

NELSON CITY COUNCIL

Cable Bay Road Remediation, Contract No: EC 3424

Tender Issue

DRAWING Rev Title

GENERAL INFORMATION - SITE 6

- 870982.1006-00 A Location Plan and Drawing List
- 870982.1006-01 A Existing Site and Site Investigation Plan
- 870982.1006-02 A Working Areas & Erosion Sediment Control Plan

RETAINING WALL DESIGN - SITE 6

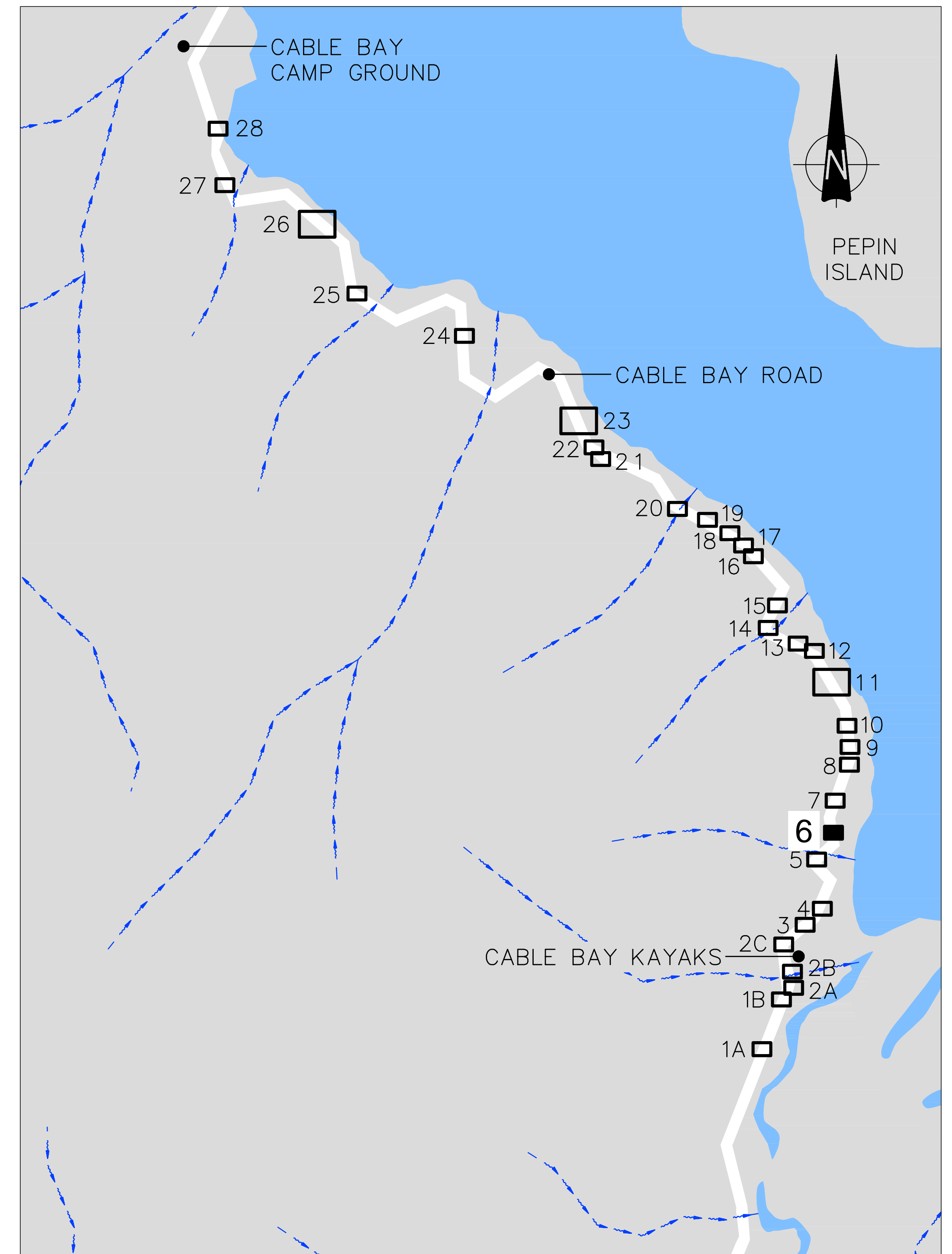
- 870982.1006-10 A General Arrangement
- 870982.1006-20 A Section and Elevation
- 870982.1006-30 A Typical Anchored Timber Pole Wall Detail
- 870982.1006-40 A Anchor and Waler Details

- 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

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

DRAWING STATUS: TENDER ISSUE

DESIGNED :	DJA	Oct. 12
DRAWN :	AMC	Oct. 12
DESIGN CHECKED :		
DRAFTING CHECKED :		
CADFILE :	\\870982.1006-00.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

NOTES :
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	
TITLE	CABLE BAY ROAD REMEDIATION	
TITLE	GENERAL INFORMATION - SITE 6	
TITLE	Location Plan and Drawing List	
SCALES (AT A1 SIZE)	DWG. No.	REV.
AS SHOWN	870982.1006-00	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
	DH Drillhole test location
	AH Machine auger hole location
	PH Fibre optic pothole location
	Distance along road alignment (From State Highway 6 intersection)

A3 SCALE 1:200
 A1 SCALE 1:100

 NETWORK SERVICES DEPARTMENT	APPROVED EXECUTIVE MANAGER NETWORK SERVICES
	DATE .15./4./20.13..... REV.
NCC Plan No. 19-0076	

DRAWING STATUS: TENDER ISSUE

DESIGNED :	MPD	Oct.12
DRAWN :	AMC	Oct.12
DESIGN CHECKED :		
DRAFTING CHECKED :		
CADFILE :	\\870982.1006-01.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

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.

