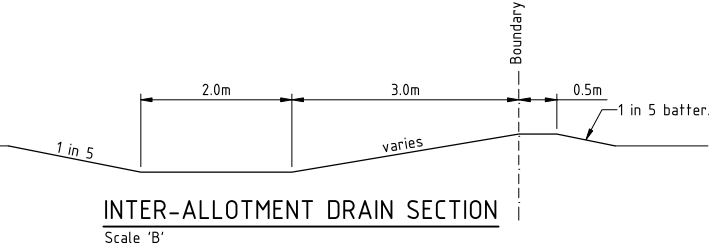


- LEGEND**
- 50.00 - Surface level.
 - IL 50.00 - Drain invert level.
 - 50.00 - 1% AEP water surface level
 - RP boundary.
 - Top of batter.
 - Toe of batter.
 - Change of grade.
 - Stormwater culvert.
 - DN100-W - DN100 PVC PN16 water main.
 - DN150-W - DN150 PVC PN16 water main.
 - DN300-W - DN300 PVC PN16 water main.
 - (w) - (w) - Water main.

GENERAL:

1. Refer to MIL0031-9 for typical road section.



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Laurence John Nolan 04/11/2022
Director/Registered Surveyor

AS CONSTRUCTED

Northern Consulting Engineers hereby certify that the works detailed on the as constructed drawing reflect any changes that were made during the course of construction.

Andrew Ian Wallace 04/11/2022
RPEQ 6743

LAYOUT PLAN



ENGINEERING CERTIFICATION

Signed: ANDREW IAN WALLACE - RPEQ No. 6743

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NORTHERN CONSULTING engineers

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B	ISSUED FOR AS CONSTRUCTED.	4/11/2022
A	ISSUED FOR CONSTRUCTION	12/04/2022
P3	ISSUED FOR OPW - LOTS 250 - 253 RAISED - NOT FOR CONSTRUCTION	4/03/2022
P2	ISSUED FOR OPW - NOT FOR CONSTRUCTION	10/11/2021
P1	PRELIMINARY DRAFT ISSUE - NOT FOR CONSTRUCTION	18/10/2021
Issue		Date
Description		
Drawn KJM Date 18/10/2021	In Association With MILFORD PLANNING	ROADWORKS, EARTHWORKS & STORMWATER LAYOUT PLAN
Checked	MOUNT MARGARET ESTATE STAGE 9, NICKEL STREET ALICE RIVER	
Reviewed		Drawing Number MIL0031-9/04
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LEVEL DATUM A.H.D.
Horizontal Datum GDA' 94 Zone 55
Refer P.M. 193516 RL. 54.562
Located on Diamond Drive

BASE SURVEY
Rowlands Surveys - 44040/04



LEGEND

- 50.00 - Surface level.
- IL 50.00 - Drain invert level.
- 50.00 - 1% AEP water surface level
- - RP boundary.
- - Top of batter.
- - Toe of batter.
- - Change of grade.
- - Stormwater culvert.
- - DN100 PVC PN16 water main.
- (w) --- (w) - Water main.

GENERAL:

1. Refer to MIL0031-9 for typical road section.

AS CONSTRUCTED

Rowlands Surveys Pty Ltd (ACN 010 025 260) hereby certify that the works detailed on this drawing, denoted *, have been constructed to the dimensions and levels shown.

Laurence John Nolan Date: **04/11/2022**
Director/Registered Surveyor

AS CONSTRUCTED

Northern Consulting Engineers hereby certify that the works detailed on the as constructed drawing reflect any changes that were made during the course of construction.

Andrew Ian Wallace Date: **04/11/2022**
Andrew Ian Wallace RPEQ 6743

LAYOUT PLAN

Scale 1:1500 @ A1
0 5 10 15 20m

ENGINEERING CERTIFICATION

Signed:

ANDREW IAN WALLACE - RPEQ No. 6743

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B ISSUED FOR AS CONSTRUCTED.
A ISSUED FOR CONSTRUCTION
P2 ISSUED FOR OPW - NOT FOR CONSTRUCTION
P1 PRELIMINARY DRAFT ISSUE - NOT FOR CONSTRUCTION

Issue	Description	Date
Drawn KJM Date 18/10/2021	In Association With MILFORD PLANNING	4/11/2022 12/04/2022 10/11/2021 18/10/2021
Checked	MOUNT MARGARET ESTATE STAGE 9, NICKEL STREET ALICE RIVER	
Reviewed		
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Drawing Number MIL0031-9/05		Issue B

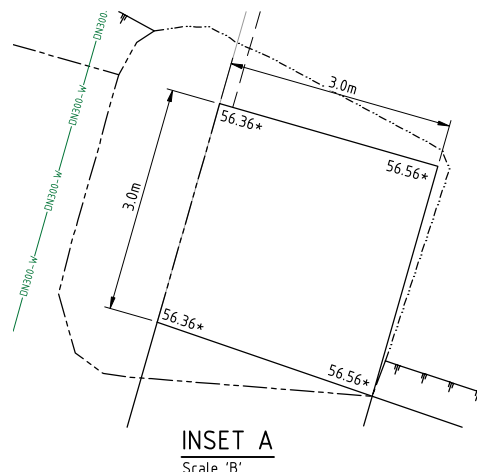
LEVEL DATUM A.H.D.
Horizontal Datum GDA' 94 Zone 55
Refer P.M. 193516 RL. 54.562
Located on Diamond Drive

BASE SURVEY
Rowlands Surveys - 44040/04



- LEGEND**
- 50.00 - Surface level.
 - IL 50.00 - Drain invert level.
 - 50.00 - 1% AEP water surface level
 - RP boundary.
 - Top of batter.
 - Toe of batter.
 - Change of grade.
 - Stormwater culvert.
 - DN100 uPVC PN16 water main.
 - DN300 uPVC PN16 water main.
 - (w) (w) - Water main.

GENERAL:
1. Refer to MIL0031-9 for typical road section.



LAYOUT PLAN
Scale 'A'

LEVEL DATUM A.H.D.
Horizontal Datum GDA' 94 Zone 55
Refer P.M. 193516 RL. 54.562
Located on Diamond Drive

BASE SURVEY
Rowlands Surveys - 44040/04

Scale 'A' 1500 @ A1
Scale 'B' 1500 @ A1

ENGINEERING CERTIFICATION

Signed:
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B ISSUED FOR AS CONSTRUCTED.
A ISSUED FOR CONSTRUCTION
P3 EXTENSION TO DIAMOND DRIVE FOR SUBSTATION SITE AND DIVERSION CHANNEL INLET AMENDED - NOT FOR CONSTRUCTION
P2 ISSUED FOR OPW - NOT FOR CONSTRUCTION
P1 PRELIMINARY DRAFT ISSUE - NOT FOR CONSTRUCTION

Issue	Description	Date
Drawn KJM Date 18/10/2021	In Association With MILFORD PLANNING	
Checked	MOUNT MARGARET ESTATE STAGE 9, NICKEL STREET ALICE RIVER	
Reviewed		
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	Drawing Number MIL0031-9/06	Issue B

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Laurence John Nolan Date: **04/11/2022**
Director/Registered Surveyor

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during the course of construction.

Andrew Ian Wallace Date: **04/11/2022**
RPEQ 6743

4/11/2022
12/04/2022
4/03/2022
10/11/2021
18/10/2021

2 Coat bitumen seal (14mm/7mm)
100mm Base gravel, DTMR type 2.1
100mm Sub-base gravel, DTMR type 2.3
200mm Lower Sub-base gravel, DTMR type 2.5

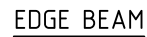
2 Coat bitumen seal (14mm/7mm)
100mm Base gravel, DTR type 2.1
150mm Sub-base gravel, DTR type 2.3
150mm Lightly bound gravel, DTR type 2.3
(UCS1.0-2.0MPa)



Scale 'A' - Horizontal
Scale 'B' - Vertical




Scale 'C'



Scale 'D'

Rowlands Surveys Pty Ltd (ACN 010 025 260) hereby certify that the works detailed on this drawing, denoted *, have been constructed to the dimensions and levels shown.


 Date: **04/11/2022**
 Laurence John Nolan
 Director/Registered Surveyor

Northern Consulting Engineers hereby certify that the works detailed on the as constructed drawing reflect any changes that were made during the course of construction.

