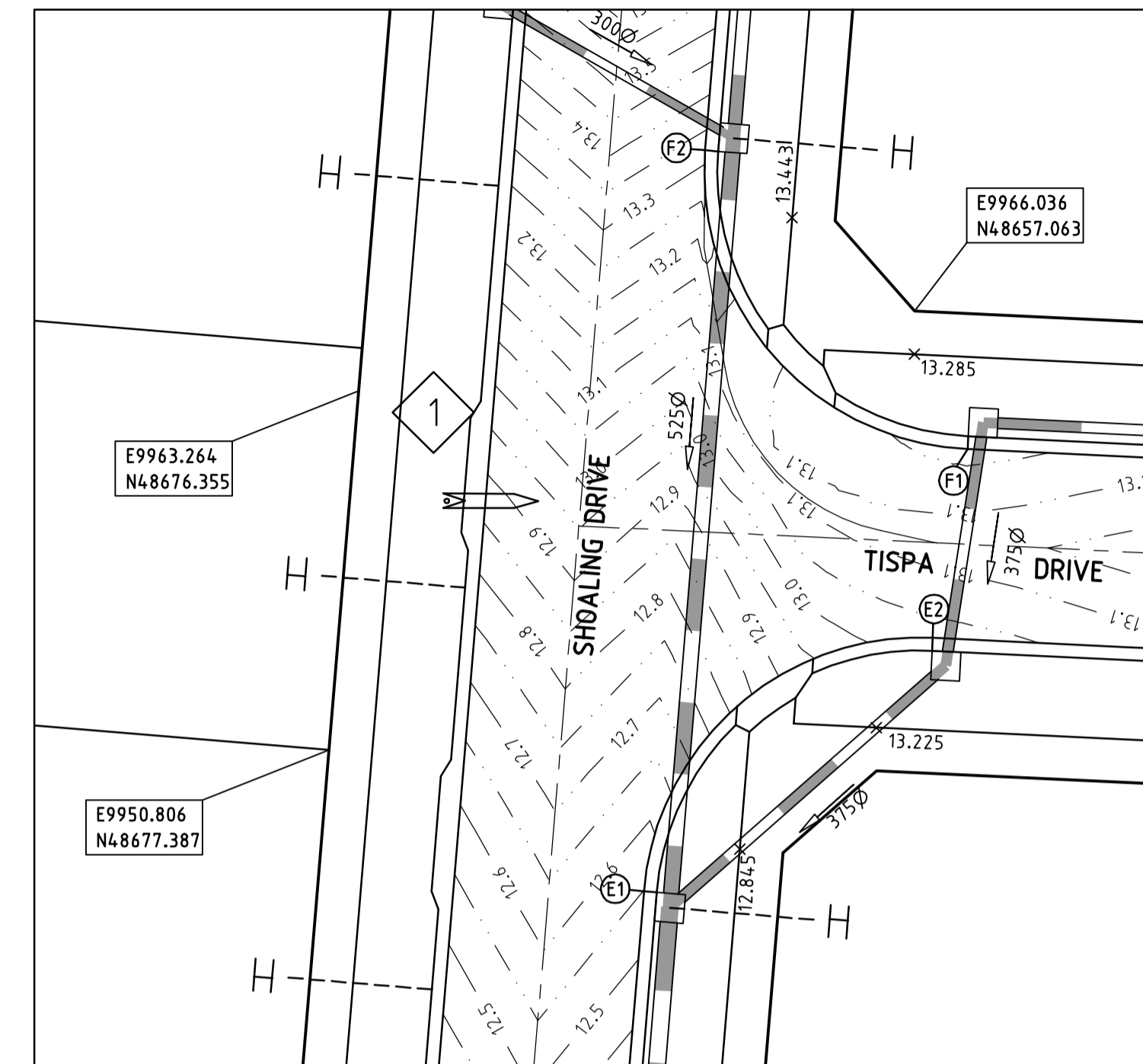
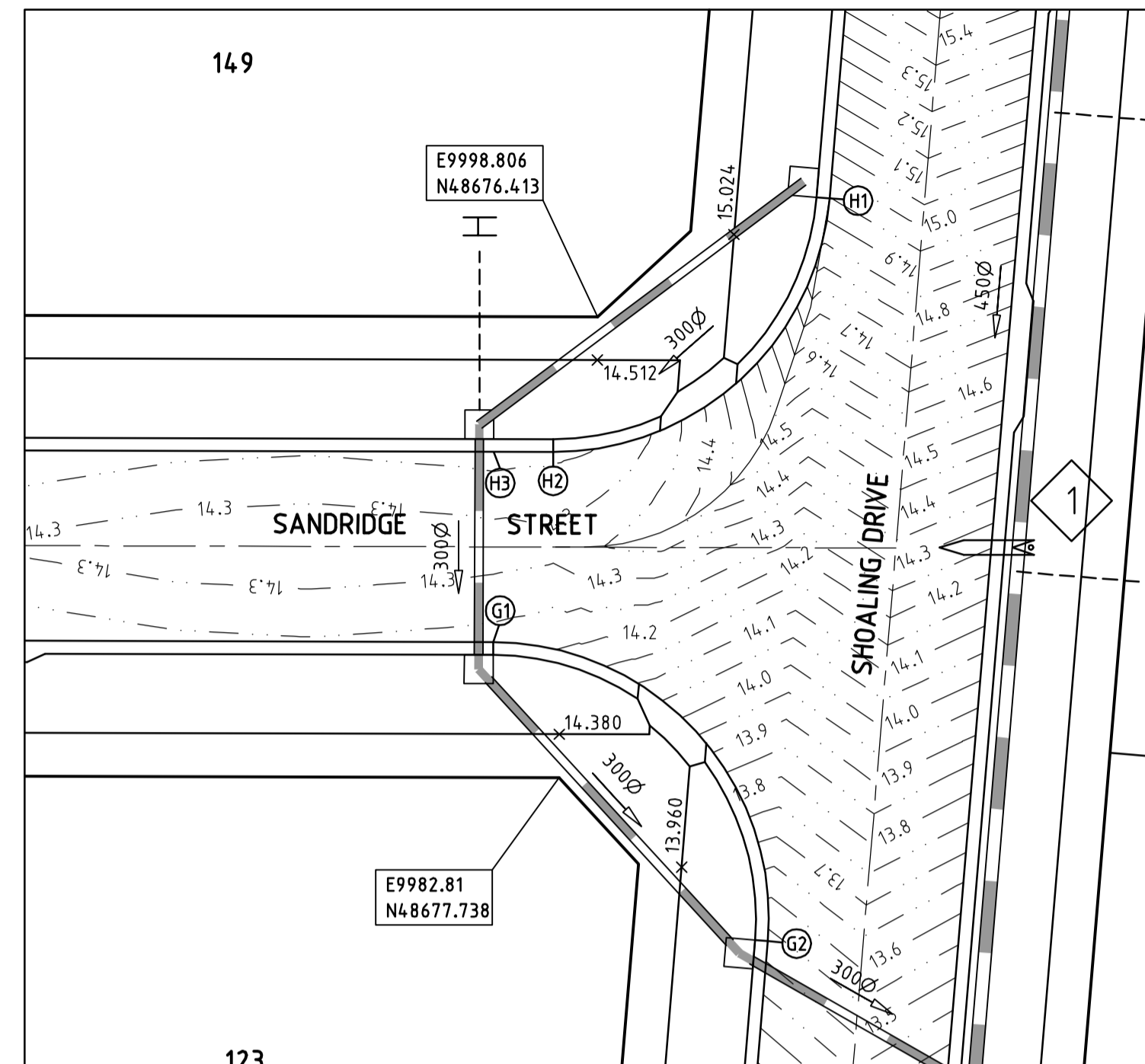
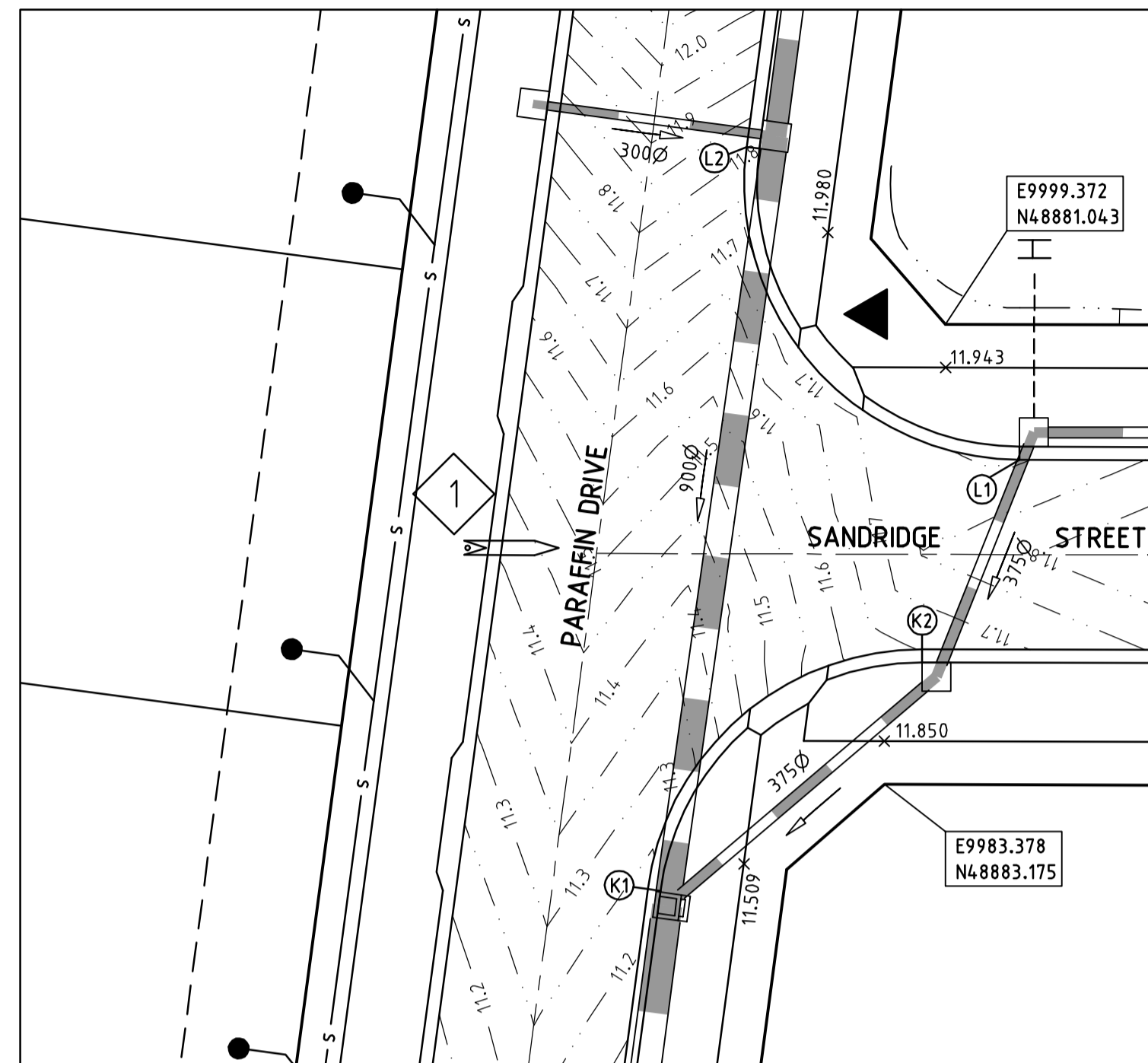
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 consulting group
 Geelong Tel +61 3 5228 3100

Designed C. Barker July 2009
 Drawn M. Wilks July 2009
 Checked C. Birkett July 2009
 Approved J. Golden July 2009

SIGN SCHEDULE

| SIGN | REF |
|-------------|-----|
| | 1 |
| STREET SIGN | |
| | 2 |
| R1-2 | |

WARNING
BEWARE OF UNDERGROUND SERVICES
THE LOCATIONS OF UNDERGROUND SERVICES ARE APPROXIMATE ONLY AND THEIR EXACT POSITION SHOULD BE PROVEN ON SITE. NO GUARANTEE IS GIVEN THAT ALL EXISTING SERVICES ARE SHOWN.



NOTES
1. REFER TO SHEET Nos 6 & 7 FOR LIP PROFILES.
2. REFER TO SHEET No 8 FOR SETOUT INFORMATION.



Principal Leopold Developments Pty Ltd
Level 1, 6 Riverside Quay
Southbank, Victoria 3006

| REVISION | DATE | APP'D |
|----------------------|----------|-------|
| B COUNCIL AMENDMENTS | 23.12.09 | |
| A ISSUED TO COUNCIL | 23.10.09 | |

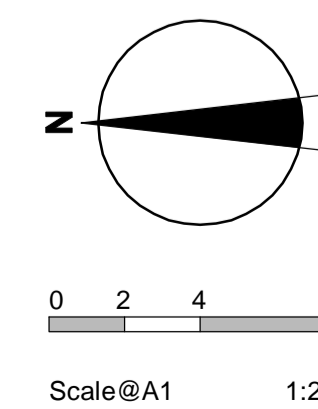
LEGEND

| | |
|--|---|
| | Electricity (Underground) |
| | Gas |
| | Telstra |
| | Water |
| | Stormwater Drain, Pit and Property Inlet |
| | Swale Drain |
| | Sewer, Maintenance Structures and Property Connection |
| | House Drain |
| | Gas & Water Conduits |
| | Tactile Paver - Directional |
| | Tactile Paver - Hazard |

| | |
|--|------------------------------------|
| | Existing Electricity (Underground) |
| | Existing Electricity (Overhead) |
| | Existing Gas |
| | Existing Telstra |
| | Existing Water |
| | Existing Stormwater Drain |
| | Existing Sewer |
| | Existing House Drain |
| | Existing Tree to Remain |
| | Existing Tree to be Removed |
| | Existing Swale Drain |

| | |
|--|----------------------------------|
| | Existing Surface Level |
| | Finished Building Line Level |
| | Finished Ridge Line Level |
| | Top of Retaining Wall |
| | Bottom of Retaining Wall |
| | Retaining Wall |
| | Intersection Threshold Treatment |
| | Structural Fill > 200mm Deep |
| | Ex. Structural Fill > 200mm Deep |
| | Proposed Driveway |

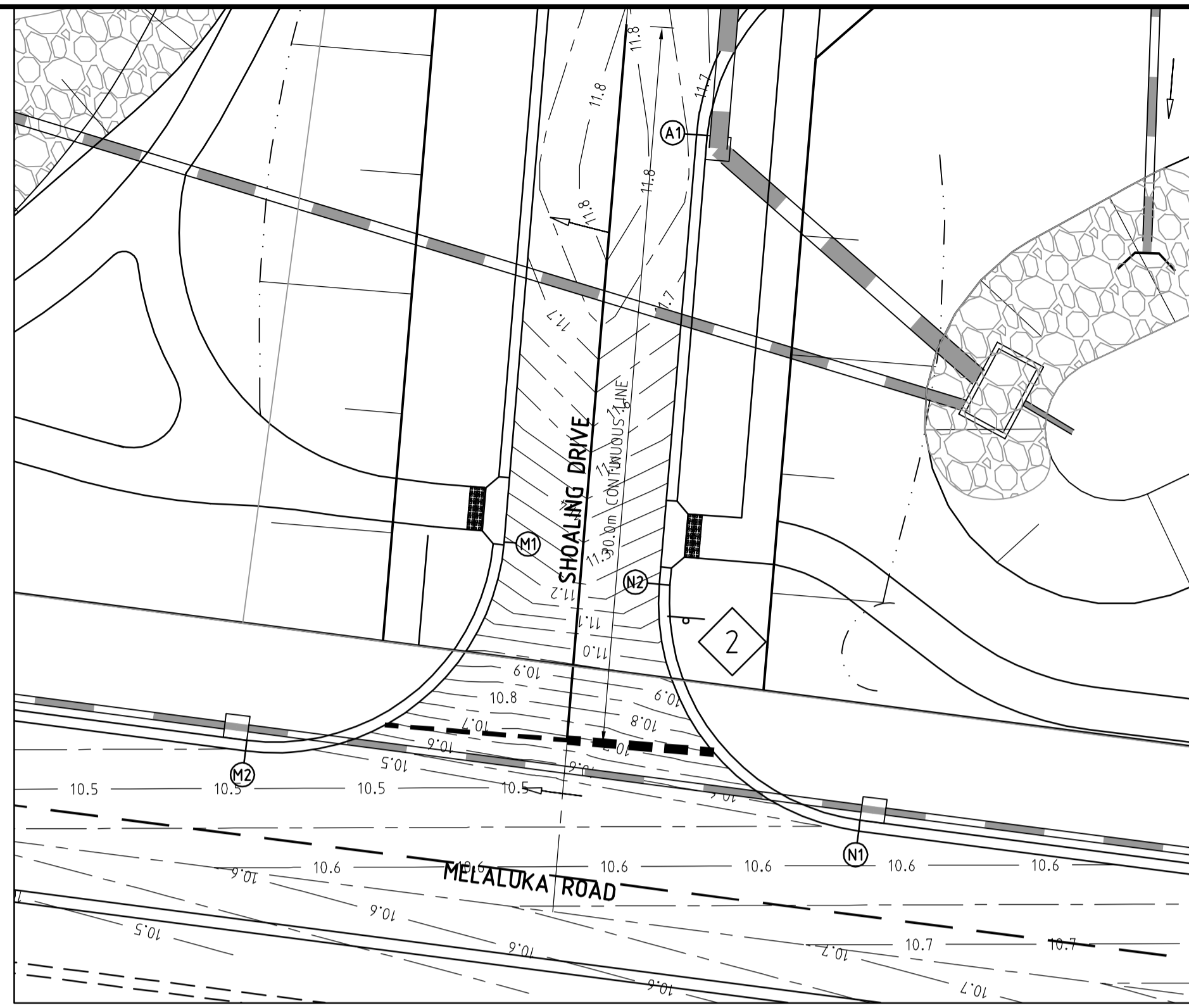
| | |
|--|--|
| | Allotment to be graded evenly in direction of fall to levels indicated |
| | Direction of Fall |
| | Overland Flow |
| | Permanent Survey Mark |
| | Temporary Bench Mark |
| | Concrete Edge Strip with Subsoil Drain underneath "No Road" sign and Barrier |
| | Zero Lot Lines |
| | Limit of Works |



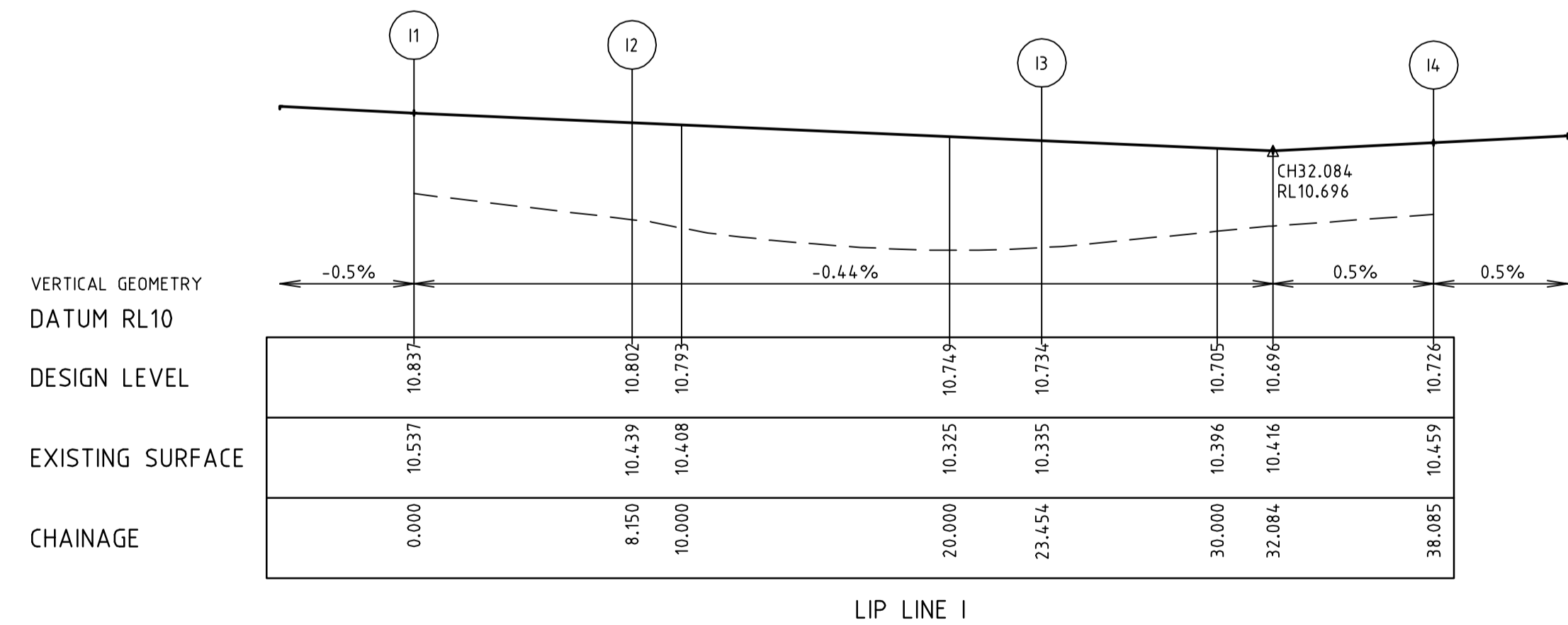
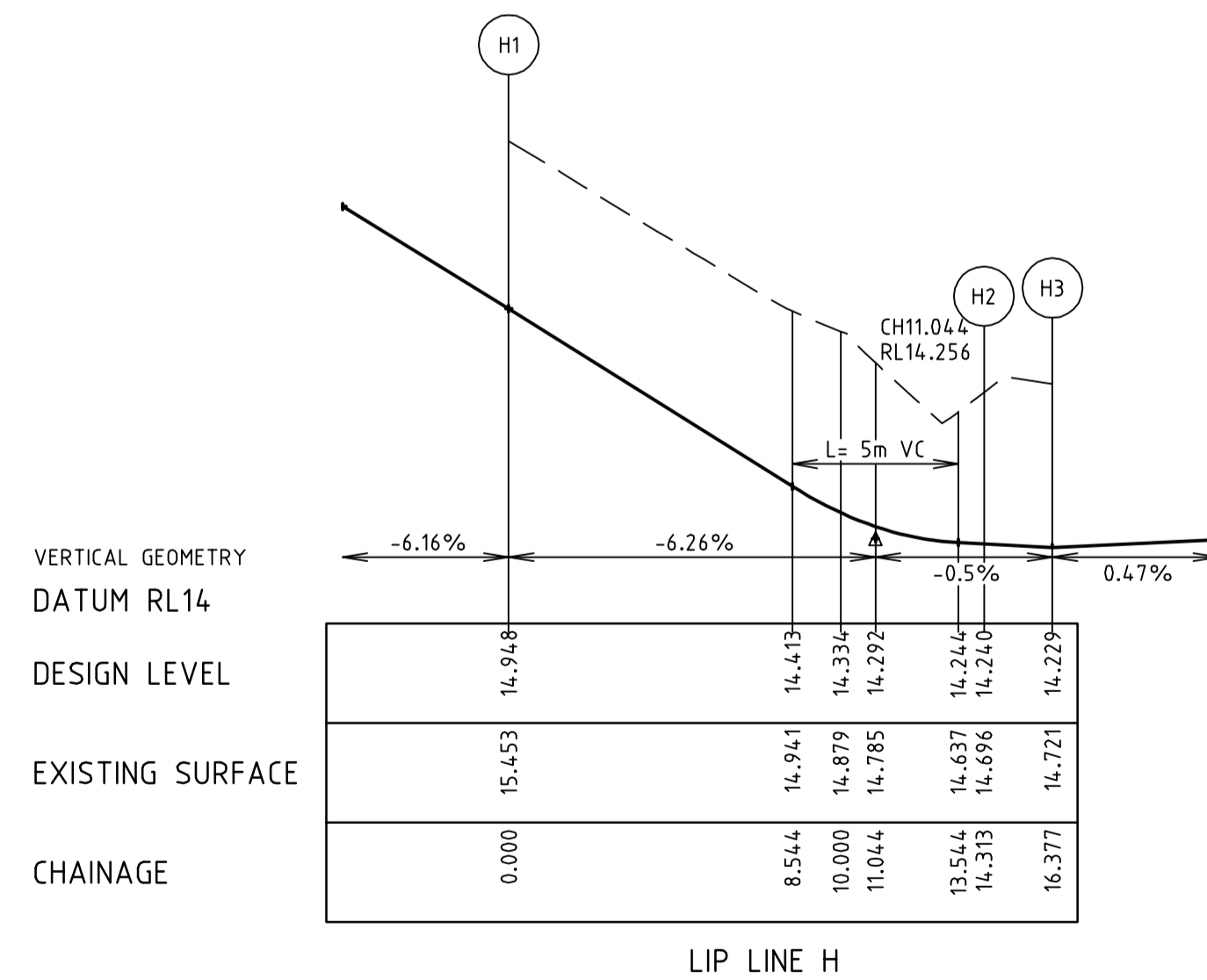
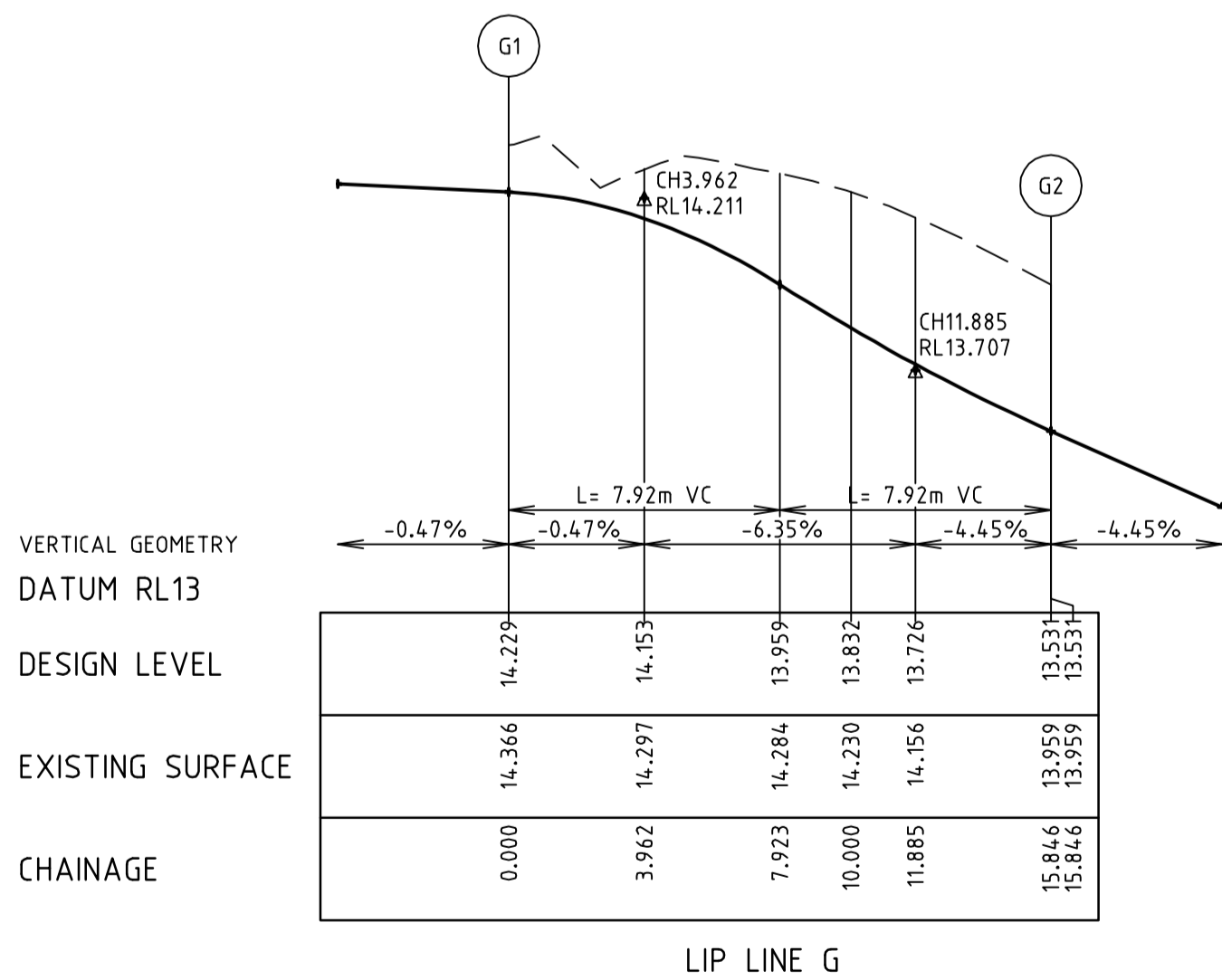
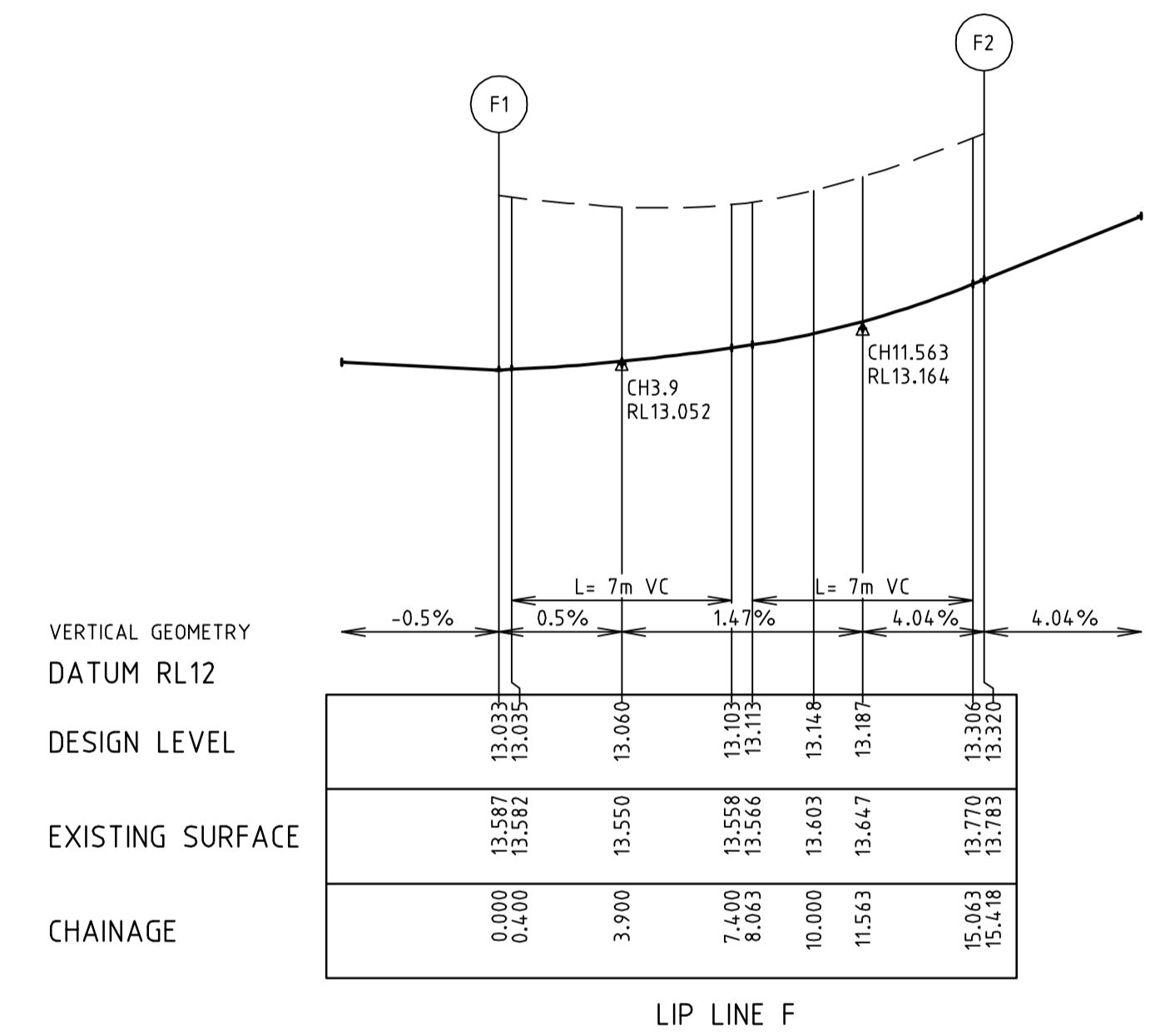
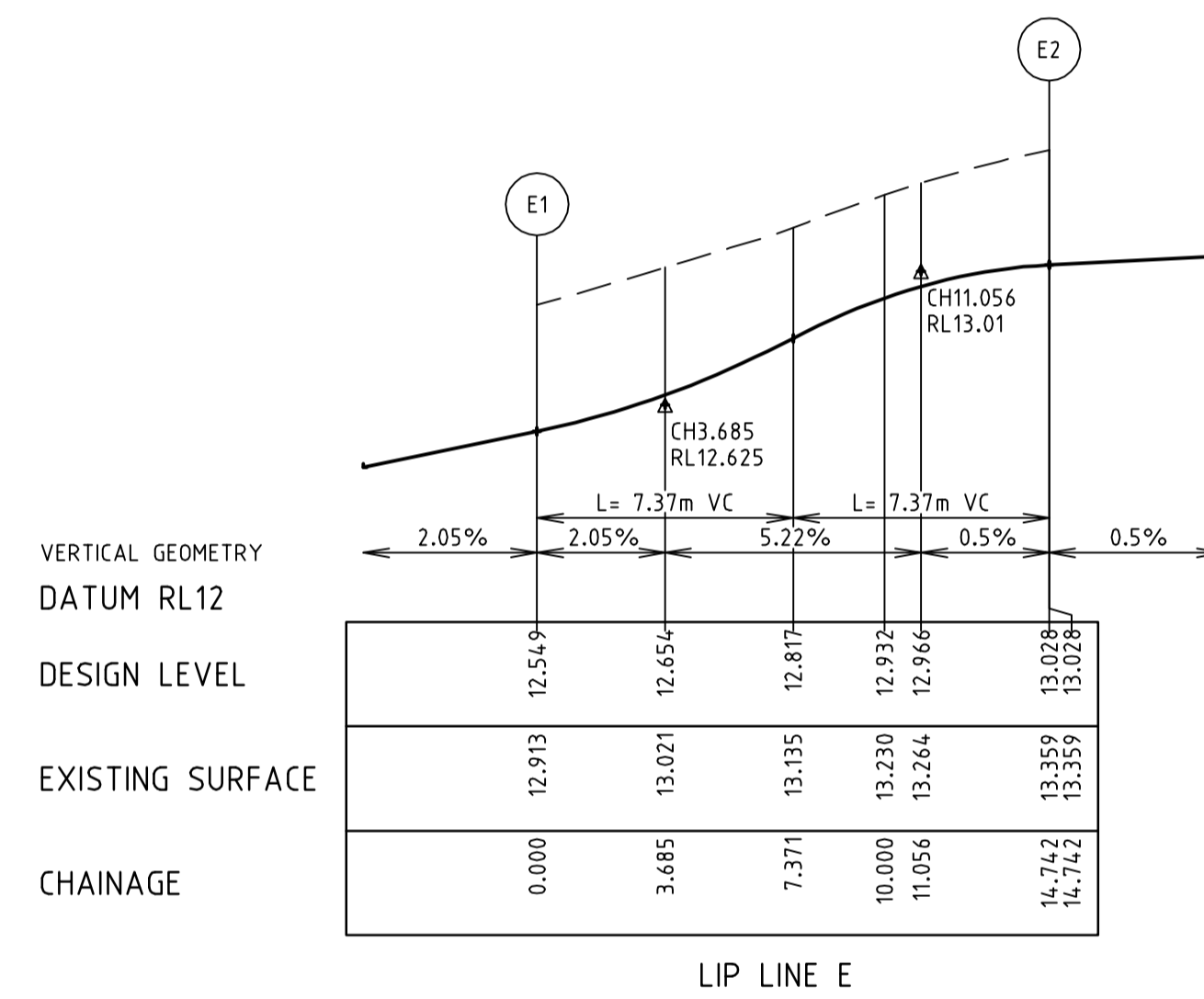
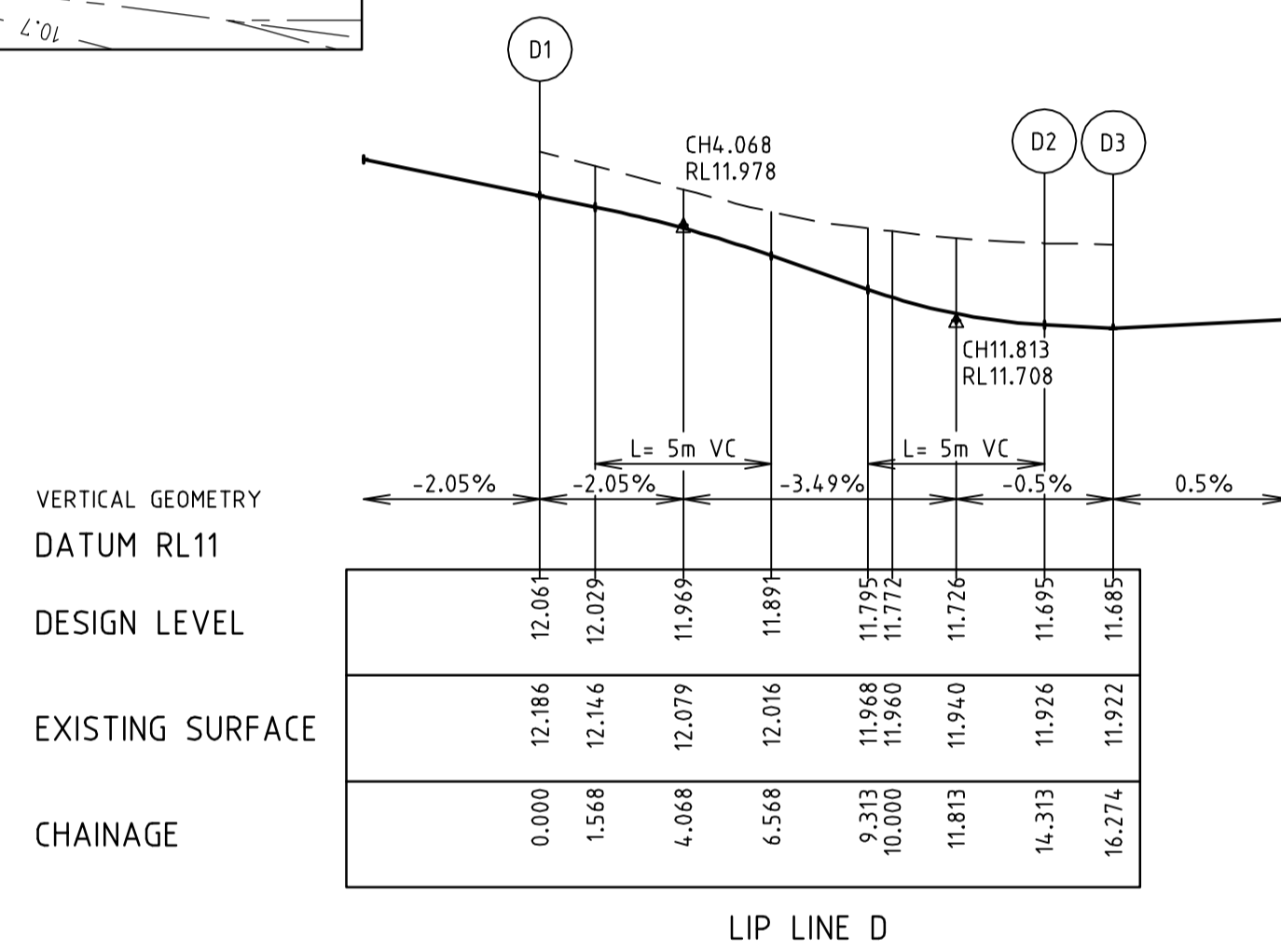
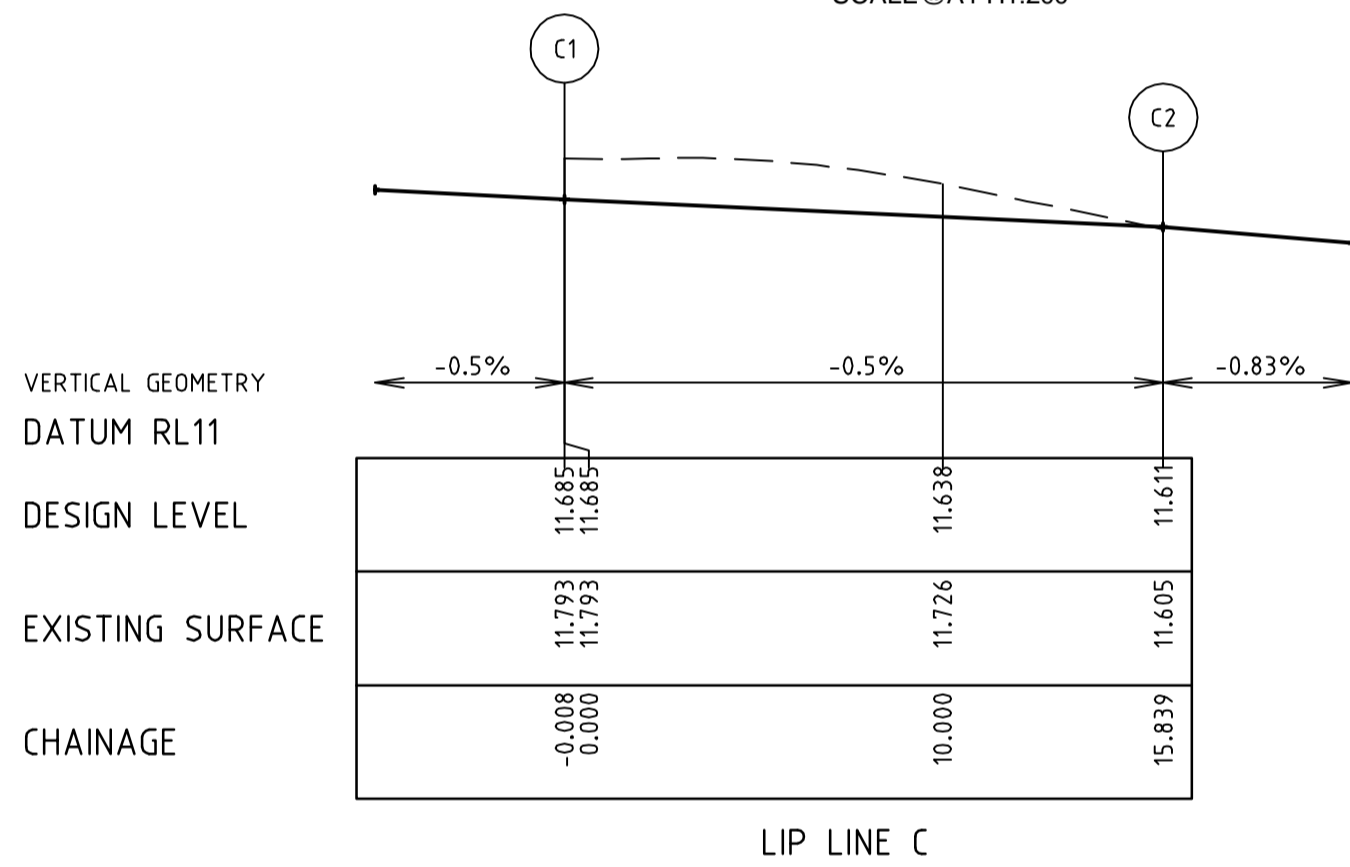
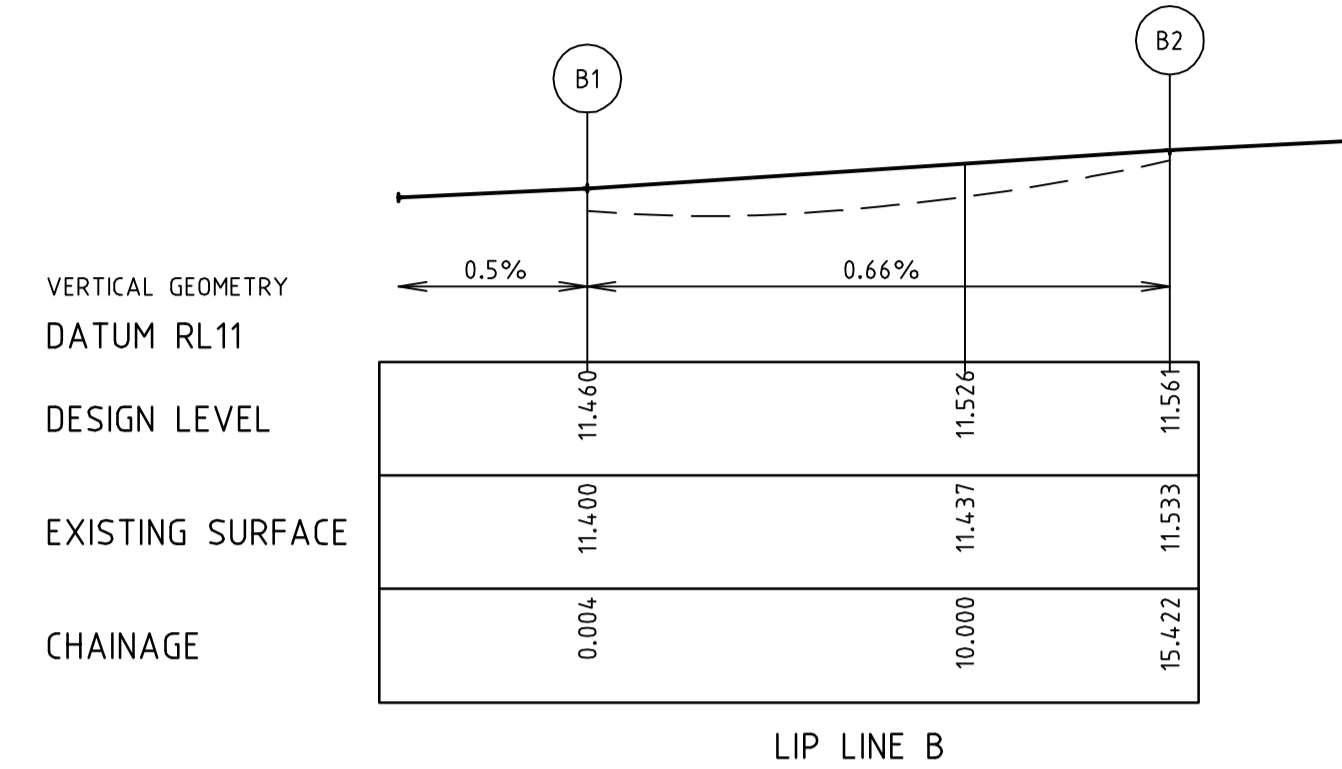
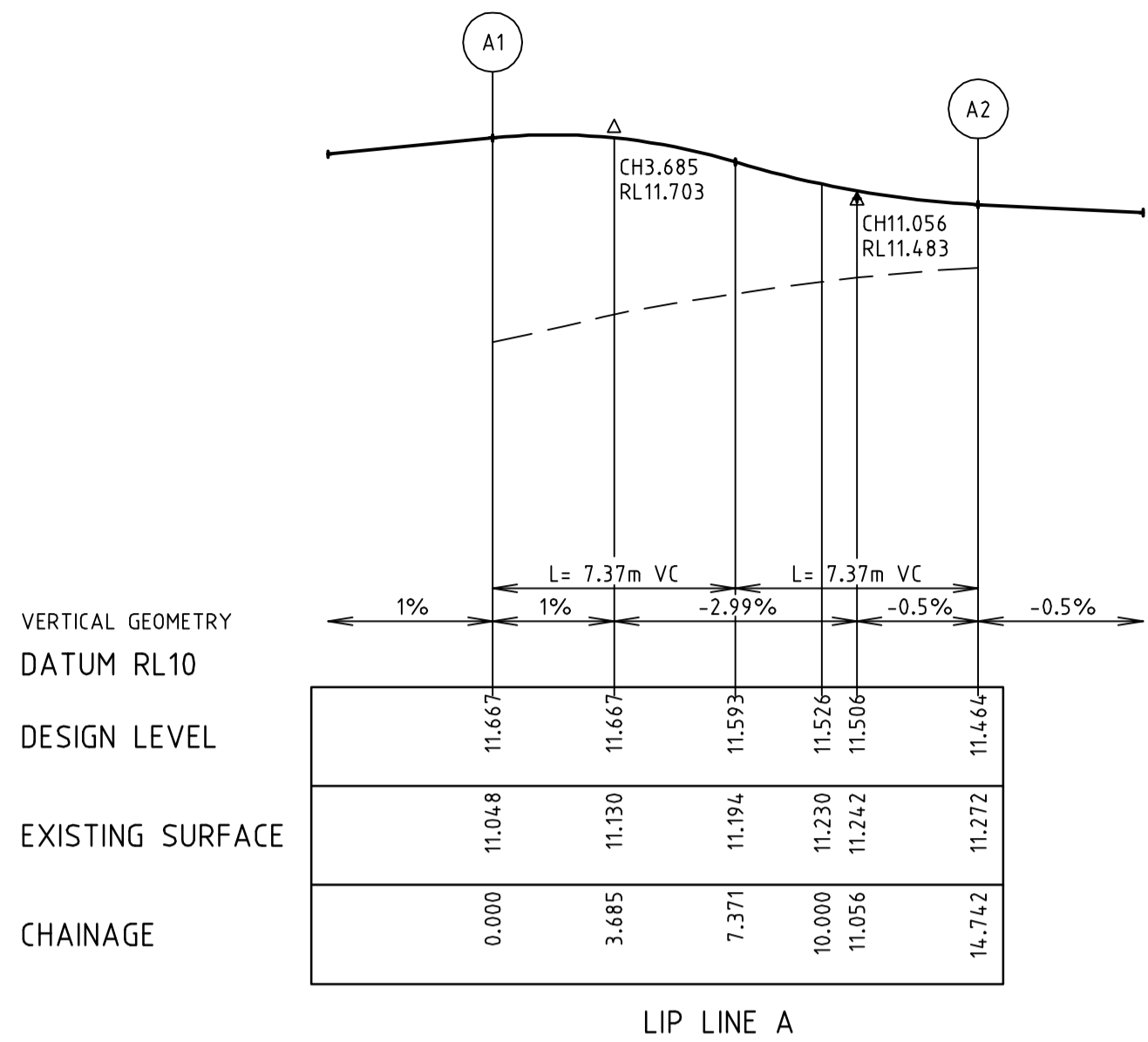
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|----------|------------|-----------|
| Designed | C. Barker | July 2009 |
| Drawn | M. Wilks | July 2009 |
| Checked | C. Birkett | July 2009 |
| Approved | J. Golden | July 2009 |

Estuary
Stage 1
City Of Greater Geelong
Roadworks and Drainage
Intersection Detail Plan

Drawing No. 0250EHL-01-05 **Rev B**
Sheet No. 5 of 40
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SCALE @ A1 H1:200



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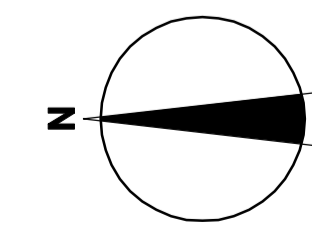
| | | |
|----------------------|----------|-------|
| REVISION | DATE | APP'D |
| B COUNCIL AMENDMENTS | 23.12.09 | |
| A ISSUED TO COUNCIL | 23.10.09 | |

LEGEND

- EXISTING SURFACE
- DESIGN LINE

NOTES

- CHAINAGES REFER TO LIP OF KERB/EDGE OF CONCRETE.
- REFER TO SHEET NUMBER 8 FOR SETOUT INFORMATION.



Scale @ A1 H1:200, V1:20



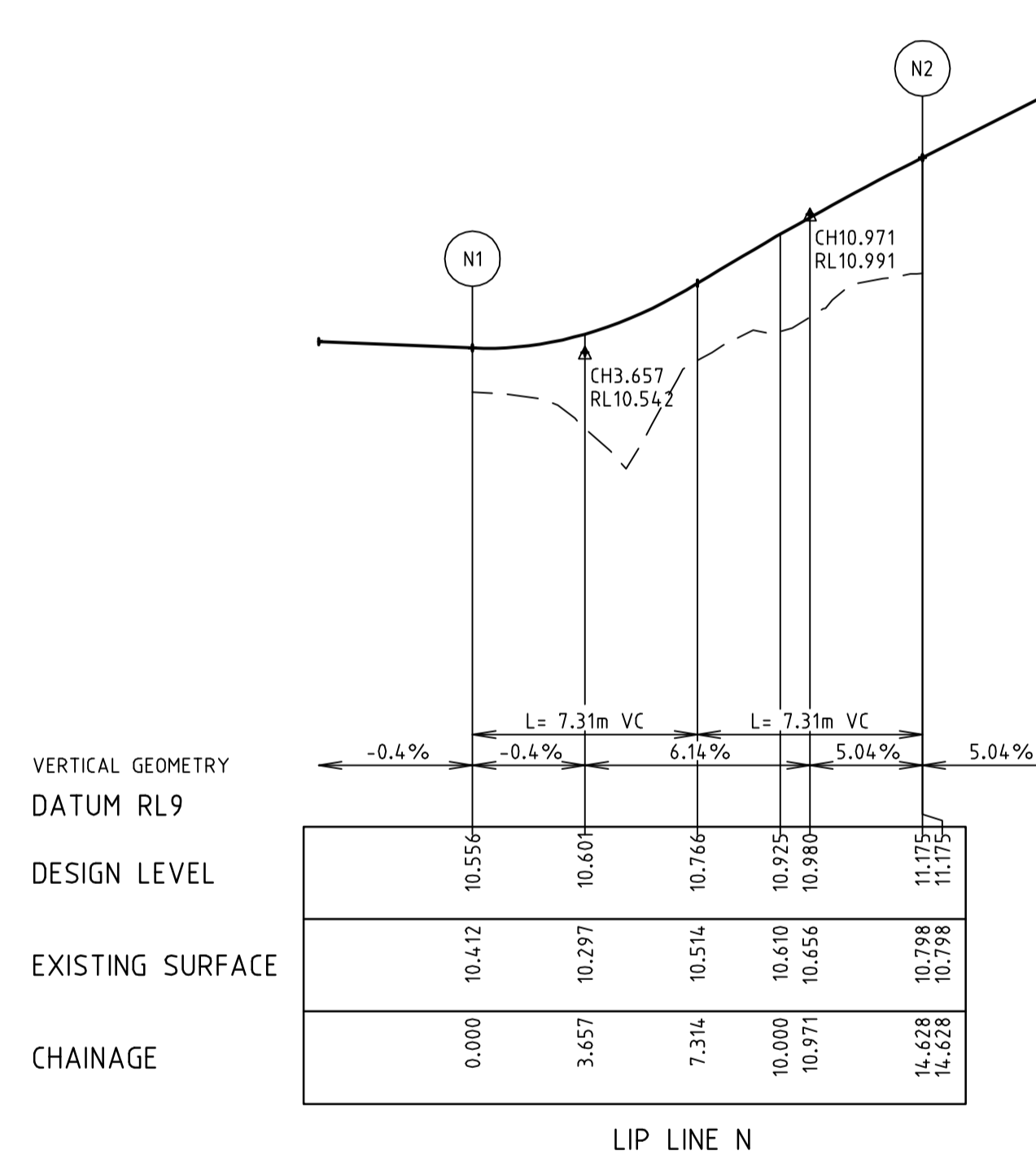
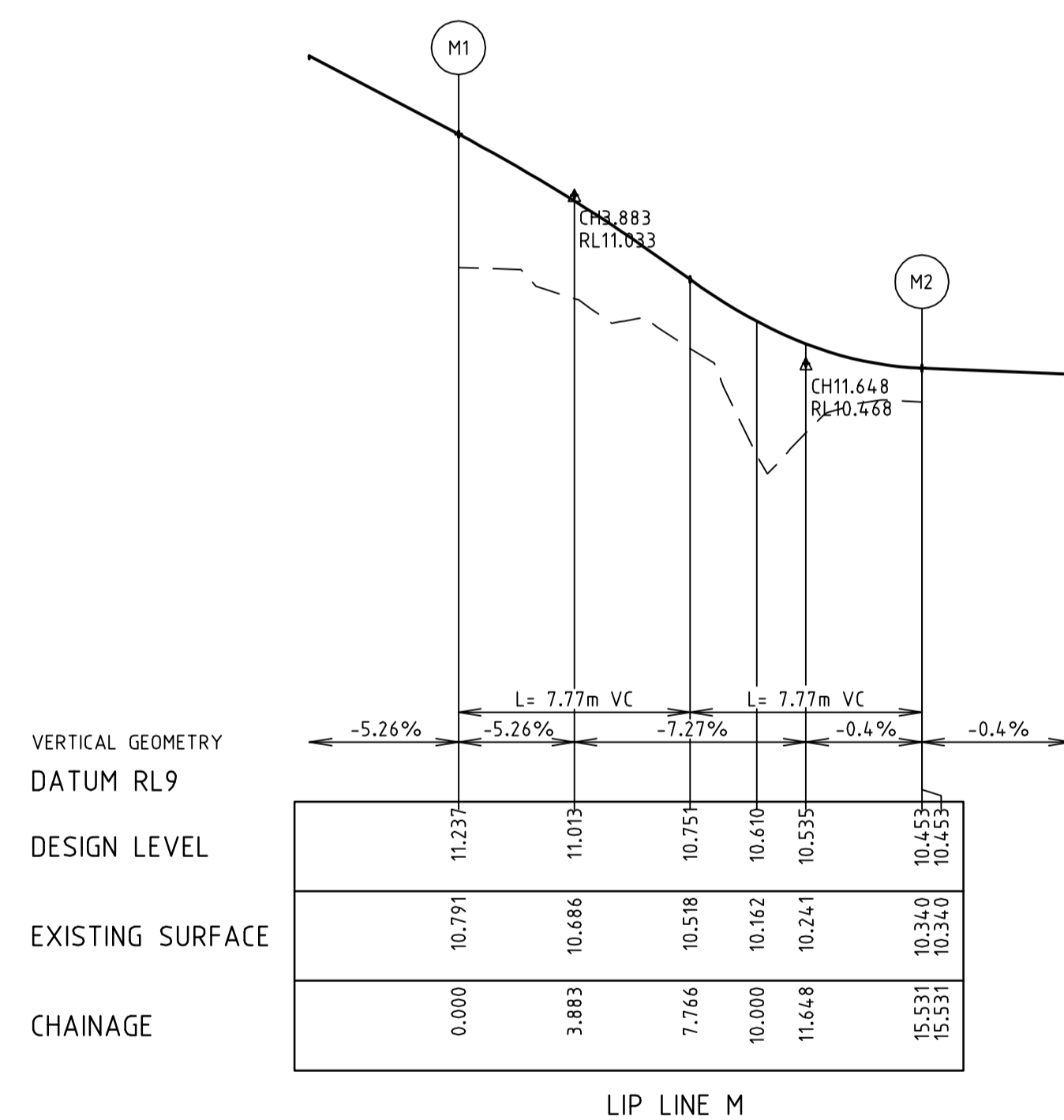
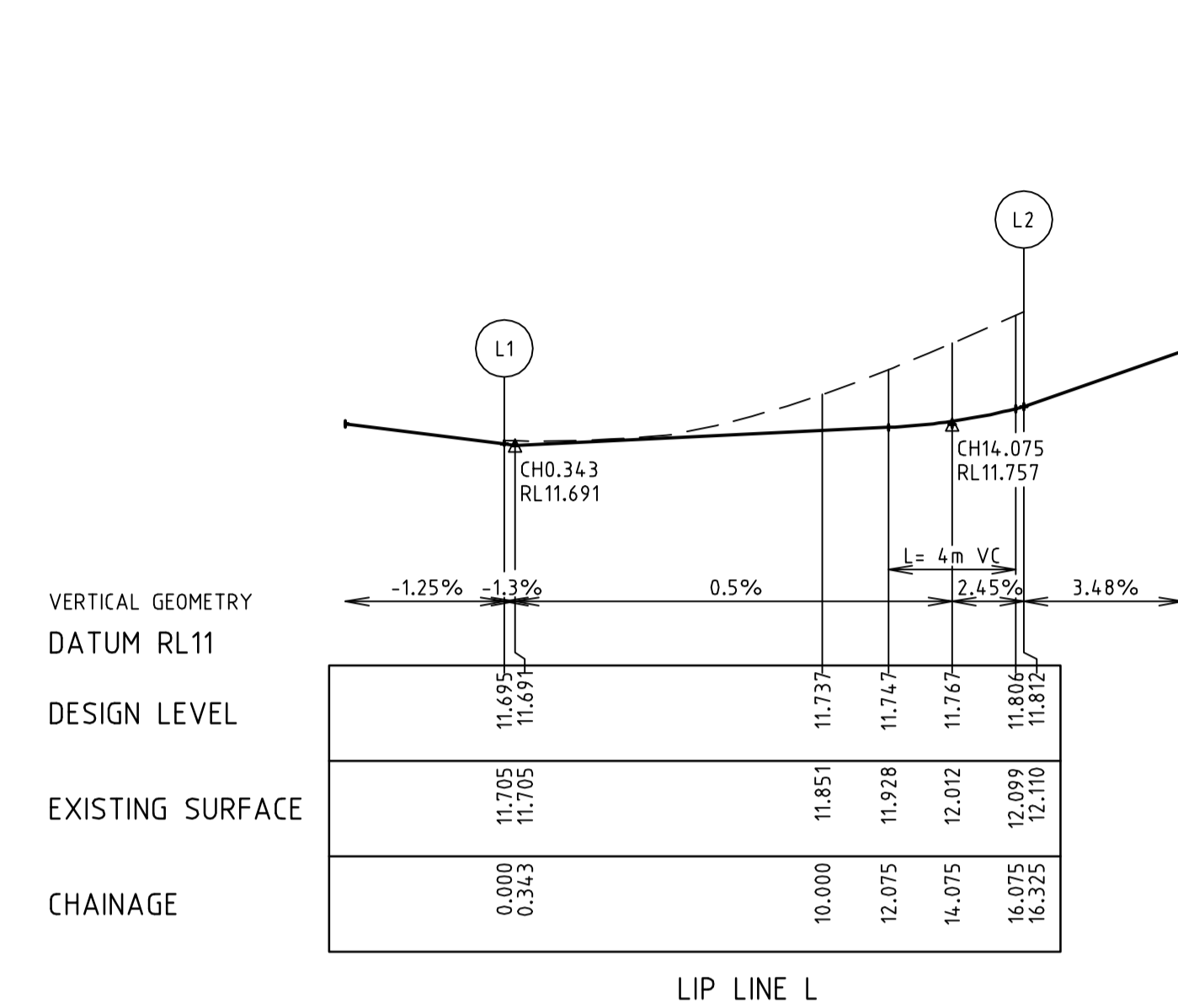
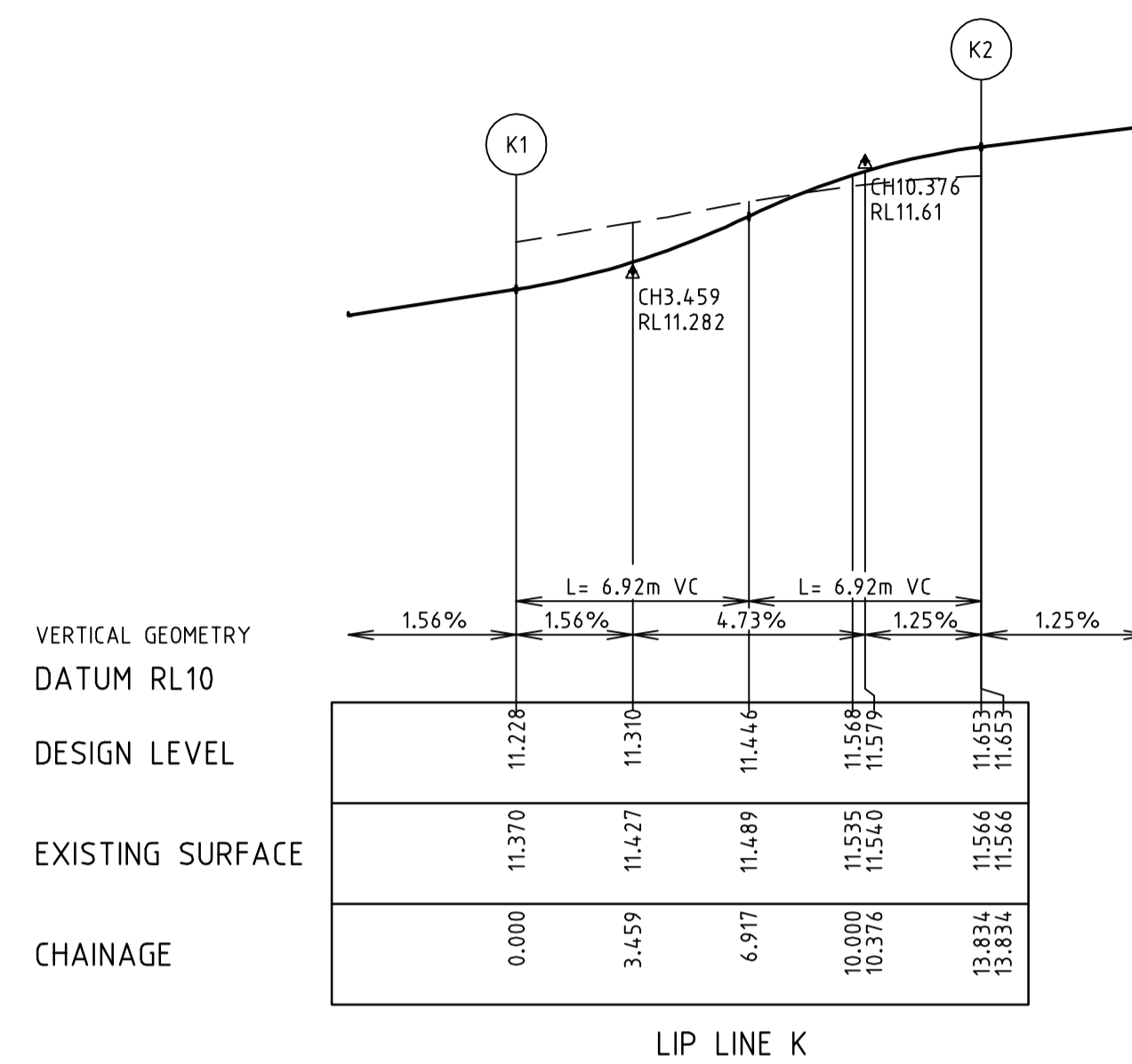
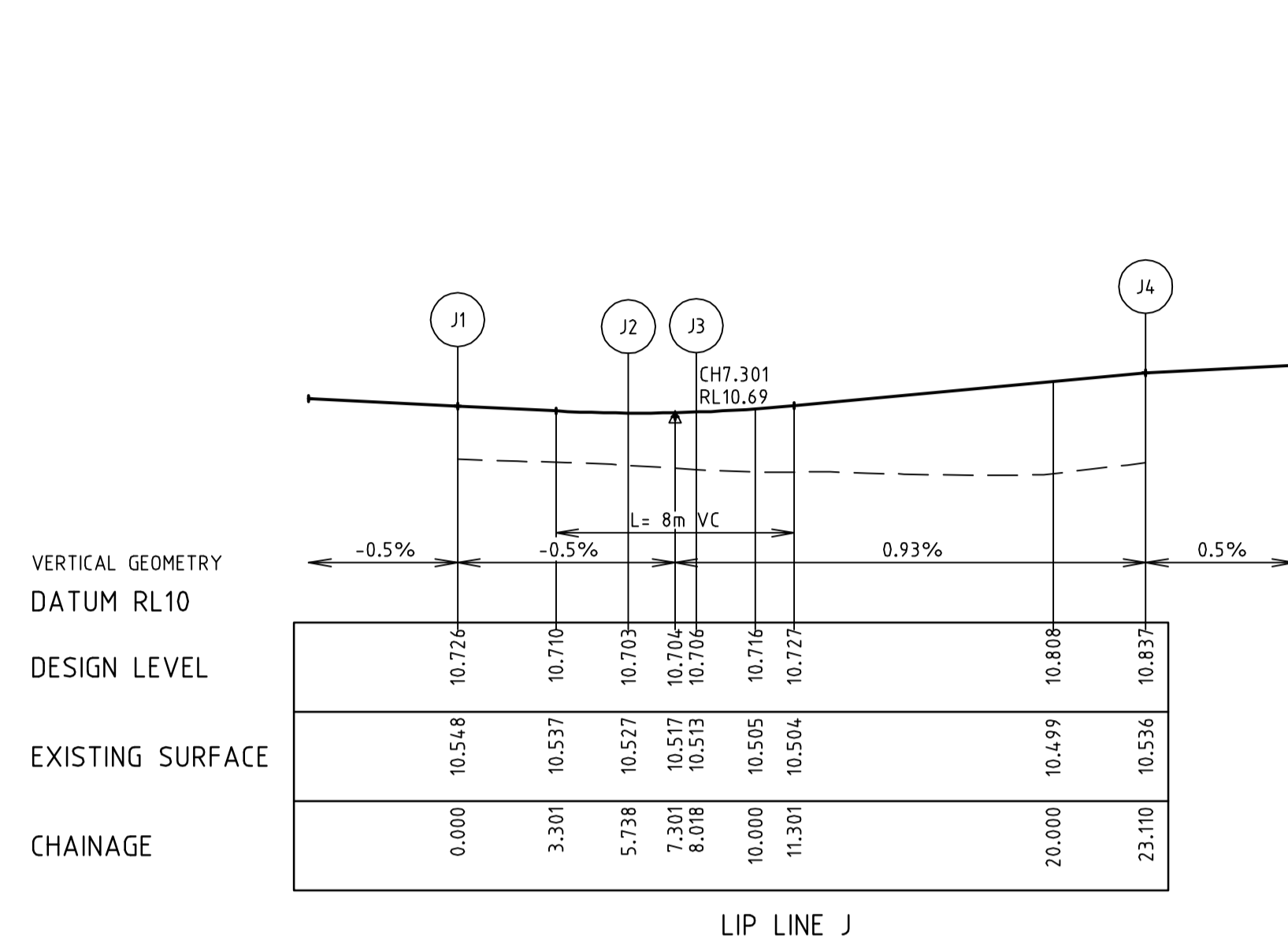
Geelong Tel +61 3 5228 3100
Designed C. Barker July 2009
Drawn M. Wilks July 2009
Checked C. Birkett July 2009
Approved J. Golden July 2009

Estuary
Stage 1
City Of Greater Geelong
Roadworks and Drainage
Lip Profiles - 1

Drawing No. 0250EHL-01-06
Sheet No. 6 of 40

Rev B

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LEGEND

--- EXISTING SURFACE

— DESIGN LINE

- NOTES**
- CHAINAGES REFER TO LIP OF KERB/EDGE OF CONCRETE.
 - REFER TO SHEET NUMBER 8 FOR SETOUT INFORMATION.



