

NELSON CITY COUNCIL

Cable Bay Road Remediation, Contract No: EC 3424

Tender Issue

DRAWING Rev Title

GENERAL INFORMATION - SITE 5

- 870982.1005-00 A Location Plan and Drawing List
- 870982.1005-01 A Existing Site and Site Investigation Plan
- 870982.1005-02 A Working Areas & Erosion Sediment Control Plan

RETAINING WALL DESIGN - SITE 5

- 870982.1005-10 A General Arrangement
- 870982.1005-20 A Retaining Wall - Sections
- 870982.1005-30 A Typical Anchored Timber Pole Wall Detail (Sheet 1 of 2)
- 870982.1005-31 A Typical Anchored Timber Pole Wall Detail (Sheet 2 of 2)
- 870982.1005-40 A Anchor and Waler Details

CULVERT UPGRADE DESIGN - SITE 5

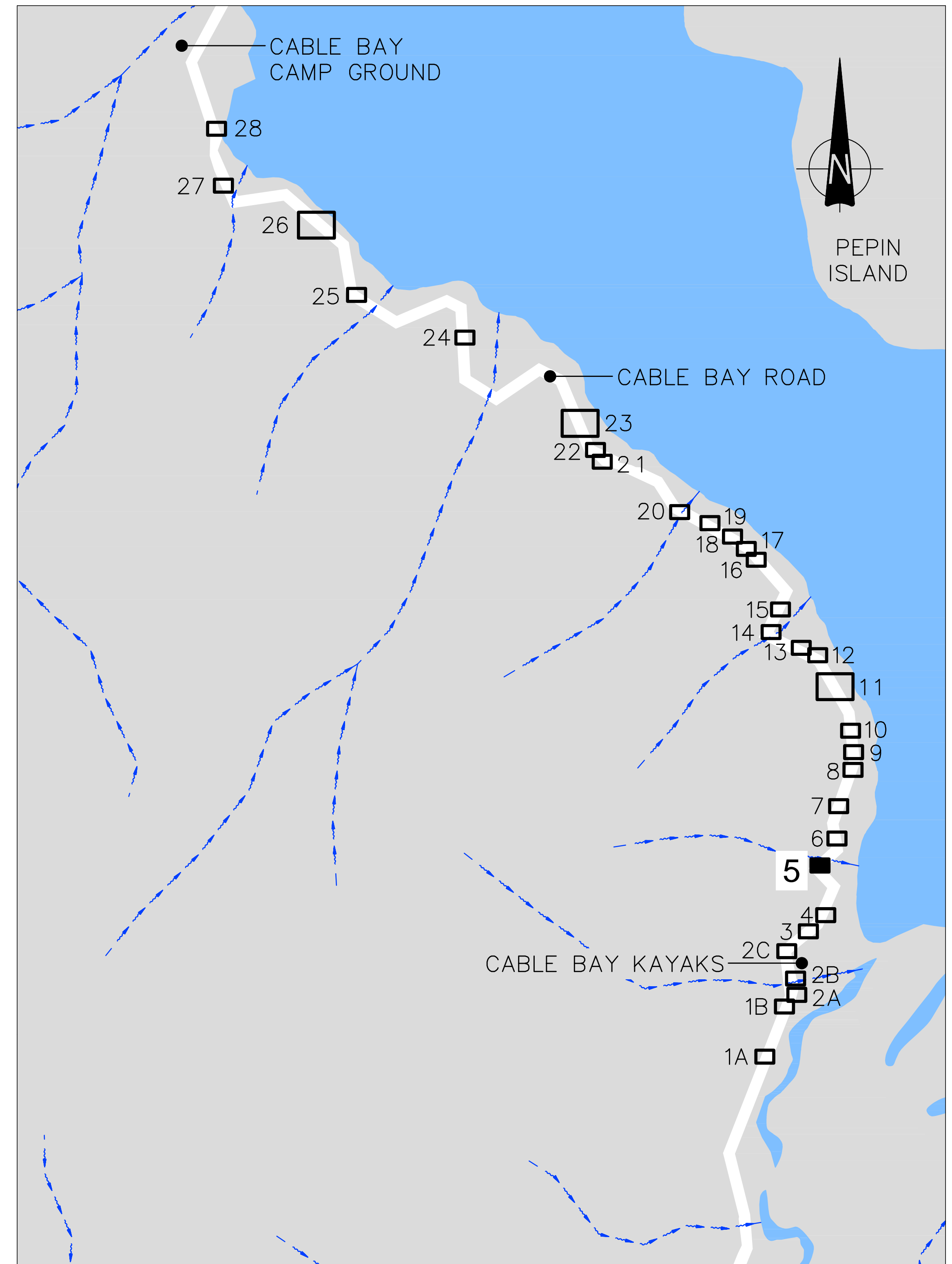
- 870982.1005-50 A Culvert - Sections and Details

• Denotes drawing this issue: 08/05/2013



Topomap sourced from Land Information New Zealand data (Crown Copyright Reserved).

LOCALITY MAP
SCALE 1: 100,000



SITE LOCATION PLAN
SCALE 1:5,000

 Nelson City Council te kaunihera o whakatū NETWORK SERVICES DEPARTMENT	APPROVED EXECUTIVE MANAGER NETWORK SERVICES
	DATE: 15/4/2013
NCC Plan No. 19-0076	

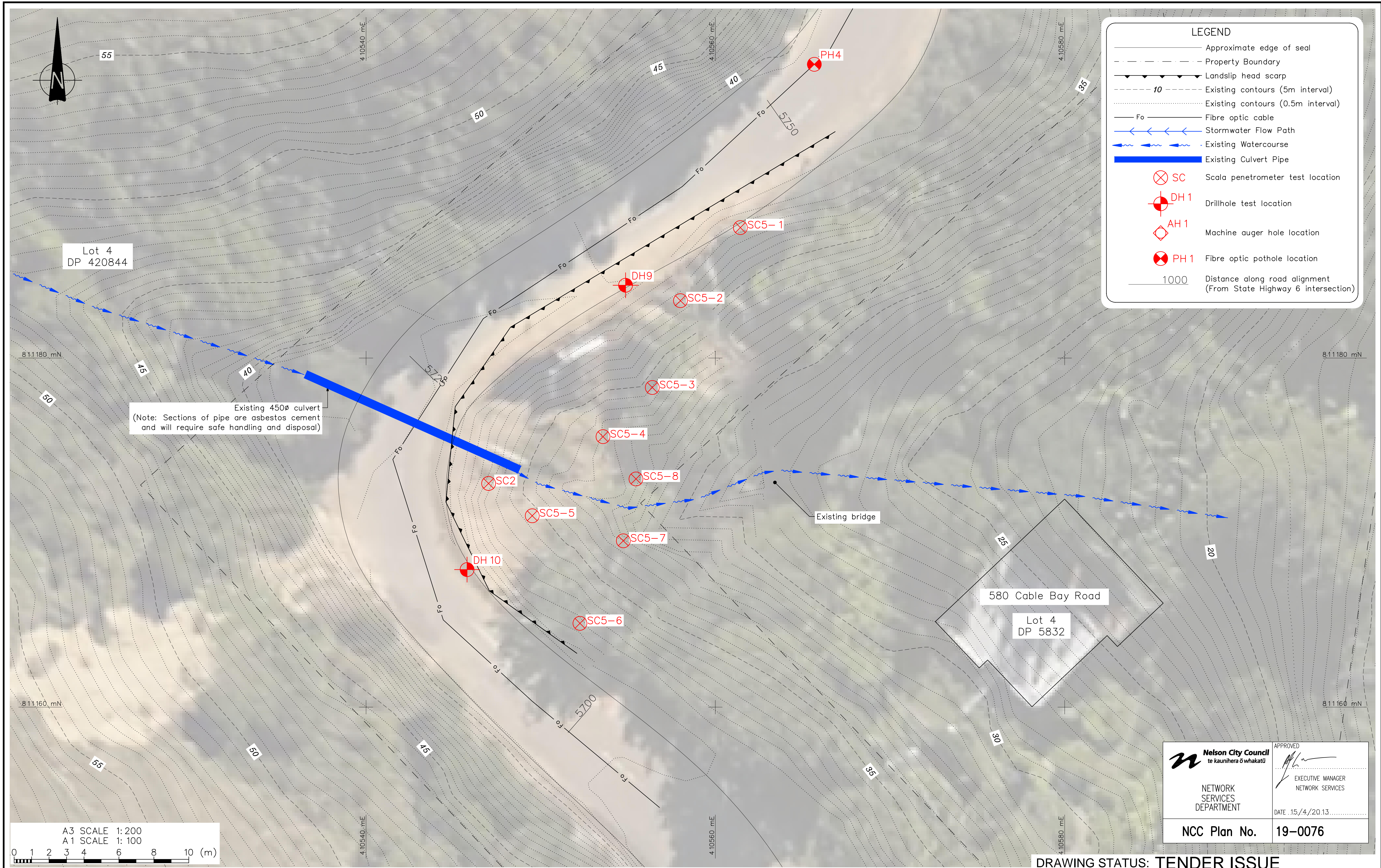
DRAWING STATUS: TENDER ISSUE

DESIGNED :	KAFK	Oct. 12	NOTES :
DRAWN :	JATG	Oct. 12	
DESIGN CHECKED :			
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CADFILE :	\\870982.1005-00.dwg		
APPROVED :	NOT FOR CONSTRUCTION This drawing is not to be used for construction purposes unless signed as approved		REFERENCE :
REVISION DESCRIPTION	BY	DATE	
A Tender Issue			
1 Consultation Issue	MPD	Nov. 12	
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CLIENT, PROJECT	NELSON CITY COUNCIL CABLE BAY ROAD REMEDIATION		
TITLE	GENERAL INFORMATION - SITE 5 Location Plan and Drawing List		
SCALES (AT A1 SIZE)	DWG. No.	REV.	
AS SHOWN	870982.1005-00	A	



LEGEND	
	Approximate edge of seal
	Property Boundary
	Landslip head scarp
	Existing contours (5m interval)
	Existing contours (0.5m interval)
	Fibre optic cable
	Stormwater Flow Path
	Existing Watercourse
	Existing Culvert Pipe
	SC Scala penetrometer test location
	DH1 Drillhole test location
	AH1 Machine auger hole location
	PH1 Fibre optic pothole location
	Distance along road alignment (From State Highway 6 intersection)

Existing 450Ø culvert
 (Note: Sections of pipe are asbestos cement and will require safe handling and disposal)

Existing bridge

580 Cable Bay Road

Lot 4
 DP 5832

A3 SCALE 1:200
 A1 SCALE 1:100
 0 1 2 3 4 6 8 10 (m)

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	DATE: 15/4/2013
NCC Plan No. 19-0076	

