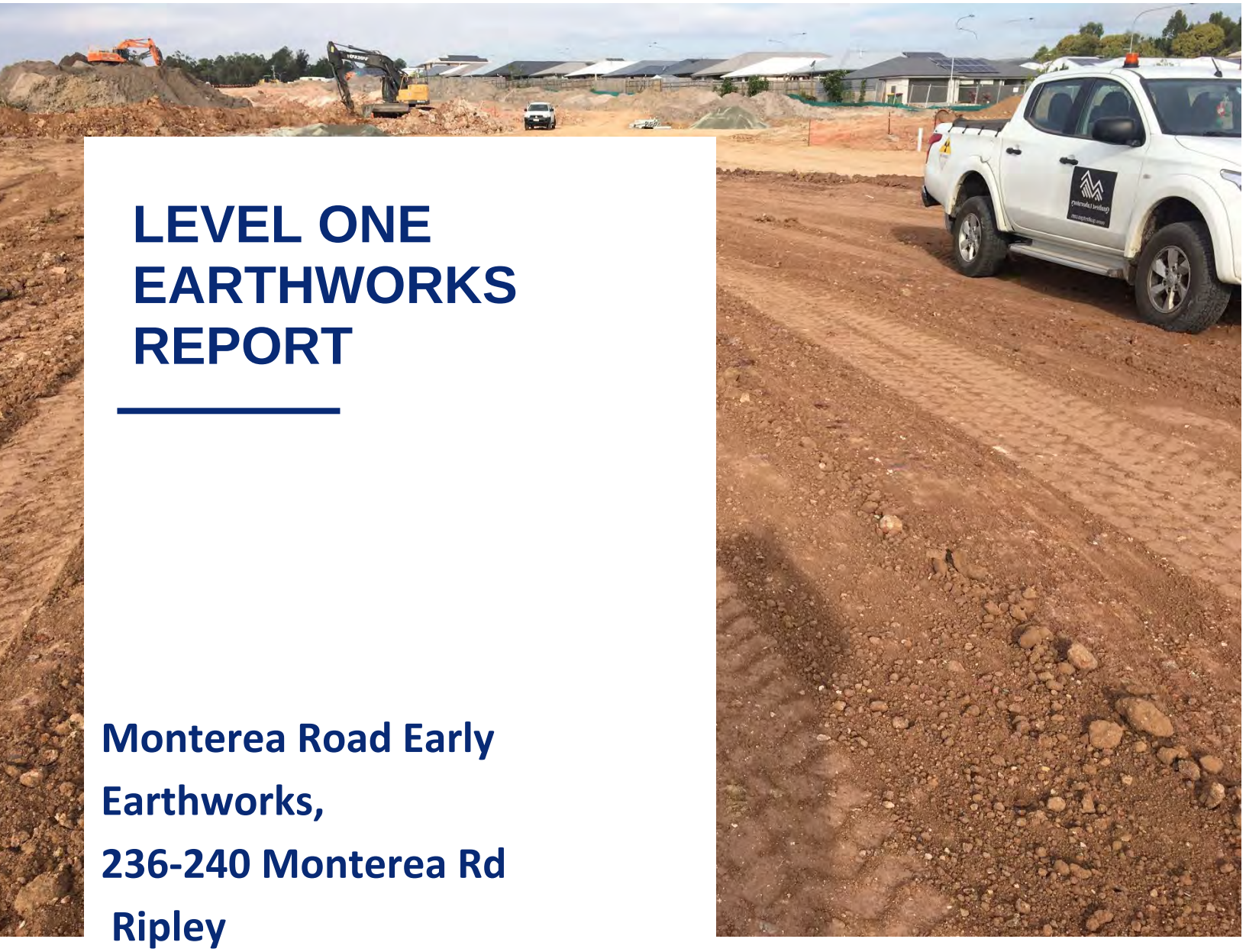

LEVEL ONE EARTHWORKS REPORT

Monterea Road Early Earthworks, 236-240 Monterea Rd Ripley

OCTOBER 21 2022

CCA Winslow Pty Ltd
Authored by: QUALTEST LABORATORY PTY LTD REF: 1636 RevA

Qualtest Laboratory
Est. 1987

Ref: 1636 – RevA
Job: 21-330
Author: D Rea / R. Mitchell

Qualtest Laboratory
Est. 1987

21st October 2022

CCA Winslow
1587 Ipswich Road
Rocklea QLD 4106

ATTENTION: MR KIERAN HOY
Email: kieranh@ccawinslow.com.au

Dear Sir

RE: LEVEL ONE EARTHWORKS REPORT
MONTEREA ROAD EARLY EARTHWORKS
236 – 240 MONTEREA ROAD,
RIPLEY

PROJECT: 236–240 MONTEREA RD, RIPLEY, MONTEREA RD EARLY EARTHWORK

CLIENT: CCA WINSLOW

SUPERINTENDANT: BORNHORST + WARD

CONTRACTOR: CCA WINSLOW

Qualtest Laboratory Pty Ltd
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GEOTECHNICAL AND LABORATORY SERVICES

1.0 INTRODUCTION

1.1 General

This Report presents results and documentation for the Level One Inspection and Testing of earthworks filling operations at 236 – 240 Monterea Road, Early Earthworks – Ripley (The Site).

Qualtest Laboratory Pty Ltd was commissioned by CCA Winslow (The Client) to provide Level 1 Earthworks Inspection and Testing services as defined in Section 8 of AS3798.

Filling operations covered by this Report were constructed between 16th September 2021 and the 16th December 2021.

The purpose of the Level 1 commission, and this Report, is to provide an opinion that the earthworks operations carried out by the Client have been carried out in accordance with AS3798, relevant project specifications, and Local Authority requirements as appropriate.

This Report has been carried out in general accordance with the following: -

- AS3798-2007 - Guidelines on Earthwork for Commercial and Residential Developments
- AS1289 – Testing of Soils for Engineering Purposes.
- AS2870-2011 – Residential Slabs and Footings.
- Ipswich City Council Requirements
- Bornhorst & Ward Drawings and Notes on Drawings.

This Report does not cover underground services, pavements, retaining walls, or any other works after the 16th December 2021.

1.2 The Development

The development comprises a multistage subdivision and associated infrastructure, including pavements, stormwater, water, and sewer reticulation.

The earthworks generally comprised:

- Filling Lots and part of Lots.
  - STAGE 10
    374, 375, 417-422, 424-428
  - STAGE 11
    366-373, 409-416,
  - STAGE 12
    333-337, 360-365, 401-408
  - STAGE 13
    307-315, 330-332,
  - STAGE 14
    338-359
  - Excluding cut lots
    410-413, and 422

Bornhorst & Ward Earthworks Plan Sheet 1 indicates the approximate extent of earthworks filling to be constructed at The Site. These plans are considered to be a reasonable indication of the actual extent of fill constructed during our involvement.

A Lot Disclosure Plan should be requested from the developer to confirm the actual depth of fill at the Site.
A Site layout plan is presented below in Figure 1. A marked-up Site layout plan showing the extent of fill covered by this Report is presented in Figure 2.

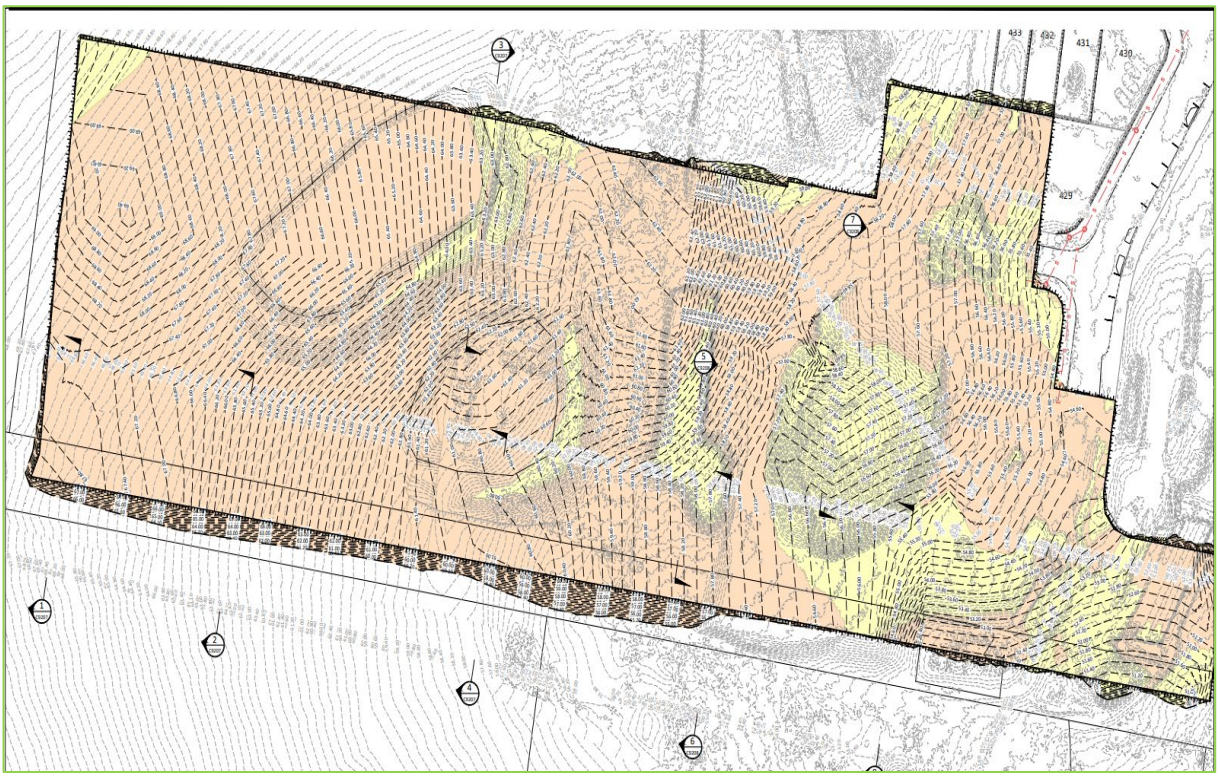

Figure 1: Site Layout Plan

Figure 2: Controlled Fill Plan – Green Shade

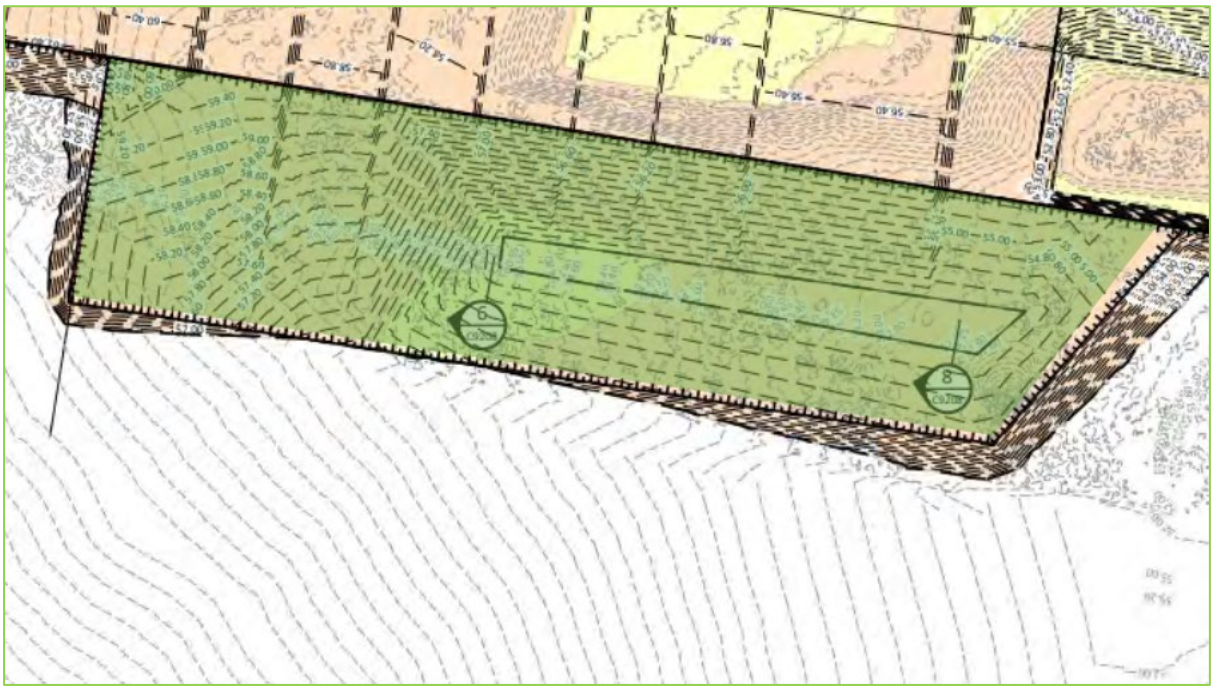

Figure 3: Controlled Fill Plan Sediment Basin – Green Shade

2.0 WORKS AND SPECIFICATIONS

All filling operations at the Site are to be placed and compacted in accordance with the following: -

- AS3798 – Type 1 Earthworks Operations.
- Ipswich City Council Specifications.
- Notes on Bornhurst & Ward Drawings.
- Density Ratio – 95% Standard

3.0 FILL FOUNDATION

Areas to be filled at the Site were observed to be stripped of grass and topsoil to depths exposing competent natural ground.

Compliance of the fill foundation and approval to commence filling was on the basis of: -

- Adequate removal of topsoil and organics
- Compliant proof roll testing of the stripped surface using onsite heavy earthworks plant

Figure 4 shows the stripped surface.

Figure 4: View of the Stripped Surface on Stages 10-12

4.0 FILLING OPERATIONS

Fill at the Site was sourced from onsite cuts within Stages 10-13.

Materials used as a fill can be broadly summarised as: -

- Ripped Extremely Weathered Sandstone (XW), with engineering properties of Clayey SAND (SC), fine to coarse sand, low to medium plasticity fines, traces of fine to coarse gravel, yellow-brown and moist.
- Fill was constructed using the following plant:
    - Podfoot Roller
    - D6 Dozer
    - Water Truck
    - 815 Compactor
    - D10 Dozer

Fill was observed to be placed in layers within the capacity of the above plant, moisture conditioned, and compacted using several passes (up and back).

To the extent that was reasonably practicable, fill materials visibly containing excessive amounts of silts or deleterious materials such as sticks and oversize particles were sorted to remove the contaminants prior to placement or rejected for use. Some cobble-sized particles may remain in the body of the fill, however, are unlikely to be in sufficient quantities to adversely affect the performance of the new fill. Sloping areas requiring filling were benched and continually keyed into the slope prior to and during fill placement.

Figures 5 and 6 show the filling operations at Stages 10-14.

Picture 2: View of the Filling Operations on Stages 10-14

Picture 3: View of the Filling Operations on Stage 10-14

5.0 COMPACTION TESTING

Compaction testing was carried out on the compacted fill materials in accordance with Table 5.1 and 8.1 of AS3798 2007 and tested to AS1289 test methods. All test locations were selected by Qualtest at random and staggered over the fill area and depth. Test locations were not obtained by survey, and on this basis, the locations should be considered as approximate only.

Compaction testing achieved the minimum required compaction specification of 95% Standard at the test locations. Areas, where the compaction specification was not achieved were reworked and re-tested using random stratified location processes.

The location of the compaction tests and area of fill covered under this Report are shown on the Site Plan contained in Appendix A.

Compaction test Reports are contained in Appendix B.

6.0 STATEMENT OF COMPLIANCE

Our representatives observed the relevant earthworks operations during our engagement including the stripped surface, new fill placement and compaction operations, and compaction testing.

As far as Qualtest could assess, the fill at The Site has been observed to be placed and compacted in accordance with the requirements outlined in Section 2.0.

The fill at The Site can be considered to be “Controlled” as defined in AS2870.

7.0 EXCLUSIONS

The compliance statement specifically excludes any topsoil, which may be placed for use as Lot dressing or any other subsequent earthworks after 14th December 2021. All trench backfill, landscaping fill, and other fill placed without our knowledge are also excluded.

Assessments of batter stability, global stability, and material quality such as soaked CBR and Site classifications are excluded from this commission. The stability of any fill batters in the long term must take account of the variable materials used for the construction of the fill platforms and all surface loads including traffic loads near the crest of all batters.

Our onsite attendance specifically excludes assessments of fill material quality and engineering properties that are outside the requirements of AS.3798 - 2007, including soil or fill reactivity and soaked CBR values. We note that the fill materials comprise clay soils, which may result in unfavourable Site classifications for individual lots and low subgrade design strengths for pavements.

Footings and ground slabs for any structures constructed over natural soils or controlled fill should be designed to accommodate the characteristic ground surface movements and settlement potential. Assessments of these design parameters are beyond the scope of this Report.

Controlled-fill (Level 1 Fill) provides an overview that the Earthwork Specification has been met. There are instances where significant long-term settlements of controlled fill can occur. Large total and differential settlements can be expected where fill has been placed over soft and compressible soils and where the thickness of controlled fill varies significantly across a lot.

Should you require further information regarding the above, please do not hesitate to contact this office.

Yours faithfully,

MICHAEL MORRISON
For and on behalf of
QUALTEST LABORATORY PTY LTD.