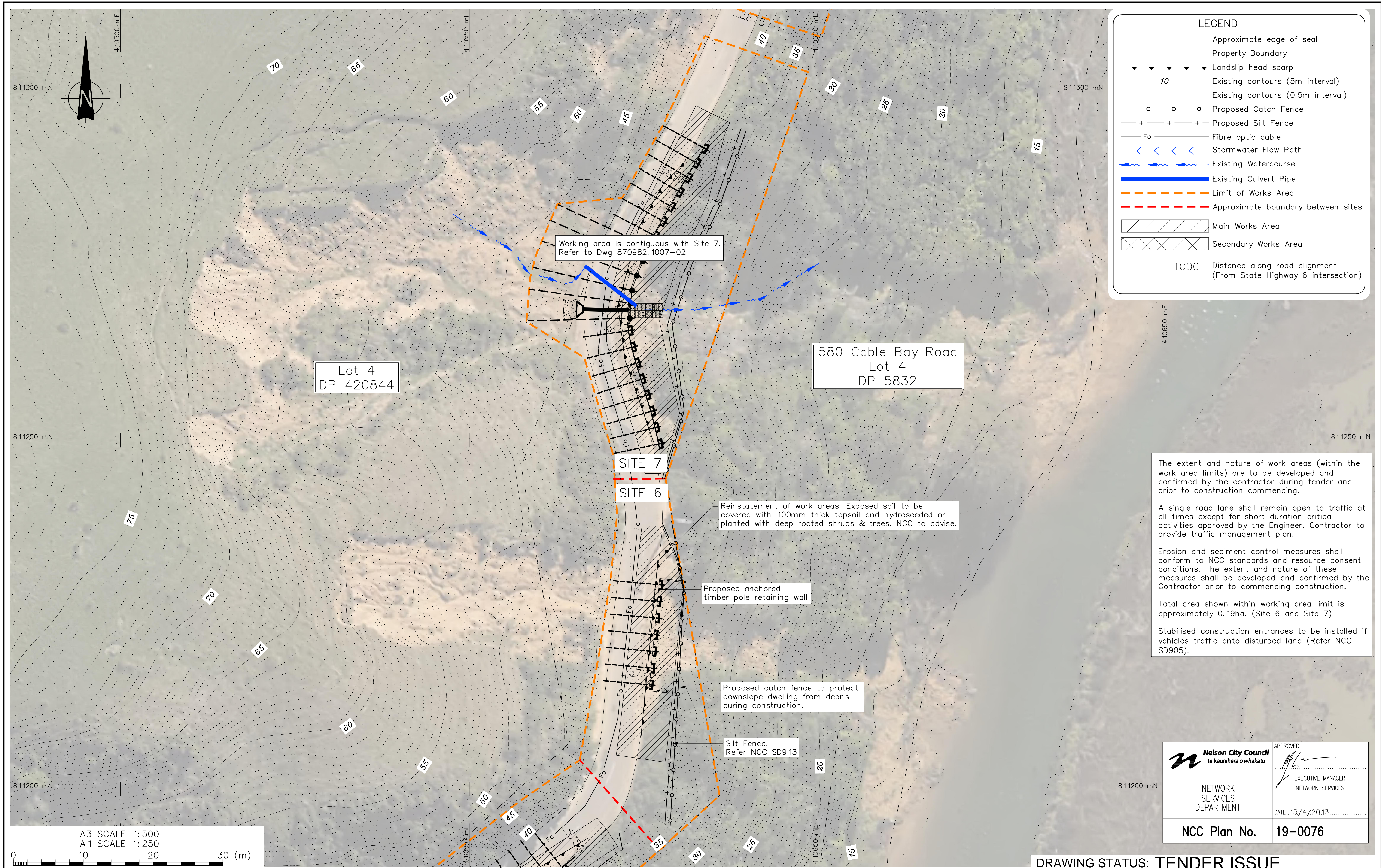
REFERENCE : LiDAR contours and aerial photos supplied by NCC.

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	GENERAL INFORMATION – SITE 6	
	Existing Site and Site Investigation Plan	
SCALES (AT A1 SIZE)	DWG. No.	REV.
1:100	870982.1006-01	A

P:\070982\070982_1006\WorkingFiles\CAD\070982_1006-01.dwg, 01/10/2013 9:44:33 a.m., caduser, A1, 1:1



LEGEND

- Approximate edge of seal
- - - Property Boundary
- Landslip head scarp
- - - 10 Existing contours (5m interval)
- Existing contours (0.5m interval)
- Proposed Catch Fence
- Proposed Silt Fence
- Fo - Fibre optic cable
- Stormwater Flow Path
- Existing Watercourse
- Existing Culvert Pipe
- Limit of Works Area
- Approximate boundary between sites
- ▨ Main Works Area
- ▩ Secondary Works Area
- 1000 Distance along road alignment (From State Highway 6 intersection)

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 0.19ha. (Site 6 and Site 7)

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

Nelson City Council
te kaunihera o whakatū

APPROVED

EXECUTIVE MANAGER
NETWORK SERVICES

DATE: 15/4/2013

NCC Plan No. 19-0076

DRAWING STATUS: TENDER ISSUE

DESIGNED :	MPD	Feb. 13
DRAWN :	DJAA	Feb. 13
DESIGN CHECKED :		
DRAFTING CHECKED :		
CADFILE :	\\870982.1006-02.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	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.

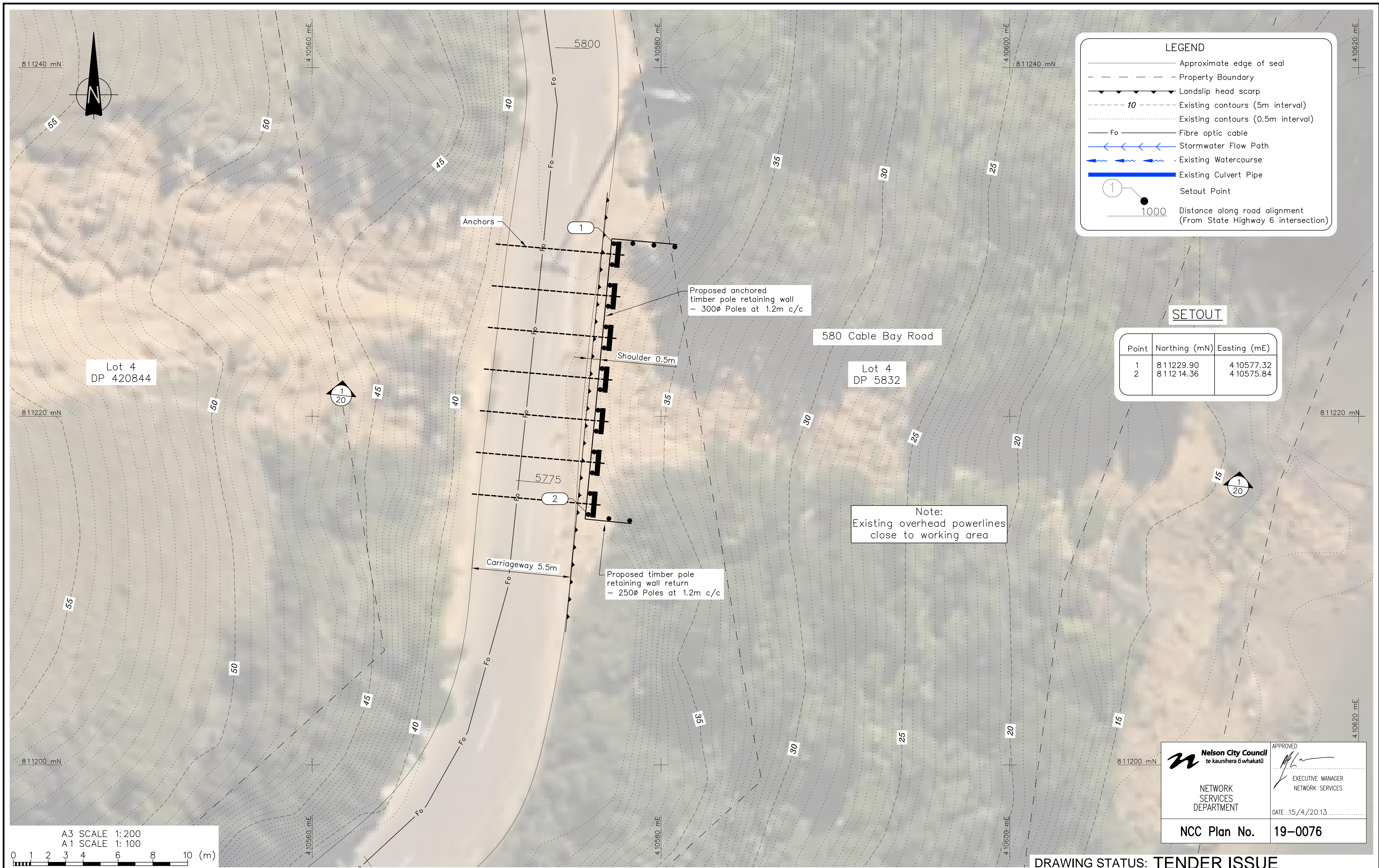
REFERENCE : LiDAR contours and aerial photos supplied by NCC.