DRAWING STATUS: TENDER ISSUE

DESIGNED :	MPD	Feb. 13
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APPROVED :	NOT FOR CONSTRUCTION	
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REVISION DESCRIPTION	BY	DATE
1 Consultation Issue	MPD	Nov. 12

NOTES :

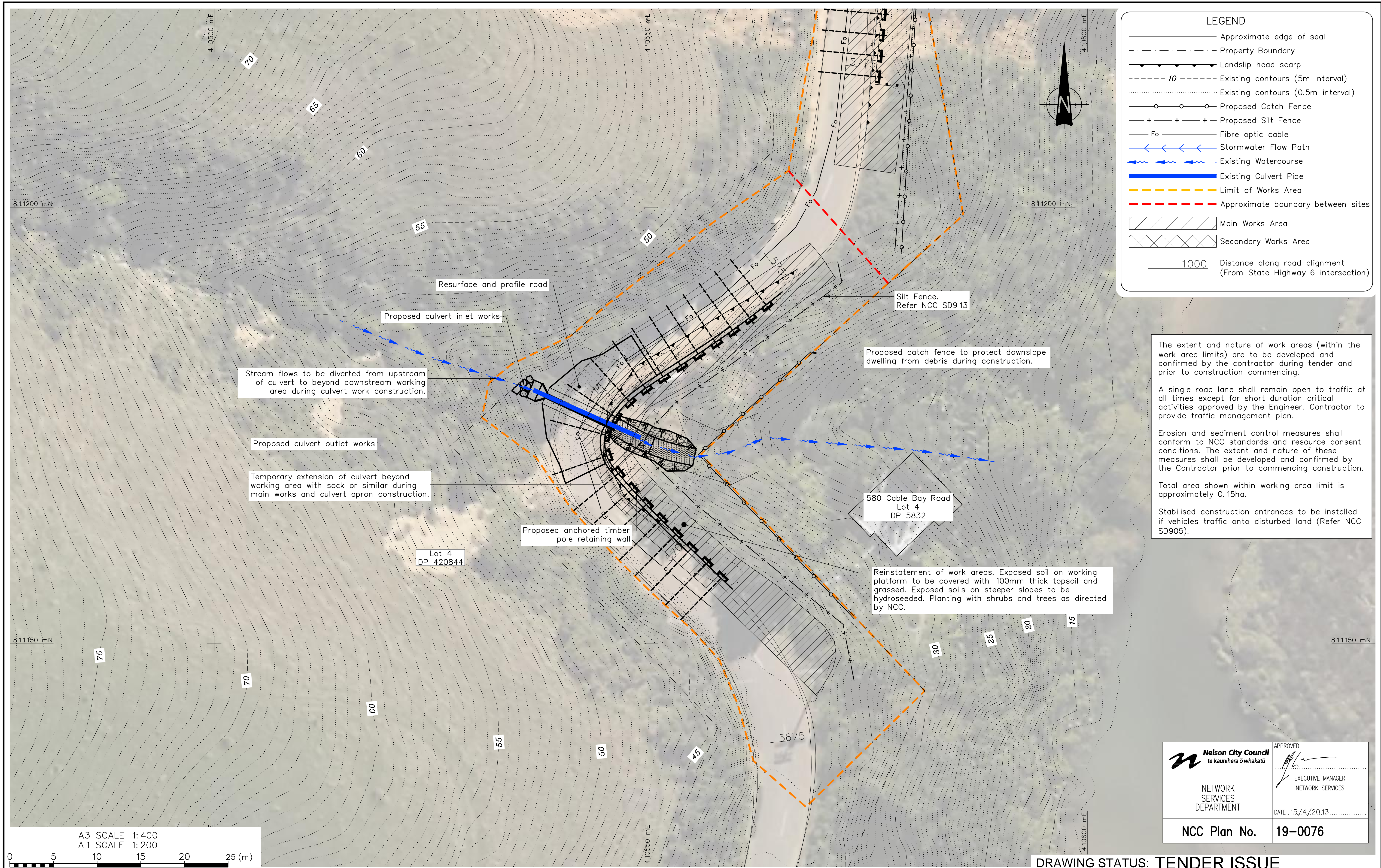
- Nelson Circuit (2000) coordinates. Levels to NCC Datum.
- The Contractor shall confirm the location/depth of all services prior to any excavation.
- All works shall comply with the latest version of the NCC Land Development Manual and all amendments.
- Works outside the reconstruction area shall be reinstated as per NCC Land Development Manual.
- Special care shall be taken to ensure there is no damage to fences and gardens on private property. Any damage is to be repaired promptly at the Contractor's cost.
- Property boundaries, services location and culvert location supplied by DOP Ltd.

REFERENCE : LiDAR contours and aerial photos supplied by NCC.

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CLIENT, PROJECT	NELSON CITY COUNCIL	
	CABLE BAY ROAD REMEDIATION	
TITLE	GENERAL INFORMATION – SITE 5	
	Existing Site and Site Investigation Plan	
SCALES (AT A1 SIZE)	DWG. No.	REV.
1:100	870982.1005-01	A

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The extent and nature of work areas (within the work area limits) are to be developed and confirmed by the contractor during tender and prior to construction commencing.

A single road lane shall remain open to traffic at all times except for short duration critical activities approved by the Engineer. Contractor to provide traffic management plan.

Erosion and sediment control measures shall conform to NCC standards and resource consent conditions. The extent and nature of these measures shall be developed and confirmed by the Contractor prior to commencing construction.

Total area shown within working area limit is approximately 0.15ha.

Stabilised construction entrances to be installed if vehicles traffic onto disturbed land (Refer NCC SD905).

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NETWORK SERVICES DEPARTMENT

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 EXECUTIVE MANAGER
 NETWORK SERVICES

DATE 15/4/2013

NCC Plan No. 19-0076

DRAWING STATUS: TENDER ISSUE

DESIGNED :	MPD	Jan. 13
DRAWN :	DJAA	Jan. 13
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REVISION DESCRIPTION	BY	DATE
1 Consultation Issue	MRF	5/11/12

NOTES :

- Nelson Circuit (2000) coordinates. Levels to NCC Datum.
- The Contractor shall confirm the location/depth of all services prior to any excavation.
- All works shall comply with the latest version of the NCC Land Development Manual and all amendments.
- Works outside the reconstruction area shall be reinstated as per NCC Land Development Manual.
- Special care shall be taken to ensure there is no damage to fences and gardens on private property. Any damage is to be repaired promptly at the Contractor's cost.
- Property boundaries, services location and culvert location supplied by DOP Ltd.

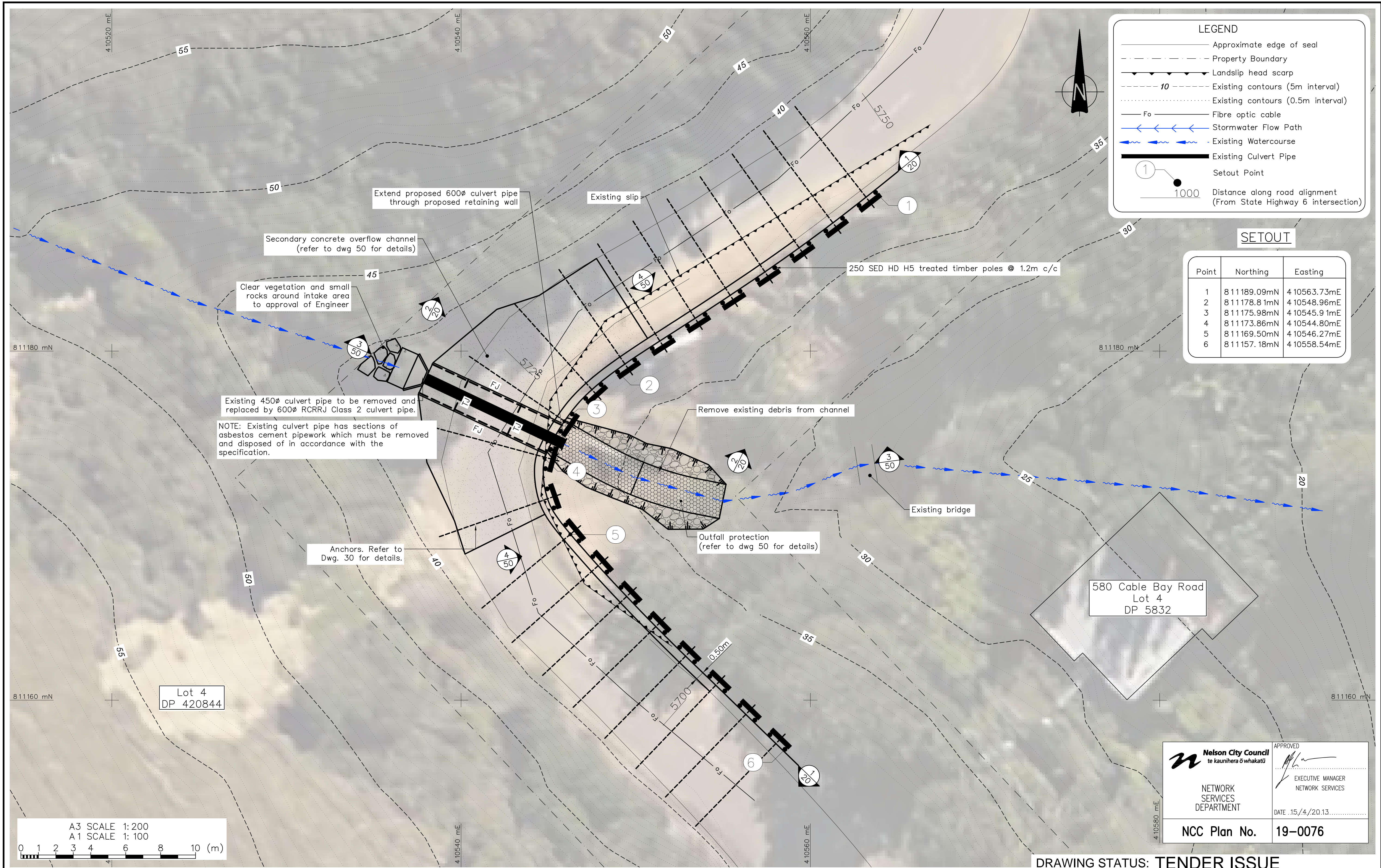
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CLIENT, PROJECT	NELSON CITY COUNCIL	
	CABLE BAY ROAD REMEDIATION	
TITLE	GENERAL INFORMATION - SITE 5	
	Working Areas & Erosion Sediment Control Plan	
SCALES (AT A1 SIZE)	DWG. No.	REV.
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LEGEND

- Approximate edge of seal
- - - Property Boundary
- ▲ Landslip head scarp
- - - 10 Existing contours (5m interval)
- - - Existing contours (0.5m interval)
- Fo Fibre optic cable
- Stormwater Flow Path
- ~ Existing Watercourse
- ▬ Existing Culvert Pipe
- 1 Setout Point
- 1000 Distance along road alignment (From State Highway 6 intersection)

SETOUT

Point	Northing	Easting
1	8 11189.09mN	4 10563.73mE
2	8 11178.81mN	4 10548.96mE
3	8 11175.98mN	4 10545.91mE
4	8 11173.86mN	4 10544.80mE
5	8 11169.50mN	4 10546.27mE
6	8 11157.18mN	4 10558.54mE

NOTE: Existing culvert pipe has sections of asbestos cement pipework which must be removed and disposed of in accordance with the specification.