Andrew Ian Wallace RPEQ 6743 Date: 04/11/2022



Signed:

ANDREW IAN WALLACE - RPEQ No. 6743

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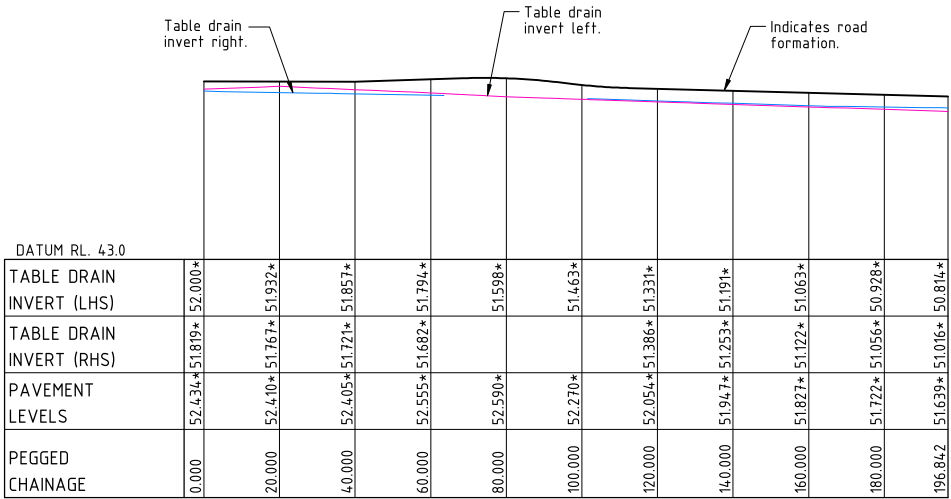
B ISSUED FOR AS CONSTRUCTED.
A ISSUED FOR CONSTRUCTION
P4 ISSUED FOR DPW - NOT FOR CONSTRUCTION - SHOULDER TREATMENT AMENDED.
P3 ISSUED FOR DPW - NOT FOR CONSTRUCTION
P2 PRELIMINARY DRAFT ISSUE - NOT FOR CONSTRUCTION - TYPICAL CROSS SECTION & EDGE BEAM DETAIL AMENDED.
P1 PRELIMINARY DRAFT ISSUE - NOT FOR CONSTRUCTION

4/11/2022
12/04/2022
19/11/2021
10/11/2021
5/11/2021
18/10/2021

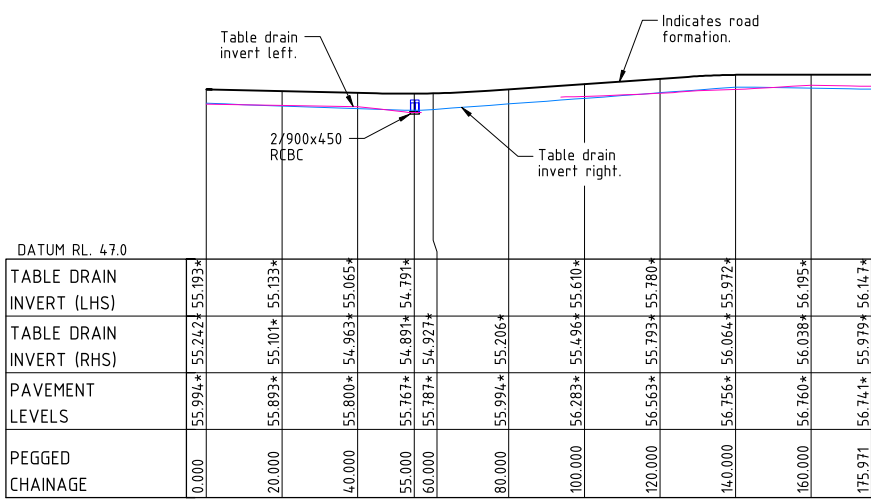
Issue	Description		Date
Drawn KJM	In Association With	TOME STREET LONGITUDINAL SECTION & TYPICAL ROAD CROSS SECTION	
Date 18/10/2021	MILFORD PLANNING		
Checked	MOUNT MARGARET ESTATE		
Reviewed	STAGE 9, NICKEL STREET		
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		Drawing Number	Issue
		MIL0031-9/07	B

LEVEL DATUM A.H.D.
Horizontal Datum GDA' 94 Zone 55
Refer P.M. 193516 RL. 54.562
Located on Diamond Drive

BASE SURVEY
Rowlands Surveys - 44040/04



NICKEL ST



DIAMOND DR

LONGITUDINAL SECTION

Scale 'A' - Horizontal
Scale 'B' - Vertical

Pavement Design Majority of Site

2 Coat bitumen seal (14mm/7mm)
100mm Base gravel, DTMR type 2.1
100mm Sub-base gravel, DTMR type 2.3
200mm Lower Sub-base gravel, DTMR type 2.5

Pavement Design Tome St
(Ch140 - Ch260)

2 Coat bitumen seal (14mm/7mm)
100mm Base gravel, DTMR type 2.1
150mm Sub-base gravel, DTMR type 2.3
150mm Lightly bound gravel, DTMR type 2.3
(UCS1.0-2.0MPa)

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Laurence John Nolan
Director/Registered Surveyor
Date: 04/11/2022

AS CONSTRUCTED

Northern Consulting Engineers hereby certify that the works detailed on the as constructed drawing reflect any changes that were made during the course of construction.

Andrew Ian Wallace RPEQ 6743
Date: 04/11/2022

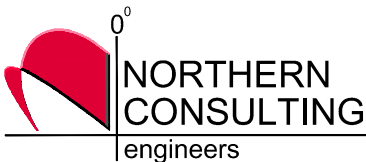


ENGINEERING CERTIFICATION

Signed:

ANDREW IAN WALLACE - RPEQ No. 6743

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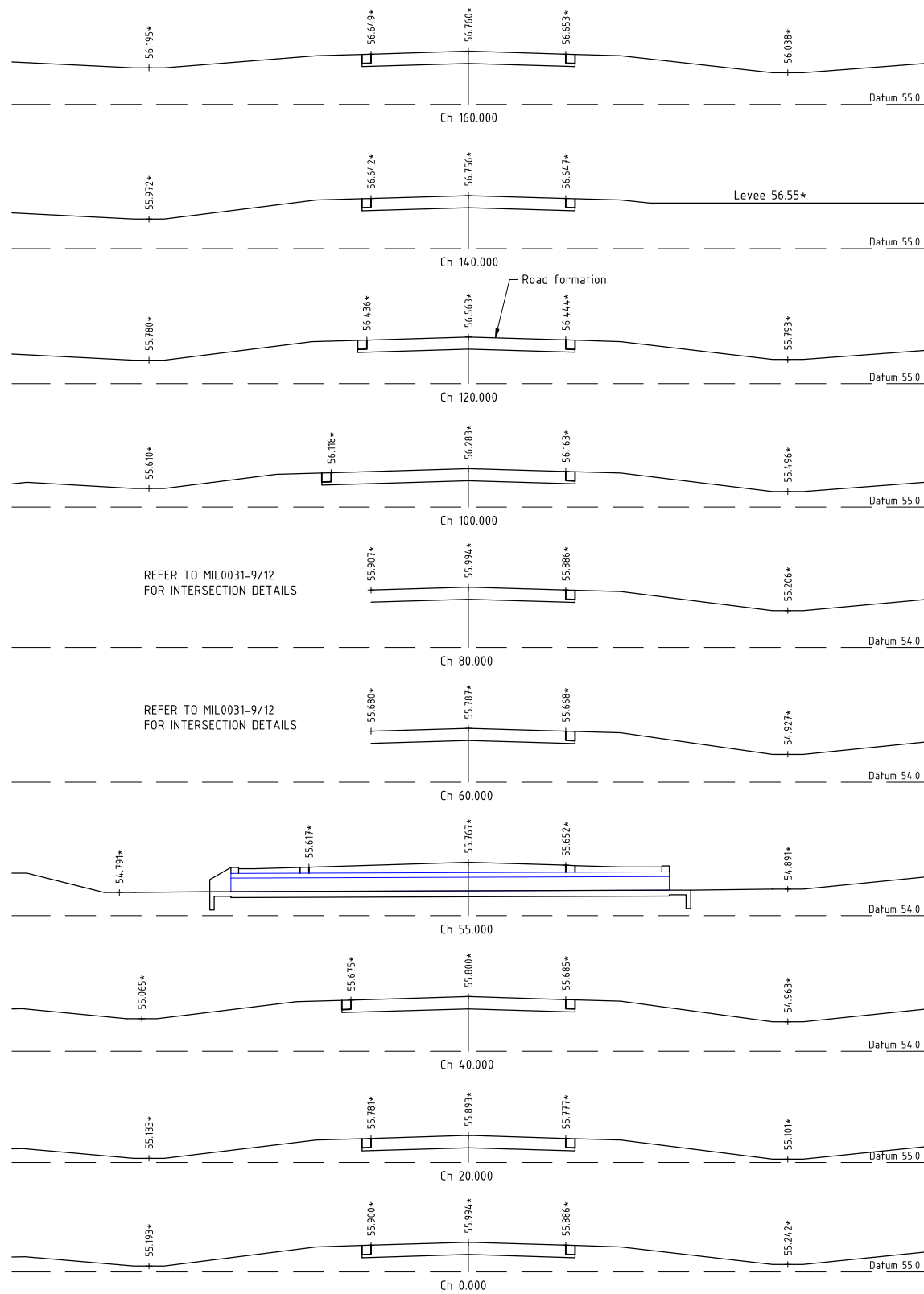
B ISSUED FOR AS CONSTRUCTED.
A ISSUED FOR CONSTRUCTION
P3 EXTENSION TO DIAMOND DRIVE FOR SUBSTATION SITE - NOT FOR CONSTRUCTION
P2 ISSUED FOR OPW - NOT FOR CONSTRUCTION
P1 PRELIMINARY DRAFT ISSUE - NOT FOR CONSTRUCTION

4/11/2022
12/04/2022
4/03/2022
10/11/2021
18/10/2021

Issue	Description	Date
Drawn KJM Date 18/10/2021	In Association With MILFORD PLANNING	NICKEL STREET & DIAMOND DRIVE LONGITUDINAL SECTIONS
Checked Reviewed	MOUNT MARGARET ESTATE STAGE 9, NICKEL STREET ALICE RIVER	
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Drawing Number MIL0031-9/08		Issue B

LEVEL DATUM A.H.D.
Horizontal Datum GDA' 94 Zone 55
Refer P.M. 193516 RL. 54.562
Located on Diamond Drive

BASE SURVEY
Rowlands Surveys - 44040/04



DIAMOND DRIVE CROSS SECTIONS

AS CONSTRUCTED

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Signature of Laurence John Nolan, Director/Registered Surveyor, dated 04/11/2022.