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	GENERAL INFORMATION - SITE 6	
	Working Areas & Erosion Sediment Control Plan	
SCALES (AT A1 SIZE)	DWG. No.	REV.
1:250	870982.1006-02	A

P:\870982\870982_1006\Working\870982_1006-02.dwg, 02, 9/05/2013 9:54:49 a.m., caduser, A1, 1:1



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
- Setout Point
- 1000 Distance along road alignment (From State Highway 6 intersection)

SETOUT

Point	Northing (mN)	Easting (mE)
1	8 11229.90	4 10577.32
2	8 112 14.36	4 10575.84

A3 SCALE 1:200
 A1 SCALE 1:100

0 1 2 3 4 6 8 10 (m)

Nelson City Council
 te kaunihera o whakatū

APPROVED

EXECUTIVE MANAGER
 NETWORK SERVICES

DATE: 15/4/2013

NCC Plan No. 19-0076

DRAWING STATUS: TENDER ISSUE

DESIGNED :	RP	Feb.13
DRAWN :	AMC	Feb.13
DESIGN CHECKED :		
DRAFTING CHECKED :		
CADFILE :	\\870982.1006-10.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

NOTES :

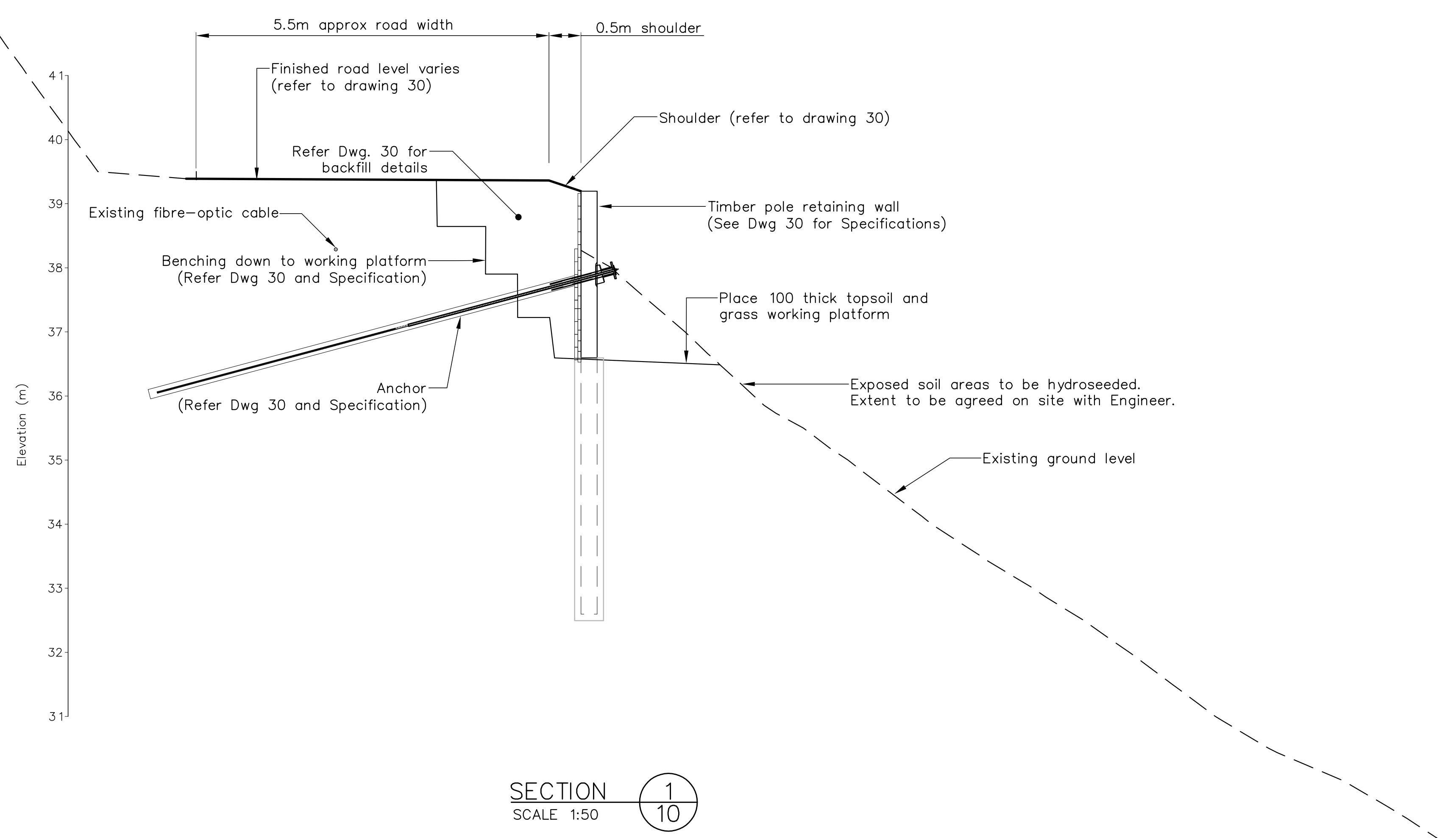
- Nelson Circuit (2000) coordinates. Levels to NCC Datum.
- The Contractor shall confirm the location/depth of all services prior to any excavation.
- All works shall comply with the latest version of the NCC Land Development Manual and all amendments.
- Works outside the reconstruction area shall be 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.