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A3 SCALE 1:200
A1 SCALE 1:100

0 1 2 3 4 6 8 10 (m)

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1 Consultation Issue	MPD	Nov.12

NOTES :

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- All works shall comply with the latest version of the NCC Land Development Manual and all amendments.
- Works outside the reconstruction area shall be reinstated as per NCC Land Development Manual.
- Special care shall be taken to ensure there is no damage to fences and gardens on private property. Any damage is to be repaired promptly at the Contractor's cost.
- Property boundaries, services location and culvert location supplied by DOP Ltd.

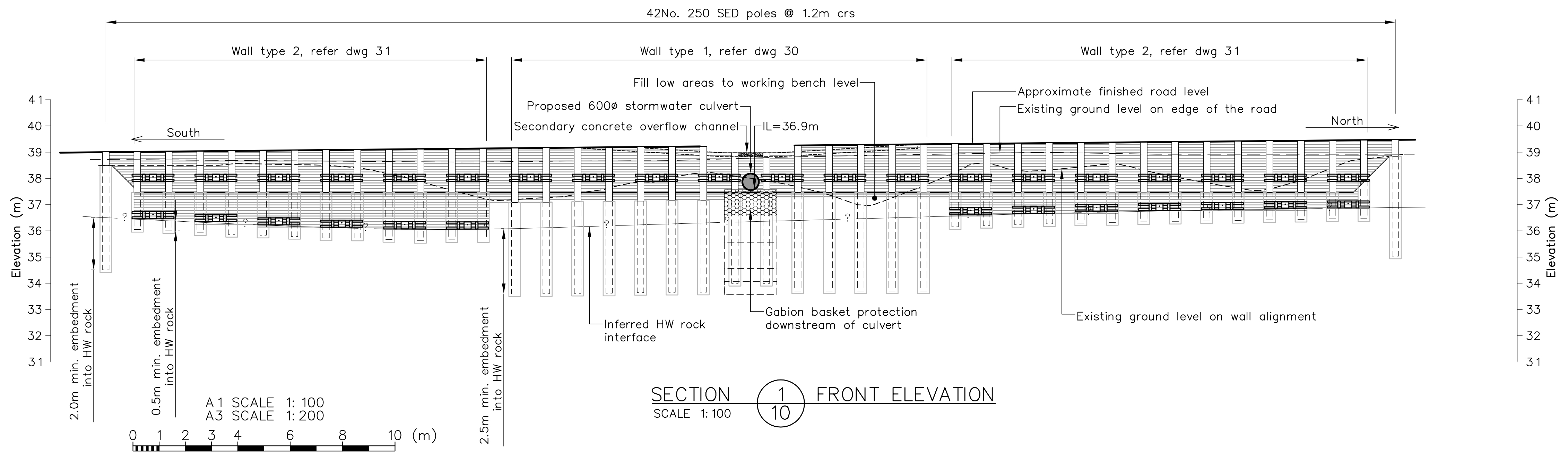
REFERENCE : LiDAR contours and aerial photos supplied by NCC.

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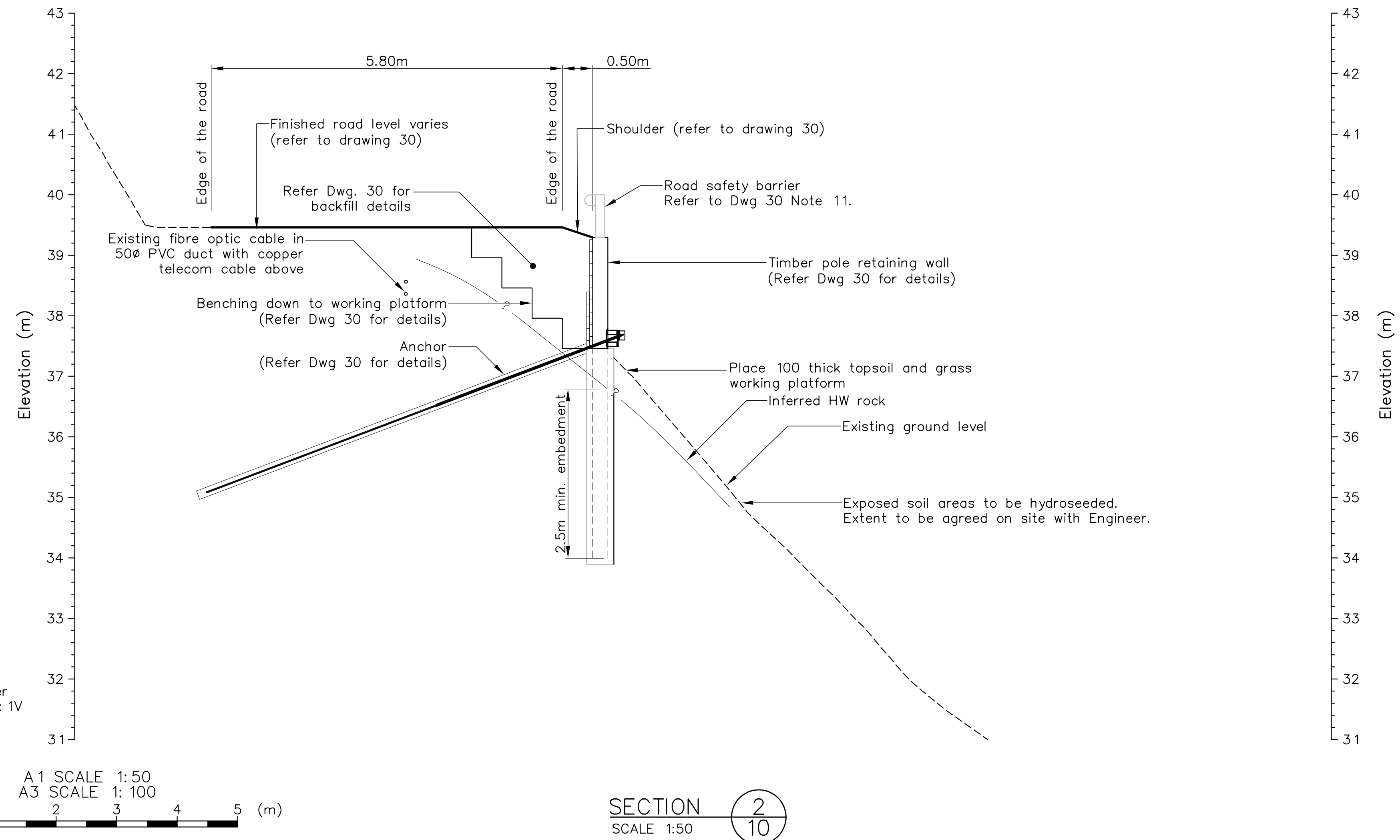
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CLIENT, PROJECT	NELSON CITY COUNCIL	
	CABLE BAY ROAD REMEDIATION	
TITLE	RETAINING WALL DESIGN – SITE 5	
	General Arrangement	
SCALES (AT A1 SIZE)	DWG. No.	REV.
1:100	870982.1005-10	A

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SECTION 1 FRONT ELEVATION
SCALE 1:100



SECTION 2
SCALE 1:50

- NOTES (cont):
- No soil to be stockpiled on site during periods of wet weather
 - No soil to be stockpiled overnight on slopes steeper than 2H: 1V
 - Pile embedment to be confirmed on site by the Engineer
 - The termination of the retaining structures to be agreed with Engineer on site prior to construction

A1 SCALE 1:50
A3 SCALE 1:100

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	<p>DATE: 15/4/2013</p>
<p>NCC Plan No. 19-0076</p>	

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- NOTES :
- All dimensions are in millimetres unless noted otherwise
 - Contractor to set out wall as per coordinates shown on sheet 10, Engineer and Client to verify wall location prior to commencement of augering of pole holes.
 - All cut faces of poles and lagging shall be coated with two layers of Ensele preservative paint or Engineer-approved similar.
 - Contractor is fully responsible for the location of all services prior to commencement of works.
 - Contractor to provide As-Built Drawings and PS3 on completion of works.
 - All works are to be inspected and approved by the Engineer
- REFERENCE :

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CLIENT, PROJECT	NELSON CITY COUNCIL CABLE BAY ROAD REMEDIATION	
TITLE	RETAINING WALL DESIGN – SITE 5 Retaining Wall – Sections	
SCALES (AT A1 SIZE)	DWG. No.	REV.
AS SHOWN	870982.1005-20	A

Min. pole diameter	250SED
Max. pole length	5.3m
Max. pole spacing	1.2m c/c
Minimum Embedment into HW rock	2.5m
Maximum Retained Height	2.8m
Assumed depth to ground water	4.0m

Pole length to be determined by minimum embedment into HW rock or max pole length i.e Poles can be cut if minimum embedment into rock is achieved.