Principal Leopold Developments Pty Ltd
Level 1, 6 Riverside Quay
Southbank, Victoria 3006

| REVISION | DATE | APP'D |
|----------------------|----------|-------|
| B COUNCIL AMENDMENTS | 23.12.09 | |
| A ISSUED TO COUNCIL | 23.10.09 | |



Estuary
Stage 1
City Of Greater Geelong
Roadworks and Drainage
Lip Profiles - 2

Designed C. Barker July 2009
Drawn M. Wilks July 2009
Checked C. Birkett July 2009
Approved J. Golden July 2009

Drawing No. 0250EHL-01-07
Sheet No. 7 of 40

Rev B

0 2 4 8
0 0.2 0.4 0.8
Scale@A1 H1:200, V1:20

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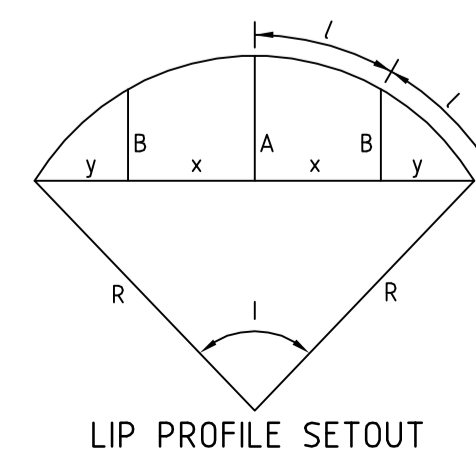
| ALIGNMENT A | | | | | | | | | |
|-------------|-----------|-----------|--------|-------|-------|-------|-------|-------|--------------|
| POINT NO | EASTING | NORTHING | RL | | | | | | |
| A1 | 9867.267 | 48672.965 | 11.667 | | | | | | |
| A2 | 9876.064 | 48662.943 | 11.464 | | | | | | |
| CURVE NO | I | RADIUS | ARC | A | B | X | Y | L | MID POINT RL |
| A1 - A2 | 87.984 | 9.600 | 14.742 | 2.693 | 1.995 | 3.596 | 3.072 | 3.685 | 11.593 |
| ALIGNMENT B | | | | | | | | | |
| POINT NO | EASTING | NORTHING | RL | | | | | | |
| B1 | 9881.317 | 48661.830 | 11.460 | | | | | | |
| B2 | 9891.698 | 48670.942 | 11.561 | | | | | | |
| CURVE NO | I | RADIUS | ARC | A | B | X | Y | L | MID POINT RL |
| B1 - B2 | 92.017 | 9.600 | 15.418 | 2.932 | 2.169 | 3.752 | 3.155 | 3.854 | 11.511 |
| ALIGNMENT C | | | | | | | | | |
| POINT NO | EASTING | NORTHING | RL | | | | | | |
| C1 | 9908.684 | 48686.560 | 11.685 | | | | | | |
| C2 | 9898.292 | 48677.019 | 11.611 | | | | | | |
| CURVE NO | I | RADIUS | ARC | A | B | X | Y | L | MID POINT RL |
| C1 - C2 | 94.575 | 9.600 | 15.846 | 3.088 | 2.282 | 3.850 | 3.204 | 3.962 | 11.655 |
| ALIGNMENT D | | | | | | | | | |
| POINT NO | EASTING | NORTHING | RL | | | | | | |
| D1 | 9922.786 | 48674.991 | 12.061 | | | | | | |
| D2 | 9922.785 | 48674.991 | 12.061 | | | | | | |
| D3 | 9913.978 | 48684.584 | 11.695 | | | | | | |
| D4 | 9913.978 | 48684.585 | 11.695 | | | | | | |
| D5 | 9913.984 | 48686.545 | 11.685 | | | | | | |
| CURVE NO | I | RADIUS | ARC | A | B | X | Y | L | MID POINT RL |
| D2 - D3 | 85.425 | 9.599 | 14.312 | 2.546 | 1.887 | 3.496 | 3.016 | 3.578 | 11.870 |
| ALIGNMENT E | | | | | | | | | |
| POINT NO | EASTING | NORTHING | RL | | | | | | |
| E1 | 9945.896 | 48666.455 | 12.549 | | | | | | |
| E2 | 9954.693 | 48656.432 | 13.028 | | | | | | |
| CURVE NO | I | RADIUS | ARC | A | B | X | Y | L | MID POINT RL |
| E1 - E2 | 87.983 | 9.600 | 14.742 | 2.693 | 1.995 | 3.596 | 3.072 | 3.685 | 12.817 |
| ALIGNMENT F | | | | | | | | | |
| POINT NO | EASTING | NORTHING | RL | | | | | | |
| F1 | 9961.243 | 48655.212 | 13.033 | | | | | | |
| F2 | 9971.624 | 48664.324 | 13.320 | | | | | | |
| CURVE NO | I | RADIUS | ARC | A | B | X | Y | L | MID POINT RL |
| F1 - F2 | 92.017 | 9.600 | 15.418 | 2.932 | 2.169 | 3.752 | 3.155 | 3.854 | 13.108 |
| ALIGNMENT G | | | | | | | | | |
| POINT NO | EASTING | NORTHING | RL | | | | | | |
| G1 | 9987.516 | 48680.032 | 14.229 | | | | | | |
| G2 | 9977.124 | 48670.492 | 13.531 | | | | | | |
| CURVE NO | I | RADIUS | ARC | A | B | X | Y | L | MID POINT RL |
| G1 - G2 | 94.575 | 9.600 | 15.846 | 3.088 | 2.282 | 3.850 | 3.204 | 3.962 | 13.959 |
| ALIGNMENT H | | | | | | | | | |
| POINT NO | EASTING | NORTHING | RL | | | | | | |
| H1 | 10002.918 | 48668.356 | 14.948 | | | | | | |
| H2 | 9994.110 | 48677.950 | 14.240 | | | | | | |
| H3 | 9994.116 | 48680.014 | 14.229 | | | | | | |
| CURVE NO | I | RADIUS | ARC | A | B | X | Y | L | MID POINT RL |
| H1 - H2 | 85.425 | 9.600 | 14.313 | 2.546 | 1.887 | 3.496 | 3.016 | 3.578 | 14.500 |
| ALIGNMENT I | | | | | | | | | |
| POINT NO | EASTING | NORTHING | RL | | | | | | |
| I1 | 9927.533 | 48905.017 | 10.837 | | | | | | |
| I2 | 9919.455 | 48906.094 | 10.802 | | | | | | |
| I3 | 9909.266 | 48897.197 | 10.734 | | | | | | |
| I4 | 9909.226 | 48882.567 | 10.726 | | | | | | |
| CURVE NO | I | RADIUS | ARC | A | B | X | Y | L | MID POINT RL |
| I2 - I3 | 97.432 | 9.000 | 15.305 | 3.062 | 2.261 | 3.712 | 3.051 | 3.826 | 10.768 |
| ALIGNMENT J | | | | | | | | | |
| POINT NO | EASTING | NORTHING | RL | | | | | | |
| J1 | 9914.526 | 48882.552 | 10.726 | | | | | | |
| J2 | 9915.088 | 48888.253 | 10.703 | | | | | | |
| J3 | 9915.528 | 48890.491 | 10.706 | | | | | | |
| J4 | 9926.661 | 48898.475 | 10.837 | | | | | | |
| CURVE NO | I | RADIUS | ARC | A | B | X | Y | L | MID POINT RL |
| J1 - J2 | 10.958 | 30.000 | 5.738 | 0.137 | 0.103 | 1.434 | 1.431 | 1.434 | 10.712 |
| J3 - J4 | 86.474 | 10.000 | 15.093 | 2.715 | 2.011 | 3.684 | 3.166 | 3.773 | 10.767 |
| ALIGNMENT K | | | | | | | | | |
| POINT NO | EASTING | NORTHING | RL | | | | | | |
| K1 | 9979.742 | 48891.402 | 11.228 | | | | | | |
| K2 | 9988.074 | 48881.859 | 11.653 | | | | | | |
| CURVE NO | I | RADIUS | ARC | A | B | X | Y | L | MID POINT RL |
| K1 - K2 | 82.568 | 9.600 | 13.834 | 2.386 | 1.770 | 3.384 | 2.950 | 3.459 | 11.446 |
| ALIGNMENT L | | | | | | | | | |
| POINT NO | EASTING | NORTHING | RL | | | | | | |
| L1 | 9994.665 | 48878.476 | 11.695 | | | | | | |
| L2 | 10005.533 | 48887.965 | 11.812 | | | | | | |
| CURVE NO | I | RADIUS | ARC | A | B | X | Y | L | MID POINT RL |
| L1 - L2 | 97.432 | 9.600 | 16.325 | 3.266 | 2.411 | 3.959 | 3.255 | 4.081 | 11.728 |

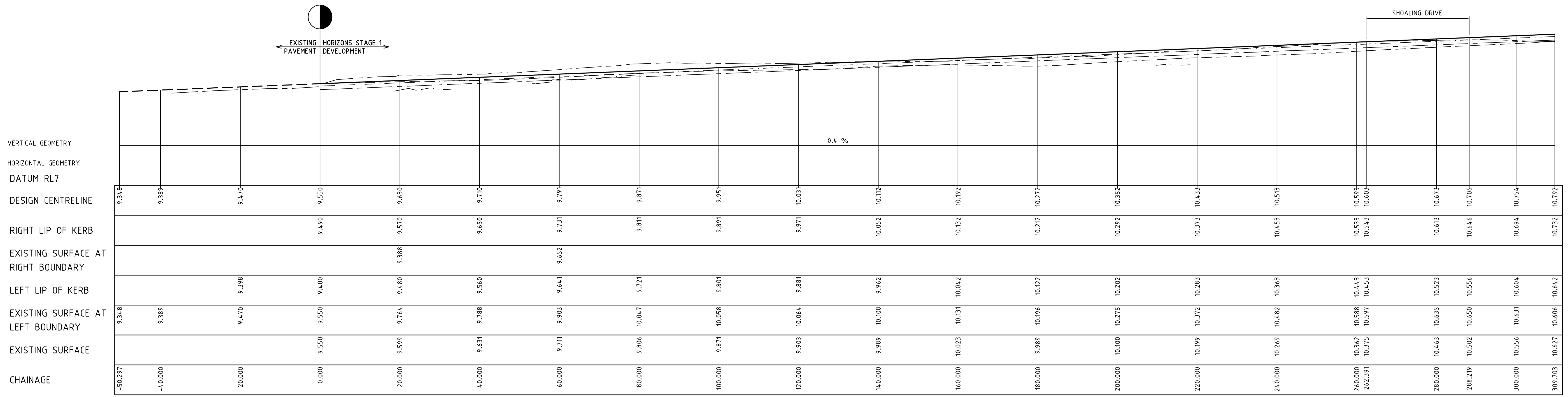
| ALIGNMENT M | | | | | | | | | |
|----------------------------|-------------------------|-----------|------------|-------|-------|-------|-------|-------|--------------|
| POINT NO | EASTING | NORTHING | RL | | | | | | |
| M1 | 9850.253 | 48680.997 | 11.237 | | | | | | |
| M2 | 9841.526 | 48691.805 | 10.453 | | | | | | |
| CURVE NO | I | RADIUS | ARC | A | B | X | Y | L | MID POINT RL |
| M1 - M2 | 92.694 | 9.600 | 15.531 | 2.973 | 2.199 | 3.778 | 3.168 | 3.883 | 10.751 |
| ALIGNMENT N | | | | | | | | | |
| POINT NO | EASTING | NORTHING | RL | | | | | | |
| N1 | 9838.187 | 48666.193 | 10.556 | | | | | | |
| N2 | 9848.498 | 48674.519 | 11.175 | | | | | | |
| CURVE NO | I | RADIUS | ARC | A | B | X | Y | L | MID POINT RL |
| N1 - N2 | 87.306 | 9.600 | 14.628 | 2.654 | 1.966 | 3.569 | 3.058 | 3.657 | 10.766 |
| ALIGNMENT O | | | | | | | | | |
| POINT NO | EASTING | NORTHING | RL | | | | | | |
| O1 | 9922.355 | 48902.075 | 10.903 | | | | | | |
| O2 | 9912.506 | 48893.476 | 10.826 | | | | | | |
| O3 | 9912.492 | 48888.658 | 10.804 | | | | | | |
| O4 | 9912.192 | 48888.359 | 10.814 | | | | | | |
| O5 | 9911.892 | 48888.659 | 10.827 | | | | | | |
| O6 | 9911.906 | 48893.477 | 10.843 | | | | | | |
| O7 | 9922.434 | 48902.670 | 10.902 | | | | | | |
| O8 | 9928.480 | 48901.864 | 10.934 | | | | | | |
| O9 | 9928.738 | 48901.527 | 10.945 | | | | | | |
| O10 | 9928.401 | 48901.269 | 10.934 | | | | | | |
| O11 | 9917.554 | 48901.344 | 10.878 | | | | | | |
| O12 | 9913.879 | 48898.143 | 10.853 | | | | | | |
| O13 | 9913.374 | 48898.467 | 10.856 | | | | | | |
| O14 | 9917.292 | 48901.888 | 10.879 | | | | | | |
| CURVE NO | I | RADIUS | ARC | A | B | X | Y | L | MID POINT RL |
| O1 - O2 | 97.432 | 8.700 | 14.794 | 2.960 | 2.185 | 3.588 | 2.949 | 3.699 | |
| O3 - O4 | 90.000 | 0.300 | 0.471 | 0.088 | 0.065 | 0.115 | 0.097 | 0.118 | |
| O4 - O5 | 90.000 | 0.300 | 0.471 | 0.088 | 0.065 | 0.115 | 0.097 | 0.118 | |
| O6 - O7 | 97.432 | 9.300 | 15.815 | 3.164 | 2.336 | 3.836 | 3.153 | 3.954 | |
| O8 - O9 | 90.000 | 0.300 | 0.471 | 0.088 | 0.065 | 0.115 | 0.097 | 0.118 | |
| O9 - O10 | 90.000 | 0.300 | 0.471 | 0.088 | 0.065 | 0.115 | 0.097 | 0.118 | |
| MELALUKA ROAD DESIGN LINE | | | | | | | | | |
| CHAINAGE | EASTING | NORTHING | BEARING | | | | | | |
| 0.000 | 9870.489 | 48952.640 | 187°25'40" | IP | | | | | |
| 100.000 | 9857.561 | 48853.479 | 187°25'40" | IP | | | | | |
| 200.000 | 9844.633 | 48754.318 | 187°25'40" | IP | | | | | |
| 300.000 | 9831.706 | 48655.158 | 187°25'40" | IP | | | | | |
| 336.270 | 9827.017 | 48619.192 | 187°25'40" | IP | | | | | |
| IP 1 | COORDINATE = 9870.4888 | | 48952.6401 | | | | | | |
| CHAINAGE | = 0.0000 | | | | | | | | |
| IP 2 | COORDINATE = 9827.0170 | | 48619.1919 | | | | | | |
| CHAINAGE | = 336.2700 | | | | | | | | |
| SHOALING DRIVE DESIGN LINE | | | | | | | | | |
| CHAINAGE | EASTING | NORTHING | BEARING | | | | | | |
| 0.000 | 9834.810 | 48678.964 | 94°44'00" | IP | | | | | |
| 100.000 | 9934.468 | 48670.712 | 94°44'00" | IP | | | | | |
| 183.951 | 10018.133 | 48663.785 | 94°44'00" | IP | | | | | |
| IP 1 | COORDINATE = 9834.8095 | | 48678.9640 | | | | | | |
| CHAINAGE | = 0.0000 | | | | | | | | |
| IP 2 | COORDINATE = 10018.1333 | | 48663.7847 | | | | | | |
| CHAINAGE | = 183.9511 | | | | | | | | |
| PARAFFIN DRIVE DESIGN LINE | | | | | | | | | |
| CHAINAGE | EASTING | NORTHING | BEARING | | | | | | |
| 0.022 | 9911.295 | 48672.631 | 0°09'30" | IP | | | | | |
| 100.000 | 9911.572 | 48772.609 | 0°09'30" | IP | | | | | |
| 200.000 | 9911.848 | 48872.609 | 0°09'30" | IP | | | | | |
| 220.566 | 9911.905 | 48893.175 | 0°09'30" | TC | | | | | |
| 236.381 | 9922.433 | 48902.368 | 97°35'25" | CT | | | | | |
| 300.000 | 9985.495 | 48893.964 | 97°35'25" | IP | | | | | |
| 349.448 | 10034.510 | 48887.433 | 97°35'25" | IP | | | | | |
| IP 1 | COORDINATE = 9911.2954 | | 48672.6309 | | | | | | |
| CHAINAGE | = 0.0215 | | | | | | | | |
| IP 2 | COORDINATE = 9911.9342 | | 48903.7666 | | | | | | |
| CENTRE | = 9921.2049 | | 48893.1490 | | | | | | |
| RADIUS | = 9.3000 | | | | | | | | |
| LENGTH | = 15.8147 | | | | | | | | |
| INTERSECT ANGLE | = 97°25'55" | | | | | | | | |
| START TANGENT | COORDINATE = 9911.9049 | | 48893.1747 | | | | | | |
| LENGTH | = 10.5919 | | | | | | | | |
| CHAINAGE | = 220.5661 | | | | | | | | |
| BEARING | = 0°09'30" | | | | | | | | |
| END TANGENT | COORDINATE = 9922.4333 | | 48902.3676 | | | | | | |
| LENGTH | = 10.5919 | | | | | | | | |
| CHAINAGE | = 236.3809 | | | | | | | | |
| BEARING | = 97°35'25" | | | | | | | | |

| IP 3 | COORDINATE = 10034.5097 | | 48887.4327 | | | | | | |
|------------------------------|-------------------------|-----------|------------|----|--|--|--|--|--|
| CHAINAGE | = 349.4480 | | | | | | | | |
| WINSLOW AVENUE DESIGN LINE | | | | | | | | | |
| CHAINAGE | EASTING | NORTHING | BEARING | | | | | | |
| 171.863 | 9876.568 | 48617.653 | 2°43'00" | IP | | | | | |
| 200.000 | 9877.901 | 48645.759 | 2°43'00" | IP | | | | | |
| 229.554 | 9879.302 | 48675.280 | 2°43'00" | IP | | | | | |
| IP 1 | COORDINATE = 9876.5675 | | 48617.6531 | | | | | | |
| CHAINAGE | = 171.8626 | | | | | | | | |
| IP 2 | COORDINATE = 9879.3019 | | 48675.2800 | | | | | | |
| CHAINAGE | = 229.5543 | | | | | | | | |
| TISPA DRIVE DESIGN LINE | | | | | | | | | |
| CHAINAGE | EASTING | NORTHING | BEARING | | | | | | |
| 175.383 | 9955.978 | 48613.885 | 2°43'00" | IP | | | | | |
| 200.000 | 9957.145 | 48638.475 | 2°43'00" | IP | | | | | |
| 230.275 | 9958.580 | 48668.716 | 2°43'00" | IP | | | | | |
| IP 1 | COORDINATE = 9955.9782 | | 48613.8850 | | | | | | |
| CHAINAGE | = 175.3828 | | | | | | | | |
| IP 2 | COORDINATE = 9958.5799 | | 48668.7157 | | | | | | |
| CHAINAGE | = 230.2752 | | | | | | | | |
| SANDRIDGE STREET DESIGN LINE | | | | | | | | | |
| CHAINAGE | EASTING | NORTHING | BEARING | | | | | | |
| 0.000 | 9990.778 | 48666.050 | 0°09'30" | IP | | | | | |
| 100.000 | 9991.054 | 48766.049 | 0°09'30" | IP | | | | | |
| 200.000 | 9991.330 | 48866.049 | 0°09'30" | IP | | | | | |
| 227.128 | 9991.405 | 48893.177 | 0°09'30" | IP | | | | | |
| IP 1 | COORDINATE = 9990.7776 | | 48666.0498 | | | | | | |
| CHAINAGE | = 0.0000 | | | | | | | | |
| IP 2 | COORDINATE = 9991.4052 | | 48893.1766 | | | | | | |
| CHAINAGE | = 227.1278 | | | | | | | | |

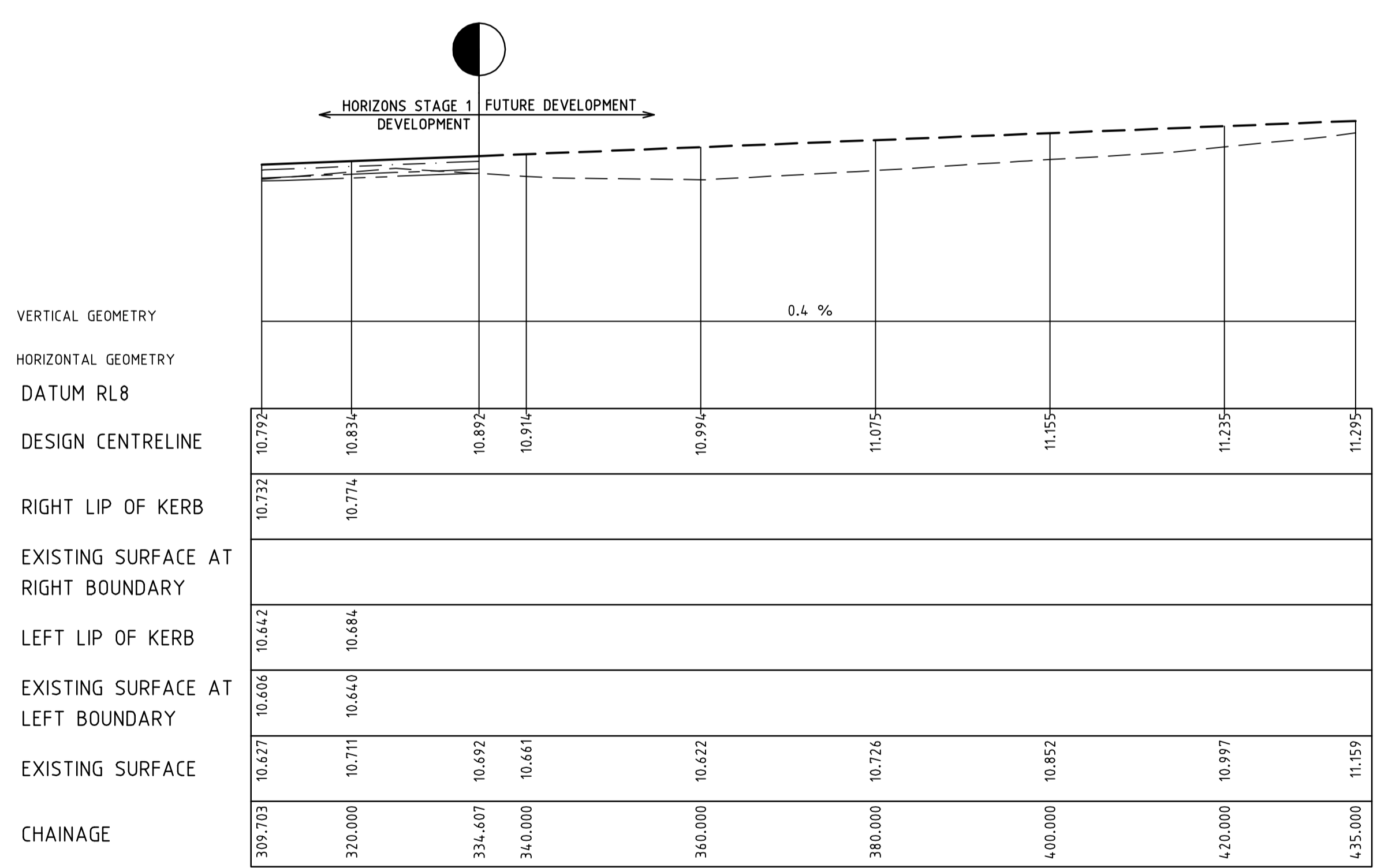
| REVISION | DATE | APP'D |
|---------------------|----------|-------|
| B COUNCIL AMENDMENT | 23.12.09 | |
| A ISSUED TO COUNCIL | 23.10.09 | |

NOTES
1. SETOUT CO-ORDINATES REFER TO LIP OF KERB/EDGE OF CONCRETE.
2. REFER TO SHEET NUMBERS 6 TO 7 FOR LIP PROFILES.

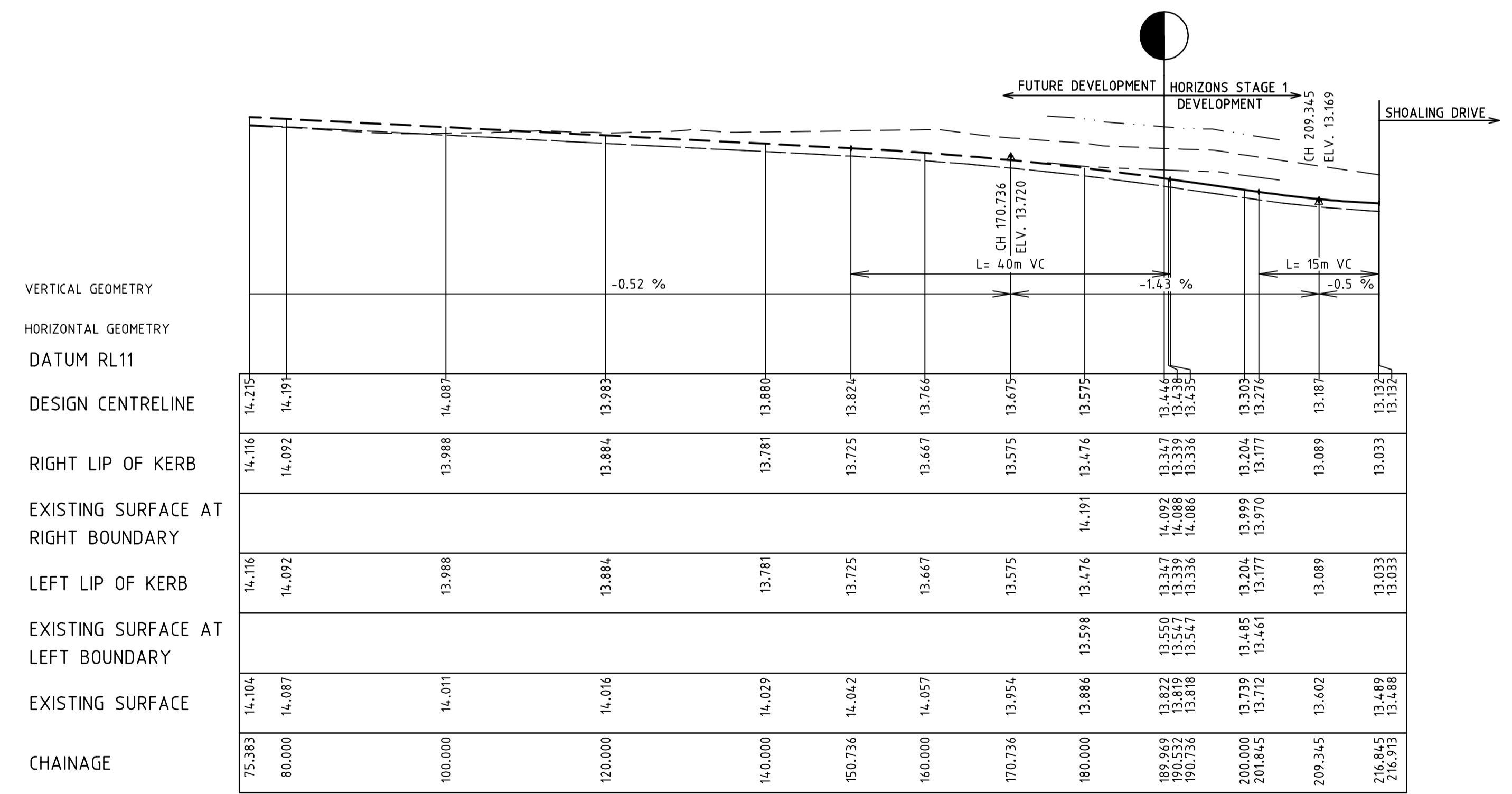




MELALUKA ROAD LONGITUDINAL SECTION



MELALUKA ROAD LONGITUDINAL SECTION



TISPA DRIVE LONGITUDINAL SECTION



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| A ISSUED TO COUNCIL | 23.10.09 | |

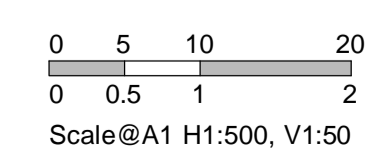
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|--------|--------------------|
| --- | EXISTING SURFACE |
| --- | DESIGN LINE |
| --- | FUTURE DESIGN LINE |

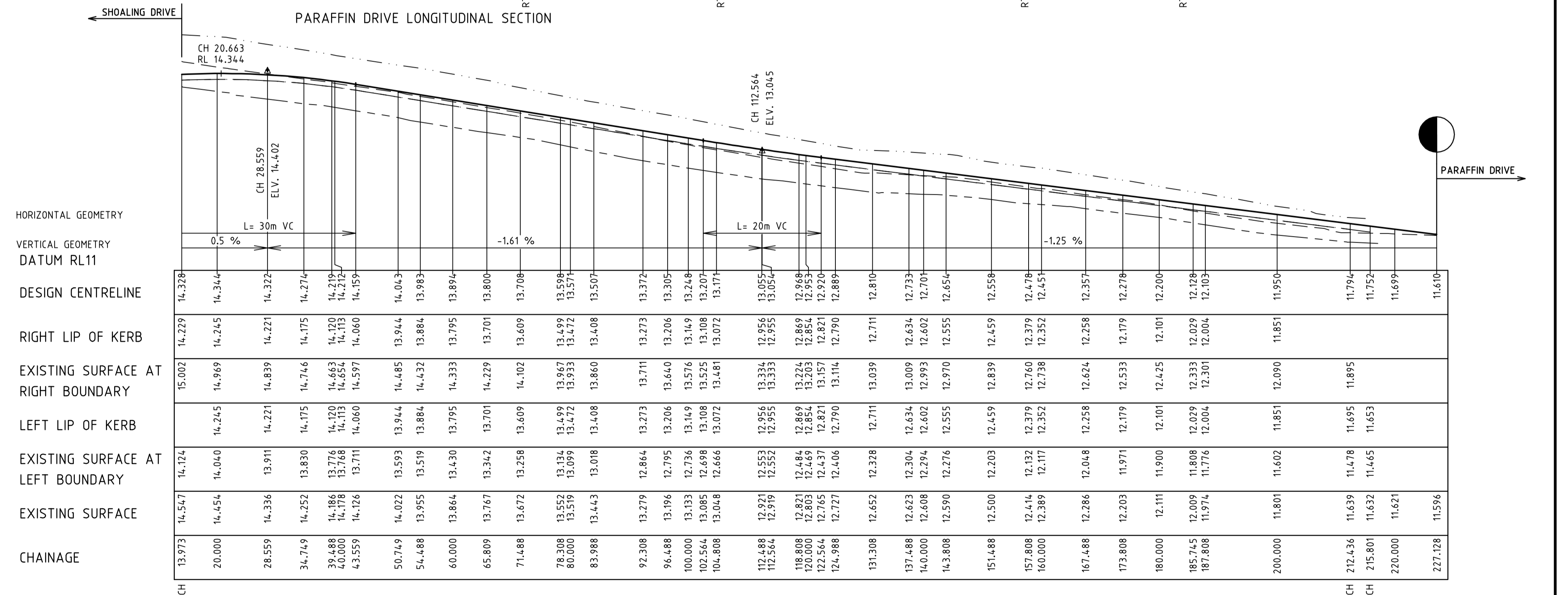
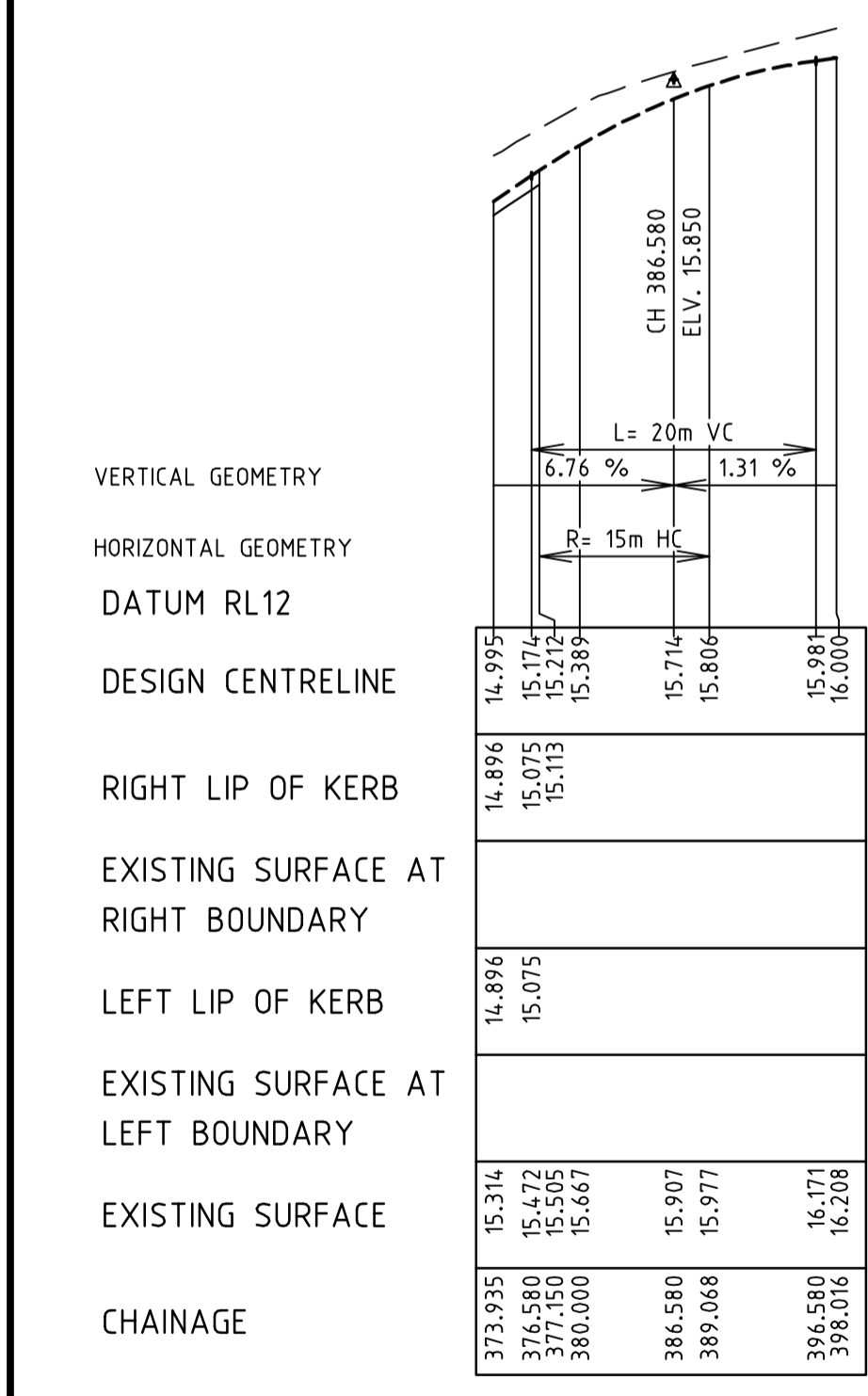
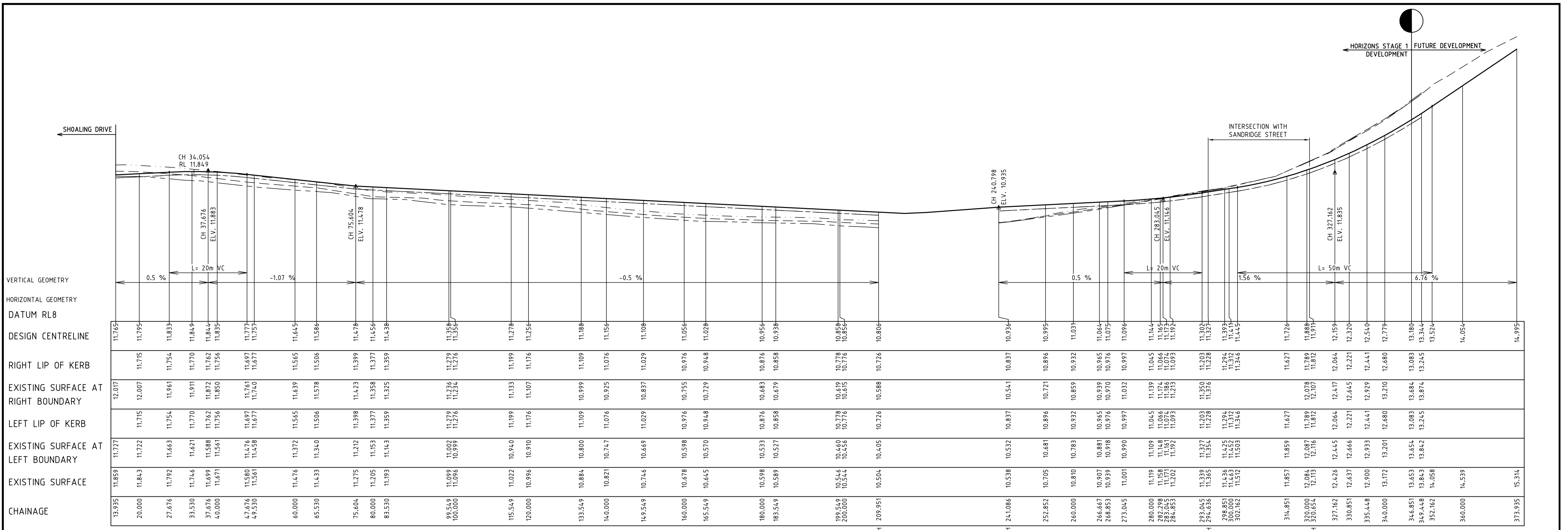


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Checked C. Birkett July 2009
Approved J. Golden July 2009

Estuary
Stage 1
City Of Greater Geelong
Roadworks and Drainage
Longitudinal Sections - 1

Drawing No. 0250EHL-01-09 **Rev B**
Sheet No. 9 of 40
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PARAFFIN DRIVE LONGITUDINAL SECTION

SANDRIDGE STREET LONGITUDINAL SECTION



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| A ISSUED TO COUNCIL | 23.10.09 | |

| LEGEND | |
|--------|--------------------|
| | EXISTING SURFACE |
| | DESIGN LINE |
| | FUTURE DESIGN LINE |

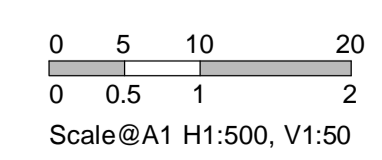


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Approved J. Golden July 2009

Estuary
Stage 1
City Of Greater Geelong
Roadworks and Drainage
Longitudinal Sections - 2

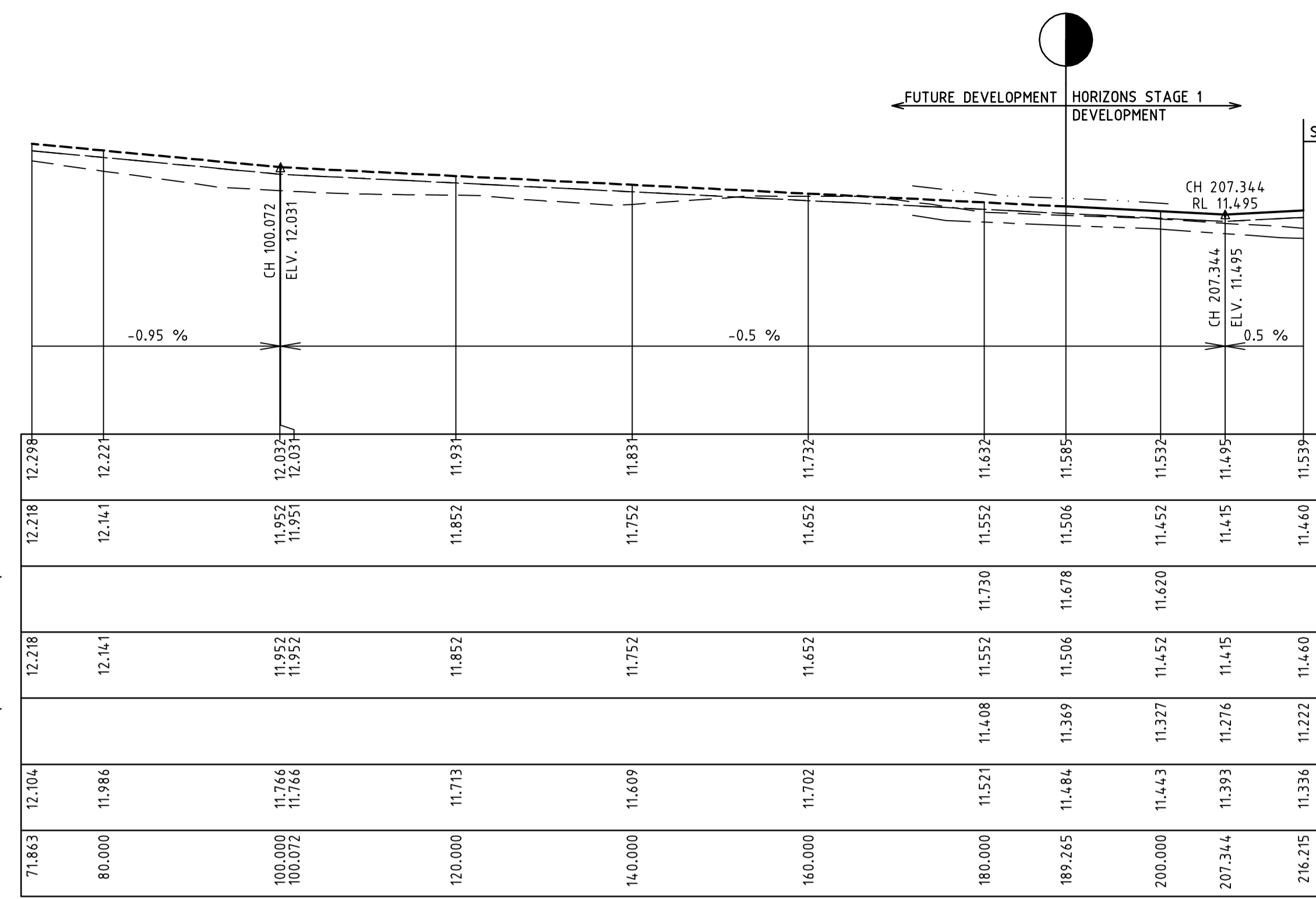
Drawing No. 0250EHL-01-10
Sheet No. 10 of 40

Rev B



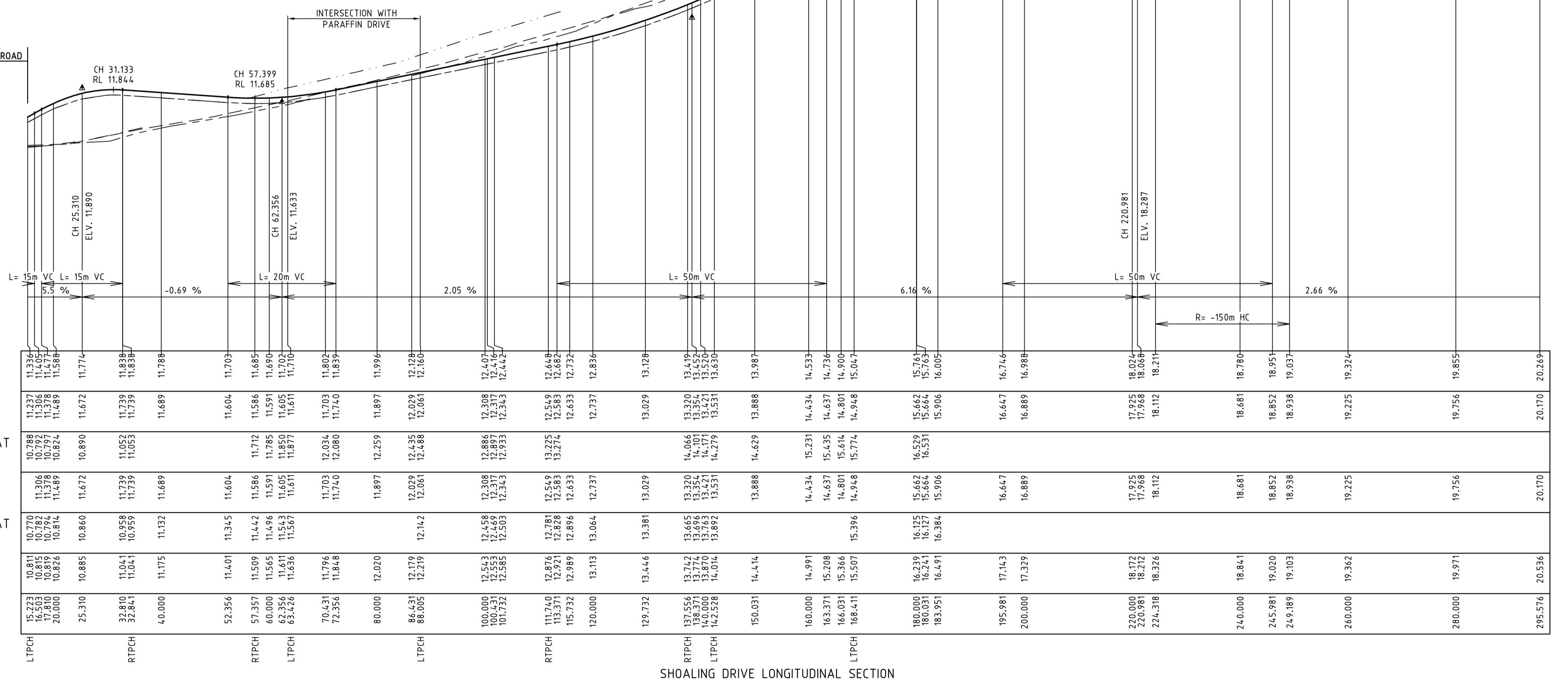
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VERTICAL GEOMETRY
 HORIZONTAL GEOMETRY
 DATUM RL9
 DESIGN CENTRELINE
 RIGHT LIP OF KERB
 EXISTING SURFACE AT RIGHT BOUNDARY
 LEFT LIP OF KERB
 EXISTING SURFACE AT LEFT BOUNDARY
 EXISTING SURFACE
 CHAINAGE



WINSLOW AVENUE LONGITUDINAL SECTION

VERTICAL GEOMETRY
 HORIZONTAL GEOMETRY
 DATUM RL7
 DESIGN CENTRELINE
 RIGHT LIP OF KERB
 EXISTING SURFACE AT RIGHT BOUNDARY
 LEFT LIP OF KERB
 EXISTING SURFACE AT LEFT BOUNDARY
 EXISTING SURFACE
 CHAINAGE



SHOALING DRIVE LONGITUDINAL SECTION



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| REVISION | DATE | APP'D |
|----------------------|----------|-------|
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| A ISSUED TO COUNCIL | 23.10.09 | |

| LEGEND | |
|--------|--------------------|
| --- | EXISTING SURFACE |
| — | DESIGN LINE |
| --- | FUTURE DESIGN LINE |



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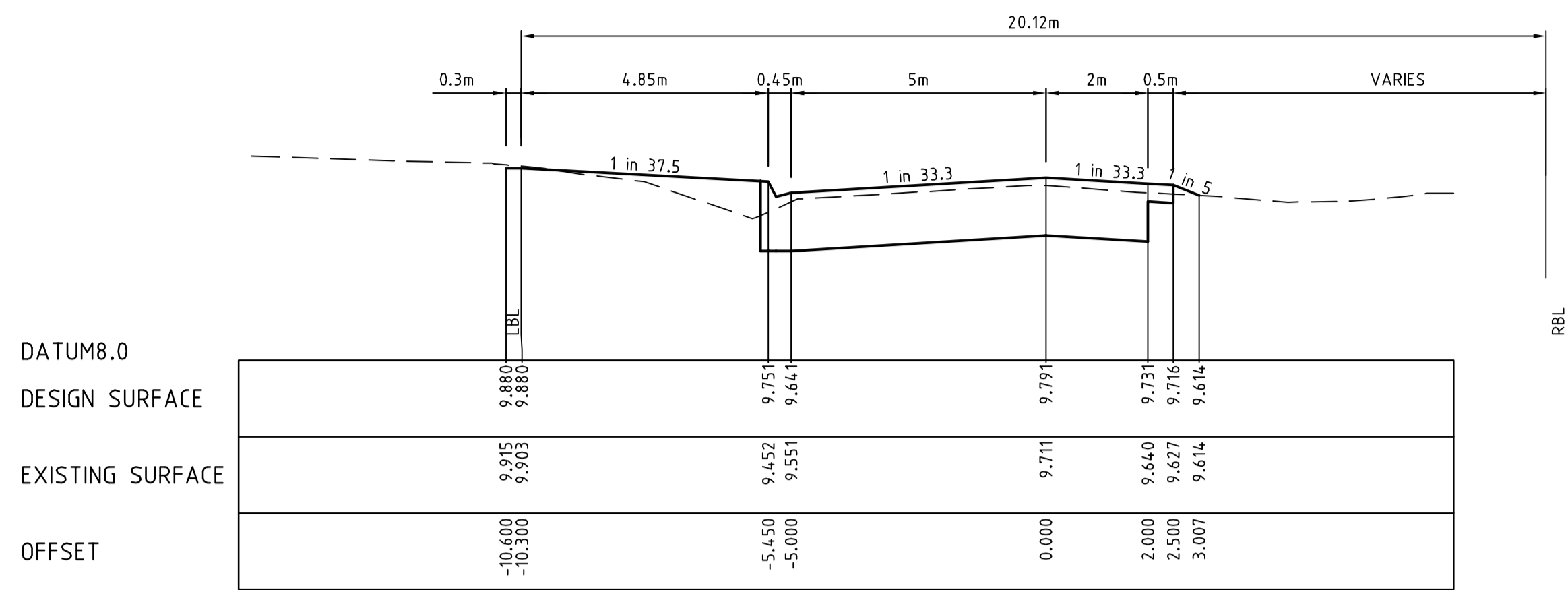
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Estuary
 Stage 1
 City Of Greater Geelong
 Roadworks and Drainage
 Longitudinal Sections - 3

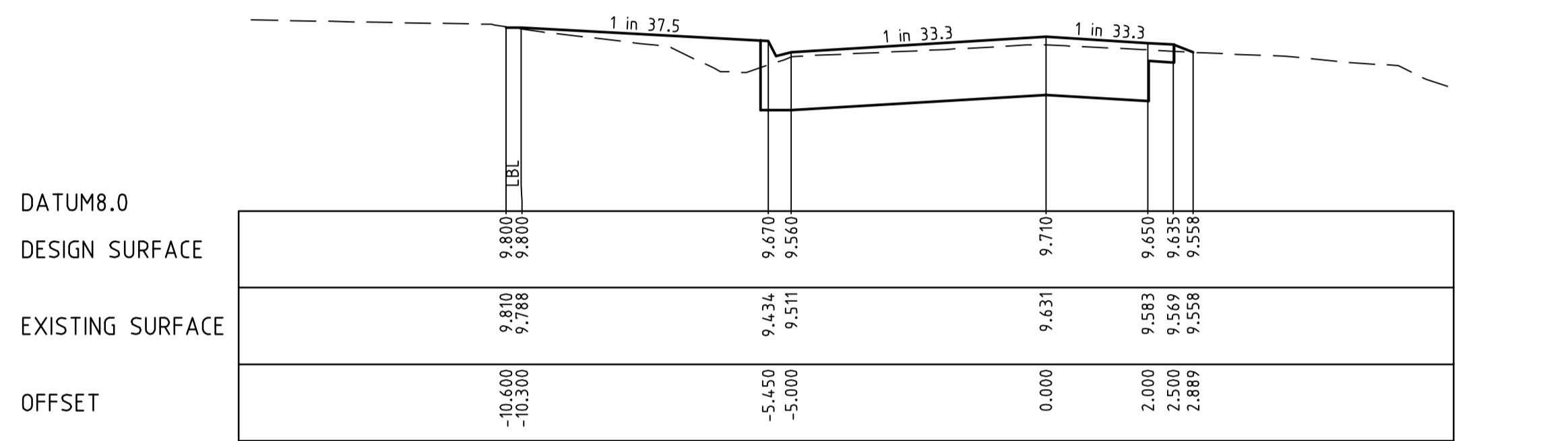
Drawing No. 0250EHL-01-11
 Sheet No. 11 of 40

Rev B

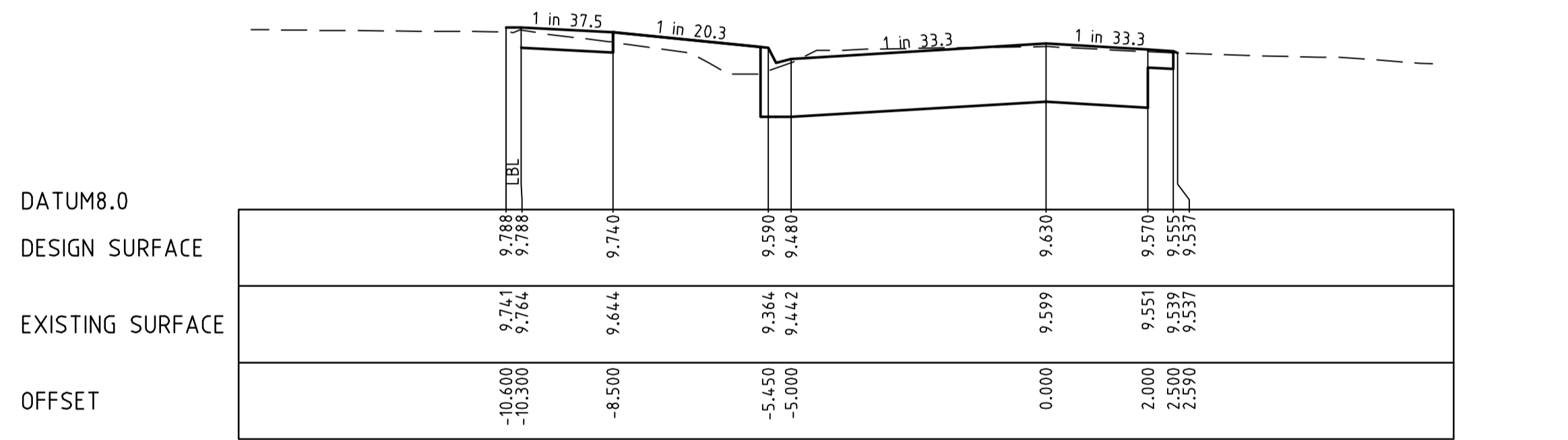
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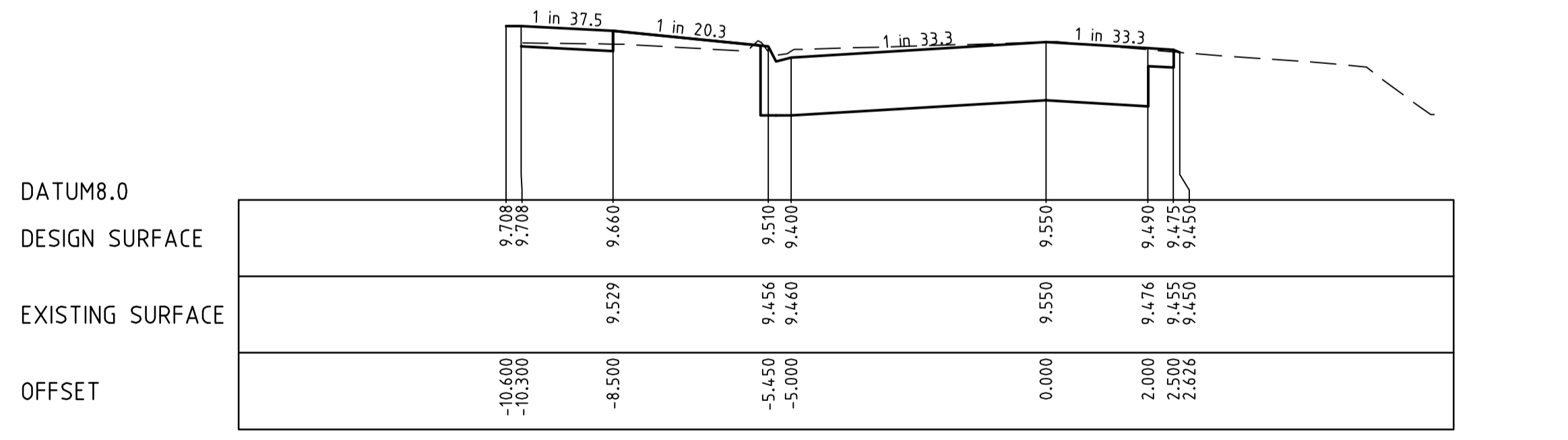
CH 60.000



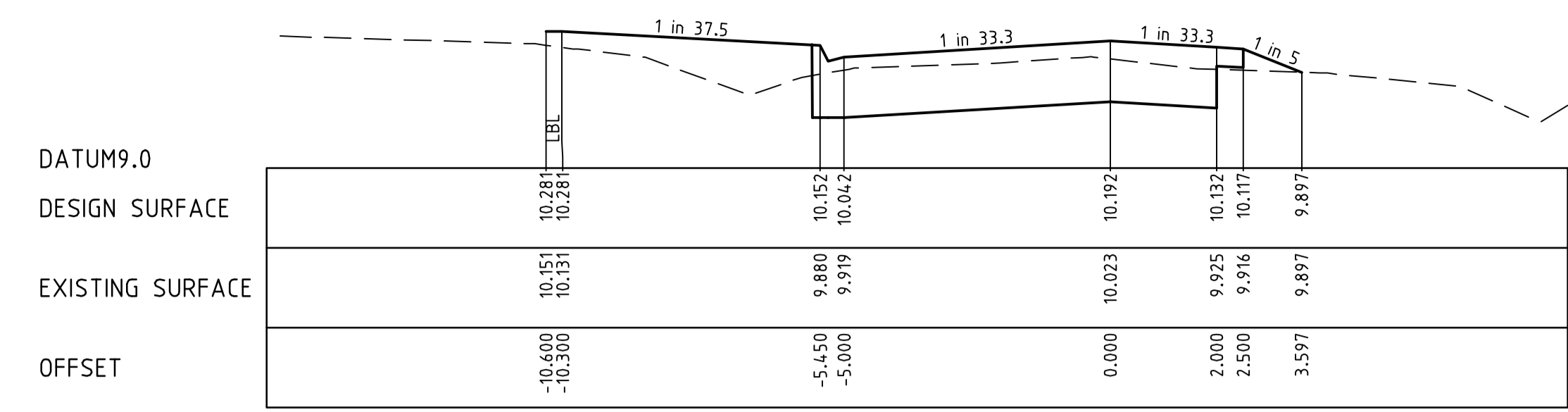
CH 40.000



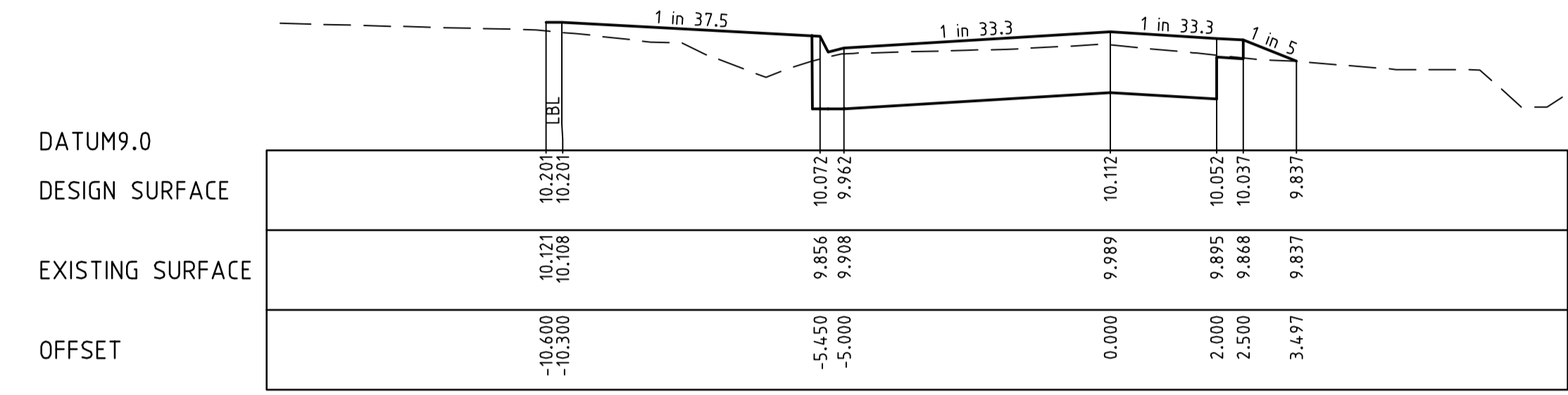
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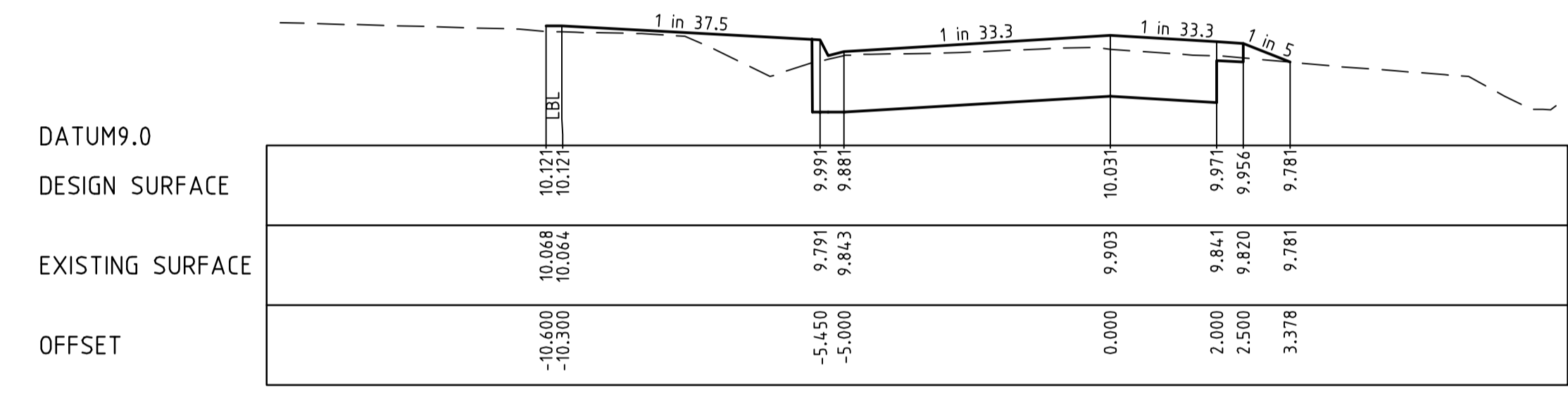
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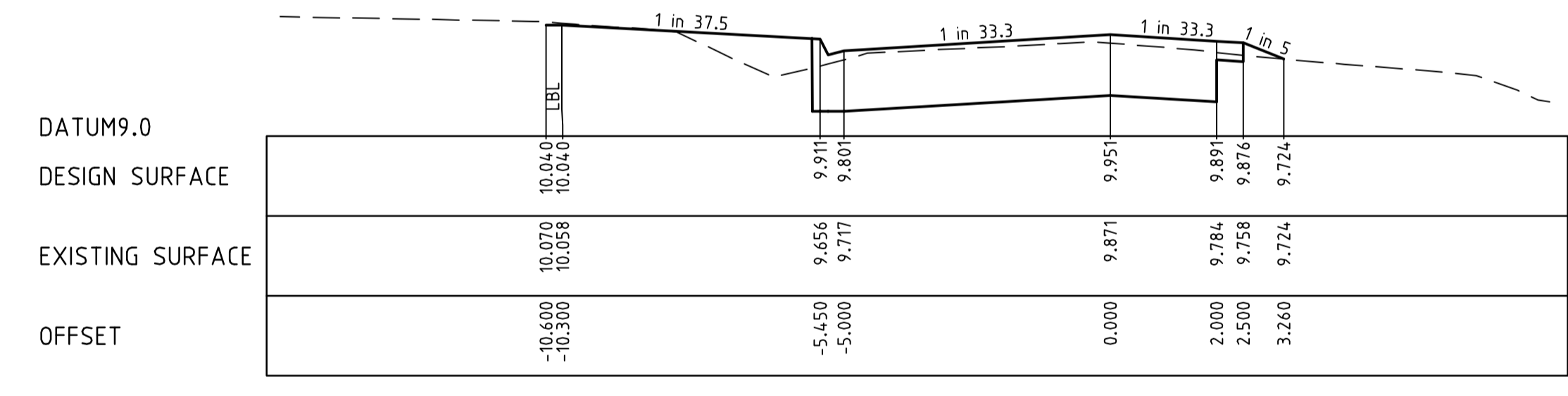
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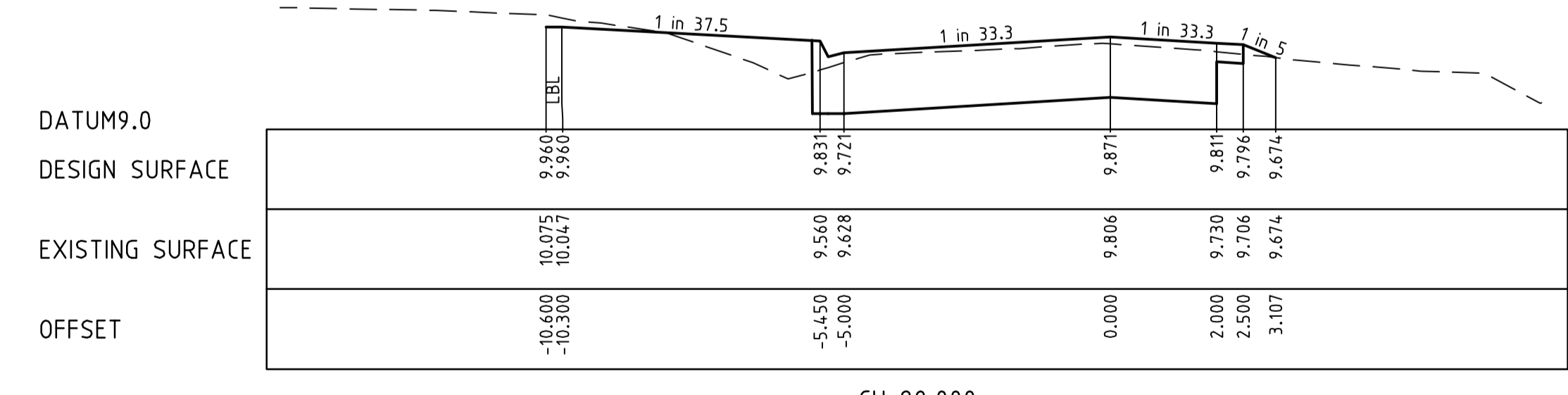
CH 140.000



CH 120.000



CH 100.000



CH 80.000



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LEGEND

--- EXISTING SURFACE

— DESIGN LINE

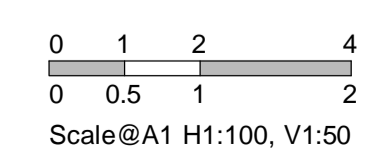


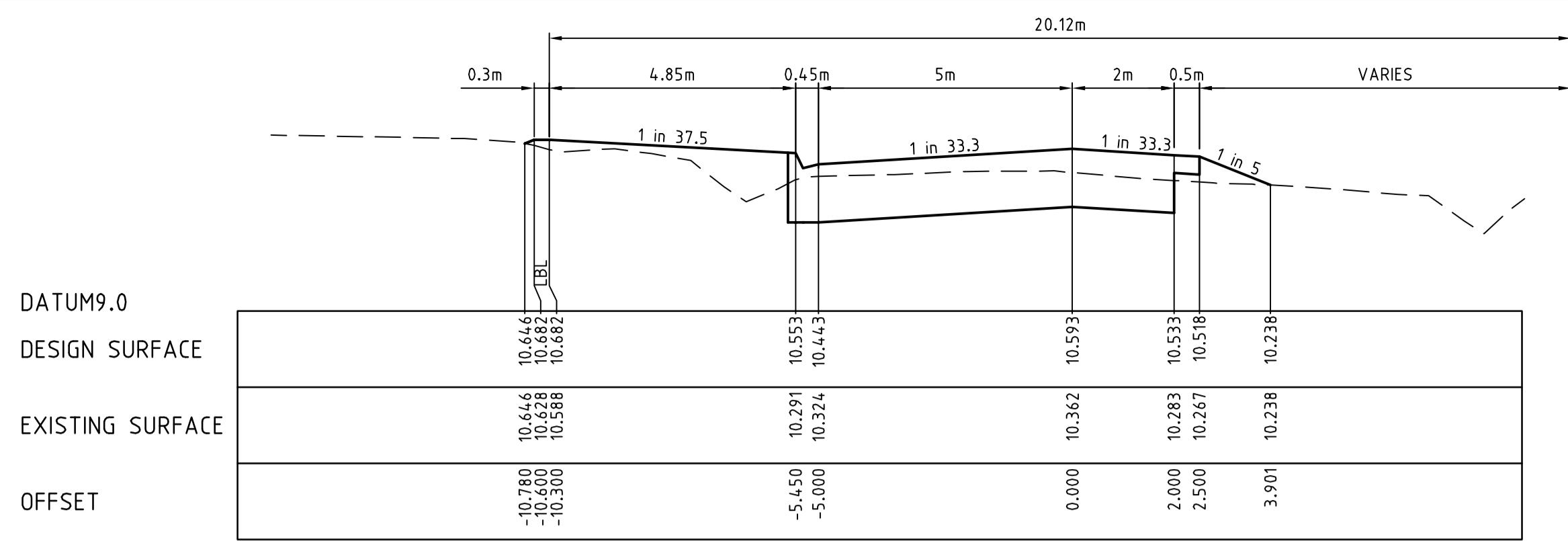
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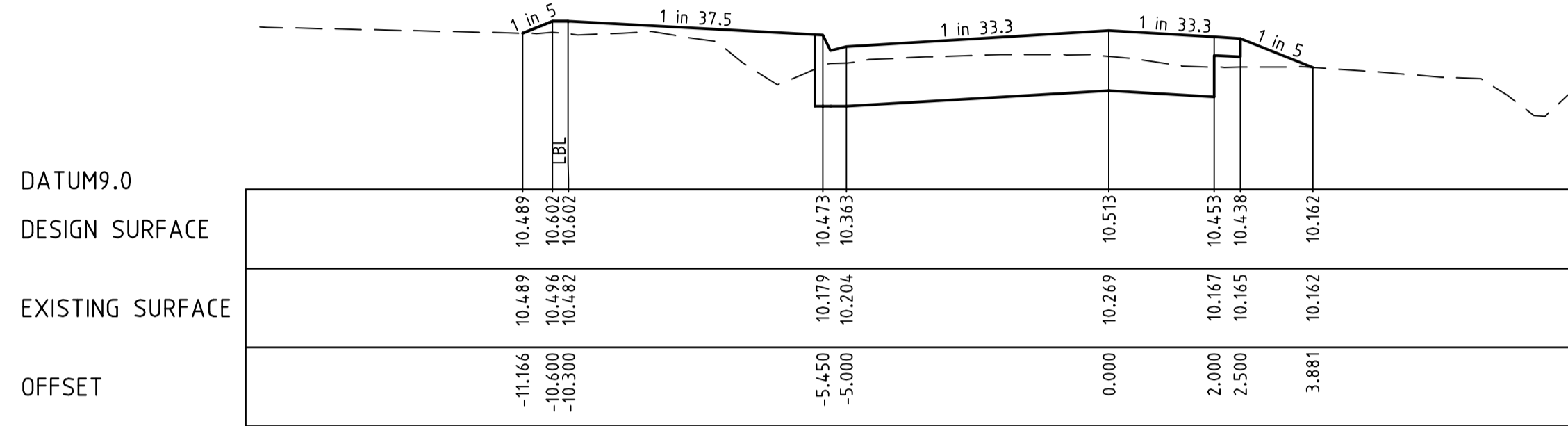
Estuary
Stage 1
City Of Greater Geelong
Roadworks and Drainage
Cross Sections - Melaluka Road - 1
Ch 0.000 - Ch 160.000