Tonkin & Taylor
 Environmental and Engineering Consultants

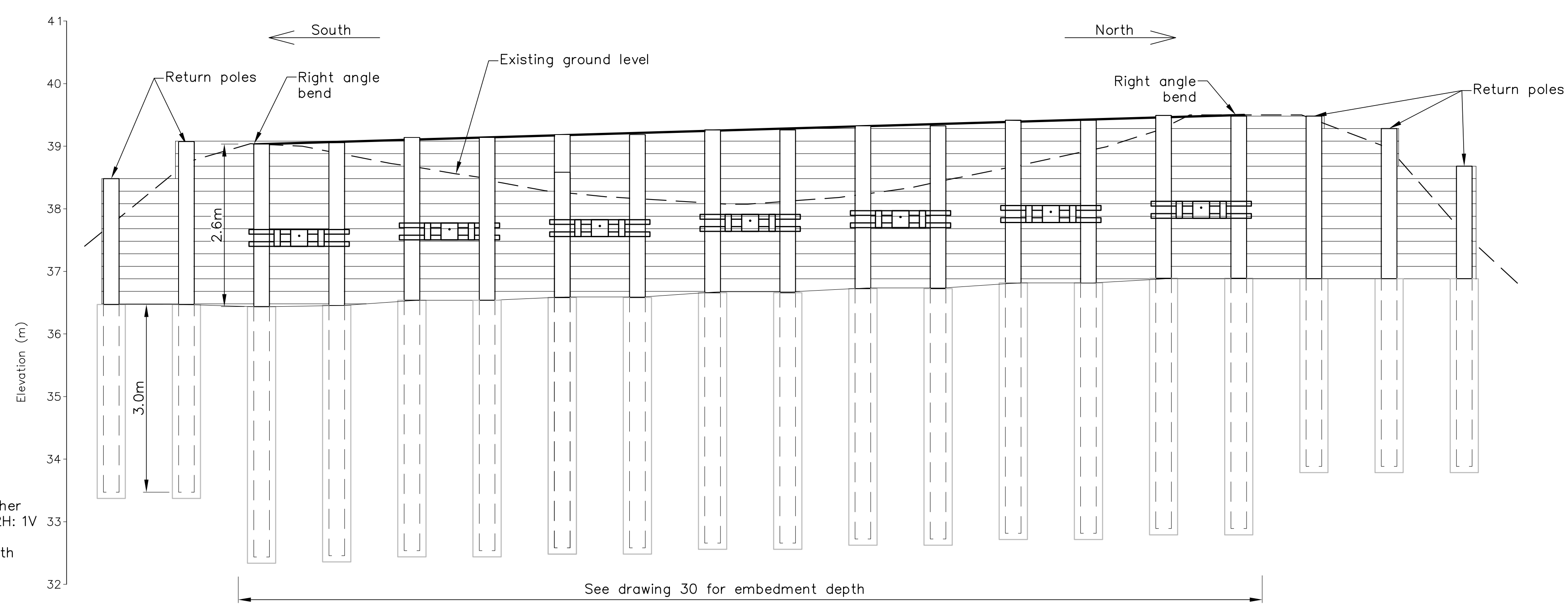
43 Halifax St, Nelson
 Tel. (03) 546 6339 Fax. (03) 546 7619
 www.tonkin.co.nz

CLIENT, PROJECT	NELSON CITY COUNCIL	
	CABLE BAY ROAD REMEDIATION	
TITLE	RETAINING WALL DESIGN – SITE 6	
	General Arrangement	
SCALES (AT A1 SIZE)	DWG. No.	REV.
1:100	870982.1006-10	A



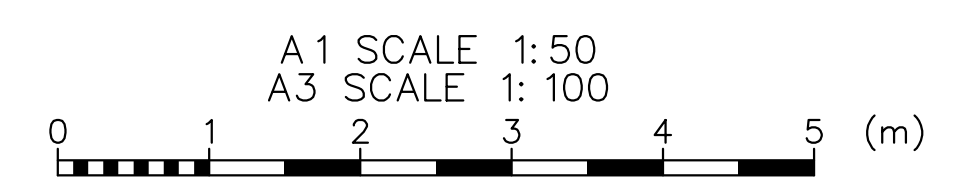
- Construction Sequence**
1. Cut platform.
 2. Install poles.
 3. Place lagging.
 4. Place hardfill and drainage metal with 150mmØ ID PVC tubes through hardfill & drainage metal for anchors
 5. Install anchors, stopping grout at least 1m back from the poles.
 6. Carry out testing on specified anchors (minimum 7 days to be allowed for grout to set).
 7. Place waler and lock off anchors at 10% working load.
 8. Grout 100Ø steel tube.

SECTION 1
SCALE 1:50



SITE 6 - FRONT ELEVATION
SCALE 1:50

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



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

DRAWING STATUS: TENDER ISSUE

DESIGNED :	RP	Feb. 13
DRAWN :	AMC	Feb. 13
DESIGN CHECKED :		
DRAFTING CHECKED :		
CADFILE :	\\870982.1006-20.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

- NOTES :
1. All dimensions are in millimetres unless noted otherwise
 2. 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.
 3. All cut faces of poles and lagging shall be coated with two layers of Ensele preservative paint or Engineer-approved similar.
 4. Contractor is fully responsible for the location of all services prior to commencement of works.
 5. Contractor to provide As-Built Drawings and PS3 on completion of works.
 6. All works are to be inspected and approved by the Engineer
- REFERENCE :