DENNIS ALAZIGHA, RPEQ 2216

Appendix A – Site Plan and Test Locations
Appendix B – Compaction Test Reports

APPENDIX A

SITE PLAN AND COMPACTION TEST LOCATIONS

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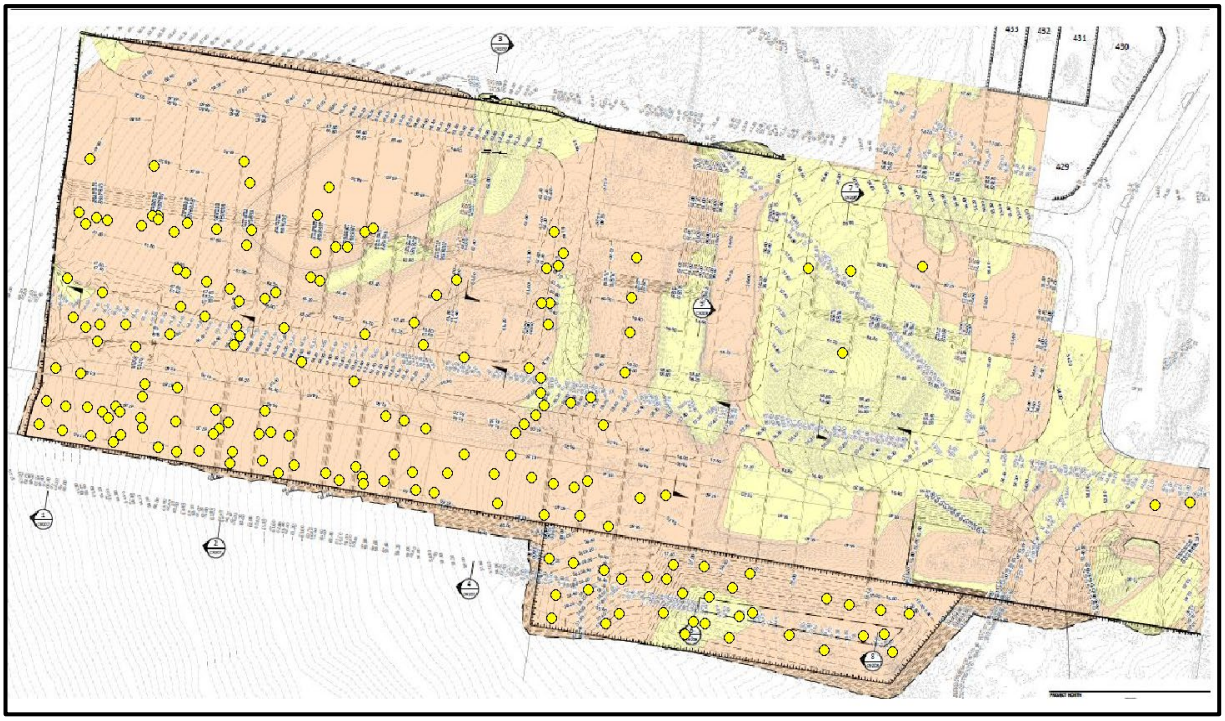

- Site Plan and Test Locations -

APPENDIX B

COMPACTION TEST REPORTS

Qualtest Laboratory

Est. 1987

Project :- Monterea Cadance Boundary
Client :- CCA Winslow

Report No :- 21/330/28
Issue No :- 1
Page No :- 1 of 2
Lab Ref No :- 25897
Date :- 10/01/2022

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Field Compaction Report

Sampling Procedure AS1289.1.2.1 cl6.4(b) (Compacted Layers)
Test Procedure AS1289.2.1.1 AS1289.5.7.1 AS1289.5.8.1

Sample Identification

	Testing of Allotment Fill	Testing of Allotment Fill	Testing of Allotment Fill	Testing of Allotment Fill
	Sediment Basin Extention Fill Area	Sediment Basin Extention Fill Area	Sediment Basin Extention Fill Area	Sediment Basin Extention Fill Area
	South East Corner	South East Corner		
	East: 7840.1	East: 7863.3	East: 7889.0	East: 7882.1
	North: 39392.2	North: 39387.1	North: 39382.2	North: 39367.03
	RL: 55.3	RL: 54.7	RL: 53.7	RL: 54.4
Test No & Description	138(Allotment Fill)	139(Allotment Fill)	140(Allotment Fill)	141(Allotment Fill)
Sample No	25897DR1	25897DR2	25897DR3	25897DR4

Field Test Data

Date Tested & Sampled		28/10/2021	28/10/2021	28/10/2021	28/10/2021
Time Tested & Sampled		PM	PM	PM	PM
Depth Tested	mm	150	150	150	150
Layer Depth	mm	Unknown	Unknown	Unknown	Unknown
Wet Oversize	%	0 @ 19mm	0 @ 19mm	0 @ 19mm	0 @ 19mm
Dry Oversize	%	0 @ 19mm	0 @ 19mm	0 @ 19mm	0 @ 19mm
Field Wet Density	t/m^3	2.04	2.04	2.04	2.12
Field Dry Density	t/m^3	1.89	1.87	1.79	1.90
Field Moisture Content	%	8.2	9.4	13.8	11.6

Laboratory Test Data

Date Tested		08/11/2021	08/11/2021	08/11/2021	08/11/2021
Compaction Reference		25897DR1	25897DR2	25897DR3	25897DR4
Modified / Standard		Standard	Standard	Standard	Standard
Hilf Density Ratio Method		Yes	Yes	Yes	Yes
Peak Converted Wet Density	t/m^3	2.06	2.05	2.07	2.12
Adj. PCWD	t/m^3	2.06	2.05	2.07	2.12
Moisture Variation	%	2.5	2.5	2.0	0.5
Adj. Moisture Variation	%	2.5	2.5	2.0	0.5
Dryer / Wetter than Optimum Moisture		2.5% Dryer than OMC	2.5% Dryer than OMC	2% Dryer than OMC	0.5% Dryer than OMC

Density Ratio	%	**99.0**	**99.5**	**98.5**	**100.0**

NATA
WORLD RECOGNISED ACCREDITATION

Accredited for complience with IOS/IEC 17025. - Testing Accreditation Number 2316.

Remarks:

Authorised Signatory: Greg Gibson

G. Gibson

QR10.14
25/03/21

Project :- Monterea Cadance Boundary
Client :- CCA Winslow

Report No :- 21/330/28
Issue No :- 1
Page No :- 2 of 2
Lab Ref No :- 25897
Date :- 10/01/2022

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Field Compaction Report

Sampling Procedure	AS1289.1.2.1 cl6.4(b) (Compacted Layers)
Test Procedure	AS1289.2.1.1 AS1289.5.7.1 AS1289.5.8.1

Sample Identification

	Testing of Allotment Fill	**Testing of Allotment Fill**		
	Sediment Basin Extention Fill Area South East Corner	**Sediment Basin Extention Fill Area** South East Corner		
	East: 7857.5 North: 39369.1 RL: 55.0	East: 7835.8 North: 39374.2 RL: 55.6		
Test No & Description	142(Allotment Fill)	143(Allotment Fill)		
Sample No	25897DR5	25897DR6		

Field Test Data

Date Tested & Sampled		28/10/2021	28/10/2021		
Time Tested & Sampled		PM	PM		
Depth Tested	mm	150	150		
Layer Depth	mm	Unknown	Unknown		
Wet Oversize	%	0 @ 19mm	0 @ 19mm		
Dry Oversize	%	0 @ 19mm	0 @ 19mm		
Field Wet Density	t/m^3	2.13	2.07		
Field Dry Density	t/m^3	1.91	1.82		
Field Moisture Content	%	11.7	13.5		

Laboratory Test Data

Date Tested		08/11/2021	08/11/2021		
Compaction Reference		25897DR5	25897DR6		
Modified / Standard		Standard	Standard		
Hilf Density Ratio Method		Yes	Yes		
Peak Converted Wet Density	t/m^3	2.13	2.11		
Adj. PCWD	t/m^3	2.13	2.11		
Moisture Variation	%	0.5	2.0		
Adj. Moisture Variation	%	0.5	2.0		
Dryer / Wetter than Optimum Moisture		0.5% Dryer than OMC	2% Dryer than OMC		

Density Ratio	%	**100.0**	**98.0**		

NATA
WORLD RECOGNISED ACCREDITATION

Accredited for complience with IOS/IEC 17025. - Testing Accreditation Number 2316.

Remarks:

Authorised Signatory: Greg Gibson

G. Gibson

Project :- Monterea Cadance Boundary
Client :- CCA Winslow

Report No :- 21/330/33
Issue No :- 1
Page No :- 1 of 1
Lab Ref No :- 25980
Date :- 10/01/2022

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Field Compaction Report

Sampling Procedure AS1289.1.2.1 cl6.4(b) (Compacted Layers)
Test Procedure AS1289.2.1.1 AS1289.5.7.1 AS1289.5.8.1

Sample Identification

		Testing of Allotment Fill Sediment Basin Extention Fill Area East: 7930.6m North: 39368.8m RL: 54.0m	Testing of Allotment Fill Sediment Basin Extention Fill Area East: 7919.9m North: 39384.0m RL: 54.9m	Testing of Allotment Fill Sediment Basin Extention Fill Area East: 7910.0m North: 39377.7m RL: 54.1m
Test No & Description		161(Allotment Fill)	162(Allotment Fill)	163(Allotment Fill)
Sample No		25980DR1	25980DR2	25980DR3

Field Test Data

Date Tested & Sampled		16/11/2021	16/11/2021	16/11/2021
Time Tested & Sampled		AM	AM	AM
Depth Tested	mm	150	150	150
Layer Depth	mm	Unknown	Unknown	Unknown
Wet Oversize	%	1 @ 19mm	0 @ 19mm	0 @ 19mm
Dry Oversize	%	1 @ 19mm	0 @ 19mm	0 @ 19mm
Field Wet Density	t/m^3	2.14	2.17	2.16
Field Dry Density	t/m^3	1.95	1.97	1.93
Field Moisture Content	%	9.8	10.1	12.0

Laboratory Test Data

Date Tested		24/11/2021	24/11/2021	24/11/2021
Compaction Reference		25980DR1	25980DR2	25980DR3
Modified / Standard		Standard	Standard	Standard
Hilf Density Ratio Method		Yes	Yes	Yes
Peak Converted Wet Density	t/m^3	2.14	2.16	2.16
Adj. PCWD	t/m^3	2.14	2.16	2.16
Moisture Variation	%	2.0	-1.0	-1.0
Adj. Moisture Variation	%	2.0	-1.0	-1.0
Dryer / Wetter than Optimum Moisture		2% Dryer than OMC	1% Wetter than OMC	1% Wetter than OMC

Density Ratio	%	**100.5**	**100.5**	**100.0**

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NATA
WORLD RECOGNISED ACCREDITATION

Remarks:

Authorised Signatory: Greg Gibson
G. Gibson

QR10.14
25/03/21

Project :- Monterea Cadance Boundary
Client :- CCA Winslow

Report No :- 21/330/35
Issue No :- 1
Page No :- 1 of 1
Lab Ref No :- 26067
Date :- 17/12/2021

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Field Compaction Report

Sampling Procedure	AS1289.1.2.1 cl6.4(b) (Compacted Layers)
Test Procedure	AS1289.2.1.1 AS1289.5.7.1 AS1289.5.8.1

Sample Identification

	Testing of Fill	Testing of Fill		
	Road Box S/E Corner Adjacent to Playground	Road Box S/E Corner Adjacent to Playground		
	East: 7978.2m North: 39382.0m RL: 52.74m	East: 7981.0m North: 39388.6m RL: 52.95m		
Test No & Description	164(Fill)	165(Fill)		
Sample No	26067DR1	26067DR2		

Field Test Data

Date Tested & Sampled		07/12/2021	07/12/2021		
Time Tested & Sampled		AM	AM		
Depth Tested	mm	150	150		
Layer Depth	mm	Unknown	Unknown		
Wet Oversize	%	0 @ 19mm	0 @ 19mm		
Dry Oversize	%	0 @ 19mm	0 @ 19mm		
Field Wet Density	t/m^3	2.22	2.20		
Field Dry Density	t/m^3	2.02	1.97		
Field Moisture Content	%	10.0	11.2		

Laboratory Test Data

Date Tested		16/12/2021	16/12/2021		
Compaction Reference		26067DR1	26067DR2		
Modified / Standard		Standard	Standard		
Hilf Density Ratio Method		Yes	Yes		
Peak Converted Wet Density	t/m^3	2.21	2.19		
Adj. PCWD	t/m^3	2.21	2.19		
Moisture Variation	%	0.0	1.5		
Adj. Moisture Variation	%	0.0	1.5		
Dryer / Wetter than Optimum Moisture		0% Wetter than OMC	1.5% Dryer than OMC		

Density Ratio	%	**100.5**	**100.0**		

NATA
WORLD RECOGNISED ACCREDITATION

Accredited for complience with IOS/IEC 17025. - Testing Accreditation Number 2316.

Remarks:

Authorised Signatory: Greg Gibson

G. Gibson

QR10.14
25/03/21

Project :- Monterea Cadance Boundary
Client :- CCA Winslow

Report No :- 21/330/36
Issue No :- 1
Page No :- 1 of 1
Lab Ref No :- 26135
Date :- 10/01/2022

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Field Compaction Report

Sampling Procedure AS1289.1.2.1 cl6.4(b) (Compacted Layers)
Test Procedure AS1289.2.1.1 AS1289.5.7.1 AS1289.5.8.1

Sample Identification	Testing of Allotment Fill	Testing of Allotment Fill	Testing of Allotment Fill	Testing of Allotment Fill
	Lot 350	**Lot 351**	**Lot 352**	**Lot 354**
	East: 7675.5m North: 39439.5m	East: 7684.9m North: 39438.0m	East: 7698.3m North: 39435.4m	East: 7723.4m North: 39433.9m
	Final Level	Final Level	Final Level	Final Level

Test No & Description	166(Allotment Fill)	167(Allotment Fill)	168(Allotment Fill)	169(Allotment Fill)
Sample No	26135DR1	26135DR2	26135DR3	26135DR4

Field Test Data

Date Tested & Sampled		16/12/2021	16/12/2021	16/12/2021	16/12/2021
Time Tested & Sampled		AM	AM	AM	AM
Depth Tested	mm	150	150	150	150
Layer Depth	mm	Unknown	Unknown	Unknown	Unknown
Wet Oversize	%	0 @ 19mm	0 @ 19mm	0 @ 19mm	0 @ 19mm
Dry Oversize	%	0 @ 19mm	0 @ 19mm	0 @ 19mm	0 @ 19mm
Field Wet Density	t/m^3	2.16	2.13	2.20	2.13
Field Dry Density	t/m^3	1.91	1.94	1.99	1.94
Field Moisture Content	%	13.2	9.6	10.5	9.7

Laboratory Test Data

Date Tested		05/01/2022	05/01/2022	05/01/2022	05/01/2022
Compaction Reference		26135DR1	26135DR2	26135DR3	26135DR4
Modified / Standard		Standard	Standard	Standard	Standard
Hilf Density Ratio Method		Yes	Yes	Yes	Yes
Peak Converted Wet Density	t/m^3	2.16	2.15	2.16	2.10
Adj. PCWD	t/m^3	2.16	2.15	2.16	2.10
Moisture Variation	%	1.0	1.5	0.0	2.5
Adj. Moisture Variation	%	1.0	1.5	0.0	2.5
Dryer / Wetter than Optimum Moisture		1% Dryer than OMC	1.5% Dryer than OMC	0% Dryer than OMC	2.5% Dryer than OMC

Density Ratio	%	**100.0**	**99.0**	**102.0**	**101.0**

NATA
WORLD RECOGNISED ACCREDITATION

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Remarks:

Authorised Signatory: Greg Gibson

G. Gibson

QR10.14
25/03/21

Project :- Monterea Cadance Boundary
Client :- CCA Winslow

Report No :- 21/330/01
Issue No :- 1
Page No :- 1 of 2
Lab Ref No :- 25652
Date :- 5/10/2021

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Field Compaction Report

Sampling Procedure AS1289.1.2.1 cl6.4(b) (Compacted Layers)
Test Procedure AS1289.2.1.1 AS1289.5.7.1 AS1289.5.8.1

Sample Identification	Testing of Allotment Fill	Testing of Allotment Fill	Testing of Allotment Fill	Testing of Allotment Fill
	Stage 12	South	South	South
	East: 7835.77 North: 39439.40	East: 7837.78 North: 39459.07	East: 7839.51 North: 39471.58	East: 7842.43 North: 39488.06
	RL: 57.38	RL: 52.28	RL: 58.75	RL: 59.36

Test No & Description	1(Allotment Fill)	2(Allotment Fill)	3(Allotment Fill)	4(Allotment Fill)
Sample No	25652DR1	25652DR2	25652DR3	25652DR4

Field Test Data

Date Tested & Sampled		17/09/2021	17/09/2021	17/09/2021	17/09/2021
Time Tested & Sampled		AM	AM	AM	AM
Depth Tested	mm	150	150	150	150
Layer Depth	mm	Unknown	Unknown	Unknown	Unknown
Wet Oversize	%	0 @ 19mm	0 @ 19mm	0 @ 19mm	0 @ 19mm
Dry Oversize	%	0 @ 19mm	0 @ 19mm	0 @ 19mm	0 @ 19mm
Field Wet Density	t/m^3	2.16	2.14	2.11	2.15
Field Dry Density	t/m^3	1.95	1.90	1.98	1.91
Field Moisture Content	%	10.9	13.0	6.5	12.9

Laboratory Test Data

Date Tested		01/10/2021	01/10/2021	01/10/2021	01/10/2021
Compaction Reference		25652DR1	25652DR2	25652DR3	25652DR4
Modified / Standard		Standard	Standard	Standard	Standard
Hilf Density Ratio Method		Yes	Yes	Yes	Yes
Peak Converted Wet Density	t/m^3	2.16	2.18	2.09	2.16
Adj. PCWD	t/m^3	2.16	2.18	2.09	2.16
Moisture Variation	%	1.5	-1.0	4.5	0.0
Adj. Moisture Variation	%	1.5	-1.0	4.5	0.0
Dryer / Wetter than Optimum Moisture		1.5% Dryer than OMC	1% Wetter than OMC	4.5% Dryer than OMC	0% Dryer than OMC

Density Ratio	%	**100.0**	**98.5**	**101.0**	**99.5**

NATA
WORLD RECOGNISED ACCREDITATION

Accredited for complience with IOS/IEC 17025. - Testing Accreditation Number 2316.