AS CONSTRUCTED

Northern Consulting Engineers hereby certify that the works detailed on the as constructed drawing reflect any changes that were made during the course of construction.

Signature of Andrew Ian Wallace, RPEQ 6743, dated 04/11/2022.

LEVEL DATUM A.H.D. Horizontal Datum GDA' 94 Zone 55 Refer P.M. 193516 RL. 54.562 Located on Diamond Drive

BASE SURVEY Rowlands Surveys - 44040/04

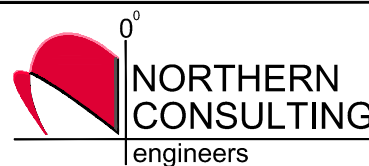


ENGINEERING CERTIFICATION

Signed:

ANDREW IAN WALLACE - RPEQ No. 6743

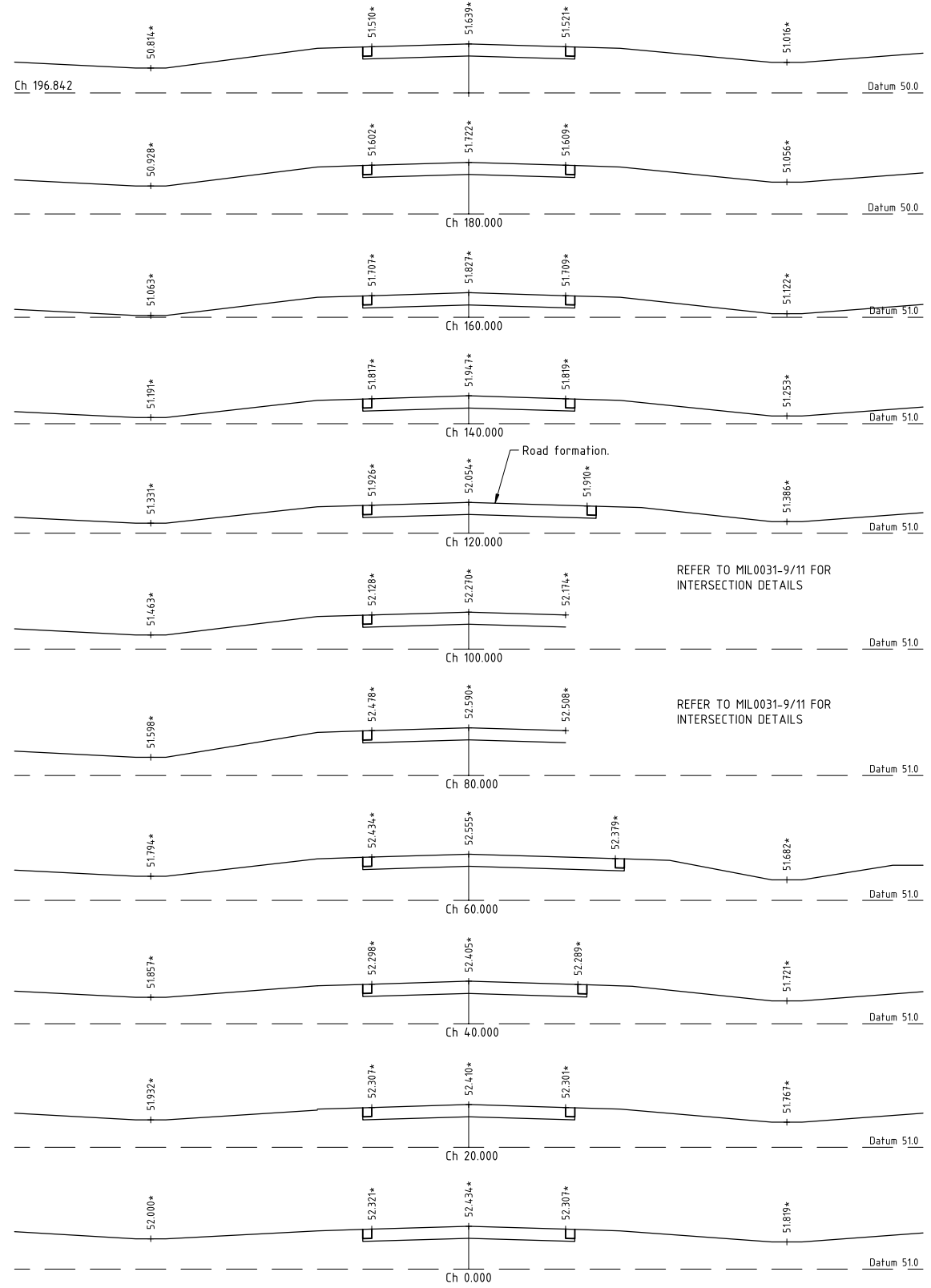
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NICKEL STREET CROSS SECTIONS

Issue Description Date B ISSUED FOR AS CONSTRUCTED. A ISSUED FOR CONSTRUCTION P2 ISSUED FOR OPW - NOT FOR CONSTRUCTION P1 PRELIMINARY DRAFT ISSUE - NOT FOR CONSTRUCTION

Drawn

KJM

Date

18/10/2021

Checked

Reviewed

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MOUNT MARGARET ESTATE

STAGE 9, NICKEL STREET ALICE RIVER

NICKEL STREET & DIAMOND DRIVE CROSS SECTIONS

Drawing Number

MIL0031-9/09

Issue

B

4/11/2022 12/04/2022 10/11/2021 18/10/2021

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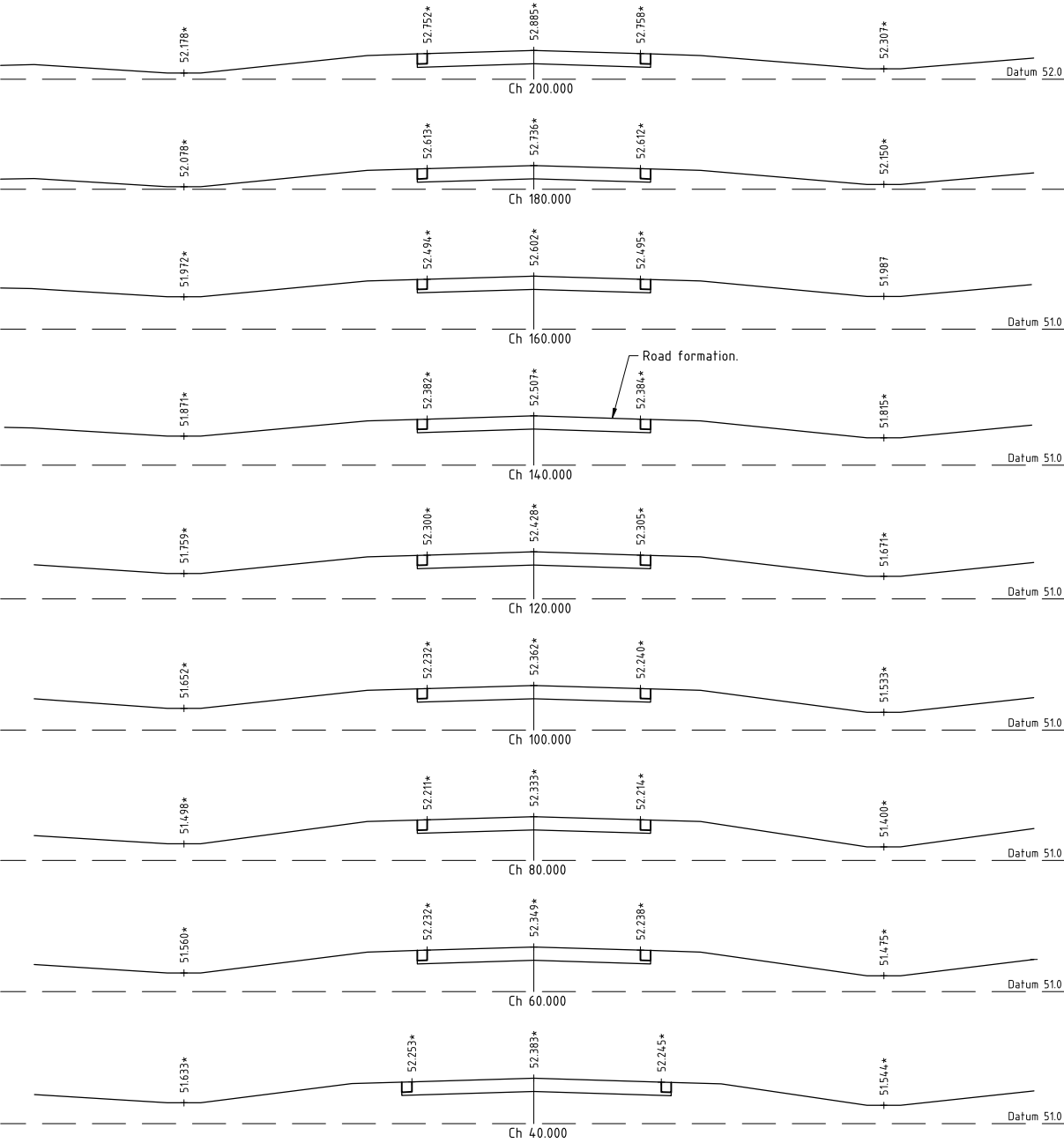
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04/11/2022
Date:
Laurence John Nolan
Director/Registered Surveyor