Depth Anchor	1.7m
Min. bar diameter	Galvanised RB25
Free Length	Greater of 3m and 1m into HW rock
Min. bonded Length	4.0m
Inclination	15°
Min. hole Diameter	100mm
Static working load	70kN
Seismic working load	100kN

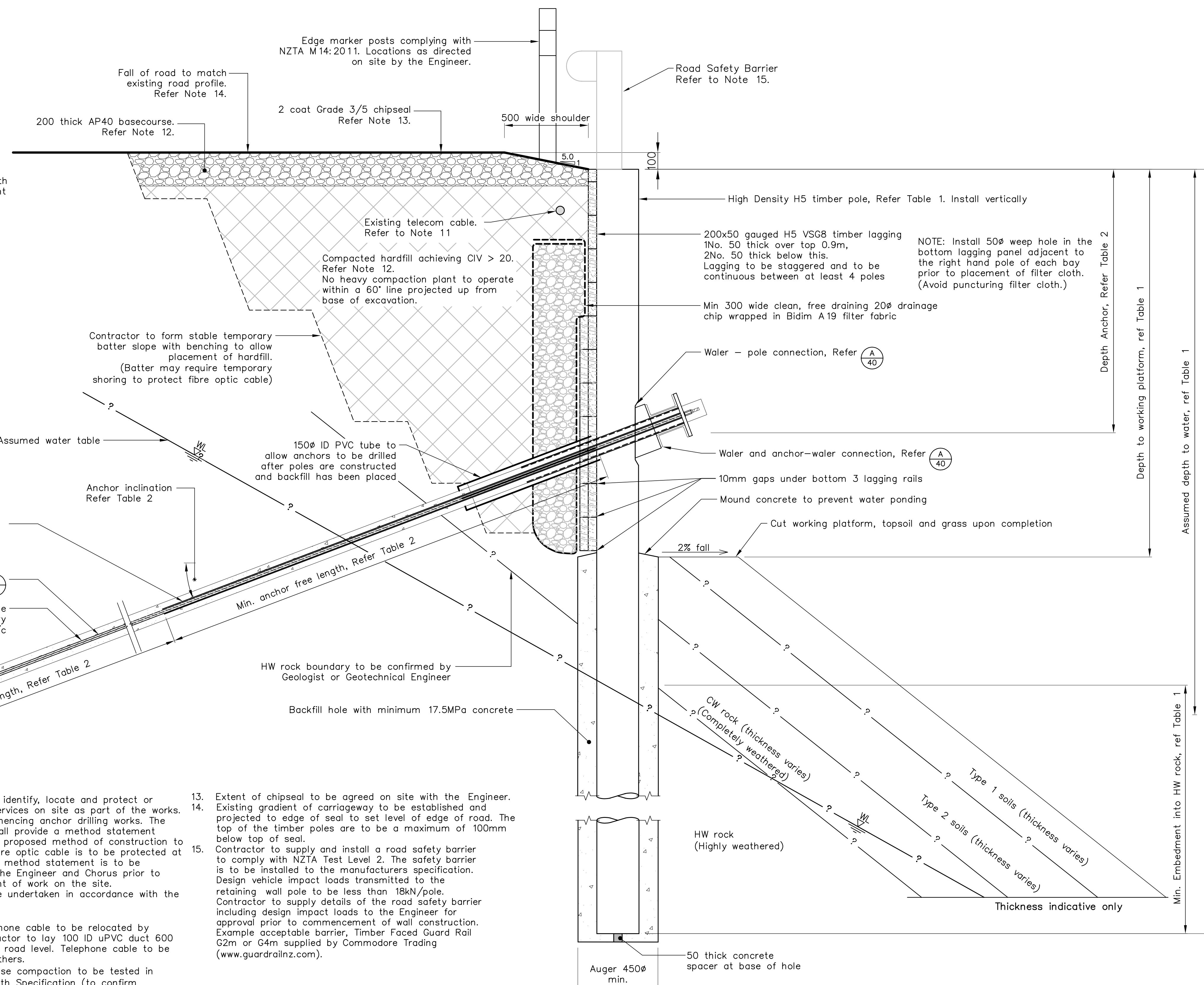
Anchor free length to be double wrapped in Denso Tape and sleeved in 50Ø ID uPVC sleeve. Refer (C/40)

Anchor Bonded Section, Refer (B/40)

Anchor bar, Refer Table 2. Bar to be centralised in hole with proprietary centralisers at 1.5m c/c

NOTES (continued):

- Contractor to identify, locate and protect or relocate all services on site as part of the works.
- Prior to commencing anchor drilling works. The Contractor shall provide a method statement detailing their proposed method of construction to ensure the fibre optic cable is to be protected at all times. The method statement is to be approved by the Engineer and Chorus prior to commencement of work on the site.
- All work to be undertaken in accordance with the specification.
- N/A
- Existing Telephone cable to be relocated by others, Contractor to lay 100 ID uPVC duct 600 below finished road level. Telephone cable to be installed by others.
- Fill and subbase compaction to be tested in accordance with Specification (to confirm thickness of metal course) prior to placing overlying basecourse and chipseal
- Extent of chipseal to be agreed on site with the Engineer.
- Existing gradient of carriageway to be established and projected to edge of seal to set level of edge of road. The top of the timber poles are to be a maximum of 100mm below top of seal.
- Contractor to supply and install a road safety barrier to comply with NZTA Test Level 2. The safety barrier is to be installed to the manufacturers specification. Design vehicle impact loads transmitted to the retaining wall pole to be less than 18kN/pole. Contractor to supply details of the road safety barrier including design impact loads to the Engineer for approval prior to commencement of wall construction. Example acceptable barrier, Timber Faced Guard Rail G2m or G4m supplied by Commodore Trading (www.guardrailnz.com).



DETAIL 1 WALL TYPE 1

SCALE: NTS Note: If rock is too difficult to auger use wall type 2 in place of wall type 1

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<p>NCC Plan No. 19-0076</p>	

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REVISION DESCRIPTION	BY	DATE
1 Consultation Issue	MRF	5/11/12

NOTES :

- All dimensions are in millimetres unless noted otherwise.
- Place Malthold paper between all steel - timber contacts.
- All cuts & holes in timber to be treated with 'Ensale' or similar approved.
- Contractor to set out wall and confirm setout with Engineer and Client before proceeding with construction.
- HW rock TBC on site by suitably experienced Geotechnical Engineer or Engineering Geologist
- Type 1 soils have scala blow counts < 2/50mm. Type 2 soils have scala blows > 2/50mm

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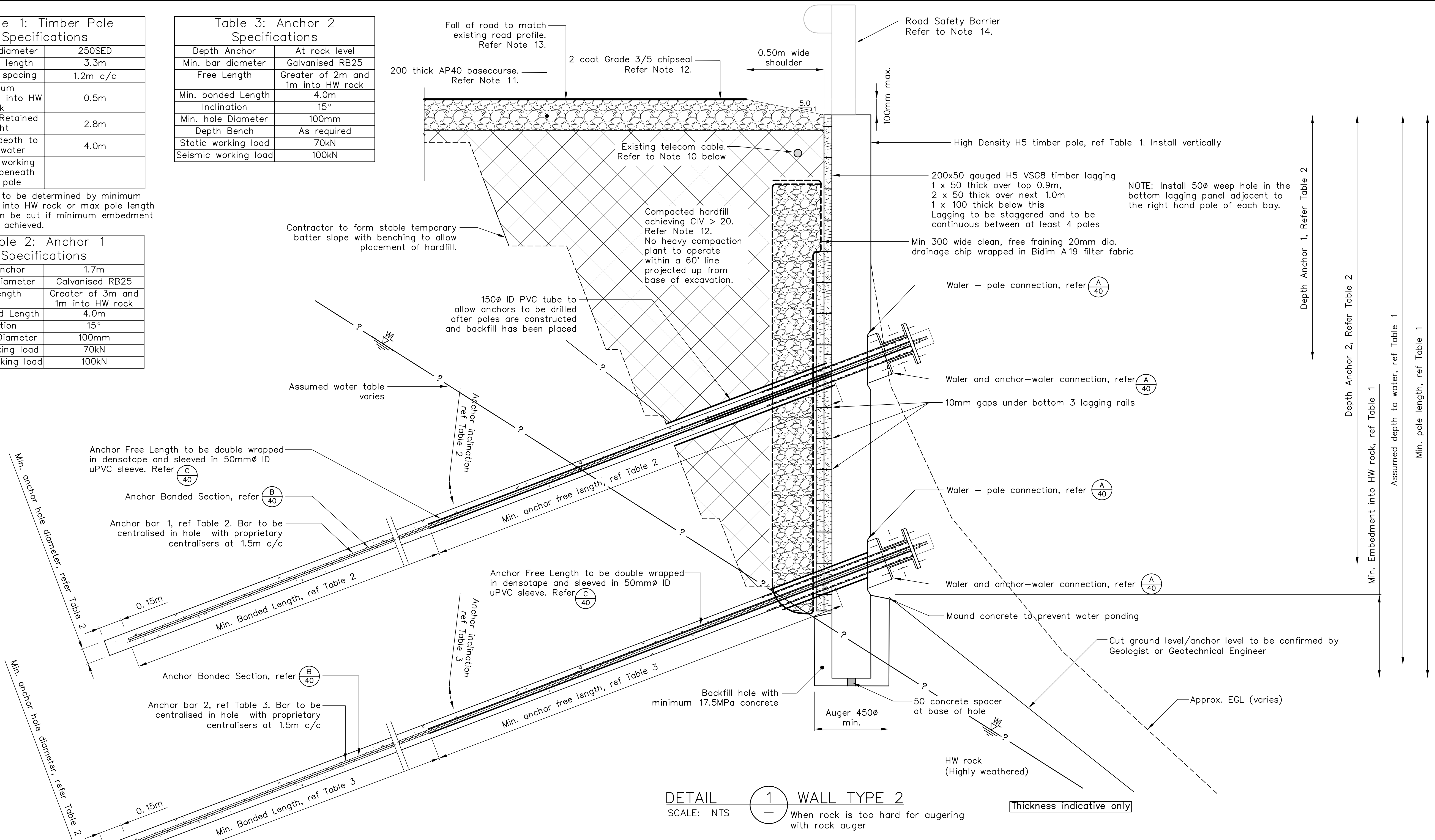
CLIENT, PROJECT	NELSON CITY COUNCIL CABLE BAY ROAD REMEDIATION	
TITLE	RETAINING WALL DESIGN - SITE 5 Typical Anchored Timber Pole Wall Detail (Sheet 1 of 2)	
SCALES (AT A1 SIZE)	DWG. No.	REV.
N.T.S	870982.1005-30	A

Min. pole diameter	250SED
Max. pole length	3.3m
Max. pole spacing	1.2m c/c
Minimum Embedment into HW rock	0.5m
Maximum Retained Height	2.8m
Assumed depth to ground water	4.0m
Depth to working platform beneath top of pole	

Depth Anchor	At rock level
Min. bar diameter	Galvanised RB25
Free Length	Greater of 2m and 1m into HW rock
Min. bonded Length	4.0m
Inclination	15°
Min. hole Diameter	100mm
Depth Bench	As required
Static working load	70kN
Seismic working load	100kN

Pole length to be determined by minimum embedment into HW rock or max pole length i.e Poles can be cut if minimum embedment into rock is achieved.