Tonkin & Taylor
Environmental and Engineering Consultants

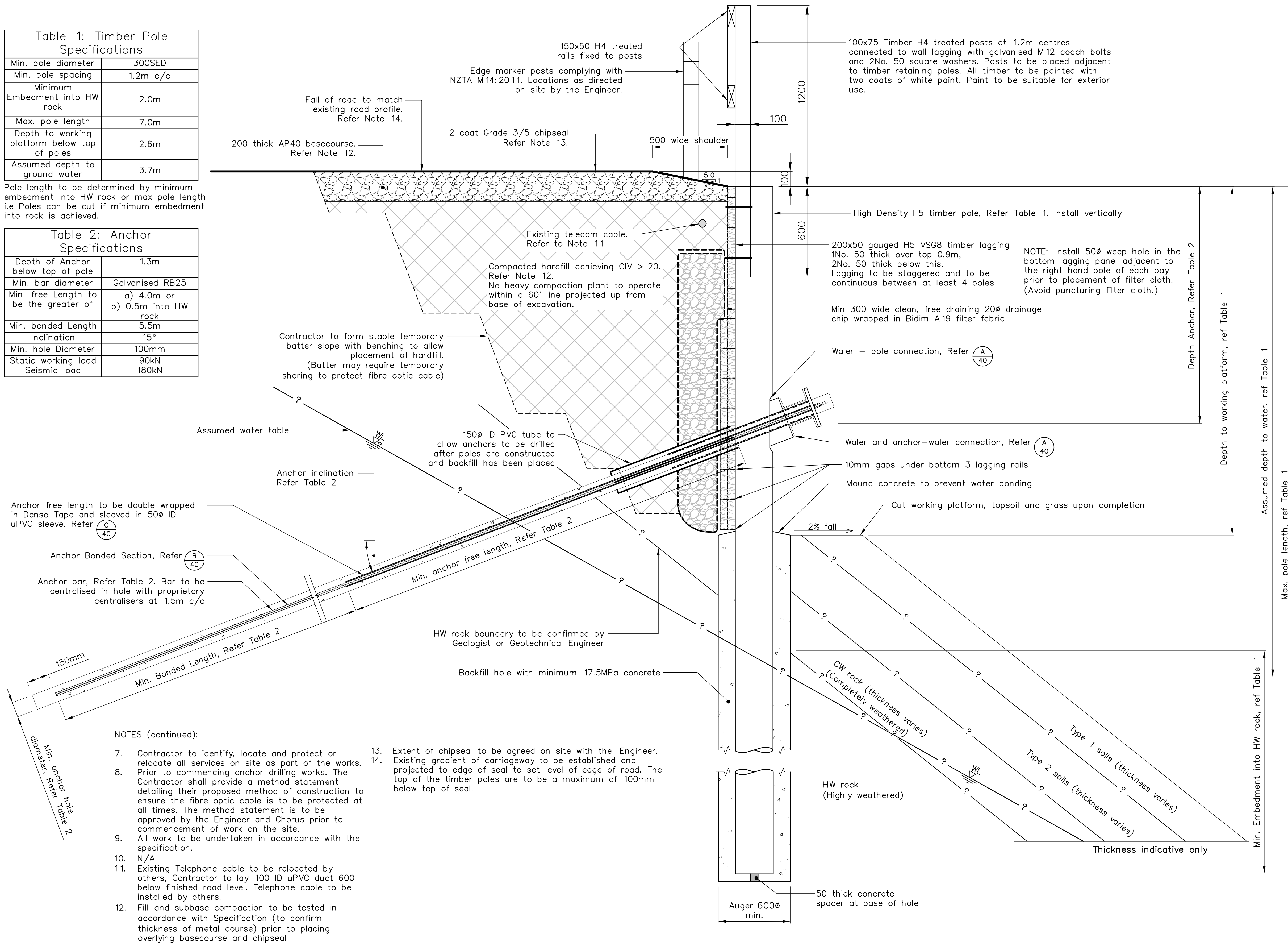
43 Halifax St, Nelson
Tel. (03) 546 6339 Fax. (03) 546 7619
www.tonkin.co.nz

CLIENT, PROJECT	NELSON CITY COUNCIL CABLE BAY ROAD REMEDIATION	
TITLE	RETAINING WALL DESIGN - SITE 6 Section and Elevation	
SCALES (AT A1 SIZE)	1:50	DWG. No. 870982.1006-20
REV.	A	

Min. pole diameter	300SED
Min. pole spacing	1.2m c/c
Minimum Embedment into HW rock	2.0m
Max. pole length	7.0m
Depth to working platform below top of poles	2.6m
Assumed depth to ground water	3.7m

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 of Anchor below top of pole	1.3m
Min. bar diameter	Galvanised RB25
Min. free Length to be the greater of	a) 4.0m or b) 0.5m into HW rock
Min. bonded Length	5.5m
Inclination	15°
Min. hole Diameter	100mm
Static working load	90kN
Seismic load	180kN



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.