Remarks:

Authorised Signatory: Greg Gibson

G. Gibson

QR10.14
25/03/21

Project :- Monterea Cadance Boundary
Client :- CCA Winslow

Report No :- 21/330/01
Issue No :- 1
Page No :- 2 of 2
Lab Ref No :- 25652
Date :- 5/10/2021

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Field Compaction Report

Sampling Procedure AS1289.1.2.1 cl6.4(b) (Compacted Layers)
Test Procedure AS1289.2.1.1 AS1289.5.7.1 AS1289.5.8.1

Sample Identification	Testing of Allotment Fill Stage 12 South	Testing of Allotment Fill Lower	Testing of Allotment Fill Dam Fill	Testing of Allotment Fill Area
	East: 7782.57 North: 39422.11 RL: 58.50	East: 7799.06 North: 39453.92 RL: 57.30	East: 7794.42 North: 39457.70 RL: 57.59	East: 7786.04 North: 39645.86 RL: 58.60

Test No & Description	5(Allotment Fill)	6(Allotment Fill)	7(Allotment Fill)	8(Allotment Fill)
Sample No	25652DR5	25652DR6	25652DR7	25652DR8

Field Test Data

Date Tested & Sampled		17/09/2021	17/09/2021	17/09/2021	17/09/2021
Time Tested & Sampled		AM	AM	AM	AM
Depth Tested	mm	150	150	150	150
Layer Depth	mm	Unknown	Unknown	Unknown	Unknown
Wet Oversize	%	0 @ 19mm	0 @ 19mm	0 @ 19mm	0 @ 19mm
Dry Oversize	%	0 @ 19mm	0 @ 19mm	0 @ 19mm	0 @ 19mm
Field Wet Density	t/m^3	2.17	2.13	2.19	2.12
Field Dry Density	t/m^3	1.94	1.90	1.98	1.92
Field Moisture Content	%	12.1	12.2	10.5	10.7

Laboratory Test Data

Date Tested		01/10/2021	01/10/2021	01/10/2021	01/10/2021
Compaction Reference		25652DR5	25652DR6	25652DR7	25652DR8
Modified / Standard		Standard	Standard	Standard	Standard
Hilf Density Ratio Method		Yes	Yes	Yes	Yes
Peak Converted Wet Density	t/m^3	2.16	2.13	2.13	2.15
Adj. PCWD	t/m^3	2.16	2.13	2.13	2.15
Moisture Variation	%	0.0	-0.5	0.5	1.0
Adj. Moisture Variation	%	0.0	-0.5	0.5	1.0
Dryer / Wetter than Optimum Moisture		0% Dryer than OMC	0.5% Wetter than OMC	0.5% Dryer than OMC	1% Dryer than OMC

Density Ratio	%	**101.0**	**100.0**	**103.0**	**98.5**

NATA
WORLD RECOGNISED ACCREDITATION

Accredited for complience with IOS/IEC 17025. - Testing Accreditation Number 2316.

Remarks:

Authorised Signatory: Greg Gibson

G. Gibson

QR10.14
25/03/21

Project :- Monterea Cadance Boundary
Client :- CCA Winslow

Report No :- 21/330/02
Issue No :- 1
Page No :- 1 of 1
Lab Ref No :- 25653
Date :- 5/10/2021

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Field Compaction Report

Sampling Procedure	AS1289.1.2.1 cl6.4(b) (Compacted Layers)
Test Procedure	AS1289.2.1.1 AS1289.5.7.1 AS1289.5.8.1

Sample Identification

	Testing of Allotment Fill	Testing of Allotment Fill		
	Stage 12	South		
	Lot 360	Lot 362		
	East: 7799.84	East: 7742.47		
	North: 39427.17	North: 39421.08		
	RL: 58.33	RL: 57.44		
Test No & Description	9(Allotment Fill)	10(Allotment Fill)		
Sample No	25653DR1	25653DR2		

Field Test Data

Date Tested & Sampled		18/09/2021	18/09/2021		
Time Tested & Sampled		AM	AM		
Depth Tested	mm	150	150		
Layer Depth	mm	Unknown	Unknown		
Wet Oversize	%	0 @ 19mm	0 @ 19mm		
Dry Oversize	%	0 @ 19mm	0 @ 19mm		
Field Wet Density	t/m^3	2.07	2.12		
Field Dry Density	t/m^3	1.84	1.90		
Field Moisture Content	%	12.5	11.4		

Laboratory Test Data

Date Tested		01/10/2021	01/10/2021		
Compaction Reference		25653DR1	25653DR2		
Modified / Standard		Standard	Standard		
Hilf Density Ratio Method		Yes	Yes		
Peak Converted Wet Density	t/m^3	2.15	2.10		
Adj. PCWD	t/m^3	2.15	2.10		
Moisture Variation	%	-1.0	1.0		
Adj. Moisture Variation	%	-1.0	1.0		
Dryer / Wetter than Optimum Moisture		1% Wetter than OMC	1% Dryer than OMC		

Density Ratio	%	**96.0**	**100.5**		

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WORLD RECOGNISED ACCREDITATION

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Remarks:

Authorised Signatory: Greg Gibson

G. Gibson

QR10.14
25/03/21

Project :- Monterea Cadance Boundary
Client :- CCA Winslow

Report No :- 21/330/03
Issue No :- 1
Page No :- 1 of 2
Lab Ref No :- 25656
Date :- 5/10/2021

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Field Compaction Report

Sampling Procedure AS1289.1.2.1 cl6.4(b) (Compacted Layers)
Test Procedure AS1289.2.1.1 AS1289.5.7.1 AS1289.5.8.1

Sample Identification	Testing of Allotment Fill	Testing of Allotment Fill	Testing of Allotment Fill	Testing of Allotment Fill
	Stage 11	Stage 12	Stage 12	Stage 12
	Lot 366	Lot 364	Lot 365	Lot 408
	East: 7868.13	East: 7847.05	East: 7841.14	East: 7854.95
	North: 39408.18	North: 39411.74	North: 39420.0	North: 39438.49
	RL: 56.80	RL: 56.61	RL: 57.07	RL: 57.30
Test No & Description	11(Allotment Fill)	12(Allotment Fill)	13(Allotment Fill)	14(Allotment Fill)
Sample No	25656DR1	25656DR2	25656DR3	25656DR4

Field Test Data

Date Tested & Sampled		20/09/2021	20/09/2021	20/09/2021	20/09/2021
Time Tested & Sampled		AM	AM	AM	AM
Depth Tested	mm	150	150	150	150
Layer Depth	mm	Unknown	Unknown	Unknown	Unknown
Wet Oversize	%	0 @ 19mm	0 @ 19mm	0 @ 19mm	0 @ 19mm
Dry Oversize	%	0 @ 19mm	0 @ 19mm	0 @ 19mm	0 @ 19mm
Field Wet Density	t/m^3	2.13	2.15	2.15	2.17
Field Dry Density	t/m^3	1.93	1.95	1.95	1.94
Field Moisture Content	%	10.3	10.3	10.4	12.3

Laboratory Test Data

Date Tested		01/10/2021	01/10/2021	01/10/2021	01/10/2021
Compaction Reference		25656DR1	25656DR2	25656DR3	25656DR4
Modified / Standard		Standard	Standard	Standard	Standard
Hilf Density Ratio Method		Yes	Yes	Yes	Yes
Peak Converted Wet Density	t/m^3	2.14	2.15	2.13	2.12
Adj. PCWD	t/m^3	2.14	2.15	2.13	2.12
Moisture Variation	%	1.5	2.0	0.0	1.0
Adj. Moisture Variation	%	1.5	2.0	0.0	1.0
Dryer / Wetter than Optimum Moisture		1.5% Dryer than OMC	2% Dryer than OMC	0% Dryer than OMC	1% Dryer than OMC

Density Ratio	%	**99.5**	**100.0**	**101.0**	**102.5**

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WORLD RECOGNISED ACCREDITATION

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Remarks:

Authorised Signatory: Greg Gibson

G. Gibson

Project :- Monterea Cadance Boundary
Client :- CCA Winslow

Report No :- 21/330/03
Issue No :- 1
Page No :- 2 of 2
Lab Ref No :- 25656
Date :- 5/10/2021

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Field Compaction Report

Sampling Procedure	AS1289.1.2.1 cl6.4(b) (Compacted Layers)
Test Procedure	AS1289.2.1.1 AS1289.5.7.1 AS1289.5.8.1

Sample Identification

	Testing of Allotment Fill	**Testing of Allotment Fill**		
	Stage 12	**Stage 12**		
	Lot 406	**Lot 407**		
	North: 7849.54	North: 7860.18		
	East: 39463.40	East: 39456.84		
	RL: 58.43	RL: 57.85		
Test No & Description	15(Allotment Fill)	16(Allotment Fill)		
Sample No	25656DR5	25656DR6		

Field Test Data

Date Tested & Sampled		20/09/2021	20/09/2021		
Time Tested & Sampled		AM	AM		
Depth Tested	mm	150	150		
Layer Depth	mm	Unknown	Unknown		
Wet Oversize	%	0 @ 19mm	0 @ 19mm		
Dry Oversize	%	0 @ 19mm	0 @ 19mm		
Field Wet Density	t/m^3	2.10	2.09		
Field Dry Density	t/m^3	1.90	1.77		
Field Moisture Content	%	10.4	18.0		

Laboratory Test Data

Date Tested		01/10/2021	01/10/2021		
Compaction Reference		25656DR5	25656DR6		
Modified / Standard		Standard	Standard		
Hilf Density Ratio Method		Yes	Yes		
Peak Converted Wet Density	t/m^3	2.14	2.00		
Adj. PCWD	t/m^3	2.14	2.00		
Moisture Variation	%	1.5	2.5		
Adj. Moisture Variation	%	1.5	2.5		
Dryer / Wetter than Optimum Moisture		1.5% Dryer than OMC	2.5% Dryer than OMC		

Density Ratio	%	**98.0**	**104.5**		

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Remarks:

Authorised Signatory: Greg Gibson

G. Gibson

QR10.14
25/03/21

Project :- Monterea Cadance Boundary
Client :- CCA Winslow

Report No :- 21/330/04
Issue No :- 1
Page No :- 1 of 2
Lab Ref No :- 25668
Date :- 5/10/2021

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Field Compaction Report

Sampling Procedure AS1289.1.2.1 cl6.4(b) (Compacted Layers)
Test Procedure AS1289.2.1.1 AS1289.5.7.1 AS1289.5.8.1

Sample Identification	Testing of Allotment Fill	Testing of Allotment Fill	Testing of Allotment Fill	Testing of Allotment Fill
	Stage 14	Stage 12	Stage 12	Stage 12
	Lot 358	Lot 360	Lot 362	Lot 363
	East: 7769.45	East: 7795.9	East: 7822.5	East: 7836.1
	North: 39428.0	North: 39425.7	North: 39423.0	North: 39421.8
	RL: 60.0	RL: 59.4	RL: 58.7	RL: 58.2
Test No & Description	17(Allotment Fill)	18(Allotment Fill)	19(Allotment Fill)	20(Allotment Fill)
Sample No	25668DR1	25668DR2	25668DR3	25668DR4

Field Test Data

Date Tested & Sampled		21/09/2021	21/09/2021	21/09/2021	21/09/2021
Time Tested & Sampled		AM	AM	AM	AM
Depth Tested	mm	150	150	150	150
Layer Depth	mm	Unknown	Unknown	Unknown	Unknown
Wet Oversize	%	0 @ 19mm	0 @ 19mm	0 @ 19mm	0 @ 19mm
Dry Oversize	%	0 @ 19mm	0 @ 19mm	0 @ 19mm	0 @ 19mm
Field Wet Density	t/m^3	2.10	2.12	2.13	2.09
Field Dry Density	t/m^3	1.87	1.85	1.85	1.80
Field Moisture Content	%	12.7	14.8	14.7	15.7

Laboratory Test Data

Date Tested		01/10/2021	02/10/2021	01/10/2021	01/10/2021
Compaction Reference		25668DR1	25668DR2	25668DR3	25668DR4
Modified / Standard		Standard	Standard	Standard	Standard
Hilf Density Ratio Method		Yes	Yes	Yes	Yes
Peak Converted Wet Density	t/m^3	2.12	2.12	2.13	2.12
Adj. PCWD	t/m^3	2.12	2.12	2.13	2.12
Moisture Variation	%	1.0	-0.5	-0.5	-1.0
Adj. Moisture Variation	%	1.0	-0.5	-0.5	-1.0
Dryer / Wetter than Optimum Moisture		1% Dryer than OMC	0.5% Wetter than OMC	0.5% Wetter than OMC	1% Wetter than OMC

Density Ratio	%	**99.0**	**100.0**	**100.0**	**98.5**

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Remarks:

Authorised Signatory: Greg Gibson

G. Gibson

Project :- Monterea Cadance Boundary
Client :- CCA Winslow

Report No :- 21/330/04
Issue No :- 1
Page No :- 2 of 2
Lab Ref No :- 25668
Date :- 5/10/2021

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Field Compaction Report

Sampling Procedure	AS1289.1.2.1 cl6.4(b) (Compacted Layers)
Test Procedure	AS1289.2.1.1 AS1289.5.7.1 AS1289.5.8.1

Sample Identification

	Testing of Allotment Fill Stage 12 Lot 364 East: 7848.0 North: 39422.4 RL: 57.9	Testing of Allotment Fill Stage 12 Lot 365 East: 7859.6 North: 39422.1 RL: 57.5		
Test No & Description	21(Allotment Fill)	22(Allotment Fill)		
Sample No	25668DR5	25668DR6		

Field Test Data

Date Tested & Sampled		21/09/2021	21/09/2021		
Time Tested & Sampled		AM	AM		
Depth Tested	mm	150	150		
Layer Depth	mm	Unknown	Unknown		
Wet Oversize	%	0 @ 19mm	0 @ 19mm		
Dry Oversize	%	0 @ 19mm	0 @ 19mm		
Field Wet Density	t/m^3	2.12	2.11		
Field Dry Density	t/m^3	1.86	1.82		
Field Moisture Content	%	14.1	15.7		

Laboratory Test Data

Date Tested		01/10/2021	01/10/2021		
Compaction Reference		25668DR5	25668DR6		
Modified / Standard		Standard	Standard		
Hilf Density Ratio Method		Yes	Yes		
Peak Converted Wet Density	t/m^3	2.13	2.14		
Adj. PCWD	t/m^3	2.13	2.14		
Moisture Variation	%	0.0	0.0		
Adj. Moisture Variation	%	0.0	0.0		
Dryer / Wetter than Optimum Moisture		0% Dryer than OMC	0% Dryer than OMC		

Density Ratio	%	**99.5**	**98.5**		

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Remarks:

Authorised Signatory: Greg Gibson

G. Gibson

QR10.14
25/03/21

Project :- Monterea Cadance Boundary
Client :- CCA Winslow

Report No :- 21/330/05
Issue No :- 1
Page No :- 1 of 2
Lab Ref No :- 25671
Date :- 14/10/2021

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Field Compaction Report

Sampling Procedure AS1289.1.2.1 cl6.4(b) (Compacted Layers)
Test Procedure AS1289.2.1.1 AS1289.5.7.1 AS1289.5.8.1

Sample Identification	Testing of Allotment Fill	Testing of Allotment Fill	Testing of Allotment Fill	Testing of Allotment Fill
	Stage 12	Stage 12	Stage 12	Stage 12
	Lot 335	Lot 336	Lot 405	Lot 407
	East: 7799.8	East: 7813.6	East: 7835.0	East: 7856.3
	North: 39481.2	North: 39477.9	North: 39474.7	North: 39465.0
	RL: 60.7	RL: 60.7	RL: 59.0	RL: 58.3
Test No & Description	23(Allotment Fill)	24(Allotment Fill)	25(Allotment Fill)	26(Allotment Fill)
Sample No	25671DR1	25671DR2	25671DR3	25671DR4

Field Test Data

Date Tested & Sampled		22/09/2021	22/09/2021	22/09/2021	22/09/2021
Time Tested & Sampled		AM	AM	AM	AM
Depth Tested	mm	150	150	150	150
Layer Depth	mm	Unknown	Unknown	Unknown	Unknown
Wet Oversize	%	0 @ 19mm	0 @ 19mm	0 @ 19mm	0 @ 19mm
Dry Oversize	%	0 @ 19mm	0 @ 19mm	0 @ 19mm	0 @ 19mm
Field Wet Density	t/m^3	2.10	2.02	2.06	2.14
Field Dry Density	t/m^3	1.85	1.84	1.90	1.95
Field Moisture Content	%	13.4	9.8	8.4	9.5

Laboratory Test Data

Date Tested		12/10/2021	12/10/2021	12/10/2021	12/10/2021
Compaction Reference		25671DR1	25671DR2	25671DR3	25671DR4
Modified / Standard		Standard	Standard	Standard	Standard
Hilf Density Ratio Method		Yes	Yes	Yes	Yes
Peak Converted Wet Density	t/m^3	2.05	2.13	2.15	2.15
Adj. PCWD	t/m^3	2.05	2.13	2.15	2.15
Moisture Variation	%	2.5	1.0	2.5	1.0
Adj. Moisture Variation	%	2.5	1.0	2.5	1.0
Dryer / Wetter than Optimum Moisture		2.5% Dryer than OMC	1% Dryer than OMC	2.5% Dryer than OMC	1% Dryer than OMC

Density Ratio	%	**102.5**	**95.0**	**96.0**	**99.5**

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Remarks:

Authorised Signatory: Greg Gibson

G. Gibson

QR10.14
25/03/21

Project :- Monterea Cadance Boundary
Client :- CCA Winslow

Report No :- 21/330/05
Issue No :- 1
Page No :- 2 of 2
Lab Ref No :- 25671
Date :- 14/10/2021

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Field Compaction Report

Sampling Procedure AS1289.1.2.1 cl6.4(b) (Compacted Layers)
Test Procedure AS1289.2.1.1 AS1289.5.7.1 AS1289.5.8.1

Sample Identification	Testing of Allotment Fill	Testing of Allotment Fill	Testing of Allotment Fill	Testing of Allotment Fill
	Stage 14 Lot 348	Stage 14 Lot 347	Stage 14 Lot 345	Stage 14 Lot 344
	East: 7660.0 North: 39472.4 RL: 66.6	East: 7674.8 North: 39470.0 RL: 65.9	East: 7703.6 North: 39467.8 RL: 64.3	East: 7714.8 North: 39466.8 RL: 63.6
Test No & Description	27(Allotment Fill)	28(Allotment Fill)	29(Allotment Fill)	30(Allotment Fill)
Sample No	25671DR5	25671DR6	25671DR7	25671DR8