Drawing No. 0250EHL-01-12 Rev B
Sheet No. 12 of 40
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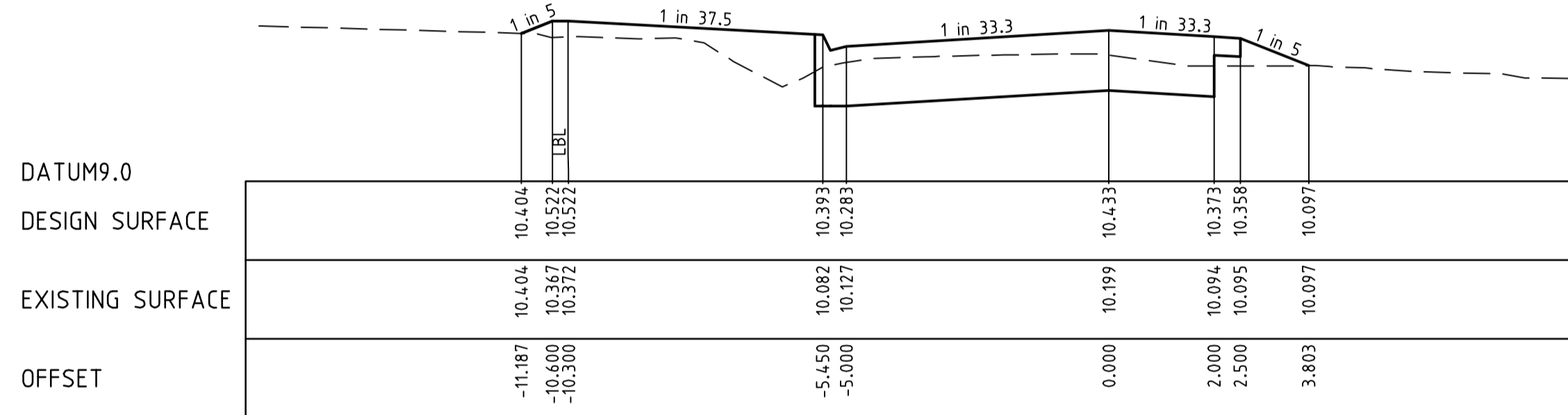




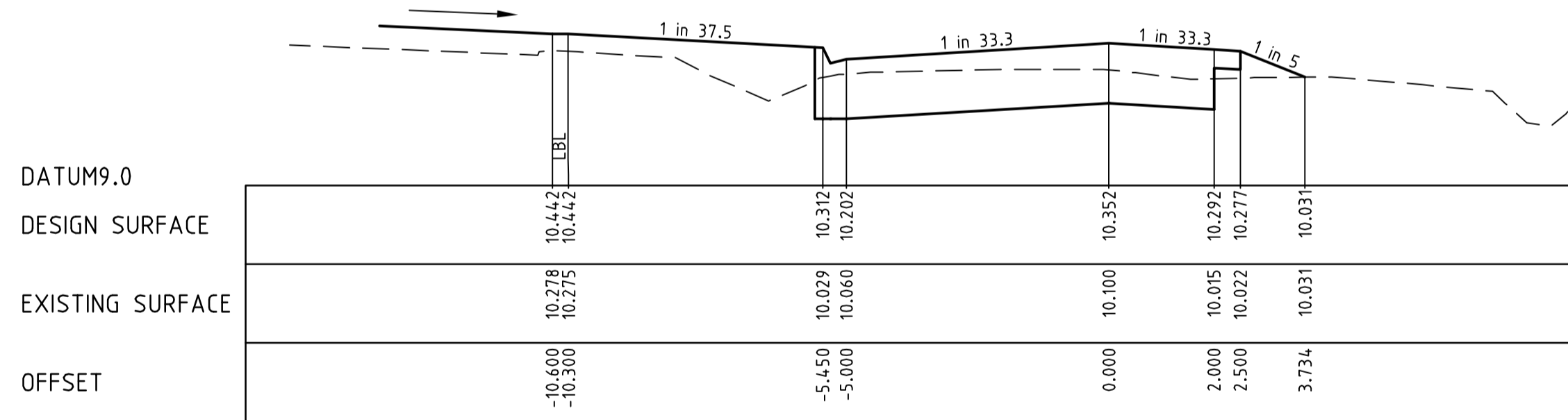
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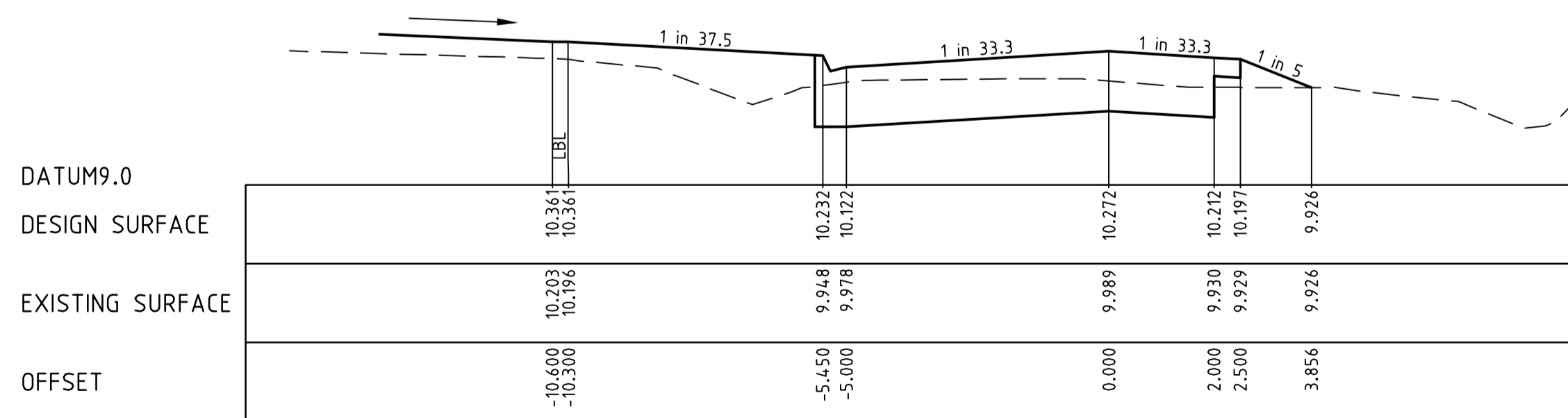
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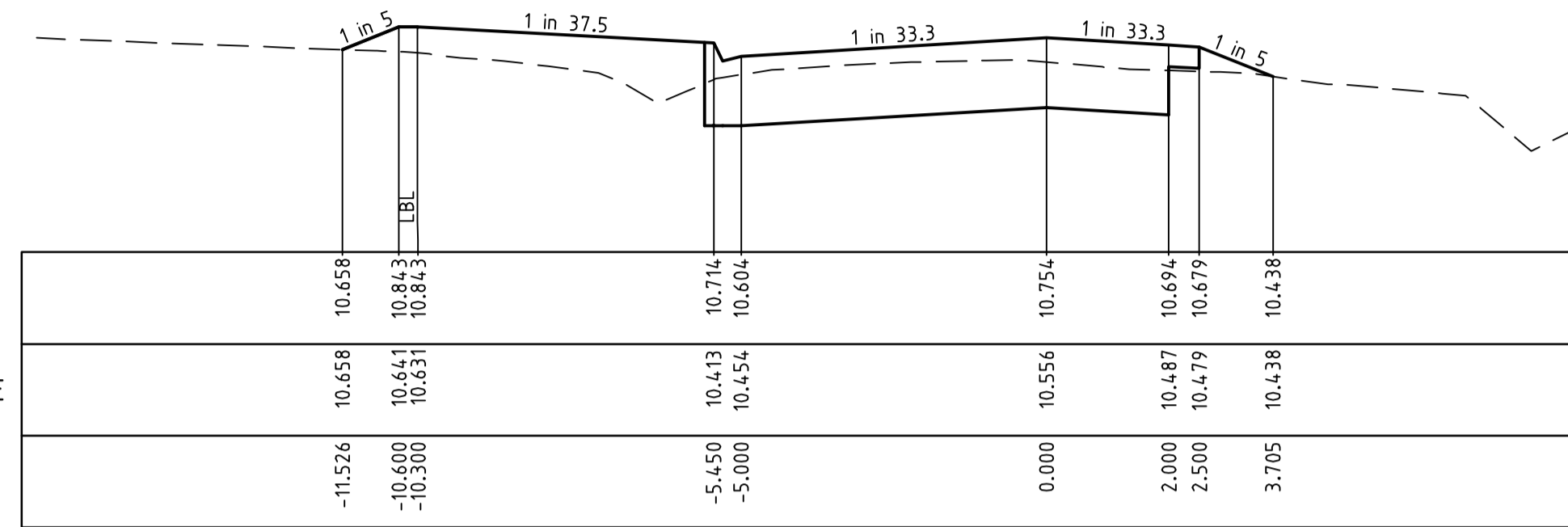
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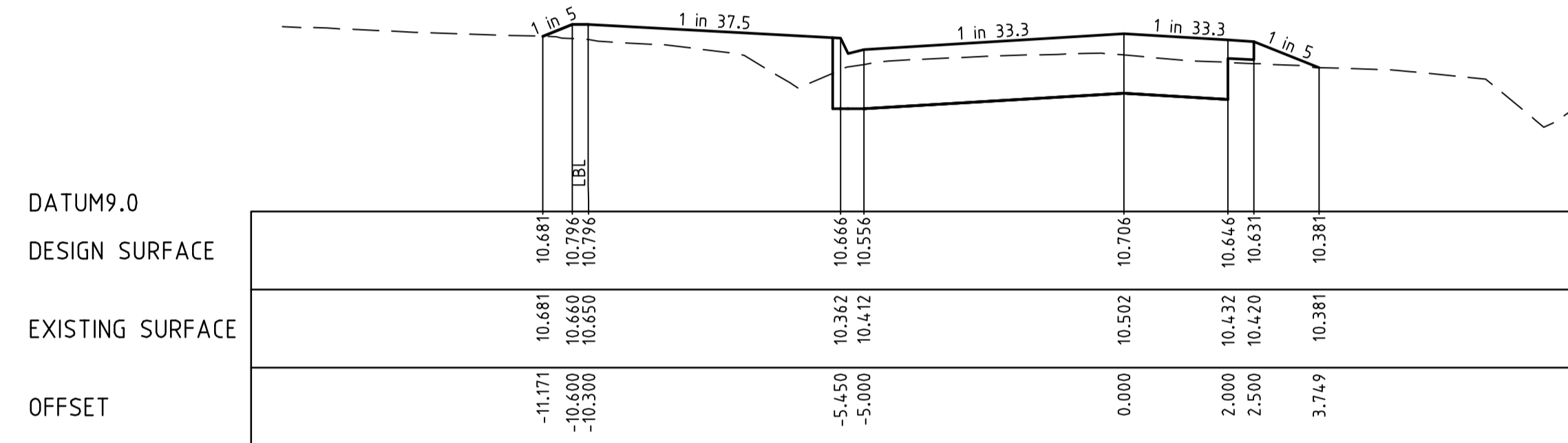
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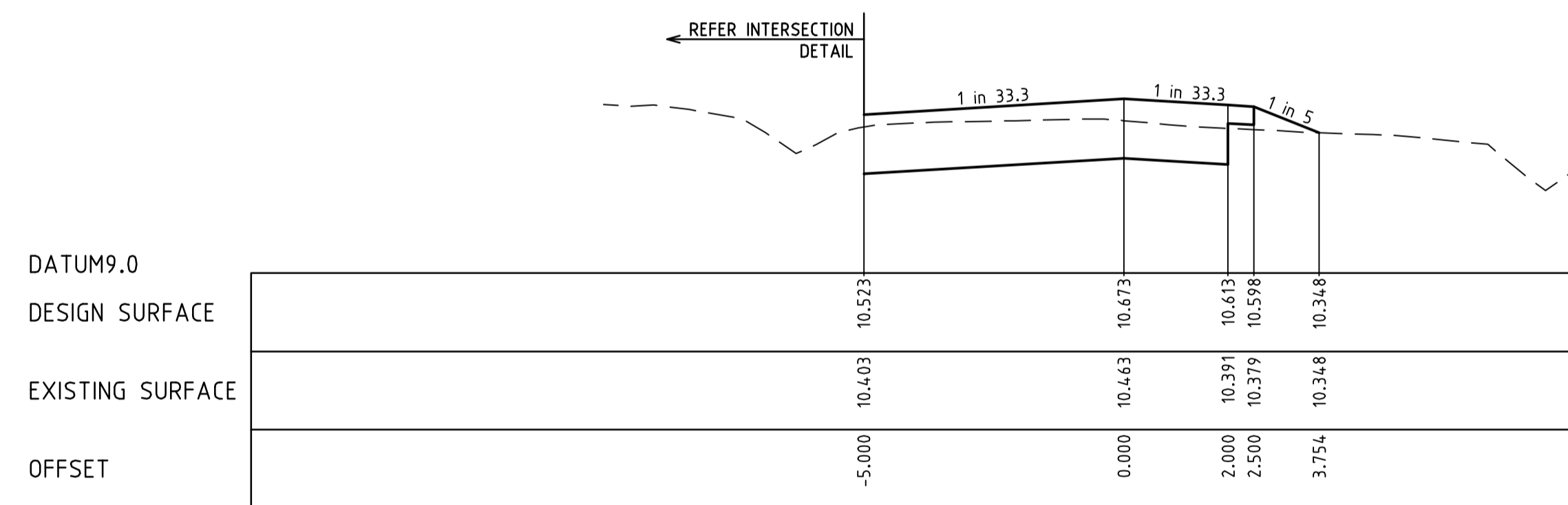
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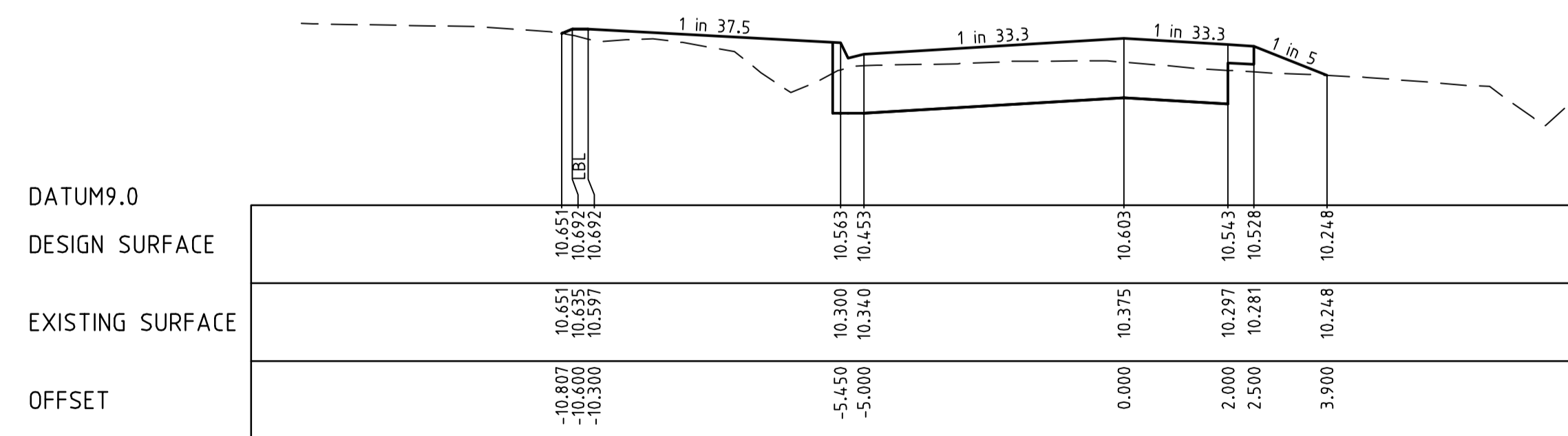
CH 300.000



LTPCH 288.219



CH 280.000



LTPCH 262.391



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| LEGEND | |
|--------|------------------|
| --- | EXISTING SURFACE |
| — | DESIGN LINE |



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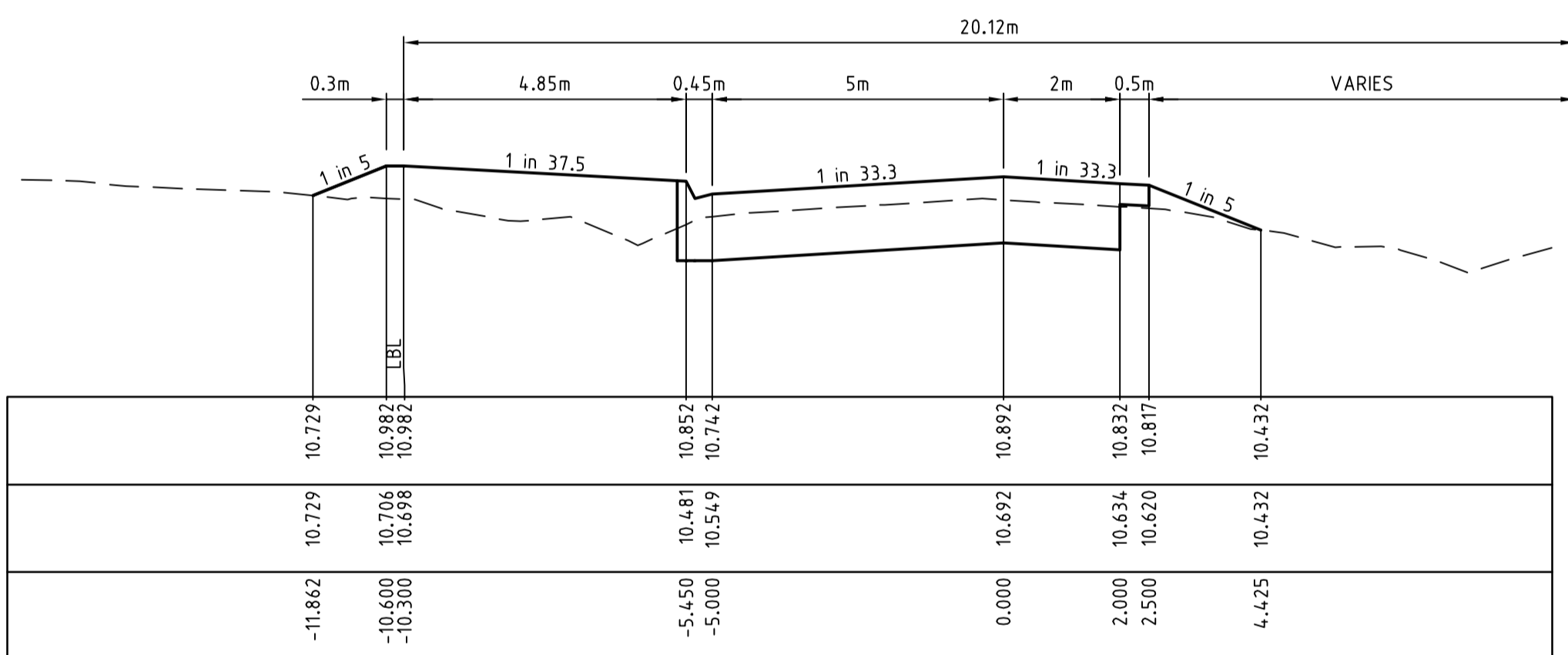
Estuary
Stage 1
City Of Greater Geelong
Roadworks and Drainage
Cross Sections - Melaluka Road - 2
Ch 180.000 - Ch 300.000

Drawing No. 0250EHL-01-13
Sheet No. 13 of 40

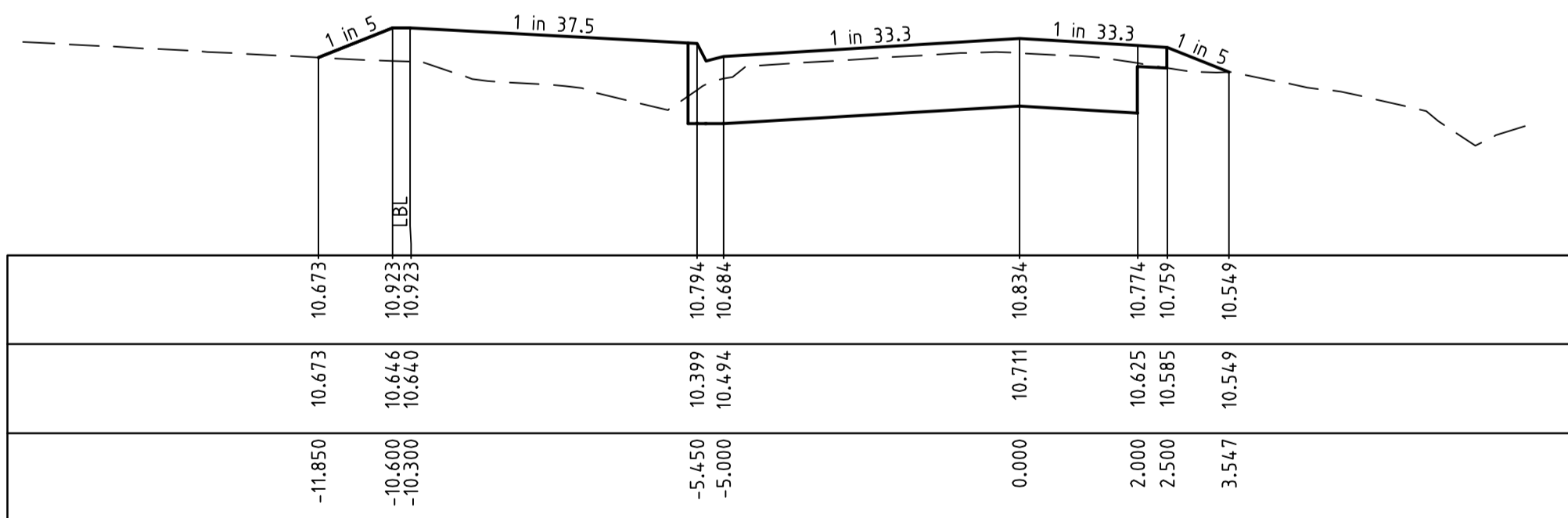
Rev B

Scale@A1 H1:100, V1:50

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LTPCH 334.607



CH 320.000



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| LEGEND | |
|--------|------------------|
| --- | EXISTING SURFACE |
| — | DESIGN LINE |



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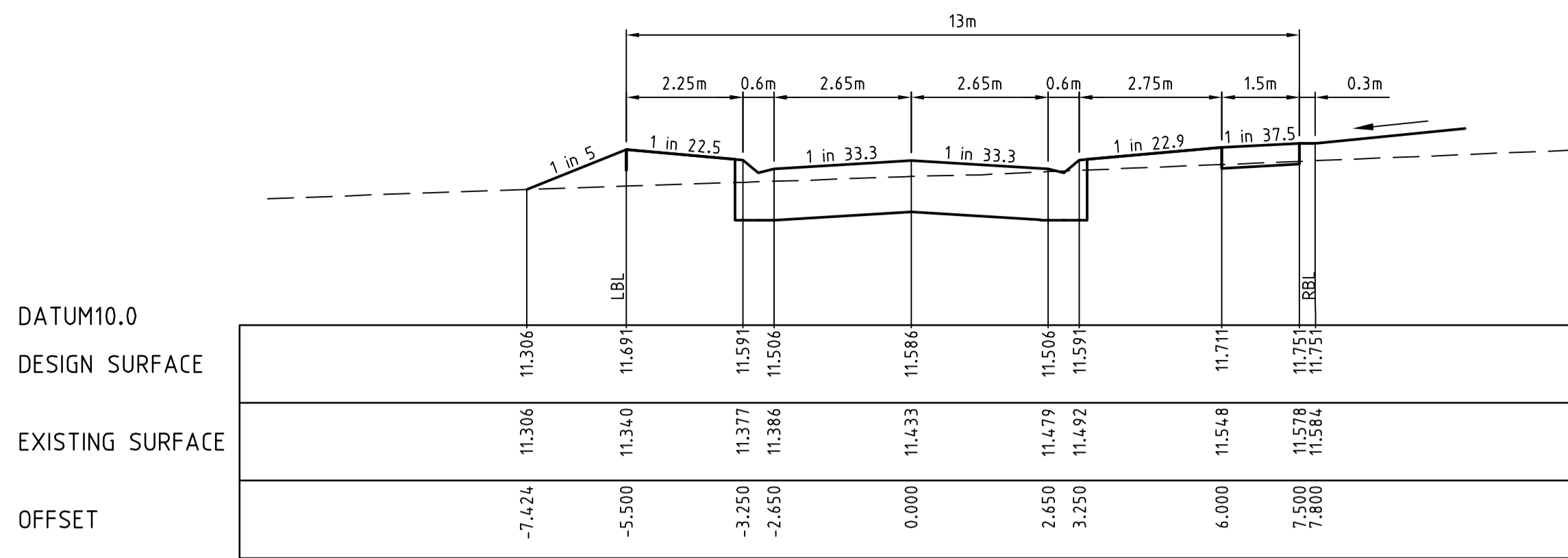
Estuary
Stage 1
City Of Greater Geelong
Roadworks and Drainage
Cross Sections - Melaluka Road - 3
Ch 320.000 - Ch 334.607

Drawing No. 0250EHL-01-14
Sheet No. 14 of 40

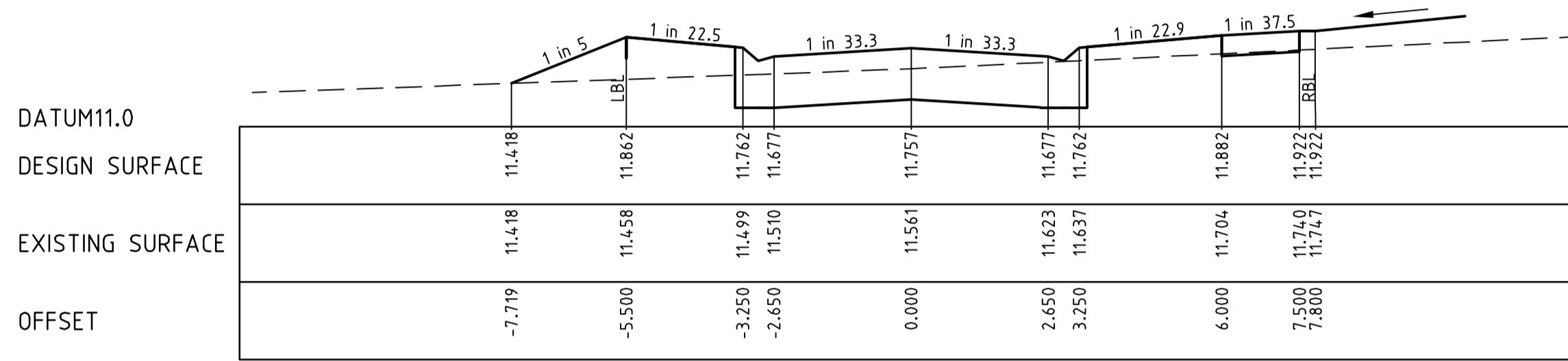
Rev B

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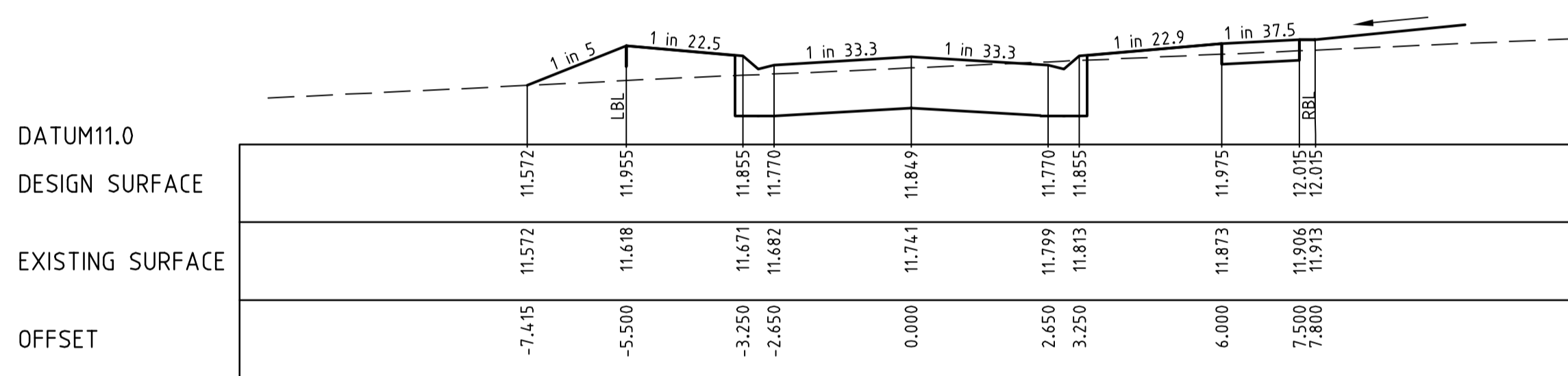
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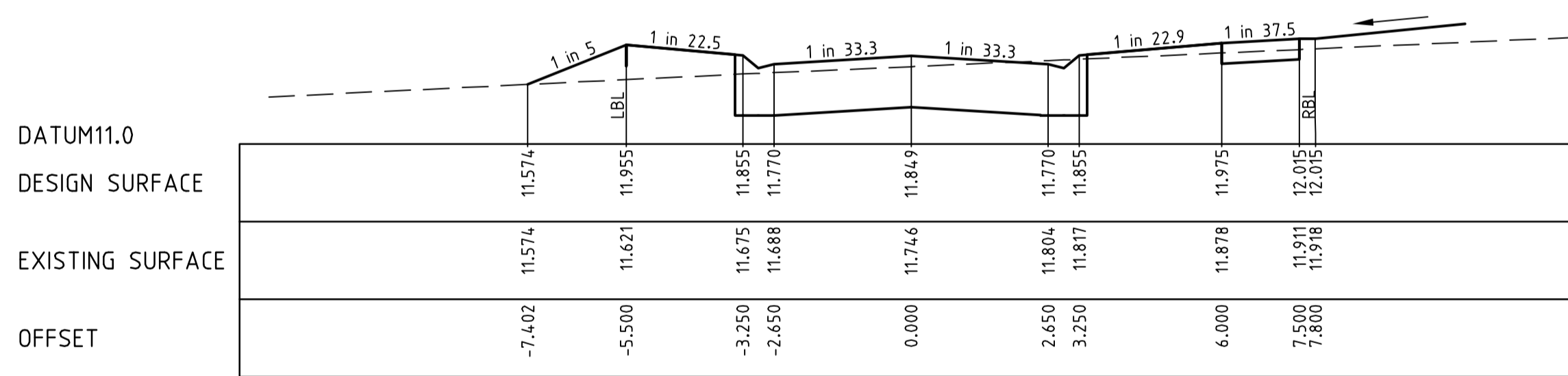
CH 65.530



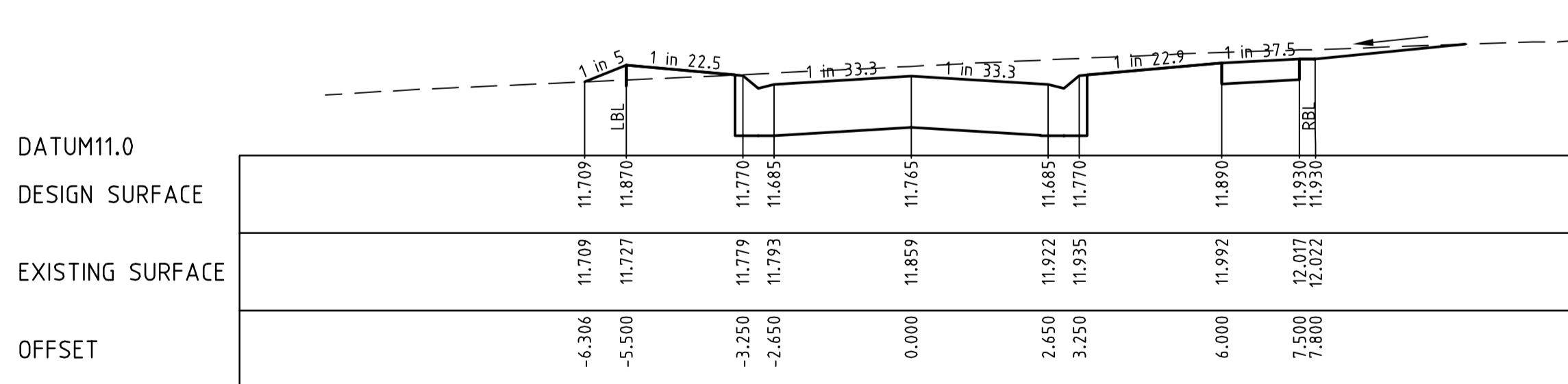
CH 49.530



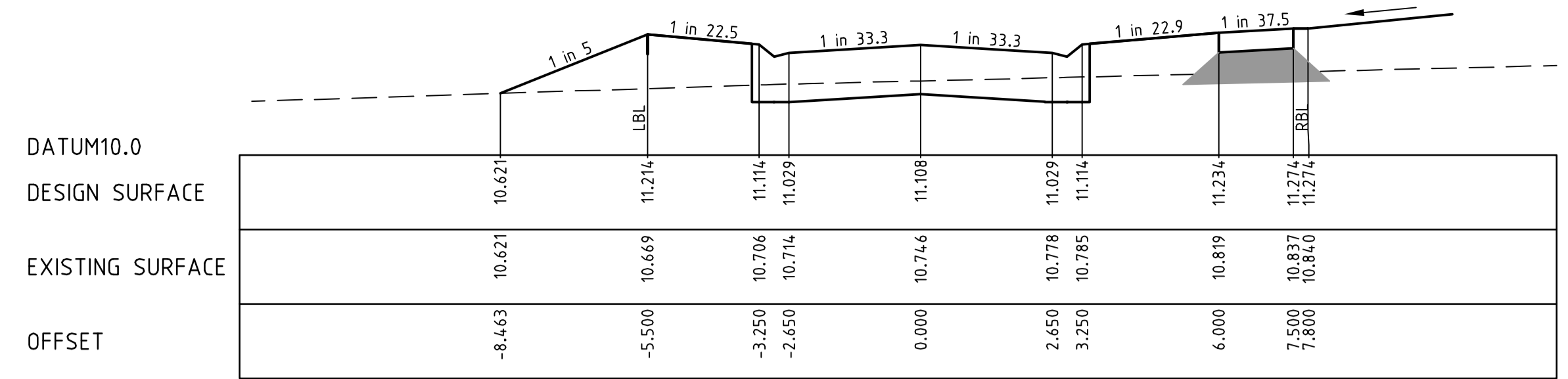
CH 34.054



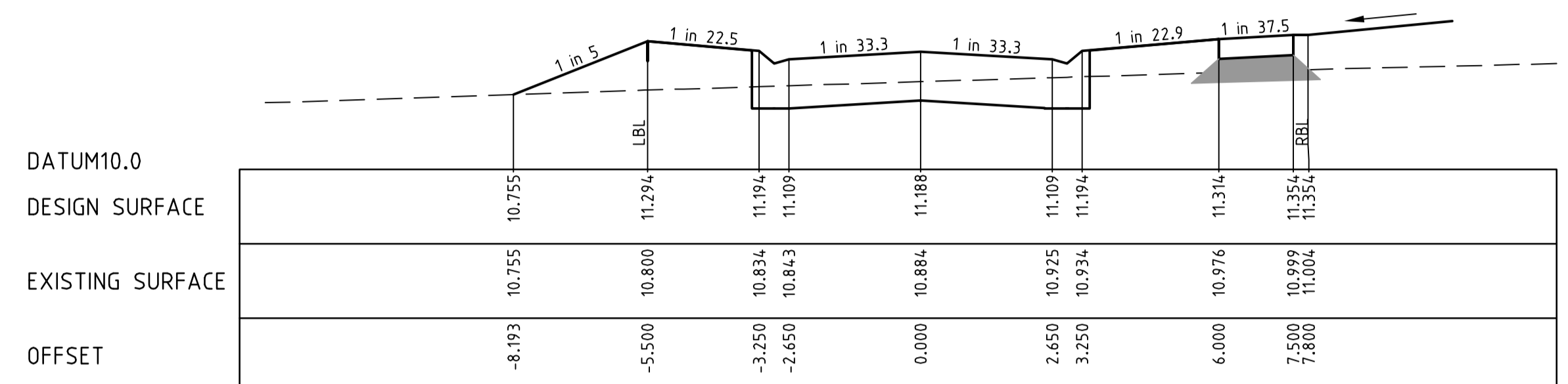
CH 33.530



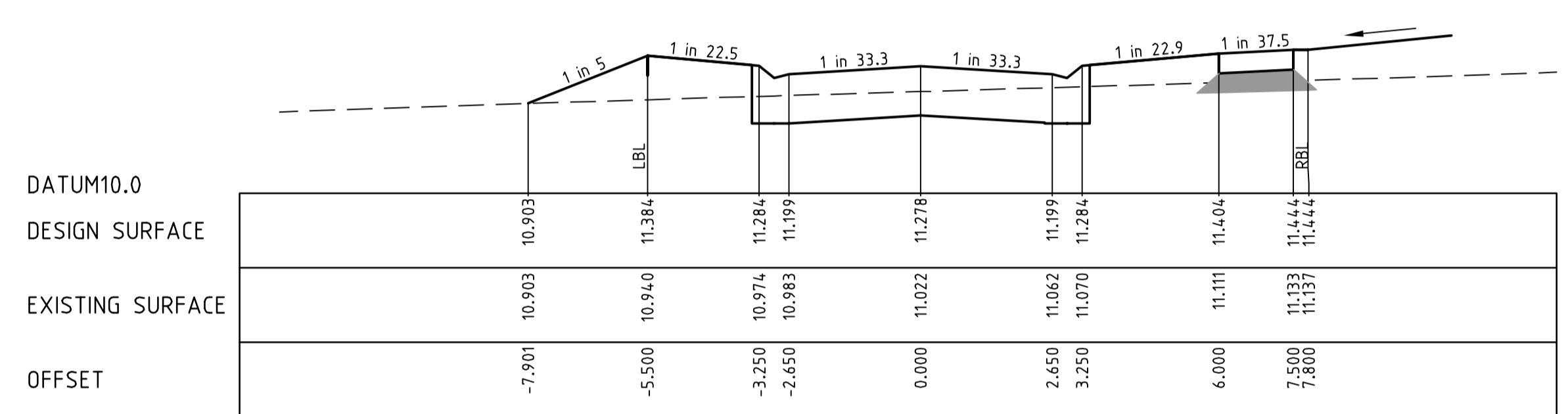
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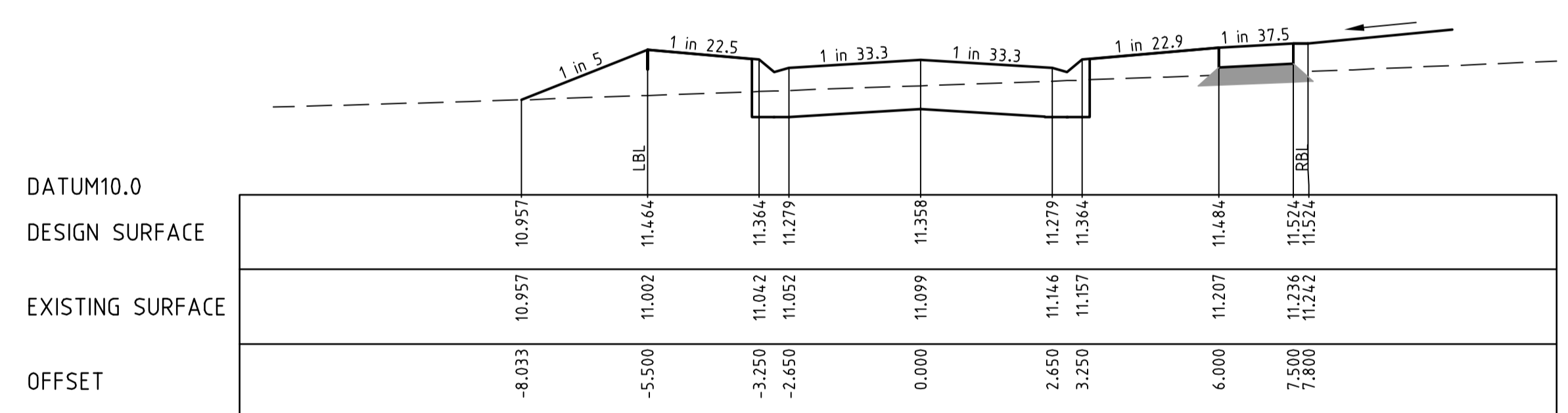
CH 149.549



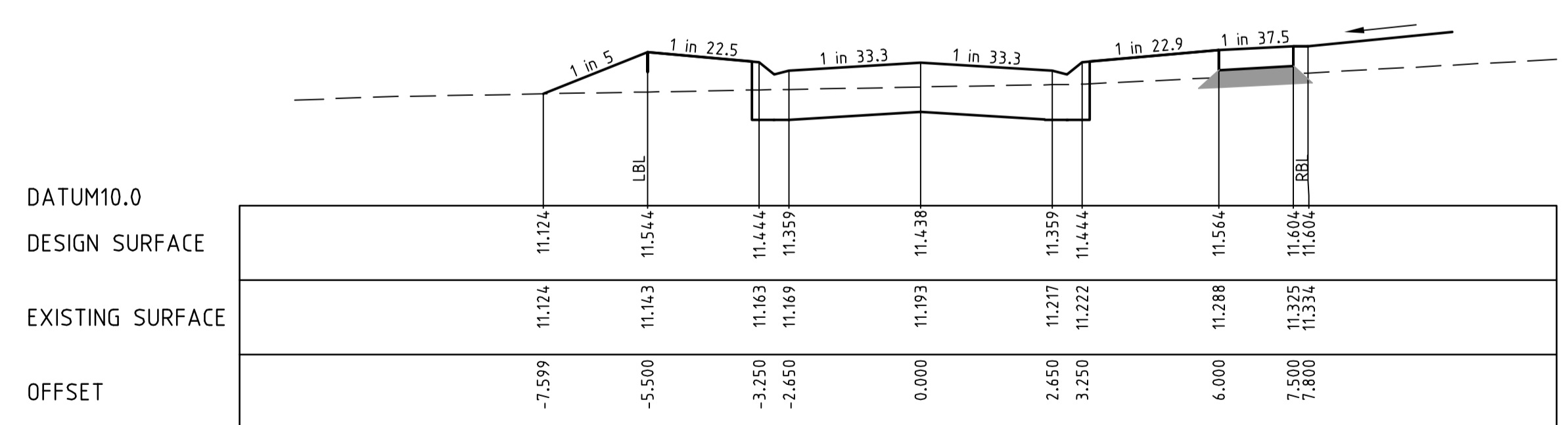
CH 133.549



CH 115.549



CH 99.549



CH 83.530



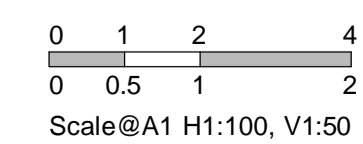
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|----------------------|----------|-------|
| B COUNCIL AMENDMENTS | 23.12.09 | |
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LEGEND

- EXISTING SURFACE
- DESIGN LINE

STRUCTURAL FILL REQUIRED UNDER PAVEMENT AND FOOTPATHS WHERE CONSTRUCTED ABOVE NATURAL SURFACE

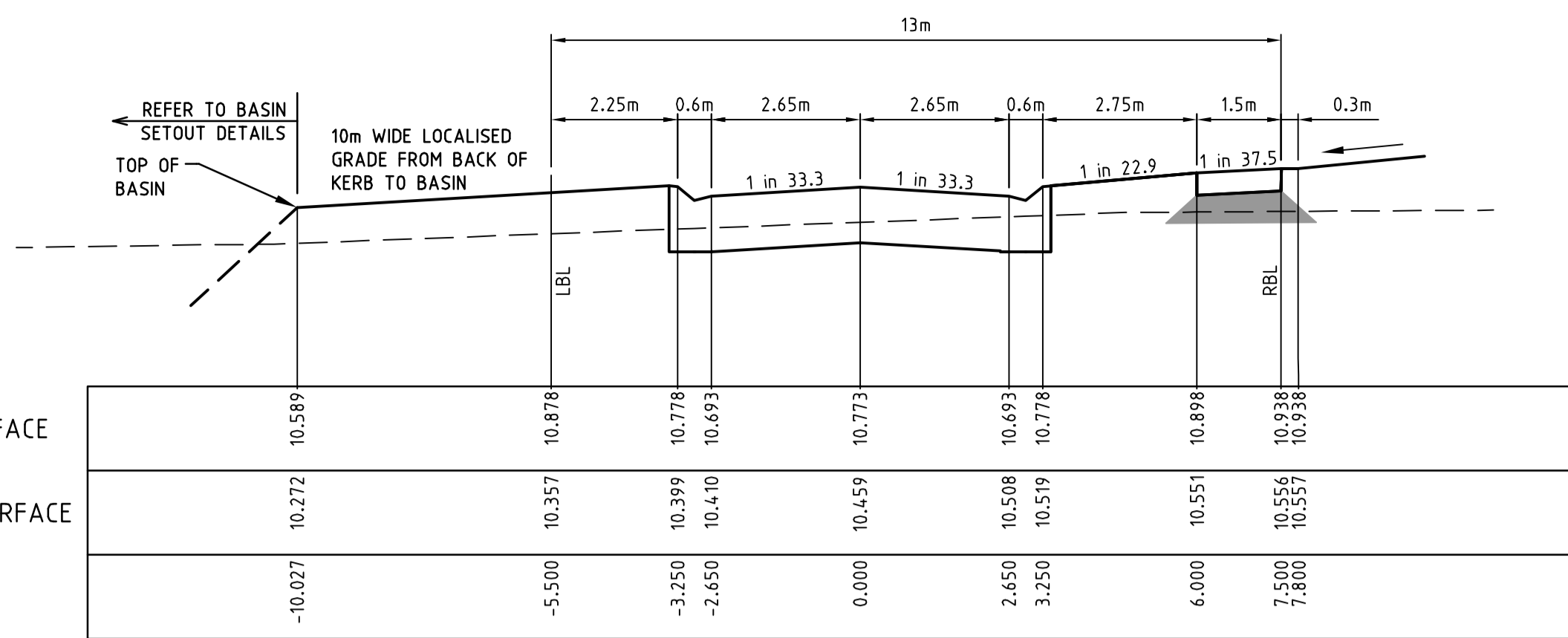


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Approved J. Golden July 2009

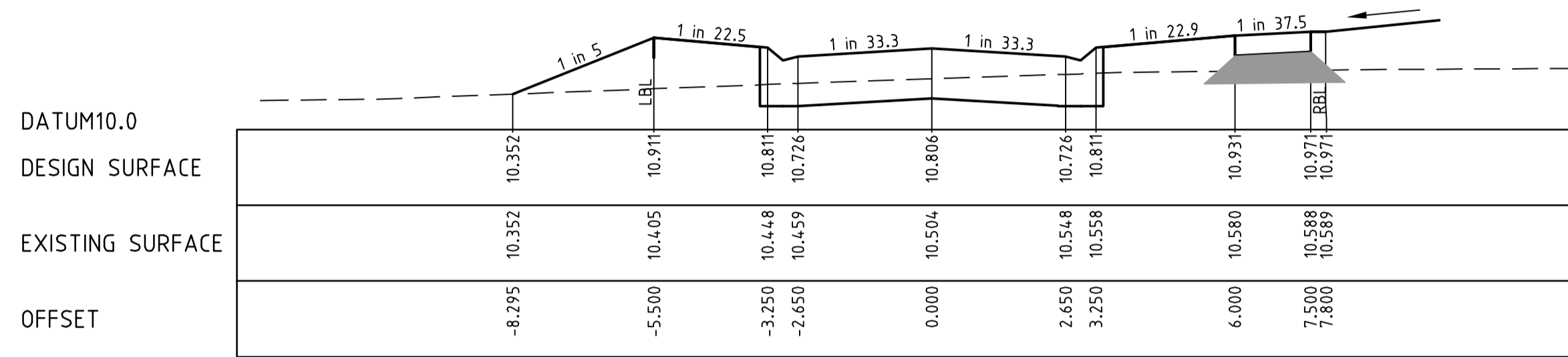
Estuary
Stage 1
City Of Greater Geelong
Roadworks and Drainage
Cross Sections - Paraffin Drive - 1
Ch 13.943 - Ch 149.549

Drawing No. 0250EHL-01-15
Sheet No. 15 of 40

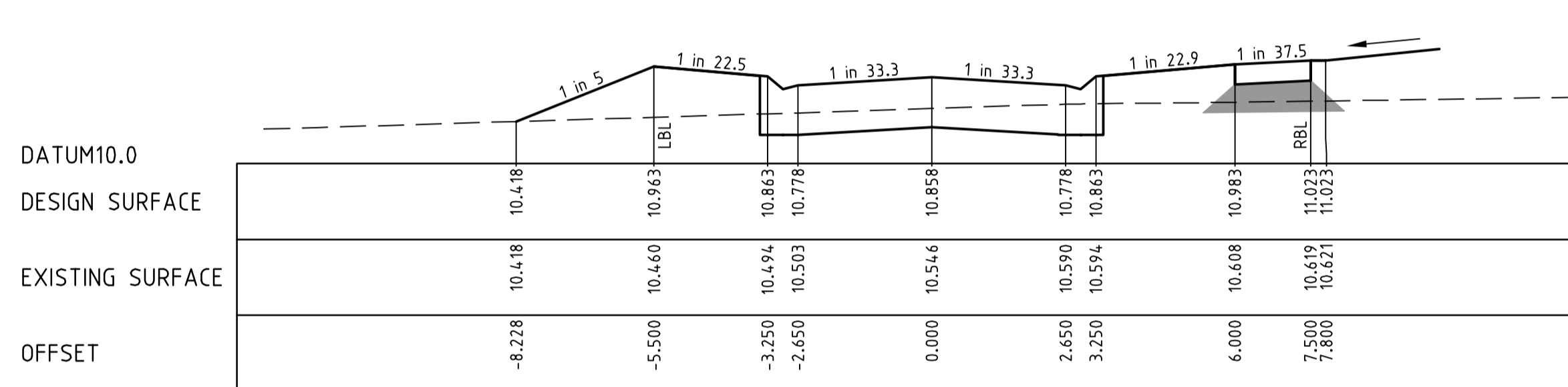
Rev B



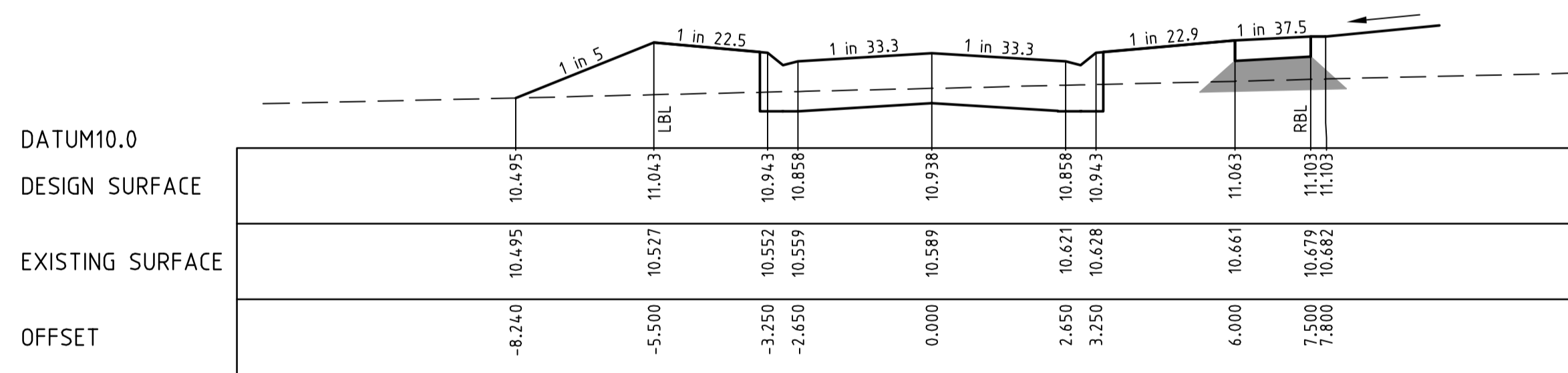
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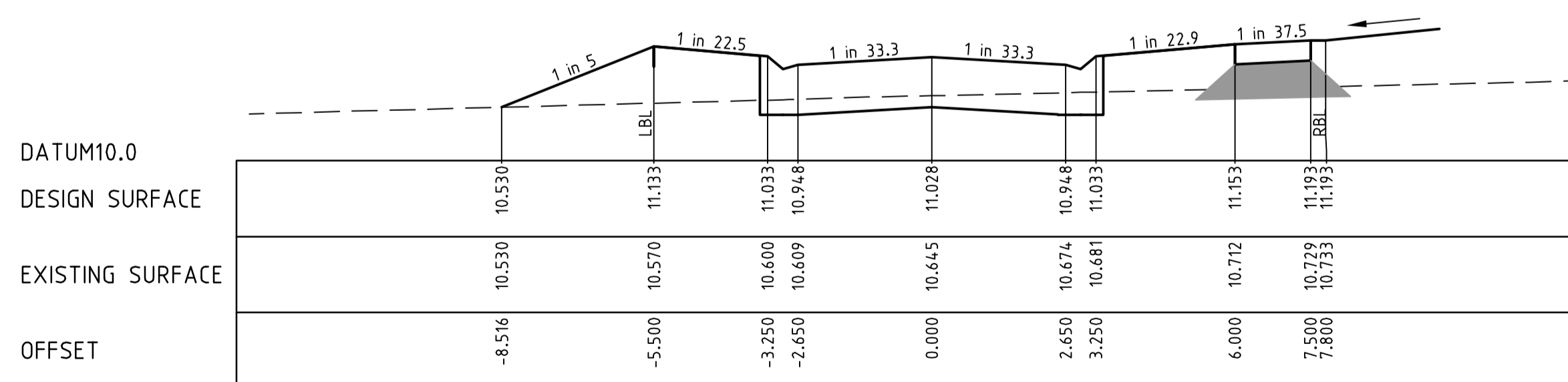
CH 209.951



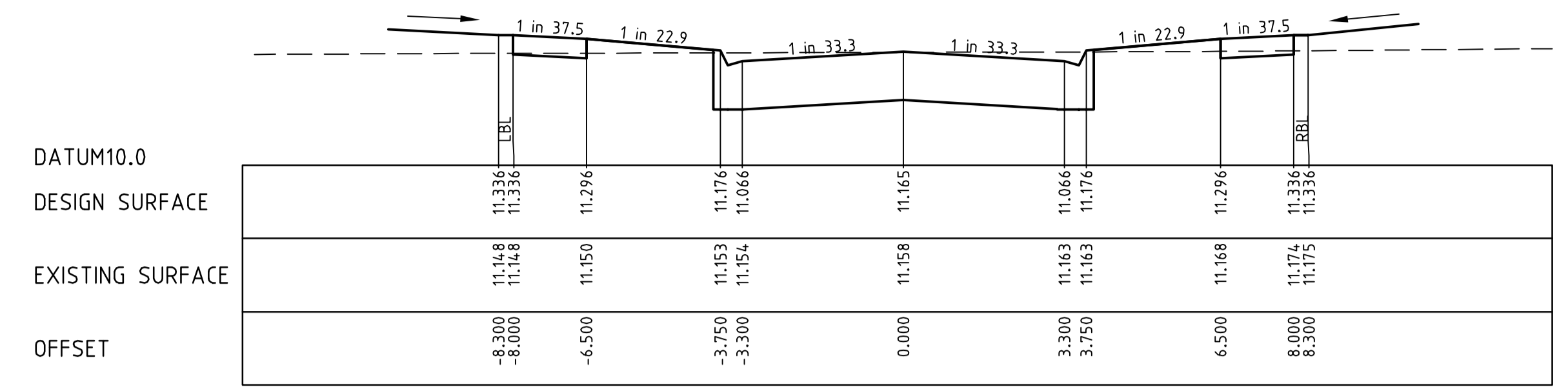
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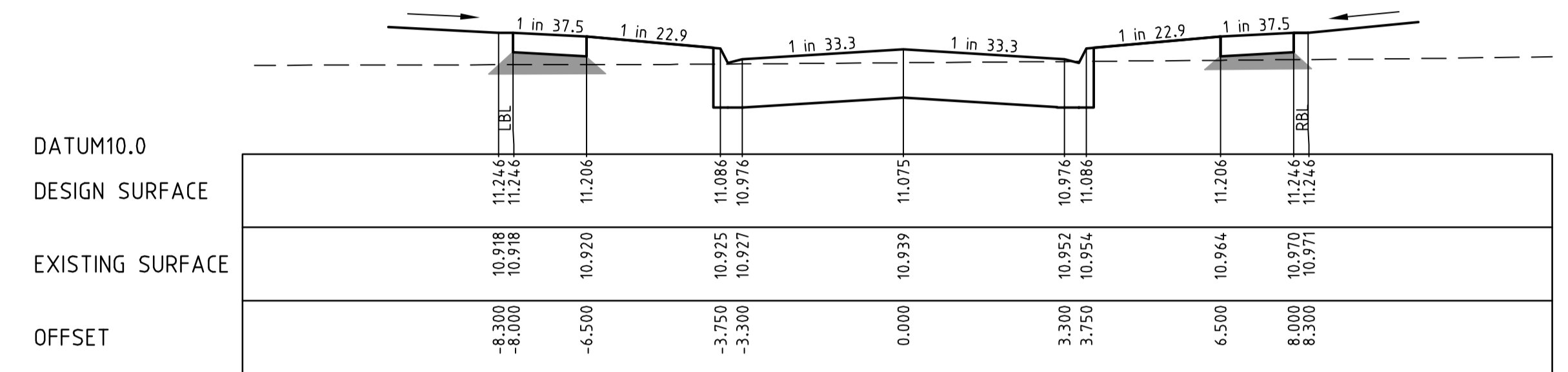
CH 183.549



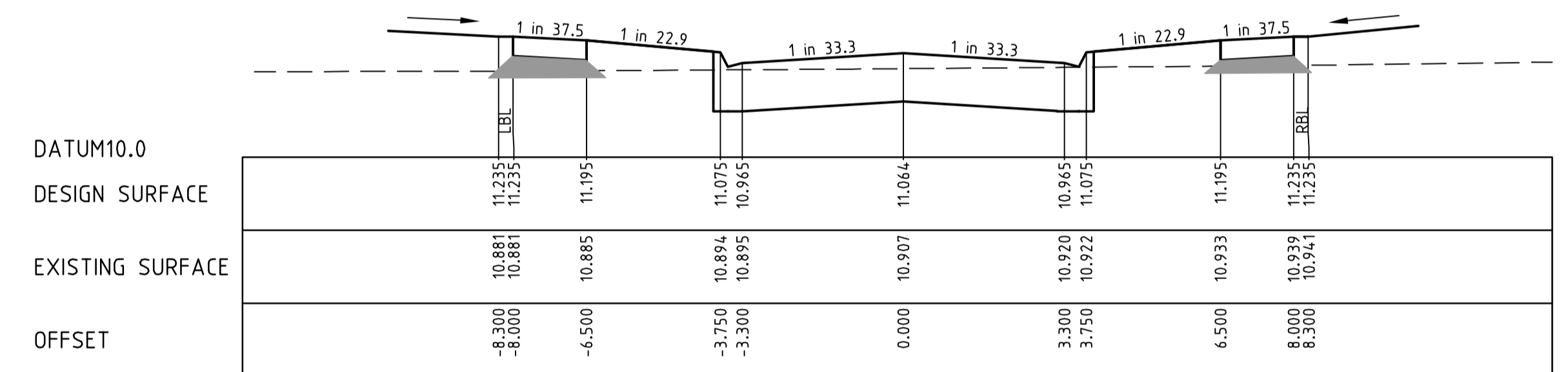
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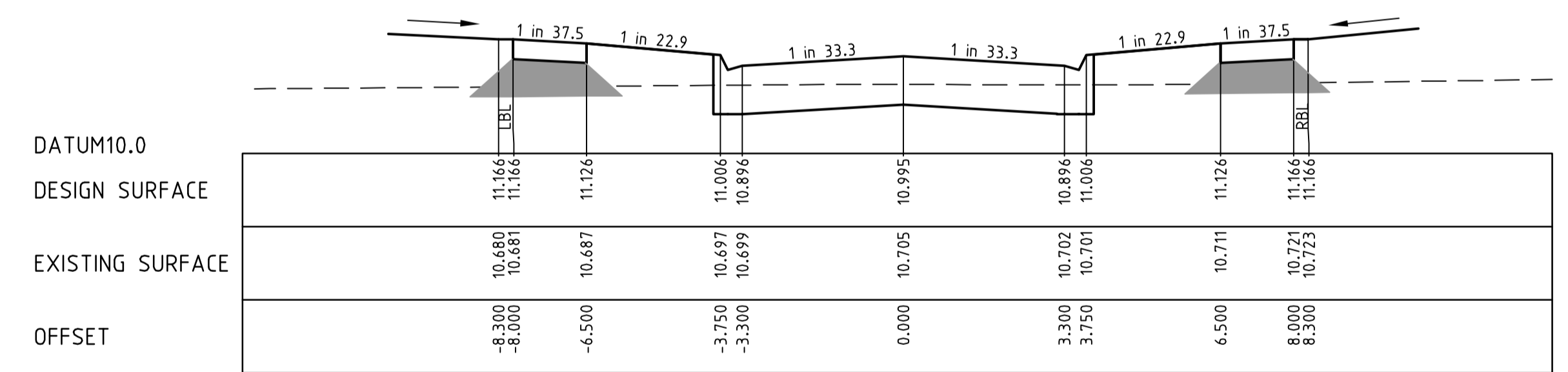
CH 282.298



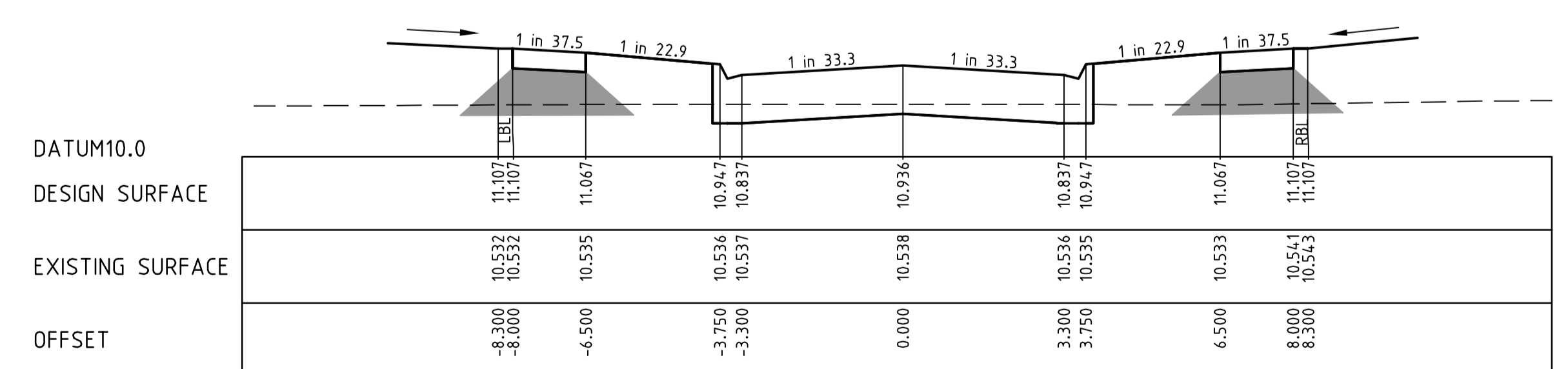
CH 268.853



CH 266.667



CH 252.852



CH 241.086



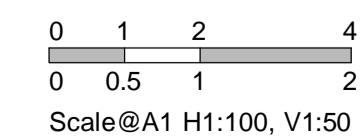
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Southbank, Victoria 3006

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|----------------------|----------|-------|
| B COUNCIL AMENDMENTS | 23.12.09 | |
| A ISSUED TO COUNCIL | 23.10.09 | |

LEGEND

- EXISTING SURFACE
- DESIGN LINE

STRUCTURAL FILL REQUIRED UNDER PAVEMENT AND FOOTPATHS WHERE CONSTRUCTED ABOVE NATURAL SURFACE

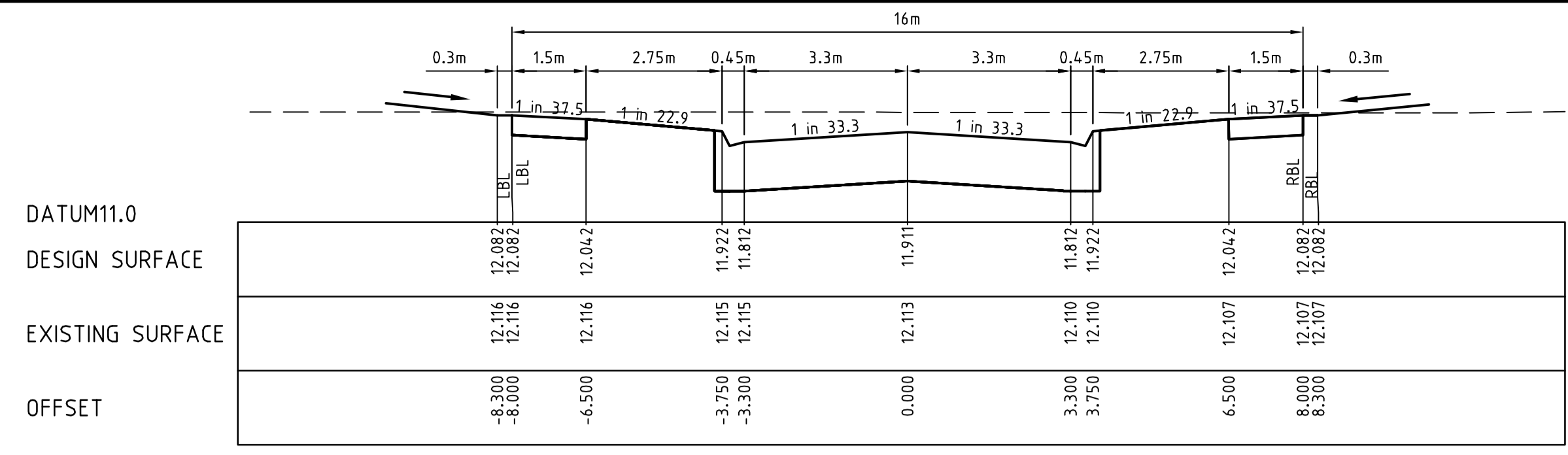


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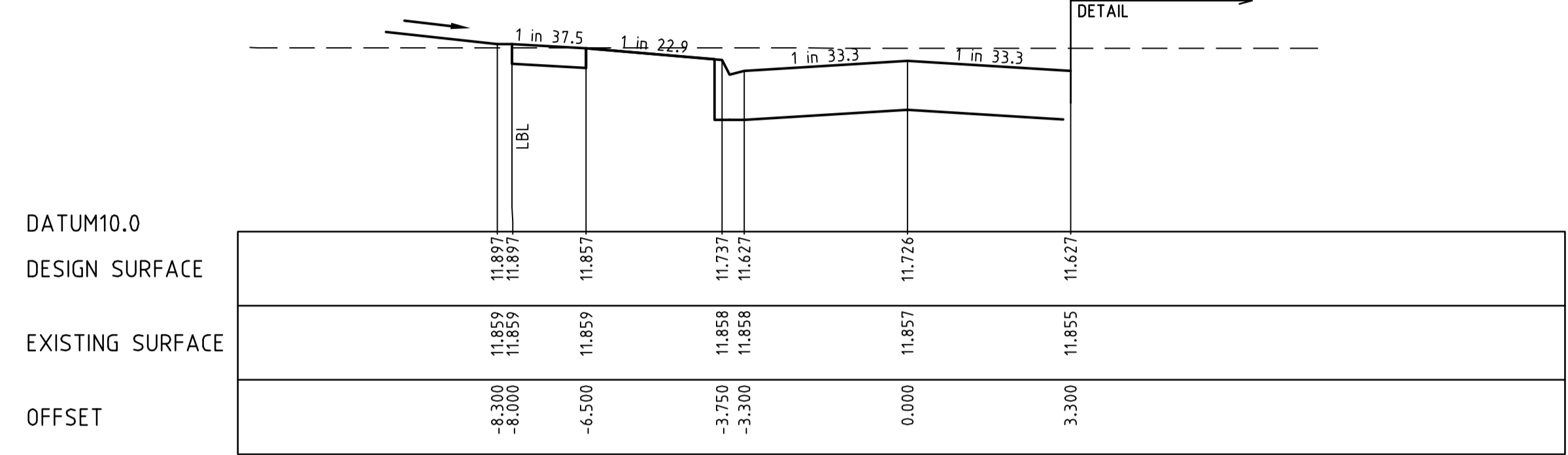
Estuary
Stage 1
City Of Greater Geelong
Roadworks and Drainage
Cross Sections - Paraffin Drive - 2
Ch 165.549 - Ch 282.298