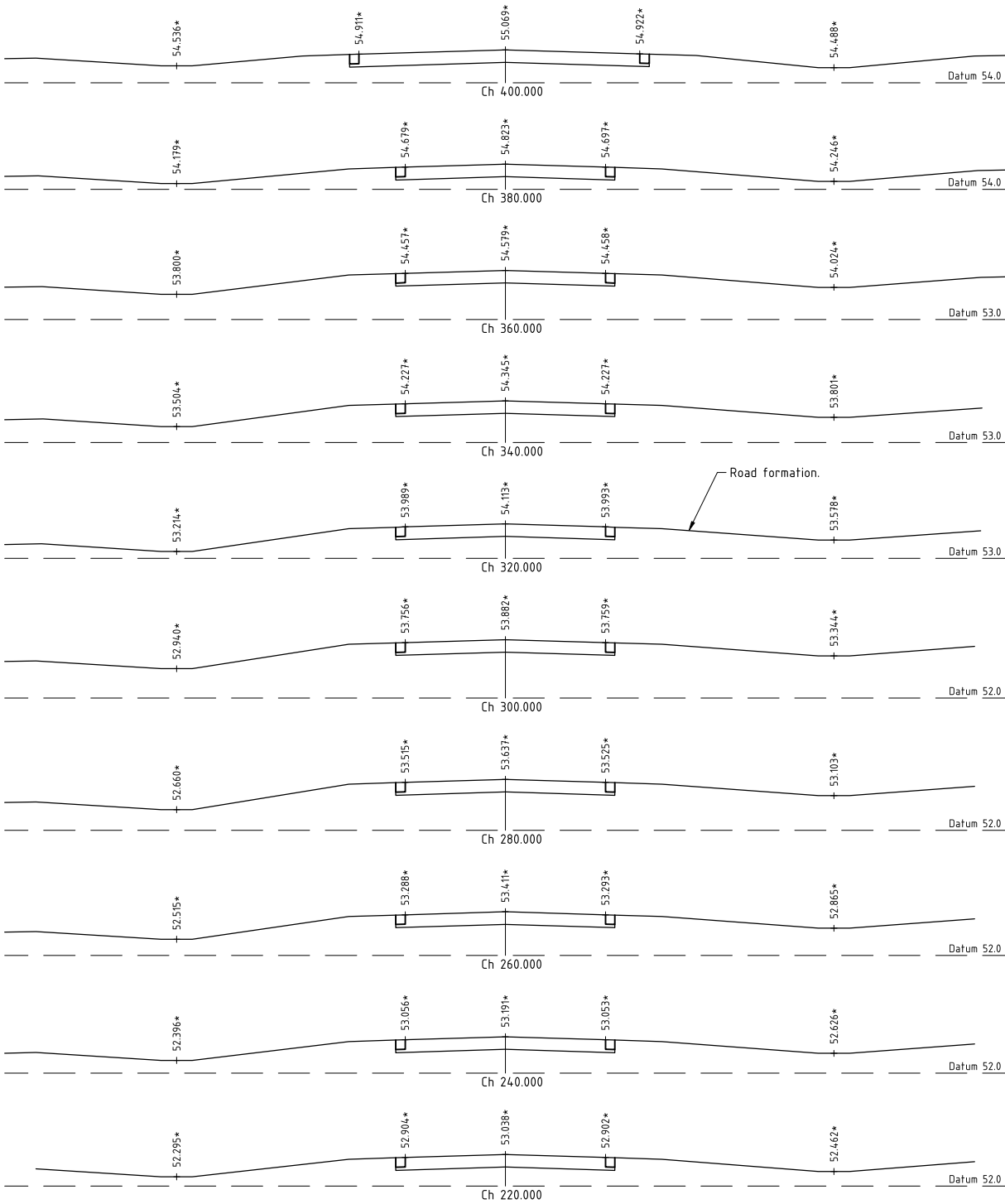
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Date:
Andrew Ian Wallace RPEQ 6743

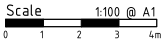


TOME STREET CROSS SECTIONS



TOME STREET CROSS SECTIONS

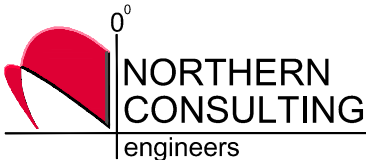
LEVEL DATUM A.H.D.
Horizontal Datum GDA' 94 Zone 55
Refer P.M. 193516 RL. 54.562
Located on Diamond Drive
BASE SURVEY
Rowlands Surveys - 44040/04



ENGINEERING CERTIFICATION

Signed:
ANDREW IAN WALLACE - RPEQ No. 6743

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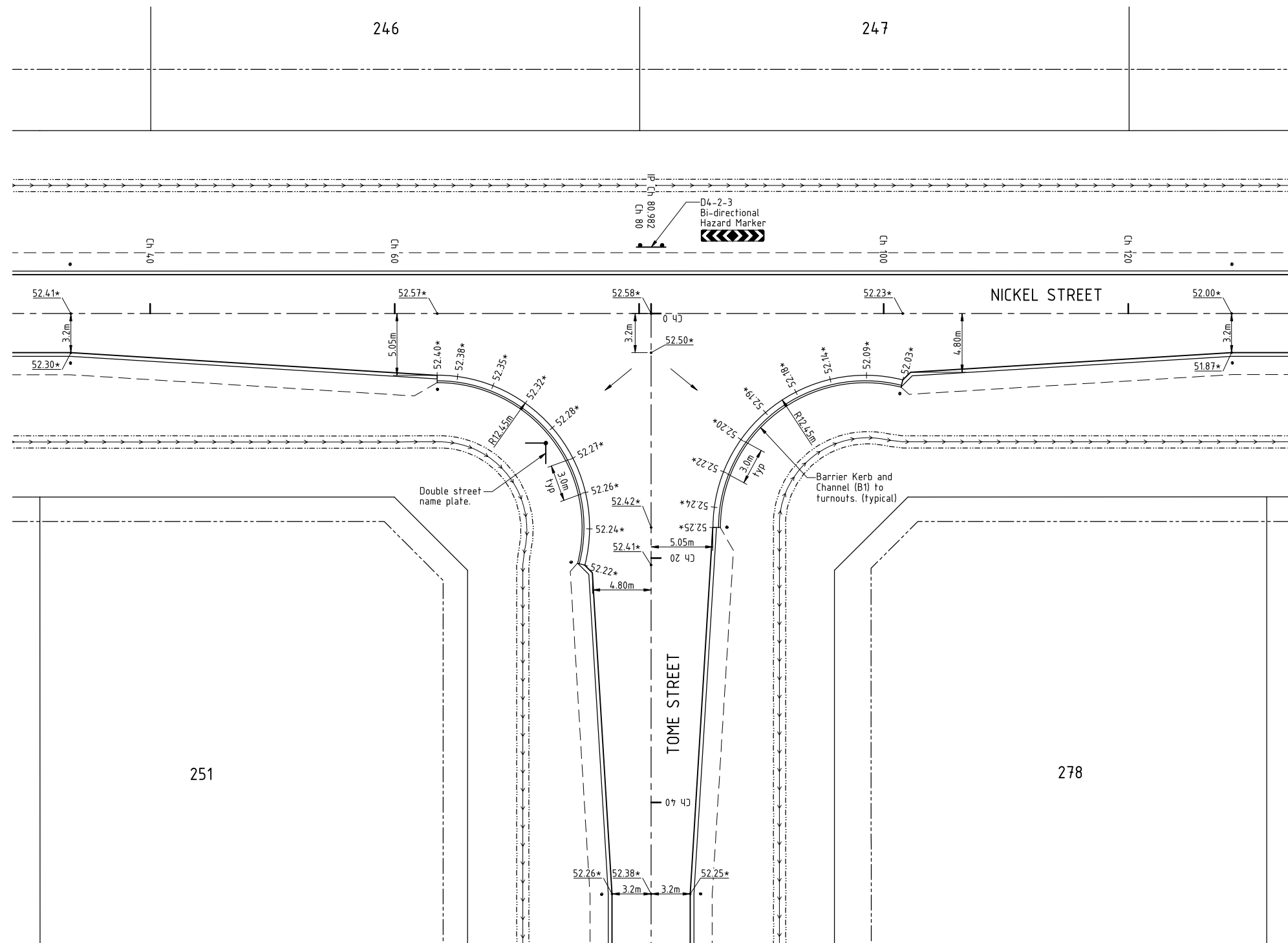
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A ISSUED FOR CONSTRUCTION
P2 ISSUED FOR OPW - NOT FOR CONSTRUCTION
P1 PRELIMINARY DRAFT ISSUE - NOT FOR CONSTRUCTION

Issue	Description	Date
Drawn KJM Date 18/10/2021	In Association With MILFORD PLANNING	TOME STREET CROSS SECTIONS
Checked	MOUNT MARGARET ESTATE STAGE 9, NICKEL STREET ALICE RIVER	
Reviewed		
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Drawing Number MIL0031-9/10		Issue B



LAYOUT PLAN

LEGEND

- Pavement level.
- Turnout lip levels.
- RP boundary.
- Top of batter.
- Toe of batter.
- Change of grade.