Depth Anchor	1.7m
Min. bar diameter	Galvanised RB25
Free Length	Greater of 3m and 1m into HW rock
Min. bonded Length	4.0m
Inclination	15°
Min. hole Diameter	100mm
Static working load	70kN
Seismic working load	100kN



- NOTES (continued):
- Contractor to identify, locate and protect or relocate all services on site as part of the works. Refer Note 8, Sheet 30
 - All work to be undertaken in accordance with the specification.
 - Existing Telephone cable to be relocated by others, Contractor to lay 100mm ID U-PVC duct 600mm below finished road level. Telephone cable to be installed by others
 - Fill and subbase compaction to be tested in accordance with Specification (to confirm thickness of metal course) prior to placing overlying basecourse and chipseal.
 - Extent of chipseal to be agreed on site with the Engineer.
 - Existing gradient of carriageway to be established and projected to edge of seal to set level of edge of road. The top of the timber poles are to be a maximum of 100mm below top of seal.
 - Contractor to supply and install a road safety barrier to comply with NZTA Test Level 2. The safety barrier to be installed to the manufacturers specification. Design vehicle impact loads transmitted to the retaining wall to be less than 15kN/pole. Contractor to supply details of the road safety barrier including design impact loads to the Engineer for approval prior to commencement of wall construction. Example acceptable barrier, Timber Faced Guard Rail G2m or G4m supplied by Commodore Trading (www.guardrainz.com)

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NCC Plan No. 19-0076	

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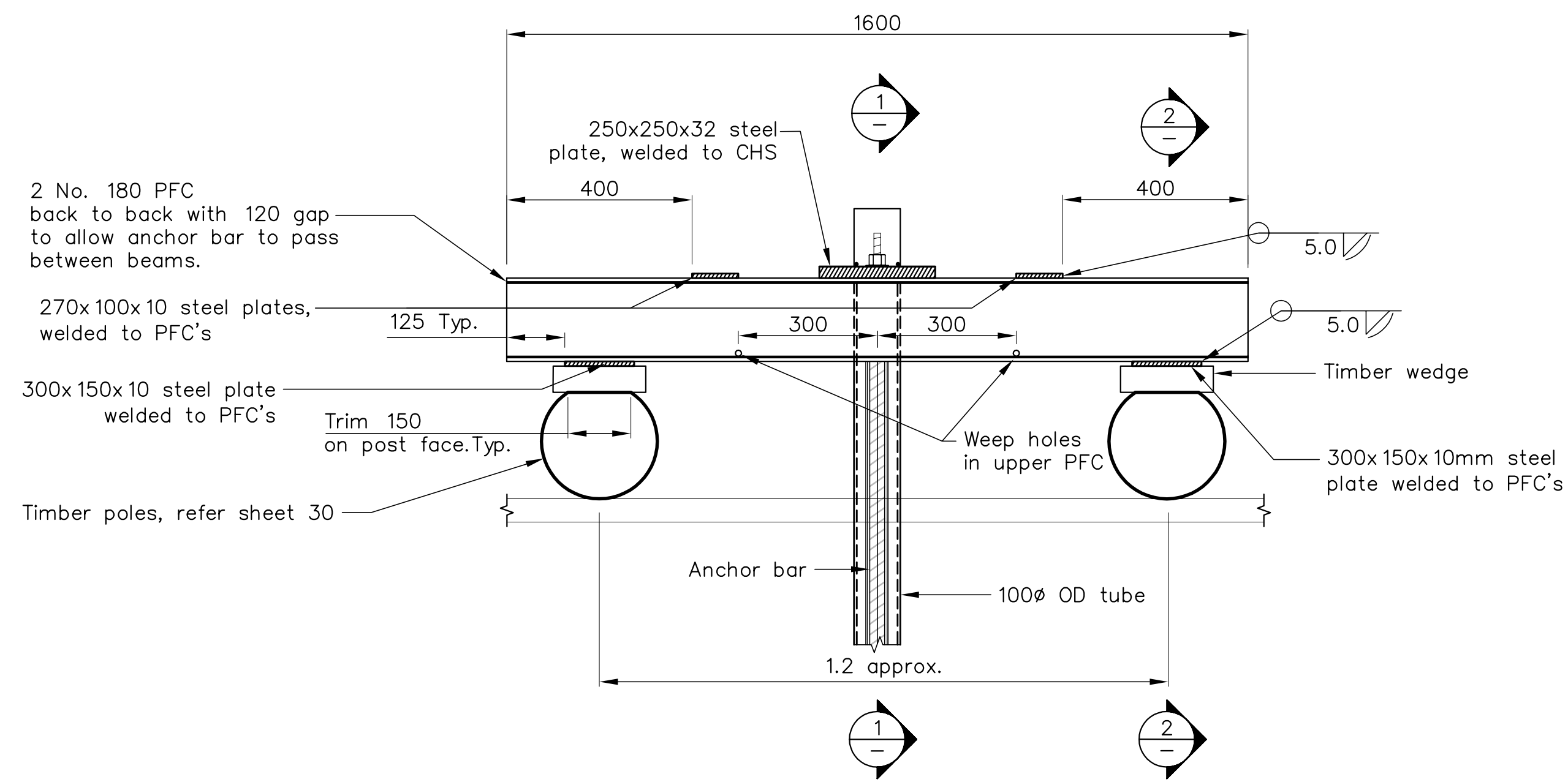
NOTES :

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- Place Malthold paper between all steel - timber contacts.
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- Contractor to set out wall and confirm setout with Engineer and Client before proceeding with construction.
- HW rock TBC on site by suitably experienced Geotechnical Engineer or Engineering Geologist
- Type 1 soils have scala blow counts < 2/50mm. Type 2 soils have scala blows > 2/50mm.

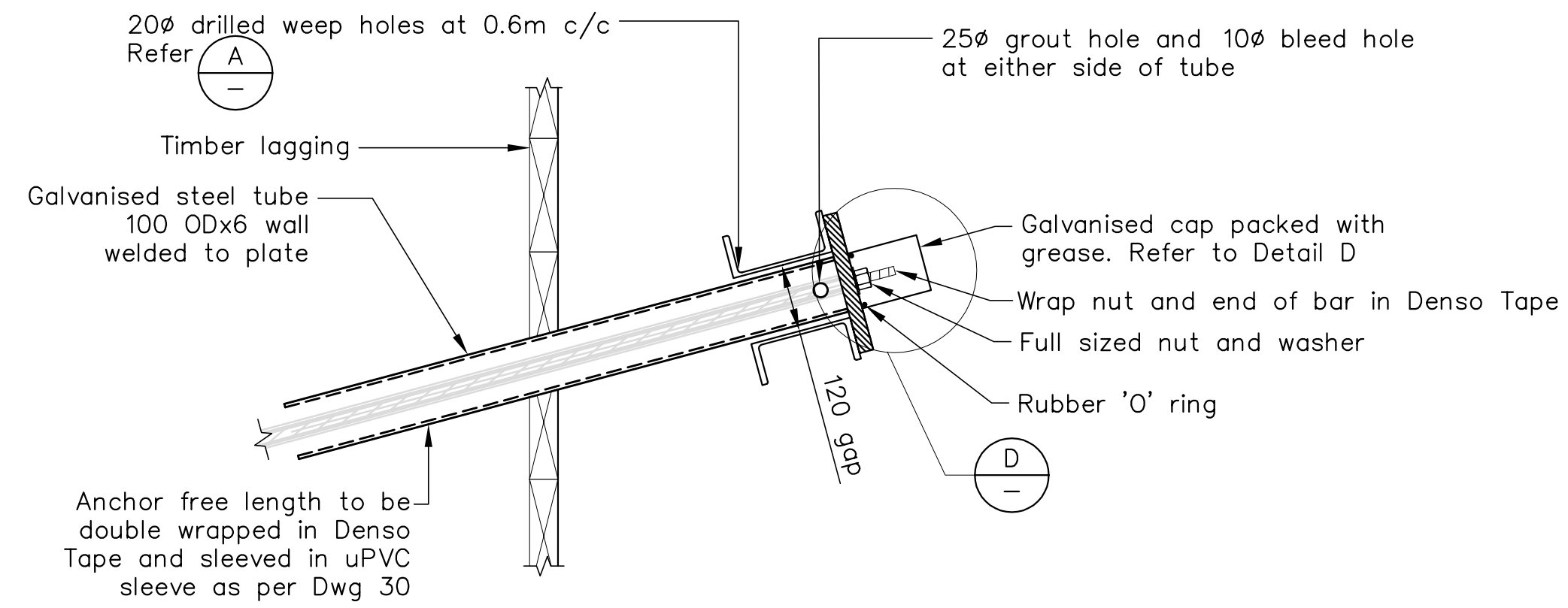
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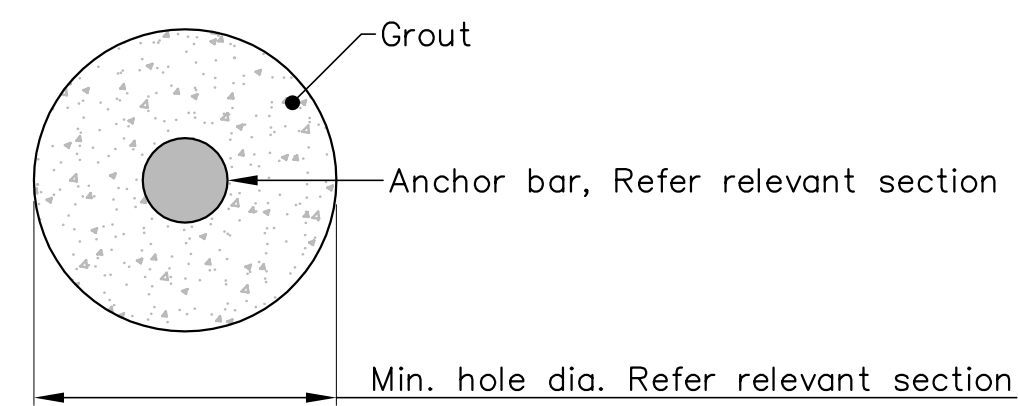
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TITLE	RETAINING WALL DESIGN - SITE 5 Typical Anchored Timber Pole Wall Detail (Sheet 2 of 2)	
SCALES (AT A1 SIZE)	DWG. No.	REV.
N.T.S	870982.1005-31	A