Drawing No. 0250EHL-01-16
Sheet No. 16 of 40

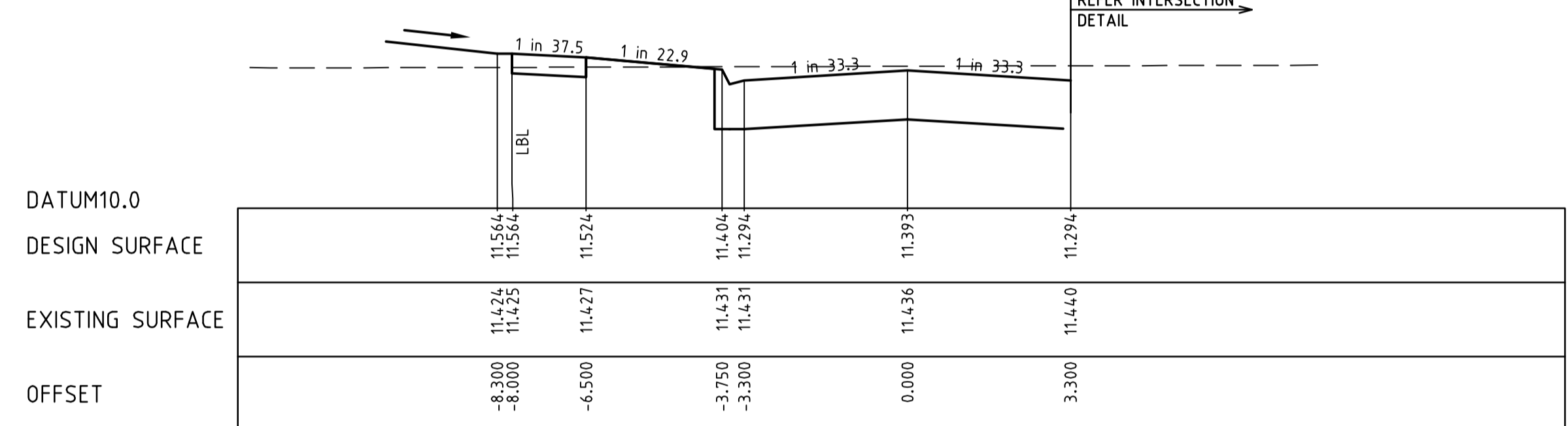
Rev B



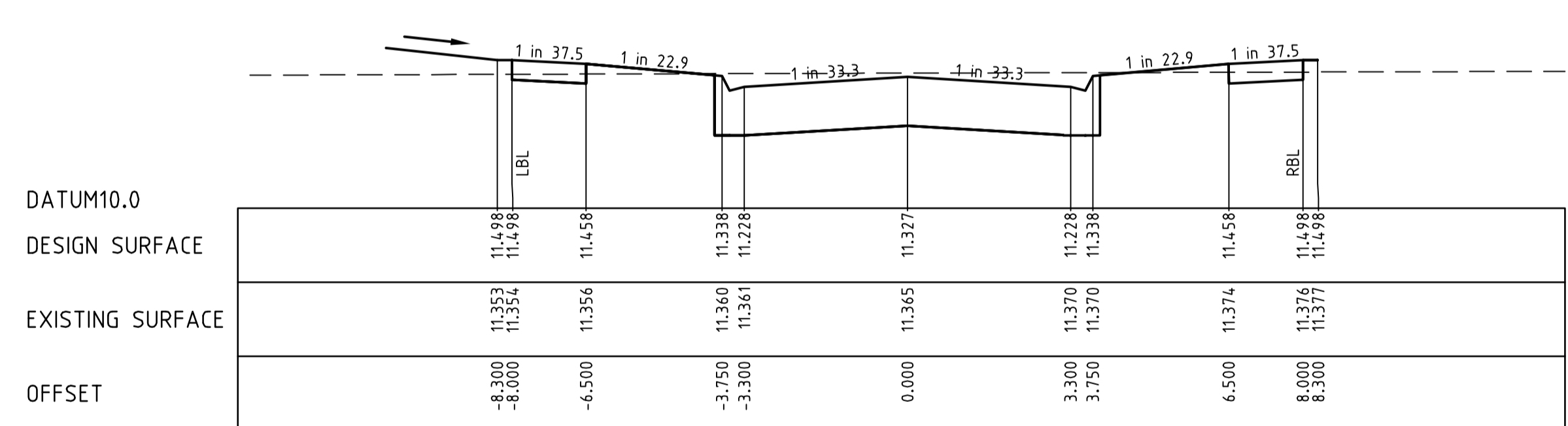
RTPCH 320.654



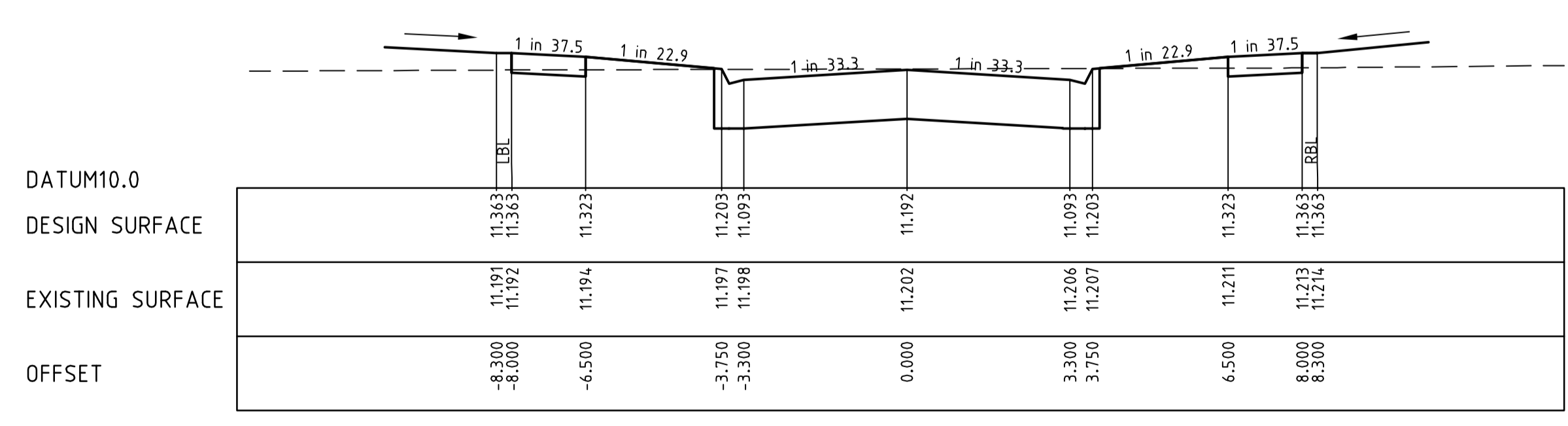
CH 314.851



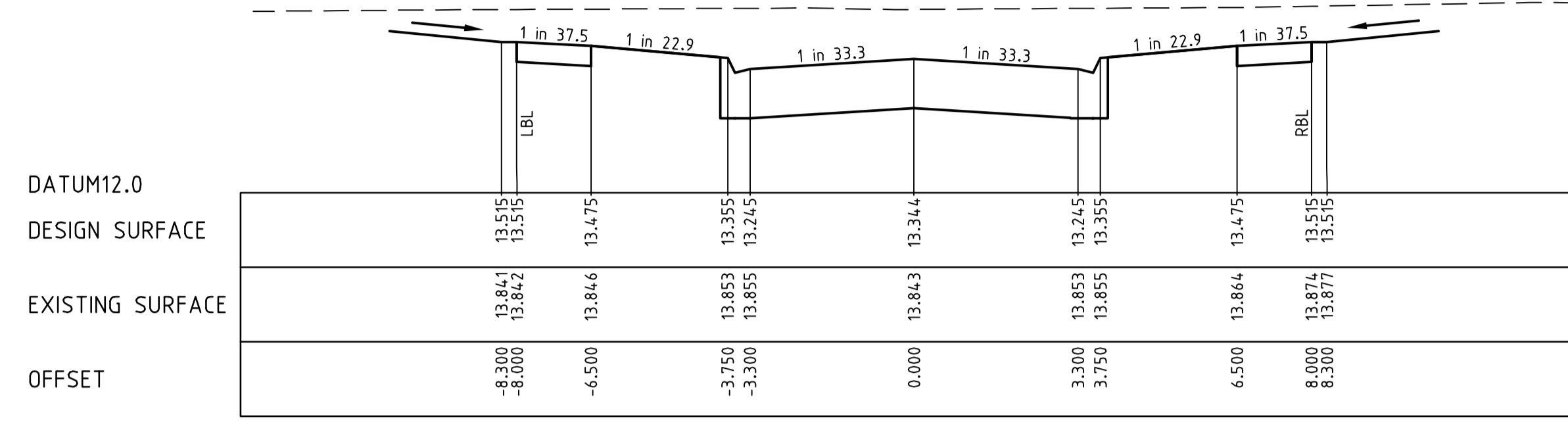
CH 298.851



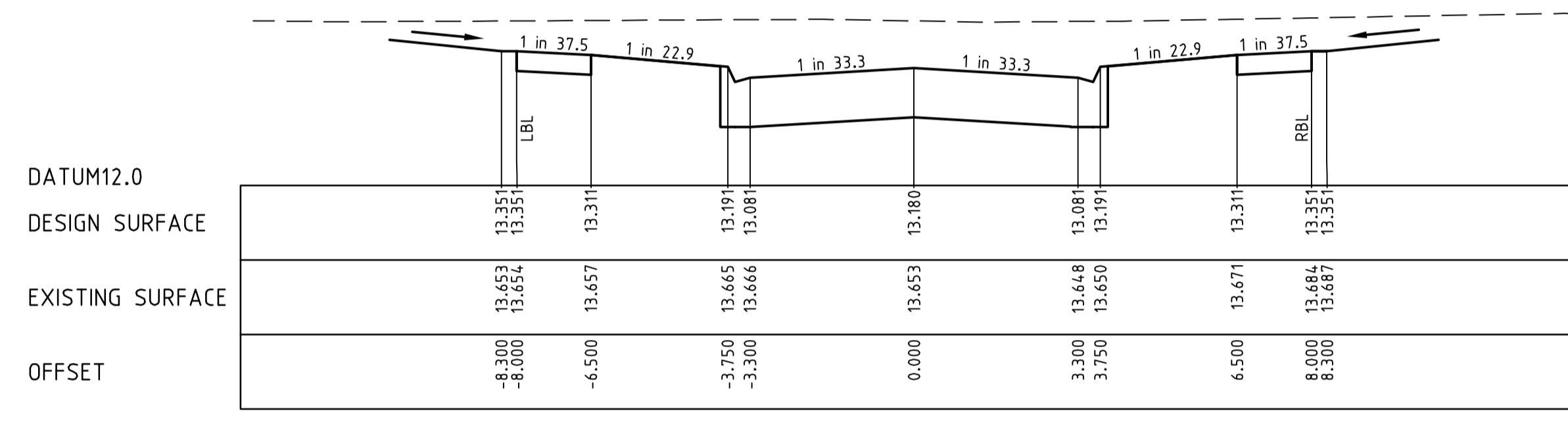
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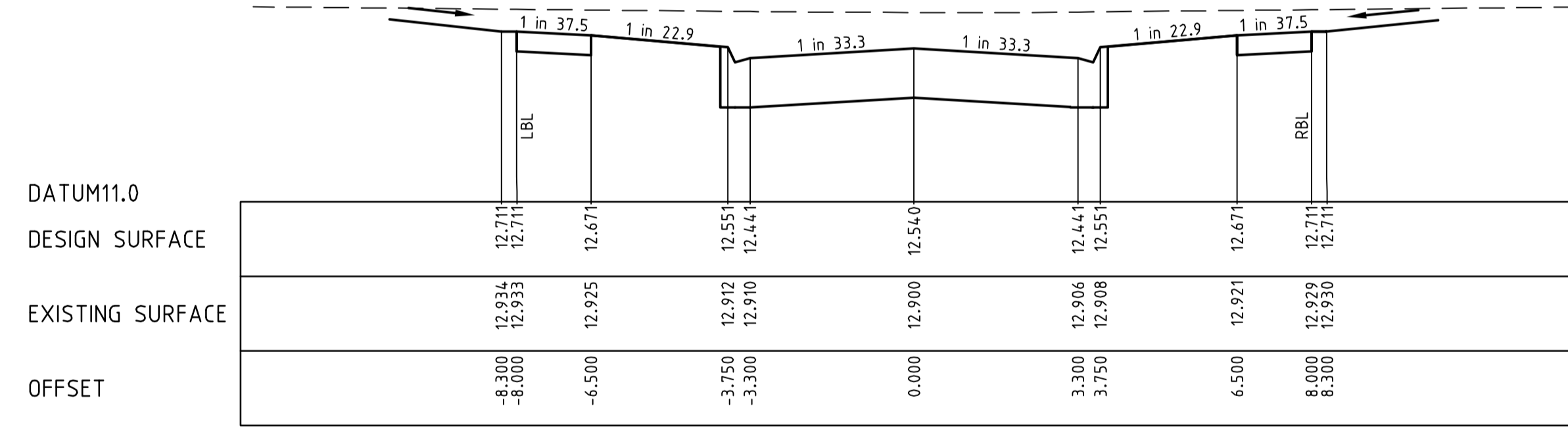
CH 284.853



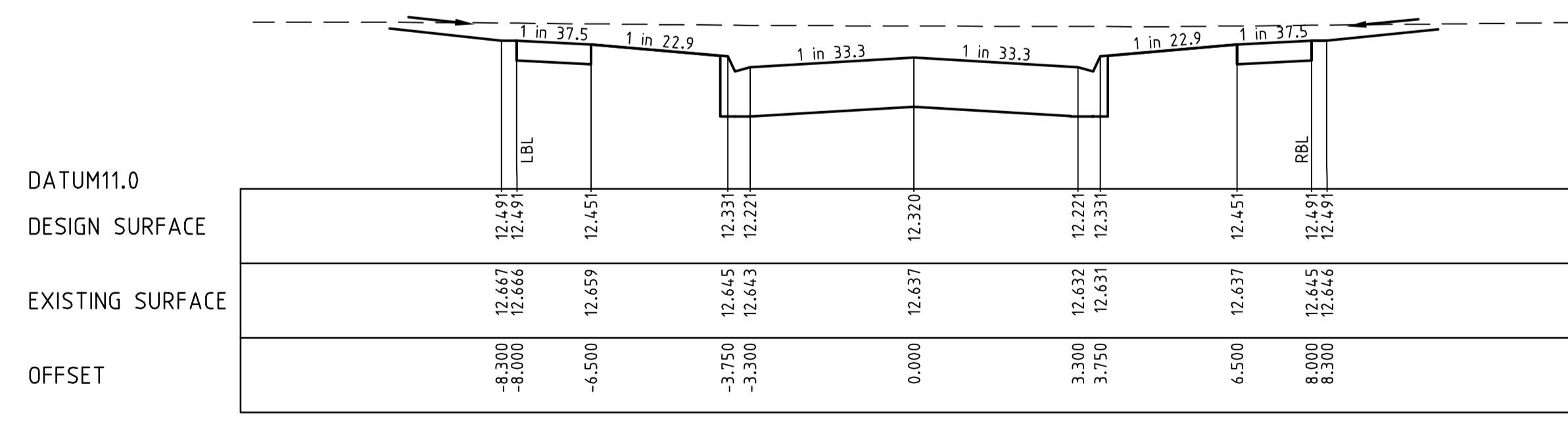
CH 349.448



CH 346.851



CH 335.448

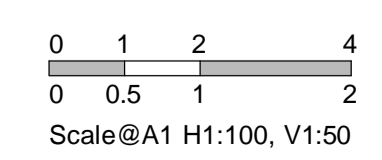
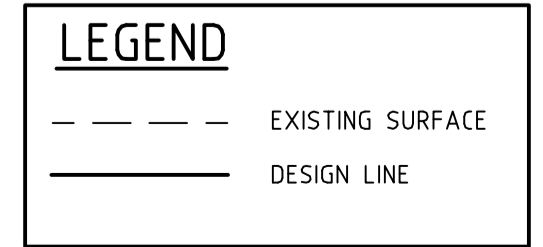


CH 330.851



Principal Leopold Developments Pty Ltd
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Southbank, Victoria 3006

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|----------------------|----------|-------|
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| B COUNCIL AMENDMENTS | 23.12.09 | |
| A ISSUED TO COUNCIL | 23.10.09 | |

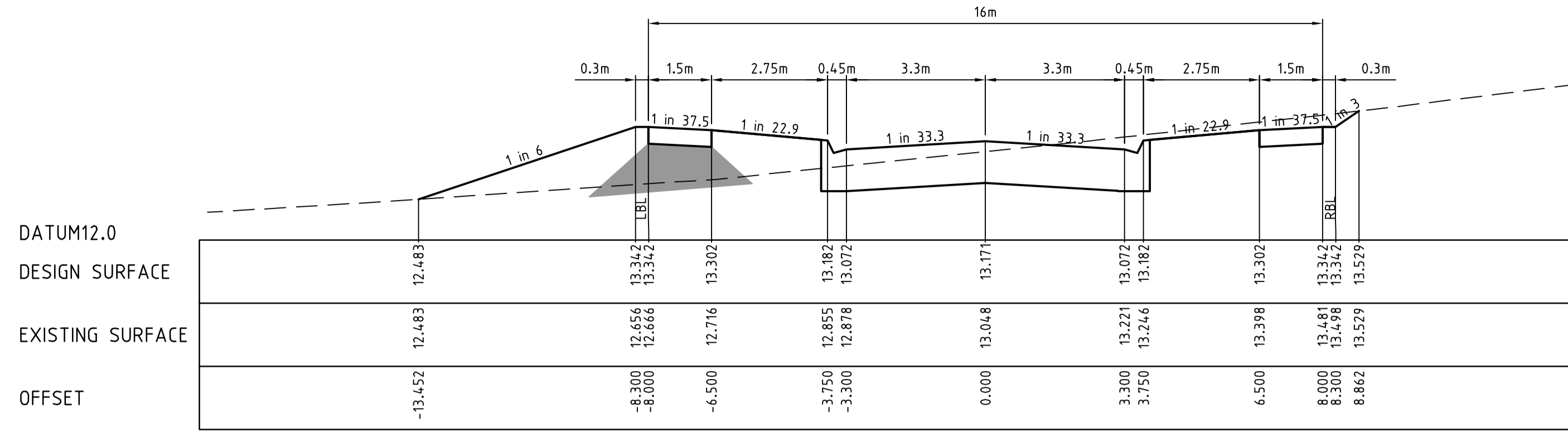


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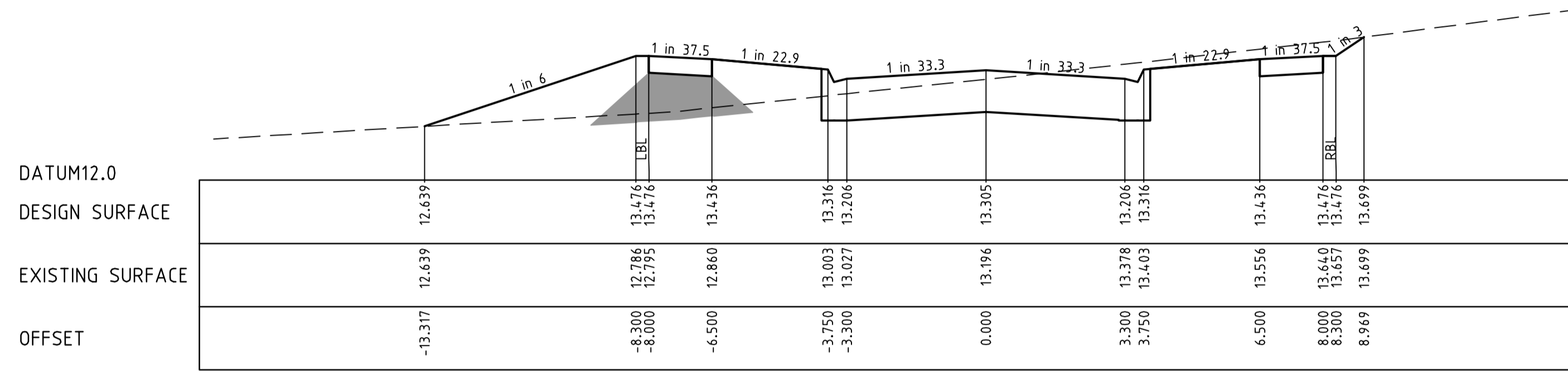
Estuary
Stage 1
City Of Greater Geelong
Roadworks and Drainage
Cross Sections - Paraffin Drive - 3
Ch 284.853 - Ch 349.448

Drawing No. 0250EHL-01-17
Sheet No. 17 of 40
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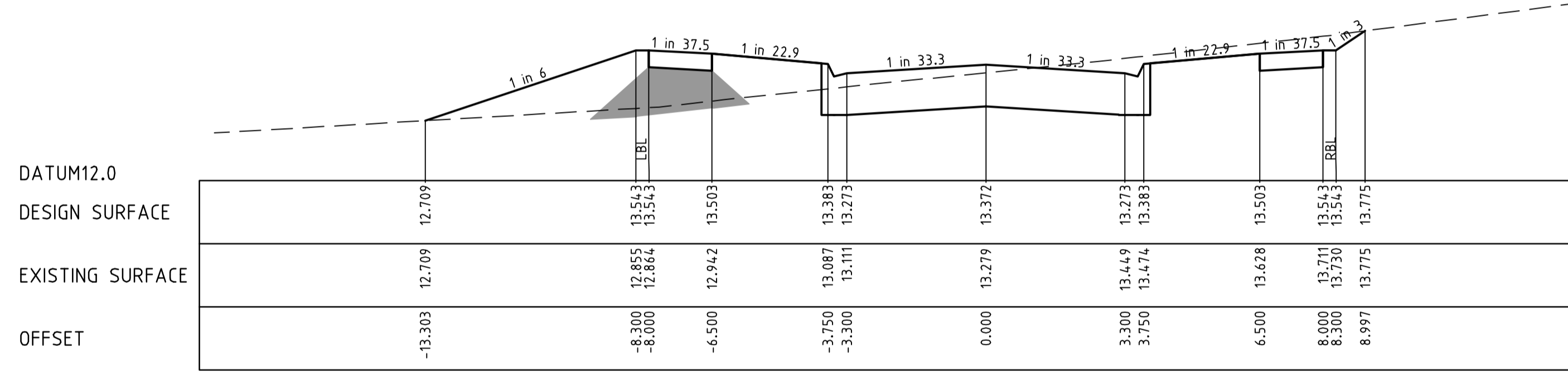
Rev C



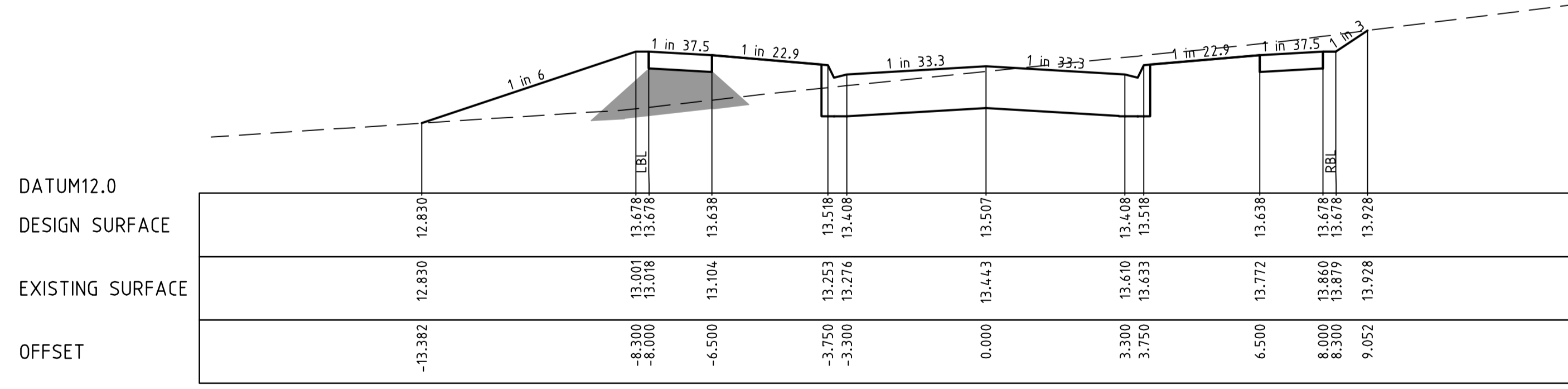
CH 104.808



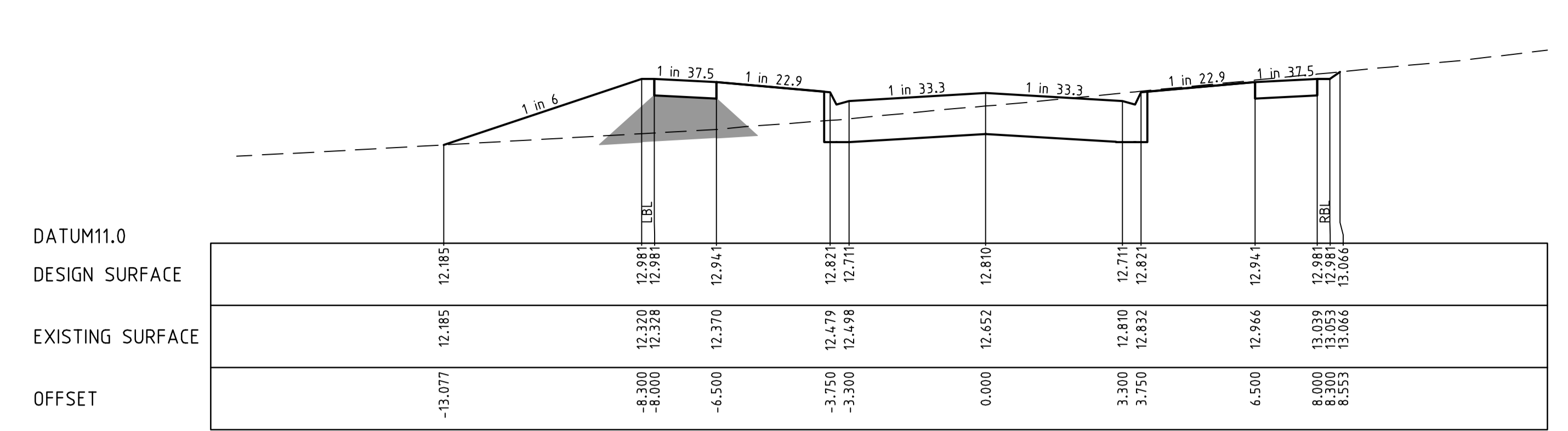
CH 96.488



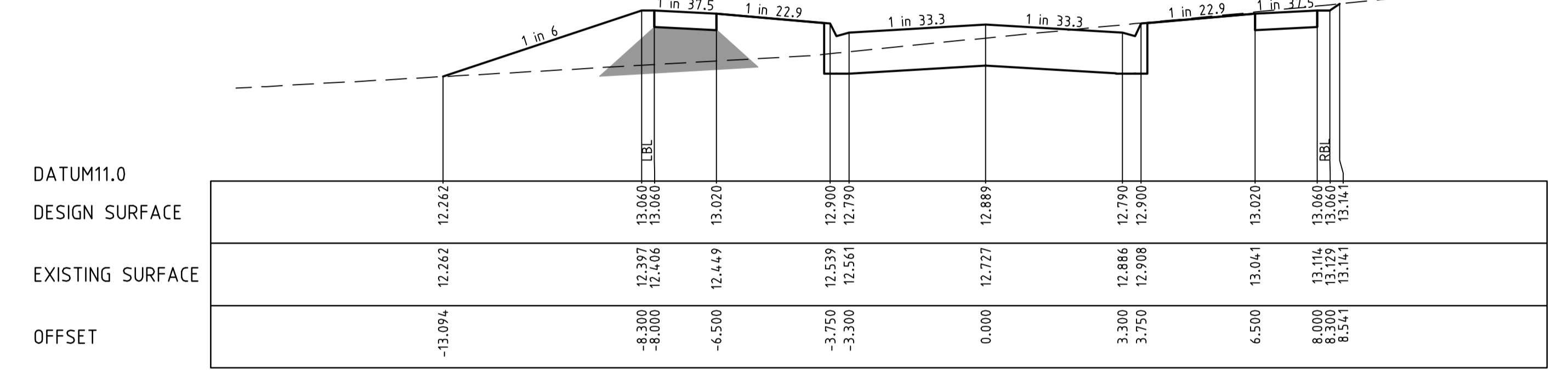
CH 92.308



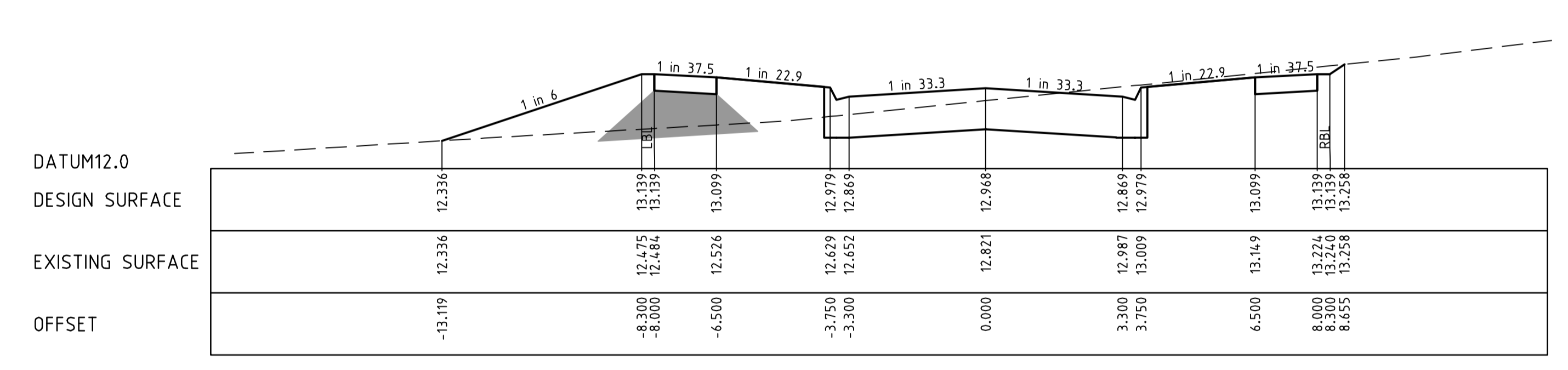
CH 83.988



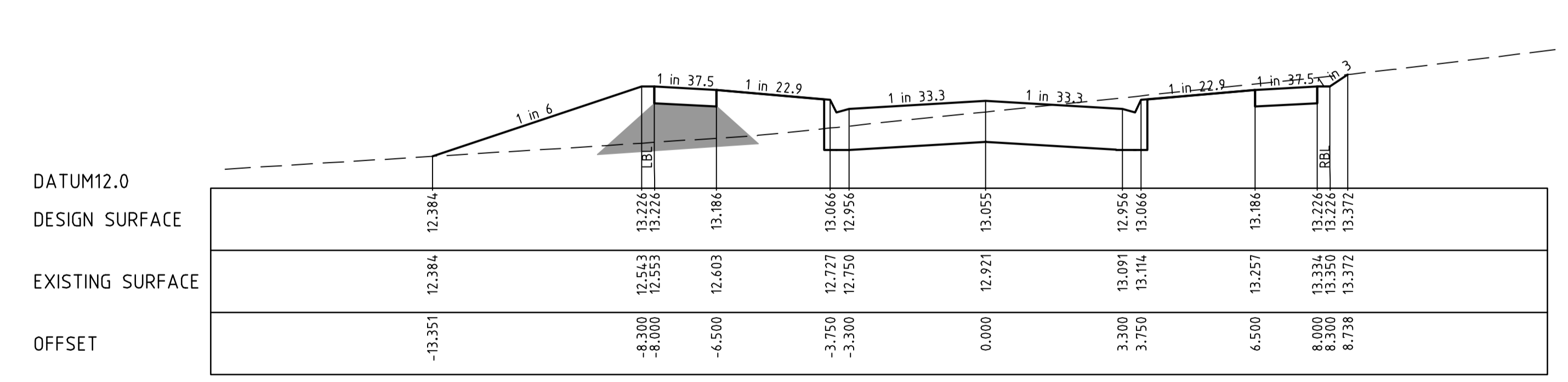
CH 131.308



CH 124.988



CH 118.808



CH 112.488



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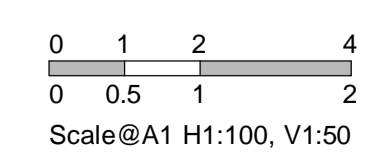
| REVISION | DATE | APP'D |
|----------------------|----------|-------|
| B COUNCIL AMENDMENTS | 23.12.09 | |
| A ISSUED TO COUNCIL | 23.10.09 | |

LEGEND

--- EXISTING SURFACE

— DESIGN LINE

STRUCTURAL FILL REQUIRED UNDER PAVEMENT AND FOOTPATHS WHERE CONSTRUCTED ABOVE NATURAL SURFACE

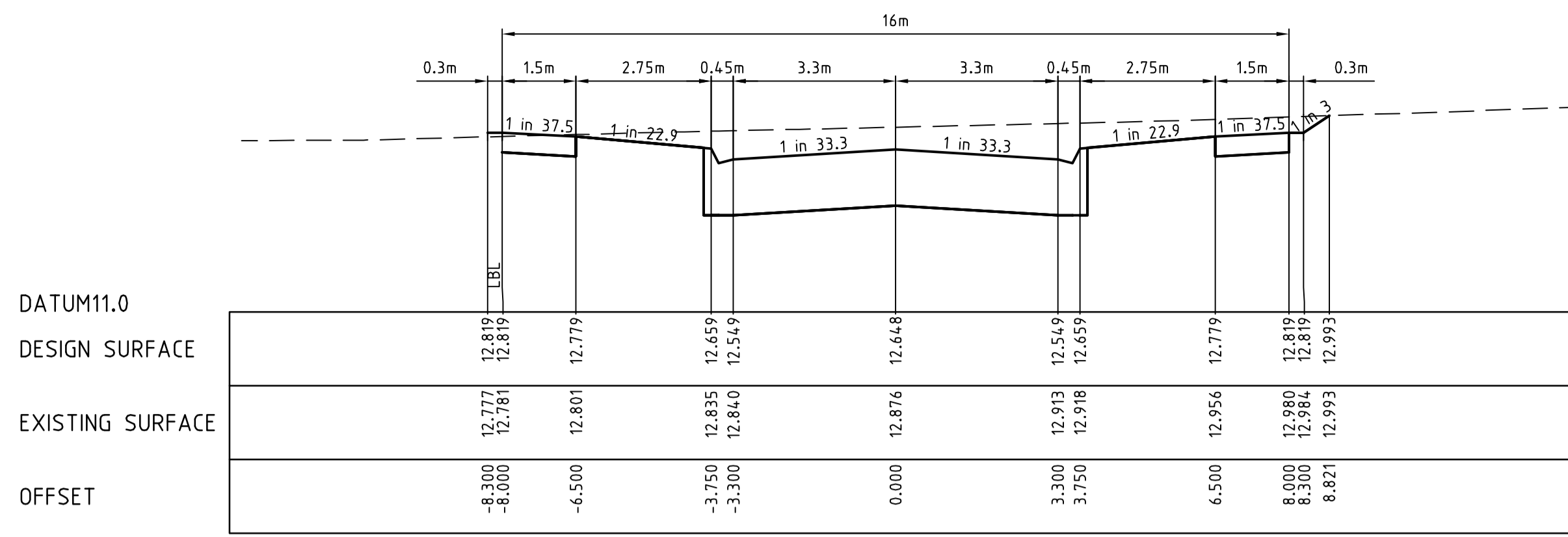


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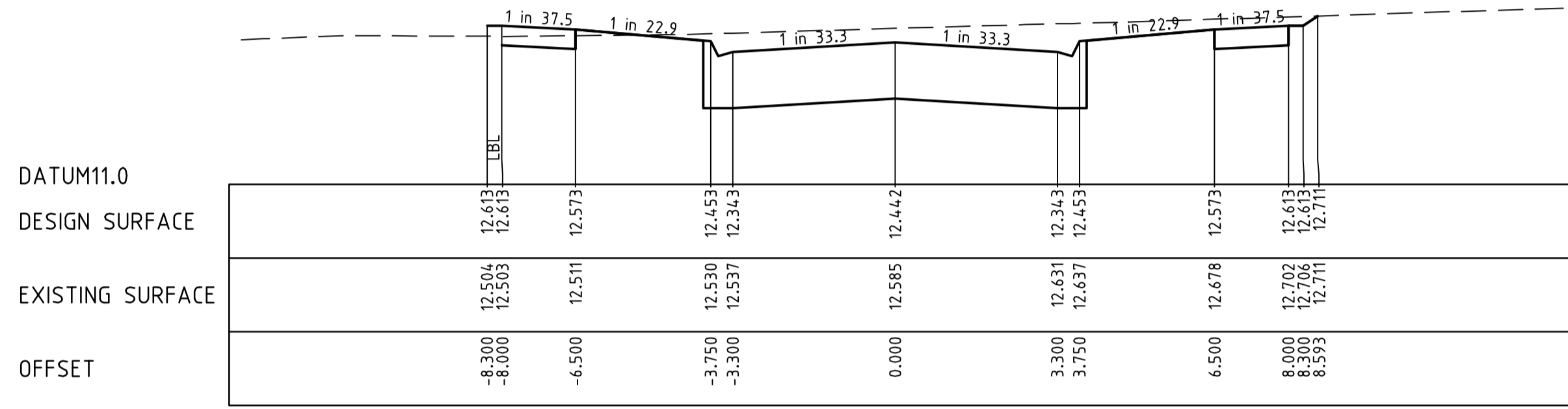
Designed C. Barker July 2009
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Estuary
 Stage 1
 City Of Greater Geelong
 Roadworks and Drainage
 Cross Sections - Sandridge Street - 2
 Ch 83.988 - Ch 131.308

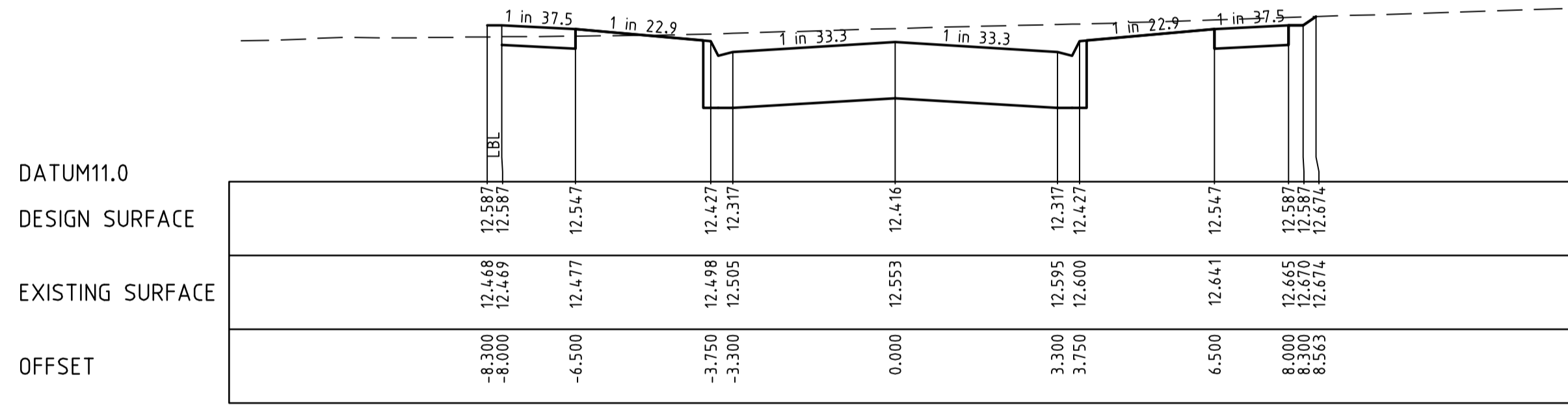
Drawing No. 0250EHL-01-19 **Rev B**
 Sheet No. 19 of 40
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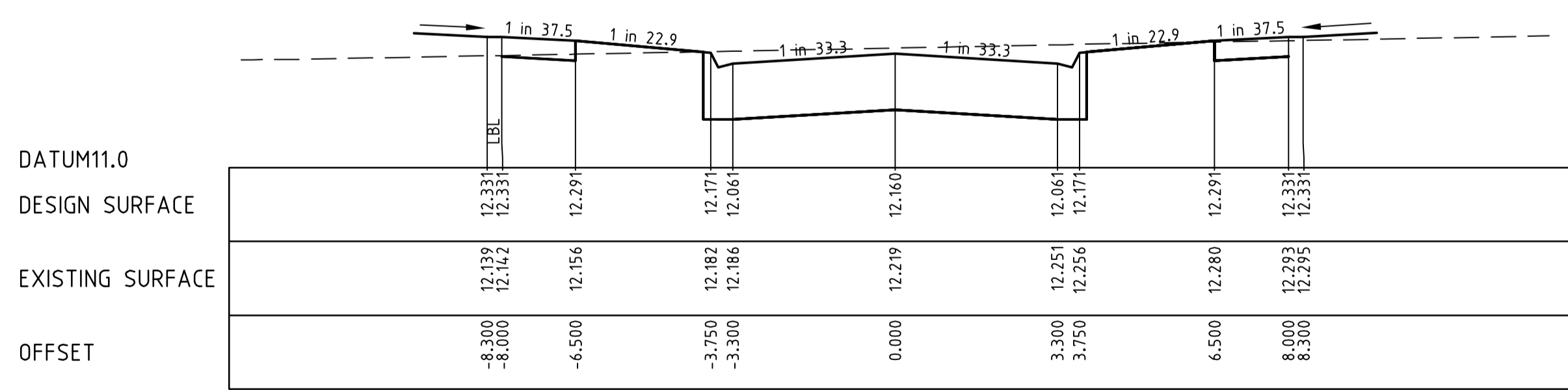
RTPCH 111.740



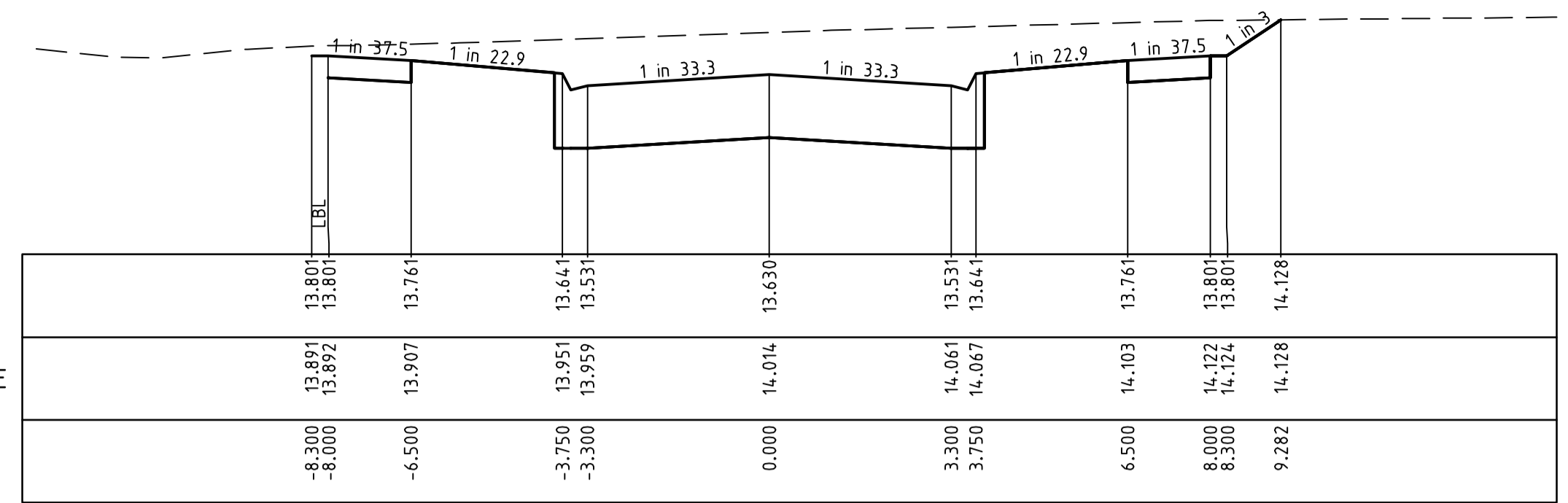
CH 101.732



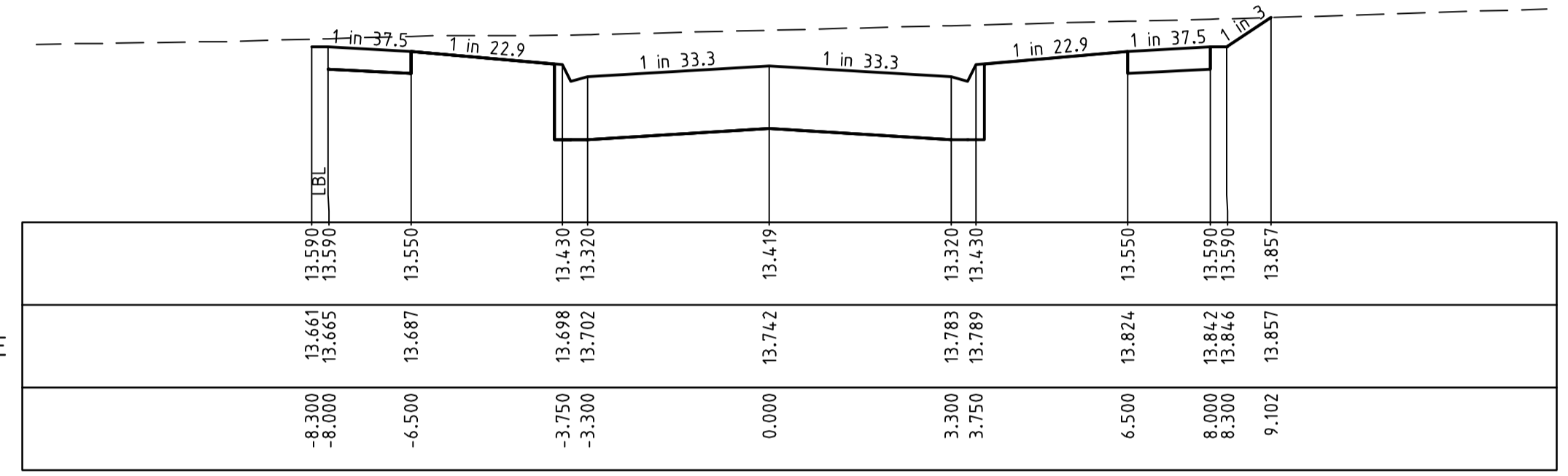
CH 100.431



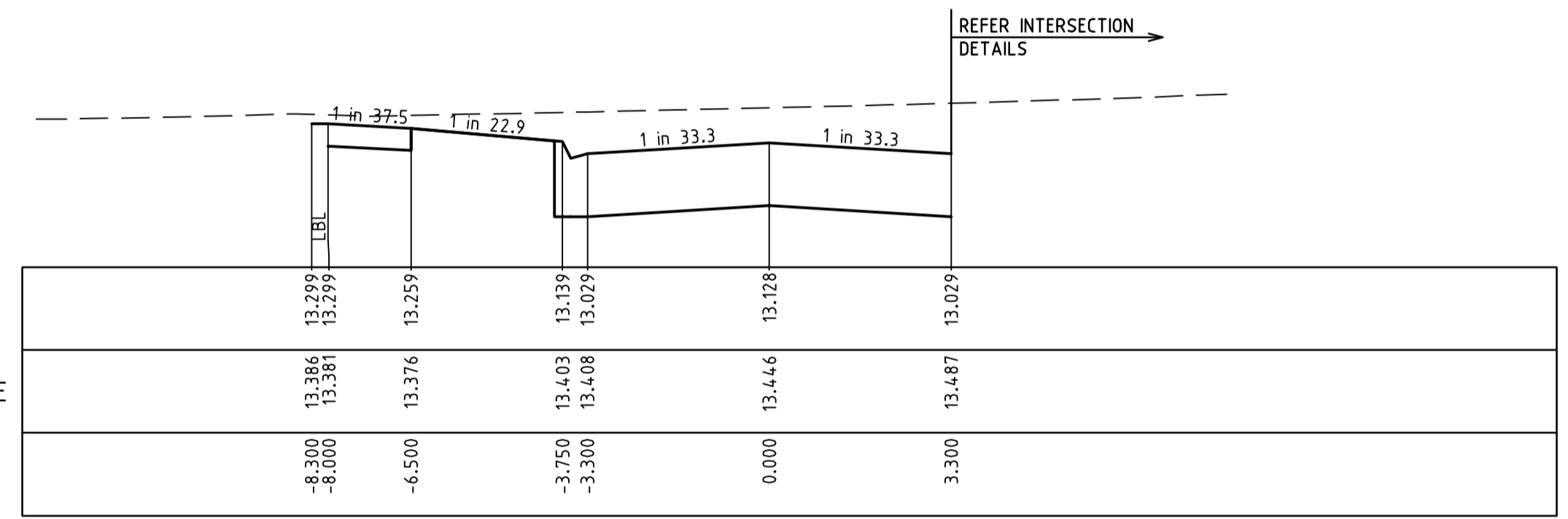
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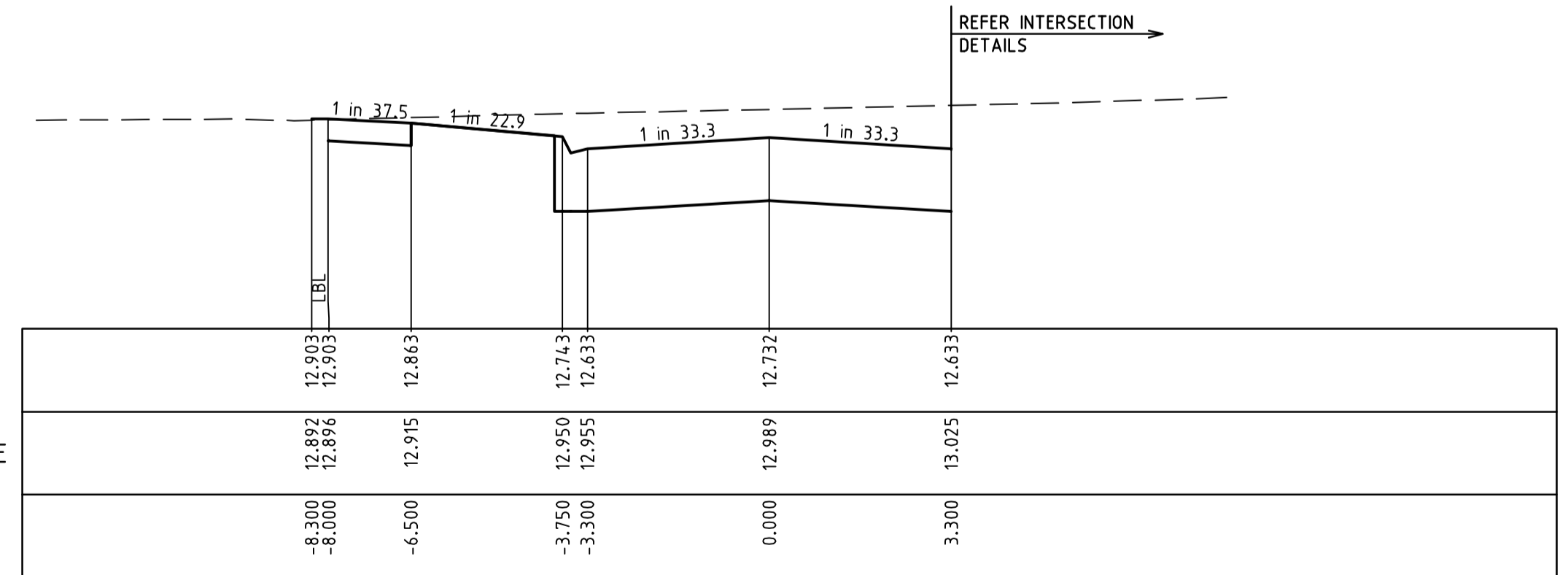
LTPCH 142.528



RTPCH 137.556



CH 129.732



CH 115.732



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| B COUNCIL AMENDMENTS | 23.12.09 | |
| A ISSUED TO COUNCIL | 23.10.09 | |

LEGEND

- EXISTING SURFACE
- DESIGN LINE

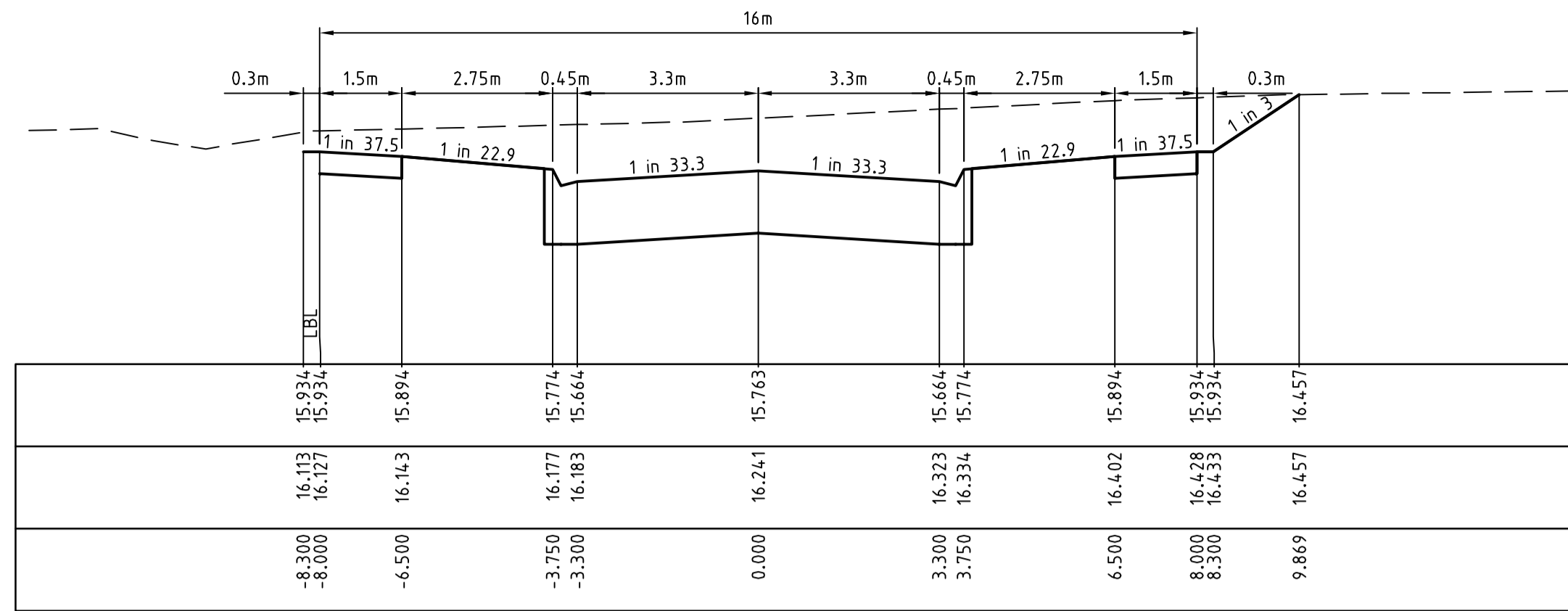


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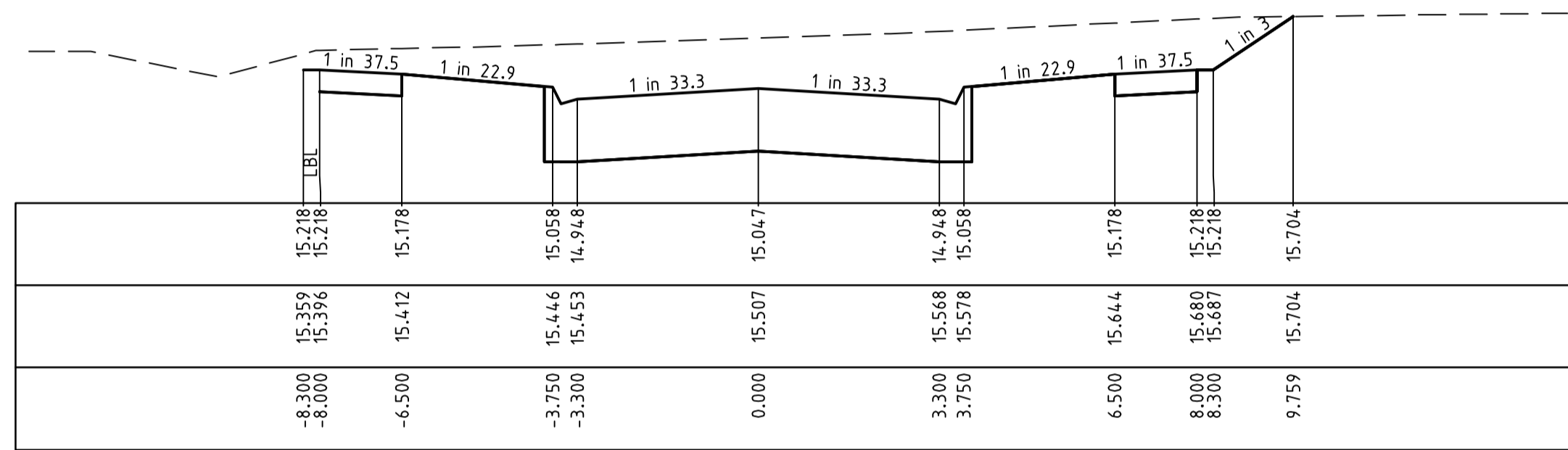
Estuary
Stage 1
City Of Greater Geelong
Roadworks and Drainage
Cross Sections - Shoaling Drive - 2
Ch 88.005 - Ch 142.528

Drawing No. 0250EHL-01-22 Rev B
Sheet No. 22 of 40
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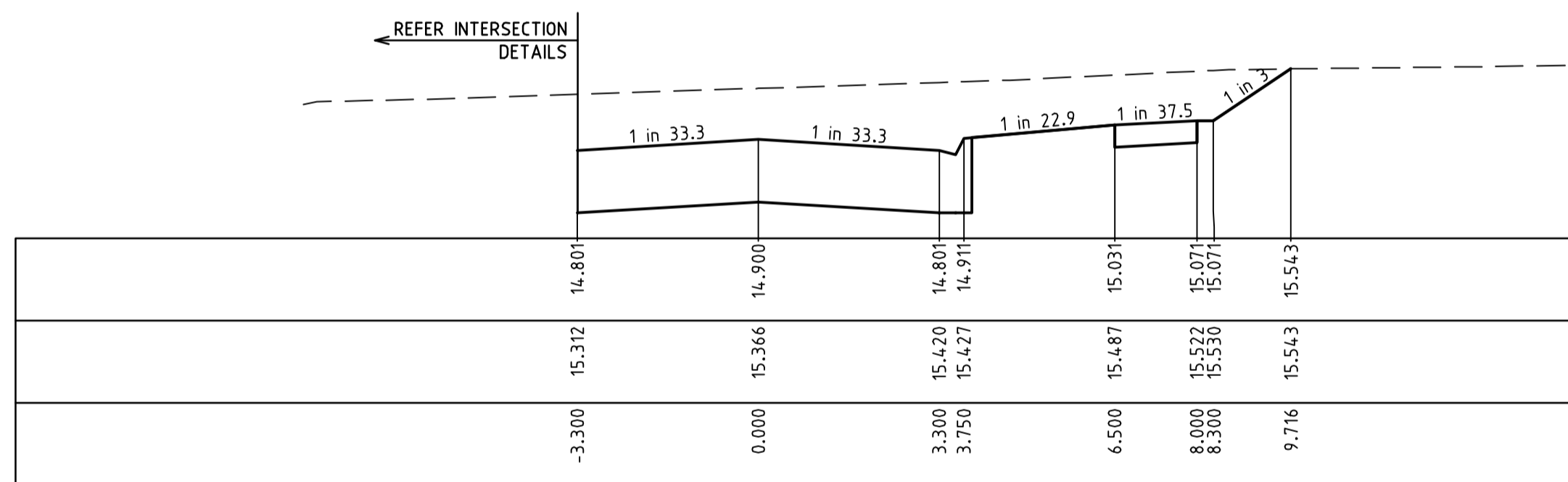
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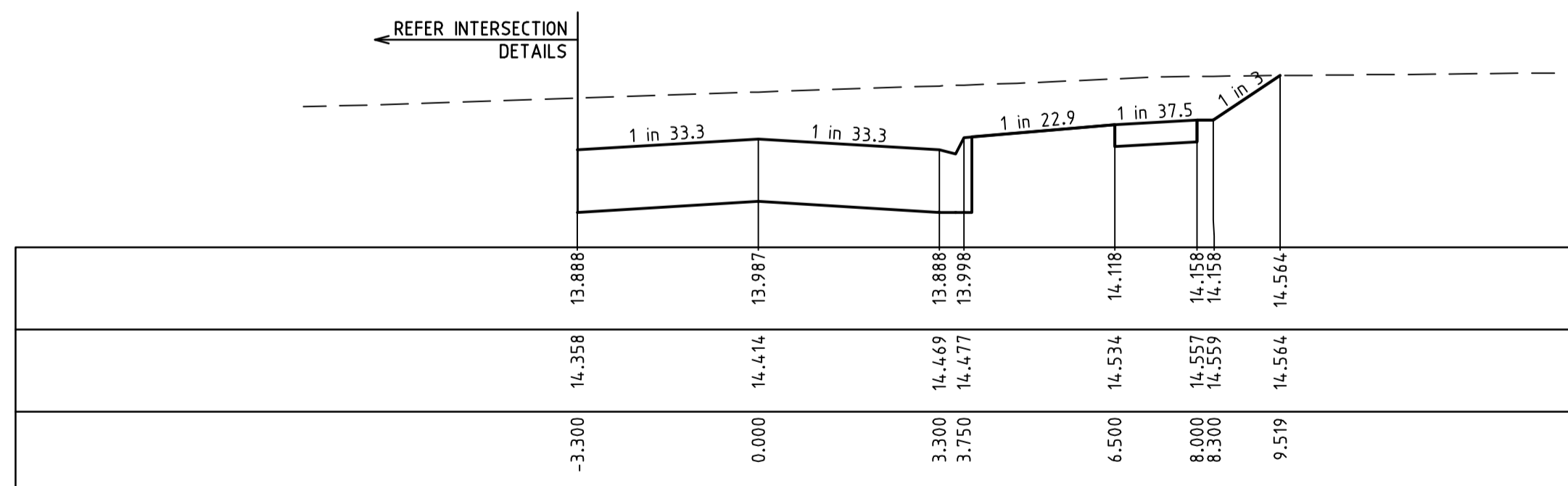
CH 180.031



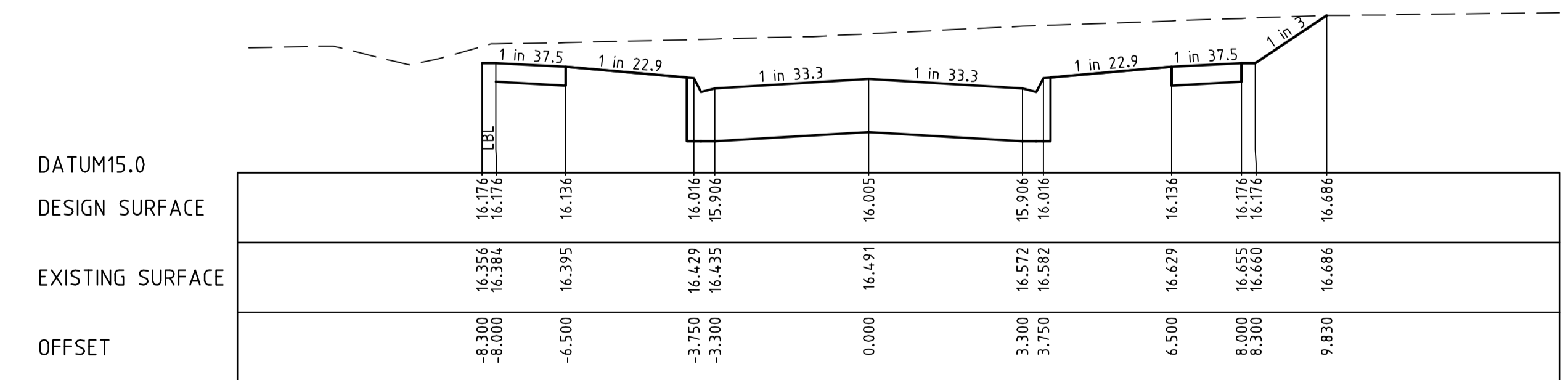
LTPCH 168.411



CH 166.031



CH 150.031



CH 183.951

LEGEND

--- EXISTING SURFACE

— DESIGN LINE

| REVISION | DATE | APP'D |
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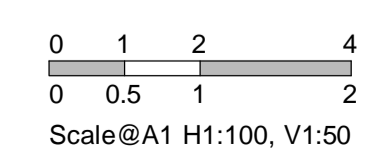


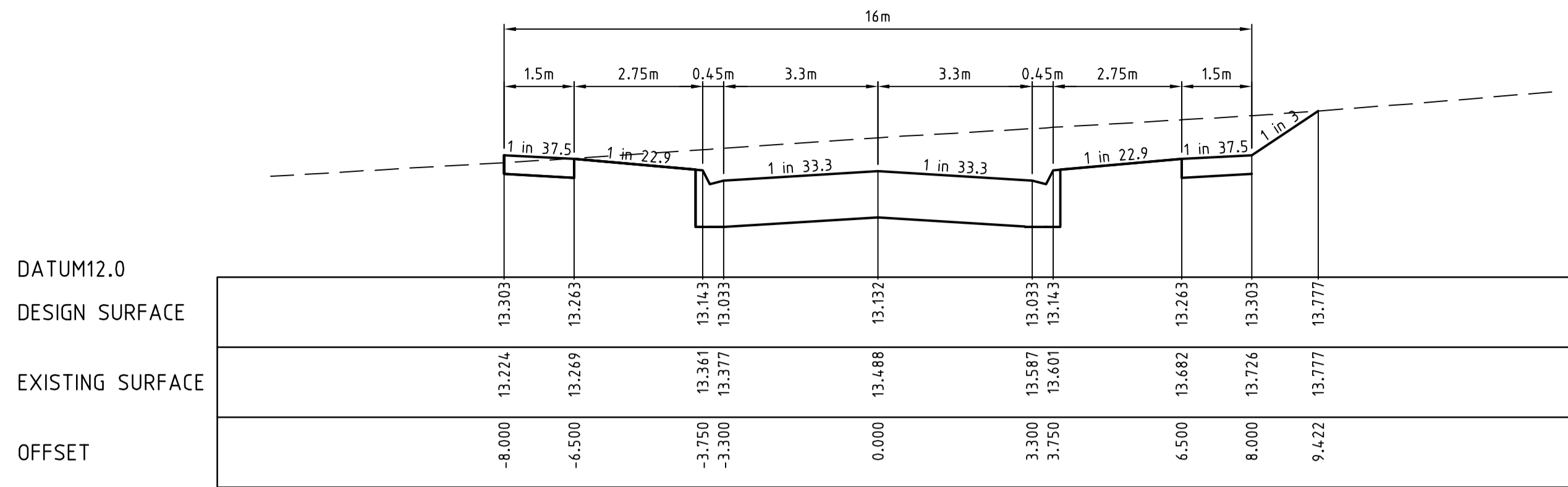
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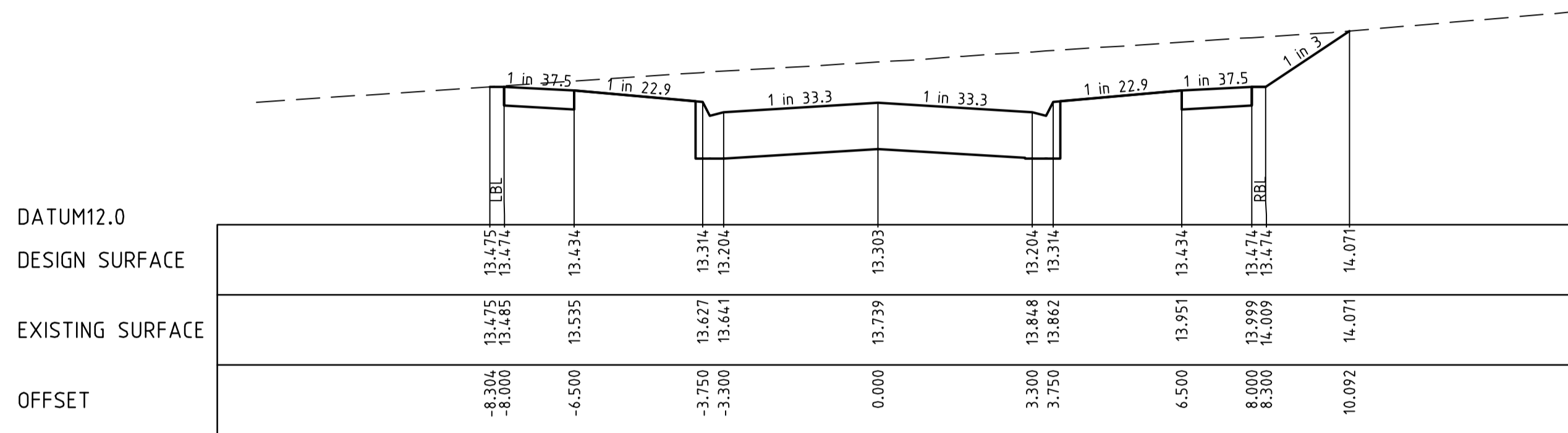
Estuary
 Stage 1
 City Of Greater Geelong
 Roadworks and Drainage
 Cross Sections - Shoaling Drive - 3
 Ch 150.031 - Ch 183.951

Drawing No. 0250EHL-01-23 **Rev B**
 Sheet No. 23 of 40
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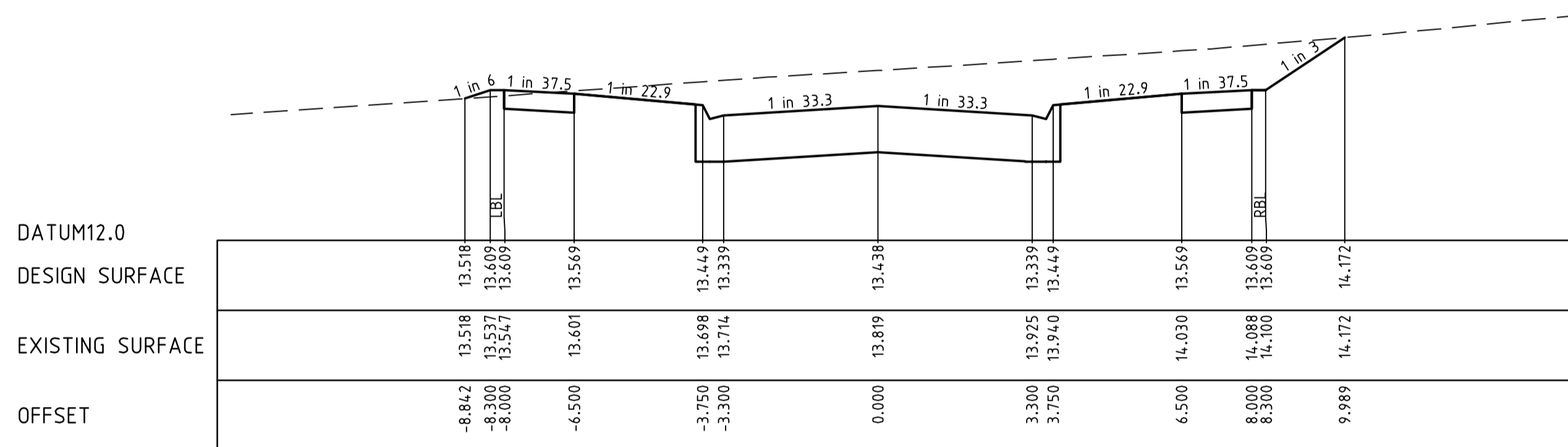