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

DRAWING STATUS: TENDER ISSUE

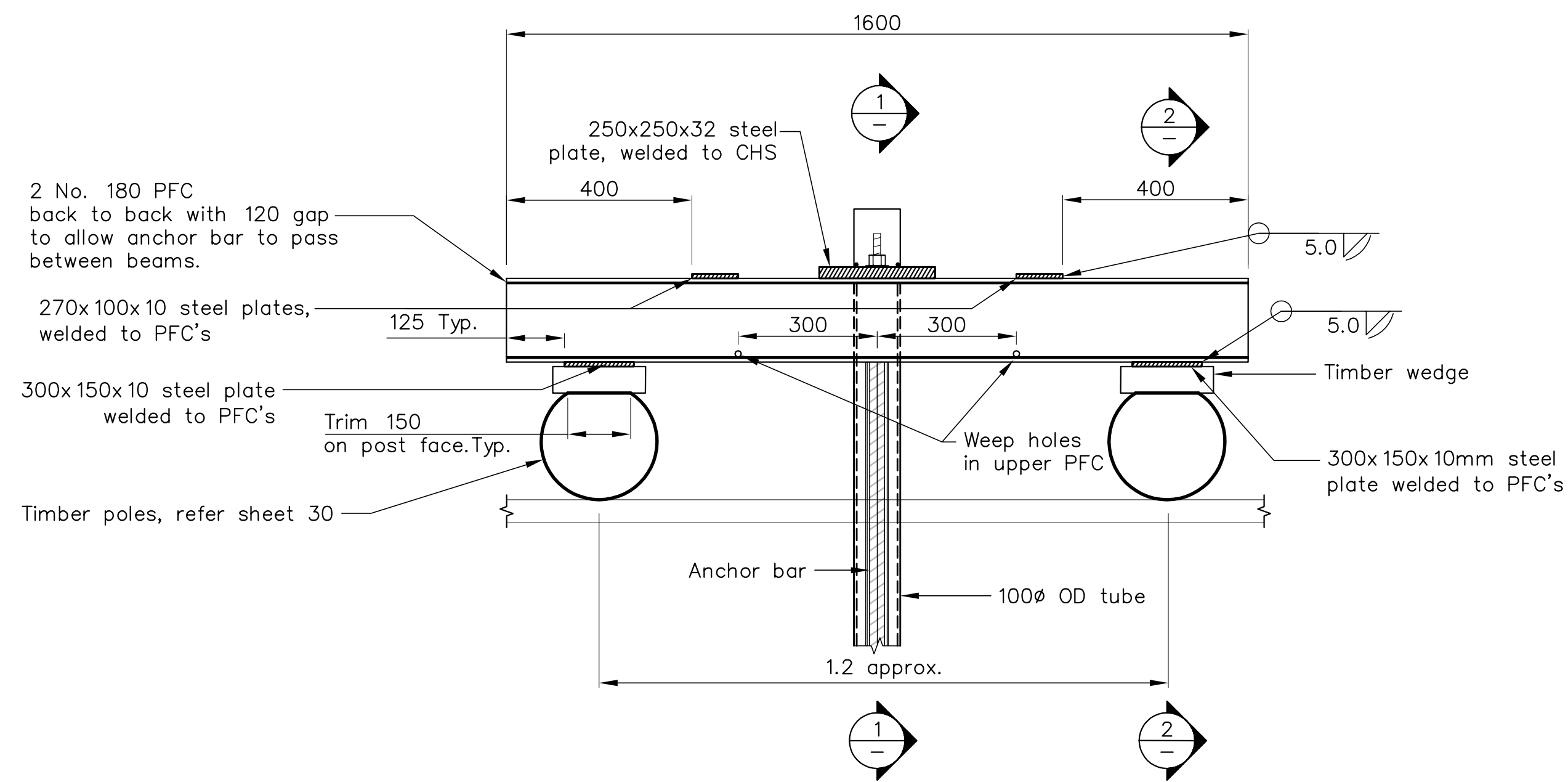
DESIGNED :	RP	Oct. 12	<p>NOTES :</p> <ol style="list-style-type: none"> All dimensions are in millimetres unless noted otherwise. Place Malthold paper between all steel - timber contacts. All cuts & holes in timber to be treated with 'Ensale' or similar approved. Contractor to set out wall and confirm 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
DRAWN :	AMC	Oct. 12	
DESIGN CHECKED :			
DRAFTING CHECKED :			
CADFILE :	\\870982.1006-30.dwg		
APPROVED :	<p>NOT FOR CONSTRUCTION</p> <p>This drawing is not to be used for construction purposes unless signed as approved</p>		
REVISION DESCRIPTION	BY	DATE	REFERENCE :
1 Consultation Issue	MPD	Nov. 12	

Tonkin & Taylor
Environmental and Engineering Consultants

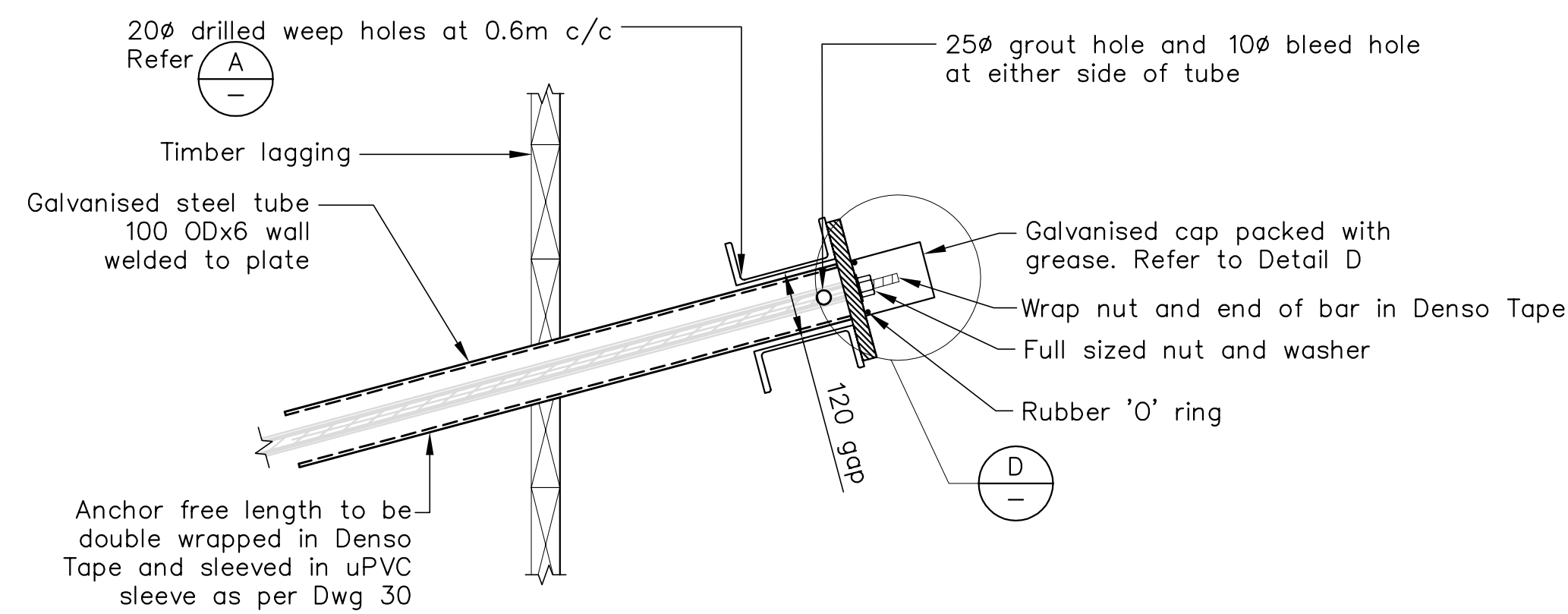
43 Halifax St, Nelson
Tel. (03) 546 6339 Fax. (03) 546 7619
www.tonkin.co.nz

CLIENT, PROJECT	<p>NELSON CITY COUNCIL CABLE BAY ROAD REMEDIATION</p>	
TITLE	<p>RETAINING WALL DESIGN - SITE 6 Typical Anchored Timber Pole Wall Detail</p>	
SCALES (AT A1 SIZE)	DWG. No.	REV.
N.T.S	870982.1006-30	A