Field Test Data

Date Tested & Sampled		22/09/2021	22/09/2021	22/09/2021	22/09/2021
Time Tested & Sampled		PM	PM	PM	PM
Depth Tested	mm	150	150	150	150
Layer Depth	mm	Unknown	Unknown	Unknown	Unknown
Wet Oversize	%	0 @ 19mm	0 @ 19mm	0 @ 19mm	0 @ 19mm
Dry Oversize	%	0 @ 19mm	0 @ 19mm	0 @ 19mm	0 @ 19mm
Field Wet Density	t/m^3	2.16	2.09	2.09	2.16
Field Dry Density	t/m^3	1.95	1.85	1.81	1.94
Field Moisture Content	%	10.4	13.0	15.0	11.1

Laboratory Test Data

Date Tested		12/10/2021	12/10/2021	12/10/2021	12/10/2021
Compaction Reference		25671DR5	25671DR6	25671DR7	25671DR8
Modified / Standard		Standard	Standard	Standard	Standard
Hilf Density Ratio Method		Yes	Yes	Yes	Yes
Peak Converted Wet Density	t/m^3	2.14	2.09	2.06	2.15
Adj. PCWD	t/m^3	2.14	2.09	2.06	2.15
Moisture Variation	%	1.0	1.0	0.5	0.0
Adj. Moisture Variation	%	1.0	1.0	0.5	0.0
Dryer / Wetter than Optimum Moisture		1% Dryer than OMC	1% Dryer than OMC	0.5% Dryer than OMC	0% Dryer than OMC

Density Ratio	%	**101.0**	**100.0**	**101.0**	**100.5**

NATA
WORLD RECOGNISED ACCREDITATION

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Remarks:

Authorised Signatory: Greg Gibson
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QR10.14
25/03/21

Project :- Monterea Cadance Boundary
Client :- CCA Winslow

Report No :- 21/330/06
Issue No :- 1
Page No :- 1 of 2
Lab Ref No :- 25680
Date :- 14/10/2021

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Field Compaction Report

Sampling Procedure AS1289.1.2.1 cl6.4(b) (Compacted Layers)
Test Procedure AS1289.2.1.1 AS1289.5.7.1 AS1289.5.8.1

Sample Identification	Testing of Allotment Fill	Testing of Allotment Fill	Testing of Allotment Fill	Testing of Allotment Fill
	Stage 14 Lot 349	Stage 14 Lot 350	Stage 14 Lot 352	Stage 14 Lot 353
	East: 7664.8 North: 39436.6 RL: 66.4	East: 7678.7 North: 39434 RL: 65.8	East: 7704.0 North: 39429 RL: 64.2	East: 7716.6 North: 39427.6 RL: 63.6
Test No & Description	31(Allotment Fill)	32(Allotment Fill)	33(Allotment Fill)	34(Allotment Fill)
Sample No	25680DR1	25680DR2	25680DR3	25680DR4

Field Test Data

Date Tested & Sampled		23/09/2021	23/09/2021	23/09/2021	23/09/2021
Time Tested & Sampled		PM	PM	PM	PM
Depth Tested	mm	150	150	150	150
Layer Depth	mm	Unknown	Unknown	Unknown	Unknown
Wet Oversize	%	0 @ 19mm	0 @ 19mm	0 @ 19mm	2 @ 19mm
Dry Oversize	%	0 @ 19mm	0 @ 19mm	0 @ 19mm	2 @ 19mm
Field Wet Density	t/m^3	2.07	2.07	2.03	2.03
Field Dry Density	t/m^3	1.71	1.79	1.80	1.80
Field Moisture Content	%	21.4	16.0	12.6	13.2

Laboratory Test Data

Date Tested		12/10/2021	12/10/2021	12/10/2021	12/10/2021
Compaction Reference		25680DR1	25680DR2	25680DR3	25680DR4
Modified / Standard		Standard	Standard	Standard	Standard
Hilf Density Ratio Method		Yes	Yes	Yes	Yes
Peak Converted Wet Density	t/m^3	1.97	2.02	2.05	2.04
Adj. PCWD	t/m^3	1.97	2.02	2.05	2.04
Moisture Variation	%	0.0	0.0	-1.0	0.0
Adj. Moisture Variation	%	0.0	0.0	-1.0	0.0
Dryer / Wetter than Optimum Moisture		0% Dryer than OMC	0% Dryer than OMC	1% Wetter than OMC	0% Dryer than OMC

Density Ratio	%	**105.0**	**102.5**	**99.0**	**99.5**

NATA
WORLD RECOGNISED ACCREDITATION

Accredited for complience with IOS/IEC 17025. - Testing Accreditation Number 2316.

Remarks:

Authorised Signatory: Greg Gibson

G. Gibson

QR10.14
25/03/21

Project :- Monterea Cadance Boundary
Client :- CCA Winslow

Report No :- 21/330/06
Issue No :- 1
Page No :- 2 of 2
Lab Ref No :- 25680
Date :- 14/10/2021

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Field Compaction Report

Sampling Procedure AS1289.1.2.1 cl6.4(b) (Compacted Layers)
Test Procedure AS1289.2.1.1 AS1289.5.7.1 AS1289.5.8.1

Sample Identification	Testing of Allotment Fill	Testing of Allotment Fill	Testing of Allotment Fill	Testing of Allotment Fill
	Stage 14	Stage 14	Stage 14	Stage 14
	Lot 354	Lot 356	Lot 357	Lot 358
	East: 7727.0	East: 7749.8	East: 7762.8	East: 7774.4
	North: 39425.6	North: 39424.6	North: 39422.0	North: 39420.7
	RL: 63.0	RL: 61.8	RL: 61.4	RL: 60.6
Test No & Description	35(Allotment Fill)	36(Allotment Fill)	37(Allotment Fill)	38(Allotment Fill)
Sample No	25680DR5	25680DR6	25680DR7	25680DR8

Field Test Data

Date Tested & Sampled		23/09/2021	23/09/2021	23/09/2021	23/09/2021
Time Tested & Sampled		PM	PM	PM	PM
Depth Tested	mm	150	150	150	150
Layer Depth	mm	Unknown	Unknown	Unknown	Unknown
Wet Oversize	%	0 @ 19mm	0 @ 19mm	0 @ 19mm	0 @ 19mm
Dry Oversize	%	0 @ 19mm	0 @ 19mm	0 @ 19mm	0 @ 19mm
Field Wet Density	t/m^3	2.02	2.14	2.11	2.05
Field Dry Density	t/m^3	1.78	1.92	1.89	1.83
Field Moisture Content	%	13.5	11.3	11.5	11.8

Laboratory Test Data

Date Tested		12/10/2021	12/10/2021	12/10/2021	12/10/2021
Compaction Reference		25680DR5	25680DR6	25680DR7	25680DR8
Modified / Standard		Standard	Standard	Standard	Standard
Hilf Density Ratio Method		Yes	Yes	Yes	Yes
Peak Converted Wet Density	t/m^3	2.05	2.07	2.05	2.08
Adj. PCWD	t/m^3	2.05	2.07	2.05	2.08
Moisture Variation	%	1.0	1.5	0.0	0.0
Adj. Moisture Variation	%	1.0	1.5	0.0	0.0
Dryer / Wetter than Optimum Moisture		1% Dryer than OMC	1.5% Dryer than OMC	0% Dryer than OMC	0% Dryer than OMC

Density Ratio	%	**98.5**	**103.0**	**103.0**	**98.5**

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WORLD RECOGNISED ACCREDITATION

Accredited for complience with IOS/IEC 17025. - Testing Accreditation Number 2316.

Remarks:

Authorised Signatory: Greg Gibson

G. Gibson

QR10.14
25/03/21

Project :- Monterea Cadance Boundary
Client :- CCA Winslow

Report No :- 21/330/07
Issue No :- 1
Page No :- 1 of 2
Lab Ref No :- 25689
Date :- 14/10/2021

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Field Compaction Report

Sampling Procedure AS1289.1.2.1 cl6.4(b) (Compacted Layers)
Test Procedure AS1289.2.1.1 AS1289.5.7.1 AS1289.5.8.1

Sample Identification

	Testing of Allotment Fill	Testing of Allotment Fill	Testing of Allotment Fill	Testing of Allotment Fill
	Stage 14 Lot 349	Stage 14 Lot 350	Stage 14 Lot 351	Stage 14 Lot 355
	East: 7654.4 North: 39430.6 RL: 67.3	East: 7676.0 North: 39427.8 RL: 66.1	East: 7689.3 North: 39424.0 RL: 65.5	East: 7737.0 North: 39418.0 RL: 65.5
Test No & Description	39(Allotment Fill)	40(Allotment Fill)	41(Allotment Fill)	42(Allotment Fill)
Sample No	25689DR1	25689DR2	25689DR3	25689DR4

Field Test Data

Date Tested & Sampled		24/09/2021	24/09/2021	24/09/2021	24/09/2021
Time Tested & Sampled		PM	PM	PM	PM
Depth Tested	mm	150	150	150	150
Layer Depth	mm	Unknown	Unknown	Unknown	Unknown
Wet Oversize	%	0 @ 19mm	0 @ 19mm	0 @ 19mm	0 @ 19mm
Dry Oversize	%	0 @ 19mm	0 @ 19mm	0 @ 19mm	0 @ 19mm
Field Wet Density	t/m^3	2.12	2.18	2.12	2.15
Field Dry Density	t/m^3	1.87	1.93	1.87	1.91
Field Moisture Content	%	13.2	12.5	13.5	12.7

Laboratory Test Data

Date Tested		13/10/2021	13/10/2021	13/10/2021	13/10/2021
Compaction Reference		25689DR1	25689DR2	25689DR3	25689DR4
Modified / Standard		Standard	Standard	Standard	Standard
Hilf Density Ratio Method		Yes	Yes	Yes	Yes
Peak Converted Wet Density	t/m^3	2.19	2.21	2.16	2.18
Adj. PCWD	t/m^3	2.19	2.21	2.16	2.18
Moisture Variation	%	0.0	-1.0	-1.0	0.0
Adj. Moisture Variation	%	0.0	-1.0	-1.0	0.0
Dryer / Wetter than Optimum Moisture		0% Dryer than OMC	1% Wetter than OMC	1% Wetter than OMC	0% Dryer than OMC

Density Ratio	%	**97.0**	**98.5**	**98.5**	**98.5**

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WORLD RECOGNISED ACCREDITATION

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Remarks:

Authorised Signatory: Greg Gibson

G. Gibson

QR10.14
25/03/21

Project :- Monterea Cadance Boundary
Client :- CCA Winslow

Report No :- 21/330/07
Issue No :- 1
Page No :- 2 of 2
Lab Ref No :- 25689
Date :- 14/10/2021

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Field Compaction Report

Sampling Procedure	AS1289.1.2.1 cl6.4(b) (Compacted Layers)
Test Procedure	AS1289.2.1.1 AS1289.5.7.1 AS1289.5.8.1

Sample Identification

	Testing of Allotment Fill Stage 14 Lot 358 East: 7770.0 North: 39415.8 RL: 60.6	Testing of Allotment Fill Stage 14 Lot 359 East: 7783.8 North: 39414 RL: 59.9		
Test No & Description	43(Allotment Fill)	44(Allotment Fill)		
Sample No	25689DR5	25689DR6		

Field Test Data

Date Tested & Sampled		24/09/2021	24/09/2021		
Time Tested & Sampled		PM	PM		
Depth Tested	mm	150	150		
Layer Depth	mm	Unknown	Unknown		
Wet Oversize	%	1 @ 19mm	1 @ 19mm		
Dry Oversize	%	1 @ 19mm	1 @ 19mm		
Field Wet Density	t/m^3	2.16	2.19		
Field Dry Density	t/m^3	1.97	1.96		
Field Moisture Content	%	9.9	11.5		

Laboratory Test Data

Date Tested		13/10/202	13/10/202		
Compaction Reference		25689DR5	25689DR6		
Modified / Standard		Standard	Standard		
Hilf Density Ratio Method		Yes	Yes		
Peak Converted Wet Density	t/m^3	2.17	2.20		
Adj. PCWD	t/m^3	2.18	2.20		
Moisture Variation	%	0.0	-0.5		
Adj. Moisture Variation	%	0.0	-0.5		
Dryer / Wetter than Optimum Moisture		0% Dryer than OMC	0.5% Wetter than OMC		

Density Ratio	%	**99.5**	**99.5**		

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Remarks:

Authorised Signatory: Greg Gibson

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QR10.14
25/03/21

Project :- Monterea Cadance Boundary
Client :- CCA Winslow

Report No :- 21/330/08
Issue No :- 1
Page No :- 1 of 2
Lab Ref No :- 25697
Date :- 14/10/2021

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Field Compaction Report

Sampling Procedure AS1289.1.2.1 cl6.4(b) (Compacted Layers)
Test Procedure AS1289.2.1.1 AS1289.5.7.1 AS1289.5.8.1

Sample Identification	Testing of Allotment Fill	Testing of Allotment Fill	Testing of Allotment Fill	Testing of Allotment Fill
	Stage 14 Below Road	Stage 14 Below Road	Stage 14 Below Road	Stage 14 Below Road
	East: 7665.0 North: 39461.8 RL: 66.1	East: 7688.6 North: 39458.0 RL: 65.1	East: 7701.6 North: 39456.8 RL: 65.0	East: 7713.8 North: 39455 RL: 64.0
Test No & Description	45(Allotment Fill)	46(Allotment Fill)	47(Allotment Fill)	48(Allotment Fill)
Sample No	25697DR1	25697DR2	25697DR3	25697DR4

Field Test Data

Date Tested & Sampled		27/09/2021	27/09/2021	27/09/2021	27/09/2021
Time Tested & Sampled		PM	PM	PM	PM
Depth Tested	mm	150	150	150	150
Layer Depth	mm	Unknown	Unknown	Unknown	Unknown
Wet Oversize	%	0 @ 19mm	3 @ 19mm	2 @ 19mm	1 @ 19mm
Dry Oversize	%	0 @ 19mm	3 @ 19mm	2 @ 19mm	1 @ 19mm
Field Wet Density	t/m^3	2.08	2.08	2.16	2.15
Field Dry Density	t/m^3	1.87	1.89	1.94	1.95
Field Moisture Content	%	11.3	10.0	11.4	10.4

Laboratory Test Data

Date Tested		13/10/2021	13/10/2021	13/10/2021	13/10/2021
Compaction Reference		25697DR1	25697DR2	25697DR3	25697DR4
Modified / Standard		Standard	Standard	Standard	Standard
Hilf Density Ratio Method		Yes	Yes	Yes	Yes
Peak Converted Wet Density	t/m^3	2.11	2.12	2.12	2.12
Adj. PCWD	t/m^3	2.11	2.12	2.12	2.12
Moisture Variation	%	1.5	2.0	2.0	1.0
Adj. Moisture Variation	%	1.5	2.0	2.0	1.0
Dryer / Wetter than Optimum Moisture		1.5% Dryer than OMC	2% Dryer than OMC	2% Dryer than OMC	1% Dryer than OMC

Density Ratio	%	**98.5**	**98.0**	**101.5**	**101.5**

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WORLD RECOGNISED ACCREDITATION

Accredited for complience with IOS/IEC 17025. - Testing Accreditation Number 2316.

Remarks:

Authorised Signatory: Greg Gibson
G. Gibson

Project :- Monterea Cadance Boundary
Client :- CCA Winslow

Report No :- 21/330/08
Issue No :- 1
Page No :- 2 of 2
Lab Ref No :- 25697
Date :- 14/10/2021

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Field Compaction Report

Sampling Procedure	AS1289.1.2.1 cl6.4(b) (Compacted Layers)
Test Procedure	AS1289.2.1.1 AS1289.5.7.1 AS1289.5.8.1

Sample Identification

	Testing of Allotment Fill Stage 14 Below Road East: 7728.4 North: 39453.0 RL: 64.5	Testing of Allotment Fill Stage 14 Below Road East: 7742.5 North: 39451.6 RL: 65.0		
Test No & Description	49(Allotment Fill)	50(Allotment Fill)		
Sample No	25697DR5	25697DR6		

Field Test Data

Date Tested & Sampled		27/09/2021	27/09/2021		
Time Tested & Sampled		PM	PM		
Depth Tested	mm	150	150		
Layer Depth	mm	Unknown	Unknown		
Wet Oversize	%	1 @ 19mm	1 @ 19mm		
Dry Oversize	%	1 @ 19mm	1 @ 19mm		
Field Wet Density	t/m^3	2.15	2.16		
Field Dry Density	t/m^3	1.88	1.93		
Field Moisture Content	%	14.4	12.2		

Laboratory Test Data

Date Tested		13/10/2021	13/10/2021		
Compaction Reference		25697DR5	25697DR6		
Modified / Standard		Standard	Standard		
Hilf Density Ratio Method		Yes	Yes		
Peak Converted Wet Density	t/m^3	2.14	2.19		
Adj. PCWD	t/m^3	2.14	2.19		
Moisture Variation	%	1.0	0.5		
Adj. Moisture Variation	%	1.0	0.5		
Dryer / Wetter than Optimum Moisture		1% Dryer than OMC	0.5% Dryer than OMC		

Density Ratio	%	**100.5**	**99.0**		

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Remarks:

Authorised Signatory: Greg Gibson

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QR10.14
25/03/21

Project :- Monterea Cadance Boundary
Client :- CCA Winslow

Report No :- 21/330/09
Issue No :- 1
Page No :- 1 of 1
Lab Ref No :- 25705
Date :- 27/10/2021

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Field Compaction Report

Sampling Procedure AS1289.1.2.1 cl6.4(b) (Compacted Layers)
Test Procedure AS1289.2.1.1 AS1289.5.7.1 AS1289.5.8.1