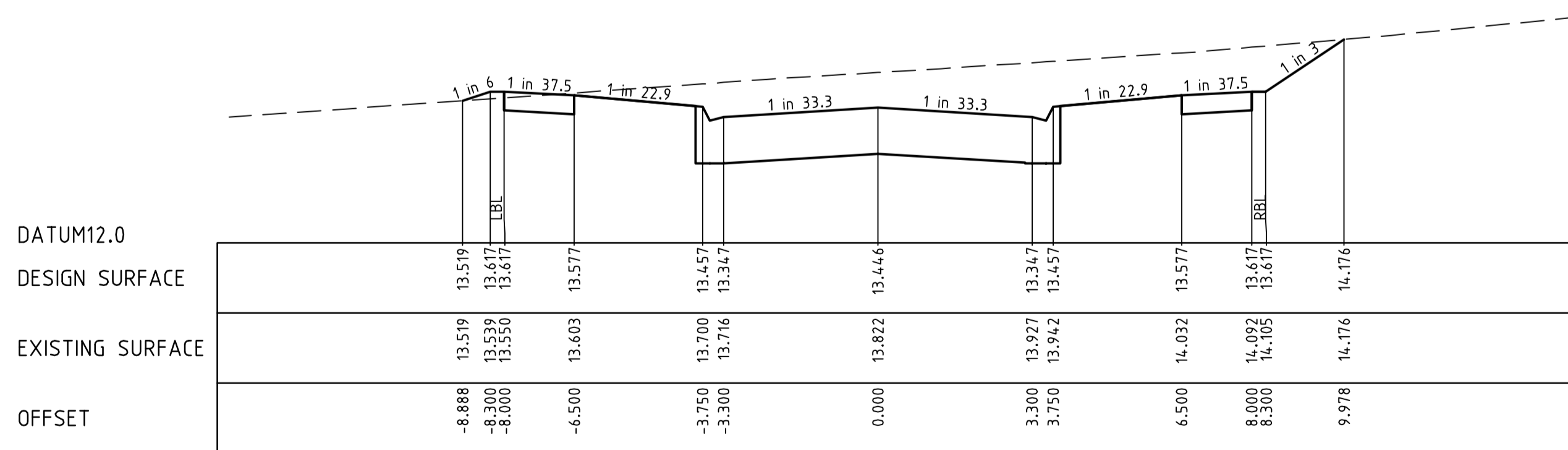
RTPCH 216.913



CH 200.000



CH 190.532



CH 189.969



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| B COUNCIL AMENDMENTS | 23.12.09 | |
| A ISSUED TO COUNCIL | 23.10.09 | |

| LEGEND | |
|--------|------------------|
| --- | EXISTING SURFACE |
| — | DESIGN LINE |

STRUCTURAL FILL REQUIRED UNDER PAVEMENT AND FOOTPATHS WHERE CONSTRUCTED ABOVE NATURAL SURFACE



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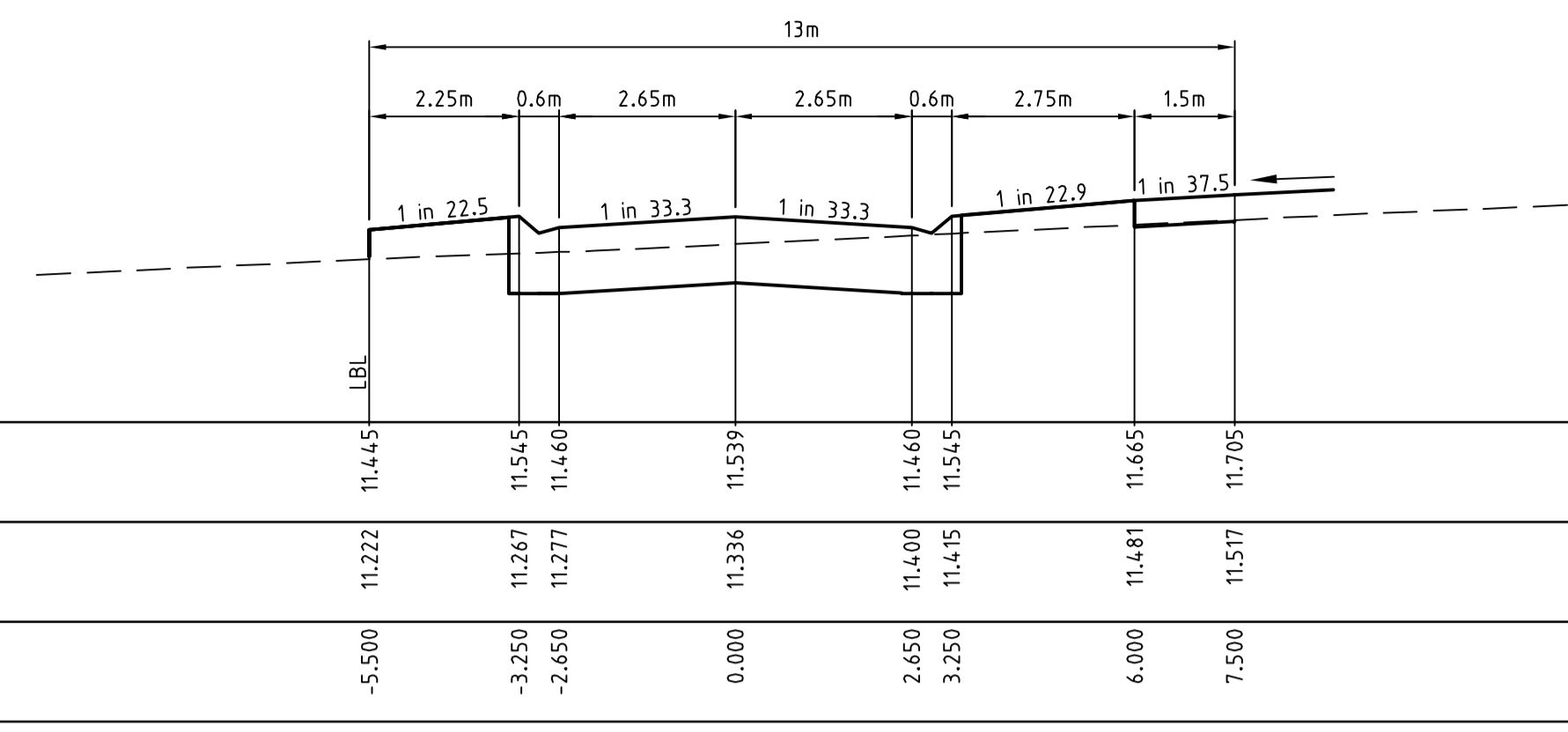
Estuary
Stage 1
City Of Greater Geelong
Roadworks and Drainage
Cross Sections - Tispa Drive
Ch 175.383 - Ch 216.913

Drawing No. 0250EHL-01-24
Sheet No. 24 of 40

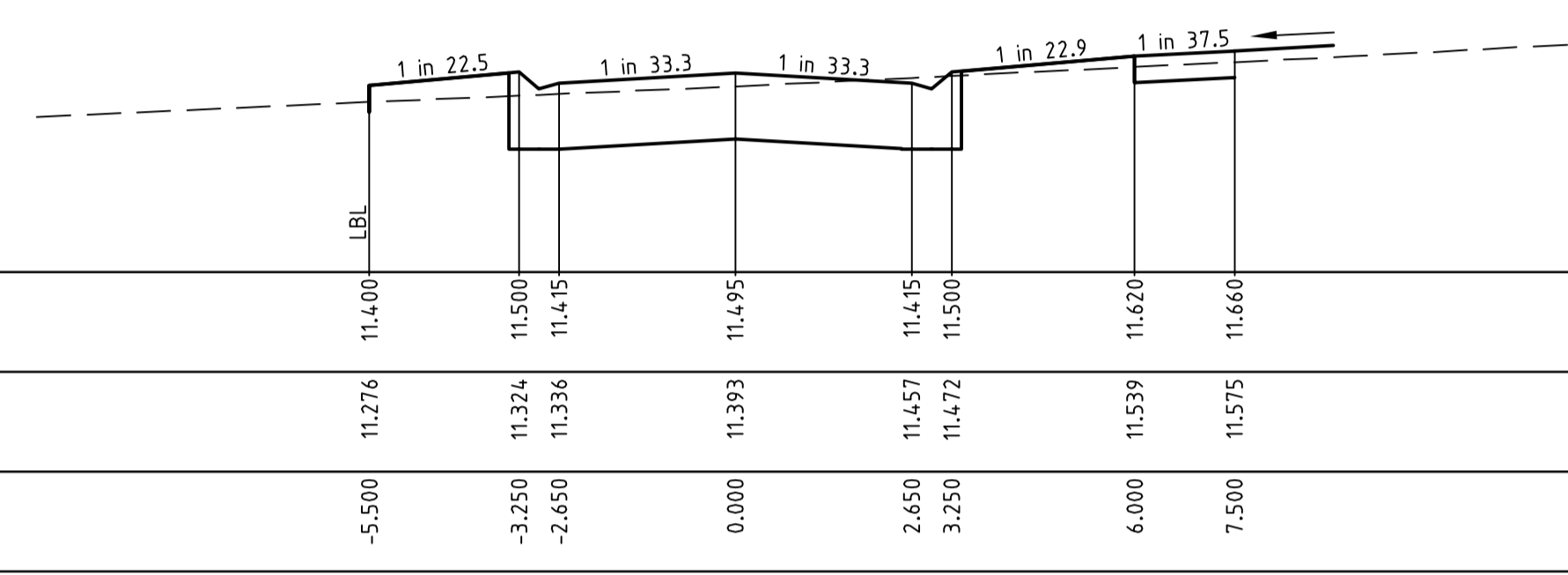
Rev B

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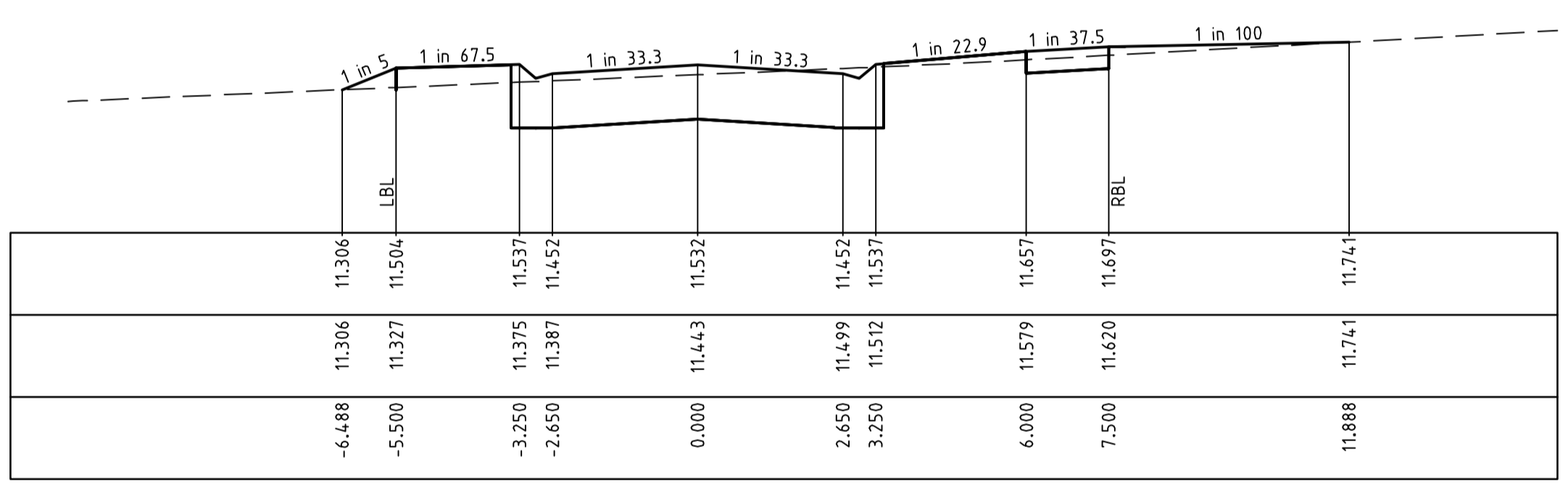
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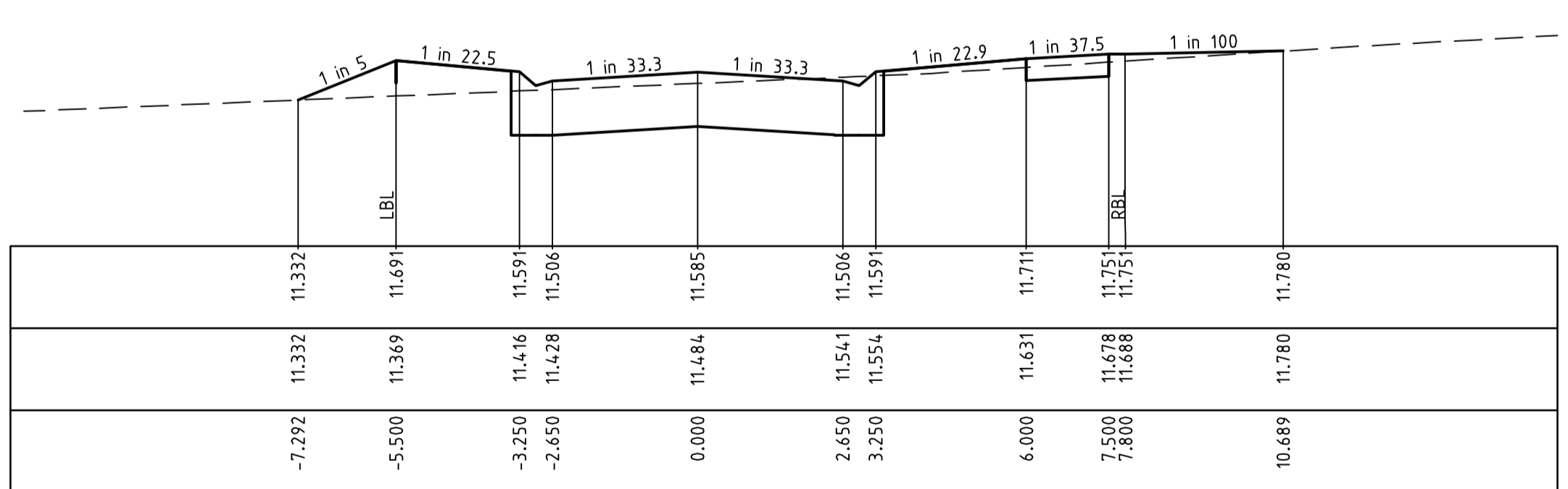
RTPCH 216.215



CH 207.344



CH 200.000



CH 189.265



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| A ISSUED TO COUNCIL | 23.10.09 | |

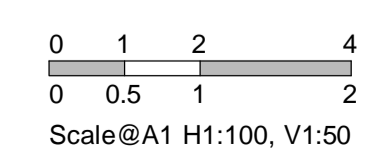
LEGEND

--- EXISTING SURFACE

— DESIGN LINE



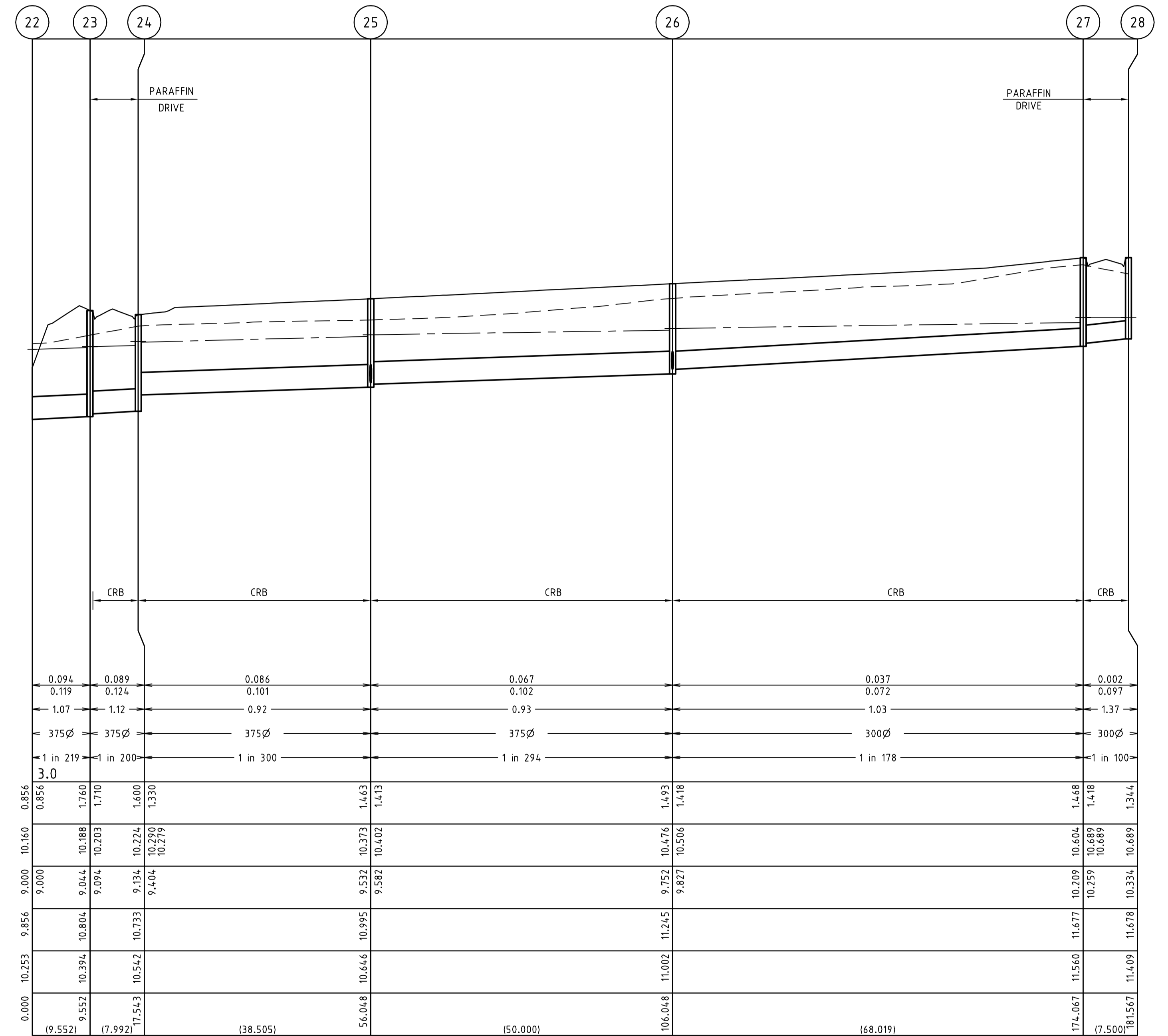
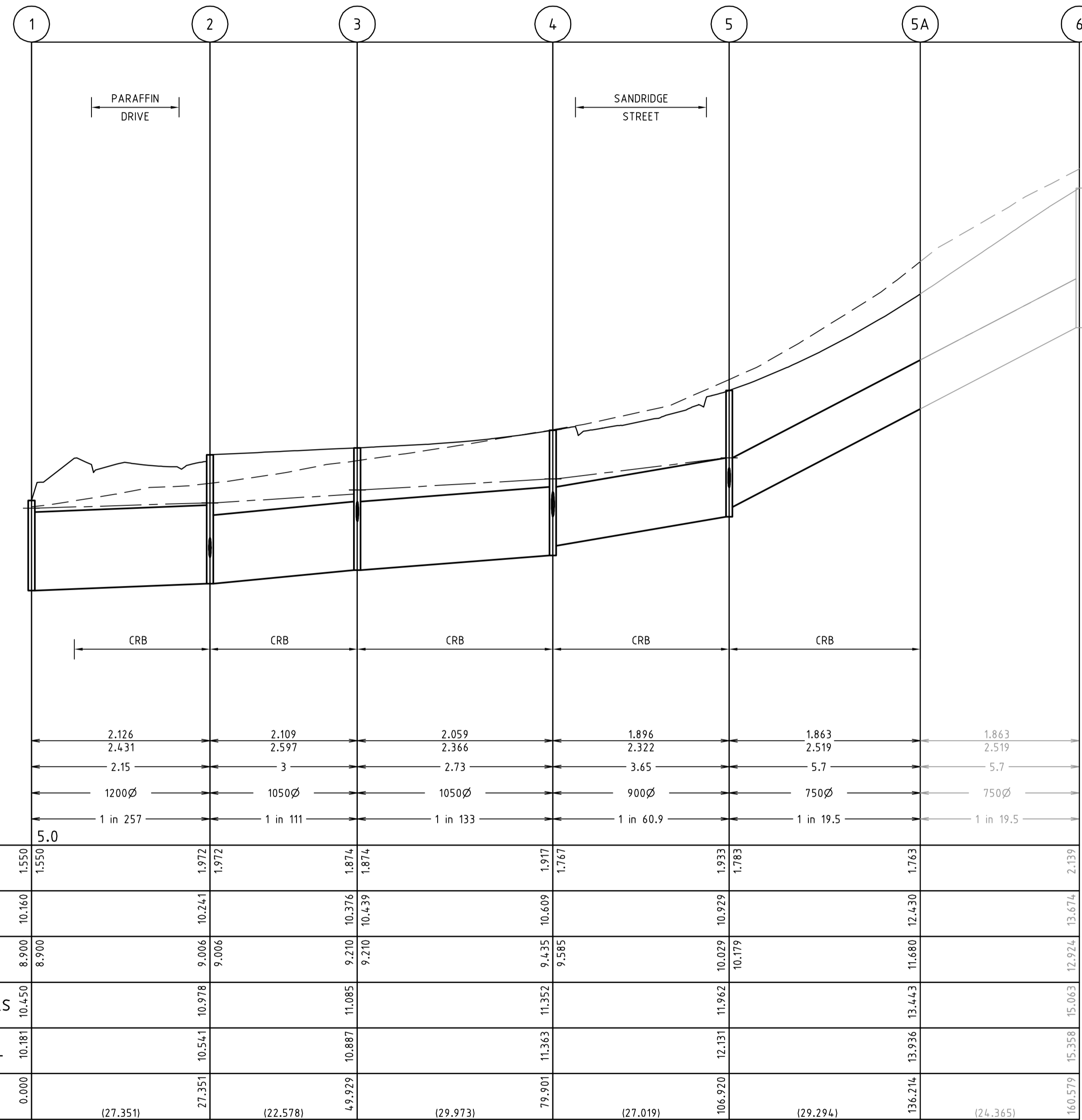
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Estuary
 Stage 1
 City Of Greater Geelong
 Roadworks and Drainage
 Cross Sections - Winslow Avenue
 Ch 171.863 - Ch 216.215

Drawing No. 0250EHL-01-25
 Sheet No. 25 of 40
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| B COUNCIL AMENDMENTS | 23.12.09 | |
| A ISSUED TO COUNCIL | 23.10.09 | |

LEGEND

- EXISTING SURFACE
- DESIGN SURFACE
- DRAINAGE PIPE/PIT
- EXISTING DRAINAGE PIPE/PIT
- HYDRAULIC GRADE LINE



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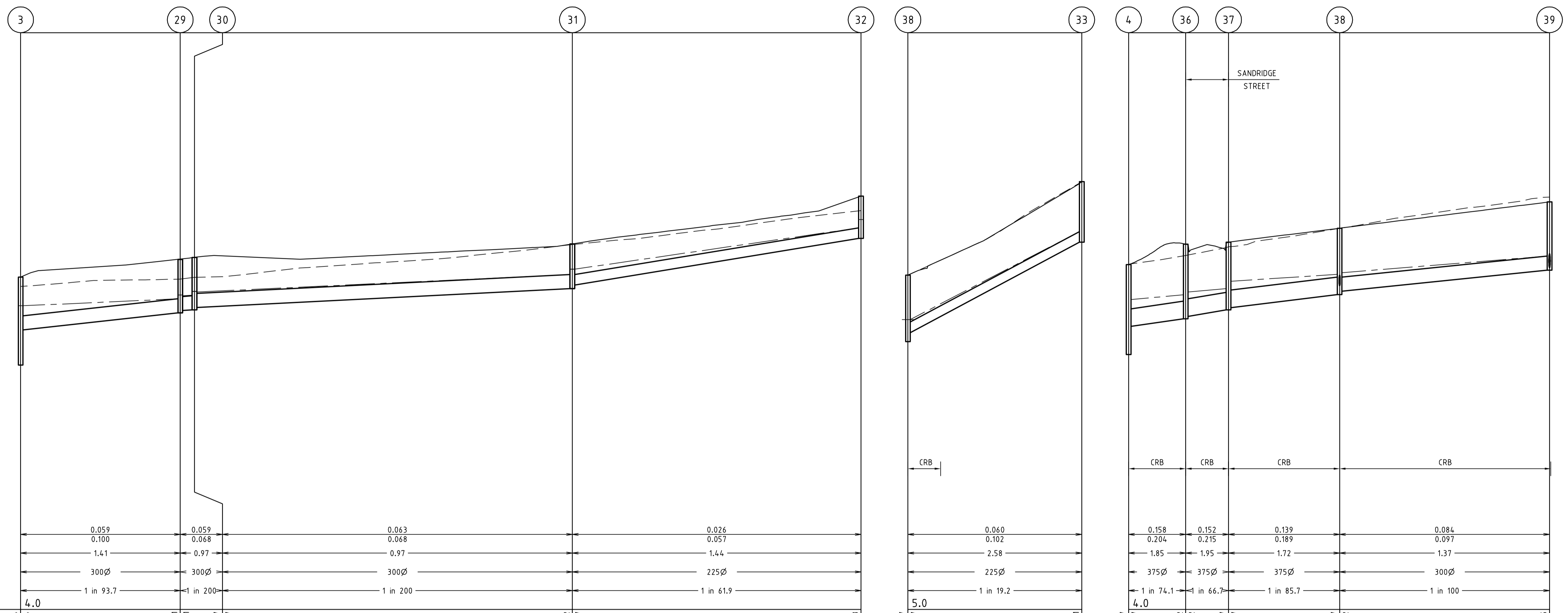
Estuary
Stage 1
City Of Greater Geelong
Roadworks and Drainage
Drainage Longitudinal Sections - 1

Drawing No. 0250EHL-01-26
Sheet No. 26 of 40

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0 5 10 20
0 0.5 1 2
Scale @ A1 H1:500, V1:50

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DESIGN FLOW (m³/s)
CAPACITY (m³/s)
AT GRADE VELOCITY (m/s)
PIPE SIZE (mm)
GRADE
DATUM

| | | | | | | | | | |
|----------------------------|--------|----------|--------|---------|--------|----------|---------|----------|---------|
| DEPTH TO INVERT | 1.874 | 1.124 | 1.141 | 1.091 | 1.117 | 1.067 | 0.952 | 0.877 | 0.803 |
| HYDRAULIC GRADE LINE | 10.400 | 10.475 | 10.624 | 10.705 | 10.701 | 10.783 | 11.142 | 11.256 | 12.536 |
| INVERT LEVEL | 9.210 | 9.940 | 10.324 | 10.374 | 10.389 | 10.439 | 10.842 | 10.917 | 11.911 |
| FINISHED SURFACE LEVELS | 11.085 | | 11.465 | | 11.506 | | 11.794 | | 12.815 |
| EXISTING SURFACE LEVEL | 10.887 | | 11.044 | | 11.083 | | 11.780 | | 12.507 |
| CHAINAGE (Reach Length) | 0.000 | (34.033) | 34.033 | (3.026) | 37.058 | (80.586) | 117.644 | (61.559) | 179.203 |

| | | | |
|-------------------------|--------|--------|--------|
| DEPTH TO INVERT | 1.417 | 1.227 | 1.291 |
| HYDRAULIC GRADE LINE | 11.146 | 11.181 | 13.057 |
| INVERT LEVEL | 10.713 | 10.903 | 12.832 |
| FINISHED SURFACE LEVELS | 12.130 | | 14.123 |
| EXISTING SURFACE LEVEL | 12.129 | | 14.119 |
| CHAINAGE (37.061) | 0.000 | | 37.061 |

| | | | | | | | |
|-------------------------|--------|----------|--------|---------|--------|----------|--------|
| DEPTH TO INVERT | 1.317 | 1.542 | 1.447 | 1.397 | 1.417 | 1.342 | 1.455 |
| HYDRAULIC GRADE LINE | 10.609 | 10.708 | 10.840 | 11.013 | 11.146 | 11.181 | 11.535 |
| INVERT LEVEL | 10.035 | 10.199 | 10.249 | 10.386 | 10.436 | 10.713 | 11.235 |
| FINISHED SURFACE LEVELS | 11.352 | 11.791 | 11.833 | 12.130 | 12.129 | 12.691 | 12.691 |
| EXISTING SURFACE LEVEL | 11.363 | 11.548 | 11.736 | 12.129 | 12.129 | 12.793 | 12.793 |
| CHAINAGE (44.764) | 0.000 | (12.166) | 12.166 | (9.142) | 21.308 | (23.684) | 44.992 |



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| A | 23.10.09 | |

| LEGEND | |
|--------|----------------------------|
| | EXISTING SURFACE |
| | DESIGN SURFACE |
| | DRAINAGE PIPE/PIT |
| | EXISTING DRAINAGE PIPE/PIT |
| | HYDRAULIC GRADE LINE |

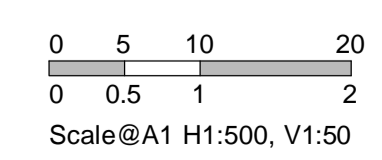


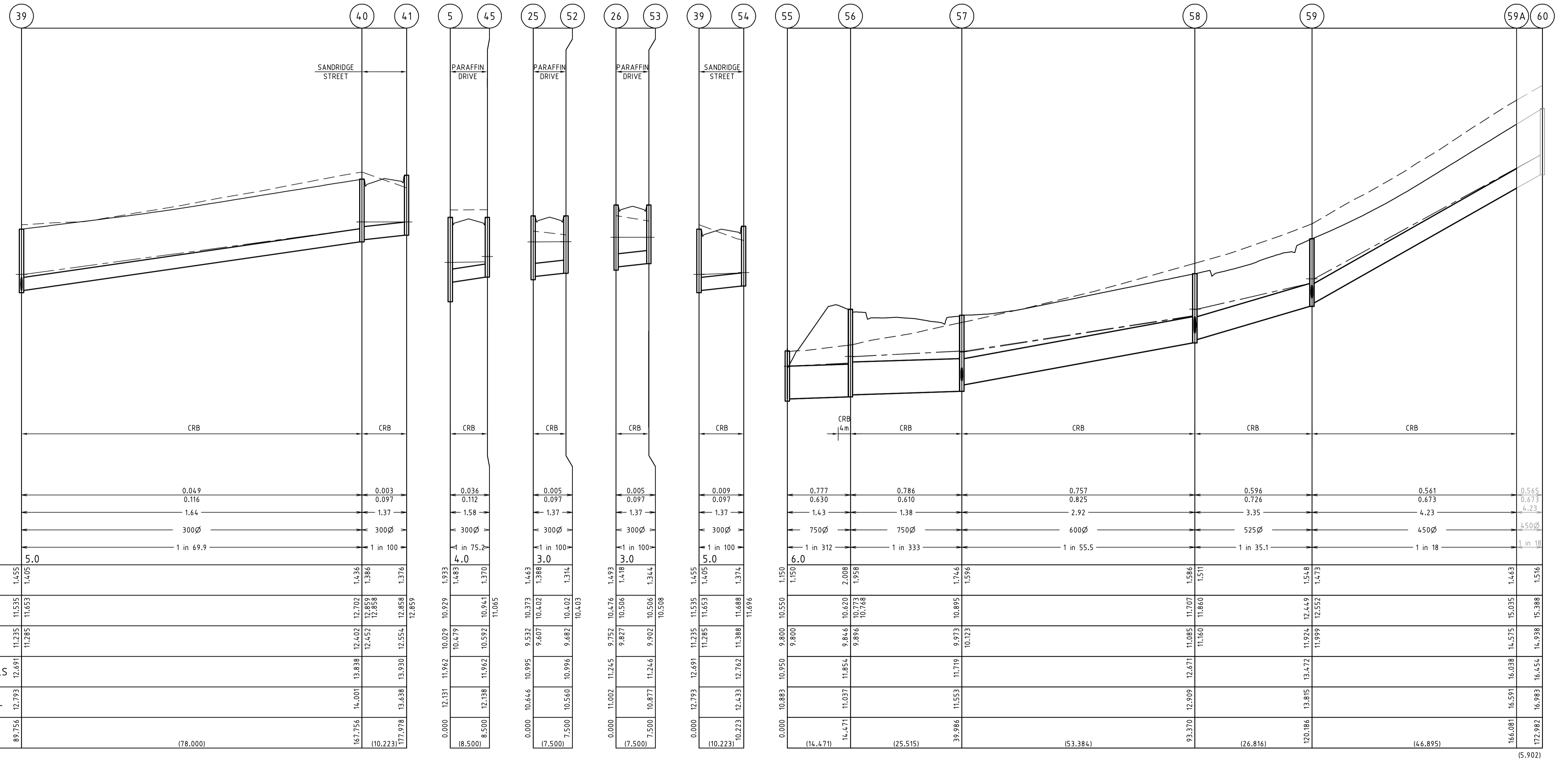
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Approved J. Golden

Estuary
Stage 1
City Of Greater Geelong
Roadworks and Drainage
Drainage Longitudinal Sections - 2

Drawing No. 0250EHL-01-27
Sheet No. 27 of 40
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Rev C





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|----------|----------|-------|
| D | 29.03.10 | |
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| B | 23.12.09 | |
| A | 23.10.09 | |

LEGEND

- EXISTING SURFACE
- DESIGN SURFACE
- DRAINAGE PIPE/PIT
- EXISTING DRAINAGE PIPE/PIT
- HYDRAULIC GRADE LINE



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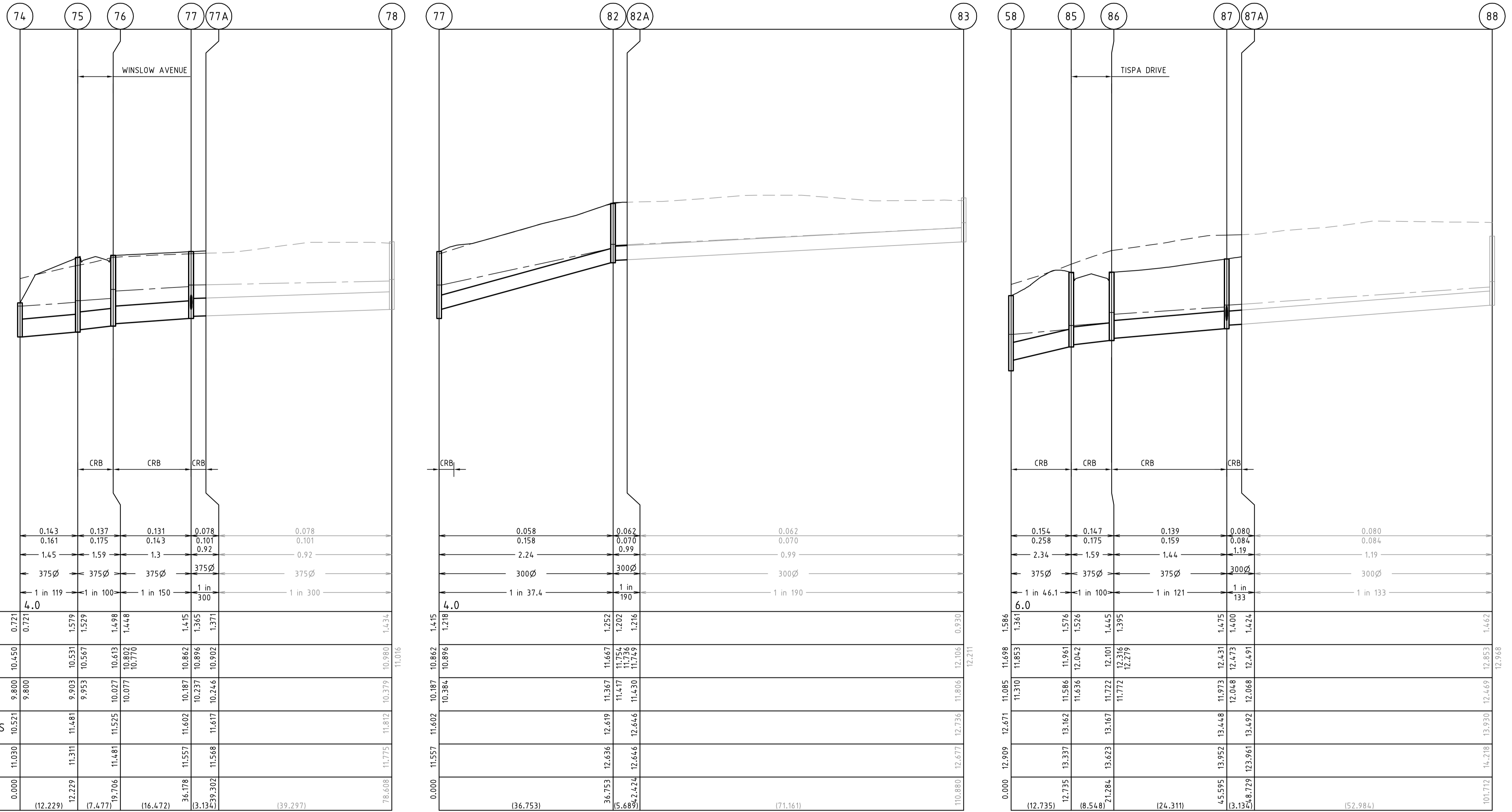
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Estuary
 Stage 1
 City Of Greater Geelong
 Roadworks and Drainage
 Drainage Longitudinal Sections - 3

Drawing No. 0250EHL-01-28
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| | 74 | 75 | 76 | 77 | 77A | 78 | 77 | 82 | 82A | 83 | 58 | 85 | 86 | 87 | 87A | 88 |
|---------------------------------|----------|----------|----------|----------|----------|----------|-----------|----------|----------|-----------|-----------|----------|----------|----------|----------|-----------|
| DESIGN FLOW (m ³ /s) | 0.143 | 0.137 | 0.131 | 0.078 | 0.078 | 0.078 | 0.058 | 0.062 | 0.062 | 0.062 | 0.154 | 0.147 | 0.139 | 0.080 | 0.080 | 0.080 |
| CAPACITY (m ³ /s) | 0.161 | 0.175 | 0.143 | 0.101 | 0.101 | 0.101 | 0.158 | 0.070 | 0.070 | 0.070 | 0.258 | 0.175 | 0.159 | 0.084 | 0.084 | 0.084 |
| AT GRADE VELOCITY (m/s) | 1.45 | 1.59 | 1.3 | 0.92 | 0.92 | 0.92 | 2.24 | 0.99 | 0.99 | 0.99 | 2.34 | 1.59 | 1.44 | 1.19 | 1.19 | 1.19 |
| PIPE SIZE (mm) | 375Ø | 375Ø | 375Ø | 375Ø | 375Ø | 375Ø | 300Ø | 300Ø | 300Ø | 300Ø | 375Ø | 375Ø | 375Ø | 300Ø | 300Ø | 300Ø |
| GRADE DATUM | 1 in 119 | 1 in 100 | 1 in 150 | 1 in 300 | 1 in 300 | 1 in 300 | 1 in 37.4 | 1 in 190 | 1 in 190 | 1 in 190 | 1 in 46.1 | 1 in 100 | 1 in 121 | 1 in 133 | 1 in 133 | 1 in 133 |
| DEPTH TO INVERT | 0.721 | 0.721 | 1.579 | 1.498 | 1.415 | 1.415 | 1.415 | 1.218 | 1.218 | 1.218 | 1.361 | 1.361 | 1.576 | 1.475 | 1.475 | 1.462 |
| HYDRAULIC GRADE LINE | 10.450 | 10.531 | 10.567 | 10.613 | 10.862 | 10.862 | 10.896 | 11.667 | 11.667 | 11.667 | 11.698 | 11.698 | 12.042 | 12.431 | 12.431 | 12.462 |
| INVERT LEVEL | 9.800 | 9.903 | 9.953 | 10.027 | 10.187 | 10.187 | 10.384 | 11.367 | 11.367 | 11.367 | 11.310 | 11.586 | 11.973 | 12.631 | 12.631 | 12.653 |
| FINISHED SURFACE LEVELS | 10.521 | 11.481 | 10.567 | 11.525 | 11.602 | 11.602 | 11.602 | 12.619 | 12.619 | 12.619 | 12.671 | 13.162 | 13.448 | 13.930 | 13.930 | 13.930 |
| EXISTING SURFACE LEVEL | 11.030 | 11.311 | 11.481 | 11.525 | 11.557 | 11.557 | 11.557 | 12.619 | 12.619 | 12.619 | 12.909 | 13.377 | 13.623 | 14.218 | 14.218 | 14.218 |
| CHAINAGE (Reach Length) | 0.000 | (12.229) | (7.477) | (16.472) | (3.134) | (39.297) | (36.753) | (5.689) | (71.161) | (110.880) | (12.735) | (8.548) | (24.311) | (13.134) | (52.984) | (101.712) |



Principal Leopold Developments Pty Ltd
Level 1, 6 Riverside Quay
Southbank, Victoria 3006

| REVISION | DATE | APP'D |
|----------|----------|-------|
| C | 29.03.10 | |
| B | 23.12.09 | |
| A | 23.10.09 | |

| LEGEND | |
|--------|----------------------------|
| --- | EXISTING SURFACE |
| — | DESIGN SURFACE |
| — | DRAINAGE PIPE/PIT |
| --- | EXISTING DRAINAGE PIPE/PIT |
| --- | HYDRAULIC GRADE LINE |

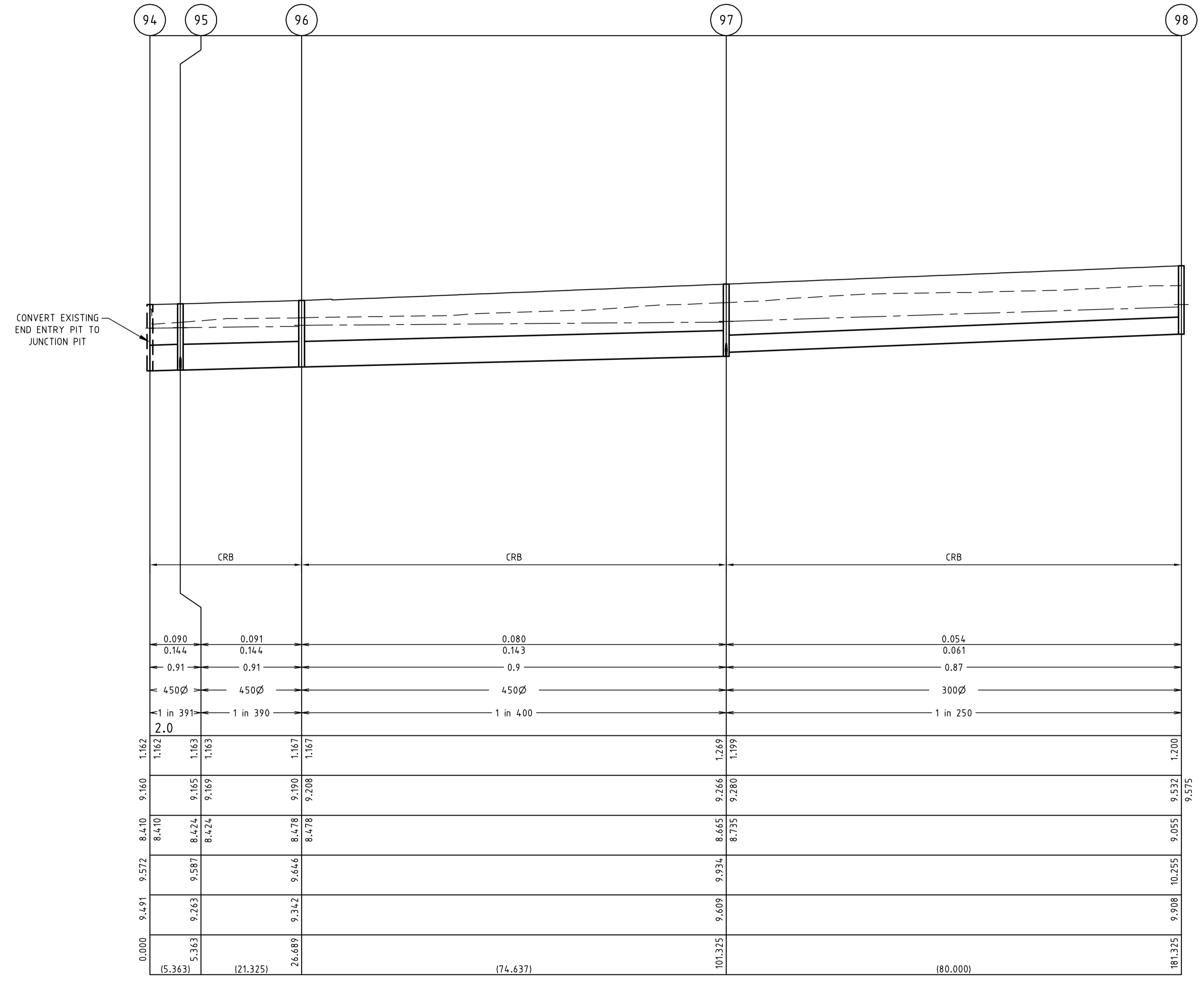
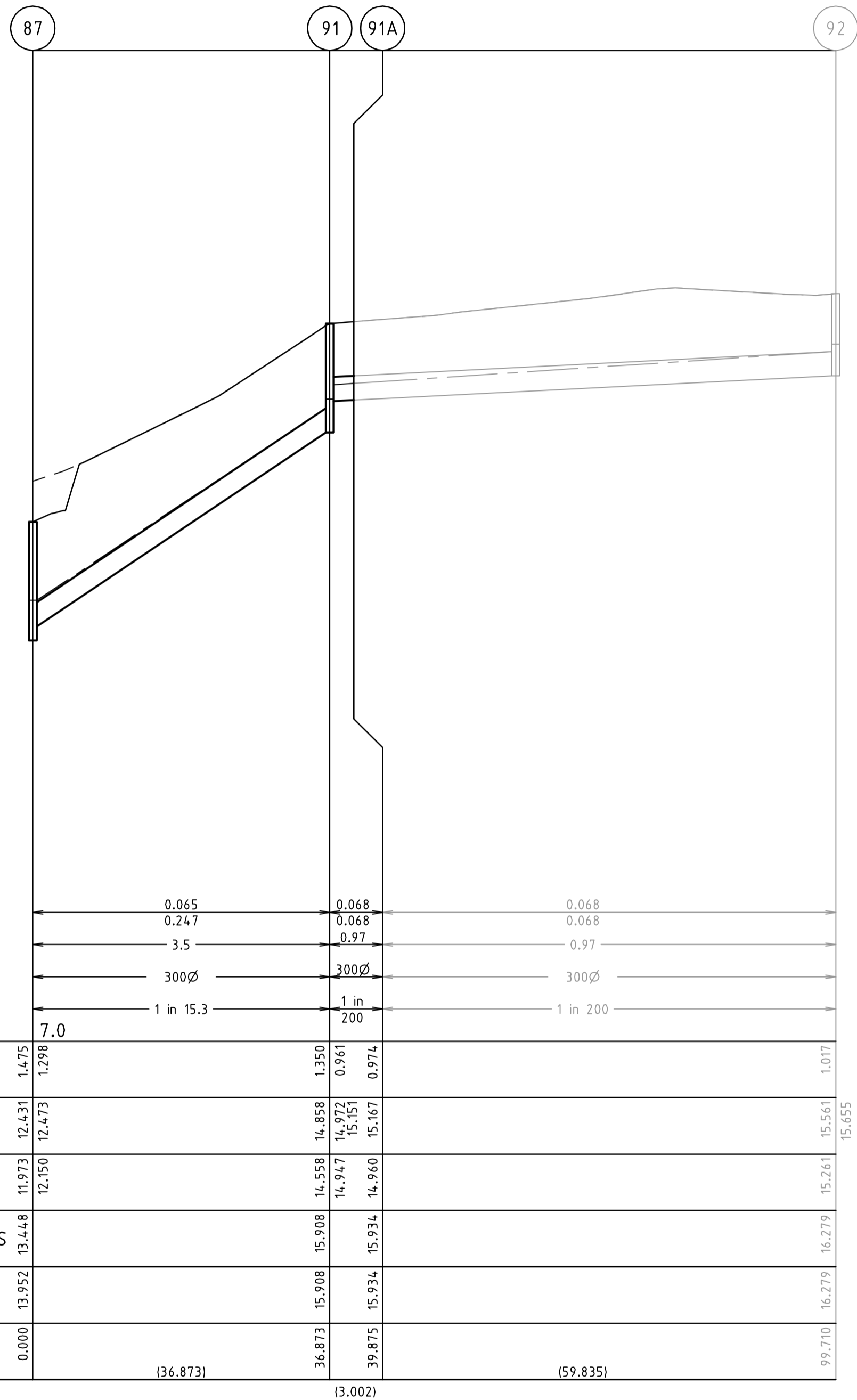


Geelong Tel +61 3 5228 3100
Designed C. Barker July 2009
Drawn M. Wilks July 2009
Checked C. Birkett July 2009
Approved J. Golden July 2009

Estuary
Stage 1
City Of Greater Geelong
Roadworks and Drainage
Drainage Longitudinal Sections - 4

Drawing No. 0250EHL-01-29 Rev C
Sheet No. 29 of 40
© SM Urban Pty Ltd ABN 99 124 206 819

0 5 10 20
0 0.5 1 2
Scale@A1 H1:500, V1:50



Principal Leopold Developments Pty Ltd
Level 1, 6 Riverside Quay
Southbank, Victoria 3006

| REVISION | DATE | APP'D |
|----------|----------|-------|
| E | 29.03.10 | |
| D | 11.03.10 | |
| C | 17.02.10 | |
| B | 23.12.09 | |
| A | 23.10.09 | |

| LEGEND | |
|--------|----------------------------|
| --- | EXISTING SURFACE |
| --- | DESIGN SURFACE |
| --- | DRAINAGE PIPE/PIT |
| --- | EXISTING DRAINAGE PIPE/PIT |
| --- | HYDRAULIC GRADE LINE |

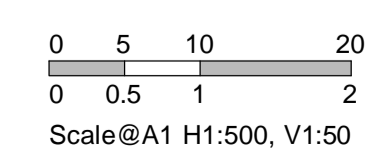


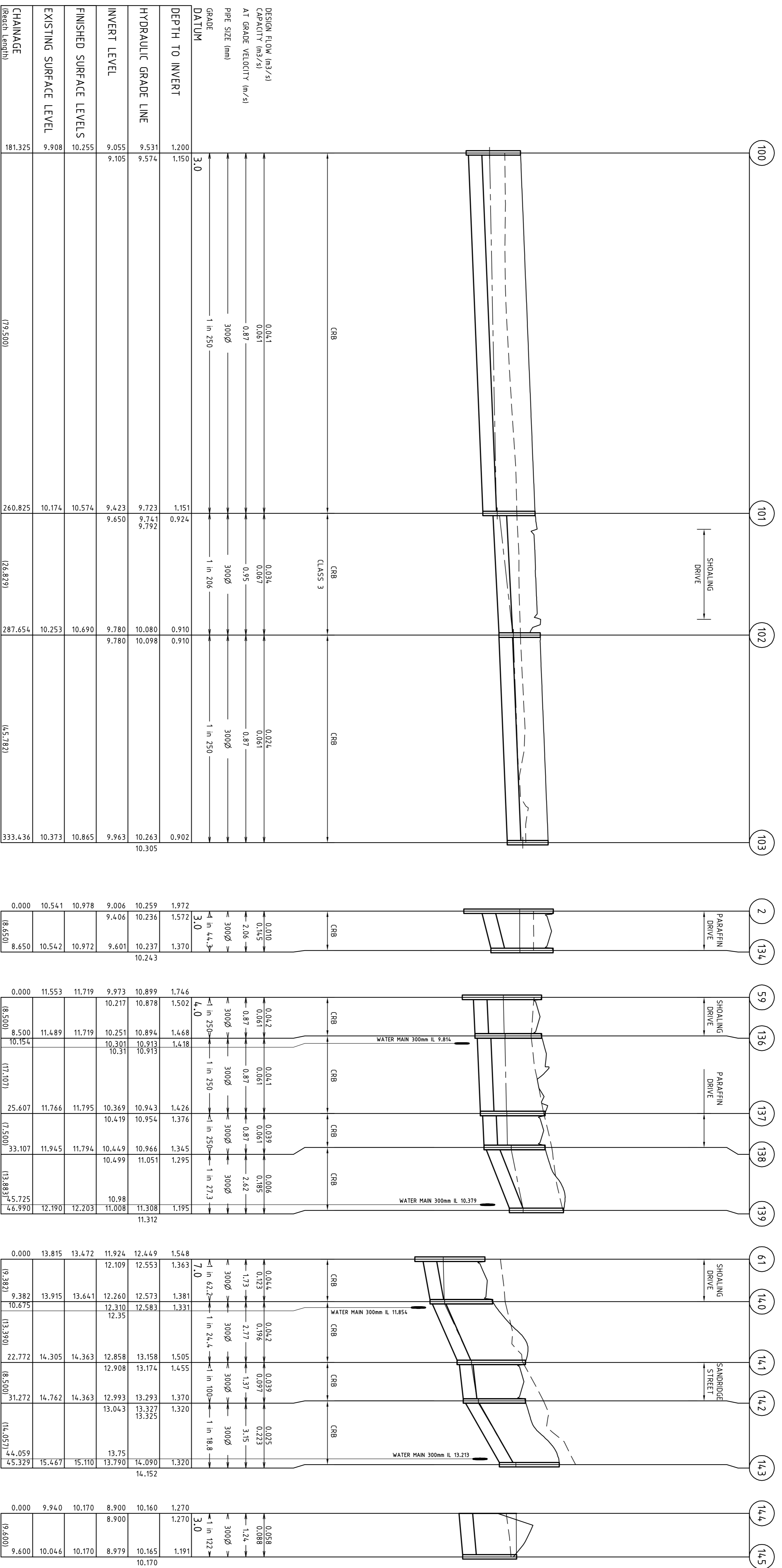
Geelong Tel +61 3 5228 3100
Designed C. Barker July 2009
Drawn M. Wilks July 2009
Checked C. Birkett July 2009
Approved J. Golden July 2009

Estuary
Stage 1
City Of Greater Geelong
Roadworks and Drainage
Drainage Longitudinal Sections - 5

Drawing No. 0250EHL-01-30
Sheet No. 30 of 40
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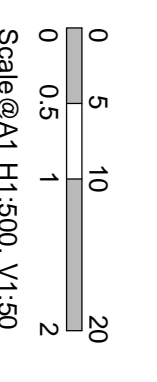
Rev E





| REVISION | DATE | APPD |
|-------------------------|----------|------|
| A ISSUED TO COUNCIL | 23.10.09 | |
| B COUNCIL AMENDMENTS | 23.12.09 | |
| C CRUSHED ROCK ADDED | 17.02.10 | |
| D DRAINAGE LINE AMENDED | 11.03.10 | |

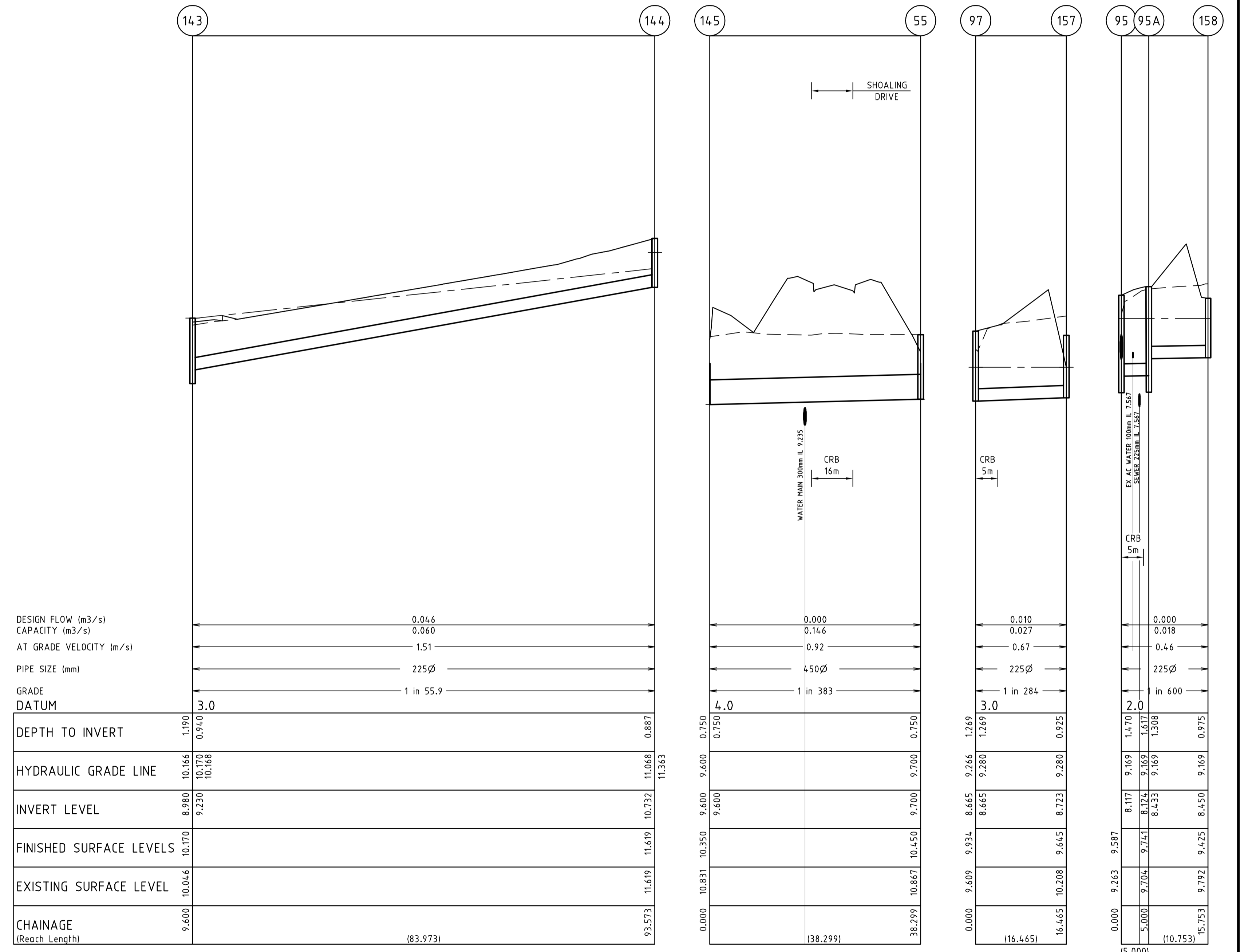
| LEGEND | |
|--------|----------------------------|
| --- | EXISTING SURFACE |
| --- | DESIGN SURFACE |
| --- | DRAINAGE PIPE/PIT |
| --- | EXISTING DRAINAGE PIPE/PIT |
| --- | HYDRAULIC GRADE LINE |



| DESIGNED | DATE |
|------------|-----------|
| C. Barker | July 2009 |
| M. Wilks | July 2009 |
| C. Birrell | July 2009 |
| J. Golden | July 2009 |

| PIT NUMBER | TYPE | PIT SCHEDULE | | | | | | | | | REMARKS |
|------------|----------------|--------------|-------------|-------------|------------------|-----------|---------------|-----------------|-----------|-------------------------|--|
| | | INTERNAL | | INLET | | OUTLET | | COVER LEVEL (m) | DEPTH (m) | STANDARD DRAWING | |
| | | WIDTH (mm) | LENGTH (mm) | DIA. (mm) | INVERT RL (m) | DIA. (mm) | INVERT RL (m) | | | | |
| 1 | | 1800 | 5000 | 1200 | 8.900 | | | 10.450 | 1.550 | SEE DETAIL | PIT DEPTH EXCLUDES SUMP |
| 2 | SIDE ENTRY PIT | 1500 | 900 | 1050 300 | 9.006 9.406 | 1200 | 9.006 | 10.978 | 1.972 | COGG303 COGG305 COGG309 | |
| 3 | JUNCTION PIT | 1200 | 900 | 1050 300 | 9.210 9.960 | 1050 | 9.210 | 11.085 | 1.874 | COGG303 COGG305 COGG306 | |
| 4 | SIDE ENTRY PIT | 1200 | 900 | 900 375 | 9.585 10.035 | 1050 | 9.435 | 11.352 | 1.917 | COGG303 COGG305 COGG309 | |
| 5 | SIDE ENTRY PIT | 900 | 900 | 750 300 | 10.179 10.479 | 900 | 10.029 | 11.962 | 1.933 | COGG303 COGG305 COGG309 | |
| 5A | ENDPIPE | | | | | 750 | 11.680 | 13.443 | 1.763 | | |
| 22 | ENDWALL | | | 375 | 9.000 | | | 9.856 | 0.856 | COGG316 | |
| 23 | SIDE ENTRY PIT | 900 | 900 | 375 | 9.094 | 375 | 9.044 | 10.804 | 1.760 | COGG305 COGG309 | |
| 24 | SIDE ENTRY PIT | 900 | 900 | 375 | 9.404 | 375 | 9.134 | 10.733 | 1.600 | COGG305 COGG309 | |
| 25 | SIDE ENTRY PIT | 900 | 900 | 375 300 | 9.582 9.607 | 375 | 9.532 | 10.995 | 1.463 | COGG305 COGG309 | |
| 26 | SIDE ENTRY PIT | 900 | 900 | 300 300 | 9.827 9.827 | 375 | 9.752 | 11.245 | 1.493 | COGG305 COGG309 | |
| 27 | SIDE ENTRY PIT | 900 | 900 | 300 | 10.259 | 300 | 10.209 | 11.677 | 1.468 | COGG305 COGG309 | |
| 28 | SIDE ENTRY PIT | 900 | 900 | 300 | | 300 | 10.334 | 11.678 | 1.344 | COGG305 COGG309 | |
| 29 | JUNCTION PIT | 900 | 600 | 300 | 10.374 | 300 | 10.324 | 11.465 | 1.141 | COGG305 COGG308 | |
| 30 | JUNCTION PIT | 900 | 600 | 300 | 10.439 | 300 | 10.389 | 11.506 | 1.117 | COGG305 COGG308 | |
| 31 | JUNCTION PIT | 900 | 600 | 225 | 10.917 | 300 | 10.842 | 11.794 | 0.952 | COGG308 | |
| 32 | JUNCTION PIT | 900 | 600 | | | 225 | 11.911 | 12.815 | 0.903 | COGG308 | |
| 33 | JUNCTION PIT | 900 | 600 | | | 225 | 12.832 | 14.123 | 1.291 | COGG305 COGG315 | |
| 36 | SIDE ENTRY PIT | 900 | 900 | 375 | 10.249 | 375 | 10.199 | 11.791 | 1.592 | COGG305 COGG309 | |
| 37 | SIDE ENTRY PIT | 900 | 900 | 375 | 10.436 | 375 | 10.386 | 11.833 | 1.447 | COGG305 COGG309 | |
| 38 | JUNCTION PIT | 900 | 900 | 300 225 | 10.788 10.903 | 375 | 10.713 | 12.130 | 1.417 | COGG305 COGG308 | |
| 39 | SIDE ENTRY PIT | 900 | 900 | 300 300 | 11.285 11.285 | 300 | 11.235 | 12.691 | 1.455 | COGG305 COGG309 | |
| 40 | SIDE ENTRY PIT | 900 | 900 | 300 | 12.452 | 300 | 12.402 | 13.838 | 1.436 | COGG305 COGG309 | |
| 41 | SIDE ENTRY PIT | 900 | 900 | 300 | | 300 | 12.554 | 13.930 | 1.376 | COGG305 COGG309 | |
| 45 | SIDE ENTRY PIT | 900 | 900 | 300 | | 300 | 10.592 | 11.962 | 1.370 | COGG305 COGG309 | |
| 52 | SIDE ENTRY PIT | 900 | 900 | 300 | | 300 | 9.682 | 10.996 | 1.314 | COGG305 COGG309 | |
| 53 | SIDE ENTRY PIT | 900 | 900 | 300 | | 300 | 9.902 | 11.246 | 1.344 | COGG305 COGG309 | |
| 54 | SIDE ENTRY PIT | 900 | 900 | 300 | | 300 | 11.388 | 12.762 | 1.374 | COGG305 COGG309 | |
| 55 | | 900 | 3000 | 750 | 9.800 | | | 10.950 | 1.150 | SEE DETAIL | PIT DEPTH EXCLUDES SUMP |
| 56 | SIDE ENTRY PIT | 900 | 900 | 750 | 9.896 | 750 | 9.846 | 11.854 | 2.008 | COGG305 COGG309 | |
| 57 | SIDE ENTRY PIT | 900 | 900 | 600 300 | 10.123 10.217 | 750 | 9.973 | 11.719 | 1.746 | COGG305 COGG309 | |
| 58 | SIDE ENTRY PIT | 900 | 900 | 525 375 | 11.600 11.310 | 600 | 11.085 | 12.671 | 1.586 | COGG305 COGG309 | |
| 59 | SIDE ENTRY PIT | 900 | 900 | 450 300 | 11.999 12.109 | 525 | 11.924 | 13.472 | 1.548 | COGG305 COGG309 | |
| 59A | ENDPIPE | | | | | 450 | 14.632 | 16.099 | 1.467 | | |
| 74 | ENDWALL | | | 375 | 9.800 | | | 10.521 | 0.721 | COGG316 | |
| 75 | SIDE ENTRY PIT | 900 | 900 | 375 | 9.953 | 375 | 9.903 | 11.481 | 1.579 | COGG305 COGG309 | |
| 76 | SIDE ENTRY PIT | 900 | 900 | 375 | 10.077 | 375 | 10.027 | 11.525 | 1.498 | COGG305 COGG309 | |
| 77 | JUNCTION PIT | 900 | 900 | 375 300 | 10.237 10.384 | 375 | 10.187 | 11.602 | 1.415 | COGG305 COGG306 | |
| 77A | ENDPIPE | | | | | 375 | 10.246 | 11.617 | 1.371 | | |
| 82 | JUNCTION PIT | 900 | 900 | 300 | 11.417 | 300 | 11.367 | 12.619 | 1.252 | COGG305 COGG306 | |
| 82A | ENDPIPE | | | | | 300 | 11.430 | 12.646 | 1.216 | | |
| 85 | SIDE ENTRY PIT | 900 | 900 | 375 | 11.636 | 375 | 11.586 | 13.162 | 1.576 | COGG305 COGG309 | |
| 86 | SIDE ENTRY PIT | 900 | 900 | 375 | 11.772 | 375 | 11.722 | 13.167 | 1.445 | COGG305 COGG309 | |
| 87 | JUNCTION PIT | 900 | 900 | 300 300 | 12.048 12.150 | 375 | 11.973 | 13.448 | 1.475 | COGG305 COGG306 | |
| 87A | ENDPIPE | | | | | 300 | 12.068 | 13.492 | 1.424 | | |
| 91 | JUNCTION PIT | 900 | 900 | 300 | 14.947 | 300 | 14.558 | 15.908 | 1.350 | COGG305 COGG308 | |
| 91A | ENDPIPE | | | | | 300 | 14.960 | 15.934 | 0.974 | | |
| 94 | EXISTING PIT | | | 450 225 | 8.410 8.410 | | | 9.572 | 1.162 | | |
| 95 | JUNCTION PIT | 900 | 600 | 450 225 | 8.424 8.424 | 450 | 8.424 | 9.587 | 1.770 | COGG305 COGG306 | PROVIDE 300mm DEPTH SUMP PIT DEPTH INCLUDES SUMP |
| 95A | JUNCTION PIT | 900 | 600 | 225 | 8.433 | 225 | 8.124 | 9.741 | 1.917 | COGG305 COGG306 | PROVIDE 300mm DEPTH SUMP PIT DEPTH INCLUDES SUMP |
| 96 | SIDE ENTRY PIT | 900 | 600 | 450 | 8.478 | 450 | 8.478 | 9.646 | 1.167 | COGG305 COGG309 | |
| 97 | SIDE ENTRY PIT | 900 | 600 | 300 225 | 8.735 8.665 | 450 | 8.665 | 9.934 | 1.269 | COGG305 COGG309 | |
| 98 | SIDE ENTRY PIT | 900 | 600 | 300 | 9.105 | 300 | 9.055 | 10.255 | 1.200 | COGG305 COGG309 | |
| 99 | SIDE ENTRY PIT | 900 | 600 | 300 | 9.650 | 300 | 9.423 | 10.574 | 1.151 | COGG305 COGG309 | |
| 100 | SIDE ENTRY PIT | 900 | 600 | 300 | 9.780 | 300 | 9.780 | 10.690 | 0.910 | COGG305 COGG309 | |
| 101 | SIDE ENTRY PIT | 900 | 600 | | | 300 | 9.963 | 10.865 | 0.902 | COGG305 COGG309 | CONSTRUCT END ENTRY PIT. GRADE TABLE DRAIN TO SUIT |
| 132 | SIDE ENTRY PIT | 900 | 600 | | | 300 | 9.601 | 10.972 | 1.370 | COGG305 COGG309 | |
| 134 | SIDE ENTRY PIT | 900 | 900 | 300 | 10.301 | 300 | 10.251 | 11.719 | 1.468 | COGG305 COGG309 | |

| | | | | | | | | | | | |
|-----|----------------|-----|-----|-----|--------|-----|--------|--------|-------|-----------------|--|
| 135 | SIDE ENTRY PIT | 900 | 900 | 300 | 10.419 | 300 | 10.369 | 11.795 | 1.426 | COGG305 COGG309 | |
| 136 | SIDE ENTRY PIT | 900 | 900 | 300 | 10.499 | 300 | 10.449 | 11.794 | 1.345 | COGG305 COGG309 | |
| 137 | SIDE ENTRY PIT | 900 | 900 | | | 300 | 11.008 | 12.203 | 1.195 | COGG305 COGG309 | |
| 138 | SIDE ENTRY PIT | 900 | 900 | 300 | 12.310 | 300 | 12.260 | 13.641 | 1.381 | COGG305 COGG309 | |
| 139 | SIDE ENTRY PIT | 900 | 900 | 300 | 12.908 | 300 | 12.858 | 14.363 | 1.505 | COGG305 COGG309 | |
| 140 | SIDE ENTRY PIT | 900 | 900 | 300 | 13.043 | 300 | 12.993 | 14.363 | 1.370 | COGG305 COGG309 | |
| 141 | SIDE ENTRY PIT | 900 | 900 | | | 300 | 13.790 | 15.110 | 1.320 | COGG305 COGG309 | |
| 142 | ENDWALL | | | 300 | 8.900 | | | 10.170 | 1.270 | COGG316 | |
| 143 | JUNCTION PIT | 900 | 900 | 225 | 9.230 | 300 | 8.980 | 10.170 | 1.190 | COGG305 COGG308 | |
| 144 | JUNCTION PIT | 900 | 600 | | | 225 | 10.732 | 11.619 | 0.887 | COGG308 | |
| 145 | ENDWALL | | | 450 | 9.600 | | | 10.350 | 0.750 | COGG316 | |
| 157 | JUNCTION PIT | 900 | 600 | | | 225 | 8.723 | 9.645 | 0.925 | SEE DETAIL | |
| 158 | JUNCTION PIT | 900 | 600 | | | 225 | 8.450 | 9.425 | 0.975 | SEE DETAIL | |