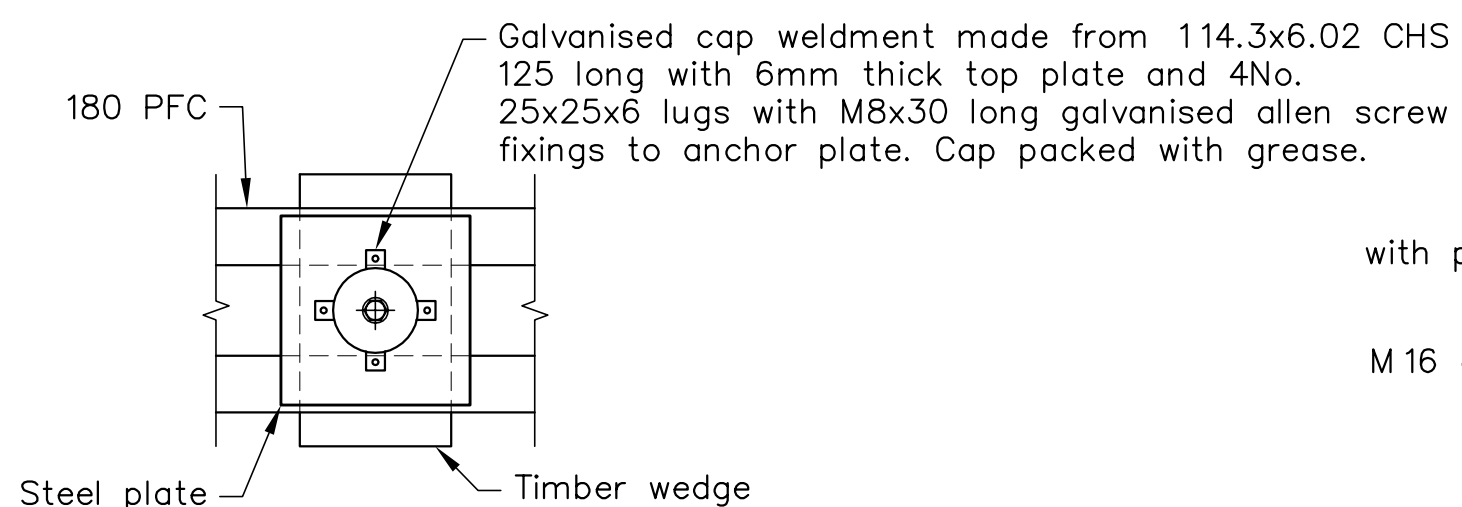
DETAIL **A** PLAN – TYPICAL BACK-TO-BACK PFC WALER
A1 SCALE 1: 10



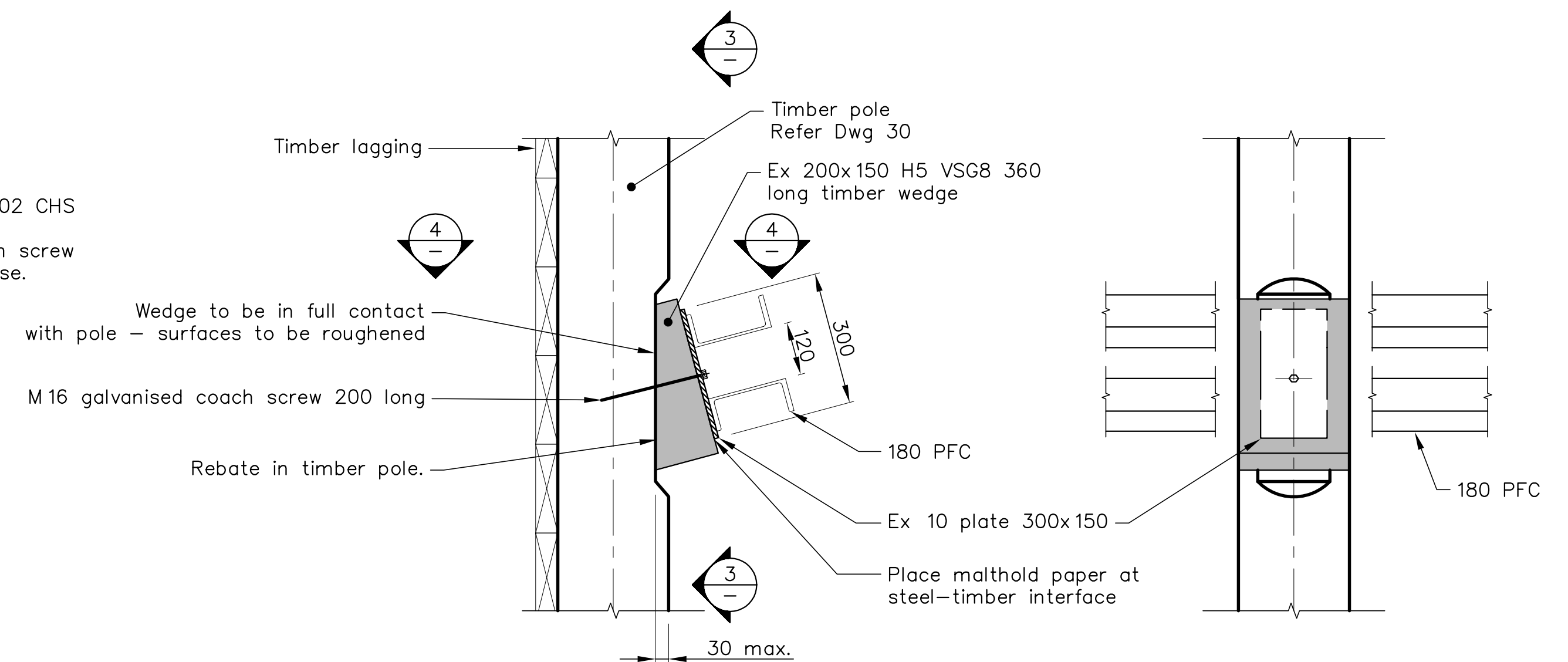
SECTION **1** WALER TO ANCHOR CONNECTION
A1 SCALE 1: 10



DETAIL **B** ANCHOR BONDED LENGTH
SCALE NTS

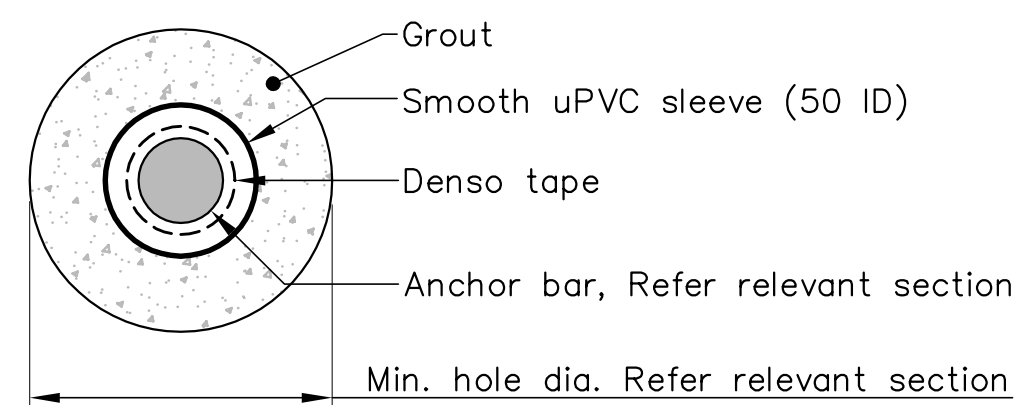


DETAIL **D** STEEL CAP
A1 SCALE 1: 10

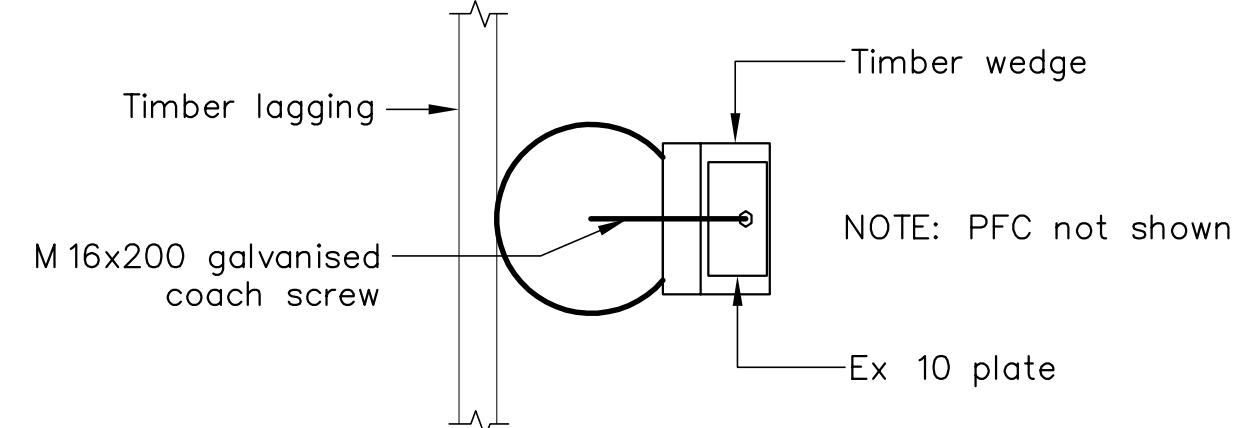


SECTION **2** WALER TO POLE CONNECTION
A1 SCALE 1: 10

SECTION **3**
A1 SCALE 1: 10

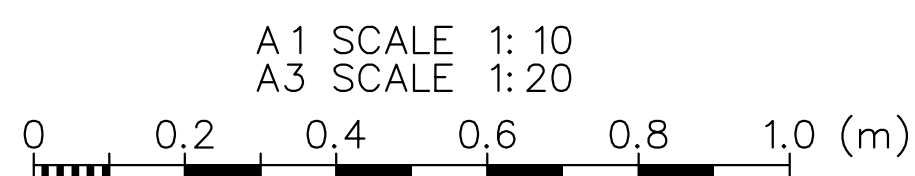


DETAIL **C** ANCHOR FREE LENGTH
SCALE NTS



SECTION **4**
A1 SCALE 1: 10

- Notes (continued)
- All cuts, scarfs or drilled surfaces in timber to be protected by applying a liberal brush application of 'ensele' or equivalent prior to assembly.
 - All steelwork shall be grade 300 and hot dip galvanised to HDG600 to AS/NZS4680 100 micron thickness after welding.
 - All bolts shall be grade 8.8/5 in accordance with AS 1252.
 - All structural steelwork to comply with NZS3404.
 - All bolts, nuts and washers shall be hot dip galvanised. Washers shall be used at all bolted connections.