Sample Identification	Testing of Allotment Fill	Testing of Allotment Fill	Testing of Allotment Fill	Testing of Allotment Fill
	Stage 13 Lot 307	Stage 13 Lot 308	Stage 13 Lot 309	Stage 13 Lot 310
	East: 7662.2 North: 39522.0 RL: 68.8	East: 7676.6 North: 39520.0 RL: 68.2	East: 7688.8 North: 39518.2 RL: 67.4	East: 7696.6 North: 39516.8 RL: 66.9
Test No & Description	51(Allotment Fill)	52(Allotment Fill)	53(Allotment Fill)	54(Allotment Fill)
Sample No	25705DR1	25705DR2	25705DR3	25705DR4

Field Test Data

Date Tested & Sampled		28/09/2021	28/09/2021	28/09/2021	28/09/2021
Time Tested & Sampled		AM	AM	AM	AM
Depth Tested	mm	150	150	150	150
Layer Depth	mm	Unknown	Unknown	Unknown	Unknown
Wet Oversize	%	0 @ 19mm	0 @ 19mm	0 @ 19mm	0 @ 19mm
Dry Oversize	%	0 @ 19mm	0 @ 19mm	0 @ 19mm	0 @ 19mm
Field Wet Density	t/m^3	2.09	2.11	2.10	2.10
Field Dry Density	t/m^3	1.93	1.94	1.90	1.90
Field Moisture Content	%	8.7	8.9	10.6	10.7

Laboratory Test Data

Date Tested		12/10/2021	12/10/2021	13/10/2021	13/10/2021
Compaction Reference		25705DR1	25705DR2	25705DR3	25705DR4
Modified / Standard		Standard	Standard	Standard	Standard
Hilf Density Ratio Method		Yes	Yes	Yes	Yes
Peak Converted Wet Density	t/m^3	2.06	2.07	2.17	2.16
Adj. PCWD	t/m^3	2.06	2.07	2.17	2.16
Moisture Variation	%	0.0	0.0	0.0	0.5
Adj. Moisture Variation	%	0.0	0.0	0.0	0.5
Dryer / Wetter than Optimum Moisture		0% Dryer than OMC	0% Dryer than OMC	0% Dryer than OMC	0.5% Dryer than OMC

Density Ratio	%	**101.5**	**102.0**	**96.5**	**97.5**

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Remarks:

Authorised Signatory: Greg Gibson
G. Gibson

QR10.14
25/03/21

Project :- Monterea Cadance Boundary
Client :- CCA Winslow

Report No :- 21/330/10
Issue No :- 1
Page No :- 1 of 2
Lab Ref No :- 25706
Date :- 1/10/2021

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Dynamic Cone Penetrometer Report

Test Procedure AS1289.6.3.2

Sample Identification

Testing of Fill	**Testing of Fill**	**Testing of Fill**	**Testing of Fill**
Stage 11 Road Box	**Stage 11 Lot 410**	**Stage 10 Lot 422**	**Stage 10 Lot 420**
East : 7918.0m	East : 7907.1m	East : 7912.32m	East : 7939.0m
North : 39428.5m	North : 39451.8m	North : 39473.0m	North : 39470.3m
RL 56.21m	RL 57.3m	RL 57.3m	RL 56.5m

Test No.	1(Fill)	2(Fill)	3(Fill)	4(Fill)
Sample No	25706DR1	25706DR2	25706DR3	25706DR4
Date Tested & Sampled	28/09/21	28/09/21	28/09/21	28/09/21

Field Test Data

Testing Level				
0.0 - 0.1	8	5	3	4
0.1 - 0.2	12	10	6	7
0.2 - 0.3	Refusal	9	6	7
0.3 - 0.4		6	5	9
0.4 - 0.5		4	5	9
0.5 - 0.6		10	3	10
0.6 -0.7		8	4	11
0.7 - 0.8		7	3	10
0.8 - 0.9		7	3	11
0.9 - 1.0		7	3	10
1.0 - 1.1		8	3	
1.1 - 1.2		10	6	
1.2 - 1.3		15	10	
1.3 - 1.4		20	15	
1.4 - 1.5		Refusal	Refusal	
1.5 - 1.6				
1.6 - 1.7				
1.7 - 1.8				
1.8 - 1.9				
1.9 - 2.0				
2.0 - 2.1				

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Remarks:

Authorised Signatory: Greg Gibson

G. Gibson

Project :- Monterea Cadance Boundary
Client :- CCA Winslow

Report No :- 21/330/10
Issue No :- 1
Page No :- 2 of 2
Lab Ref No :- 25706
Date :- 1/10/2021

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Dynamic Cone Penetrometer Report

Test Procedure AS1289.6.3.2

Sample Identification

	Testing of Fill	Testing of Fill	Testing of Fill
	Stage 11	**Stage 11**	**Stage 11**
	Lot 412	**Lot 414**	**Lot 411**
	East : 7934.8m	East : 7959.9m	East : 7925.6m
	North : 39448.6m	North : 39436.9m	North : 39461.4m
	RL 56.5m	RL 55.0m	RL 57.0m

Test No.	5(Fill)	6(Fill)	7(Fill)	
Sample No	25706DR5	25706DR6	25706DR7	
Date Tested & Sampled	28/09/21	28/09/21	28/09/21	

Field Test Data

Testing Level				
0.0 - 0.1	5	12	3	
0.1 - 0.2	5	15	5	
0.2 - 0.3	6	Refusal	3	
0.3 - 0.4	8		6	
0.4 - 0.5	7		5	
0.5 - 0.6	8		5	
0.6 -0.7	8		5	
0.7 - 0.8	9		5	
0.8 - 0.9	10		3	
0.9 - 1.0	10		4	
1.0 - 1.1			5	
1.1 - 1.2			5	
1.2 - 1.3			7	
1.3 - 1.4			10	
1.4 - 1.5			15	
1.5 - 1.6			Refusal	
1.6 - 1.7				
1.7 - 1.8				
1.8 - 1.9				
1.9 - 2.0				
2.0 - 2.1				

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Remarks:

Authorised Signatory: Greg Gibson

G. Gibson

Project :- Monterea Cadance Boundary
Client :- CCA Winslow

Report No :- 21/330/11
Issue No :- 1
Page No :- 1 of 3
Lab Ref No :- 25726
Date :- 26/10/2021

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Field Compaction Report

Sampling Procedure AS1289.1.2.1 cl6.4(b) (Compacted Layers)
Test Procedure AS1289.2.1.1 AS1289.5.7.1 AS1289.5.8.1

Sample Identification

	Testing of Fill	Testing of Fill	Testing of Fill	Testing of Fill
	Stage 12 Lot 333	Stage 12 Lot 334	Stage 12 Lot 335	Stage 14 Lot 338
	East: 7811.5 North: 39502.6 RL: 61.7	East: 7804.0 North: 39497.6 RL: 61.9	East: 7796.6 North: 39488.8 RL: 61.7	East: 7779.0 North: 39484.6 RL: 61.9
Test No & Description	55(Fill)	56(Fill)	57(Fill)	58(Fill)
Sample No	25726DR1	25726DR2	25726DR3	25726DR4

Field Test Data

Date Tested & Sampled		29/09/2021	29/09/2021	29/09/2021	29/09/2021
Time Tested & Sampled		AM	AM	AM	AM
Depth Tested	mm	150	150	150	150
Layer Depth	mm	Unknown	Unknown	Unknown	Unknown
Wet Oversize	%	0 @ 19mm	0 @ 19mm	0 @ 19mm	0 @ 19mm
Dry Oversize	%	0 @ 19mm	0 @ 19mm	0 @ 19mm	0 @ 19mm
Field Wet Density	t/m^3	2.06	2.04	2.01	2.05
Field Dry Density	t/m^3	1.90	1.87	1.69	1.78
Field Moisture Content	%	8.4	9.0	18.5	15.2

Laboratory Test Data

Date Tested		13/10/2021	13/10/2021	13/10/2021	13/10/2021
Compaction Reference		25726DR1	25726DR2	25726DR3	25726DR4
Modified / Standard		Standard	Standard	Standard	Standard
Hilf Density Ratio Method		Yes	Yes	Yes	Yes
Peak Converted Wet Density	t/m^3	2.16	2.14	2.04	2.10
Adj. PCWD	t/m^3	2.16	2.14	2.04	2.10
Moisture Variation	%	2.0	2.0	0.5	0.5
Adj. Moisture Variation	%	2.0	2.0	0.5	0.5
Dryer / Wetter than Optimum Moisture		2% Dryer than OMC	2% Dryer than OMC	0.5% Dryer than OMC	0.5% Dryer than OMC

Density Ratio	%	**95.5**	**95.5**	**98.5**	**97.5**

NATA
WORLD RECOGNISED ACCREDITATION

Accredited for complience with IOS/IEC 17025. - Testing Accreditation Number 2316.

Remarks:

Authorised Signatory: Greg Gibson

G. Gibson

Project :- Monterea Cadance Boundary
Client :- CCA Winslow

Report No :- 21/330/11
Issue No :- 1
Page No :- 2 of 3
Lab Ref No :- 25726
Date :- 26/10/2021

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Field Compaction Report

Sampling Procedure AS1289.1.2.1 cl6.4(b) (Compacted Layers)
Test Procedure AS1289.2.1.1 AS1289.5.7.1 AS1289.5.8.1

Sample Identification

	Testing of Fill	Testing of Fill	Testing of Fill	Testing of Fill
	Stage 14 Lot 356	Stage 14 Lot 358	Stage 12 Lot 360	Stage 12 Lot 361
	East: 7748.0 North: 39439.6 RL: 63.1	East: 7777.7 North: 39436.7 RL: 61.5	East: 7794.5 North: 39420.9 RL: 60.3	East: 7806.7 North: 39419.6 RL: 59.9
Test No & Description	59(Fill)	60(Fill)	61(Fill)	62(Fill)
Sample No	25726DR5	25726DR6	25726DR7	25726DR8

Field Test Data

Date Tested & Sampled		29/09/2021	29/09/2021	29/09/2021	29/09/2021
Time Tested & Sampled		AM	AM	PM	PM
Depth Tested	mm	150	150	150	150
Layer Depth	mm	Unknown	Unknown	Unknown	Unknown
Wet Oversize	%	0 @ 19mm	1 @ 19mm	0 @ 19mm	0 @ 19mm
Dry Oversize	%	0 @ 19mm	1 @ 19mm	0 @ 19mm	0 @ 19mm
Field Wet Density	t/m^3	2.13	2.18	2.10	2.10
Field Dry Density	t/m^3	1.93	1.95	1.84	1.83
Field Moisture Content	%	10.2	11.5	14.1	14.9

Laboratory Test Data

Date Tested		13/10/2021	13/10/2021	13/10/2021	13/10/2021
Compaction Reference		25726DR5	25726DR6	25726DR7	25726DR8
Modified / Standard		Standard	Standard	Standard	Standard
Hilf Density Ratio Method		Yes	Yes	Yes	Yes
Peak Converted Wet Density	t/m^3	2.12	2.19	2.05	2.12
Adj. PCWD	t/m^3	2.12	2.19	2.05	2.12
Moisture Variation	%	1.5	0.0	1.0	0.0
Adj. Moisture Variation	%	1.5	0.0	1.0	0.0
Dryer / Wetter than Optimum Moisture		1.5% Dryer than OMC	0% Wetter than OMC	1% Dryer than OMC	0% Dryer than OMC

Density Ratio	%	**100.5**	**99.0**	**102.5**	**99.5**

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WORLD RECOGNISED ACCREDITATION

Accredited for complience with IOS/IEC 17025. - Testing Accreditation Number 2316.

Remarks:

Authorised Signatory: Greg Gibson

G. Gibson

Project :- Monterea Cadance Boundary
Client :- CCA Winslow

Report No :- 21/330/11
Issue No :- 1
Page No :- 3 of 3
Lab Ref No :- 25726
Date :- 26/10/2021

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Field Compaction Report

Sampling Procedure	AS1289.1.2.1 cl6.4(b) (Compacted Layers)
Test Procedure	AS1289.2.1.1 AS1289.5.7.1 AS1289.5.8.1

Sample Identification

		Testing of Fill Stage 12 Lot 362 East: 7812.5 North: 39148.3 RL: 62.0	Testing of Fill Stage 12 Lot 363 East: 7828.5 North: 39146.5 RL: 59.1	
Test No & Description		63(Fill)	64(Fill)	
Sample No		25726DR9	25726DR10	

Field Test Data

Date Tested & Sampled		29/09/2021	29/09/2021		
Time Tested & Sampled		PM	PM		
Depth Tested	mm	150	150		
Layer Depth	mm	Unknown	Unknown		
Wet Oversize	%	0 @ 19mm	0 @ 19mm		
Dry Oversize	%	0 @ 19mm	0 @ 19mm		
Field Wet Density	t/m^3	2.17	2.16		
Field Dry Density	t/m^3	1.95	1.95		
Field Moisture Content	%	10.9	10.4		

Laboratory Test Data

Date Tested		13/10/2021	13/10/2021		
Compaction Reference		25726DR9	25726DR10		
Modified / Standard		Standard	Standard		
Hilf Density Ratio Method		Yes	Yes		
Peak Converted Wet Density	t/m^3	2.11	2.16		
Adj. PCWD	t/m^3	2.11	2.16		
Moisture Variation	%	1.5	1.0		
Adj. Moisture Variation	%	1.5	1.0		
Dryer / Wetter than Optimum Moisture		1.5% Dryer than OMC	1% Dryer than OMC		

Density Ratio	%	**102.5**	**100.0**		

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Remarks:

Authorised Signatory: Greg Gibson

G. Gibson

Project :- Monterea Cadance Boundary
Client :- CCA Winslow

Report No :- 21/330/12
Issue No :- 1
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Lab Ref No :- 25731
Date :- 27/10/2021

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Field Compaction Report

Sampling Procedure AS1289.1.2.1 cl6.4(b) (Compacted Layers)
Test Procedure AS1289.2.1.1 AS1289.5.7.1 AS1289.5.8.1

Sample Identification	Testing of Allotment Fill	Testing of Allotment Fill	Testing of Allotment Fill	Testing of Allotment Fill
	Stage 10 Lot 375	Stage 10 Lot 374	Stage 11 Lot 373	Stage 11 Lot 372
	East: 7873.3 North: 39510.0 RL: 60.2	East: 7871.6 North: 39497.7 RL: 59.8	East: 7870.6 North: 39486.8 RL: 59.7	East: 7868.8 North: 39473.6 RL: 59.3
Test No & Description	65(Allotment Fill)	66(Allotment Fill)	67(Allotment Fill)	68(Allotment Fill)
Sample No	25731DR1	25731DR2	25731DR3	25731DR4

Field Test Data

Date Tested & Sampled		30/09/2021	30/09/2021	30/09/2021	30/09/2021
Time Tested & Sampled		PM	PM	PM	PM
Depth Tested	mm	150	150	150	150
Layer Depth	mm	Unknown	Unknown	Unknown	Unknown
Wet Oversize	%	2 @ 19mm	1 @ 19mm	0 @ 19mm	1 @ 19mm
Dry Oversize	%	2 @ 19mm	1 @ 19mm	0 @ 19mm	1 @ 19mm
Field Wet Density	t/m^3	2.11	2.11	2.12	2.11
Field Dry Density	t/m^3	1.91	1.89	1.90	1.88
Field Moisture Content	%	10.7	11.4	11.5	12.2

Laboratory Test Data

Date Tested		13/10/2021	13/10/2021	13/10/2021	13/10/2021
Compaction Reference		25731DR1	25731DR2	25731DR3	25731DR4
Modified / Standard		Standard	Standard	Standard	Standard
Hilf Density Ratio Method		Yes	Yes	Yes	Yes
Peak Converted Wet Density	t/m^3	2.13	2.08	2.14	2.17
Adj. PCWD	t/m^3	2.14	2.08	2.14	2.17
Moisture Variation	%	2.5	2.0	0.5	0.0
Adj. Moisture Variation	%	2.5	2.0	0.5	0.0
Dryer / Wetter than Optimum Moisture		2.5% Dryer than OMC	2% Dryer than OMC	0.5% Dryer than OMC	0% Dryer than OMC

Density Ratio	%	**98.5**	**101.0**	**99.0**	**97.0**

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Remarks:

Authorised Signatory: Greg Gibson

G. Gibson

QR10.14
25/03/21

Project :- Monterea Cadance Boundary
Client :- CCA Winslow

Report No :- 21/330/13
Issue No :- 1
Page No :- 1 of 1
Lab Ref No :- 25742
Date :- 14/10/2021

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Field Compaction Report

Sampling Procedure AS1289.1.2.1 cl6.4(b) (Compacted Layers)
Test Procedure AS1289.2.1.1 AS1289.5.7.1 AS1289.5.8.1

Sample Identification

		Testing of Allotment Fill	Testing of Allotment Fill	Testing of Allotment Fill	
		Stage 12 Lot 403	Stage 12 Lot 402	Stage 12 Lot 401	
		East: 7843.10 North: 39495.10 RL: 61.44	East: 7846.18 North: 39507.36 RL: 61.53	East: 7848.45 North: 39511.15 RL: 61.00	
Test No & Description		69(Allotment Fill)	70(Allotment Fill)	71(Allotment Fill)	
Sample No		25742DR1	25742DR2	25742DR3	

Field Test Data

Date Tested & Sampled		05/10/2021	05/10/2021	05/10/2021	
Time Tested & Sampled		PM	PM	PM	
Depth Tested	mm	150	150	150	
Layer Depth	mm	Unknown	Unknown	Unknown	
Wet Oversize	%	0 @ 19mm	0 @ 19mm	0 @ 19mm	
Dry Oversize	%	0 @ 19mm	0 @ 19mm	0 @ 19mm	
Field Wet Density	t/m^3	2.08	2.10	2.07	
Field Dry Density	t/m^3	1.87	1.82	1.86	
Field Moisture Content	%	11.5	15.8	11.3	

Laboratory Test Data

Date Tested		13/10/2021	13/10/2021	13/10/2021	
Compaction Reference		25742DR1	25742DR2	25742DR3	
Modified / Standard		Standard	Standard	Standard	
Hilf Density Ratio Method		Yes	Yes	Yes	
Peak Converted Wet Density	t/m^3	2.14	2.02	2.15	
Adj. PCWD	t/m^3	2.14	2.02	2.15	
Moisture Variation	%	1.5	1.0	2.0	
Adj. Moisture Variation	%	1.5	1.0	2.0	
Dryer / Wetter than Optimum Moisture		1.5% Dryer than OMC	1% Dryer than OMC	2% Dryer than OMC	