Principal Leopold Developments Pty Ltd
Level 1, 6 Riverside Quay
Southbank, Victoria 3006

| REVISION | DATE | APP'D |
|--|----------|-------|
| G PITS 157 & 158 AMENDED | 22.06.10 | |
| F DRAINAGE AMENDMENTS | 31.05.10 | |
| E MINOR AMENDMENTS | 29.03.10 | |
| D DRAINAGE AMENDED | 11.03.10 | |
| C PIT NUMBERS AMENDED CRUSHED ROCK ADDED | 17.02.10 | |
| B COUNCIL AMENDMENTS | 23.12.09 | |
| A ISSUED TO COUNCIL | 23.10.09 | |

LEGEND

- EXISTING SURFACE
- DESIGN SURFACE
- DRAINAGE PIPE/PIT
- EXISTING DRAINAGE PIPE/PIT
- HYDRAULIC GRADE LINE



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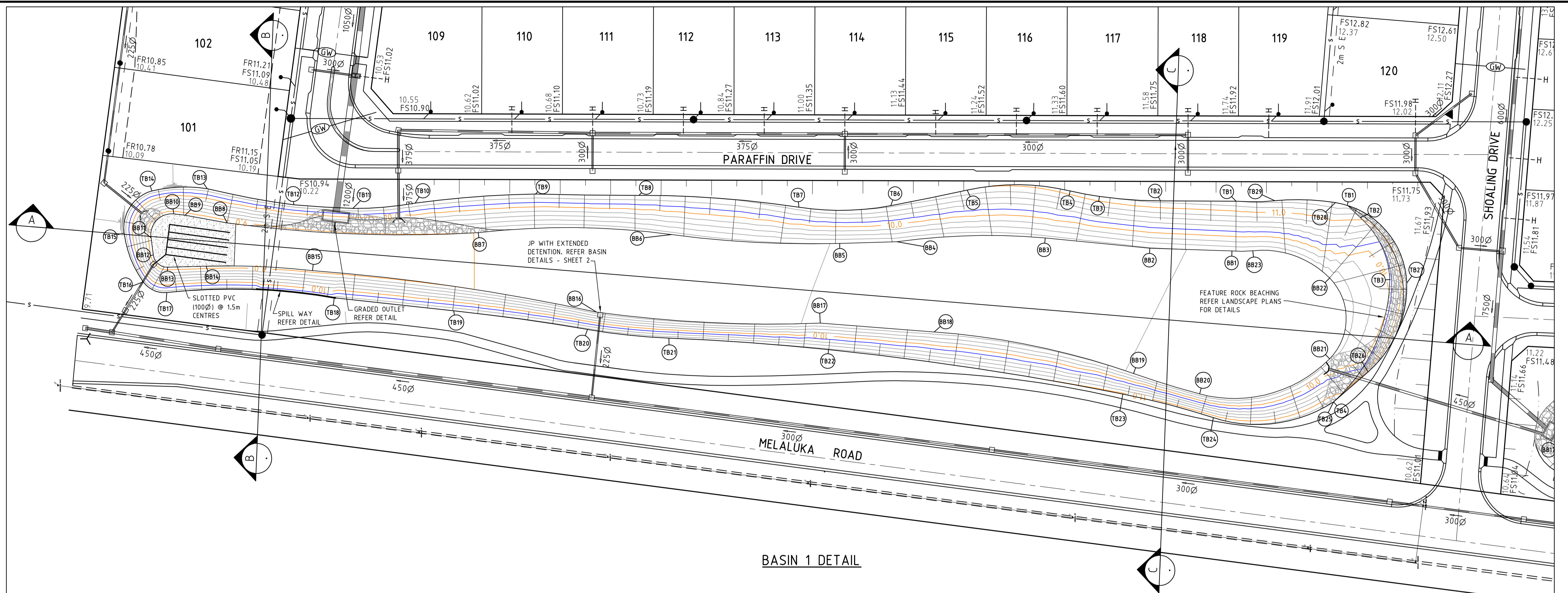
Designed C. Barker July 2009
 Drawn M. Wilks July 2009
 Checked C. Birckett July 2009
 Approved J. Golden July 2009

Estuary
 Stage 1
 City Of Greater Geelong
 Roadworks and Drainage
 Pit Schedule

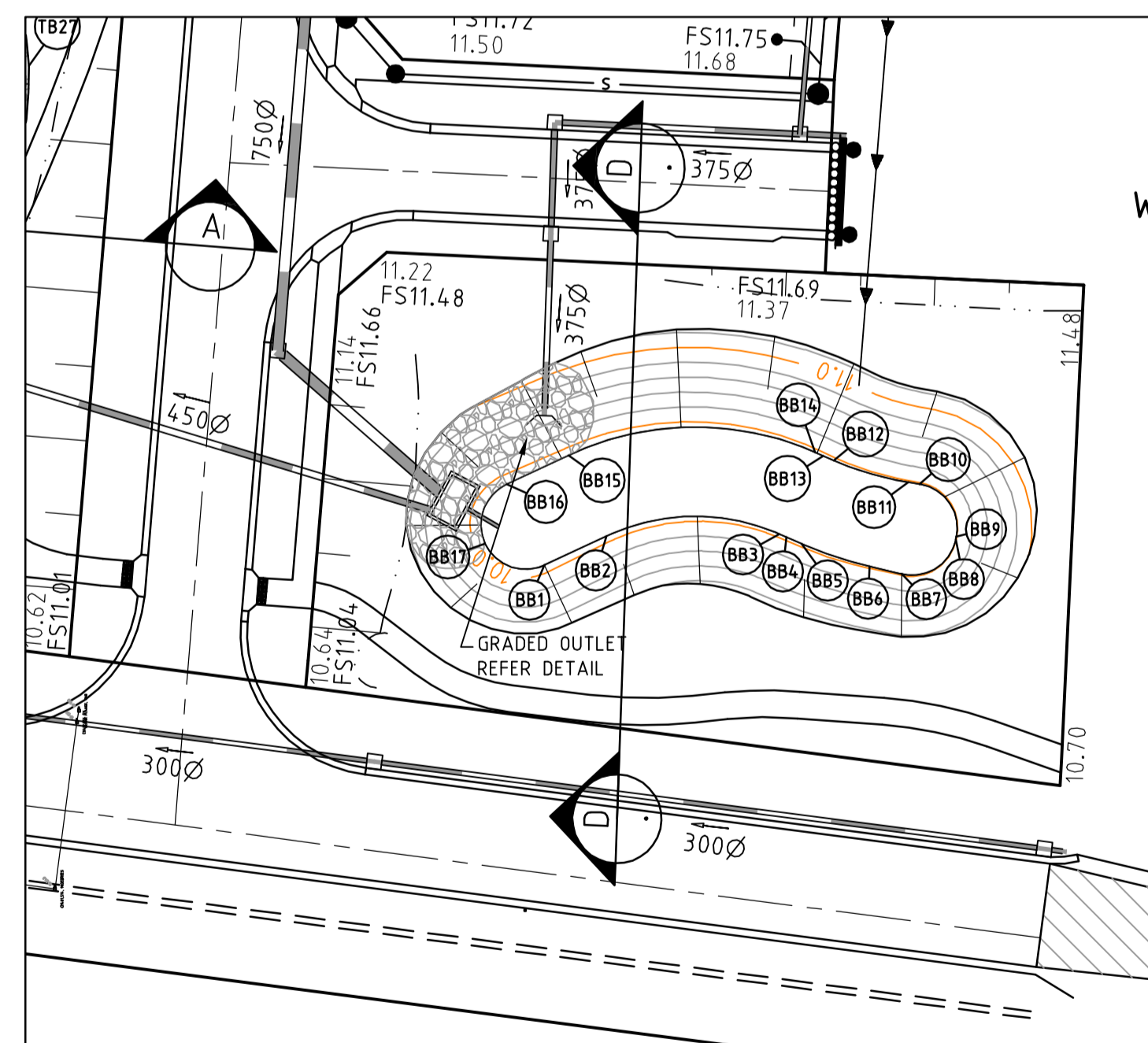
Drawing No. 0250EHL-01-32
 Sheet No. 32 of 40

Rev G

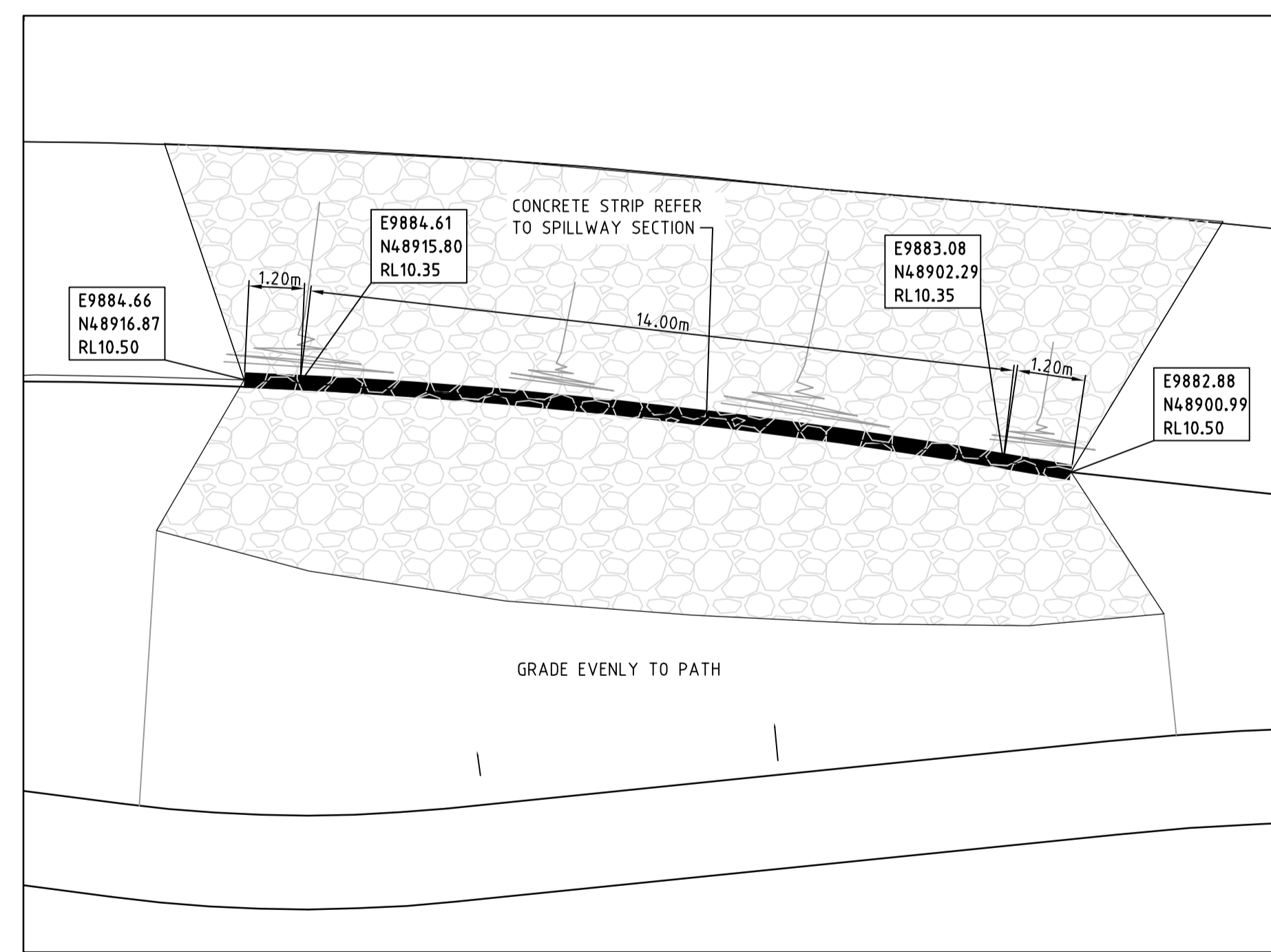
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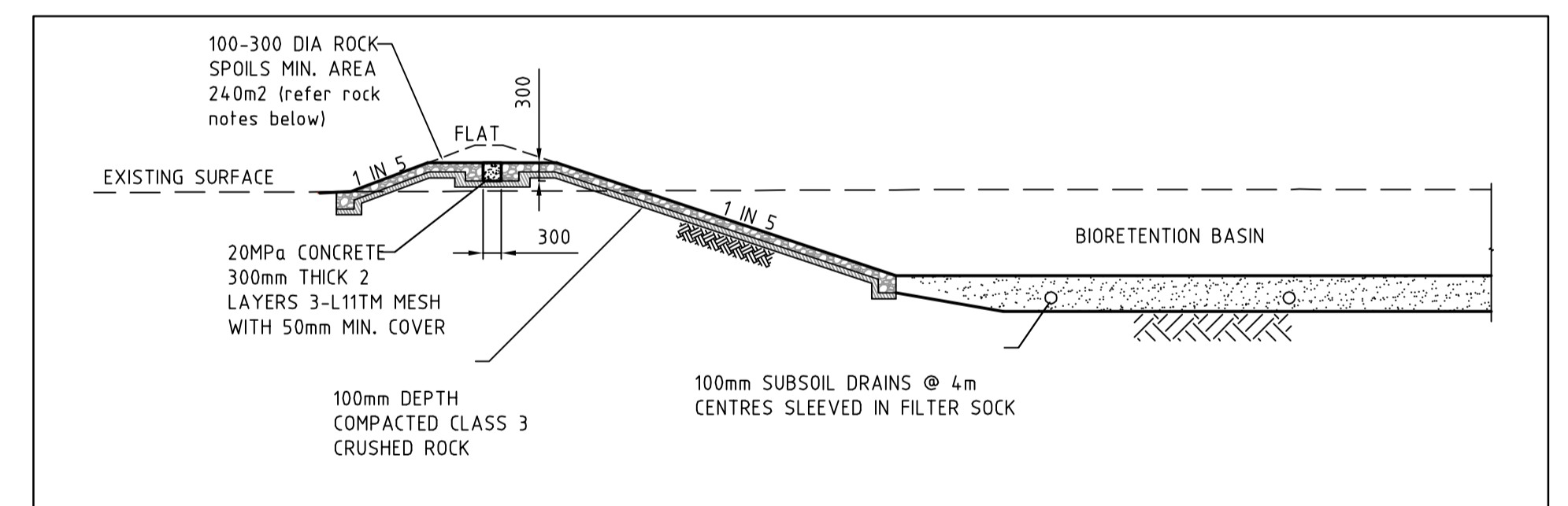
BASIN 1 DETAIL



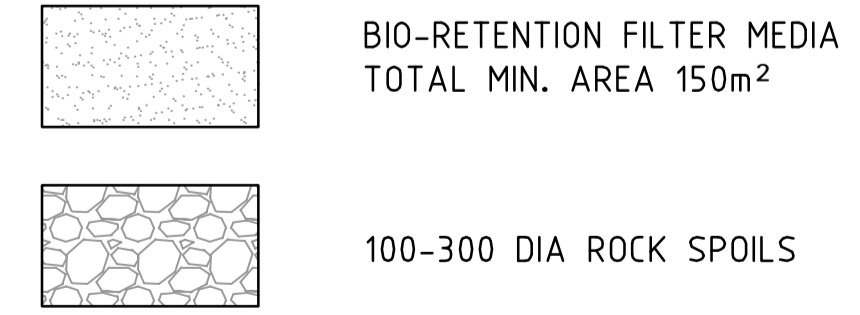
BASIN 2 DETAIL



SPILLWAY DETAIL



SPILLWAY SECTION
N.T.S.



NOTES ON ROCKWORK:

LINING ROCKS SHOULD BE WELL GRADED TO FORM A TIGHTLY SEALED ROCK LAYER WHICH IS FREE OF VOIDS AND PROVIDES RESISTANCE TO FLOW VELOCITIES AND INFILTRATION/UNDERMINING.

IN SEALING ROCK VOIDS USE A SMALLER GRADED ROCK MIX (INFILL MIX). DEPENDING ON ROCK AVAILABILITY AND CONSTRUCTION METHOD ADOPTED, SEALING OF THE ROCKWORK MAY OCCUR AS A PRE-MIX (I.E. INFILL MIX IS COMBINED WITH LARGER LINING ROCKS BEFORE PLACEMENT), OR BY WORKING THE INFILL MIX BETWEEN THE LARGER ROCKS AS THEY ARE LAID.

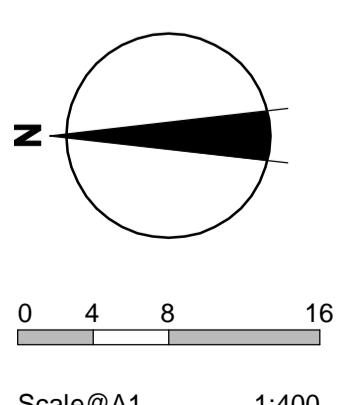
THE CONTRACTOR SHOULD USE METHODS FOR HANDLING AND PLACEMENT OF LINING ROCK THAT WILL AVOID SEGREGATION OF THE ROCK SIZES. ROCKS SHALL BE CAREFULLY PLACED IN POSITION, NOT DUMPED DIRECTLY.



Principal Leopold Developments Pty Ltd
Level 1, 6 Riverside Quay
Southbank, Victoria 3006

| REVISION | DATE | APP'D |
|------------------------|----------|-------|
| D BASIN AMENDED | 31.05.10 | |
| C FILTER MEDIA AMENDED | 10.05.10 | |
| B COUNCIL AMENDMENTS | 23.12.09 | |
| A ISSUED TO COUNCIL | 23.10.09 | |

| LEGEND | |
|--------|--|
| | Electricity (Underground) |
| | Gas |
| | Telstra |
| | Water |
| | Stormwater Drain, Pit and Property Inlet |
| | Swale Drain |
| | Sewer, Maintenance Structures and Property Connection |
| | House Drain |
| | Gas & Water Conduits |
| | Tactile Paver - Directional |
| | Tactile Paver - Hazard |
| | Existing Electricity (Underground) |
| | Existing Electricity (Overhead) |
| | Existing Gas |
| | Existing Telstra |
| | Existing Water |
| | Existing Stormwater Drain |
| | Existing Sewer |
| | Existing House Drain |
| | Existing Tree to Remain |
| | Existing Tree to be Removed |
| | Existing Swale Drain |
| | Existing Surface Level |
| | Finished Building Line Level |
| | Finished Ridge Line Level |
| | Top of Retaining Wall |
| | Bottom of Retaining Wall |
| | Retaining Wall |
| | Intersection Threshold Treatment |
| | Structural Fill > 200mm Deep |
| | Ex. Structural Fill > 200mm Deep |
| | Proposed Driveway |
| | Allotment to be graded evenly in direction of fall to levels indicated |
| | Direction of Fall |
| | Overland Flow |
| | Permanent Survey Mark |
| | Temporary Bench Mark |
| | Concrete Edge Strip with Subsoil Drain underneath "No Road" sign and Barrier |
| | Zero Lot Lines |
| | Limit of Works |



Geelong Tel +61 3 5228 3100

Designed C. Barker July 2009
 Drawn M. Wilks July 2009
 Checked C. Birkett July 2009
 Approved J. Golden July 2009

Estuary
 Stage 1
 City Of Greater Geelong
 Roadworks and Drainage
 Basin Layout Plan

Drawing No. 0250EHL-01-33 Rev D
 Sheet No. 33 of 40
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| Point no | Easting | Northing | RL |
|----------|----------|-----------|-------|
| BB1 | 9852.272 | 48654.127 | 9.700 |
| BB2 | 9854.222 | 48649.976 | 9.715 |
| BB3 | 9854.364 | 48638.382 | 9.755 |
| BB4 | 9854.151 | 48637.897 | 9.757 |
| BB5 | 9853.699 | 48636.871 | 9.761 |
| BB6 | 9852.174 | 48632.306 | 9.777 |
| BB7 | 9851.669 | 48630.132 | 9.784 |
| BB8 | 9853.999 | 48626.509 | 9.800 |
| BB9 | 9854.168 | 48626.475 | 9.799 |
| BB10 | 9857.724 | 48628.956 | 9.783 |
| BB11 | 9857.841 | 48629.710 | 9.781 |
| BB12 | 9859.300 | 48634.701 | 9.763 |
| BB13 | 9859.614 | 48635.416 | 9.761 |
| BB14 | 9859.856 | 48635.965 | 9.759 |
| BB15 | 9859.653 | 48652.528 | 9.702 |
| BB16 | 9857.703 | 48656.678 | 9.673 |
| BB17 | 9853.712 | 48658.118 | 9.661 |

| Curve no | l | Radius | Arc | A | B | X | Y | l | Mid point RL |
|-------------|--------|--------|--------|-------|-------|-------|-------|-------|--------------|
| BB2 - BB3 | 48.926 | 14.000 | 11.955 | 1.257 | 0.939 | 2.966 | 2.831 | 2.989 | 9.735 |
| BB3 - BB6 | 10.621 | 26.000 | 4.820 | 0.112 | 0.084 | 1.204 | 1.202 | 1.205 | 9.769 |
| BB7 - BB8 | 91.774 | 3.000 | 4.805 | 0.912 | 0.674 | 1.169 | 0.984 | 1.201 | 9.792 |
| BB9 - BB10 | 92.544 | 3.000 | 4.846 | 0.926 | 0.685 | 1.179 | 0.989 | 1.211 | 9.791 |
| BB11 - BB12 | 14.938 | 20.000 | 5.214 | 0.170 | 0.127 | 1.303 | 1.297 | 1.304 | 9.772 |
| BB14 - BB15 | 48.926 | 20.000 | 17.078 | 1.795 | 1.341 | 4.237 | 4.045 | 4.270 | 9.731 |
| BB16 - BB17 | 90.000 | 3.000 | 4.712 | 0.879 | 0.650 | 1.148 | 0.973 | 1.178 | 9.657 |
| BB17 - BB1 | 90.000 | 3.000 | 4.712 | 0.879 | 0.650 | 1.148 | 0.973 | 1.178 | 9.681 |

| Point no | Easting | Northing | RL |
|----------|----------|-----------|-------|
| BB1 | 9892.190 | 48723.429 | 9.425 |
| BB2 | 9892.735 | 48739.705 | 9.379 |
| BB3 | 9894.763 | 48760.436 | 9.321 |
| BB4 | 9894.019 | 48789.815 | 9.237 |
| BB5 | 9893.696 | 48801.185 | 9.205 |
| BB6 | 9895.453 | 48834.485 | 9.111 |
| BB7 | 9895.818 | 48872.809 | 9.002 |
| BB8 | 9897.769 | 48922.582 | 8.862 |
| BB9 | 9899.267 | 48930.934 | 8.838 |
| BB10 | 9899.556 | 48933.156 | 8.831 |
| BB11 | 9894.809 | 48937.675 | 8.810 |
| BB12 | 9891.415 | 48937.230 | 8.800 |
| BB13 | 9888.987 | 48934.396 | 8.813 |
| BB14 | 9889.184 | 48926.748 | 8.836 |
| BB15 | 9888.306 | 48905.655 | 8.901 |
| BB16 | 9880.095 | 48849.365 | 9.075 |
| BB17 | 9877.905 | 48805.027 | 9.212 |
| BB18 | 9876.167 | 48782.436 | 9.281 |
| BB19 | 9867.927 | 48742.914 | 9.405 |
| BB20 | 9863.885 | 48729.827 | 9.447 |
| BB21 | 9870.840 | 48704.066 | 9.533 |
| BB22 | 9886.840 | 48704.066 | 9.486 |
| BB23 | 9892.255 | 48719.280 | 9.437 |

| Curve no | l | Radius | Arc | A | B | X | Y | l | Mid point RL |
|-------------|---------|----------|--------|-------|-------|--------|--------|--------|--------------|
| BB2 - BB3 | 0.736 | 1622.063 | 20.831 | 0.033 | 0.025 | 5.208 | 5.208 | 5.208 | 9.350 |
| BB3 - BB4 | 13.180 | 128.042 | 29.453 | 0.846 | 0.634 | 7.359 | 7.335 | 7.363 | 9.279 |
| BB5 - BB6 | 9.294 | 205.807 | 33.383 | 0.676 | 0.507 | 8.343 | 8.330 | 8.346 | 9.158 |
| BB6 - BB7 | 14.243 | 154.568 | 38.424 | 1.192 | 0.894 | 9.600 | 9.563 | 9.606 | 9.057 |
| BB7 - BB8 | 11.266 | 253.727 | 49.892 | 1.225 | 0.919 | 12.468 | 12.438 | 12.473 | 8.932 |
| BB8 - BB9 | 1.795 | 270.877 | 8.485 | 0.033 | 0.025 | 2.121 | 2.121 | 2.121 | 8.850 |
| BB9 - BB10 | 3.735 | 34.378 | 2.241 | 0.018 | 0.014 | 0.560 | 0.560 | 0.560 | 8.834 |
| BB10 - BB11 | 103.893 | 4.162 | 7.547 | 1.597 | 1.176 | 1.823 | 1.454 | 1.887 | 8.821 |
| BB12 - BB13 | 83.867 | 2.792 | 4.087 | 0.715 | 0.530 | 0.999 | 0.867 | 1.022 | 8.807 |
| BB13 - BB14 | 0.246 | 1779.573 | 7.650 | 0.004 | 0.003 | 1.912 | 1.912 | 1.912 | 8.825 |
| BB14 - BB15 | 7.958 | 152.112 | 21.129 | 0.367 | 0.275 | 5.281 | 5.275 | 5.282 | 8.869 |
| BB15 - BB16 | 7.899 | 412.934 | 56.931 | 0.981 | 0.735 | 14.230 | 14.213 | 14.233 | 8.988 |
| BB16 - BB17 | 9.986 | 255.024 | 44.448 | 0.968 | 0.726 | 11.108 | 11.087 | 11.112 | 9.144 |
| BB17 - BB18 | 0.376 | 3448.709 | 22.658 | 0.019 | 0.014 | 5.664 | 5.664 | 5.664 | 9.246 |
| BB18 - BB19 | 15.134 | 153.295 | 40.490 | 1.335 | 1.001 | 10.115 | 10.071 | 10.123 | 9.343 |
| BB19 - BB20 | 4.356 | 180.182 | 13.700 | 0.130 | 0.098 | 3.425 | 3.425 | 3.425 | 9.426 |
| BB20 - BB21 | 60.190 | 26.607 | 27.952 | 3.587 | 2.675 | 6.908 | 6.434 | 6.988 | 9.490 |
| BB21 - BB22 | 89.594 | 11.354 | 17.755 | 3.297 | 2.441 | 4.327 | 4.439 | 4.327 | 9.511 |
| BB22 - BB23 | 51.228 | 18.678 | 16.700 | 1.835 | 1.371 | 4.140 | 3.934 | 4.175 | 9.462 |
| BB23 - BB1 | 10.259 | 23.205 | 4.155 | 0.093 | 0.070 | 1.038 | 1.036 | 1.039 | 9.431 |

| Point no | Easting | Northing | RL |
|----------|----------|-----------|--------|
| TB1 | 9901.236 | 48700.542 | 11.571 |
| TB2 | 9898.815 | 48697.977 | 11.070 |
| TB3 | 9886.544 | 48692.133 | 10.036 |
| TB4 | 9862.305 | 48703.280 | 11.323 |

| Curve no | l | Radius | Arc | A | B | X | Y | l | Mid point RL |
|-----------|--------|--------|--------|-------|-------|-------|-------|-------|--------------|
| TB2 - TB3 | 46.003 | 17.390 | 13.963 | 1.383 | 1.033 | 3.467 | 3.328 | 3.491 | 10.141 |
| TB3 - TB4 | 47.183 | 33.331 | 27.449 | 2.786 | 2.082 | 6.814 | 6.526 | 6.862 | 10.036 |

| Point no | Easting | Northing | RL |
|----------|----------|-----------|--------|
| TB1 | 9902.050 | 48722.600 | 11.383 |
| TB2 | 9902.121 | 48737.564 | 11.267 |
| TB3 | 9902.991 | 48749.712 | 11.173 |
| TB4 | 9904.082 | 48755.496 | 11.128 |
| TB5 | 9904.257 | 48775.913 | 10.968 |
| TB6 | 9901.169 | 48791.056 | 10.849 |
| TB7 | 9900.860 | 48809.256 | 10.708 |
| TB8 | 9903.223 | 48840.961 | 10.597 |
| TB9 | 9903.492 | 48861.483 | 10.583 |
| TB10 | 9901.696 | 48885.313 | 10.566 |
| TB11 | 9900.619 | 48897.665 | 10.558 |
| TB12 | 9901.351 | 48909.356 | 10.550 |
| TB13 | 9904.536 | 48926.510 | 10.538 |
| TB14 | 9904.101 | 48937.502 | 10.530 |
| TB15 | 9895.765 | 48943.018 | 10.523 |
| TB16 | 9886.089 | 48939.217 | 10.516 |
| TB17 | 9883.979 | 48934.542 | 10.512 |
| TB18 | 9882.925 | 48901.369 | 10.454 |
| TB19 | 9880.363 | 48877.696 | 10.583 |
| TB20 | 9876.646 | 48851.138 | 10.679 |

| | | | |
|------|----------|-----------|--------|
| TB21 | 9874.942 | 48835.038 | 10.736 |
| TB22 | 9872.671 | 48803.406 | 10.849 |
| TB23 | 9863.866 | 48745.070 | 11.066 |
| TB24 | 9859.182 | 48727.123 | 11.176 |
| TB25 | 9862.305 | 48703.280 | 11.325 |
| TB26 | 9868.243 | 48696.445 | 11.379 |
| TB27 | 9885.829 | 48688.777 | 11.497 |
| TB28 | 9901.779 | 48702.889 | 11.565 |
| TB29 | 9902.144 | 48714.929 | 11.469 |

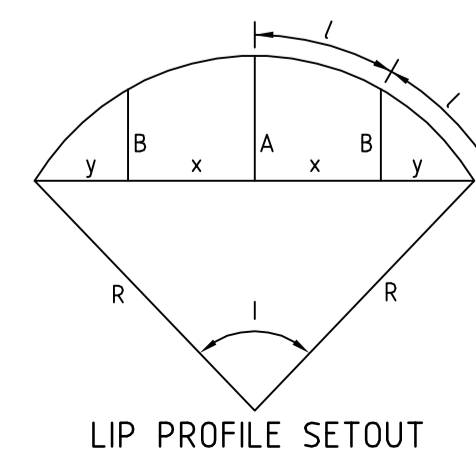
| Curve no | l | Radius | Arc | A | B | X | Y | l | Mid point RL |
|-------------|--------|---------|--------|-------|-------|--------|--------|--------|--------------|
| TB2 - TB3 | 7.657 | 91.199 | 12.187 | 0.204 | 0.153 | 3.046 | 3.043 | 3.047 | 11.220 |
| TB3 - TB4 | 5.511 | 61.224 | 5.889 | 0.071 | 0.053 | 1.472 | 1.471 | 1.472 | 11.150 |
| TB4 - TB5 | 25.892 | 45.570 | 20.593 | 1.158 | 0.868 | 5.137 | 5.072 | 5.148 | 11.048 |
| TB5 - TB6 | 1.851 | 478.372 | 15.455 | 0.062 | 0.047 | 3.864 | 3.863 | 3.864 | 10.909 |
| TB6 - TB7 | 19.265 | 54.392 | 18.289 | 0.767 | 0.575 | 4.567 | 4.535 | 4.572 | 10.778 |
| TB7 - TB8 | 8.802 | 207.164 | 31.824 | 0.611 | 0.458 | 7.954 | 7.942 | 7.956 | 10.608 |
| TB8 - TB9 | 1.781 | 660.368 | 20.524 | 0.080 | 0.060 | 5.131 | 5.131 | 5.131 | 10.590 |
| TB9 - TB10 | 6.612 | 207.211 | 23.911 | 0.345 | 0.259 | 5.977 | 5.972 | 5.977 | 10.575 |
| TB10 - TB11 | 11.045 | 64.417 | 12.418 | 0.299 | 0.224 | 3.103 | 3.096 | 3.104 | 10.562 |
| TB11 - TB12 | 3.007 | 223.259 | 11.716 | 0.077 | 0.058 | 2.929 | 2.928 | 2.929 | 10.554 |
| TB12 - TB13 | 6.219 | 160.813 | 17.455 | 0.237 | 0.178 | 4.363 | 4.360 | 4.364 | 10.544 |
| TB13 - TB14 | 21.612 | 29.338 | 11.066 | 0.520 | 0.390 | 2.762 | 2.738 | 2.767 | 10.534 |
| TB14 - TB15 | 81.720 | 7.640 | 10.897 | 1.862 | 1.381 | 2.667 | 2.331 | 2.724 | 10.527 |
| TB15 - TB16 | 28.159 | 21.366 | 10.501 | 0.642 | 0.481 | 2.619 | 2.579 | 2.625 | 10.519 |
| TB16 - TB17 | 60.359 | 5.101 | 5.374 | 0.691 | 0.516 | 1.328 | 1.236 | 1.343 | 10.514 |
| TB17 - TB18 | 15.417 | 123.715 | 33.290 | 1.118 | 0.838 | 8.316 | 8.279 | 8.323 | 10.501 |
| TB19 - TB20 | 3.579 | 429.369 | 26.821 | 0.209 | 0.157 | 6.705 | 6.703 | 6.705 | 10.631 |
| TB20 - TB21 | 7.430 | 124.940 | 16.201 | 0.263 | 0.197 | 4.050 | 4.045 | 4.050 | 10.707 |
| TB21 - TB22 | 3.564 | 509.960 | 31.718 | 0.247 | 0.185 | 7.929 | 7.927 | 7.930 | 10.793 |
| TB22 - TB23 | 5.387 | 627.707 | 59.019 | 0.694 | 0.520 | 14.753 | 14.745 | 14.755 | 10.954 |
| TB23 - TB24 | 6.699 | 158.733 | 18.558 | 0.271 | 0.203 | 4.639 | 4.635 | 4.640 | 11.121 |
| TB24 - TB25 | 50.873 | 27.993 | 24.855 | 2.714 | 2.027 | 6.163 | 5.860 | 6.214 | 11.251 |
| TB26 - TB27 | 50.914 | 22.317 | 19.831 | 2.167 | 1.618 | 4.917 | 4.675 | 4.958 | 11.438 |
| TB27 - TB28 | 79.205 | 16.704 | 23.091 | 3.834 | 2.846 | 5.659 | 4.989 | 5.773 | 11.563 |
| TB28 - TB29 | 14.313 | 48.347 | 12.077 | 0.377 | 0.282 | 3.017 | 3.006 | 3.019 | 11.529 |
| TB29 - TB1 | 9.427 | 46.679 | 7.681 | 0.158 | 0.118 | 1.920 | 1.916 | 1.920 | 11.426 |



Principal Leopold Developments Pty Ltd
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| REVISION | DATE | APP'D |
|----------------------|----------|-------|
| B COUNCIL AMENDMENTS | 23.12.09 | |
| A ISSUED TO COUNCIL | 23.10.09 | |

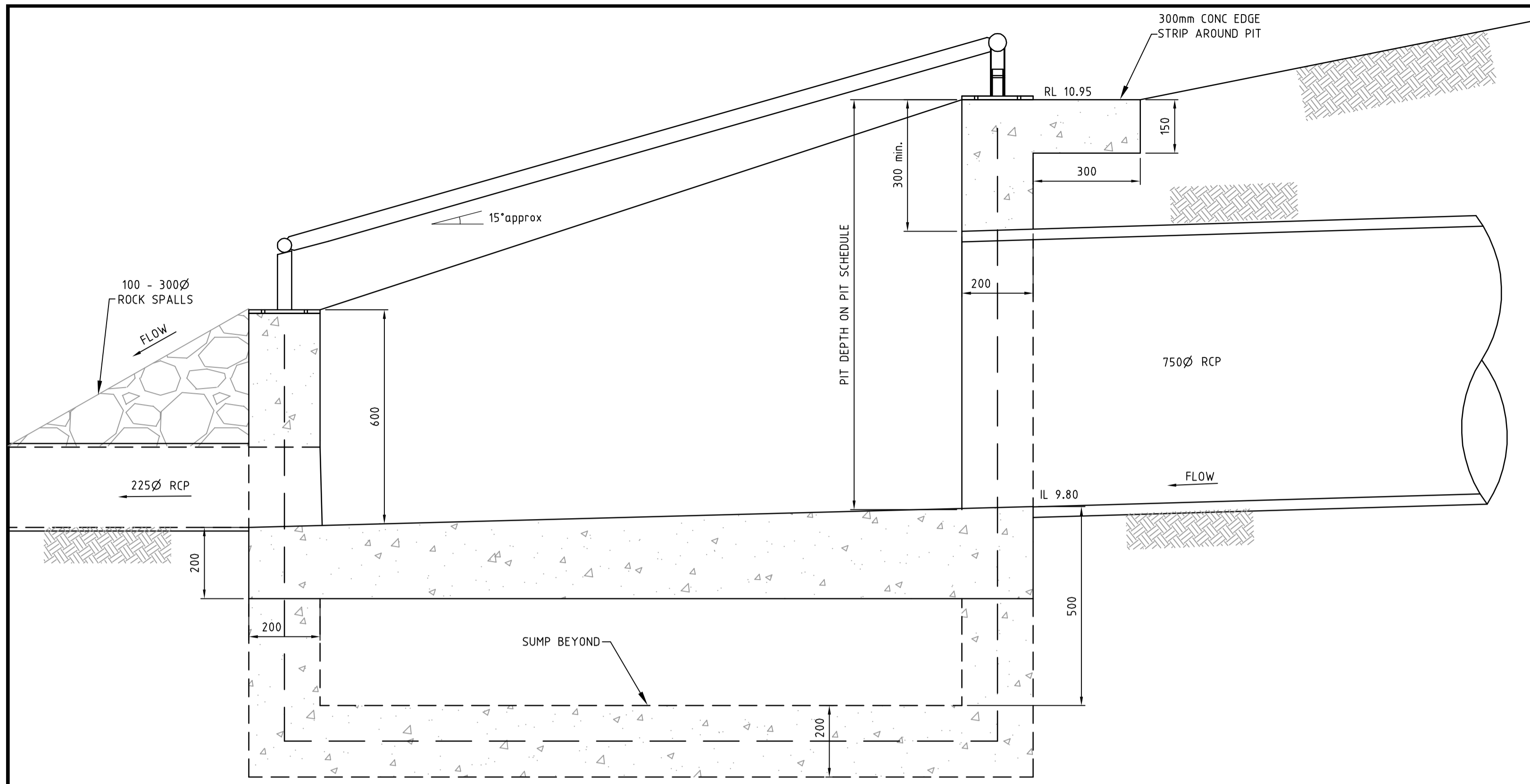
NOTES
1. SETOUT CO-ORDINATES REFER TO LIP OF KERB/EDGE OF CONCRETE.
2. REFER TO SHEET NUMBERS X TO X FOR LIP PROFILES.



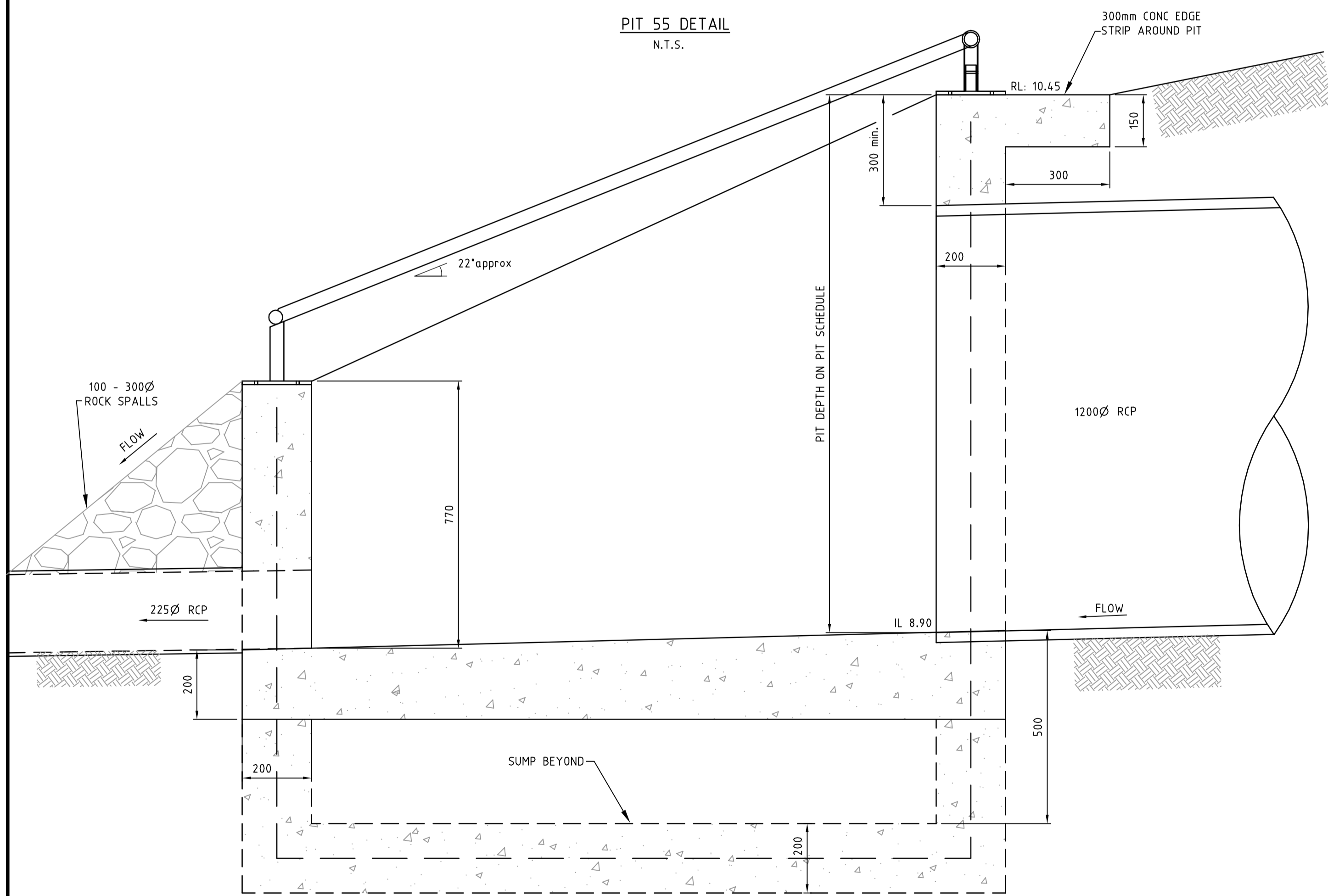
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Designed C. Barker July 2009
Drawn M.Wilks July 2009
Checked C. Birkett July 2009
Approved J. Golden July 2009

Estuary
Stage 1
City Of Greater Geelong
Roadworks and Drainage
Basin Setout Information

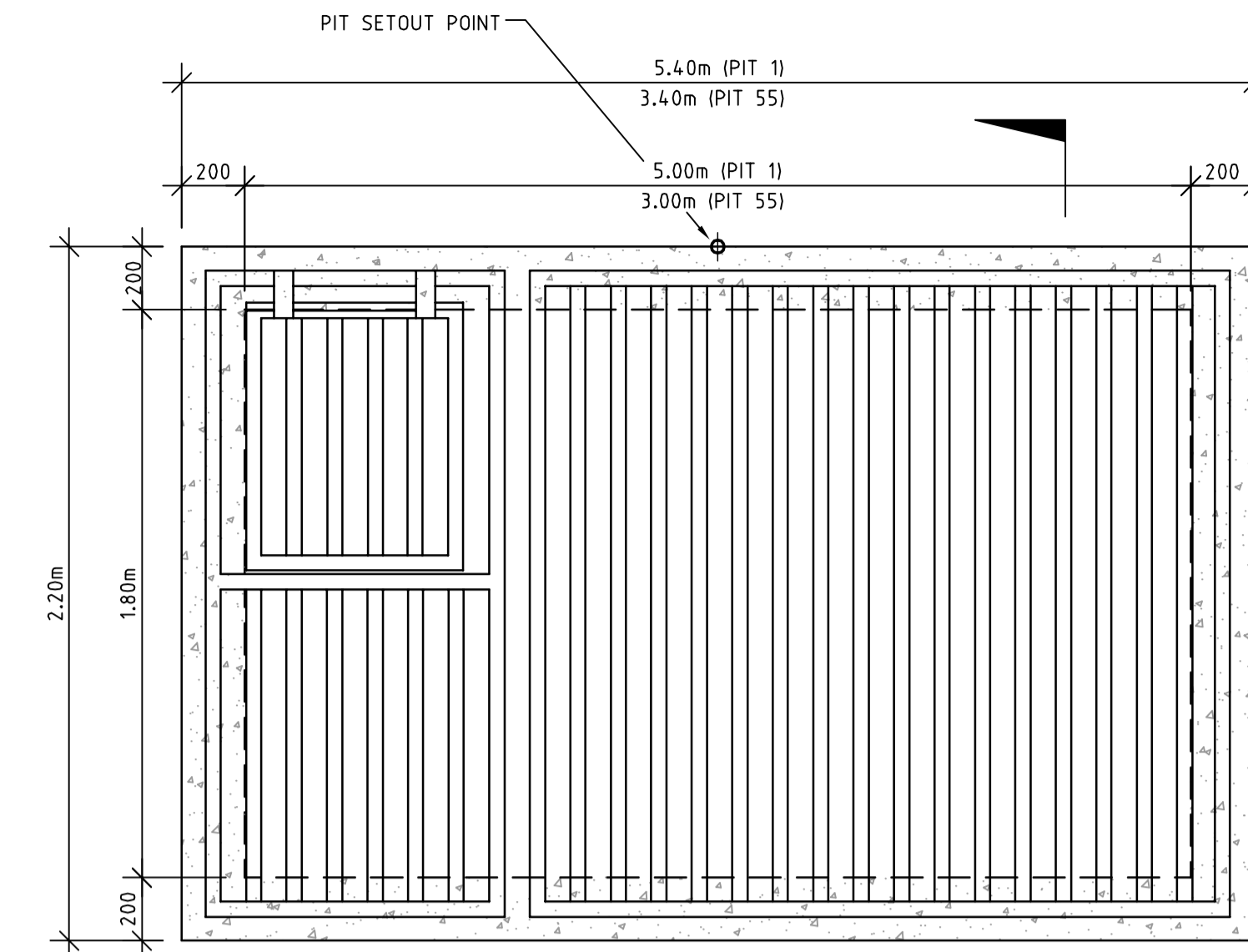
Drawing No. 0250EHL-01-34 Rev B
Sheet No. 34 of 40
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PIT 55 DETAIL
N.T.S.



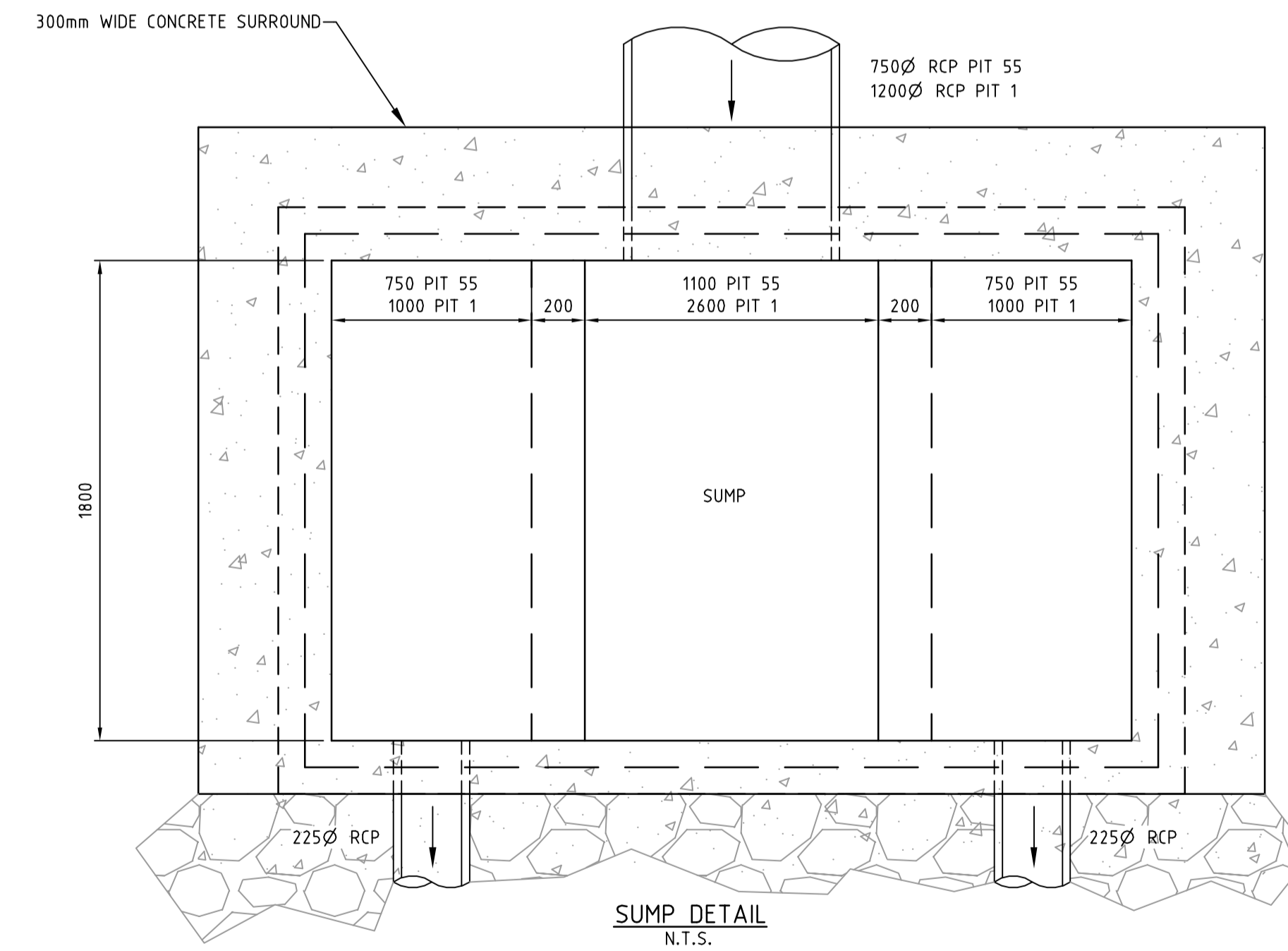
PIT 1 DETAIL
N.T.S.



PLAN PITS 1 & 55
N.T.S.

| PIT SETOUT POINTS | | | |
|-------------------|---------|----------|-------|
| PIT | EASTING | NORTHING | RL |
| 1 | 9900.10 | 48900.88 | 10.45 |
| 55 | 9857.10 | 48661.21 | 10.95 |

FOR PIT REINFORCEMENT DETAILS REFER CCG302 & CCG303



SUMP DETAIL
N.T.S.

FOR DETAILS OF CONSTRUCTION OF PIPE GRILLE REFER TO MELBOURNE WATER STANDARD DRAWING No. 7251/8/320



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| C MINOR AMENDMENTS | 29.03.10 | |
| B COUNCIL AMENDMENTS | 23.12.09 | |
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| | | |
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| Checked | C. Birkett | July 2009 |
| Approved | J. Golden | July 2009 |

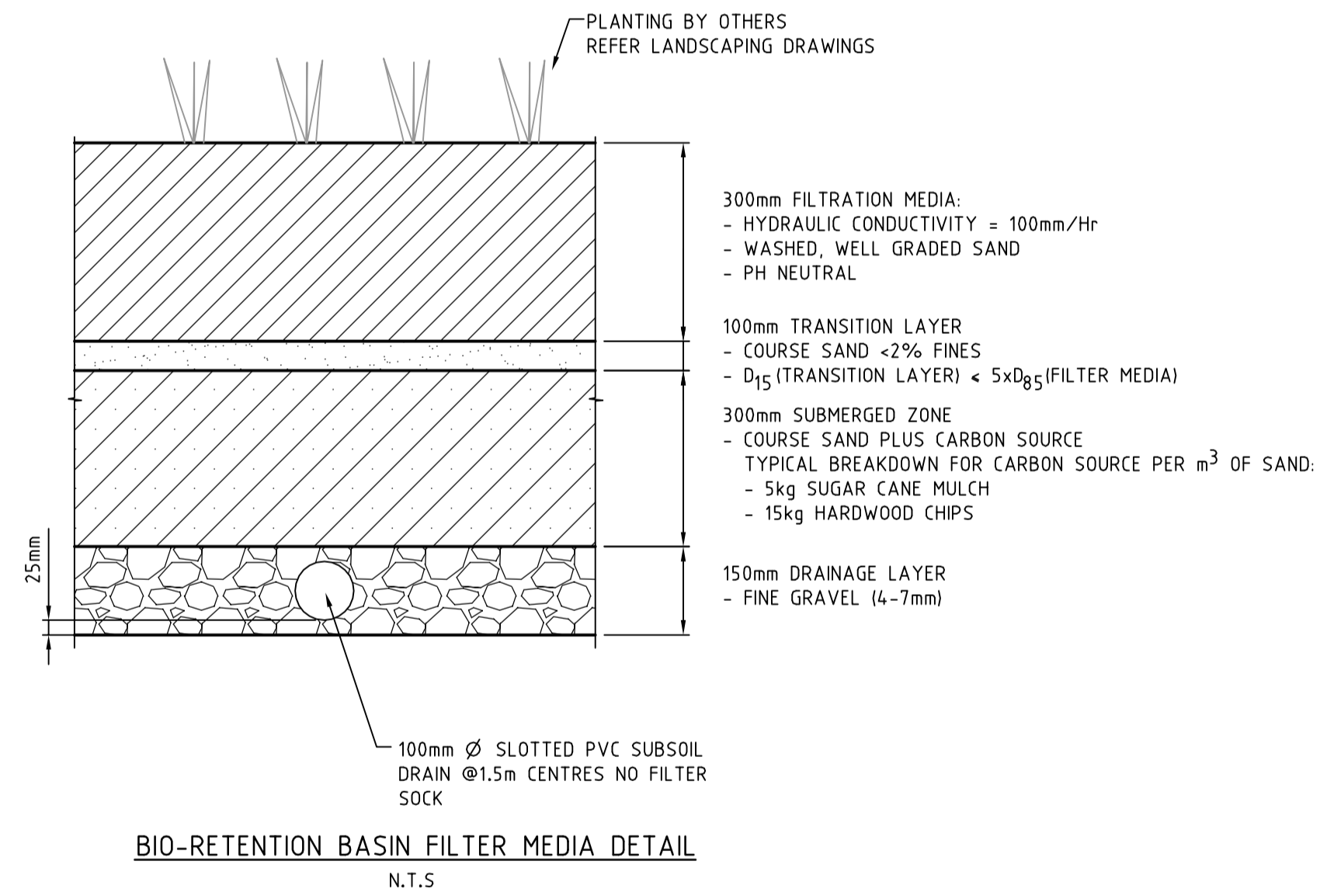
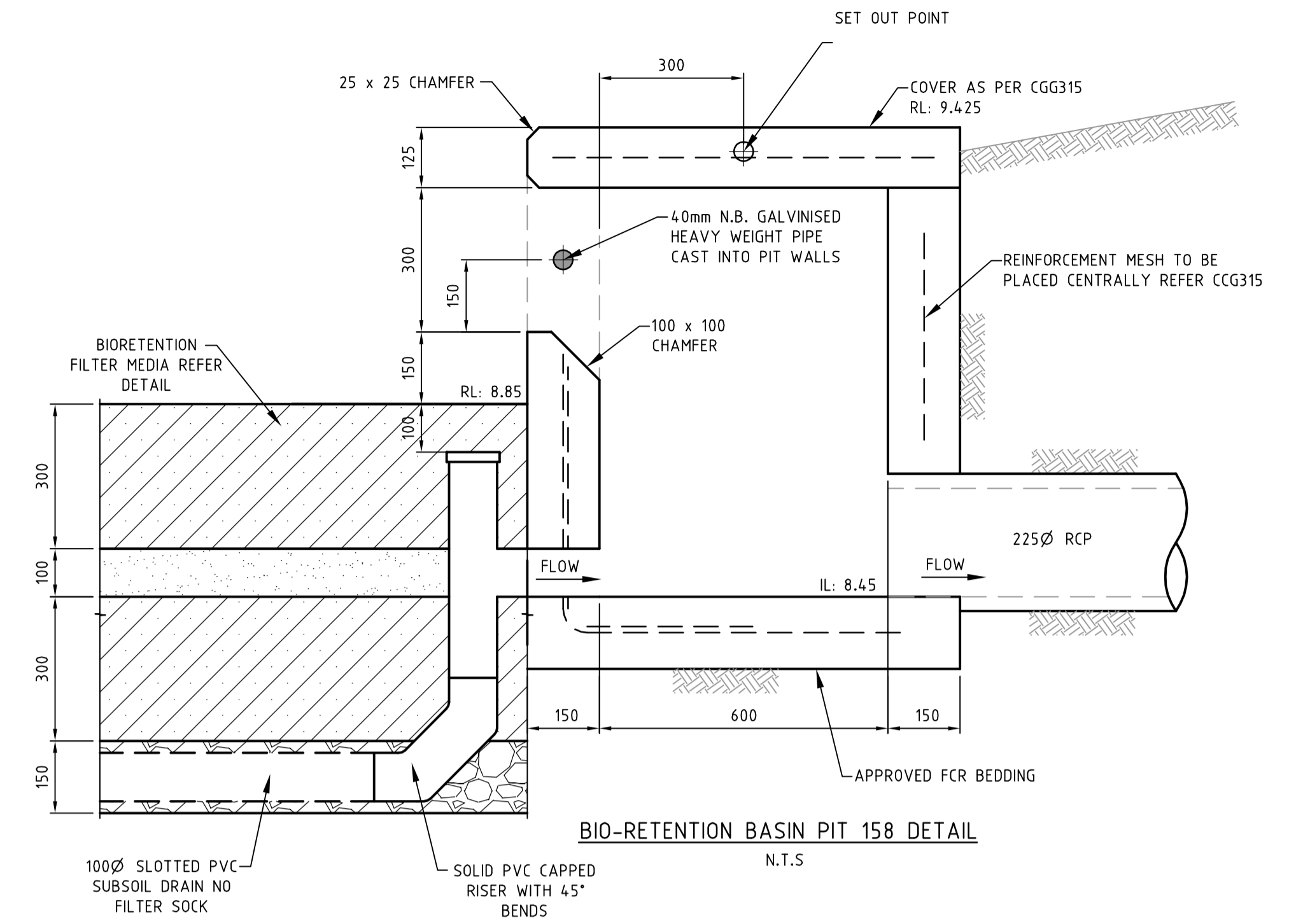
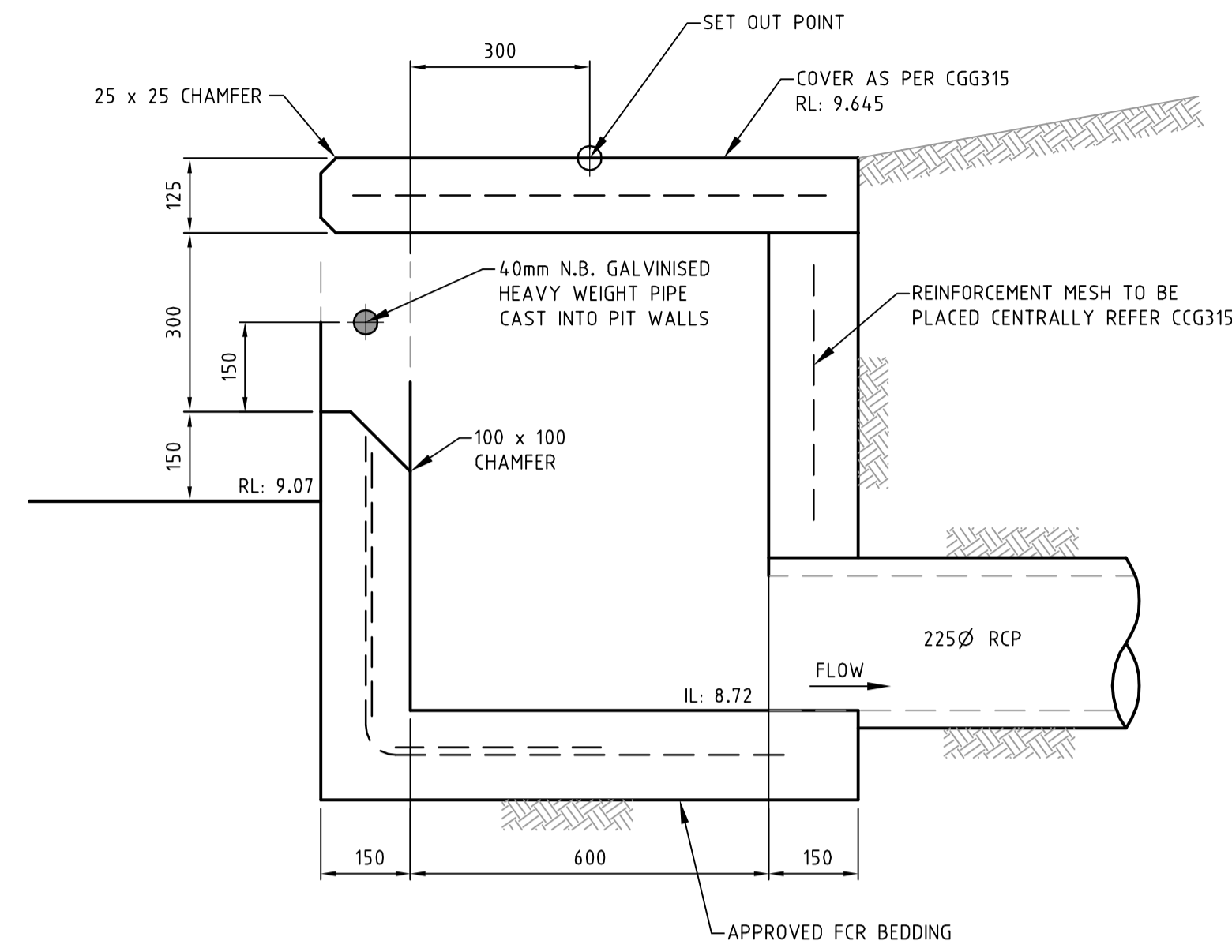
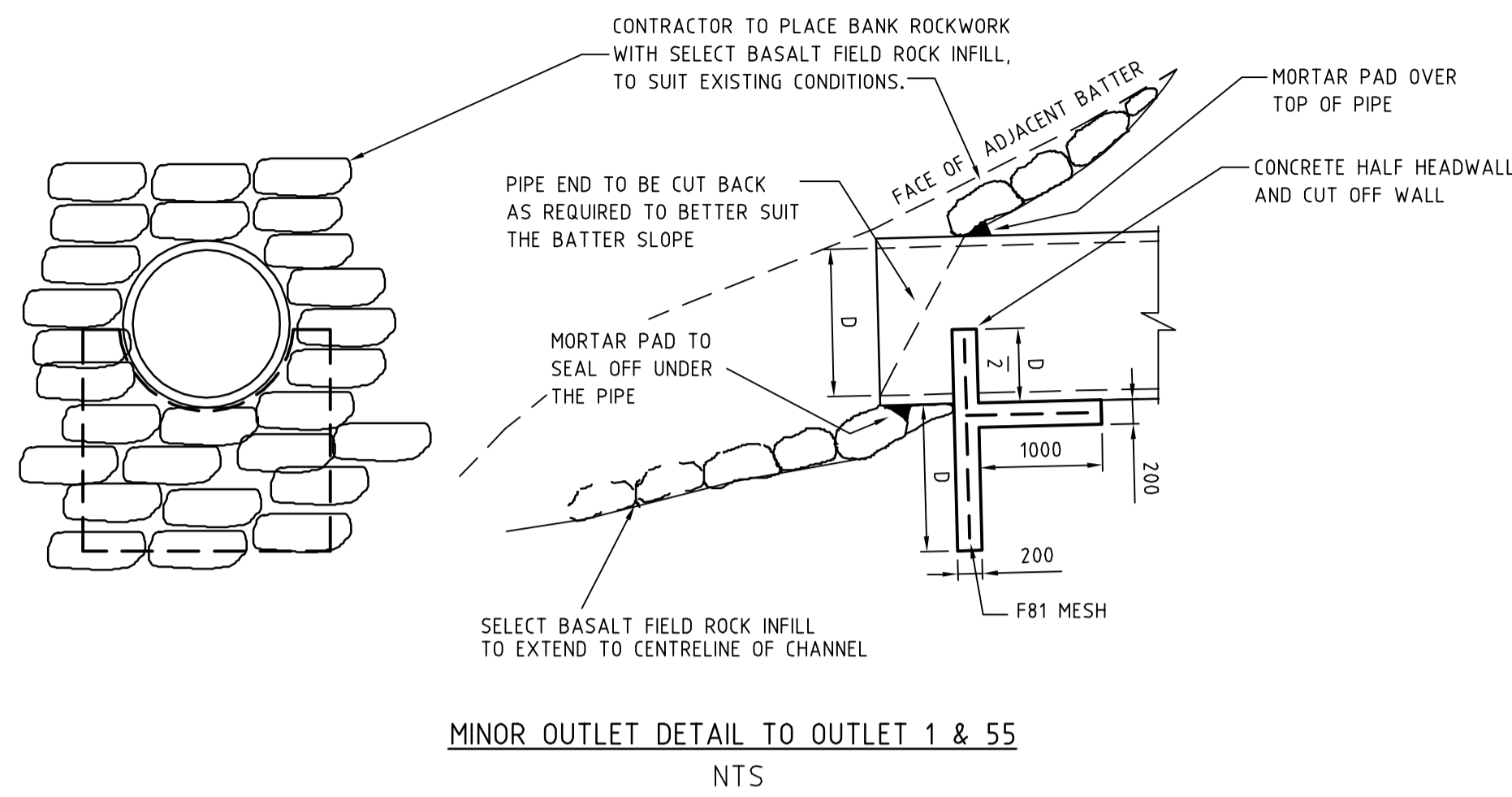
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Estuary
Stage 1
City Of Greater Geelong
Roadworks and Drainage
Basin Details Sheet 1

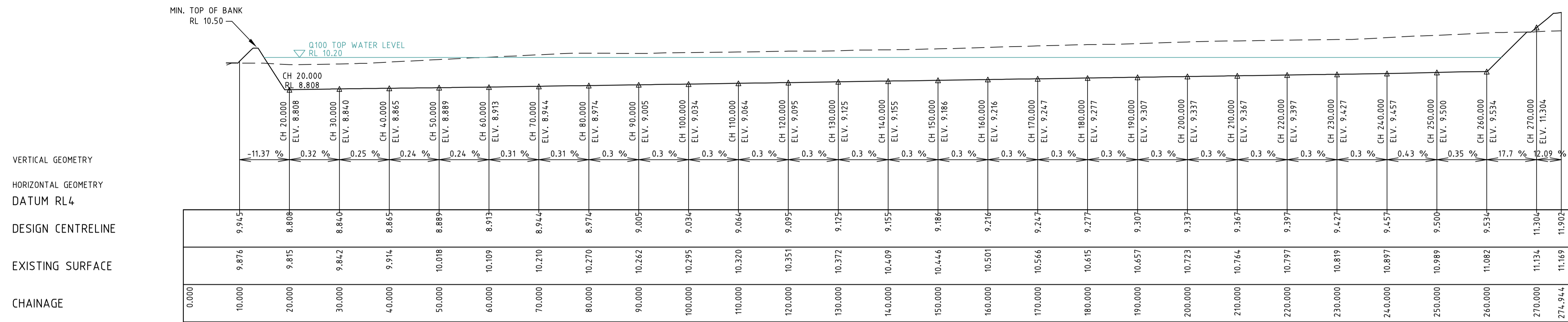
Drawing No. 0250EHL-01-35
Sheet No. 35 of 40