AS CONSTRUCTED

Rowlands Surveys Pty Ltd (ACN 010 025 260) hereby certify that the works detailed on this drawing, denoted *, have been constructed to the dimensions and levels shown.

Signature: Date: 04/11/2022
Laurence John Nolan
Director/Registered Surveyor

AS CONSTRUCTED

Northern Consulting Engineers hereby certify that the works detailed on the as constructed drawing reflect any changes that were made during the course of construction.

Signature: Date: 04/11/2022
Andrew Ian Wallace RPEQ 6743



ENGINEERING CERTIFICATION

Signed:
ANDREW IAN WALLACE - RPEQ No. 6743

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A ISSUED FOR CONSTRUCTION
P2 ISSUED FOR OPW - NOT FOR CONSTRUCTION
P1 PRELIMINARY DRAFT ISSUE - NOT FOR CONSTRUCTION

Issue	Description	Date
Drawn KJM Date 18/10/2021	In Association With MILFORD PLANNING	INTERSECTION LAYOUT PLAN
Checked	MOUNT MARGARET ESTATE STAGE 9, NICKEL STREET ALICE RIVER	
Reviewed		
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		Issue B

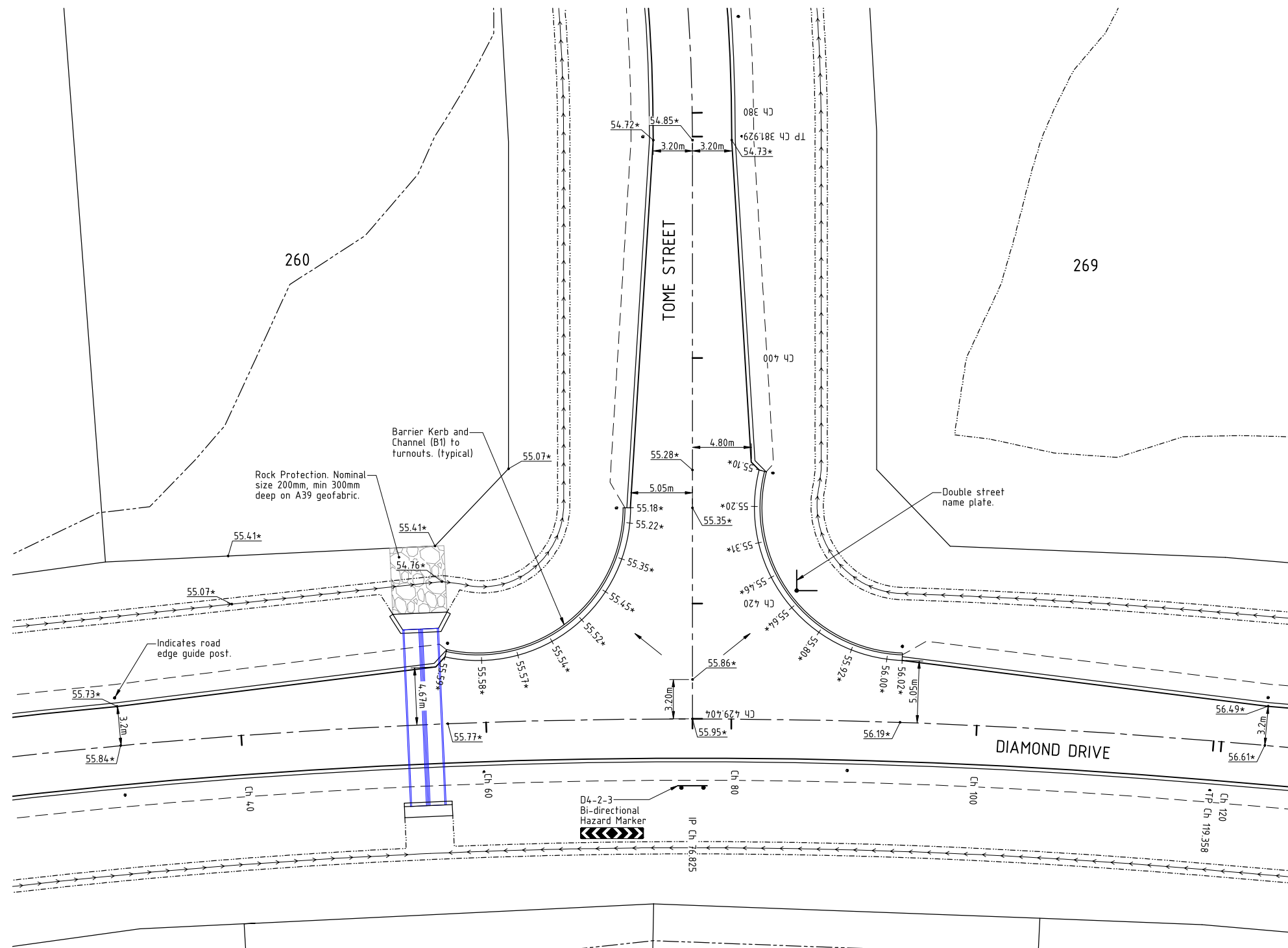
LEVEL DATUM A.H.D.
Horizontal Datum GDA' 94 Zone 55
Refer P.M. 193516 RL. 54.562
Located on Diamond Drive

BASE SURVEY
Rowlands Surveys - 44040/04

4/11/2022
12/04/2022
10/11/2021
18/10/2021

LEGEND

- Pavement level.
- Turnout lip levels.
- RP boundary.
- Top of batter.
- Toe of batter.
- Change of grade.



LAYOUT PLAN

AS CONSTRUCTED

Rowlands Surveys Pty Ltd (ACN 010 025 260) hereby certify that the works detailed on this drawing, denoted *, have been constructed to the dimensions and levels shown.

Laurence John Nolan
Director/Registered Surveyor
Date: 04/11/2022

AS CONSTRUCTED

Northern Consulting Engineers hereby certify that the works detailed on the as constructed drawing reflect any changes that were made during the course of construction.