Density Ratio	%	**97.5**	**104.0**	**96.5**	

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Remarks:

Authorised Signatory: Greg Gibson
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QR10.14
25/03/21

Project :- Monterea Cadance Boundary
Client :- CCA Winslow

Report No :- 21/330/14
Issue No :- 1
Page No :- 1 of 2
Lab Ref No :- 25747
Date :- 15/10/2021

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Field Compaction Report

Sampling Procedure AS1289.1.2.1 cl6.4(b) (Compacted Layers)
Test Procedure AS1289.2.1.1 AS1289.5.7.1 AS1289.5.8.1

Sample Identification

	Testing of Fill	Testing of Fill	Testing of Fill	Testing of Fill
	Stage 11	**Stage 12**	**Stage 14**	**Stage 14**
	Road box	**Road box**	**Road box**	**Lot 346**
	East: 7881.15	East: 7822.20	East: 7728.01	East: 7694.18
	North: 39434.27	North: 39440.61	North: 39451.92	North: 39458.80
	RL: 57.5	RL: 59.3	RL: 63.5	RL: 66.7
Test No & Description	72(Fill)	73(Fill)	74(Fill)	75(Fill)
Sample No	25747DR1	25747DR2	25747DR3	25747DR4

Field Test Data

Date Tested & Sampled		06/10/2021	06/10/2021	06/10/2021	06/10/2021
Time Tested & Sampled		AM	AM	AM	PM
Depth Tested	mm	150	150	150	150
Layer Depth	mm	Unknown	Unknown	Unknown	Unknown
Wet Oversize	%	0 @ 19mm	0 @ 19mm	0 @ 19mm	0 @ 19mm
Dry Oversize	%	0 @ 19mm	0 @ 19mm	0 @ 19mm	0 @ 19mm
Field Wet Density	t/m^3	2.19	2.21	2.07	2.10
Field Dry Density	t/m^3	1.97	2.01	1.89	1.95
Field Moisture Content	%	11.1	10.2	9.8	7.4

Laboratory Test Data

Date Tested		14/10/2021	14/10/2021	14/10/2021	14/10/2021
Compaction Reference		25747DR1	25747DR2	25747DR3	25747DR4
Modified / Standard		Standard	Standard	Standard	Standard
Hilf Density Ratio Method		Yes	Yes	Yes	Yes
Peak Converted Wet Density	t/m^3	2.11	2.13	2.09	2.10
Adj. PCWD	t/m^3	2.11	2.13	2.09	2.10
Moisture Variation	%	0.5	0.5	2.0	3.0
Adj. Moisture Variation	%	0.5	0.5	2.0	3.0
Dryer / Wetter than Optimum Moisture		0.5% Dryer than OMC	0.5% Dryer than OMC	2% Dryer than OMC	3% Dryer than OMC

Density Ratio	%	**103.5**	**104.0**	**99.0**	**99.5**

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Remarks:

Authorised Signatory: Greg Gibson

G. Gibson

QR10.14
25/03/21

Project :- Monterea Cadance Boundary
Client :- CCA Winslow

Report No :- 21/330/14
Issue No :- 1
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Lab Ref No :- 25747
Date :- 15/10/2021

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Field Compaction Report

Sampling Procedure	AS1289.1.2.1 cl6.4(b) (Compacted Layers)
Test Procedure	AS1289.2.1.1 AS1289.5.7.1 AS1289.5.8.1

Sample Identification

		Testing of Fill Stage 14 Lot 347 East: 7681.81 North: 39485.66 RL: 66.7	Testing of Fill Stage 14 Lot 348 East: 7657.77 North: 39501.88 RL: 68.5	
Test No & Description		76(Fill)	77(Fill)	
Sample No		25747DR5	25747DR6	

Field Test Data

Date Tested & Sampled		06/10/202	06/10/202		
Time Tested & Sampled		PM	PM		
Depth Tested	mm	150	150		
Layer Depth	mm	Unknown	Unknown		
Wet Oversize	%	0 @ 19mm	0 @ 19mm		
Dry Oversize	%	0 @ 19mm	0 @ 19mm		
Field Wet Density	t/m^3	2.12	2.18		
Field Dry Density	t/m^3	1.91	1.97		
Field Moisture Content	%	11.0	10.5		

Laboratory Test Data

Date Tested		14/10/2021	14/10/2021		
Compaction Reference		25747DR5	25747DR6		
Modified / Standard		Standard	Standard		
Hilf Density Ratio Method		Yes	Yes		
Peak Converted Wet Density	t/m^3	2.03	2.09		
Adj. PCWD	t/m^3	2.03	2.09		
Moisture Variation	%	-1.0	0.5		
Adj. Moisture Variation	%	-1.0	0.5		
Dryer / Wetter than Optimum Moisture		1% Wetter than OMC	0.5% Dryer than OMC		

Density Ratio	%	**104.0**	**104.5**		

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Remarks:

Authorised Signatory: Greg Gibson

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QR10.14
25/03/21

Project :- Monterea Cadance Boundary
Client :- CCA Winslow

Report No :- 21/330/16
Issue No :- 1
Page No :- 1 of 1
Lab Ref No :- 25759
Date :- 26/10/2021

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Field Compaction Report

Sampling Procedure	AS1289.1.2.1 cl6.4(b) (Compacted Layers)
Test Procedure	AS1289.2.1.1 AS1289.5.7.1 AS1289.5.8.1

Sample Identification

		Testing of Fill Stage 10 Lot 420 East: 7938.5 North: 7938.5 RL: 57.0	Testing of Fill Stage 10 Lot 419 East: 7948.9 North: 39472.0 RL: 56.9	
Test No & Description		78(Fill)	79(Fill)	
Sample No		25759DR1	25759DR2	

Field Test Data

Date Tested & Sampled		08/10/2021	08/10/2021		
Time Tested & Sampled		AM	AM		
Depth Tested	mm	150	150		
Layer Depth	mm	Unknown	Unknown		
Wet Oversize	%	0 @ 19mm	0 @ 19mm		
Dry Oversize	%	0 @ 19mm	0 @ 19mm		
Field Wet Density	t/m^3	1.99	2.05		
Field Dry Density	t/m^3	1.73	1.83		
Field Moisture Content	%	14.9	12.3		

Laboratory Test Data

Date Tested		14/10/2021	14/10/2021		
Compaction Reference		25759DR1	25759DR2		
Modified / Standard		Standard	Standard		
Hilf Density Ratio Method		Yes	Yes		
Peak Converted Wet Density	t/m^3	2.08	2.05		
Adj. PCWD	t/m^3	2.08	2.05		
Moisture Variation	%	0.5	1.0		
Adj. Moisture Variation	%	0.5	1.0		
Dryer / Wetter than Optimum Moisture		0.5% Dryer than OMC	1% Dryer than OMC		

Density Ratio	%	**95.5**	**100.0**		

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Remarks:

Authorised Signatory: Greg Gibson

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QR10.14
25/03/21

Project :- Monterea Cadance Boundary
Client :- CCA Winslow

Report No :- 21/330/17
Issue No :- 1
Page No :- 1 of 1
Lab Ref No :- 25761
Date :- 15/10/2021

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Field Compaction Report

Sampling Procedure	AS1289.1.2.1 cl6.4(b) (Compacted Layers)
Test Procedure	AS1289.2.1.1 AS1289.5.7.1 AS1289.5.8.1

Sample Identification

	Testing of Fill	Testing of Fill	Testing of Fill	
	Stage 13	Stage 13	Stage 13	
	Upper Dam Fill Area	Upper Dam Fill Area	Upper Dam Fill Area	
	Lot 330	Lot 331	Lot 332	
	East: 7763.8	East: 7770.0	East: 7780.8	
	North: 39510.0	North: 39512.6	North: 39517.6	
	RL: 62.2	RL: 62.8	RL: 62.9	
Test No & Description	80(Fill)	81(Fill)	82(Fill)	
Sample No	25761DR1	25761DR2	25761DR3	

Field Test Data

Date Tested & Sampled		09/10/2021	09/10/2021	09/10/2021	
Time Tested & Sampled		AM	AM	AM	
Depth Tested	mm	150	150	150	
Layer Depth	mm	Unknown	Unknown	Unknown	
Wet Oversize	%	0 @ 19mm	0 @ 19mm	0 @ 19mm	
Dry Oversize	%	0 @ 19mm	0 @ 19mm	0 @ 19mm	
Field Wet Density	t/m^3	2.01	2.03	2.02	
Field Dry Density	t/m^3	1.71	1.75	1.72	
Field Moisture Content	%	17.9	15.9	17.4	

Laboratory Test Data

Date Tested		14/10/2021	14/10/2021	14/10/2021	
Compaction Reference		25761DR1	25761DR2	25761DR3	
Modified / Standard		Standard	Standard	Standard	
Hilf Density Ratio Method		Yes	Yes	Yes	
Peak Converted Wet Density	t/m^3	2.05	2.04	2.12	
Adj. PCWD	t/m^3	2.05	2.04	2.12	
Moisture Variation	%	2.0	0.5	-3.0	
Adj. Moisture Variation	%	2.0	0.5	-3.0	
Dryer / Wetter than Optimum Moisture		2% Dryer than OMC	0.5% Dryer than OMC	3% Wetter than OMC	

Density Ratio	%	**98.0**	**99.0**	**95.0**	

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Remarks:

Authorised Signatory: Greg Gibson

G. Gibson

QR10.14
25/03/21

Project :- Monterea Cadance Boundary
Client :- CCA Winslow

Report No :- 21/330/18
Issue No :- 1
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Date :- 15/10/2021

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Field Compaction Report

Sampling Procedure AS1289.1.2.1 cl6.4(b) (Compacted Layers)
Test Procedure AS1289.2.1.1 AS1289.5.7.1 AS1289.5.8.1

Sample Identification

	Testing of Fill	Testing of Fill	Testing of Fill	Testing of Fill
	Stage 13	**Stage 13**	**Stage 13**	**Stage 144**
	Upper Dam Fill Area	**Upper Dam Fill Area**	**Upper Dam Fill Area**	**Upper Dam Fill Area**
	Lot 330	Lot 331	Lot 330	Lot 341
	East: 7764.8	East: 7774.0	East: 7761.8	East: 7747.0
	North: 39522	North: 39512.8	North: 69502.6	North: 39489.1
	RL: 63.7	RL: 62.9	RL: 62.7	RL: 63.1
Test No & Description	83(Fill)	84(Fill)	85(Fill)	86(Fill)
Sample No	25777DR1	25777DR2	25777DR3	25777DR4

Field Test Data

Date Tested & Sampled		11/10/2021	11/10/2021	11/10/2021	11/10/2021
Time Tested & Sampled		AM	AM	AM	AM
Depth Tested	mm	150	150	150	150
Layer Depth	mm	Unknown	Unknown	Unknown	Unknown
Wet Oversize	%	0 @ 19mm	0 @ 19mm	0 @ 19mm	0 @ 19mm
Dry Oversize	%	0 @ 19mm	0 @ 19mm	0 @ 19mm	0 @ 19mm
Field Wet Density	t/m^3	2.11	2.06	2.08	2.07
Field Dry Density	t/m^3	1.90	1.90	1.91	1.86
Field Moisture Content	%	11.4	8.5	9.1	11.4

Laboratory Test Data

Date Tested		14/10/2021	14/10/2021	14/10/2021	14/10/2021
Compaction Reference		25777DR1	25777DR2	25777DR3	25777DR4
Modified / Standard		Standard	Standard	Standard	Standard
Hilf Density Ratio Method		Yes	Yes	Yes	Yes
Peak Converted Wet Density	t/m^3	2.12	2.06	2.10	2.12
Adj. PCWD	t/m^3	2.12	2.06	2.10	2.12
Moisture Variation	%	1.0	3.0	2.5	1.5
Adj. Moisture Variation	%	1.0	3.0	2.5	1.5
Dryer / Wetter than Optimum Moisture		1% Dryer than OMC	3% Dryer than OMC	2.5% Dryer than OMC	1.5% Dryer than OMC

Density Ratio	%	**99.5**	**100.0**	**99.0**	**97.5**

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WORLD RECOGNISED ACCREDITATION

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Remarks:

Authorised Signatory: Greg Gibson

G. Gibson

QR10.14
25/03/21

Project :- Monterea Cadance Boundary
Client :- CCA Winslow

Report No :- 21/330/18
Issue No :- 1
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Date :- 15/10/2021

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Field Compaction Report

Sampling Procedure AS1289.1.2.1 cl6.4(b) (Compacted Layers)
Test Procedure AS1289.2.1.1 AS1289.5.7.1 AS1289.5.8.1

Sample Identification

		Testing of Fill	Testing of Fill	Testing of Fill
		Stage 13	Stage 13	Stage 14
		Upper Dam Fill Area	Upper Dam Fill Area	Upper Dam Fill Area
		Lot 332	Lot 331	Lot 341
		East: 7783.2	East: 7764.4	East: 7750.8
		North: 39518.7	North: 39501.3	North: 39485.5
		RL: 63.2	RL: 63.5	RL 63.7
Test No & Description		87(Fill)	88(Fill)	89(Fill)
Sample No		25777DR5	25777DR6	25777DR7

Field Test Data

Date Tested & Sampled		11/10/2021	11/10/2021	11/10/2021	
Time Tested & Sampled		PM	PM	PM	
Depth Tested	mm	150	150	150	
Layer Depth	mm	Unknown	Unknown	Unknown	
Wet Oversize	%	0 @ 19mm	0 @ 19mm	0 @ 19mm	
Dry Oversize	%	0 @ 19mm	0 @ 19mm	0 @ 19mm	
Field Wet Density	t/m^3	2.09	2.09	2.09	
Field Dry Density	t/m^3	1.88	1.71	1.86	
Field Moisture Content	%	11.3	22.5	12.5	

Laboratory Test Data

Date Tested		14/10/2021	14/10/2021	14/10/2021	
Compaction Reference		25777DR5	25777DR6	25777DR7	
Modified / Standard		Standard	Standard	Standard	
Hilf Density Ratio Method		Yes	Yes	Yes	
Peak Converted Wet Density	t/m^3	2.17	2.13	2.06	
Adj. PCWD	t/m^3	2.17	2.13	2.06	
Moisture Variation	%	-1.0	-2.5	1.5	
Adj. Moisture Variation	%	-1.0	-2.5	1.5	
Dryer / Wetter than Optimum Moisture		1% Wetter than OMC	2.5% Wetter than OMC	1.5% Dryer than OMC	
Density Ratio	%	**96.0**	**98.5**	**101.5**	

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Remarks:

Authorised Signatory: Greg Gibson
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QR10.14
25/03/21

Project :- Monterea Cadance Boundary
Client :- CCA Winslow

Report No :- 21/330/19
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Date :- 20/10/2021

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Field Compaction Report

Sampling Procedure AS1289.1.2.1 cl6.4(b) (Compacted Layers)
Test Procedure AS1289.2.1.1 AS1289.5.7.1 AS1289.5.8.1

Sample Identification

	Testing of Fill	Testing of Fill	Testing of Fill	Testing of Fill
	Stage 13 Lot 312	Stage 13 Lot 313	Stage 13 Lot 314	Stage 13 Lot 315
	East: 7718.8 North: 39503.8 RL: 65.78	East: 7725.3 North: 39500.8 RL: 65.0	East:: 7733.3 North: 39498.0 RL: 64.5	East: 7745.6 North: 39495.0 RL: 63.8
Test No & Description	90(Fill)	91(Fill)	92(Fill)	93(Fill)
Sample No	25803DR1	25803DR2	25803DR3	25803DR4

Field Test Data

Date Tested & Sampled		13/10/2021	13/10/2021	13/10/2021	13/10/2021
Time Tested & Sampled		AM	AM	AM	AM
Depth Tested	mm	150	150	150	150
Layer Depth	mm	Unknown	Unknown	Unknown	Unknown
Wet Oversize	%	3 @ 19mm	2 @ 19mm	7 @ 19mm	2 @ 19mm
Dry Oversize	%	3 @ 19mm	2 @ 19mm	7 @ 19mm	2 @ 19mm
Field Wet Density	t/m^3	2.07	2.06	2.06	2.05
Field Dry Density	t/m^3	1.88	1.89	1.88	1.87
Field Moisture Content	%	10.4	9.0	10.0	9.8

Laboratory Test Data

Date Tested		15/10/2021	15/10/2021	15/10/2021	15/10/2021
Compaction Reference		25803DR1	25803DR2	25803DR3	25803DR4
Modified / Standard		Standard	Standard	Standard	Standard
Hilf Density Ratio Method		Yes	Yes	Yes	Yes
Peak Converted Wet Density	t/m^3	2.16	2.08	2.09	2.10
Adj. PCWD	t/m^3	2.16	2.08	2.10	2.10
Moisture Variation	%	0.5	2.5	1.5	3.0
Adj. Moisture Variation	%	0.5	2.5	1.5	3.0
Dryer / Wetter than Optimum Moisture		0.5% Dryer than OMC	2.5% Dryer than OMC	1.5% Dryer than OMC	3% Dryer than OMC

Density Ratio	%	**96.0**	**99.0**	**98.5**	**98.0**

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Remarks:

Authorised Signatory: Greg Gibson

G. Gibson

QR10.14
25/03/21

Project :- Monterea Cadance Boundary
Client :- CCA Winslow

Report No :- 21/330/19
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Field Compaction Report

Sampling Procedure AS1289.1.2.1 cl6.4(b) (Compacted Layers)
Test Procedure AS1289.2.1.1 AS1289.5.7.1 AS1289.5.8.1