Rev C

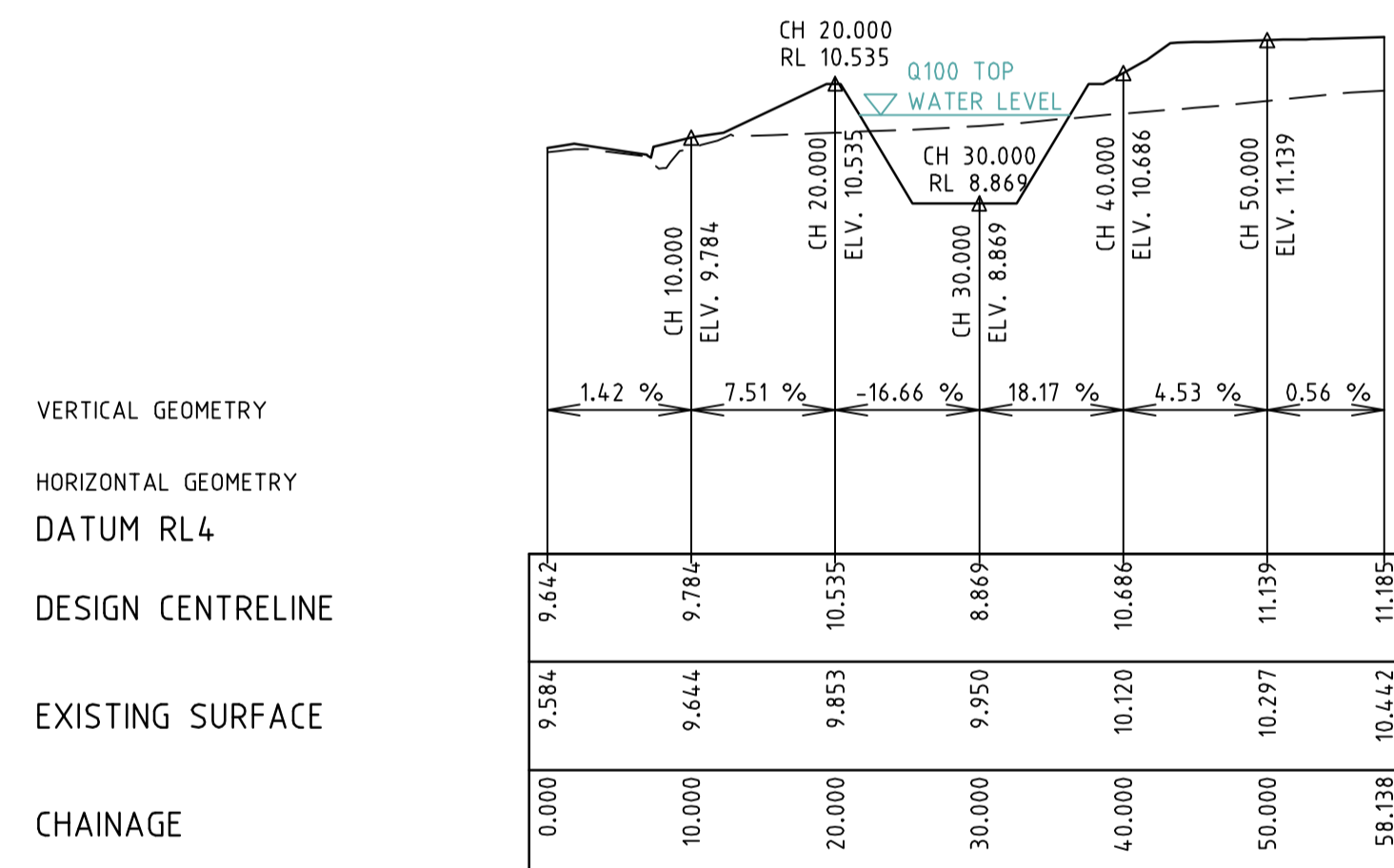
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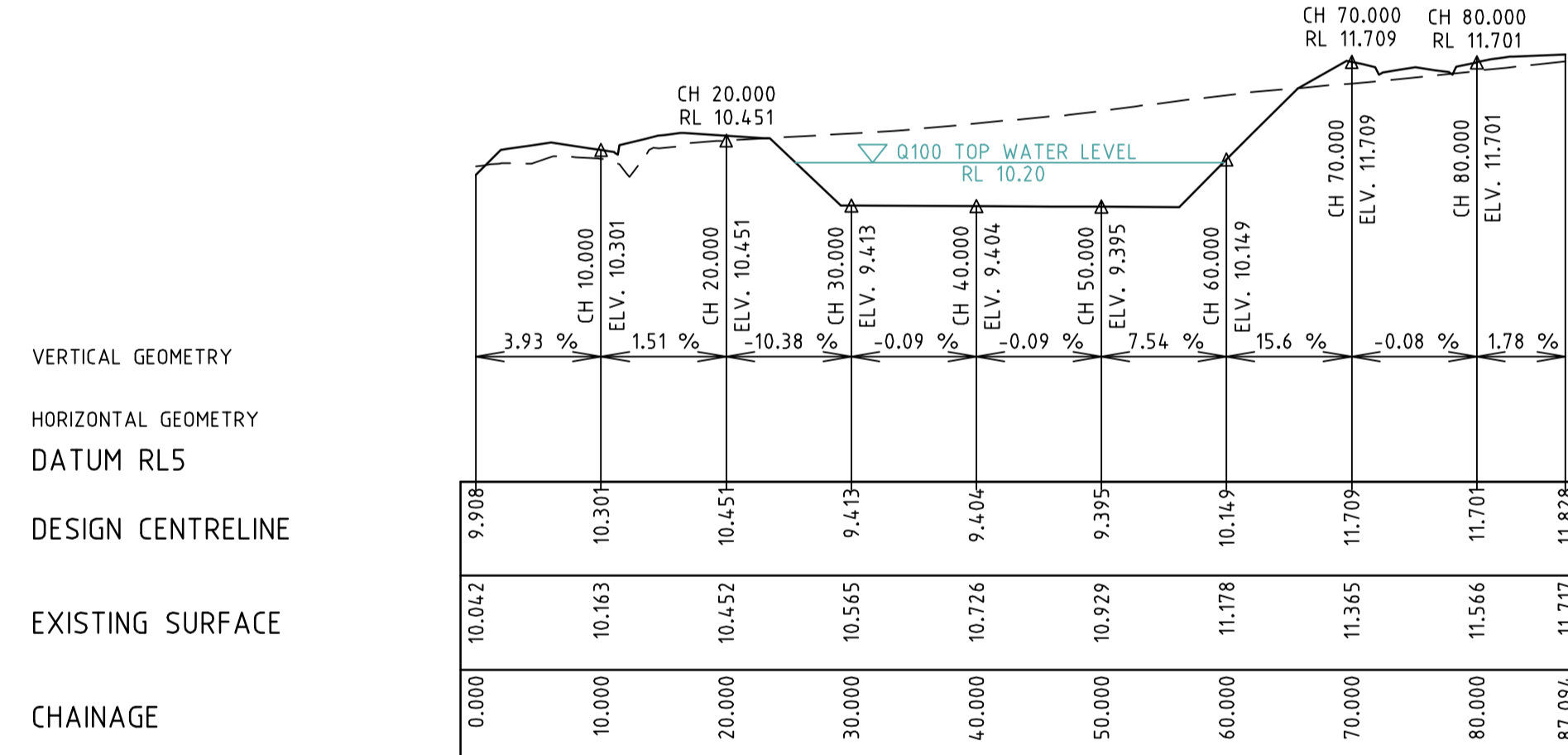
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| D | 10.05.10 | |
| C | 29.03.10 | |
| B | 23.12.09 | |
| A | 23.10.09 | |



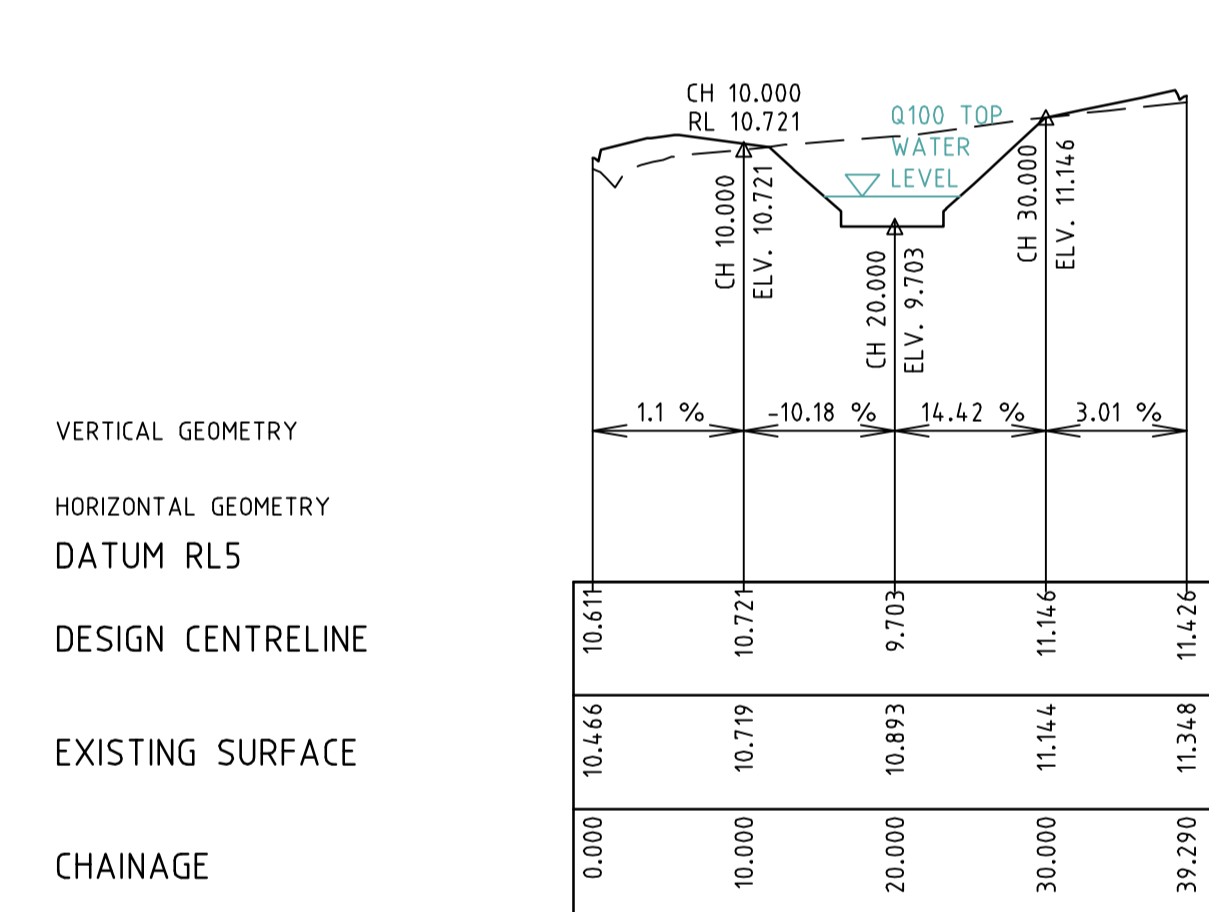
LONGITUDINAL SECTION A-A



LONGITUDINAL SECTION B-B



LONGITUDINAL SECTION C-C



LONGITUDINAL SECTION D-D



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Southbank, Victoria 3006

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|----------------------|----------|-------|
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LEGEND

- EXISTING SURFACE
- DESIGN LINE



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Checked C. Birkett July 2009
Approved J. Golden July 2009

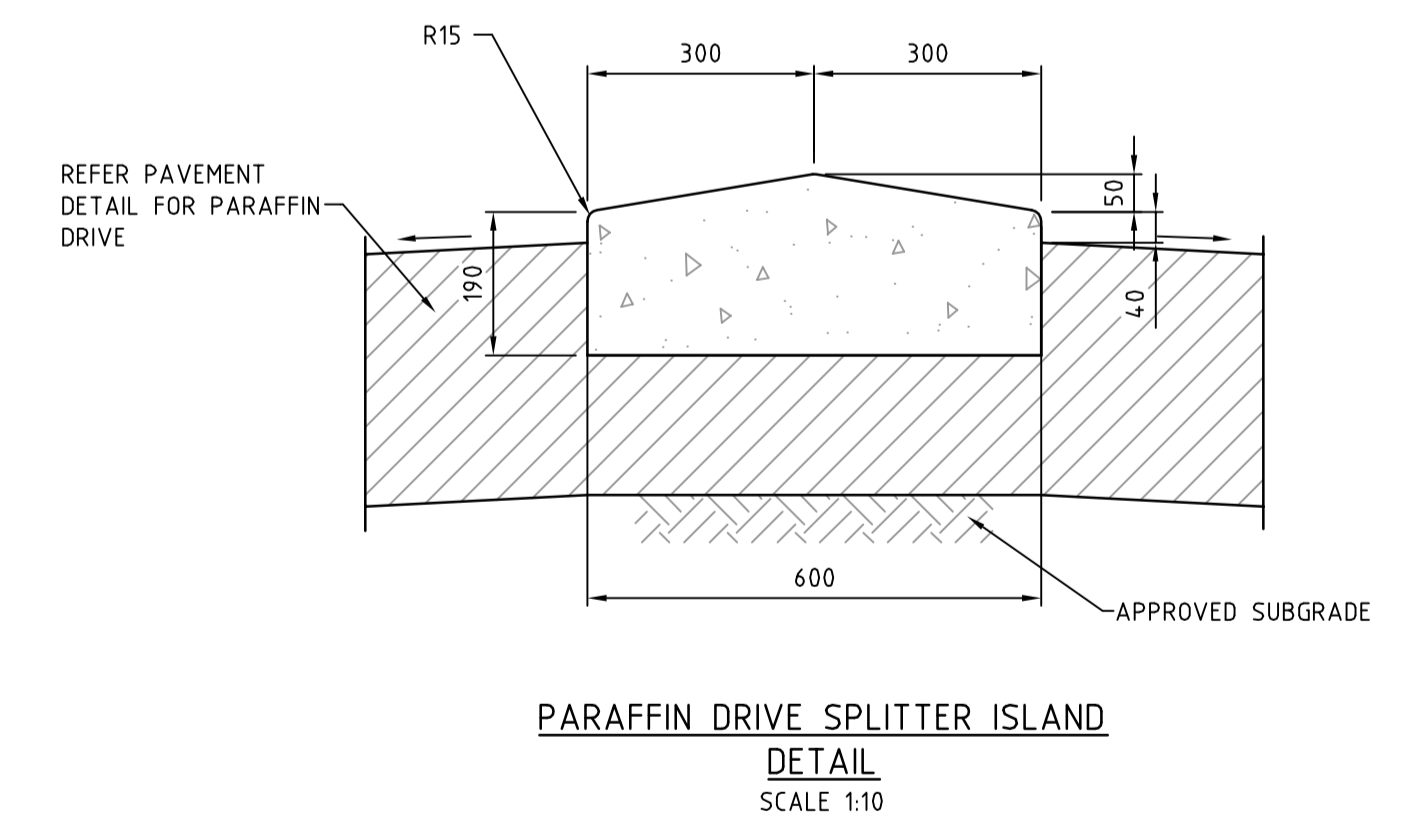
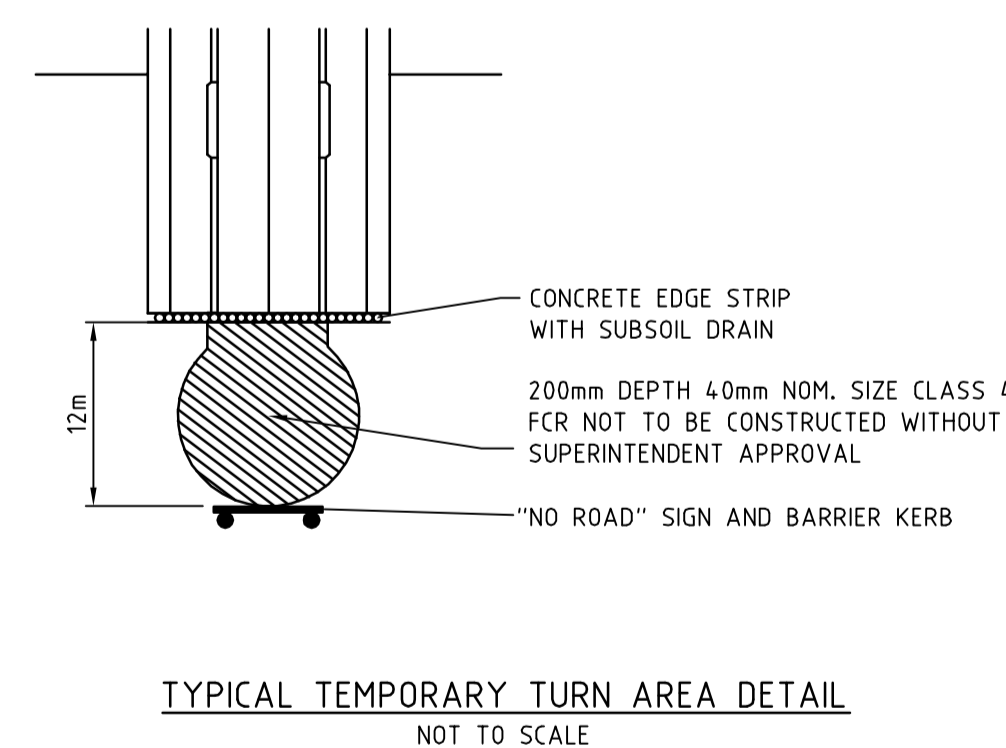
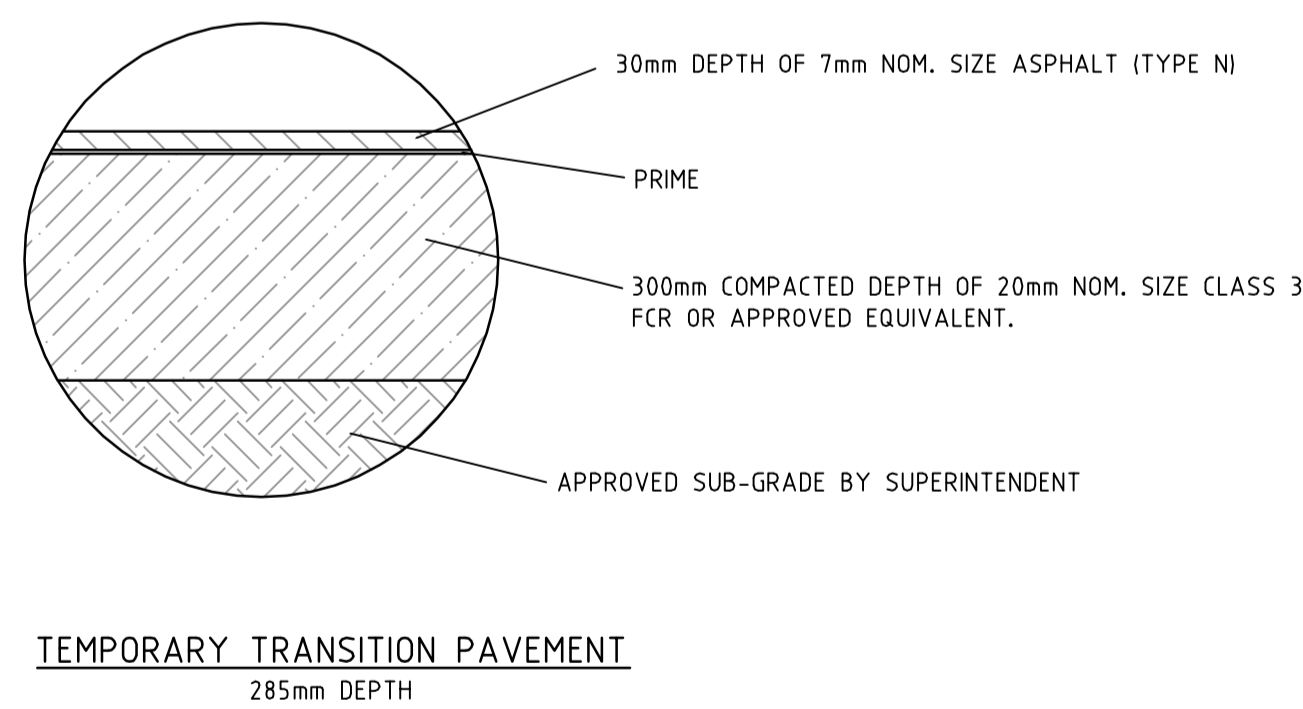
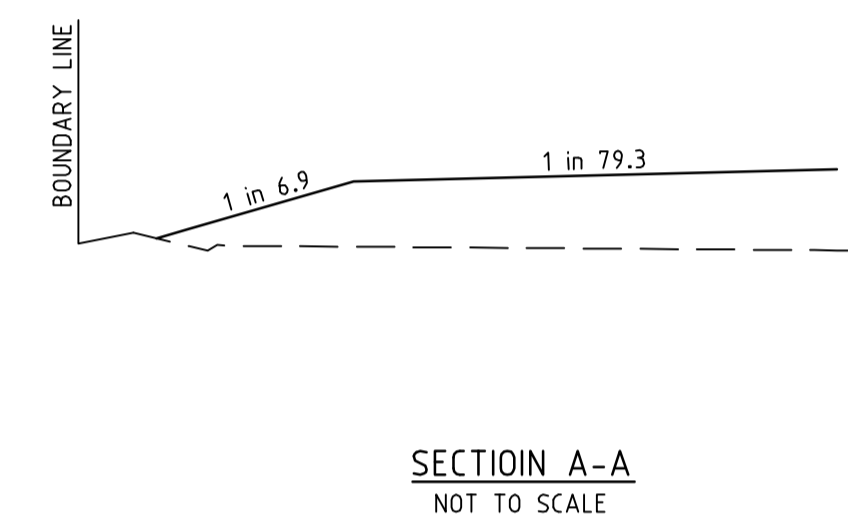
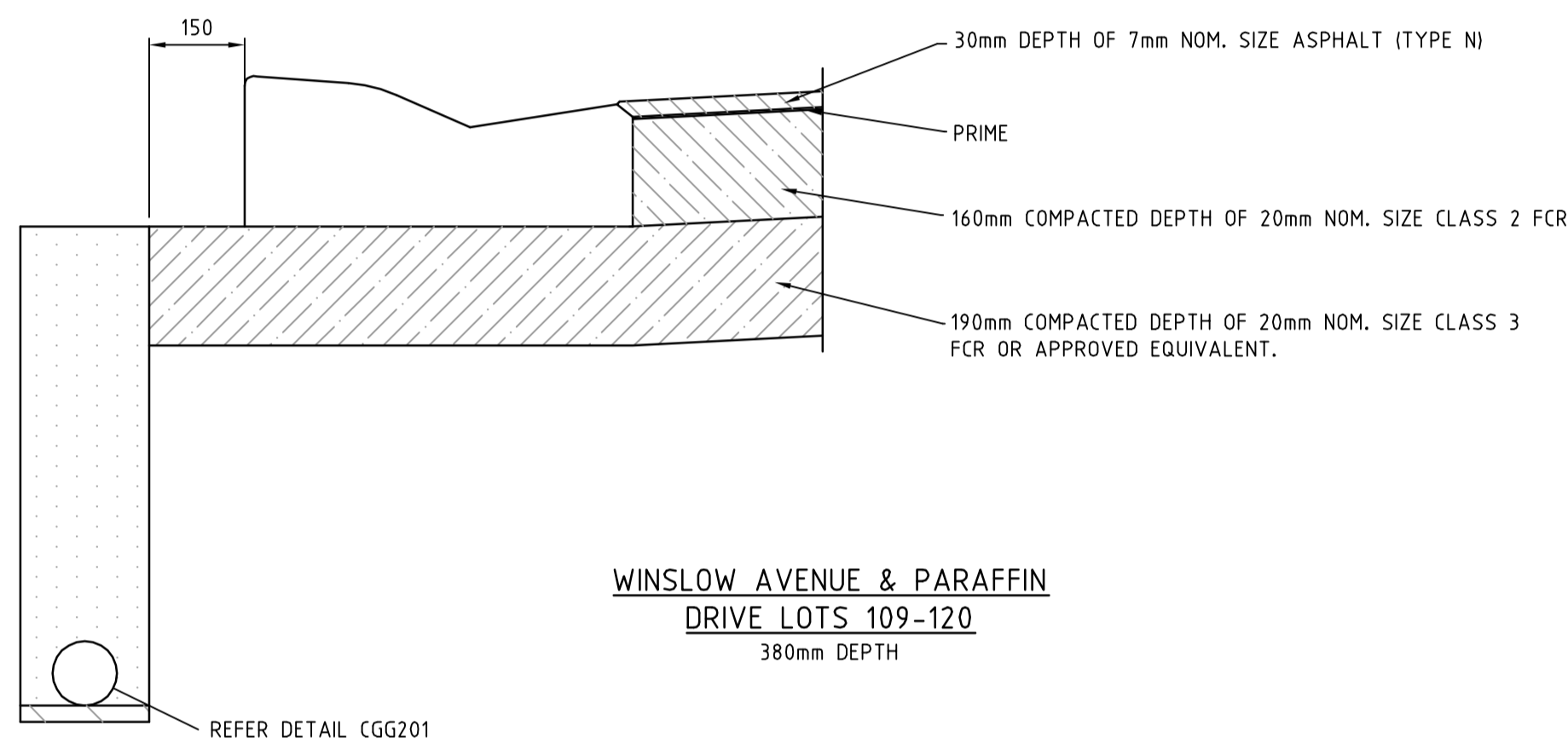
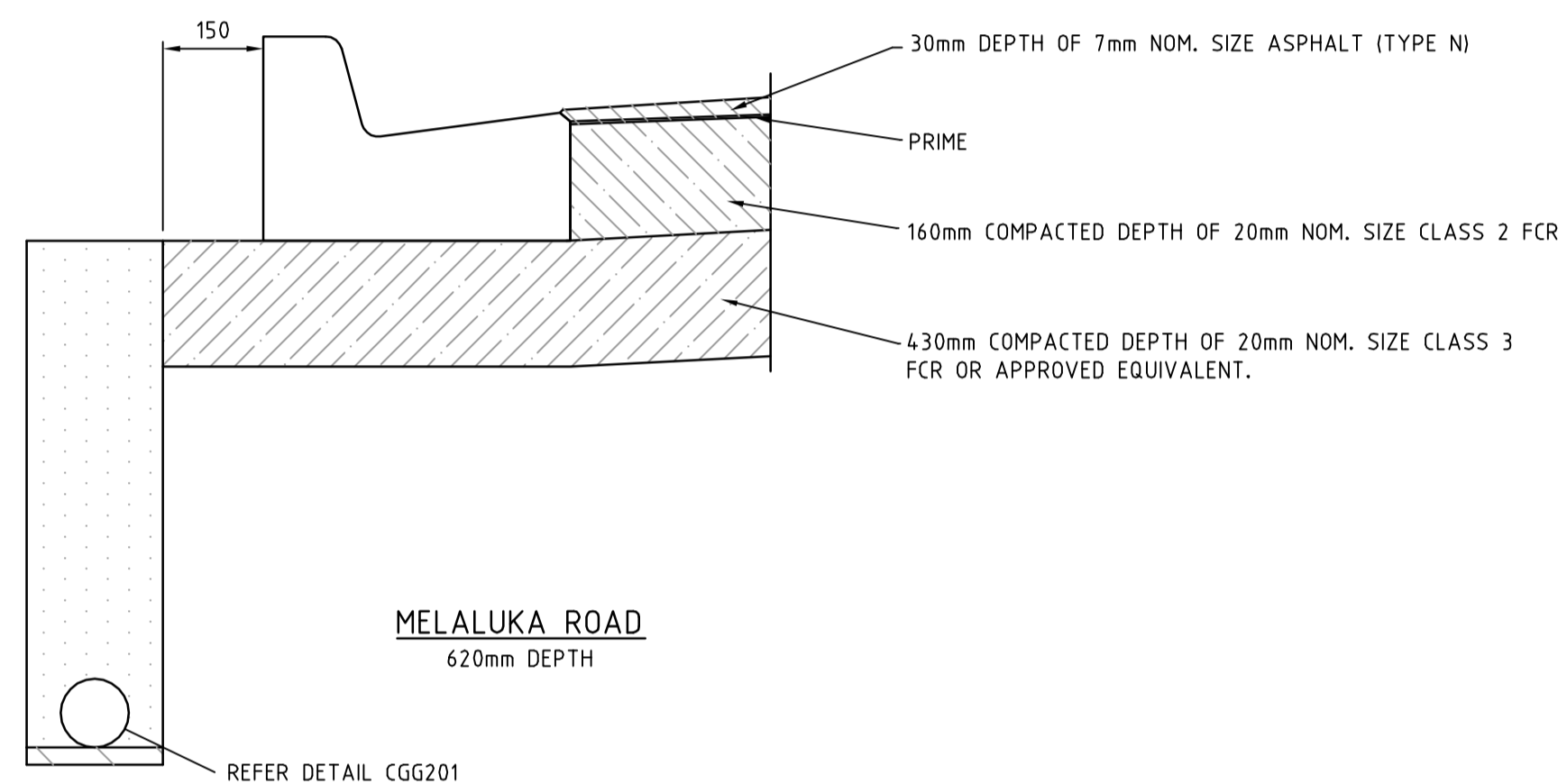
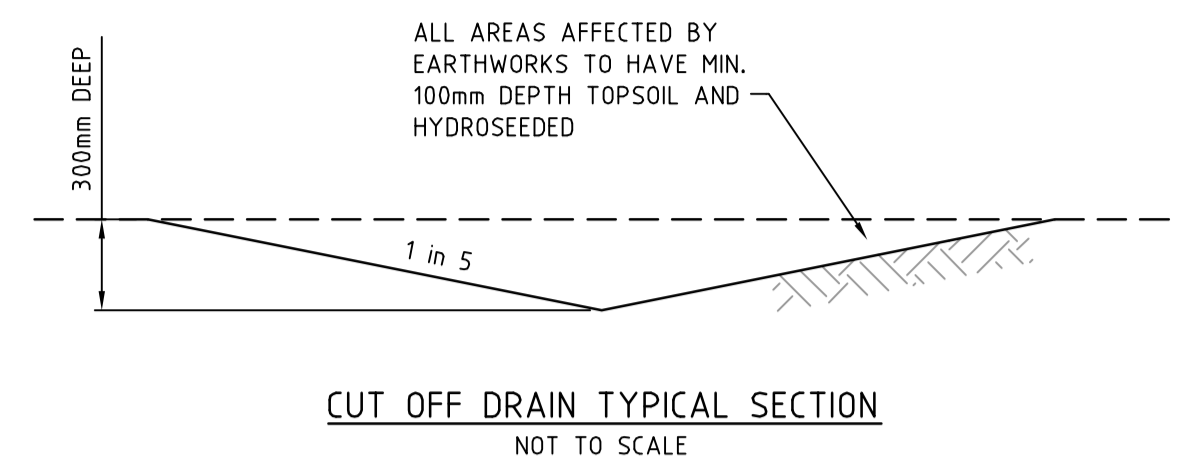
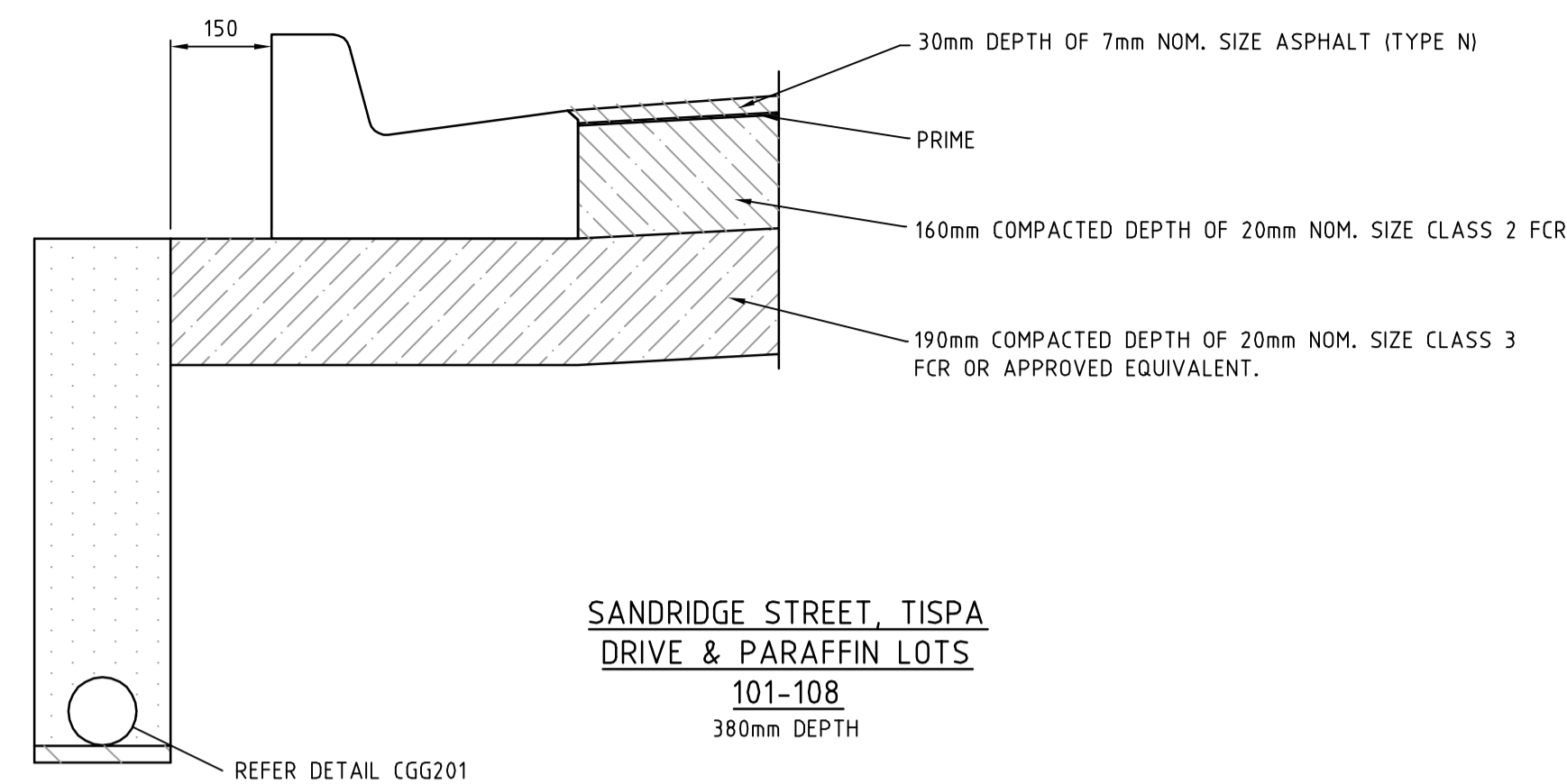
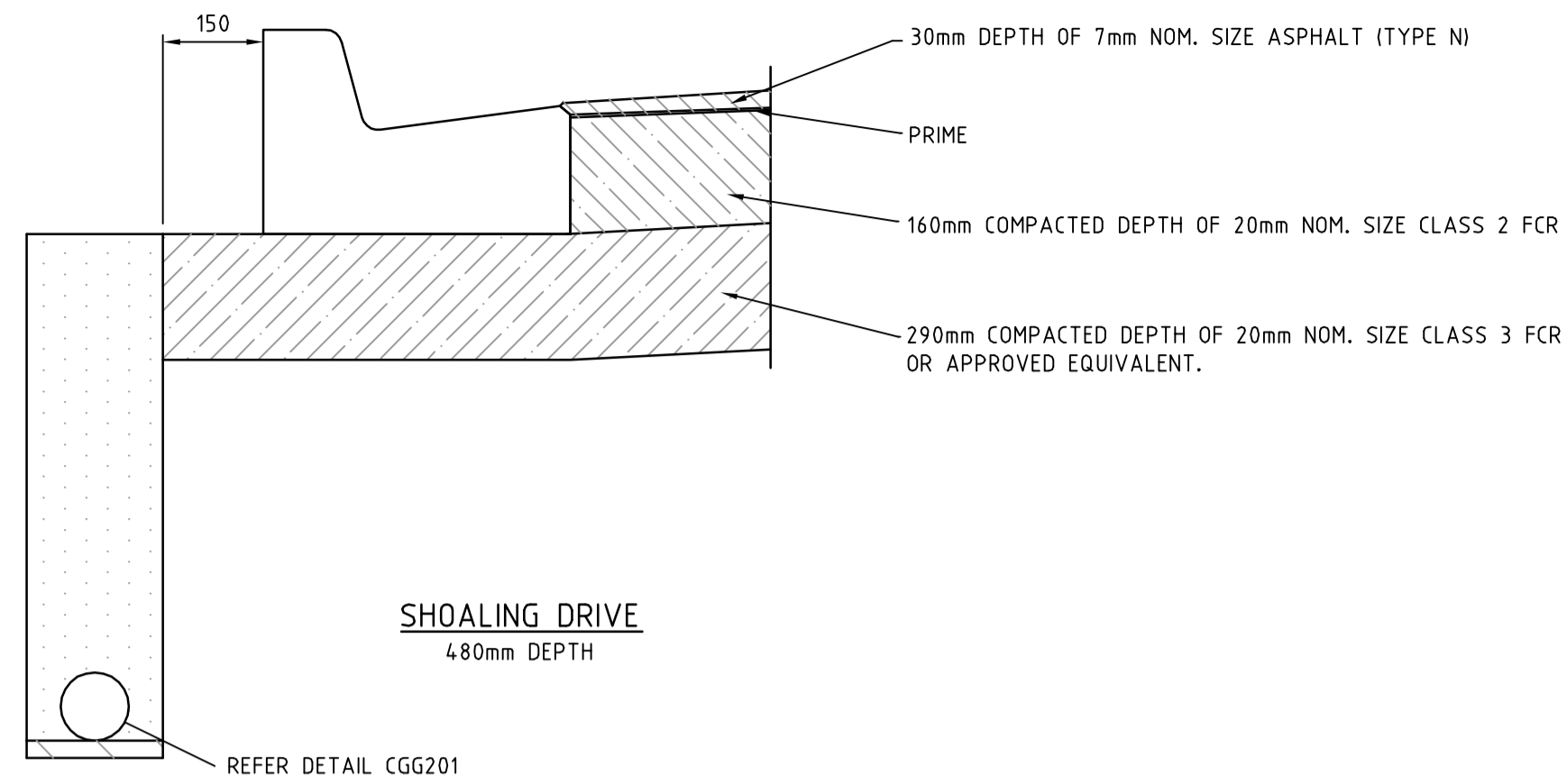
Estuary
Stage 1
City Of Greater Geelong
Roadworks and Drainage
Basin Cross Sections - 1

Drawing No. 0250EHL-01-37
Sheet No. 37 of 40

Rev B

0 1 2 4
0 0.5 1 2
Scale @ A1 H1:100, V1:50

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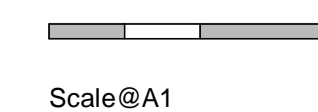
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Estuary
Stage 1
City Of Greater Geelong
Roadworks and Drainage
Standard Details

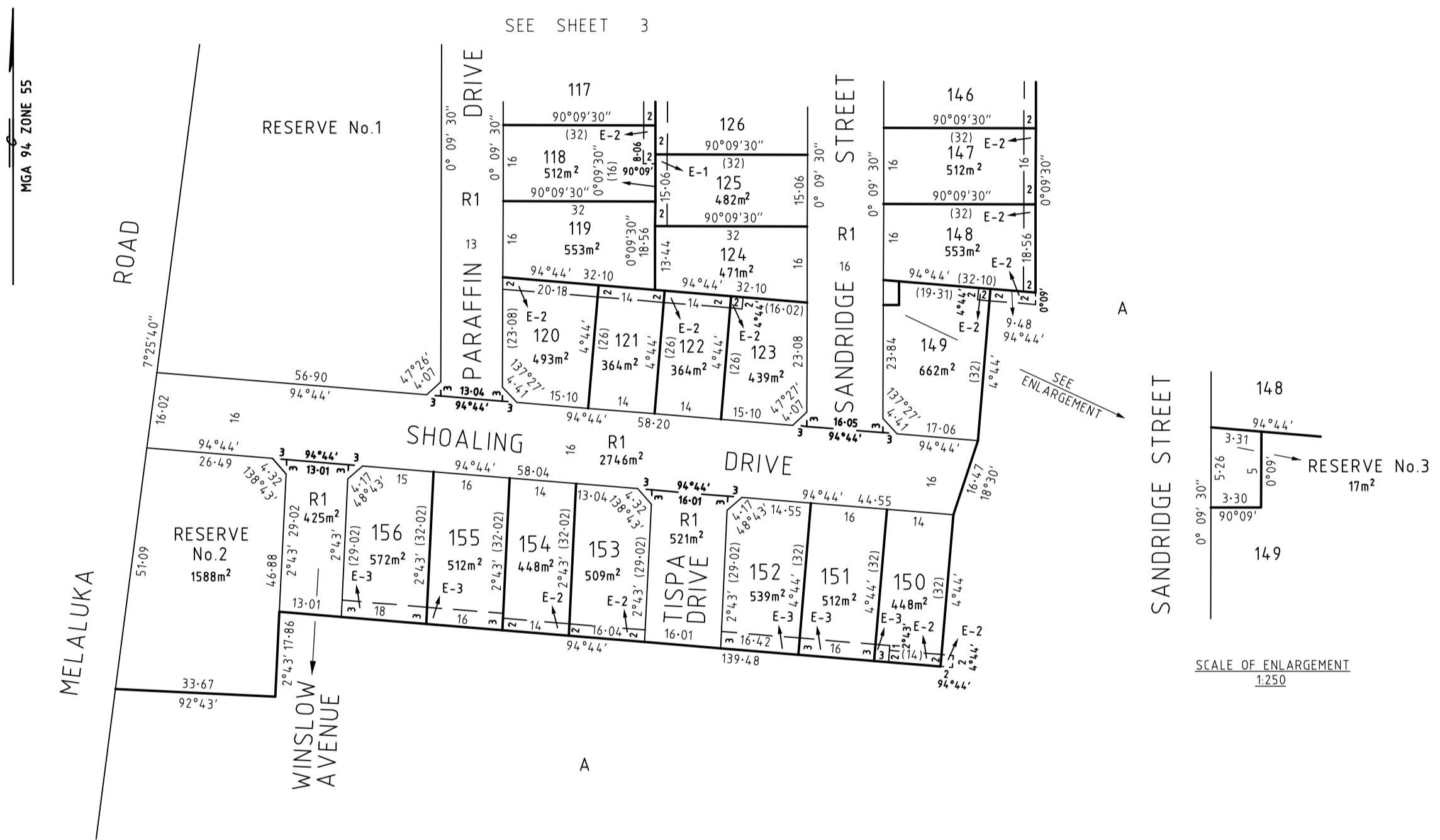
Designed C. Barker July 2009
Drawn M. Wiiks July 2009
Checked C. Birkett July 2009
Approved J. Golden July 2009

Drawing No. 0250EHL-01-38
Sheet No. 38 of 40

Rev B

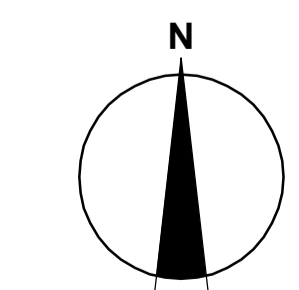


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Scale@A1 1:1000



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Estuary
Stage 1
City Of Greater Geelong
Roadworks and Drainage
Subdivision Setout Plan

Drawing No. 0250EHL-01-39
Sheet No. 39 of 40

Rev B

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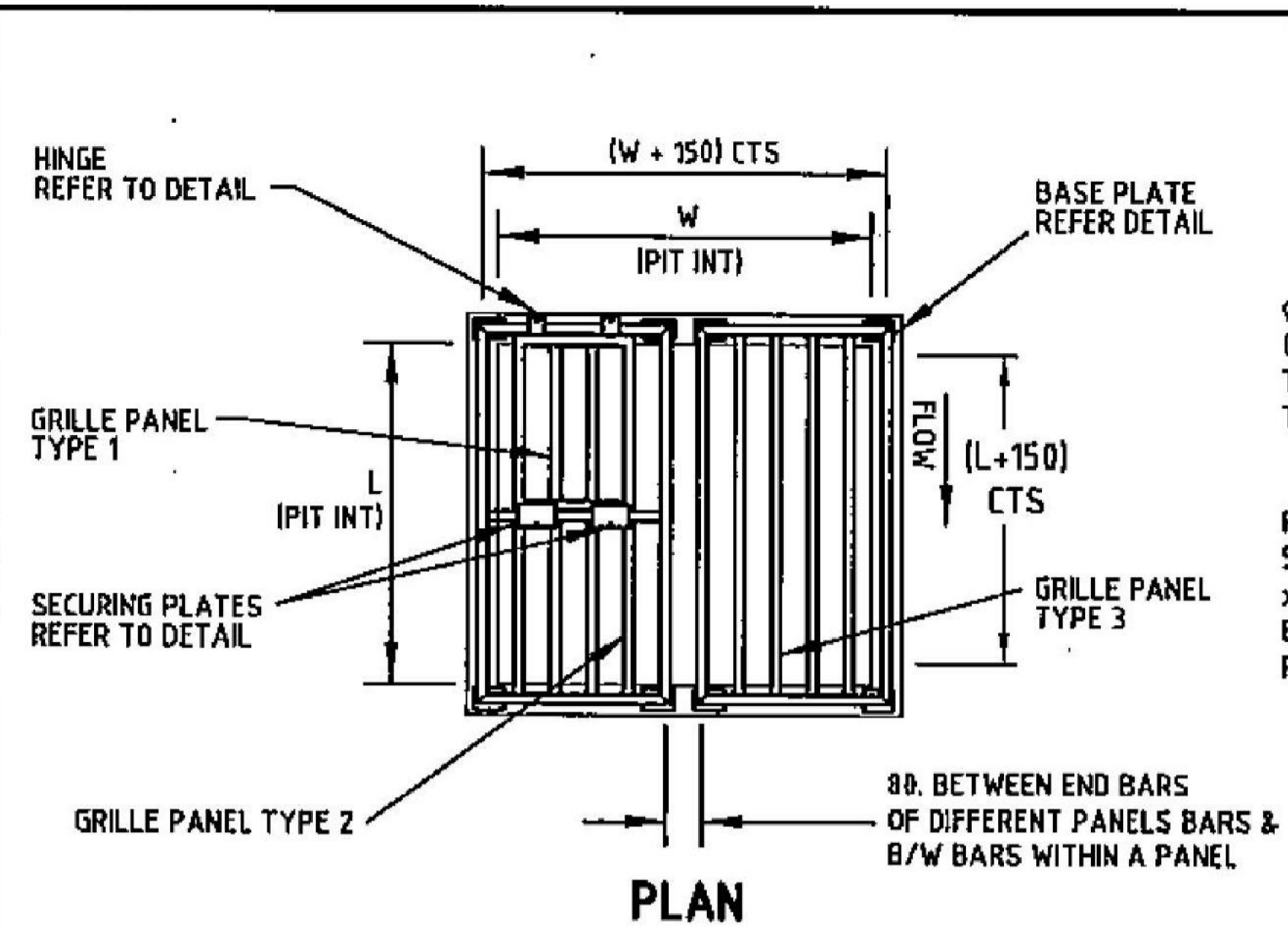
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| REV | A | Developed for LDM 2007 |
| NOTE | | |
| DATE | 08.07 | |

08.07

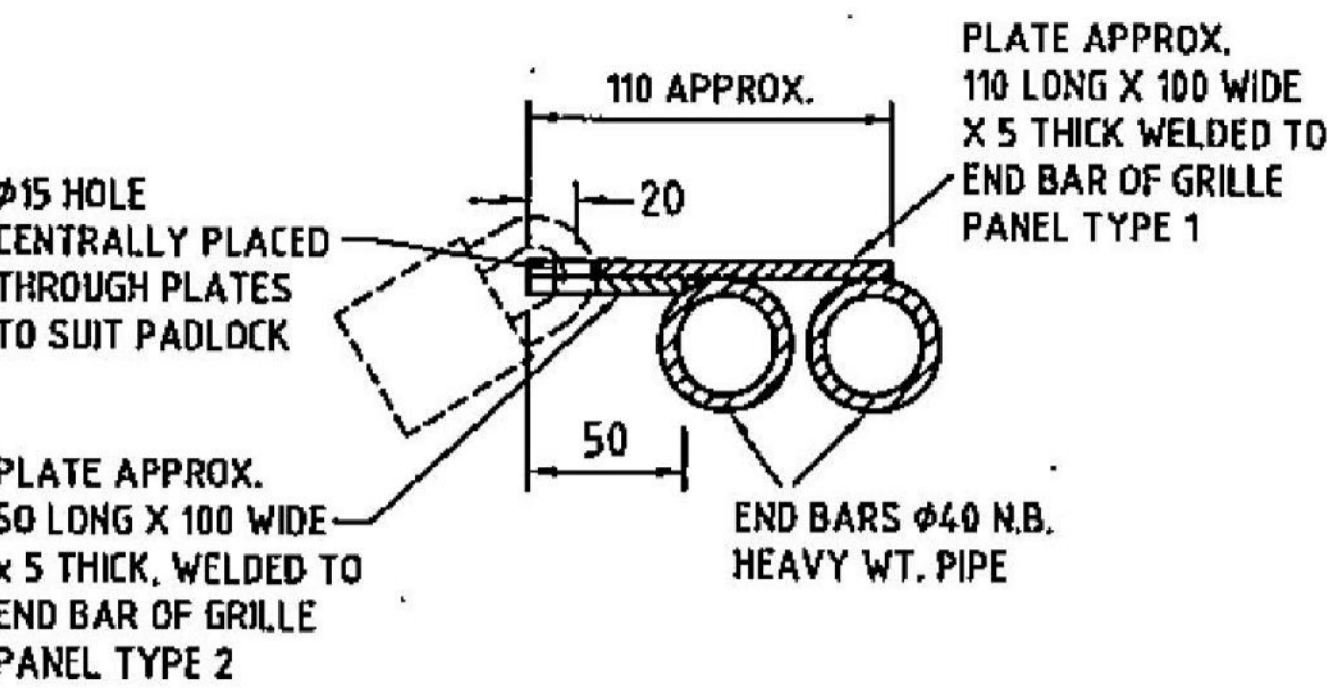
Melbourne Water



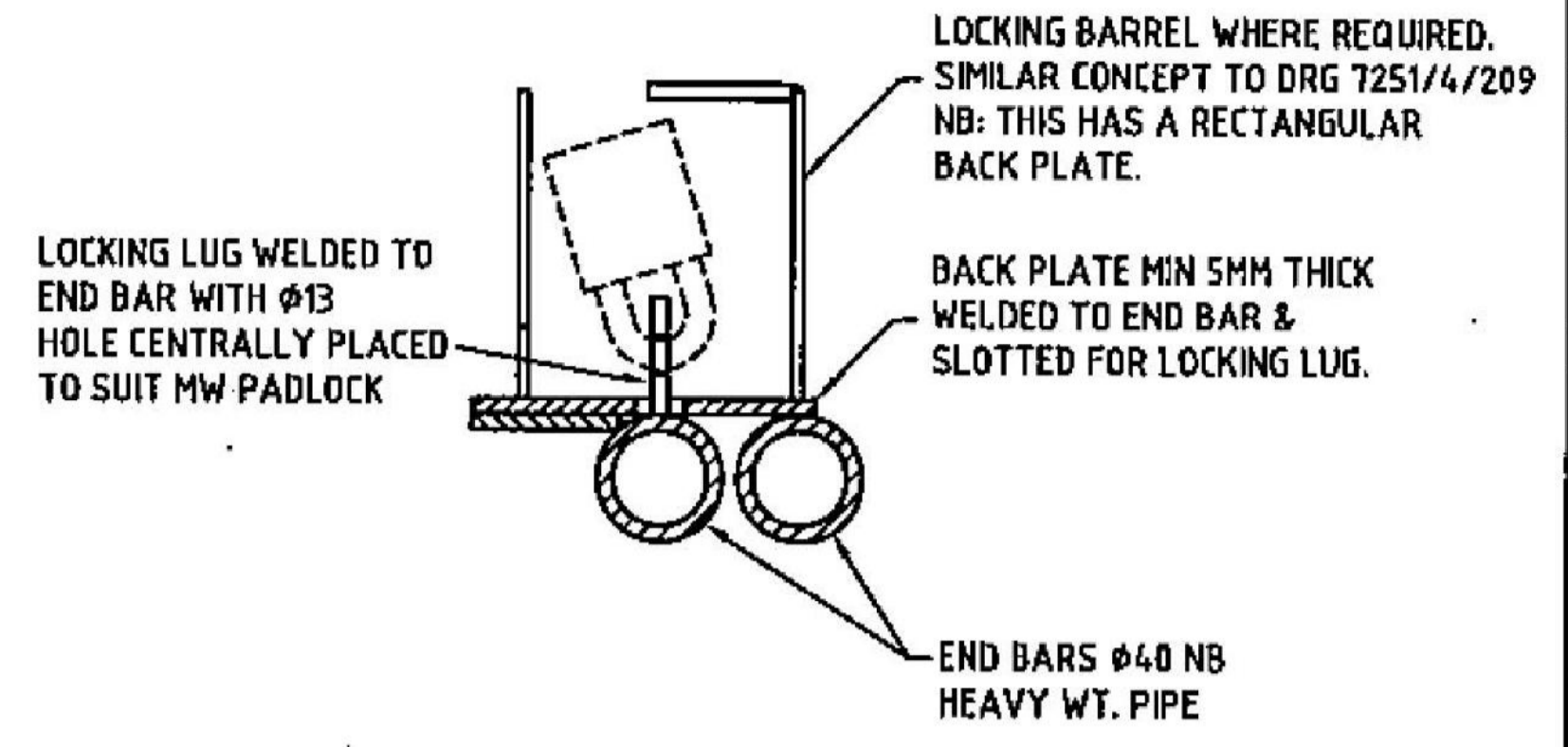
DRAINAGE STANDARD DRAWING
PIPE GRILLE TYPE 3
 (FOR PIT OPENING GREATER THAN 900 x 900)
 DRG NO. 7251/8/320
 Scale N.T.S.
 REV A



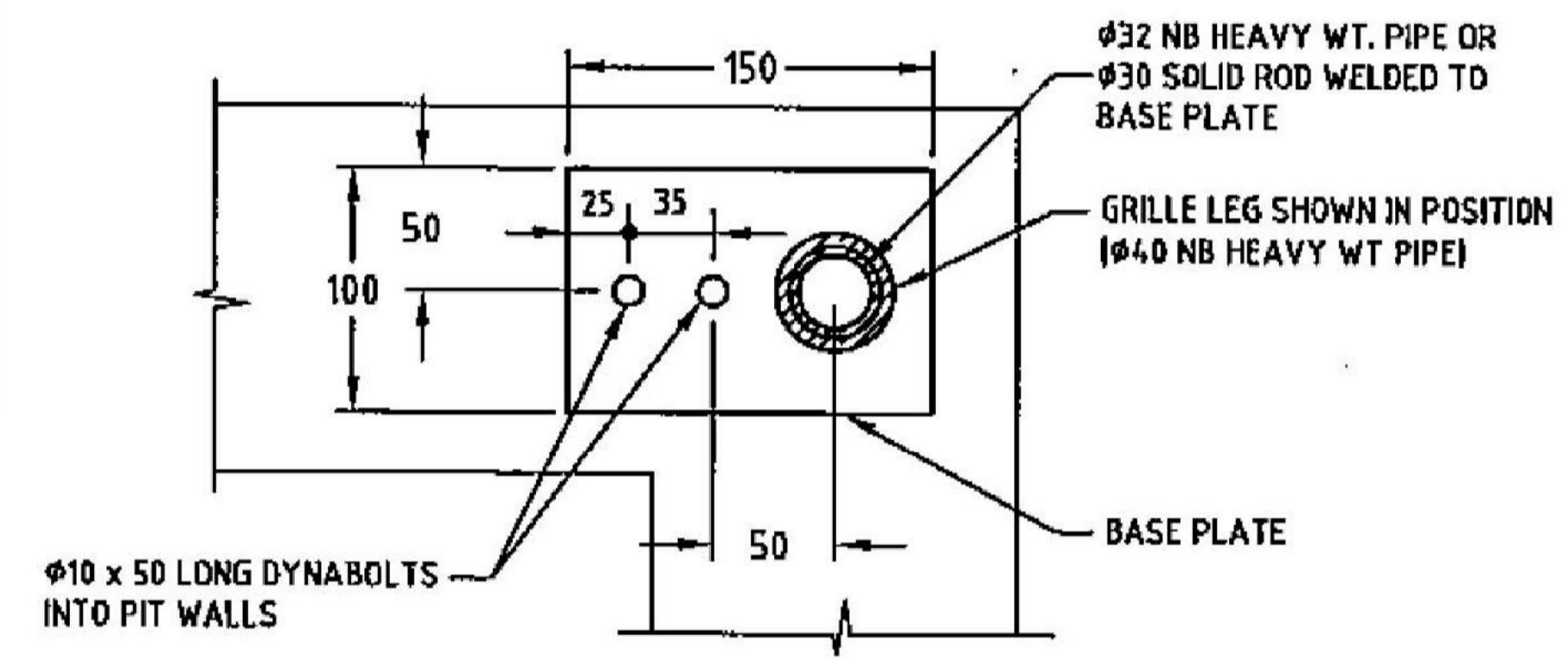
PLAN



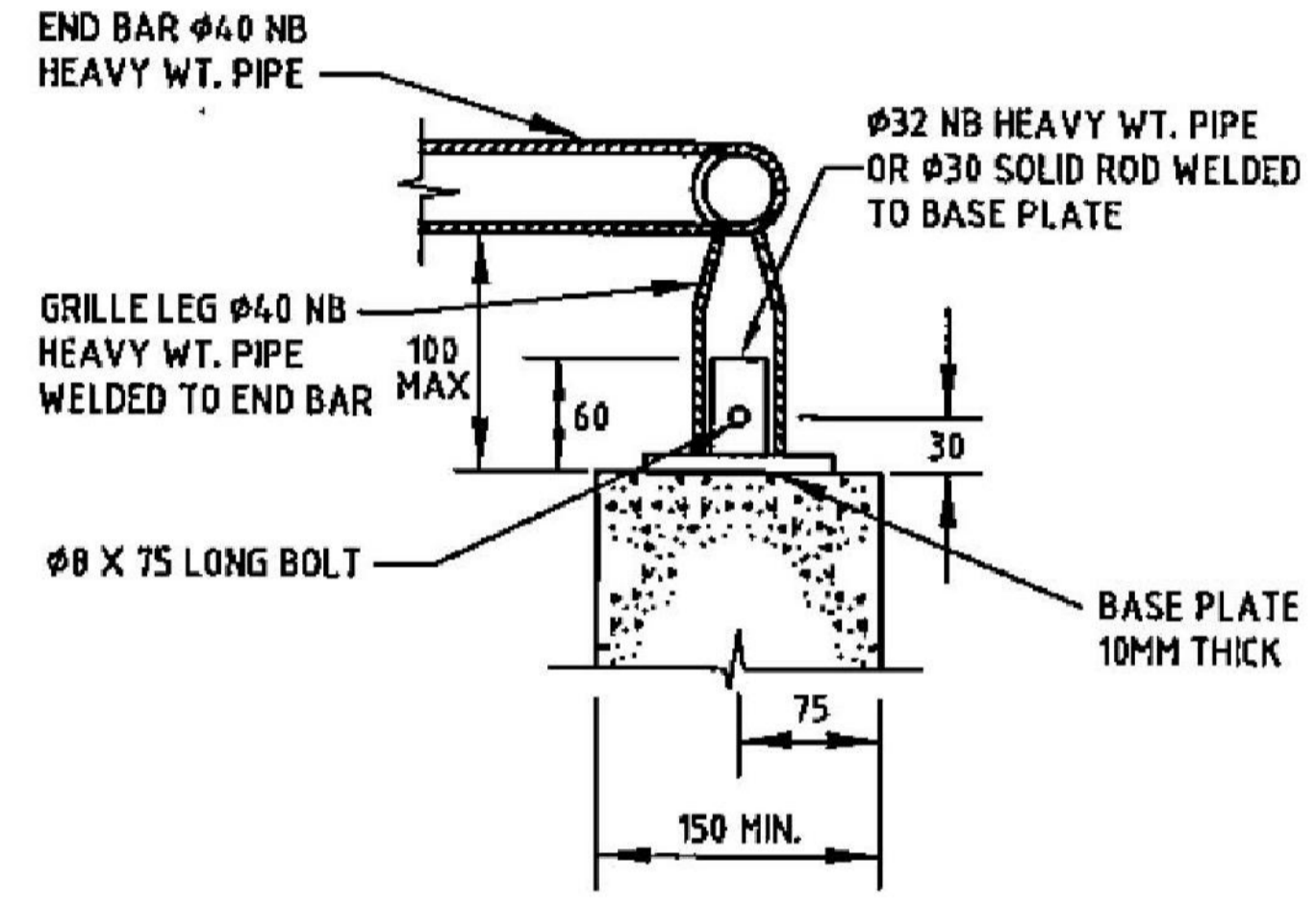
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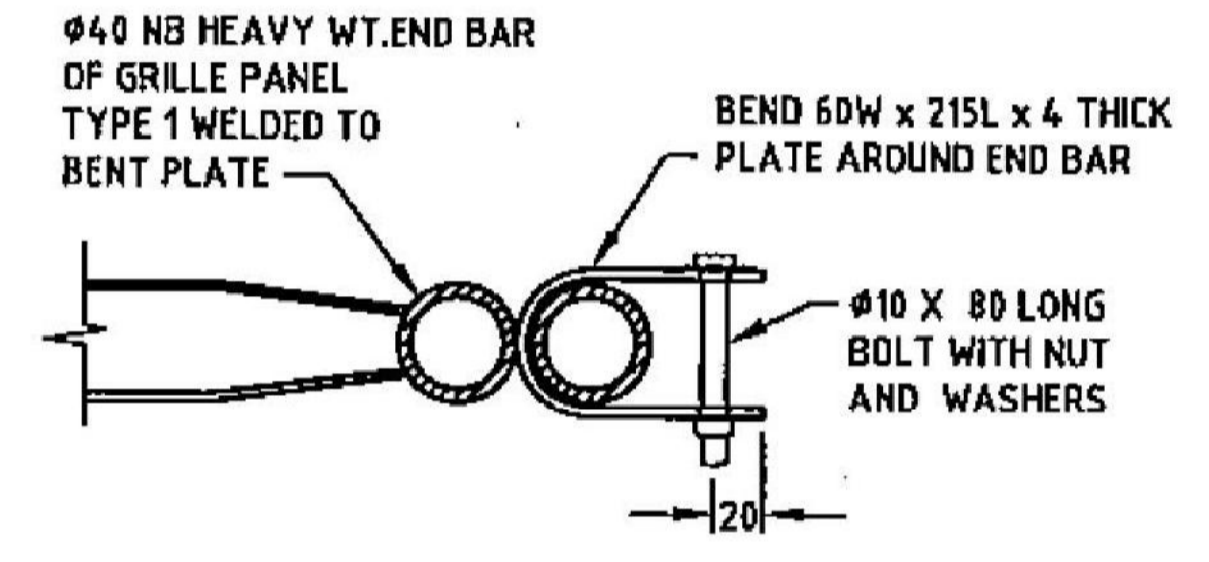
LOCKING BARREL DETAIL
 (ALTERNATIVE TO SECURING PLATE, WHERE REQUIRED)



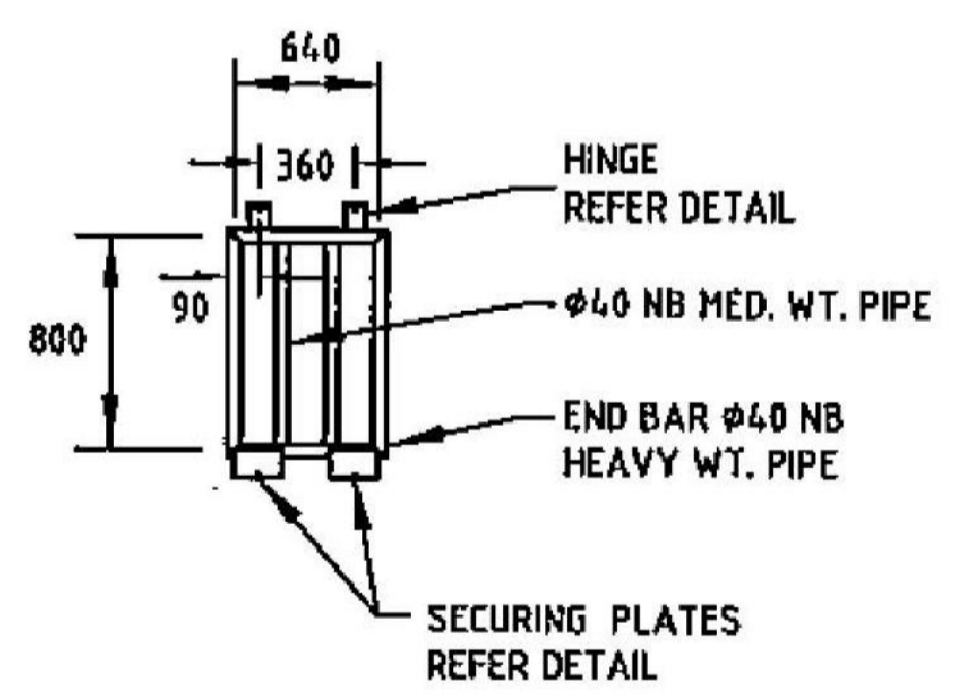
FIXING DETAIL - PLAN



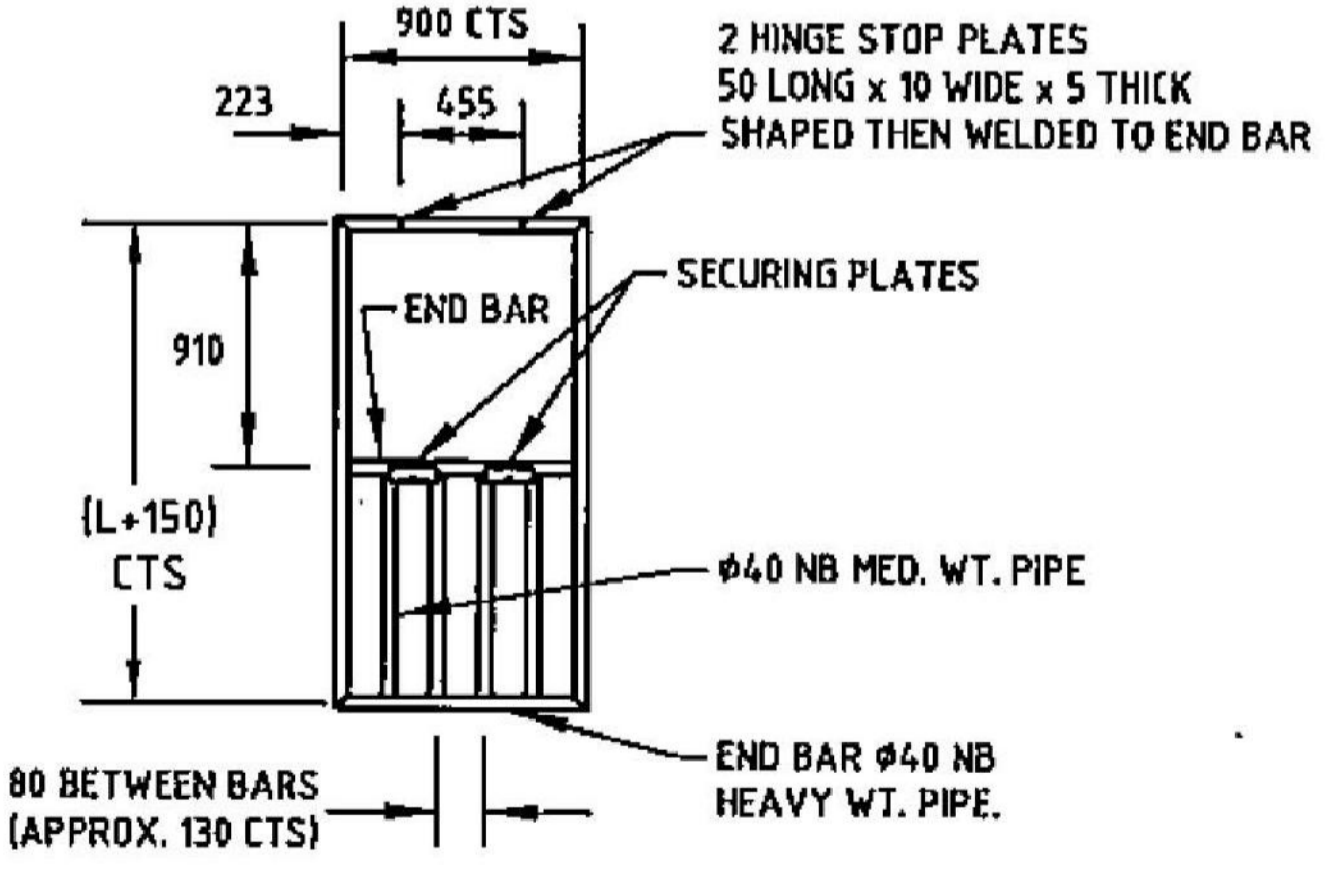
FIXING DETAIL - ELEVATION



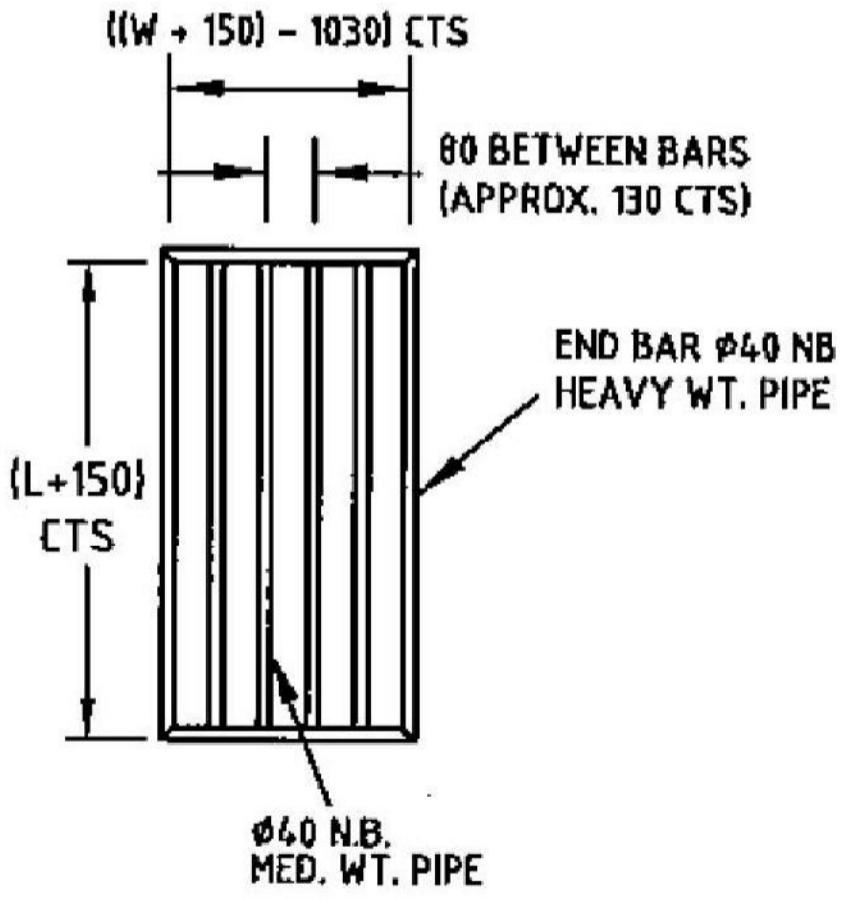
HINGE DETAIL



PANEL - TYPE 1



PANEL - TYPE 2



PANEL - TYPE 3

NOTES:

1. PIPE GRILLES ARE REQUIRED IN SITUATIONS WHERE FLOOD DEBRIS BUILD-UP IS LIKELY. IF THIS IS NOT THE CASE, A GRATED COVER WHICH SITS FLUSH WITH THE TOP OF THE PIT & CAN BE SECURED DOWN MAY BE ACCEPTABLE, PROVIDED THE DESIGN INTENT IS NOT COMPROMISED.
2. THIS CONCEPT PLAN IS FOR DESIGN PURPOSES ONLY. GRILLE DIMENSIONS L & W WILL VARY ACCORDING TO THE PIT DIMENSIONS.
3. ALL WELDS TO BE 6MM FILLET UNLESS SHOWN OTHERWISE.
4. AFTER FABRICATION, GRILLE AND ASSOCIATED FITTINGS TO BE HOT-DIPPED GALVANISED ACCORDING TO RELEVANT AUSTRALIAN STANDARDS (E.G. AS/NZ 4680). ALL HOLES THROUGH STEELWORK TO BE DRILLED PRIOR TO GALVANISING.
5. ALL NUTS, BOLTS AND WASHERS TO BE GALVANISED TO RELEVANT AUSTRALIAN STANDARDS.
6. NB STANDS FOR NOMINAL BORE.