Andrew Ian Wallace RPEQ 6743
Date: 04/11/2022

Scale 1:200 @ A1

ENGINEERING CERTIFICATION

Signed:
ANDREW IAN WALLACE - RPEQ No. 6743

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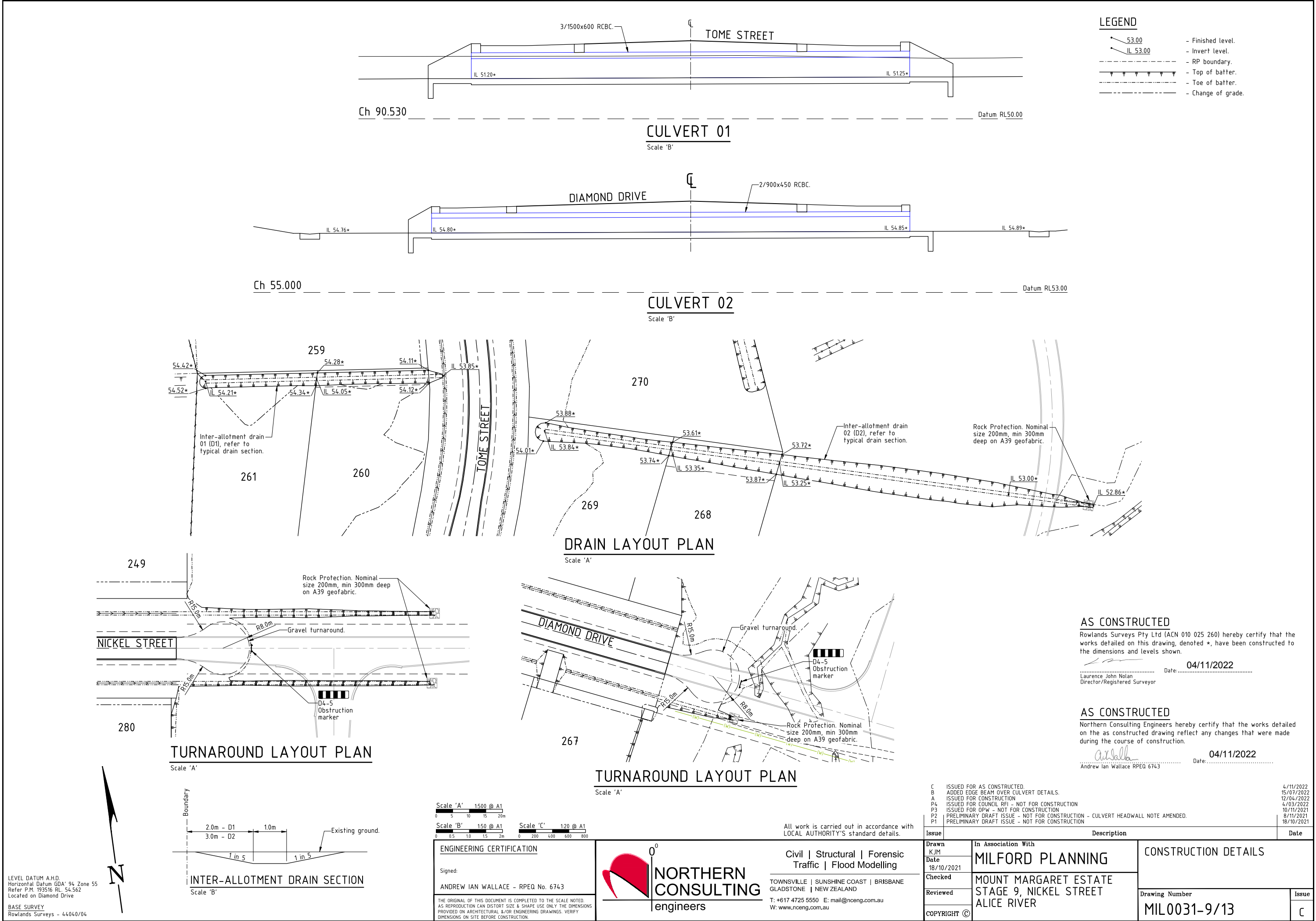
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B ISSUED FOR AS CONSTRUCTED.
A ISSUED FOR CONSTRUCTION
P2 ISSUED FOR OPW - NOT FOR CONSTRUCTION
P1 PRELIMINARY DRAFT ISSUE - NOT FOR CONSTRUCTION

Issue	Description	Date
Drawn KJM Date 18/10/2021	In Association With MILFORD PLANNING	4/11/2022
Checked Reviewed	MOUNT MARGARET ESTATE STAGE 9, NICKEL STREET ALICE RIVER	12/04/2022
COPYRIGHT ©	Drawing Number MIL0031-9/12	10/11/2021
	Issue B	18/10/2021

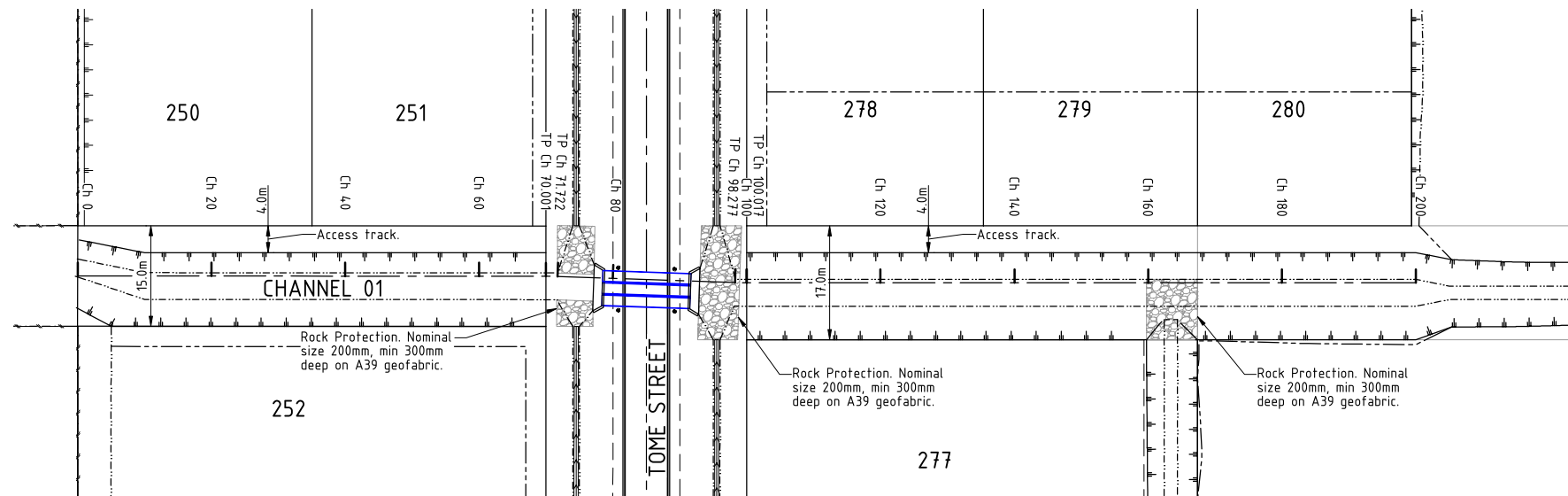
LEVEL DATUM A.H.D.
Horizontal Datum GDA' 94 Zone 55
Refer P.M. 193516 RL. 54.562
Located on Diamond Drive

BASE SURVEY
Rowlands Surveys - 44040/04



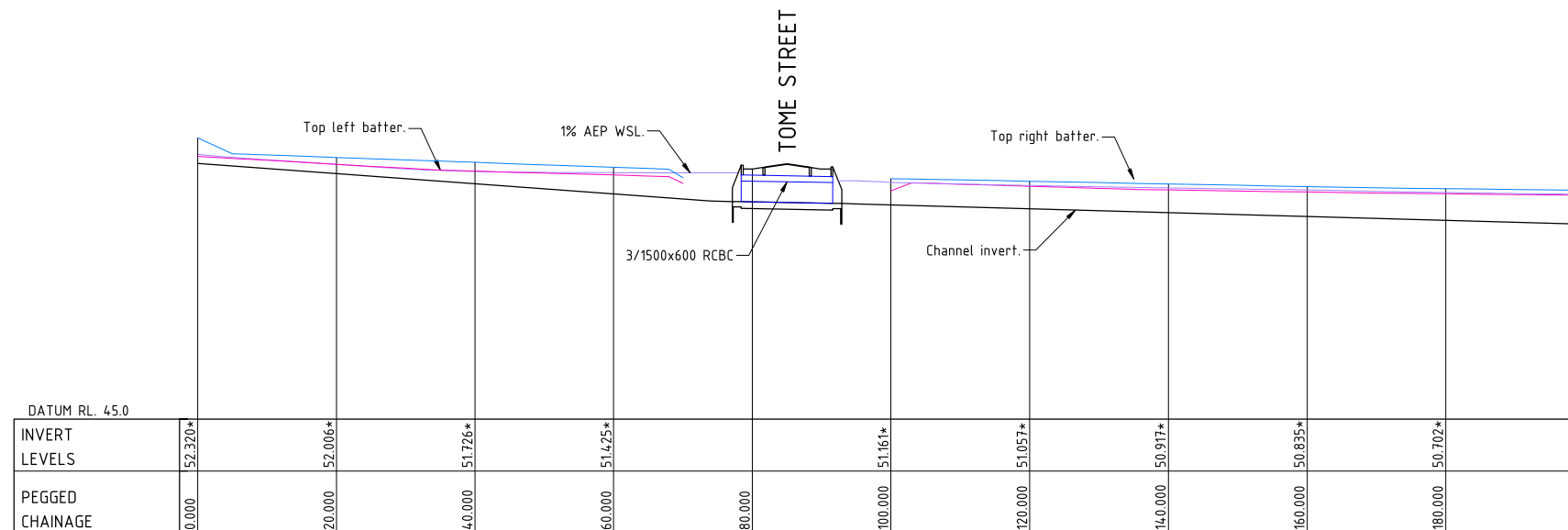
LEGEND

- RP boundary.
- Top of batter.
- Toe of batter.
- Change of grade.

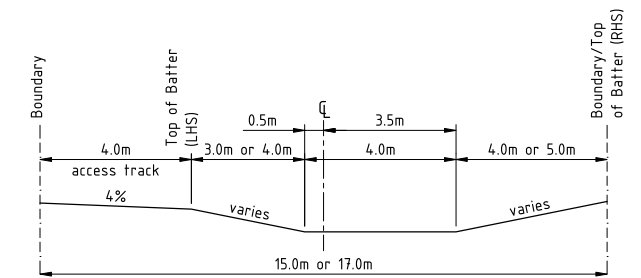


LAYOUT PLAN

Scale 'A'



LONGITUDINAL SECTION

Scale 'A' - Horizontal
Scale 'B' - Vertical

TYPICAL CHANNEL 01 CROSS SECTION

Scale 'B'

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Date: 04/11/2022
Laurence John Nolan
Director/Registered Surveyor

AS CONSTRUCTED

Northern Consulting Engineers hereby certify that the works detailed on the as constructed drawing reflect any changes that were made during the course of construction.