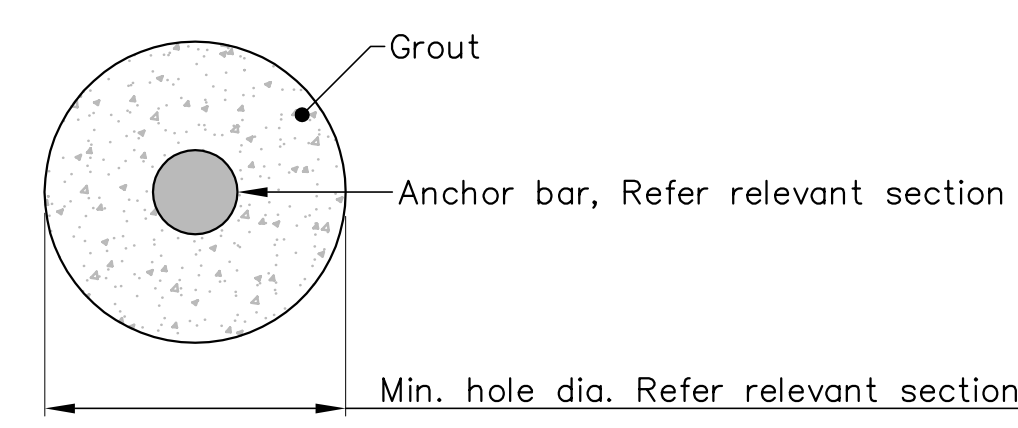
P:\070982\070982_1006\Working\Site\070982_1006-30.dwg, 30, 9/05/2013 9:45:31 a.m., caduser, A1, 1:1



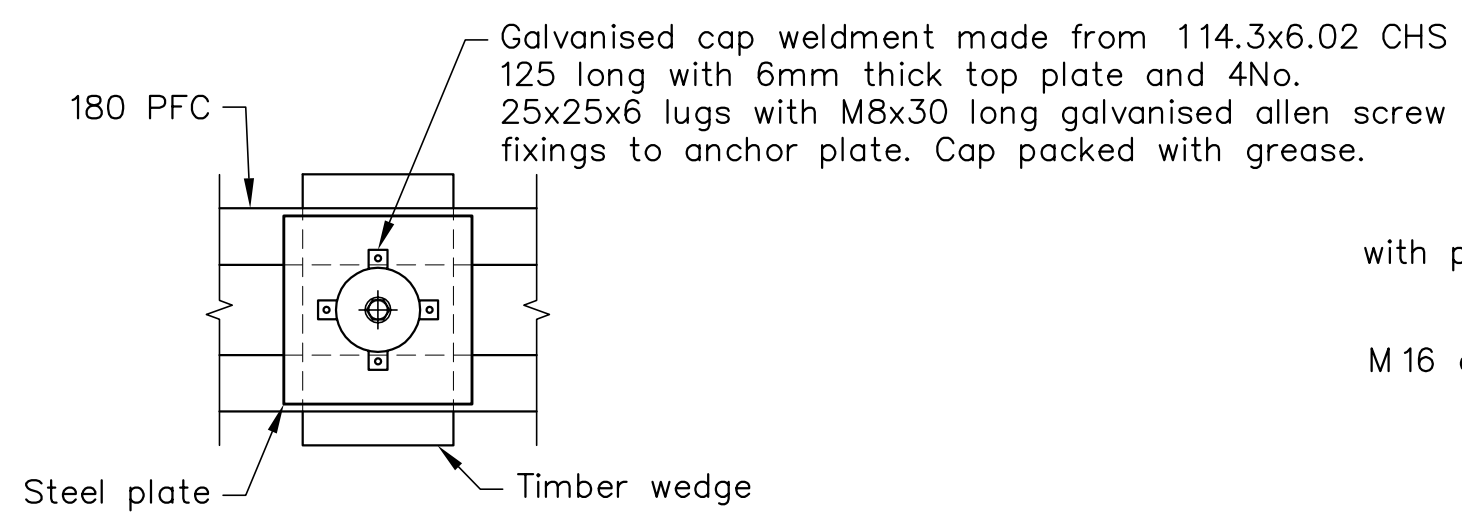
DETAIL **A** PLAN - TYPICAL BACK-TO-BACK PFC WALER
A1 SCALE 1: 10



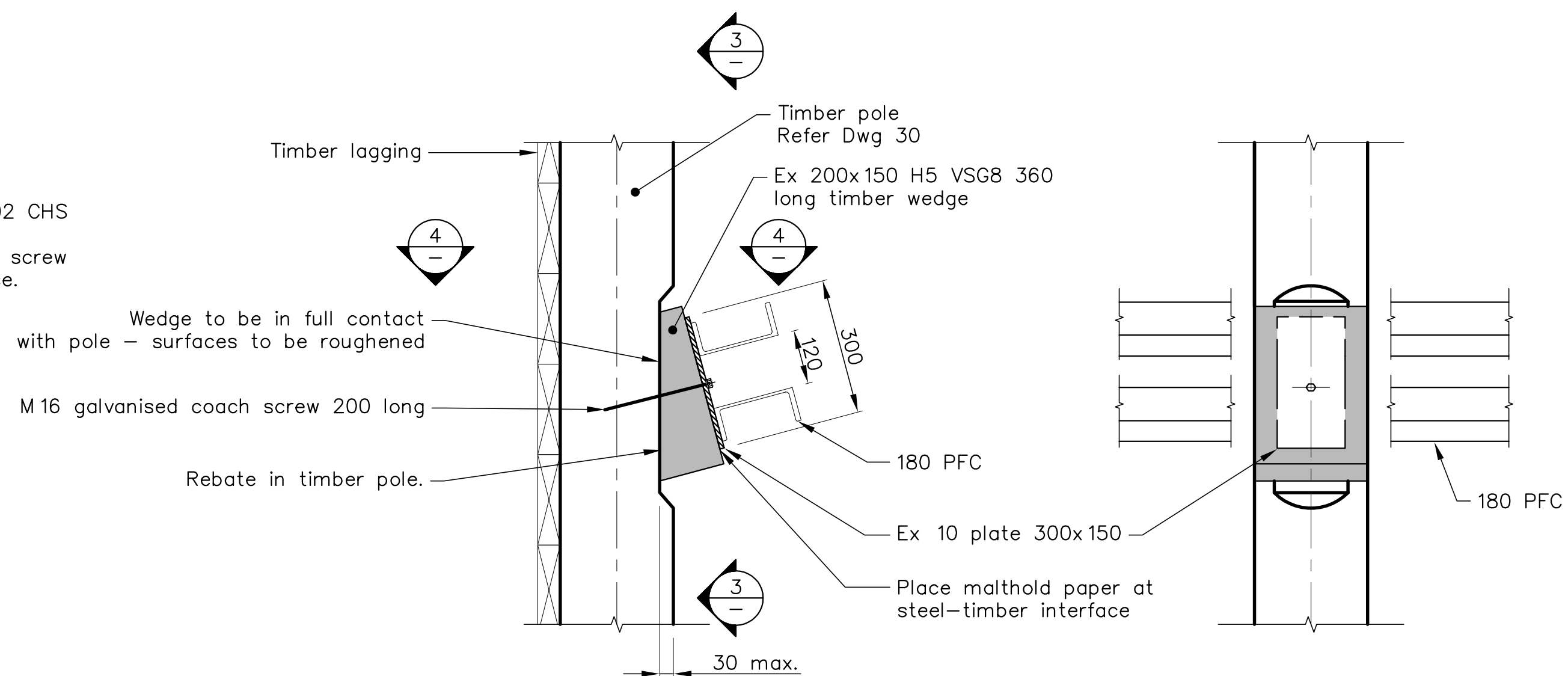
SECTION **1** WALER TO ANCHOR CONNECTION
A1 SCALE 1: 10