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	<p>DATE .15./4./20.13</p>

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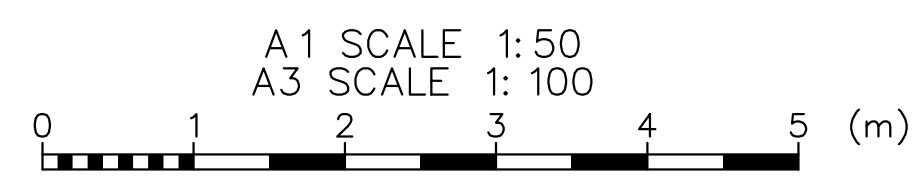
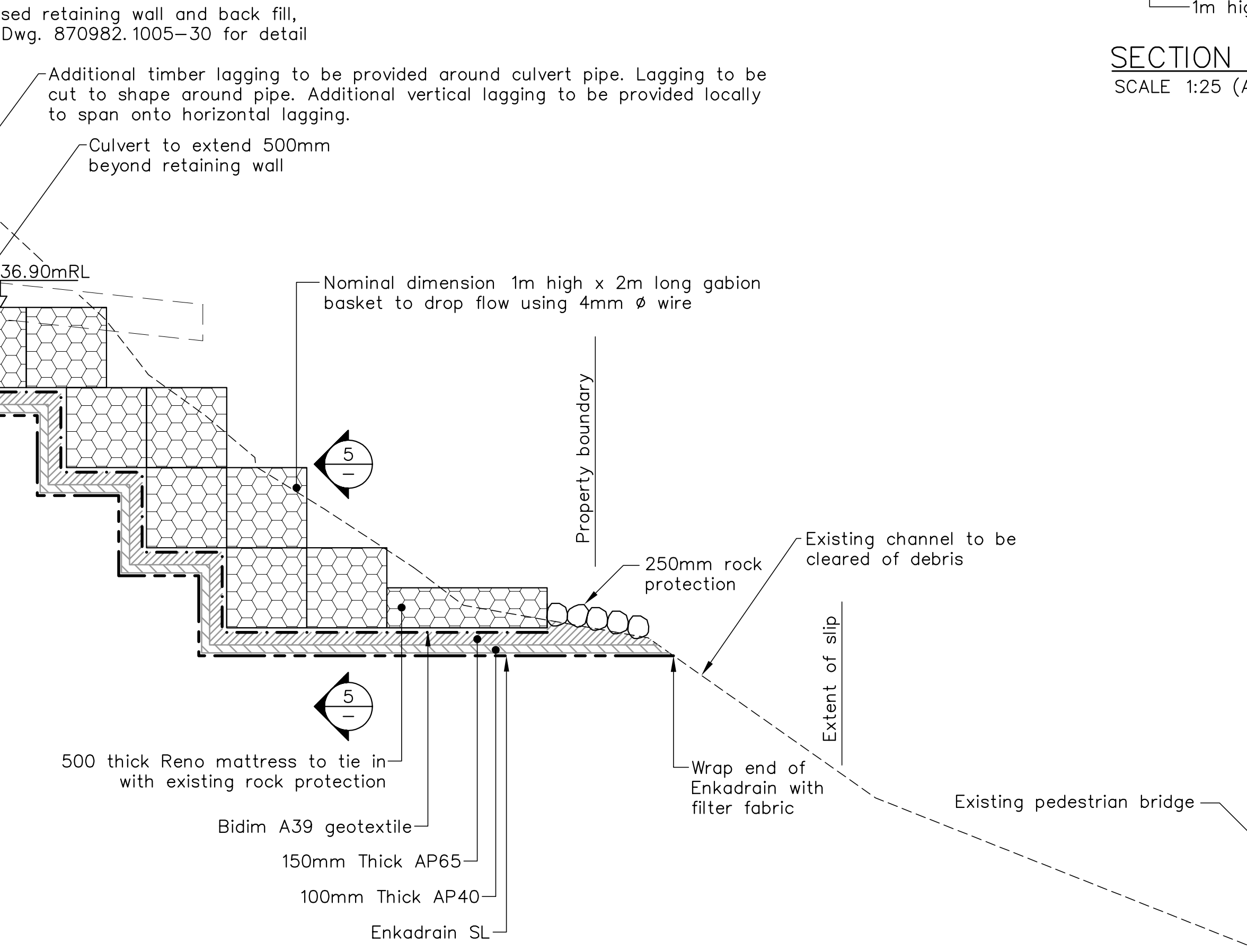
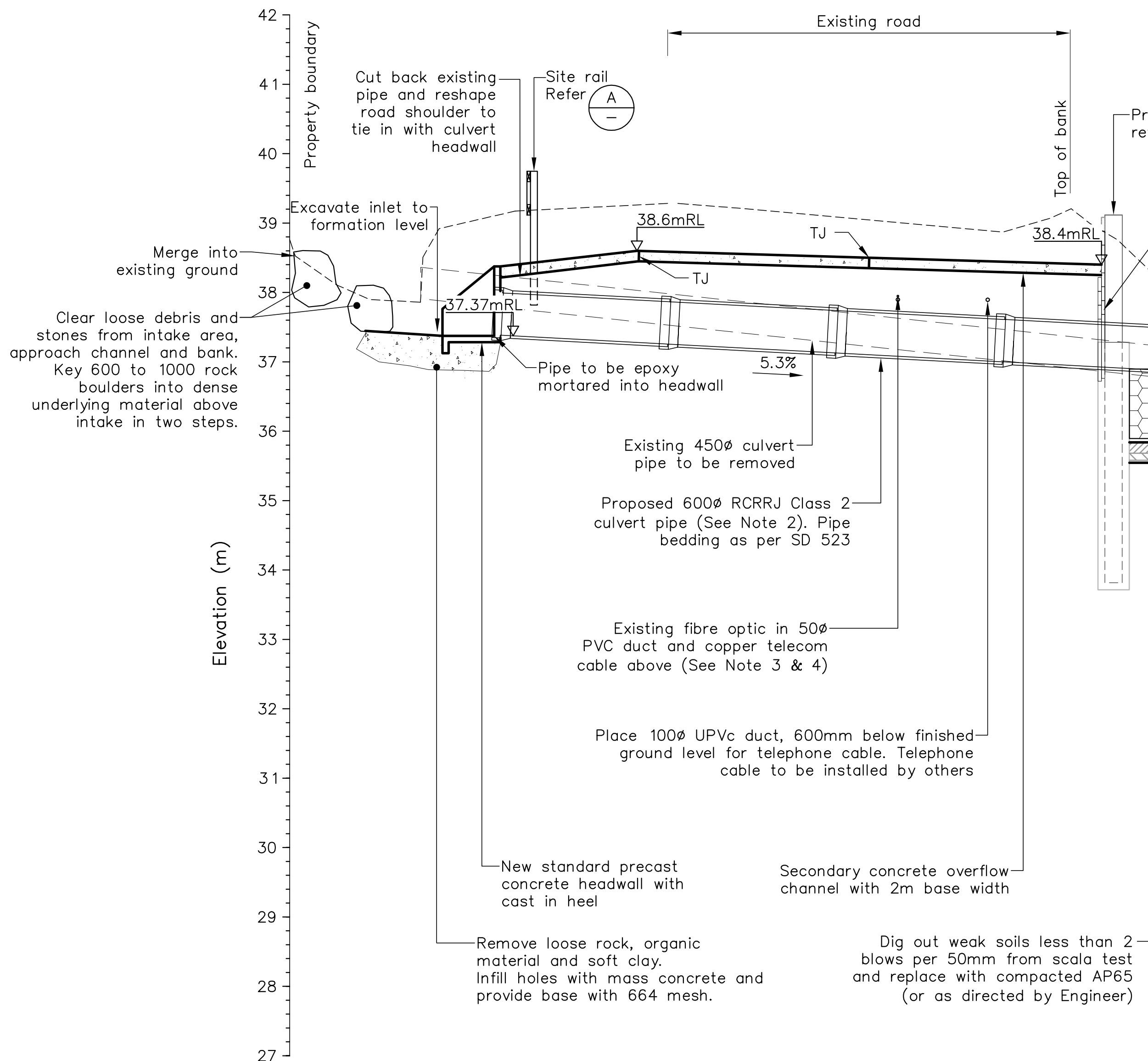
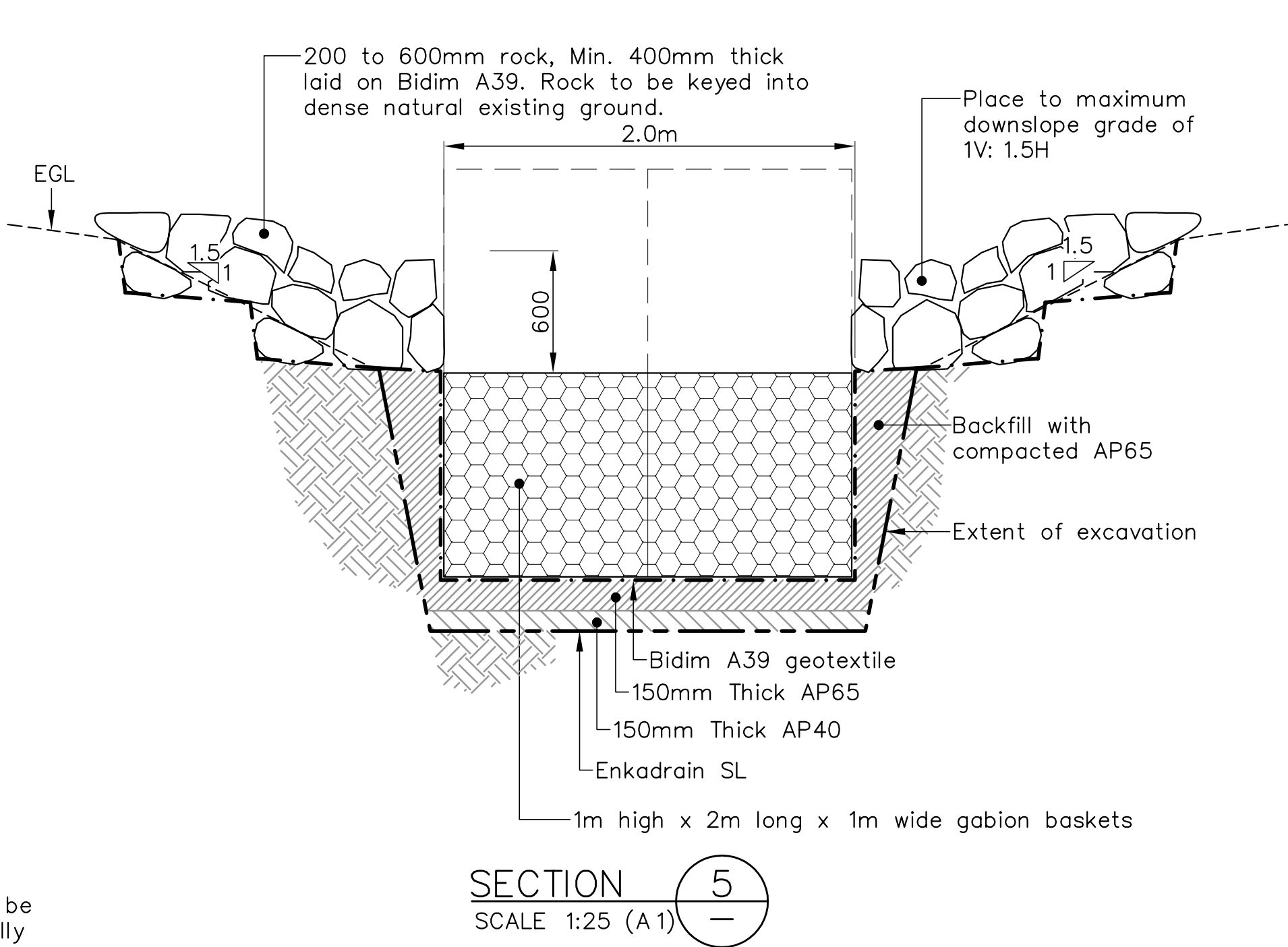
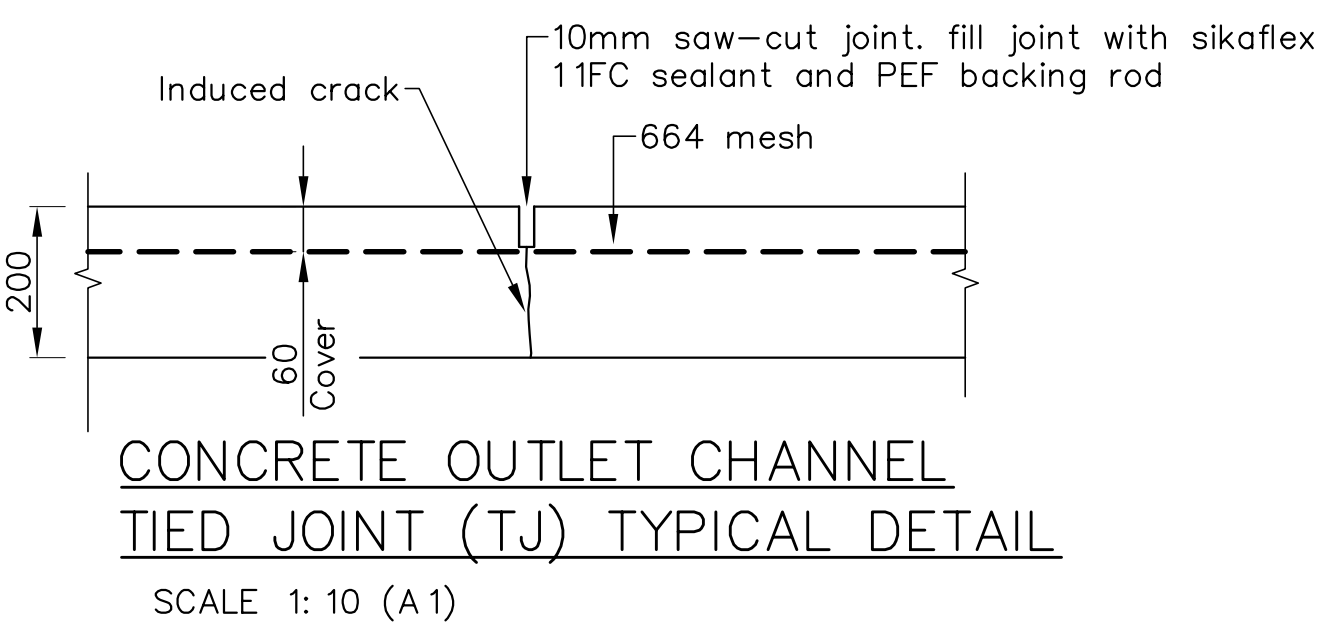
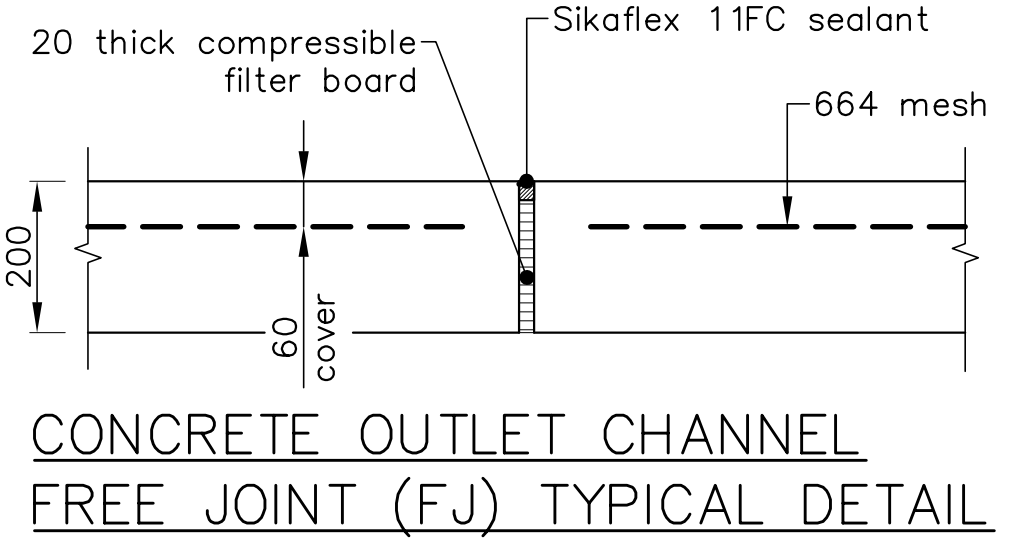
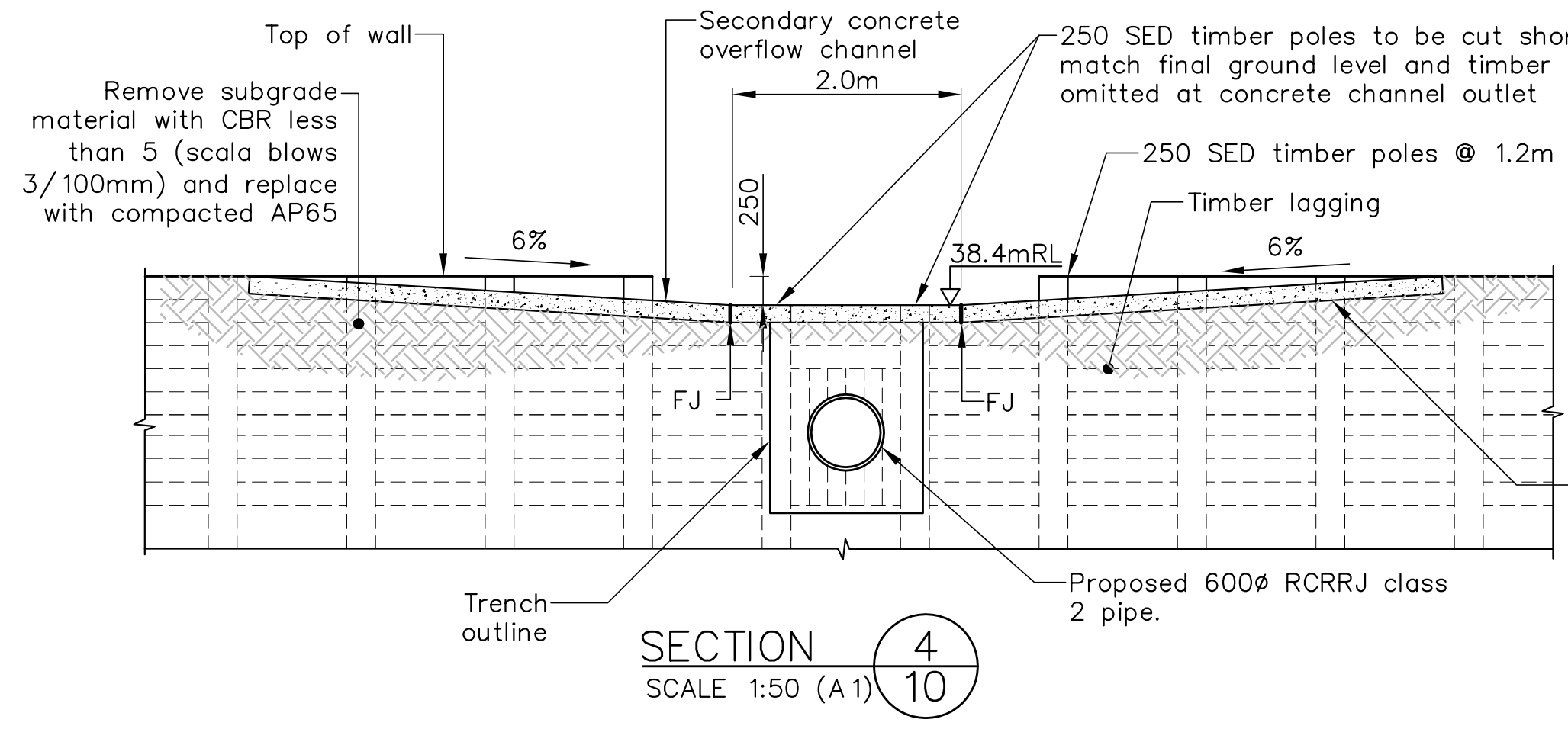
DESIGNED :	DJA	Feb. 13
DRAWN :	AMC	Feb. 13
DESIGN CHECKED :		
DRAFTING CHECKED :		
CADFILE :	\\870982.1005-40.dwg	
APPROVED :	NOT FOR CONSTRUCTION	
This drawing is not to be used for construction purposes unless signed as approved		
REVISION DESCRIPTION	BY	DATE
1 Consultation Issue	MPD	Nov. 12