Date: 04/11/2022
Andrew Ian Wallace RPEQ 6743LEVEL DATUM A.H.D.
Horizontal Datum GDA' 94 Zone 55
Refer P.M. 193516 RL. 54.562
Located on Diamond DriveBASE SURVEY
Rowlands Surveys - 44040/04Scale 'A' 1:500 @ A1
Scale 'B' 1:100 @ A1

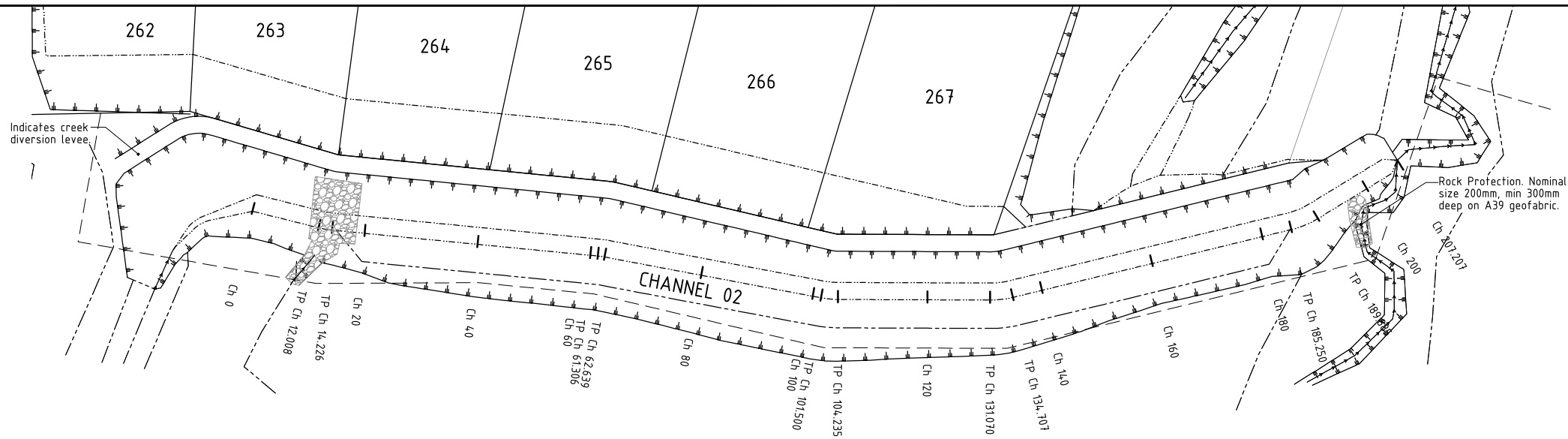
ENGINEERING CERTIFICATION

Signed:

ANDREW IAN WALLACE - RPEQ No. 6743

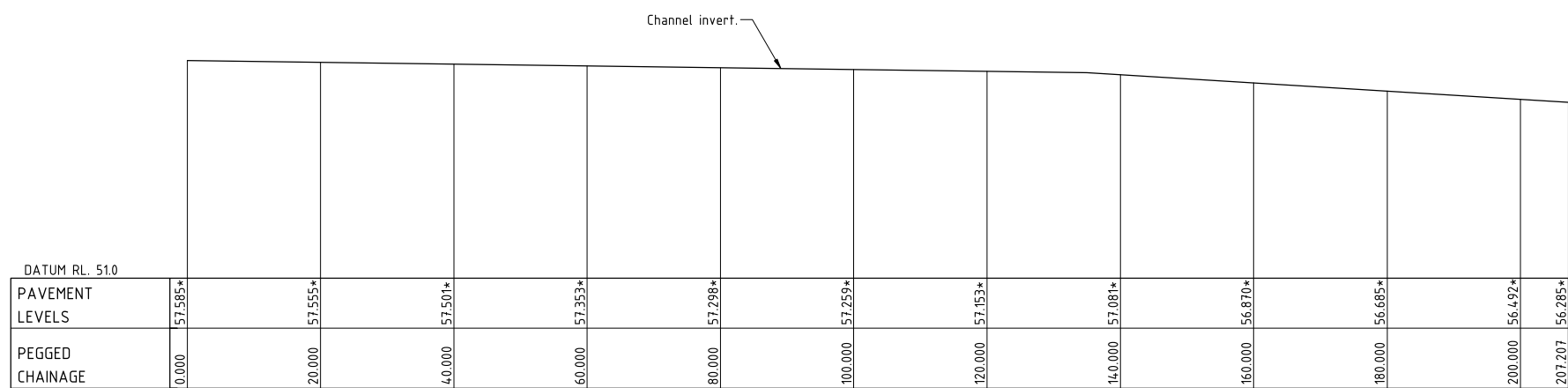
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T: +617 4725 5550 E: mail@nceng.com.au
W: www.nceng.com.auB ISSUED FOR AS CONSTRUCTED.
A ISSUED FOR CONSTRUCTION
P2 ISSUED FOR OPW - NOT FOR CONSTRUCTION
P1 PRELIMINARY DRAFT ISSUE - NOT FOR CONSTRUCTION

Issue	Description	Date
Drawn KJM Date 18/10/2021	In Association With MILFORD PLANNING	4/11/2022
Checked	MOUNT MARGARET ESTATE STAGE 9, NICKEL STREET ALICE RIVER	12/04/2022
Reviewed		10/11/2021
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CHANNEL 01 LAYOUT PLAN, LONGITUDINAL SECTION & CONSTRUCTION DETAILS		
Drawing Number MIL0031-9/14		Issue B

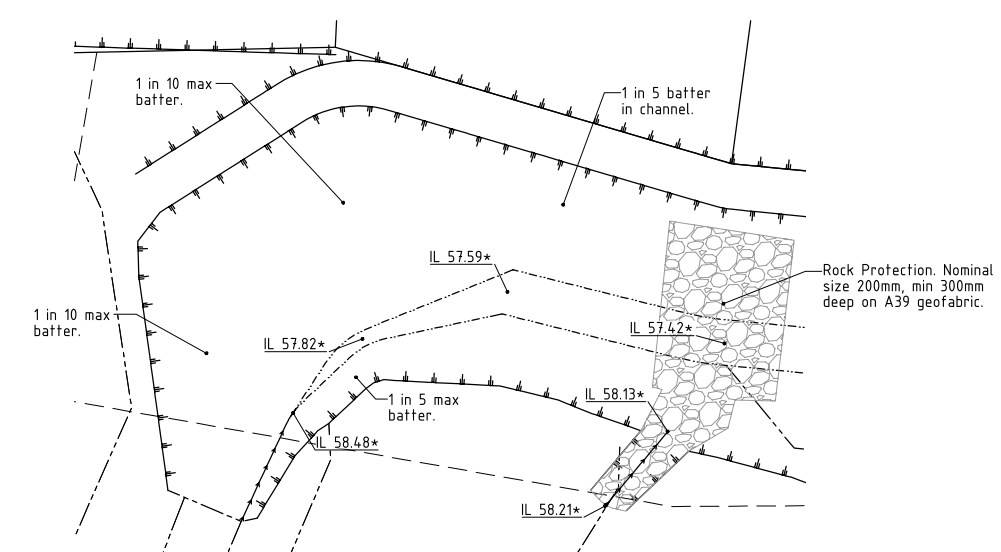


- LEGEND**
- RP boundary.
 - Top of batter.
 - Toe of batter.
 - Change of grade.

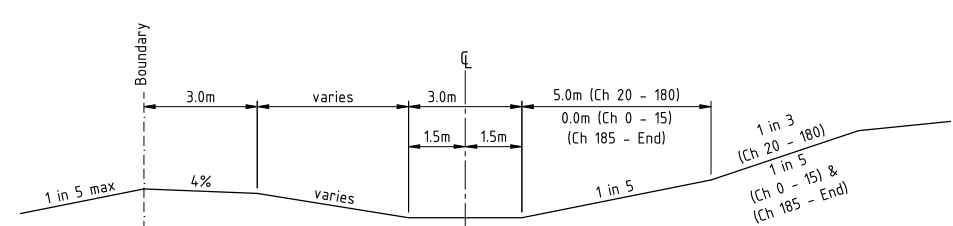
LAYOUT PLAN
Scale 'A'



CHANNEL 02
LONGITUDINAL SECTION
Scale 'A' - Horizontal
Scale 'C' - Vertical



CHANNEL TIE-IN
Scale 'B'

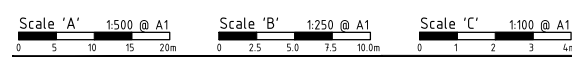


TYPICAL CHANNEL 02 CROSS SECTION
Scale 'C'

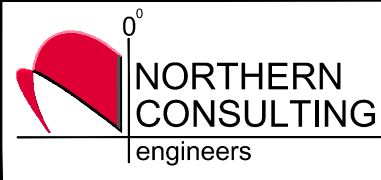
AS CONSTRUCTED
Rowlands Surveys Pty Ltd (ACN 010 025 260) hereby certify that the works detailed on this drawing, denoted *, have been constructed to the dimensions and levels shown.
Laurence John Nolan Date: 04/11/2022
Director/Registered Surveyor

AS CONSTRUCTED
Northern Consulting Engineers hereby certify that the works detailed on the as constructed drawing reflect any changes that were made during the course of construction.
Andrew Ian Wallace Date: 04/11/2022
Andrew Ian Wallace RPEQ 6743