DETAIL **B** ANCHOR BONDED LENGTH
SCALE NTS

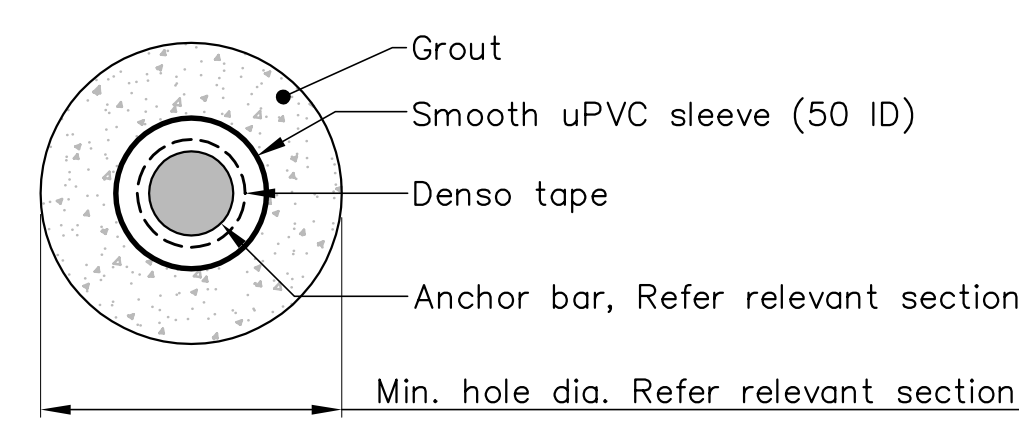


DETAIL **D** STEEL CAP
A1 SCALE 1: 10

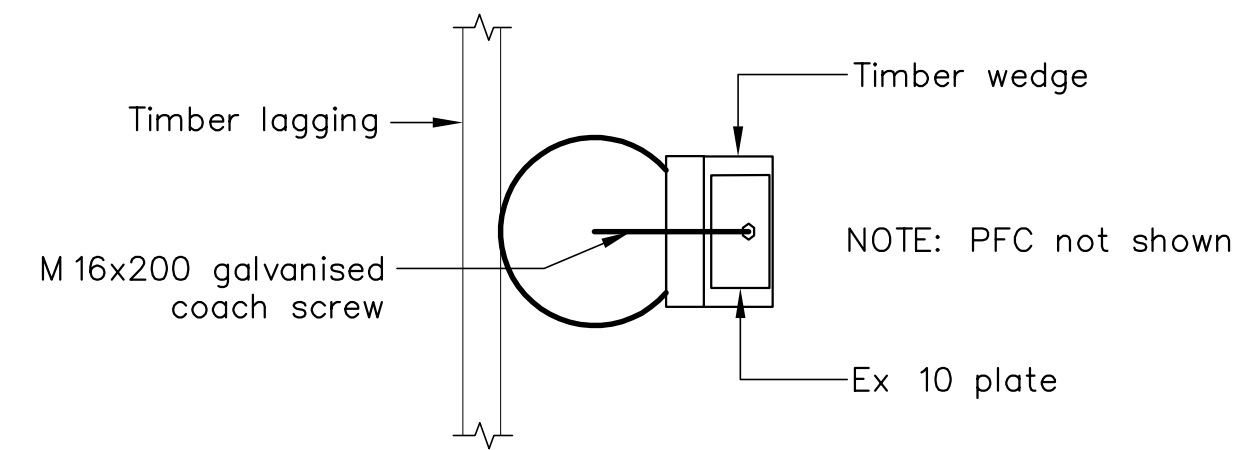


SECTION **2** WALER TO POLE CONNECTION
A1 SCALE 1: 10

SECTION **3**
A1 SCALE 1: 10

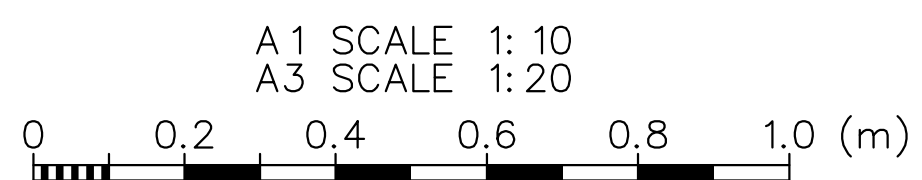


DETAIL **C** ANCHOR FREE LENGTH
SCALE NTS



SECTION **4**
A1 SCALE 1: 10

- Notes (continued)
- All cut or drilled surfaces in timber to be protected by applying a liberal brush application of 'ensele' or equivalent.
 - All steelwork shall be grade 300 and hot dip galvanised to HDG600 to AS/NZS4680 100 micron thickness after welding.
 - Grout in steel tube to be cementitious grout complying with BS8081: 1989. The grout shall have a 28 day strength of 4N/mm² and a water cement ratio of between 0.35 and 0.45.
 - All cuts, scarfs and holes in treated timber to be coated with ensele preservative prior to assembly.



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

DRAWING STATUS: TENDER ISSUE

DESIGNED :	RP	May.12
DRAWN :	AMC	May.12
DESIGN CHECKED :		
DRAFTING CHECKED :		
CADFILE :	\\870982.1006-40.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

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 6 Anchor and Waler Details	
SCALES (AT A1 SIZE)	DWG. No.	REV.
AS SHOWN	870982.1006-40	A

P:\070982\070982_1006\Working\Drawings\070982_1006-40.dwg, 40, 9/05/2013 9:25:35 a.m., caduser, A1, 1:1