Sample Identification

	Testing of Fill	Testing of Fill	Testing of Fill	Testing of Fill
	Stage 13 **Road Box**	**Stage 14** **Lot 344**	**Stage 14** **Lot 343**	**Stage 14** **Lot 342**
	East: 7768.6 North: 39531.9 RL: 64.2	East: 7716.5 North: 39492.7 RL: 65.7	East: 7724.4 North: 39489.4 RL: 65.3	East: 7735.0 North: 39486.0 RL: 64.3
Test No & Description	94(Fill)	95(Fill)	96(Fill)	97(Fill)
Sample No	25803DR5	25803DR6	25803DR7	25803DR8

Field Test Data

Date Tested & Sampled		13/10/2021	13/10/2021	13/10/2021	13/10/2021
Time Tested & Sampled		AM	PM	PM	PM
Depth Tested	mm	150	150	150	150
Layer Depth	mm	Unknown	Unknown	Unknown	Unknown
Wet Oversize	%	2 @ 19mm	0 @ 19mm	0 @ 19mm	0 @ 19mm
Dry Oversize	%	2 @ 19mm	0 @ 19mm	0 @ 19mm	0 @ 19mm
Field Wet Density	t/m^3	2.08	2.08	2.09	2.09
Field Dry Density	t/m^3	1.89	1.82	1.85	1.85
Field Moisture Content	%	9.8	14.6	13.1	12.9

Laboratory Test Data

Date Tested		15/10/2021	15/10/2021	15/10/2021	15/10/2021
Compaction Reference		25803DR5	25803DR6	25803DR7	25803DR8
Modified / Standard		Standard	Standard	Standard	Standard
Hilf Density Ratio Method		Yes	Yes	Yes	Yes
Peak Converted Wet Density	t/m^3	2.13	2.03	2.12	2.09
Adj. PCWD	t/m^3	2.13	2.03	2.12	2.09
Moisture Variation	%	1.5	-2.0	0.0	-1.0
Adj. Moisture Variation	%	1.5	-2.0	0.0	-1.0
Dryer / Wetter than Optimum Moisture		1.5% Dryer than OMC	2% Wetter than OMC	0% Dryer than OMC	1% Wetter than OMC

Density Ratio	%	**97.5**	**102.5**	**98.5**	**100.0**

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Remarks:

Authorised Signatory: Greg Gibson

G. Gibson

QR10.14
25/03/21

Project :- Monterea Cadance Boundary
Client :- CCA Winslow

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Field Compaction Report

Sampling Procedure	AS1289.1.2.1 cl6.4(b) (Compacted Layers)
Test Procedure	AS1289.2.1.1 AS1289.5.7.1 AS1289.5.8.1

Sample Identification

		Testing of Fill Stage 14 Lot 340 East: 7757.8 North: 39475.9 RL: 63.0	Testing of Fill Stage 14 Lot 338 East: 7775.5 North: 39469.2 RL: 62.4	
Test No & Description		98(Fill)	99(Fill)	
Sample No		25803DR9	25803DR10	

Field Test Data

Date Tested & Sampled		13/10/2021	13/10/2021		
Time Tested & Sampled		PM	PM		
Depth Tested	mm	150	150		
Layer Depth	mm	Unknown	Unknown		
Wet Oversize	%	0 @ 19mm	0 @ 19mm		
Dry Oversize	%	0 @ 19mm	0 @ 19mm		
Field Wet Density	t/m^3	1.98	2.06		
Field Dry Density	t/m^3	1.76	1.87		
Field Moisture Content	%	12.5	10.5		

Laboratory Test Data

Date Tested		15/10/2021	15/10/2021		
Compaction Reference		25803DR9	25803DR10		
Modified / Standard		Standard	Standard		
Hilf Density Ratio Method		Yes	Yes		
Peak Converted Wet Density	t/m^3	2.05	2.12		
Adj. PCWD	t/m^3	2.05	2.12		
Moisture Variation	%	2.0	1.5		
Adj. Moisture Variation	%	2.0	1.5		
Dryer / Wetter than Optimum Moisture		2% Dryer than OMC	1.5% Dryer than OMC		

Density Ratio	%	**96.5**	**97.5**		

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Remarks:

Authorised Signatory: Greg Gibson

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QR10.14
25/03/21

Project :- Monterea Cadance Boundary
Client :- CCA Winslow

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Field Compaction Report

Sampling Procedure	AS1289.1.2.1 cl6.4(b) (Compacted Layers)
Test Procedure	AS1289.2.1.1 AS1289.5.7.1 AS1289.5.8.1

Sample Identification

		Testing of Fill	Testing of Fill	Testing of Fill
		Stage 13 Road Box	Stage 13 Lot 314	Stage 14 Lot 342
		East: 7741.3 North: 39532.9	East: 7736.2 North: 39494.7	East: 7734.6 North: 39480.8
		RL: 65.37	RL: 65.3	RL: 64.9
Test No & Description		100(Fill)	101(Fill)	102(Fill)
Sample No		25806DR1	25806DR2	25806DR3

Field Test Data

Date Tested & Sampled		16/10/2021	16/10/2021	16/10/2021	
Time Tested & Sampled		AM	AM	AM	
Depth Tested	mm	150	150	150	
Layer Depth	mm	Unknown	Unknown	Unknown	
Wet Oversize	%	0 @ 19mm	4 @ 19mm	5 @ 19mm	
Dry Oversize	%	0 @ 19mm	4 @ 19mm	5 @ 19mm	
Field Wet Density	t/m^3	2.18	2.09	2.09	
Field Dry Density	t/m^3	1.92	1.83	1.88	
Field Moisture Content	%	13.2	14.0	11.6	

Laboratory Test Data

Date Tested		25/10/2021	25/10/2021	25/10/2021	
Compaction Reference		25806DR1	25806DR2	25806DR3	
Modified / Standard		Standard	Standard	Standard	
Hilf Density Ratio Method		Yes	Yes	Yes	
Peak Converted Wet Density	t/m^3	2.15	2.09	2.12	
Adj. PCWD	t/m^3	2.15	2.10	2.14	
Moisture Variation	%	-1.0	-0.5	0.5	
Adj. Moisture Variation	%	-1.0	-0.5	0.5	
Dryer / Wetter than Optimum Moisture		1% Wetter than OMC	0.5% Wetter than OMC	0.5% Dryer than OMC	

Density Ratio	%	**101.0**	**99.5**	**98.0**	

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Remarks:

Authorised Signatory: Greg Gibson

G. Gibson

QR10.14
25/03/21

Project :- Monterea Cadance Boundary
Client :- CCA Winslow

Report No :- 21/330/21
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Field Compaction Report

Sampling Procedure AS1289.1.2.1 cl6.4(b) (Compacted Layers)
Test Procedure AS1289.2.1.1 AS1289.5.7.1 AS1289.5.8.1

Sample Identification

	Testing of Fill	Testing of Fill	Testing of Fill	Testing of Fill
	Stage 13 Lot 311	Stage 13	Stage 13	Stage 13
	East: 7709.2 North: 39521.1	East: 7719.8 North: 39519.4	East: 7729.7 North: 39517.6	East: 7741.5 North: 39515.7
	RL: 67.9	RL: 67.2	RL: 66.7	RL: 65.9
Test No & Description	103(Fill)	104(Fill)	105(Fill)	106(Fill)
Sample No	25810DR1	25810DR2	25810DR3	25810DR4

Field Test Data

Date Tested & Sampled		18/10/2021	18/10/2021	18/10/2021	18/10/2021
Time Tested & Sampled		AM	AM	AM	AM
Depth Tested	mm	150	150	150	150
Layer Depth	mm	Unknown	Unknown	Unknown	Unknown
Wet Oversize	%	0 @ 19mm	0 @ 19mm	6 @ 19mm	1 @ 19mm
Dry Oversize	%	0 @ 19mm	0 @ 19mm	7 @ 19mm	1 @ 19mm
Field Wet Density	t/m^3	2.12	2.12	2.11	2.10
Field Dry Density	t/m^3	1.92	1.91	1.89	1.82
Field Moisture Content	%	10.8	11.1	11.8	15.2

Laboratory Test Data

Date Tested		25/10/2021	25/10/2021	25/10/2021	25/10/2021
Compaction Reference		25810DR1	25810DR2	25810DR3	25810DR4
Modified / Standard		Standard	Standard	Standard	Standard
Hilf Density Ratio Method		Yes	Yes	Yes	Yes
Peak Converted Wet Density	t/m^3	2.12	2.14	2.15	2.14
Adj. PCWD	t/m^3	2.12	2.14	2.17	2.14
Moisture Variation	%	0.5	0.5	0.5	-1.0
Adj. Moisture Variation	%	0.5	0.5	0.5	-1.0
Dryer / Wetter than Optimum Moisture		0.5% Dryer than OMC	0.5% Dryer than OMC	0.5% Dryer than OMC	1% Wetter than OMC

Density Ratio	%	**100.0**	**99.0**	**97.5**	**98.5**

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Remarks:

Authorised Signatory: Greg Gibson

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QR10.14
25/03/21

Project :- Monterea Cadance Boundary
Client :- CCA Winslow

Report No :- 21/330/22
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Field Compaction Report

Sampling Procedure AS1289.1.2.1 cl6.4(b) (Compacted Layers)
Test Procedure AS1289.2.1.1 AS1289.5.7.1 AS1289.5.8.1

Sample Identification

	Testing of Fill	Testing of Fill	Testing of Fill	Testing of Fill
	Stage 13 **Road Box**	**Stage 13** **Lot 309**	**Stage 14** **Lot 347**	**Stage 13** **Road Box**
	East: 7686.4 North: 39539.5 RL: 68.4	East: 7687.9 North: 39520.2 RL: 69.4	East: 7683.2 North: 39485.6 RL: 68.6	East: 7708.6 North: 39537.0 RL: 67.3
Test No & Description	107(Fill)	108(Fill)	109(Fill)	110(Fill)
Sample No	25823DR1	25823DR2	25823DR3	25823DR4

Field Test Data

Date Tested & Sampled		20/10/2021	20/10/2021	20/10/2021	20/10/2021
Time Tested & Sampled		AM	AM	AM	AM
Depth Tested	mm	150	150	150	150
Layer Depth	mm	Unknown	Unknown	Unknown	Unknown
Wet Oversize	%	2 @ 19mm	0 @ 19mm	0 @ 19mm	0 @ 19mm
Dry Oversize	%	2 @ 19mm	0 @ 19mm	0 @ 19mm	0 @ 19mm
Field Wet Density	t/m^3	2.19	2.06	2.12	2.21
Field Dry Density	t/m^3	1.99	1.87	1.91	2.00
Field Moisture Content	%	10.0	9.9	10.8	10.7

Laboratory Test Data

Date Tested		26/10/2021	26/10/2021	27/10/2021	27/10/2021
Compaction Reference		25823DR1	25823DR2	25823DR3	25823DR4
Modified / Standard		Standard	Standard	Standard	Standard
Hilf Density Ratio Method		Yes	Yes	Yes	Yes
Peak Converted Wet Density	t/m^3	2.16	2.16	2.16	2.20
Adj. PCWD	t/m^3	2.16	2.16	2.16	2.20
Moisture Variation	%	0.5	0.5	0.0	0.5
Adj. Moisture Variation	%	0.5	0.5	0.0	0.5
Dryer / Wetter than Optimum Moisture		0.5% Dryer than OMC	0.5% Dryer than OMC	0% Dryer than OMC	0.5% Dryer than OMC

Density Ratio	%	**101.5**	**95.0**	**98.0**	**100.5**

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Remarks:

Authorised Signatory: Greg Gibson

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25/03/21

Project :- Monterea Cadance Boundary
Client :- CCA Winslow

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Field Compaction Report

Sampling Procedure AS1289.1.2.1 cl6.4(b) (Compacted Layers)
Test Procedure AS1289.2.1.1 AS1289.5.7.1 AS1289.5.8.1

Sample Identification

	Testing of Fill	Testing of Fill	Testing of Fill	Testing of Fill
	Stage 13 Lot 311	Stage 14 Lot 345	Stage 12 Lot 405	Stage 12 Lot 404
	East: 7707.6 North: 39521.0	East: 7700.7 North: 39479.1	East: 7833.2 North: 39456.4	East: 7839.1 North: 39466.8
	RL: 67.9	RL:66.9	RL: 60.7	RL: 62.53
Test No & Description	111(Fill)	112(Fill)	113(Fill)	114(Fill)
Sample No	25823DR5	25823DR6	25823DR7	25823DR8

Field Test Data

Date Tested & Sampled		20/10/2021	20/10/2021	20/10/2021	20/10/2021
Time Tested & Sampled		AM	AM	PM	PM
Depth Tested	mm	150	150	150	150
Layer Depth	mm	Unknown	Unknown	Unknown	Unknown
Wet Oversize	%	0 @ 19mm	0 @ 19mm	0 @ 19mm	0 @ 19mm
Dry Oversize	%	0 @ 19mm	0 @ 19mm	0 @ 19mm	0 @ 19mm
Field Wet Density	t/m^3	2.09	2.10	2.13	2.15
Field Dry Density	t/m^3	1.89	1.85	1.91	1.96
Field Moisture Content	%	10.5	13.3	11.6	9.7

Laboratory Test Data

Date Tested		27/10/2021	28/10/2021	28/10/2021	28/10/2021
Compaction Reference		25823DR5	25823DR6	25823DR7	25823DR8
Modified / Standard		Standard	Standard	Standard	Standard
Hilf Density Ratio Method		Yes	Yes	Yes	Yes
Peak Converted Wet Density	t/m^3	2.19	2.15	2.14	2.14
Adj. PCWD	t/m^3	2.19	2.15	2.14	2.14
Moisture Variation	%	-0.5	0.0	0.0	1.5
Adj. Moisture Variation	%	-0.5	0.0	0.0	1.5
Dryer / Wetter than Optimum Moisture		0.5% Wetter than OMC	0% Dryer than OMC	0% Dryer than OMC	1.5% Dryer than OMC

Density Ratio	%	**95.5**	**97.5**	**99.5**	**100.0**

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Remarks:

Authorised Signatory: Greg Gibson

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Project :- Monterea Cadance Boundary
Client :- CCA Winslow

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Field Compaction Report

Sampling Procedure AS1289.1.2.1 cl6.4(b) (Compacted Layers)
Test Procedure AS1289.2.1.1 AS1289.5.7.1 AS1289.5.8.1

Sample Identification

	Testing of Fill	Testing of Fill	Testing of Fill	Testing of Fill
	Stage 12 Lot 403	Stage 12 Lot 402	Stage 12 Lot 401	Stage 12 Lot 405
	East: 7840.5 North: 39495.2 RL: 62.0	East: 7842.9 North: 39506.9 RL: 62.2	East: 7845.7 North: 39518.3 RL: 61.8	East: 7830.1 North: 39453.0 RL: 59.8
Test No & Description	115(Fill)	116(Fill)	117(Fill)	118(Fill)
Sample No	25823DR9	25823DR10	25823DR11	25823DR12

Field Test Data

Date Tested & Sampled		20/10/2021	20/10/2021	20/10/2021	20/10/2021
Time Tested & Sampled		PM	PM	PM	PM
Depth Tested	mm	150	150	150	150
Layer Depth	mm	Unknown	Unknown	Unknown	Unknown
Wet Oversize	%	0 @ 19mm	0 @ 19mm	0 @ 19mm	0 @ 19mm
Dry Oversize	%	0 @ 19mm	0 @ 19mm	0 @ 19mm	0 @ 19mm
Field Wet Density	t/m^3	2.12	2.11	2.13	2.13
Field Dry Density	t/m^3	1.92	1.94	1.93	1.91
Field Moisture Content	%	10.6	8.9	10.5	11.4

Laboratory Test Data

Date Tested		28/10/2021	28/10/2021	28/10/2021	28/10/2021
Compaction Reference		25823DR9	25823DR10	25823DR11	25823DR12
Modified / Standard		Standard	Standard	Standard	Standard
Hilf Density Ratio Method		Yes	Yes	Yes	Yes
Peak Converted Wet Density	t/m^3	2.18	2.14	2.17	2.17
Adj. PCWD	t/m^3	2.18	2.14	2.17	2.17
Moisture Variation	%	1.0	2.0	1.5	-0.5
Adj. Moisture Variation	%	1.0	2.0	1.5	-0.5
Dryer / Wetter than Optimum Moisture		1% Dryer than OMC	2% Dryer than OMC	1.5% Dryer than OMC	0.5% Wetter than OMC

Density Ratio	%	**97.5**	**99.0**	**98.5**	**98.0**

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Remarks:

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QR10.14
25/03/21

Project :- Monterea Cadance Boundary
Client :- CCA Winslow

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Field Compaction Report

Sampling Procedure	AS1289.1.2.1 cl6.4(b) (Compacted Layers)
Test Procedure	AS1289.2.1.1 AS1289.5.7.1 AS1289.5.8.1

Sample Identification

		Testing of Fill	Testing of Fill	Testing of Fill	
		Stage 13 Lot 311	Stage 14 Lot 346	Stage 14 Lot 347	
		East: 7709.5 North: 39520.9 RL: 68.0	East: 7697.4 North: 39486.5 RL: 67.9	East: 7688.1 North: 39486.8 RL: 68.2	
Test No & Description		119(Fill)	120(Fill)	121(Fill)	
Sample No		25830DR1	25830DR2	25830DR3	

Field Test Data

Date Tested & Sampled		21/10/2021	21/10/2021	21/10/2021	
Time Tested & Sampled		AM	AM	AM	
Depth Tested	mm	150	150	150	
Layer Depth	mm	Unknown	Unknown	Unknown	
Wet Oversize	%	0 @ 19mm	0 @ 19mm	0 @ 19mm	
Dry Oversize	%	0 @ 19mm	0 @ 19mm	0 @ 19mm	
Field Wet Density	t/m^3	2.11	2.08	2.19	
Field Dry Density	t/m^3	1.92	1.85	1.94	
Field Moisture Content	%	10.1	12.5	13.2	

Laboratory Test Data

Date Tested		25/10/2021	25/10/2021	25/10/2021	
Compaction Reference		25830DR1	25830DR2	25830DR3	
Modified / Standard		Standard	Standard	Standard	
Hilf Density Ratio Method		Yes	Yes	Yes	
Peak Converted Wet Density	t/m^3	2.11	2.15	2.16	
Adj. PCWD	t/m^3	2.11	2.15	2.16	
Moisture Variation	%	1.0	0.0	0.0	
Adj. Moisture Variation	%	1.0	0.0	0.0	
Dryer / Wetter than Optimum Moisture		1% Dryer than OMC	0% Dryer than OMC	0% Dryer than OMC	

Density Ratio	%	**100.0**	**96.5**	**101.5**	

NATA
WORLD RECOGNISED ACCREDITATION

Accredited for complience with IOS/IEC 17025. - Testing Accreditation Number 2316.