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| REVISION | DATE | APP'D |
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| Designed | C. Barker | July 2009 |
| Drawn | M. Wilks | July 2009 |
| Checked | C. Birkett | July 2009 |
| Approved | J. Golden | July 2009 |

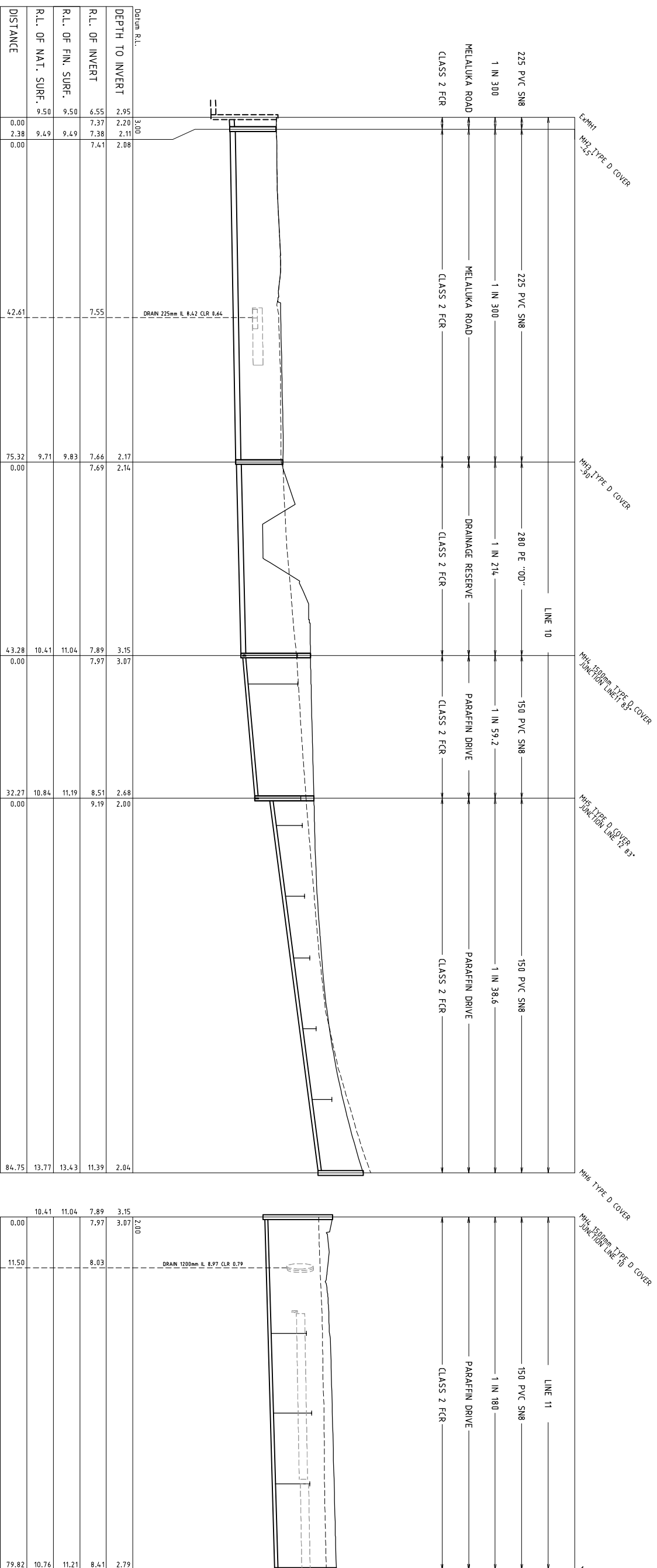
Estuary
 Stage 1
 City Of Greater Geelong
 Roadworks and Drainage
 Pipe Grille Detail

Drawing No. 0250EHL-01-40
 Sheet No. 40 of 40

Rev B

Scale @A1

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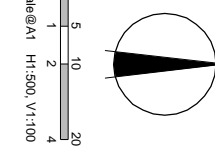


CONSTRUCTION NOTES

1. CONSTRUCTION OF THE SEWER AND WATER MAINS IS TO BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS "CONSTRUCTION OF SEWER AND WATER MAINS" AND THE STANDARD SPECIFICATIONS "CONSTRUCTION OF SEWER AND WATER MAINS" AND THE STANDARD SPECIFICATIONS "CONSTRUCTION OF SEWER AND WATER MAINS".
2. EVERY INVERT TO BE INDICATED BY A MANHOLE. HOWEVER, ACTUAL LOCATIONS ARE TO BE CHECKED ON SITE PRIOR TO CONSTRUCTION TO EXCAVATIONS.
3. NOMINAL SIZE OF WATER MAINS INDICATED IN MILKINGS, OFFSETS ARE INDICATED IN METRES.
4. ALL SEWER PIPES ARE 1500mm UNLESS OTHERWISE SPECIFIED.

- PIPE TYPES**
- ASBESTOS CEMENT PIPE
 - DUCTILE IRON PIPE
 - HDPE
 - HDPE WITH CORRUGATED
 - POLYETHYLENE GLASS FIBRE REINFORCED CONCRETE
 - WINDSOR CLAY
- FITTINGS AND SYMBOLS**
- SCALE "A" - JUMP UP
 - TYPE "B" - JUMP UP
 - TYPE "C" - SLOPE LINE
 - TYPE "D" - SLOPE LINE
 - TYPE "E" - SLOPE LINE
 - TYPE "F" - SLOPE LINE
 - TYPE "G" - SLOPE LINE
 - TYPE "H" - SLOPE LINE
 - TYPE "I" - SLOPE LINE
 - TYPE "J" - SLOPE LINE
 - TYPE "K" - SLOPE LINE
 - TYPE "L" - SLOPE LINE
 - TYPE "M" - SLOPE LINE
 - TYPE "N" - SLOPE LINE
 - TYPE "O" - SLOPE LINE
 - TYPE "P" - SLOPE LINE
 - TYPE "Q" - SLOPE LINE
 - TYPE "R" - SLOPE LINE
 - TYPE "S" - SLOPE LINE
 - TYPE "T" - SLOPE LINE
 - TYPE "U" - SLOPE LINE
 - TYPE "V" - SLOPE LINE
 - TYPE "W" - SLOPE LINE
 - TYPE "X" - SLOPE LINE
 - TYPE "Y" - SLOPE LINE
 - TYPE "Z" - SLOPE LINE

- OTHER U/G SERVICES**
- EXISTING WATERMAIN
 - GAS
 - ELECTRA
 - SEWER
 - PALE

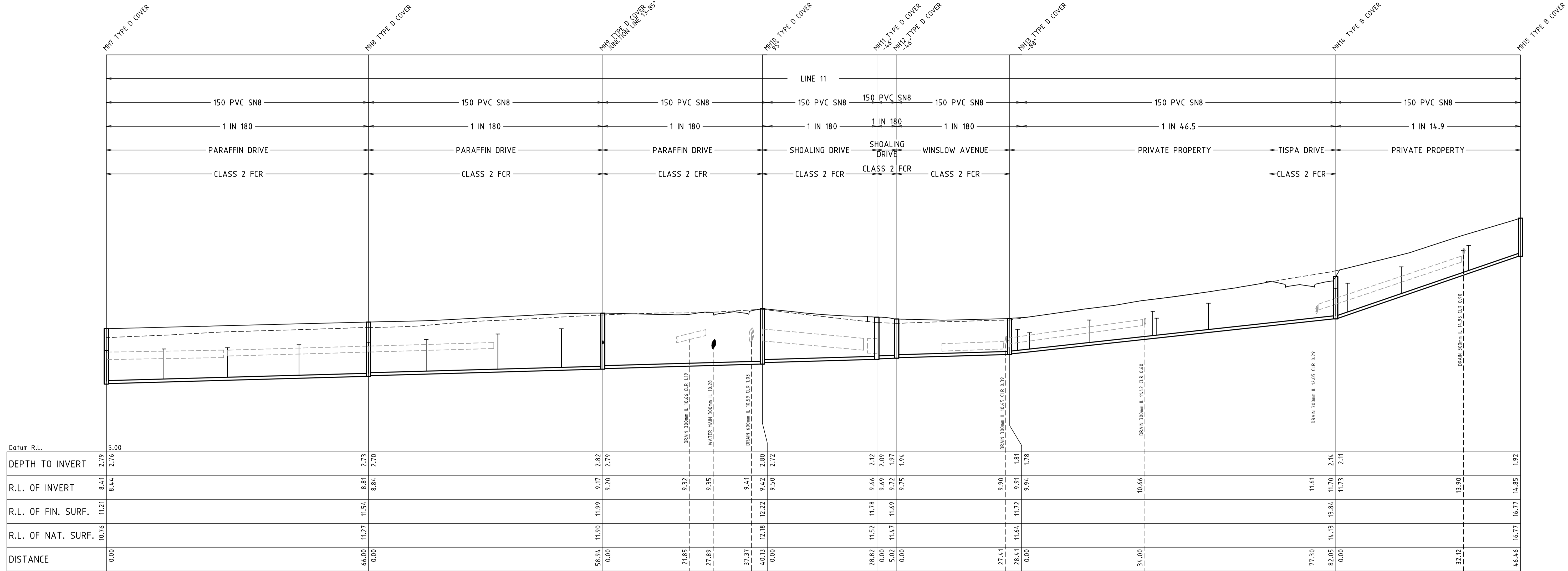


| | | |
|----------|-----------|-----------|
| Designed | C. Baker | July 2009 |
| Drawn | C. Baker | July 2009 |
| Checked | C. Baker | July 2009 |
| Approved | J. Golden | July 2009 |

Barwon Region Water Corporation
 Estuary
 Stage 1
 Sewer Longitudinal Sections
 Drawing No. 0250EHL-01-52 Rev D
 Sheet No. 2 of 5
 © SA Urban Pty Ltd ABN 99 02026819



| | | | |
|-----------|------------------------------|---------------------------|--------------------------|
| Principal | Leopold Developments Pty Ltd | Level 1, 6 Riverside Quay | Southbank, Victoria 3006 |
| REVISION | DATE | APP'D | |
| A | ISSUED TO BARWON WATER | 09/11/09 | |
| B | BARWON WATER AMENDMENTS | 23/12/09 | |
| C | MINOR AMENDMENTS | 14/01/10 | |
| D | LINE 10 OFFSET AMENDED | 11/03/10 | |



WORKS SHALL NOT COMMENCE UNTIL PLANS SIGNED BY BARWON WATER

ACCEPTED BY BARWON WATER DEVELOPMENT SERVICES CO-ORDINATOR



Principal Leopold Developments Pty Ltd
Level 1, 6 Riverside Quay
Southbank, Victoria 3006

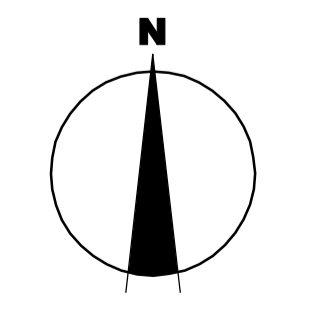
| REVISION | DATE | APP'D |
|---------------------------|----------|-------|
| B BARWON WATER AMENDMENTS | 23.12.09 | |
| A ISSUED TO COUNCIL | 09.11.09 | |

1. CONSTRUCTION OF THE SEWER AND WATER MAINS IS TO BE IN ACCORDANCE WITH THE BARWON WATER STANDARD SPECIFICATIONS "CONSTRUCTION OF GRAVITY SEWERS AND RISING MAINS" AND "CONSTRUCTION OF WATER MAINS".
2. EVERY ENDEAVOUR TO ENSURE THE LOCATION OF ALL EXISTING SERVICES ON THE PLAN ARE CORRECT. HOWEVER ACTUAL LOCATIONS ARE TO BE CHECKED ON SITE PRIOR TO COMMENCEMENT TO EXCAVATIONS.
3. NOMINAL SIZE OF WATER MAINS INDICATED IN MILLIMETRES. OFFSETS ARE INDICATED IN METRES.
4. ALL SEWER PIPES ARE 150Ømm UNLESS OTHERWISE SHOWN.

- PIPE TYPES**
- ASBESTOS CEMENT
 - CAST IRON CEMENT LINED
 - DUCTILED CEMENT LINED
 - MILD STEEL CEMENT LINED
 - POLYVINYL CHLORIDE
 - POLYETHYLENE (AS SPECIFIED)
 - REINFORCED CONCRETE
 - VITREOUS CLAY

- CONSTRUCTION NOTES**
- FITTINGS AND SYMBOLS**
- WATER MAINS NOT CONNECTED
 - CHANGING OF PIPE SIZE
 - VALVE
 - NON RETURN VALVE
 - FIRE PLUG
 - DEAD END CAP

- OTHER U/G SERVICES**
- EXISTING WATERMAIN
 - STORMWATER
 - GAS
 - TELSTRA
 - S.E.C.
 - SEWER

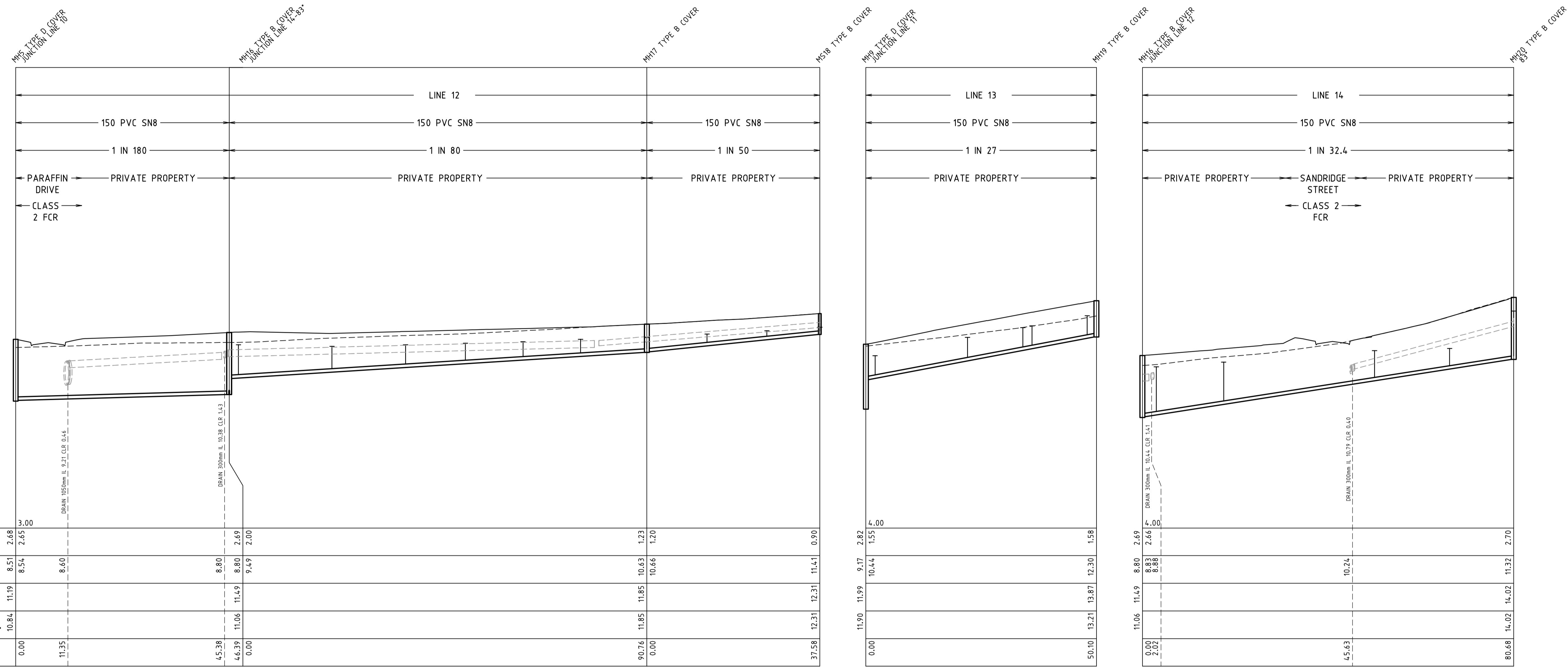


| | | |
|----------|------------|-----------|
| Designed | C. Barker | July 2009 |
| Drawn | C. Barker | July 2009 |
| Checked | C. Birkett | July 2009 |
| Approved | J. Golden | July 2009 |

Barwon Region Water Corporation
Extention No. 61-14419
Estuary
Stage 1
Sewer Longitudinal Sections

Drawing No. O250EHL-01-53 Rev B
Sheet No. 3 of 5
© SM Urban Pty Ltd ABN 99 124 206 819

61-14419



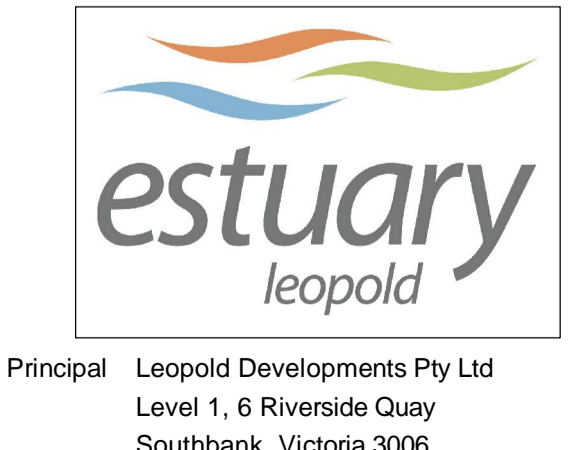
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|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Datum R.L. | 3.00 | | | | | | | | | |
| DEPTH TO INVERT | 8.51 | 7.68 | 8.80 | 7.69 | 10.63 | 1.23 | 10.66 | 1.20 | 11.41 | 0.90 |
| R.L. OF INVERT | 8.54 | 7.65 | 8.80 | 7.69 | 10.63 | 1.23 | 10.66 | 1.20 | 11.41 | 0.90 |
| R.L. OF FIN. SURF. | 11.19 | 11.49 | 11.49 | 11.49 | 11.85 | 12.31 | 12.31 | 12.31 | 12.31 | 12.31 |
| R.L. OF NAT. SURF. | 10.84 | 11.06 | 11.06 | 11.06 | 11.85 | 12.31 | 12.31 | 12.31 | 12.31 | 12.31 |
| DISTANCE | 0.00 | 11.35 | 45.38 | 46.39 | 90.76 | 0.00 | 90.76 | 0.00 | 37.58 | 0.00 |

| | | | | | | | | | | |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Datum R.L. | 4.00 | | | | | | | | | |
| DEPTH TO INVERT | 9.17 | 2.82 | 8.80 | 2.69 | 10.63 | 1.23 | 10.66 | 1.20 | 11.41 | 0.90 |
| R.L. OF INVERT | 9.17 | 2.82 | 8.80 | 2.69 | 10.63 | 1.23 | 10.66 | 1.20 | 11.41 | 0.90 |
| R.L. OF FIN. SURF. | 11.99 | 10.44 | 11.49 | 11.49 | 11.85 | 12.31 | 12.31 | 12.31 | 12.31 | 12.31 |
| R.L. OF NAT. SURF. | 11.90 | 11.99 | 11.49 | 11.49 | 11.85 | 12.31 | 12.31 | 12.31 | 12.31 | 12.31 |
| DISTANCE | 0.00 | 50.10 | 13.21 | 13.87 | 12.30 | 1.58 | 12.30 | 1.58 | 12.30 | 1.58 |

| | | | | | | | | | | |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Datum R.L. | 4.00 | | | | | | | | | |
| DEPTH TO INVERT | 8.80 | 2.69 | 8.80 | 2.66 | 10.74 | 2.70 | 10.74 | 2.70 | 11.32 | 2.70 |
| R.L. OF INVERT | 8.80 | 2.66 | 8.80 | 2.66 | 10.74 | 2.70 | 10.74 | 2.70 | 11.32 | 2.70 |
| R.L. OF FIN. SURF. | 11.49 | 11.49 | 11.49 | 11.49 | 11.85 | 12.31 | 12.31 | 12.31 | 12.31 | 12.31 |
| R.L. OF NAT. SURF. | 11.06 | 11.49 | 11.49 | 11.49 | 11.85 | 12.31 | 12.31 | 12.31 | 12.31 | 12.31 |
| DISTANCE | 0.00 | 2.02 | 45.63 | 45.63 | 80.68 | 14.02 | 14.02 | 14.02 | 14.02 | 14.02 |

WORKS SHALL NOT COMMENCE UNTIL PLANS SIGNED BY BARWON WATER

ACCEPTED BY BARWON WATER DEVELOPMENT SERVICES CO-ORDINATOR



| | | | |
|---|-------------------------|----------|-------|
| B | BARWON WATER AMENDMENTS | 23.12.09 | |
| A | ISSUED TO BARWON WATER | 09.11.09 | |
| | REVISION | DATE | APP'D |

CONSTRUCTION NOTES

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- NOMINAL SIZE OF WATER MAINS INDICATED IN MILLIMETRES, OFFSETS ARE INDICATED IN METRES.
- ALL SEWER PIPES ARE 150mm UNLESS OTHERWISE SHOWN.

PIPE TYPES

| | |
|-----------------------------|------|
| ASBESTOS CEMENT | AC |
| CAST IRON CEMENT LINED | DCL |
| DUCTILE CEMENT LINED | DCL |
| MILD STEEL CEMENT LINED | MSCL |
| POLYVINYL CHLORIDE | PVC |
| POLYETHYLENE (AS SPECIFIED) | PE |
| REINFORCED CONCRETE | RC |
| VITREOUS CLAY | VC |

FITTINGS AND SYMBOLS

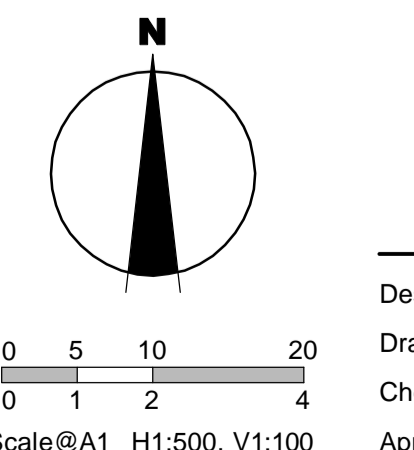
| | |
|---------------------------|-----|
| WATER MAINS NOT CONNECTED | --- |
| CHANGING OF PIPE SIZE | --- |
| MAINS IN CONDUIT | --- |
| VALVE | --- |
| NON RETURN VALVE | --- |
| FIRE PLUG | --- |
| DEAD END CAP | --- |

SEWER

| | |
|---------------------|-----|
| TYPE "A" JUMP UP | --- |
| TYPE "B" JUMP UP | --- |
| TYPE "C" SLIDE LINE | --- |
| OBSCURE JUNCTION | --- |
| TYPE "A" SPECIAL | --- |

OTHER U/G SERVICES

| | |
|--------------------|-----|
| EXISTING WATERMAIN | --- |
| STORMWATER | --- |
| GAS | --- |
| TELSTRA | --- |
| S.E.C. | --- |
| SEWER | --- |
| (POLE) | --- |



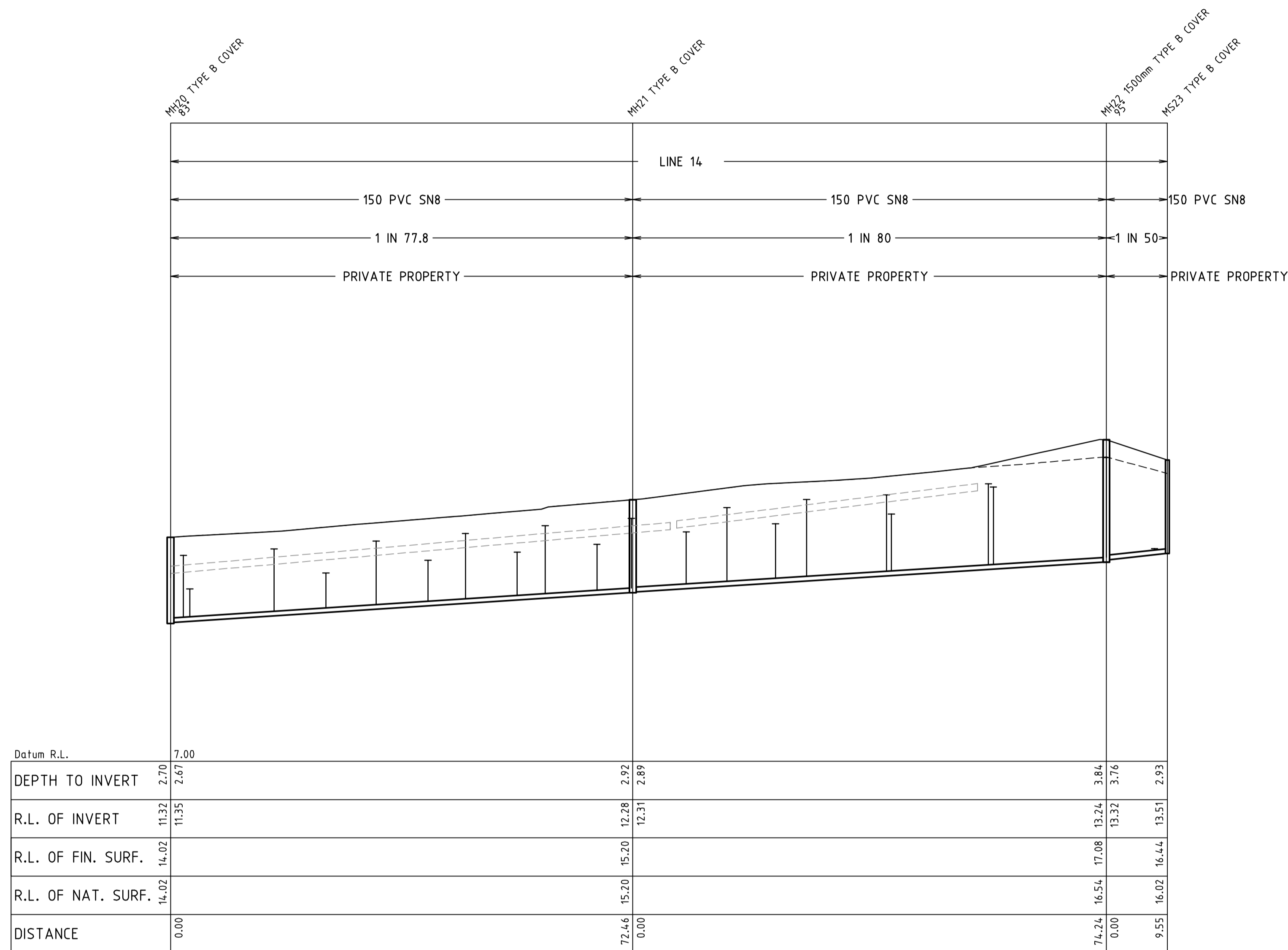
smec urban
consulting group
Geelong Tel +61 3 5228 3100

| | | |
|----------|------------|-----------|
| Designed | C. Barker | July 2009 |
| Drawn | C. Barker | July 2009 |
| Checked | C. Birkett | July 2009 |
| Approved | J. Golden | July 2009 |

Barwon Region Water Corporation
Extention No. 61-14419
Estuary Stage 1
Sewer Longitudinal Sections

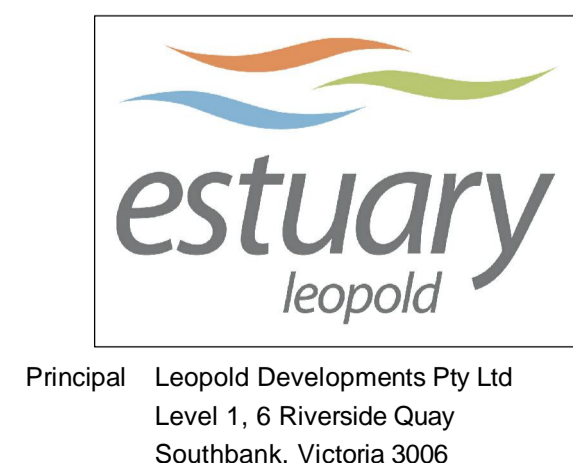
Drawing No. O250EHL-01-54 Rev B
Sheet No. 4 of 5
© SM Urban Pty Ltd ABN 99 124 206 819

61-14419



| Datum R.L. | 7.00 | | | |
|--------------------|----------------|----------------|----------------|----------------|
| DEPTH TO INVERT | 2.70 2.67 | | 2.92 2.89 | 3.84 3.76 |
| R.L. OF INVERT | 11.32 11.35 | 12.28 12.31 | 13.24 13.32 | 13.51 13.51 |
| R.L. OF FIN. SURF. | 14.02 | 15.20 | 17.08 | 16.44 |
| R.L. OF NAT. SURF. | 14.02 | 15.20 | 16.54 | 16.02 |
| DISTANCE | 0.00 | 72.46 | 0.00 | 9.55 |

| LINE NO. | MANHOLE NO. | HC NO. | LOT NAME | CONNECTION TYPE | CHAINAGE | IL SEWER | IL BRANCH | BRANCH HEIGHT |
|----------|-------------|--------|----------|-----------------|----------|----------|-----------|---------------|
| 10 | MH4 | 1 | Lot 101 | A Special | 0.00 | 7.89 | 10.44 | 2.56 |
| 10 | MH4 | 2 | Lot 102 | A Special | 6.42 | 8.07 | 10.47 | 2.40 |
| 10 | MH4 | 3 | Lot 103 | A Special | 0.00 | 8.51 | 10.61 | 2.10 |
| 10 | MH5 | 4 | Lot 104 | A Special | 6.15 | 9.34 | 10.67 | 1.33 |
| 10 | MH5 | 5 | Lot 105 | A Special | 22.15 | 9.76 | 10.77 | 1.01 |
| 10 | MH5 | 6 | Lot 106 | A Special | 36.15 | 10.13 | 11.00 | 0.87 |
| 10 | MH5 | 7 | Lot 107 | A Special | 52.15 | 10.55 | 11.30 | 0.75 |
| 10 | MH5 | 8 | Lot 108 | A Special | 68.15 | 10.97 | 12.00 | 1.03 |
| 11 | MH4 | 9 | Lot 109 | A | 26.31 | 8.11 | 9.85 | 1.74 |
| 11 | MH4 | 10 | Lot 110 | A | 44.33 | 8.22 | 10.09 | 1.88 |
| 11 | MH4 | 11 | Lot 111 | A | 60.33 | 8.31 | 10.01 | 1.70 |
| 11 | MH7 | 12 | Lot 112 | A | 0.00 | 8.41 | 10.11 | 1.70 |
| 11 | MH7 | 13 | Lot 113 | A | 14.50 | 8.52 | 10.19 | 1.67 |
| 11 | MH7 | 14 | Lot 114 | A | 30.49 | 8.61 | 10.24 | 1.63 |
| 11 | MH7 | 15 | Lot 115 | A | 48.48 | 8.71 | 10.40 | 1.68 |
| 11 | MH8 | 16 | Lot 116 | A | 0.00 | 8.81 | 10.53 | 1.72 |
| 11 | MH8 | 17 | Lot 117 | A | 14.99 | 8.92 | 10.67 | 1.75 |
| 11 | MH8 | 18 | Lot 118 | A | 32.50 | 9.02 | 10.94 | 1.92 |
| 11 | MH8 | 19 | Lot 119 | A | 48.51 | 9.11 | 11.20 | 2.09 |
| 11 | MH13 | 20 | Lot 156 | A Special | 2.00 | 9.97 | 11.18 | 1.21 |
| 11 | MH13 | 21 | Fut Lot | A | 5.00 | 10.03 | 11.00 | 0.96 |
| 11 | MH13 | 22 | Lot 155 | A Special | 20.00 | 10.36 | 11.65 | 1.28 |
| 11 | MH13 | 23 | Lot 154 | B | 36.00 | 10.71 | 12.09 | 1.38 |
| 11 | MH13 | 24 | Fut Lot | A | 37.00 | 10.73 | 11.74 | 1.01 |
| 11 | MH13 | 25 | Lot 153 | B | 50.00 | 11.01 | 12.49 | 1.48 |
| 11 | MH14 | 26 | Lot 152 | A Special | 0.00 | 11.70 | 13.24 | 1.54 |
| 11 | MH14 | 27 | Fut Lot | A | 3.00 | 11.90 | 13.50 | 1.60 |
| 11 | MH14 | 28 | Lot 151 | A Special | 16.46 | 12.82 | 14.32 | 1.50 |
| 11 | MH14 | 29 | Fut Lot | A | 32.06 | 13.90 | 15.15 | 1.25 |
| 11 | MH14 | 30 | Lot 150 | B | 33.46 | 13.99 | 15.40 | 1.41 |
| 12 | MH16 | 31 | Lot 134 | A Special | 2.02 | 9.51 | 10.96 | 1.45 |
| 12 | MH16 | 32 | Lot 133 | A Special | 22.34 | 9.77 | 10.89 | 1.12 |
| 12 | MH16 | 33 | Lot 132 | A Special | 38.34 | 9.97 | 10.96 | 0.99 |
| 12 | MH16 | 34 | Lot 131 | A Special | 51.34 | 10.13 | 11.03 | 0.89 |
| 12 | MH16 | 35 | Lot 130 | A Special | 63.84 | 10.29 | 11.09 | 0.80 |
| 12 | MH16 | 36 | Lot 129 | A Special | 76.34 | 10.45 | 11.20 | 0.75 |
| 12 | MH17 | 37 | Lot 128 | A Special | 0.00 | 10.63 | 11.27 | 0.65 |
| 12 | MH17 | 38 | Lot 127 | A Special | 13.08 | 10.91 | 11.43 | 0.51 |
| 12 | MH17 | 39 | Lot 126 | A Special | 26.08 | 11.18 | 11.57 | 0.39 |
| 12 | MS14 | 40 | Lot 125 | A Special | 0.00 | 11.41 | 11.72 | 0.31 |
| 13 | MH9 | 41 | Lot 120 | B | 2.01 | 10.50 | 11.48 | 0.98 |
| 13 | MH9 | 42 | Lot 121 | B | 22.10 | 11.26 | 12.28 | 1.02 |
| 13 | MH9 | 43 | Lot 124 | A Special | 34.11 | 11.71 | 12.70 | 0.99 |
| 13 | MH9 | 44 | Lot 122 | B | 36.10 | 11.79 | 12.78 | 0.99 |
| 13 | MH19 | 45 | Lot 123 | B | 0.00 | 12.30 | 13.28 | 0.98 |
| 14 | MH16 | 46 | Lot 135 | B | 3.02 | 8.91 | 11.00 | 2.09 |
| 14 | MH16 | 47 | Lot 136 | B | 17.65 | 9.37 | 11.20 | 1.83 |
| 14 | MH16 | 48 | Lot 137 | A Special | 50.42 | 10.39 | 11.70 | 1.31 |
| 14 | MH16 | 49 | Lot 138 | A | 66.75 | 10.90 | 11.80 | 0.90 |
| 14 | MH20 | 50 | Fut Lot | A Special | 0.00 | 11.32 | 13.42 | 2.10 |
| 14 | MH20 | 51 | Lot 139 | B | 2.02 | 11.37 | 13.45 | 2.08 |
| 14 | MH20 | 52 | Fut Lot | A | 3.02 | 11.38 | 12.40 | 1.02 |
| 14 | MH20 | 53 | Lot 140 | B | 16.22 | 11.55 | 13.65 | 2.10 |
| 14 | MH20 | 54 | Fut Lot | A | 24.34 | 11.66 | 12.90 | 1.24 |
| 14 | MH20 | 55 | Lot 141 | B | 32.22 | 11.76 | 13.90 | 2.14 |
| 14 | MH20 | 56 | Fut Lot | A | 40.34 | 11.87 | 13.30 | 1.43 |
| 14 | MH20 | 57 | Lot 142 | B | 46.22 | 11.94 | 14.14 | 2.19 |
| 14 | MH20 | 58 | Fut Lot | A | 54.34 | 12.05 | 13.55 | 1.50 |
| 14 | MH20 | 59 | Lot 143 | B | 58.72 | 12.11 | 14.39 | 2.28 |
| 14 | MH20 | 60 | Fut Lot | A | 66.84 | 12.21 | 13.80 | 1.59 |
| 14 | MH21 | 61 | Lot 144 | A Special | 0.00 | 12.28 | 14.61 | 2.33 |
| 14 | MH21 | 62 | Fut Lot | A | 8.38 | 12.41 | 14.19 | 1.78 |
| 14 | MH21 | 63 | Lot 145 | B Special | 14.76 | 12.49 | 14.95 | 2.46 |
| 14 | MH21 | 64 | Fut Lot | TM Special | 22.38 | 12.59 | 14.44 | 1.85 |
| 14 | MH21 | 65 | Lot 146 | B Special | 27.26 | 12.65 | 15.20 | 2.55 |
| 14 | MH21 | 66 | Lot 147 | B Special | 39.76 | 12.81 | 15.35 | 2.54 |
| 14 | MH21 | 67 | Fut Lot | TM Special | 40.53 | 12.82 | 14.75 | 1.93 |
| 14 | MH21 | 68 | Lot 148 | B Special | 55.76 | 13.01 | 15.70 | 2.69 |
| 14 | MH21 | 69 | Fut Lot | TM Special | 56.53 | 13.02 | 15.59 | 2.57 |
| 14 | MH22 | 70 | Fut Lot | B Special | 0.00 | 13.24 | 16.51 | 3.27 |
| 14 | MH23 | 71 | Lot 149 | B | 0.00 | 13.51 | 15.84 | 2.33 |



| REVISION | DATE | APP'D |
|---------------------------|----------|-------|
| D MINOR AMENDMENTS | 14.12.10 | |
| C MINOR AMENDMENTS | 12.01.10 | |
| B BARWON WATER AMENDMENTS | 23.12.09 | |
| A ISSUED TO BARWON WATER | 09.11.09 | |

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- ALL SEWER PIPES ARE 150mm UNLESS OTHERWISE SHOWN.

PIPE TYPES

ASBESTOS CEMENT
DUCTILE CEMENT LINED
MILD STEEL CEMENT LINED
POLYETHYLENE (AS SPECIFIED)
REINFORCED CONCRETE
VITREOUS CLAY

AC
DCL
MSCL
PVC
PE
VC

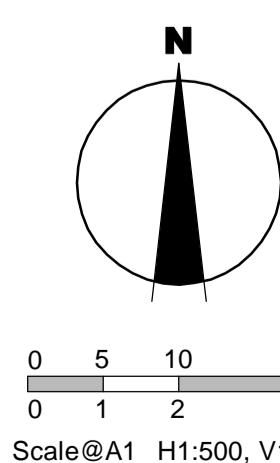
FITTINGS AND SYMBOLS

WATER CHANGE OF PIPE SIZE
MAINS NOT CONNECTED
MAINS IN CONDUIT
VALVE
NON RETURN VALVE
FIRE PLUG
DEAD END CAP

SEWER
TYPE "A" JUMP UP
TYPE "B" JUMP UP
TYPE "C" SLIDE LINE
OBLIQUE JUNCTION
TYPE "A" SPECIAL

OTHER U/G SERVICES

EXISTING WATERMAIN
STORMWATER
GAS
TELSTRA
S.E.C.
SEWER



smec urban
consulting group
Geelong Tel +61 3 5228 3100

Designed C. Barker July 2009
Drawn C. Barker July 2009
Checked C. Birkett July 2009
Approved J. Golden July 2009

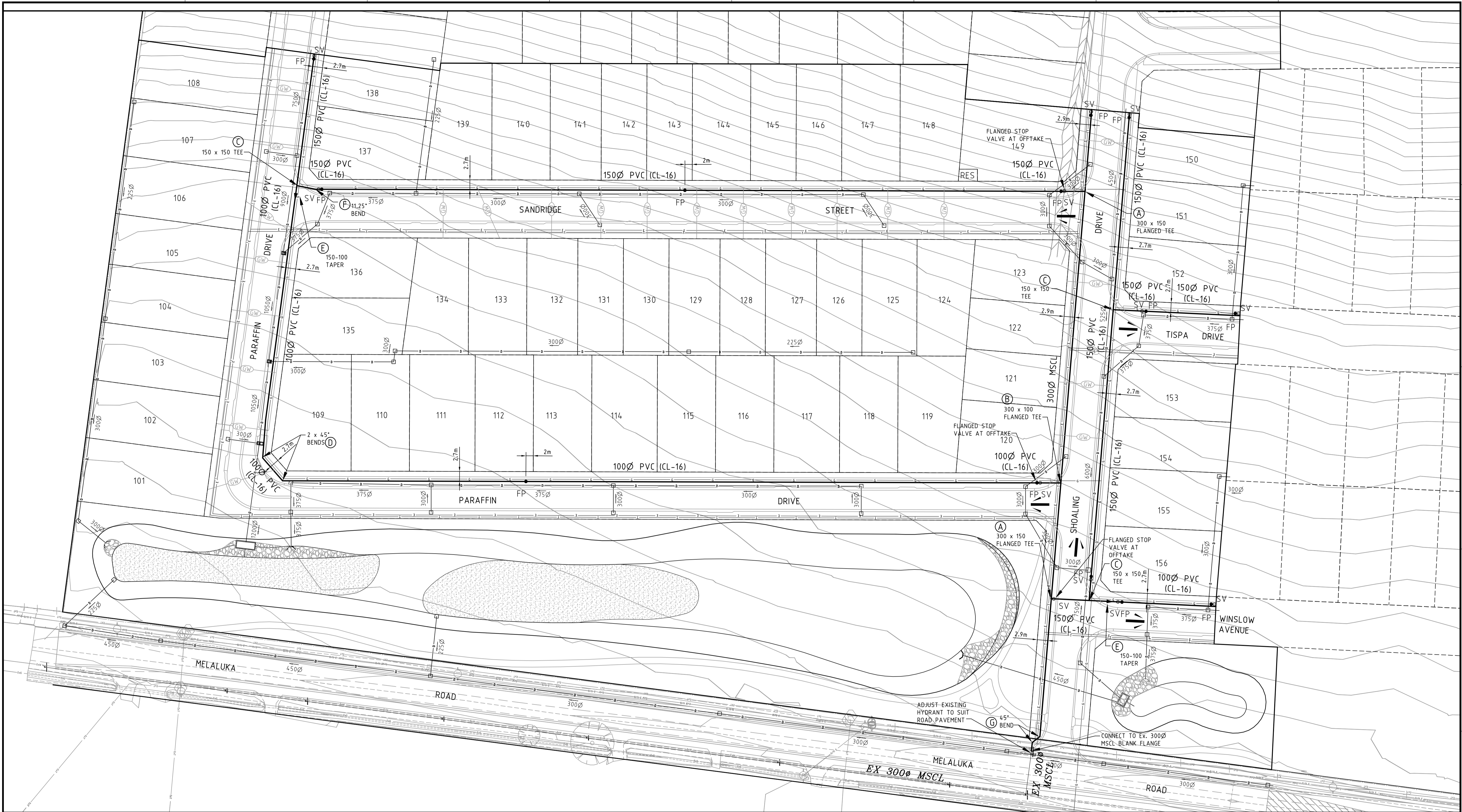
Barwon Region Water Corporation
Extension No. 61-14419
Estuary
Stage 1
Sewer Longitudinal Sections

Drawing No. O250EHL-01-55 Rev D
Sheet No. 5 of 5
© SM Urban Pty Ltd ABN 99 124 206 819

WORKS SHALL NOT COMMENCE UNTIL PLANS SIGNED BY BARWON WATER

ACCEPTED BY BARWON WATER DEVELOPMENT SERVICES CO-ORDINATOR

61-14419



WARNING
BEWARE OF UNDERGROUND SERVICES
 THE LOCATIONS OF UNDERGROUND SERVICES ARE APPROXIMATE ONLY AND THEIR EXACT POSITION SHOULD BE PROVEN ON SITE. NO GUARANTEE IS GIVEN THAT ALL EXISTING SERVICES ARE SHOWN.

WORKS SHALL NOT COMMENCE UNTIL PLANS SIGNED BY BARWON WATER

ACCEPTED BY BARWON WATER
 DEVELOPMENT SERVICES
 CO-ORDINATOR



Principal Leopold Developments Pty Ltd
 Level 1, 6 Riverside Quay
 Southbank, Victoria 3006

| REVISION | DATE | APP'D |
|---------------------------|----------|-------|
| D MINOR AMENDMENTS | 14.01.10 | |
| C MINOR AMENDMENTS | 12.01.10 | |
| B BARWON WATER AMENDMENTS | 23.12.09 | |
| A ISSUED TO BARWON WATER | 09.11.09 | |

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PIPE TYPES

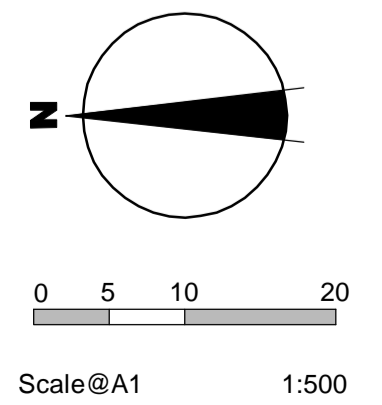
| | |
|-----------------------------|------|
| ASBESTOS CEMENT | AC |
| CAST IRON CEMENT LINED | DCL |
| DUCTILED CEMENT LINED | MSCL |
| MILD STEEL CEMENT LINED | PVC |
| POLYVINYL CHLORIDE | PE |
| POLYETHYLENE (AS SPECIFIED) | RE |
| REINFORCED CONCRETE | VC |
| VITREOUS CLAY | |

FITTINGS AND SYMBOLS

| | | | | | |
|-------|---------------------|---------------------|-----------------------|------------------|------------------|
| SEWER | TYPE "A" JUMP UP | TYPE "B" JUMP UP | TYPE "C" SLIDE LINE | OBLIQUE JUNCTION | TYPE "A" SPECIAL |
| WATER | CHANGE OF PIPE SIZE | MAINS NOT CONNECTED | MAINS IN CONDUIT | VALVE | NON RETURN VALVE |
| | FIRE PLUG | DEAD END CAP | DIRECTION OF SWABBING | | |

OTHER U/G SERVICES

| | | | | | |
|--------------------|------------|-----|---------|--------|-------|
| EXISTING WATERMAIN | STORMWATER | GAS | TELSTRA | S.E.C. | SEWER |
| (POLE) | | | | | |



smec urban
 consulting group
 Geelong Tel +61 3 5228 3100

| | | |
|----------|------------|-----------|
| Designed | M.Wilks | July 2009 |
| Drawn | M.Wilks | July 2009 |
| Checked | C. Birkett | July 2009 |
| Approved | J. Golden | July 2009 |

Barwon Region Water Corporation
 Extention No. 61-14419
 Estuary - Stage 1
 Water Detail Plan - 2

Drawing No. 0250EHL-01-61 Rev D
 Sheet No. 1 of 2
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61-14419

NOTES

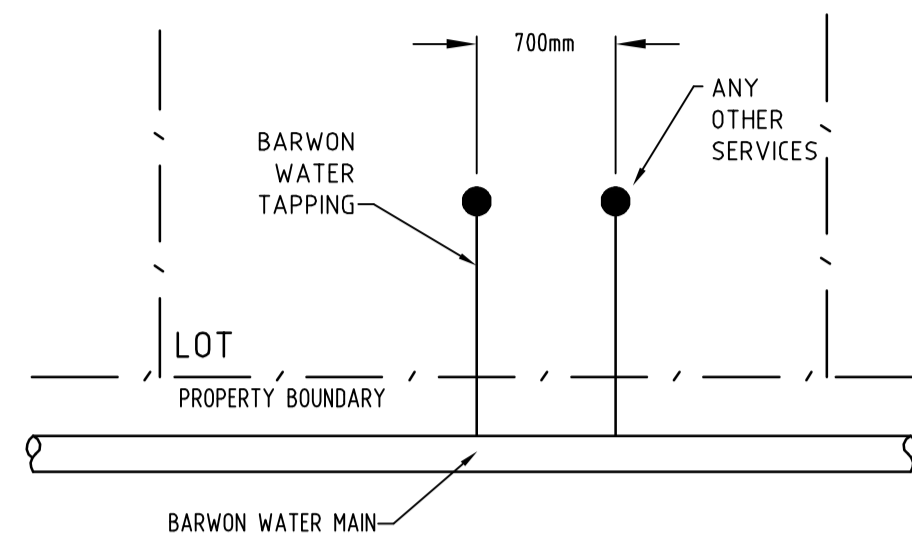
- GENERAL**
- SEWERS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE WATER SERVICES ASSOCIATION OF AUSTRALIA STANDARD CODES (WSA 02-2002 - WSA 03-2002) IN CONJUNCTION WITH BARWON WATER'S SUPPLEMENTS TO THE CODES.
 - BARWON WATER AND THE PROJECT MANAGER TO BE NOTIFIED 7 CLEAR WORKING DAYS NOTICE PRIOR TO COMMENCEMENT OF WORKS.
 - THE CONTRACTOR SHALL
 - COMPLY WITH SAFETY REQUIREMENTS OF THE MINES ACT, GENERAL REGULATIONS AND STATUTORY RULES, AND THE MINES (TRENCHES) REGULATIONS 1982.
 - NOTIFY THE DEPARTMENT OF LABOUR OF HIS INTENTION TO COMMENCE TRENCHING OPERATIONS WHERE TRENCHES ARE 1.5 METRES OR DEEPER.
 - INSURE THAT THE MINE MANAGER OR HIS DEPUTY AS REQUIRED BY THE REGULATIONS IS IN ATTENDANCE WHEN TRENCHING OPERATIONS ARE IN PROGRESS.
 - THE CONTRACTOR SHALL MAKE ALL WORKS AVAILABLE FOR THE INSPECTOR/SURVEYOR TO CARRY OUT THE NECESSARY INSPECTIONS AND SURVEYING BEFORE BACKFILLING IS COMMENCED.
 - SERVICES ARE APPROXIMATE ONLY. ALL RELEVANT SERVICE AUTHORITY'S ARE TO BE CONTACTED PRIOR TO THE COMMENCEMENT OF EXCAVATION TO ESTABLISH THEIR EXACT LOCATION.
 - CONTACT PRIOR TO COMMENCEMENT OF WORKS:
CITY OF GREATER GEELONG
POWERCOR
TELSTRA
TRU
VICTORIAN WORKCOVER AUTHORITY
 - ALL SERVICES ARE TO BE LOCATED ON SITE PRIOR TO ANY EXCAVATION.
 - INVERT LEVELS OF EXISTING SEWERS AND WATERMAINS TO BE CHECKED PRIOR TO THE COMMENCEMENT OF WORKS.
 - CLASS 2 BACKFILL TO BE USED UNDER DRIVEWAYS FOR WATER AND SEWER RETICULATION.
 - PROPERTY OWNERS ARE TO BE NOTIFIED IN WRITING BY THE CONSULTANT 14 CLEAR DAYS PRIOR TO COMMENCEMENT OF WORKS
 - COPY OF CADASTRAL MAP GRID (MGA) CONNECTION & COPY OF AUSTRALIAN HEIGHT DATUM (AHD) CONNECTION IS TO BE PROVIDED BY CONTRACTOR
 - WORKS SHALL BE EFFECTED BETWEEN THE HOURS OF 8:00am AND 5:00pm MONDAY - FRIDAY. IN THE EVENT THAT WORKS ARE TO BE EFFECTED OUTSIDE THESE WORKING HOURS, A LETTER REQUESTING APPROVAL FOR SUCH OUT OF HOURS WORK SHALL BE LODGED TO THE SENIOR QUALITY AUDITOR.
 - THE CONTRACTOR SHALL COMPLY WITH SAFETY REQUIREMENTS RELATING TO WORKING NEAR POWER LINES AS SET BY THE CHIEF ELECTRICAL INSPECTOR WHERE NECESSARY AN ACCREDITED TRAINED SPOTTER IS TO BE PROVIDED.
 - WATER RESTRICTIONS ARE TO APPLY FROM MIDNIGHT JUNE 30th 2006, IN ACCORDANCE WITH BY-LAW NO. 187. ONLY TRIGGER HOSES (MAXIMUM SIZE 25mm) MAY BE USED FOR CONSTRUCTION WORK NOT INCLUDING TRENCHING, UNLESS OTHERWISE EXEMPTED BY THE AUTHORITY IN WRITING. MECHANICAL COMPACTION IS TO BE USED IN ACCORDANCE WITH MRWA SPECIFICATION 04-03 FOR TRENCH WORKS UNTIL FURTHER NOTICE. ANY WATER USED TO FLUSH WATER MAINS IS TO BE RECLAIMED AND USED FOR CONSTRUCTION PURPOSES.

WATER

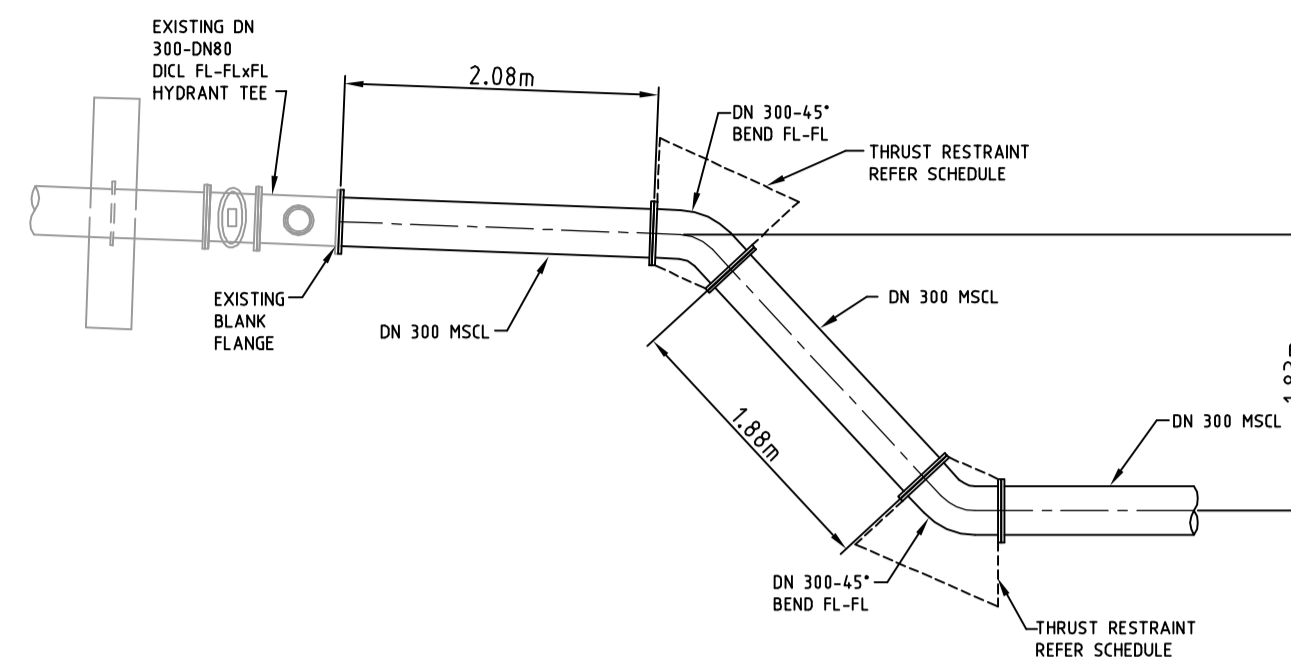
- ENSURE WATERMAINS ARE GRADED TO SUFFICIENT DEPTH UNDER ROADWAYS TO OBTAIN REQUIRED CLEARANCE UNDER STORM WATER DRAINS AND PAVEMENT LEVELS.
- MARKER POSTS TO BE PLACED AT FIRE PLUGS AND STOP VALVES. FIRE PLUG INDICATORS ARE TO BE IN ACCORDANCE WITH CFA & WSAA REQUIREMENTS.
- ALL ALLOTMENTS ARE TO BE PROVIDED WITH A WATER SERVICE AS PART OF WATER RETICULATION WORKS. THE WATER MAIN IS TO BE TAPPED USING A TAPPING SADDLE AND PRESSURE FERRULE (FERRULE TO BE LEFT OPEN). A MINIMUM SIZE SERVICE (i.e. 20mm COPPER, 25mm PE) IS THEN TO BE EXTENDED TO A POINT 500mm WITHIN THE PROPERTY. THE SERVICE IS TO BE A CONTINUOUS LENGTH WITH NO JOINTS. IN THE CASE OF PE OR ANY OTHER NON-METALLIC SERVICE BEING INSTALLED, A COPPER TRACE WIRE IS TO BE INCORPORATED. A BURIED BALL VALVE IS TO BE PLACED AT THE END OF THE SERVICE AND BACKFILLED WITH SAND TO DESIGN SURFACE LEVEL. DETECTOR TAPE FROM BALL VALVE TO BE RUN TO SURFACE LEVEL.
- PE PIPE TO BE LAID IN ACCORDANCE WITH WSA-01 WITH LONG RADIUS BENDS OR DEFLECTION ONLY. NO COMPRESSION BENDS TO BE USED.
- AC PIPE NOTE**
ANY WORK INVOLVING THE REMOVAL (CUTTING AND HANDLING), STORAGE, TRANSPORTATION AND DISPOSAL OF WASTE ASBESTOS (AC) PIPES MUST BE CARRIED OUT IN ACCORDANCE WITH THE OCCUPATIONAL, HEALTH AND SAFETY (ASBESTOS) REGULATIONS 1992 AND RELEVANT CODES OF PRACTICE (REMOVAL), THE ENVIRONMENT PROTECTION (PRESCRIBED WASTE) REGULATIONS 1998 (STORAGE, TRANSPORTATION AND DISPOSAL), AND BARWON WATER'S SAFETY MANAGEMENT SYSTEM "SAFEAS".
- FITZROY BOXES ARE TO BE PLACED OVER MONT TAP (MT) OR ANY TAPPING LOCATED WITHIN THE ROAD PAVEMENT.
- THRUST BLOCKS ARE TO BE CONSTRUCTED AS PER BARWON WATER STANDARD DRAWING No'S 70104, 70105 AND 70106
- SWABBING OF WATER MAINS IS TO BE DONE IN ACCORDANCE WITH SECTION 6.7 AND SECTION 18 OF WSAA WATER SUPPLY CODE OF AUSTRALIA WSA 03-2002 MRWA EDITION VERSION 1.0.
- ALL WATER MAINS MUST BE HYDROSTATIC PRESSURE TESTED IN ACCORDANCE WITH SECTION 19.4 OF WSAA WATER SUPPLY CODE OF AUSTRALIA WSA 03-2002 MRWA EDITION VERSION 1.0. THE CONTRACTOR MUST GIVE BARWON WATER THREE WORKING DAYS NOTICE IN WRITING OF THE DATE AND TIME OF THE PROPOSED HYDROSTATIC PRESSURE TESTING TO ENSURE THAT BARWON WATER HAS THE OPPORTUNITY TO WITNESS THESE TESTS.

SPECIAL

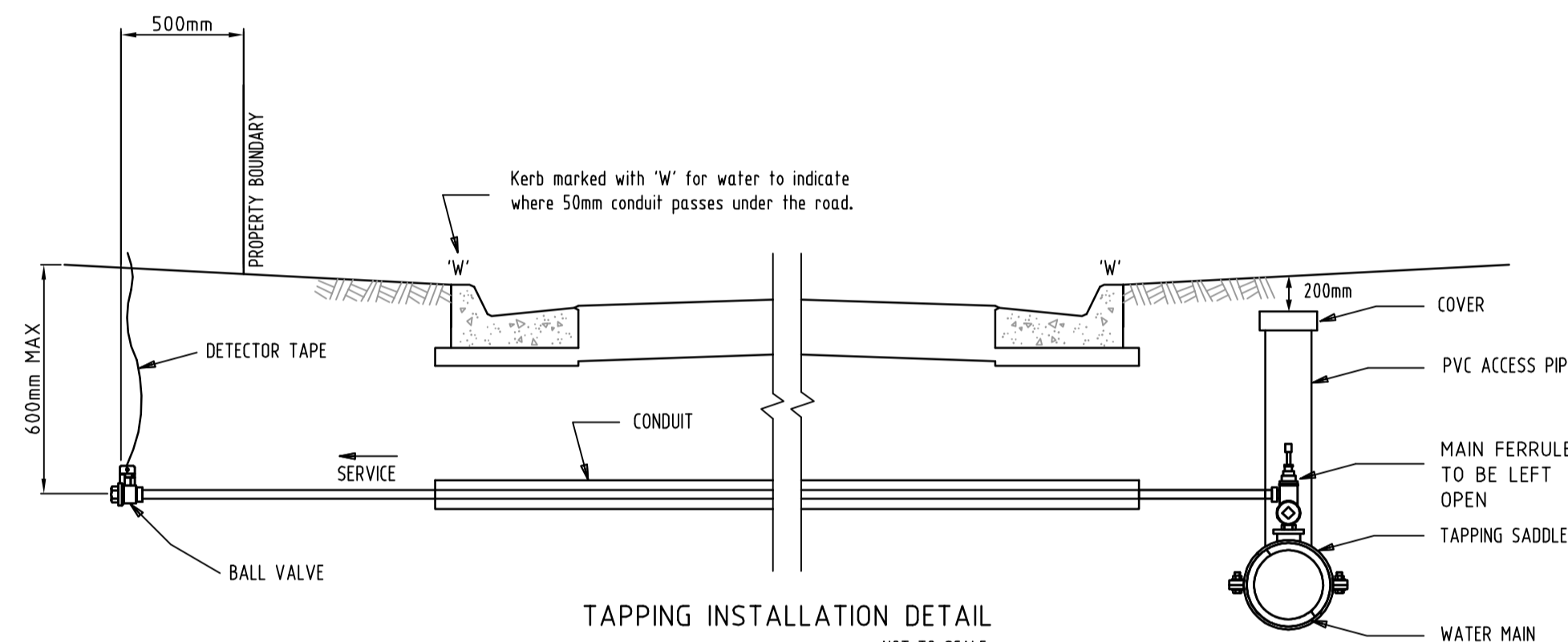
- TRENCH COMPACTION RESULTS TO BE SUBMITTED BY CONSULTANT WITH 'AS CONSTRUCTED' NOTES.



TAPPING OFFSET DETAIL
NOT TO SCALE



WATER MAIN CONNECTION DETAIL
SCALE 150



TAPPING INSTALLATION DETAIL
NOT TO SCALE

- All lots are to be tapped using a tapping saddle and pressure ferrule.
- A minimum size service (ie 20mm Copper, 25mm PE) is then to be extended to a point 500mm within the property.
- Service pipe between main ferrule and ball valve to be a continuous length (ie no joins)
- Service to be type 'B' Copper or class 12 type 50 PE.
- In the case of PE or any other non-metallic service being installed, a copper trace wire is to be incorporated.
- A buried ball valve is to be placed at the end of the service.
- Detector tape is to be run to surface level.
- Ball Valve to be in accordance with Australian Standards (ie stamped 'W') Brass fitting with Stainless Steel ball.

| NEW WATER MAINS | | |
|-----------------|--------------------|--------|
| SIZE | TYPE | LENGTH |
| 100Ø | PVC (CL 16) | 330.06 |
| 150Ø | PVC (CL 16) | 420.23 |
| 300Ø | OD337 MSCL (5.0mm) | 176.43 |

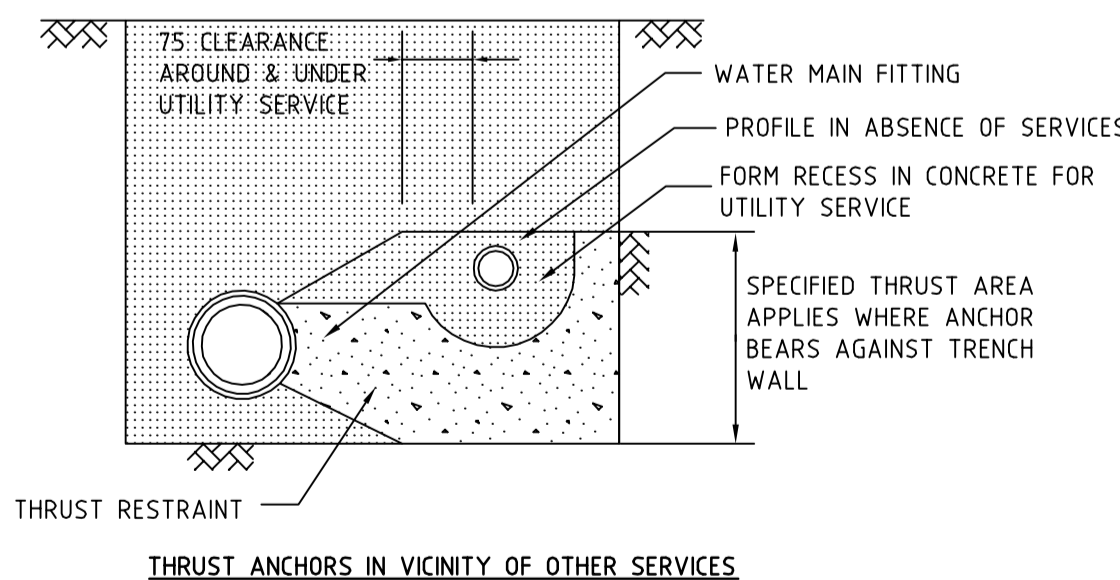
| THRUST RESTRAINT SCHEDULE | | | |
|---------------------------|----------|-----------|--------|
| LOCATION | TYPE | AREA (m²) | NUMBER |
| A 150 x 300 TEE | CONCRETE | 3.00 | 2 |
| B 100 x 300 TEE | CONCRETE | 3.00 | 1 |
| C 150 x 150 TEE | CONCRETE | 0.80 | 3 |
| D 100Ø 45° BEND | CONCRETE | 0.30 | 2 |
| E 100 - 150 TAPER | CONCRETE | 0.42 | 2 |
| F 150Ø 11.25° BEND | CONCRETE | N | 1 |
| G 300Ø 45° BEND | CONCRETE | 1.80 | 2 |

| SURVEY CONTROL MGA 94 ZONE 55 | | | | | |
|-------------------------------|------------|-------------|-------|--------------------------|--------|
| PM | EASTING | NORTHING | RL | DESCRIPTION | PARISH |
| MOOLAP PM 321 | 277040 | 5769480 | 9.436 | BRASS PLAQUE IN CONCRETE | MOOLAP |
| MOOLAP PM 137 | 278263.348 | 5769552.155 | - | BRASS PLAQUE IN CONCRETE | MOOLAP |
| MOOLAP PM 69 | 277138.741 | 5770359.313 | 8.503 | BRASS PLAQUE IN CONCRETE | MOOLAP |

| SURVEY CONTROL ARBITRARY | | | | | |
|--------------------------|-----------|-----------|-------|--------------------------|--------|
| PM | EASTING | NORTHING | RL | DESCRIPTION | PARISH |
| PM69 | 10000.000 | 50000.000 | 8.503 | BRASS PLAQUE IN CONCRETE | MOOLAP |
| PM137 | 11124.354 | 49193.067 | - | BRASS PLAQUE IN CONCRETE | MOOLAP |
| PM321 | 9897.742 | 48994.921 | 9.436 | BRASS PLAQUE IN CONCRETE | MOOLAP |

| SURVEY CONTROL | | | | | |
|----------------|---------|----------|-------|------------------|--------|
| TBM | EASTING | NORTHING | RL | DESCRIPTION | PARISH |
| SPIKE 1 | 9874.79 | 48950.39 | 9.49 | SPIKE IN BITUMEN | MOOLAP |
| STAR 2 | 9810.80 | 48462.72 | 11.64 | STAR PICKET | MOOLAP |

| ROAD NAME | SERVICES OFFSET SCHEDULE | | | | | | | |
|------------------------------|--------------------------|------------|-------|------------|-------------|------------|---------|-----------------------|
| | GAS | | WATER | | ELECTRICITY | | TELSTRA | |
| | SIDE | OFFSET (m) | SIDE | OFFSET (m) | SIDE | OFFSET (m) | SIDE | OFFSET (m) |
| SHOALING DRIVE | SOUTH | 2.10 | SOUTH | 2.70 | NORTH | 1.80 | NORTH | 2.30 |
| SHOALING DRIVE TRUNK MAIN | - | - | NORTH | 2.90 | - | - | - | - |
| PARAFFIN DRIVE (NORTH\SOUTH) | EAST | 2.10 | EAST | 2.70 | WEST | 1.00 | WEST | 0.50 |
| PARAFFIN DRIVE (EAST\WEST) | SOUTH | 2.10 | SOUTH | 2.70 | NORTH | 2.30 | NORTH | 1.70 |
| SANDRIDGE STREET | EAST | 2.10 | EAST | 2.70 | WEST | 2.30 | WEST | 1.70 |
| WINSLOW AVENUE | EAST | 2.10 | EAST | 2.70 | WEST | 1.00 | WEST | 0.50 |
| TISPA DRIVE | EAST | 2.10 | EAST | 2.70 | WEST | 2.30 | WEST | 1.70 |
| MELALUKA ROAD (NEW SERVICES) | WEST | 2.10 | WEST | 5.00 | - | - | - | - |
| MELALUKA ROAD (EXISTING) | WEST | Ex. 4.00 | EAST | Ex. 2.10 | EAST | Ex. 0\N E | EAST | VARIES Ex.1.20 - 1.50 |



WARNING

BEWARE OF UNDERGROUND SERVICES
THE LOCATIONS OF UNDERGROUND SERVICES ARE APPROXIMATE ONLY AND THEIR EXACT POSITION SHOULD BE PROVEN ON SITE. NO GUARANTEE IS GIVEN THAT ALL EXISTING SERVICES ARE SHOWN.

WORKS SHALL NOT COMMENCE UNTIL PLANS SIGNED BY BARWON WATER

ACCEPTED BY BARWON WATER
DEVELOPMENT SERVICES
CO-ORDINATOR



Principal Leopold Developments Pty Ltd
Level 1, 6 Riverside Quay
Southbank, Victoria 3006

| REVISION | DATE | APP'D |
|---------------------------|----------|-------|
| D MINOR AMENDMENTS | 14.01.10 | |
| C MINOR AMENDMENTS | 12.01.10 | |
| B BARWON WATER AMENDMENTS | 23.12.09 | |
| A ISSUED TO BARWON WATER | 09.11.09 | |

- CONSTRUCTION NOTES**
- CONSTRUCTION OF THE SEWER AND WATER MAINS IS TO BE IN ACCORDANCE WITH THE BARWON WATER STANDARD SPECIFICATIONS "CONSTRUCTION OF GRAVITY SEWERS AND RISING MAINS" AND "CONSTRUCTION OF WATER MAINS".
 - EVERY ENDEAVOUR TO ENSURE THE LOCATION OF ALL EXISTING SERVICES ON THE PLAN ARE CORRECT. HOWEVER ACTUAL LOCATIONS ARE TO BE CHECKED ON SITE PRIOR TO COMMENCEMENT TO EXCAVATIONS.
 - NOMINAL SIZE OF WATER MAINS INDICATED IN MILLIMETRES. OFFSETS ARE INDICATED IN METRES.
 - ALL SEWER PIPES ARE 150Ømm UNLESS OTHERWISE SHOWN.

PIPE TYPES

- ASBESTOS CEMENT
- CAST IRON CEMENT LINED
- DUCTILE CEMENT LINED
- MILD STEEL CEMENT LINED
- POLYVINYL CHLORIDE
- POLYETHYLENE (AS SPECIFIED)
- REINFORCED CONCRETE
- VITREOUS CLAY

- AC
- DCL
- DCL
- MSCL
- PVC
- PE
- PE
- VC

- WATER CHANGE OF PIPE SIZE
- MAINS NOT CONNECTED
- MAINS IN CONDUIT
- VALVE
- NON RETURN VALVE
- FIRE PLUG
- DEAD END CAP
- DIRECTION OF SWABBING

FITTINGS AND SYMBOLS

- SEWER TYPE "A" JUMP UP
- TYPE "B" JUMP UP
- TYPE "C" SLIDE LINE
- OBLIQUE JUNCTION
- TYPE "A" SPECIAL

OTHER U/G SERVICES

- EXISTING WATERMAIN
- STORMWATER
- GAS
- TELSTRA
- S.E.C.
- SEWER

Scale@A1



Geelong Tel +61 3 5228 3100

Designed M.Wilks July 2009
Drawn M.Wilks July 2009
Checked C. Birkett July 2009
Approved J. Golden July 2009

Barwon Region Water Corporation

Extention No. 61-14419
Estuary - Stage 1

Water Detail Plan - 1

Drawing No. 0250EHL-01-62 Rev D
Sheet No. 2 of 2

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