REFERENCE :

Tonkin & Taylor
Environmental and Engineering Consultants

43 Halifax St, Nelson
Tel. (03) 546 6339 Fax. (03) 546 7619
www.tonkin.co.nz

CLIENT, PROJECT	NELSON CITY COUNCIL CABLE BAY ROAD REMEDIATION	
TITLE	RETAINING WALL DESIGN – SITE 5 Anchor and Waler Details	
SCALES (AT A1 SIZE)	DWG. No.	REV.
AS SHOWN	870982.1005-40	A



NOTES CONTINUED:
 4. Prior to commencing any excavation work the Contractor shall provide a method statement detailing their proposed method of construction to ensure the fibre optic cable is to be protected at all times. The method statement is to be approved by the Engineer and Transfield prior to commencement of work on the site.

NOTES:
 1. All dimensions are in millimetres unless noted otherwise.
 2. Provide 100mm clearance to culvert below existing fibre optic in 50mm PVC duct. If necessary the invert levels may be lowered to achieve sufficient clearance under the fibre optic subject to Engineers approval.
 3. Services and service locations shown on this plan are indicative only. Other services may be present but not shown on this plan. The Contractor shall be responsible for notifying, locating, protecting and relocating all services on the site.

REFERENCE :

SECTION 3
 SCALE 1:50 (A1)

 NETWORK SERVICES DEPARTMENT	APPROVED EXECUTIVE MANAGER NETWORK SERVICES
	DATE: 15/4/2013
NCC Plan No. 19-0076	

DRAWING STATUS: TENDER ISSUE

DESIGNED :	KAFK	Jan. 13
DRAWN :	JATG	Jan. 13
DESIGN CHECKED :		
DRAFTING CHECKED :		
CADFILE :	\\870982.1005-50.dwg	
APPROVED :	NOT FOR CONSTRUCTION	
This drawing is not to be used for construction purposes unless signed as approved		
REVISION DESCRIPTION	BY	DATE
1 Consultation Issue	MPD	Nov. 12

DESIGNED :	KAFK	Jan. 13
DRAWN :	JATG	Jan. 13
DESIGN CHECKED :		
DRAFTING CHECKED :		
CADFILE :	\\870982.1005-50.dwg	
APPROVED :	NOT FOR CONSTRUCTION	
This drawing is not to be used for construction purposes unless signed as approved		
REVISION DESCRIPTION	BY	DATE
1 Consultation Issue	MPD	Nov. 12

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CLIENT, PROJECT NELSON CITY COUNCIL CABLE BAY ROAD REMEDIATION	
TITLE CULVERT UPGRADE DESIGN – SITE 5 Culvert – Sections and Details	
SCALES (AT A1 SIZE) AS SHOWN	DWG. No. 870982.1005-50
REV. A	

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