C	ISSUED FOR AS CONSTRUCTED.	4/11/2022
B	GYPNUM TREATMENT ADDED.	12/07/2022
A	ISSUED FOR CONSTRUCTION	12/04/2022
P4	DIVERSION CHANNEL INLET AND ALIGNMENT AMENDED - NOT FOR CONSTRUCTION	4/03/2022
P3	ISSUED FOR OPW - NOT FOR CONSTRUCTION	10/11/2021
P2	PRELIMINARY DRAFT ISSUE - NOT FOR CONSTRUCTION - LEVEE EXTENT SHOW	8/11/2021
P1	PRELIMINARY DRAFT ISSUE - NOT FOR CONSTRUCTION	18/10/2021
Issue	Description	Date
Drawn	KJM	
Date	18/10/2021	
Checked		
Reviewed		
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In Association With		
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MOUNT MARGARET ESTATE		
STAGE 9, NICKEL STREET		
ALICE RIVER		
Drawing Number		Issue
MIL0031-9/16		C

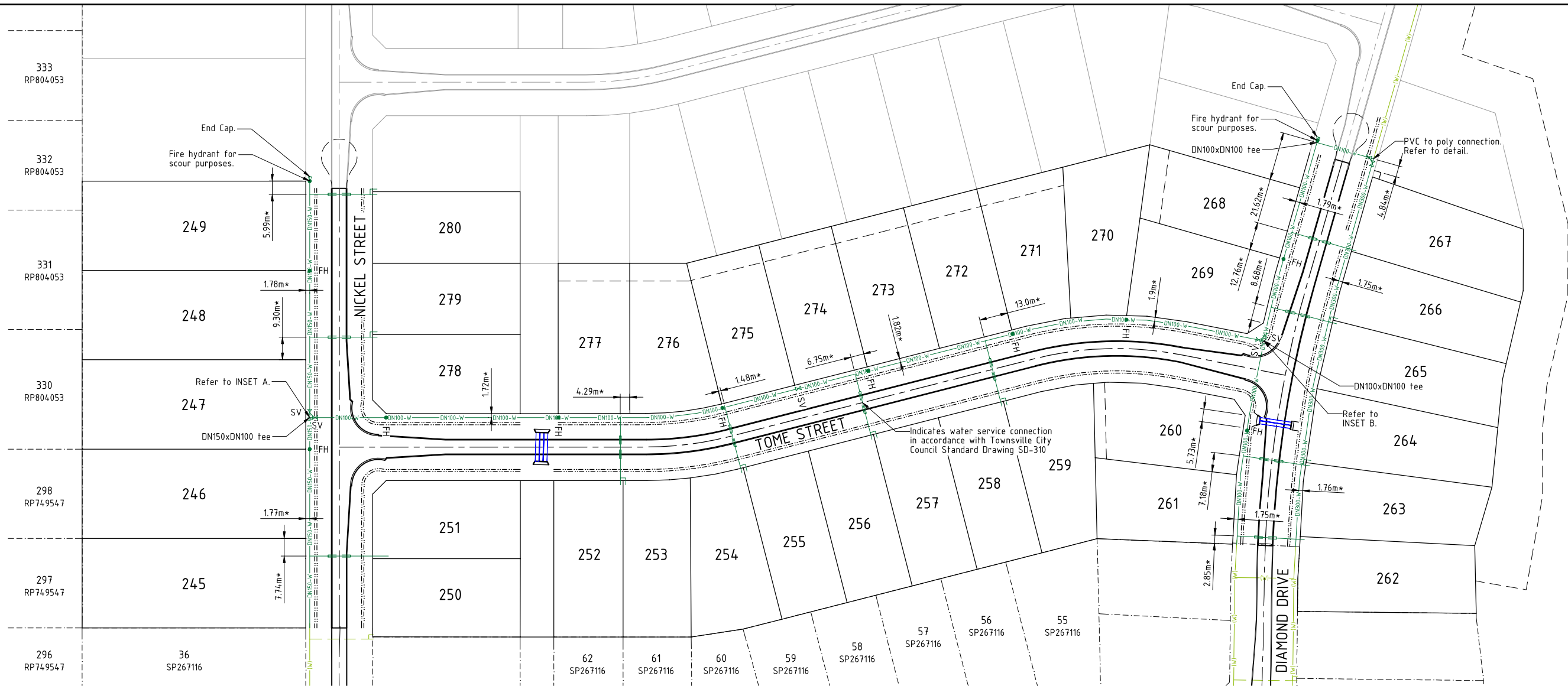


ENGINEERING CERTIFICATION
Signed:
ANDREW IAN WALLACE - RPEQ No. 6743
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LEVEL DATUM A.H.D.
Horizontal Datum GDA' 94 Zone 55
Refer P.M. 193516 RL. 54.562
Located on Diamond Drive
BASE SURVEY
Rowlands Surveys - 44040/04



WATER NOTES:

- All PVC water mains & fittings are to be Class 16 cast iron outside diameter compatible unless shown otherwise.
- All fittings are to be ductile iron concrete lined (D.I.C.L.) PN16 socket end unless shown otherwise.
- Valves & hydrants located directly opposite property boundary pegs unless shown otherwise.

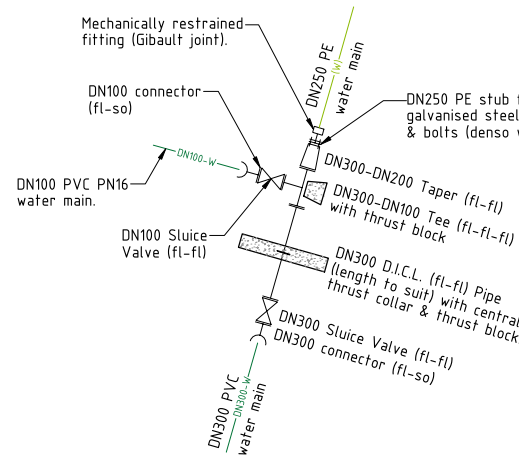
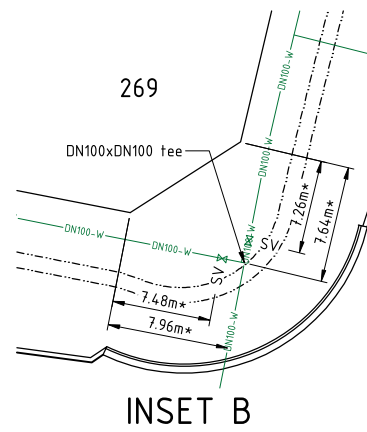
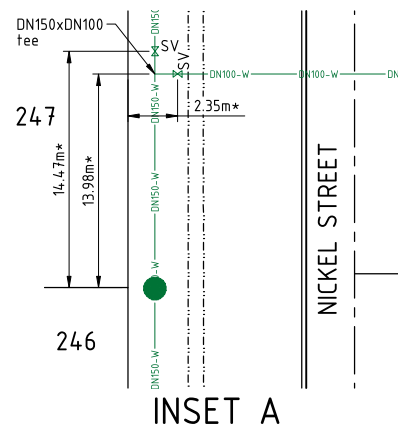
SERVICE CONNECTION:

- Double service connection
- Single service connection

LAYOUT PLAN

LEGEND

- RP boundary.
- Top of batter.
- Toe of batter.
- Change of grade.
- Stormwater culvert.
- DN100 PVC PN16 water main.
- DN150 PVC PN16 water main.
- DN300 PVC PN16 water main.
- (w) - Water main.



PVC TO POLY MAIN CONNECTION

AS CONSTRUCTED

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Laurence John Nolan
Director/Registered Surveyor
Date: 04/11/2022

AS CONSTRUCTED

Northern Consulting Engineers hereby certify that the works detailed on the as constructed drawing reflect any changes that were made during the course of construction.

Andrew Ian Wallace RPEQ 6743
Date: 04/11/2022

Scale 1:1000 @ A1
0 10 20 30 40m

ENGINEERING CERTIFICATION

Signed:
ANDREW IAN WALLACE - RPEQ No. 6743

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B	ISSUED FOR AS CONSTRUCTED.	4/11/2022
A	ISSUED FOR CONSTRUCTION	12/04/2022
P3	DN100 BACK FEED TO EXISTING DN250 POLY MAIN - NOT FOR CONSTRUCTION	4/03/2022
P2	ISSUED FOR OPW - NOT FOR CONSTRUCTION	10/11/2021
P1	PRELIMINARY DRAFT ISSUE - NOT FOR CONSTRUCTION	18/10/2021

Issue	Description	Date
Drawn	KJM	
Date	18/10/2021	
Checked		
Reviewed		
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MOUNT MARGARET ESTATE STAGE 9, NICKEL STREET ALICE RIVER		
WATER RETICULATION LAYOUT PLAN		
Drawing Number		Issue
MIL0031-9/18		B

LEVEL DATUM A.H.D.
Horizontal Datum GDA' 94 Zone 55
Refer P.M. 193516 RL. 54.562
Located on Diamond Drive

BASE SURVEY
Rowlands Surveys - 44040/04