Remarks:

Authorised Signatory: Greg Gibson

G. Gibson

QR10.14
25/03/21

Project :- Monterea Cadance Boundary
Client :- CCA Winslow

Report No :- 21/330/24
Issue No :- 1
Page No :- 1 of 1
Lab Ref No :- 25841
Date :- 4/11/2021

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Field Compaction Report

Sampling Procedure AS1289.1.2.1 cl6.4(b) (Compacted Layers)
Test Procedure AS1289.2.1.1 AS1289.5.7.1 AS1289.5.8.1

Sample Identification

	Testing of Fill	Testing of Fill	Testing of Fill	
	Stage 14 Lot 354	Stage 14 Lot 353	Stage 14 Lot 351	
	East: 7728.9 North: 39437.2	East: 7712.9 North: 39439.3	East: 7691.8 North: 39441.9	
	RL: 64.9	RL: 66.3	RL: 67.2	
Test No & Description	122(Fill)	123(Fill)	124(Fill)	
Sample No	25841DR1	25841DR2	25841DR3	

Field Test Data

Date Tested & Sampled		22/10/2021	22/10/2021	22/10/2021	
Time Tested & Sampled		PM	PM	PM	
Depth Tested	mm	150	150	150	
Layer Depth	mm	Unknown	Unknown	Unknown	
Wet Oversize	%	0 @ 19mm	0 @ 19mm	0 @ 19mm	
Dry Oversize	%	0 @ 19mm	0 @ 19mm	0 @ 19mm	
Field Wet Density	t/m^3	2.10	2.01	2.02	
Field Dry Density	t/m^3	1.86	1.83	1.77	
Field Moisture Content	%	13.1	9.9	14.2	

Laboratory Test Data

Date Tested		03/11/2021	03/11/2021	03/11/2021	
Compaction Reference		25841DR1	25841DR2	25841DR3	
Modified / Standard		Standard	Standard	Standard	
Hilf Density Ratio Method		Yes	Yes	Yes	
Peak Converted Wet Density	t/m^3	2.06	2.06	2.09	
Adj. PCWD	t/m^3	2.06	2.06	2.09	
Moisture Variation	%	1.5	1.0	1.5	
Adj. Moisture Variation	%	1.5	1.0	1.5	
Dryer / Wetter than Optimum Moisture		1.5% Dryer than OMC	1% Dryer than OMC	1.5% Dryer than OMC	

Density Ratio	%	**102.0**	**97.5**	**97.0**	

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Remarks:

Authorised Signatory: Greg Gibson

G. Gibson

QR10.14
25/03/21

Project :- Monterea Cadance Boundary
Client :- CCA Winslow

Report No :- 21/330/26
Issue No :- 1
Page No :- 1 of 1
Lab Ref No :- 25846
Date :- 29/11/2021

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Field Compaction Report

Sampling Procedure AS1289.1.2.1 cl6.4(b) (Compacted Layers)
Test Procedure AS1289.2.1.1 AS1289.5.7.1 AS1289.5.8.1

Sample Identification

	Testing of Fill	Testing of Fill	Testing of Fill	Testing of Fill
	Stage 14	Stage 14	Stage 14	Stage 14
	East: 7752.1	East: 7744.5	East: 7739.0	East: 7731.1
	North: 39451.1	North: 39459.4	North: 39539.8	North: 39455.9
	RL: 63.0	RL: 62.9	RL: 63.0	RL: 63.8
Test No & Description	128(Fill)	129(Fill)	130(Fill)	131(Fill)
Sample No	25846DR1	25846DR2	25846DR3	25846DR4

Field Test Data

Date Tested & Sampled		25/10/2021	25/10/2021	25/10/2021	25/10/2021
Time Tested & Sampled		AM	AM	AM	AM
Depth Tested	mm	150	150	150	150
Layer Depth	mm	Unknown	Unknown	Unknown	Unknown
Wet Oversize	%	0 @ 19mm	0 @ 19mm	0 @ 19mm	0 @ 19mm
Dry Oversize	%	0 @ 19mm	0 @ 19mm	0 @ 19mm	0 @ 19mm
Field Wet Density	t/m^3	2.04	2.09	2.05	2.07
Field Dry Density	t/m^3	1.82	1.89	1.85	1.84
Field Moisture Content	%	11.9	10.5	10.7	12.4

Laboratory Test Data

Date Tested		03/11/2021	03/11/2021	03/11/2021	03/11/2021
Compaction Reference		25846DR1	25846DR2	25846DR3	25846DR4
Modified / Standard		Standard	Standard	Standard	Standard
Hilf Density Ratio Method		Yes	Yes	Yes	Yes
Peak Converted Wet Density	t/m^3	2.14	2.14	2.14	2.14
Adj. PCWD	t/m^3	2.14	2.14	2.14	2.14
Moisture Variation	%	1.0	1.5	2.0	1.0
Adj. Moisture Variation	%	1.0	1.5	2.0	1.0
Dryer / Wetter than Optimum Moisture		1% Dryer than OMC	1.5% Dryer than OMC	2% Dryer than OMC	1% Dryer than OMC

Density Ratio	%	**95.5**	**97.5**	**96.0**	**96.5**

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WORLD RECOGNISED ACCREDITATION

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Remarks:

Authorised Signatory: Greg Gibson

G. Gibson

QR10.14
25/03/21

Project :- Monterea Cadance Boundary
Client :- CCA Winslow

Report No :- 21/330/25
Issue No :- 1
Page No :- 1 of 1
Lab Ref No :- 25842
Date :- 2/11/2021

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Field Compaction Report

Sampling Procedure AS1289.1.2.1 cl6.4(b) (Compacted Layers)
Test Procedure AS1289.2.1.1 AS1289.5.7.1 AS1289.5.8.1

Sample Identification

		Testing of Fill Stage 14	Testing of Fill Road Box	Testing of Fill South West Corner
		East: 7668.8 North: 39461.0 RL: 66.9	East: 7690.0 North: 39456.8 RL: 65.9	East: 7702.3 North: 39463.0 RL: 65.5
Test No & Description		125(Fill)	126(Fill)	127(Fill)
Sample No		25842DR1	25842DR2	25842DR3

Field Test Data

Date Tested & Sampled		23/10/2021	23/10/2021	23/10/2021	
Time Tested & Sampled		AM	AM	AM	
Depth Tested	mm	150	150	150	
Layer Depth	mm	Unknown	Unknown	Unknown	
Wet Oversize	%	0 @ 19mm	0 @ 19mm	0 @ 19mm	
Dry Oversize	%	0 @ 19mm	0 @ 19mm	0 @ 19mm	
Field Wet Density	t/m^3	2.09	2.17	2.12	
Field Dry Density	t/m^3	1.88	1.95	1.92	
Field Moisture Content	%	11.1	11.1	10.8	

Laboratory Test Data

Date Tested		01/11/2021	01/11/2021	01/11/2021	
Compaction Reference		25842DR1	25842DR2	25842DR3	
Modified / Standard		Standard	Standard	Standard	
Hilf Density Ratio Method		Yes	Yes	Yes	
Peak Converted Wet Density	t/m^3	2.14	2.16	2.16	
Adj. PCWD	t/m^3	2.14	2.16	2.16	
Moisture Variation	%	1.0	0.5	0.5	
Adj. Moisture Variation	%	1.0	0.5	0.5	
Dryer / Wetter than Optimum Moisture		1% Dryer than OMC	0.5% Dryer than OMC	0.5% Dryer than OMC	

Density Ratio	%	**98.0**	**100.5**	**98.5**	

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Remarks:

Authorised Signatory: Greg Gibson

G. Gibson

QR10.14
25/03/21

Project :- Monterea Cadance Boundary
Client :- CCA Winslow

Report No :- 21/330/27
Issue No :- 1
Page No :- 1 of 2
Lab Ref No :- 25880
Date :- 10/11/2021

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Field Compaction Report

Sampling Procedure AS1289.1.2.1 cl6.4(b) (Compacted Layers)
Test Procedure AS1289.2.1.1 AS1289.5.7.1 AS1289.5.8.1

Sample Identification

	Testing of Fill	Testing of Fill	Testing of Fill	Testing of Fill
	Stage 13	**Stage 14**	**Stage 13**	**Stage 14**
	Lot 309	**Lot 347**	**Lot 312**	**Lot 344**
	East: 7684.8	East: 7679.8	East: 7715.0	East: 7712.2
	North: 39518.0	North: 39488.6	North: 39504.6	North: 39483.6
	At Final Level	At Final Level	At Final Level	At Final Level
Test No & Description	132(Fill)	133(Fill)	134(Fill)	135(Fill)
Sample No	25880DR1	25880DR2	25880DR3	25880DR4

Field Test Data

Date Tested & Sampled		27/10/2021	27/10/2021	27/10/2021	27/10/2021
Time Tested & Sampled		AM	AM	AM	AM
Depth Tested	mm	150	150	150	150
Layer Depth	mm	Unknown	Unknown	Unknown	Unknown
Wet Oversize	%	0 @ 19mm	0 @ 19mm	0 @ 19mm	0 @ 19mm
Dry Oversize	%	0 @ 19mm	0 @ 19mm	0 @ 19mm	0 @ 19mm
Field Wet Density	t/m^3	2.10	2.09	2.07	2.09
Field Dry Density	t/m^3	1.88	1.89	1.91	1.88
Field Moisture Content	%	11.4	10.7	8.3	11.0

Laboratory Test Data

Date Tested		05/11/2021	05/11/2021	05/11/2021	05/11/2021
Compaction Reference		25880DR1	25880DR2	25880DR3	25880DR4
Modified / Standard		Standard	Standard	Standard	Standard
Hilf Density Ratio Method		Yes	Yes	Yes	Yes
Peak Converted Wet Density	t/m^3	2.12	2.12	2.12	2.06
Adj. PCWD	t/m^3	2.12	2.12	2.12	2.06
Moisture Variation	%	1.0	1.5	2.5	3.0
Adj. Moisture Variation	%	1.0	1.5	2.5	3.0
Dryer / Wetter than Optimum Moisture		1% Dryer than OMC	1.5% Dryer than OMC	2.5% Dryer than OMC	3% Dryer than OMC

Density Ratio	%	**99.0**	**98.5**	**97.5**	**101.5**

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WORLD RECOGNISED ACCREDITATION

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Remarks:

Authorised Signatory: Greg Gibson

G. Gibson

QR10.14
25/03/21

Project :- Monterea Cadance Boundary
Client :- CCA Winslow

Report No :- 21/330/27
Issue No :- 1
Page No :- 2 of 2
Lab Ref No :- 25880
Date :- 10/11/2021

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Field Compaction Report

Sampling Procedure	AS1289.1.2.1 cl6.4(b) (Compacted Layers)
Test Procedure	AS1289.2.1.1 AS1289.5.7.1 AS1289.5.8.1

Sample Identification

	Testing of Fill	Testing of Fill		
	Stage 13	Stage 14		
	Lot 314	Lot 342		
	East: 7739.5	East: 7736.4		
	North: 39512.8	North: 39483.8		
	At Final Level	At Final Level		
Test No & Description	136(Fill)	137(Fill)		
Sample No	25880DR5	25880DR6		

Field Test Data

Date Tested & Sampled		27/10/2021	27/10/2021		
Time Tested & Sampled		AM	AM		
Depth Tested	mm	150	150		
Layer Depth	mm	Unknown	Unknown		
Wet Oversize	%	0 @ 19mm	0 @ 19mm		
Dry Oversize	%	0 @ 19mm	0 @ 19mm		
Field Wet Density	t/m^3	2.06	2.09		
Field Dry Density	t/m^3	1.90	1.90		
Field Moisture Content	%	8.9	10.1		

Laboratory Test Data

Date Tested		05/11/2021	05/11/2021		
Compaction Reference		25880DR5	25880DR6		
Modified / Standard		Standard	Standard		
Hilf Density Ratio Method		Yes	Yes		
Peak Converted Wet Density	t/m^3	2.07	2.14		
Adj. PCWD	t/m^3	2.07	2.14		
Moisture Variation	%	3.0	2.5		
Adj. Moisture Variation	%	3.0	2.5		
Dryer / Wetter than Optimum Moisture		3% Dryer than OMC	2.5% Dryer than OMC		

Density Ratio	%	**99.5**	**98.0**		

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Remarks:

Authorised Signatory: Greg Gibson

G. Gibson

QR10.14
25/03/21

Project :- Monterea Cadance Boundary
Client :- CCA Winslow

Report No :- 21/330/28
Issue No :- 1
Page No :- 1 of 2
Lab Ref No :- 25897
Date :- 10/11/2021

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Field Compaction Report

Sampling Procedure AS1289.1.2.1 cl6.4(b) (Compacted Layers)
Test Procedure AS1289.2.1.1 AS1289.5.7.1 AS1289.5.8.1

Sample Identification

	Testing of Allotment Fill	Testing of Allotment Fill	Testing of Allotment Fill	Testing of Allotment Fill
	Sediment Basin Extention Fill Area	Sediment Basin Extention Fill Area	Sediment Basin Extention Fill Area	Sediment Basin Extention Fill Area
	South East Corner	South East Corner		
	East: 7840.1	East: 7863.3	East: 7889.0	East: 7882.1
	North: 39392.2	North: 39387.1	North: 39382.2	North: 39367.03
	RL: 55.3	RL: 54.7	RL: 53.7	RL: 54.4
Test No & Description	138(Allotment Fill)	139(Allotment Fill)	140(Allotment Fill)	141(Allotment Fill)
Sample No	25897DR1	25897DR2	25897DR3	25897DR4

Field Test Data

Date Tested & Sampled		28/10/2021	28/10/2021	28/10/2021	28/10/2021
Time Tested & Sampled		PM	PM	PM	PM
Depth Tested	mm	150	150	150	150
Layer Depth	mm	Unknown	Unknown	Unknown	Unknown
Wet Oversize	%	0 @ 19mm	0 @ 19mm	0 @ 19mm	0 @ 19mm
Dry Oversize	%	0 @ 19mm	0 @ 19mm	0 @ 19mm	0 @ 19mm
Field Wet Density	t/m^3	2.04	2.04	2.04	2.12
Field Dry Density	t/m^3	1.89	1.87	1.79	1.90
Field Moisture Content	%	8.2	9.4	13.8	11.6

Laboratory Test Data

Date Tested		08/11/2021	08/11/2021	08/11/2021	08/11/2021
Compaction Reference		25897DR1	25897DR2	25897DR3	25897DR4
Modified / Standard		Standard	Standard	Standard	Standard
Hilf Density Ratio Method		Yes	Yes	Yes	Yes
Peak Converted Wet Density	t/m^3	2.06	2.05	2.07	2.12
Adj. PCWD	t/m^3	2.06	2.05	2.07	2.12
Moisture Variation	%	2.5	2.5	2.0	0.5
Adj. Moisture Variation	%	2.5	2.5	2.0	0.5
Dryer / Wetter than Optimum Moisture		2.5% Dryer than OMC	2.5% Dryer than OMC	2% Dryer than OMC	0.5% Dryer than OMC

Density Ratio	%	**99.0**	**99.5**	**98.5**	**100.0**

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Remarks:

Authorised Signatory: Greg Gibson

G. Gibson

QR10.14
25/03/21

Project :- Monterea Cadance Boundary
Client :- CCA Winslow

Report No :- 21/330/28
Issue No :- 1
Page No :- 2 of 2
Lab Ref No :- 25897
Date :- 10/11/2021

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Field Compaction Report

Sampling Procedure	AS1289.1.2.1 cl6.4(b) (Compacted Layers)
Test Procedure	AS1289.2.1.1 AS1289.5.7.1 AS1289.5.8.1

Sample Identification

		Testing of Allotment Fill	**Testing of Allotment Fill**	
		Sediment Basin Extention Fill Area South East Corner	**Sediment Basin Extention Fill Area** South East Corner	
		East: 7857.5 North: 39369.1 RL: 55.0	East: 7835.8 North: 39374.2 RL: 55.6	
Test No & Description		142(Allotment Fill)	143(Allotment Fill)	
Sample No		25897DR5	25897DR6	

Field Test Data

Date Tested & Sampled		28/10/2021	28/10/2021		
Time Tested & Sampled		PM	PM		
Depth Tested	mm	150	150		
Layer Depth	mm	Unknown	Unknown		
Wet Oversize	%	0 @ 19mm	0 @ 19mm		
Dry Oversize	%	0 @ 19mm	0 @ 19mm		
Field Wet Density	t/m^3	2.13	2.07		
Field Dry Density	t/m^3	1.91	1.82		
Field Moisture Content	%	11.7	13.5		

Laboratory Test Data

Date Tested		08/11/2021	08/11/2021		
Compaction Reference		25897DR5	25897DR6		
Modified / Standard		Standard	Standard		
Hilf Density Ratio Method		Yes	Yes		
Peak Converted Wet Density	t/m^3	2.13	2.11		
Adj. PCWD	t/m^3	2.13	2.11		
Moisture Variation	%	0.5	2.0		
Adj. Moisture Variation	%	0.5	2.0		
Dryer / Wetter than Optimum Moisture		0.5% Dryer than OMC	2% Dryer than OMC		

Density Ratio	%	**100.0**	**98.0**		

NATA
WORLD RECOGNISED ACCREDITATION

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Remarks:

Authorised Signatory: Greg Gibson

G. Gibson

QR10.14
25/03/21

Project :- Monterea Cadance Boundary
Client :- CCA Winslow

Report No :- 21/330/29
Issue No :- 1
Page No :- 1 of 1
Lab Ref No :- 25900
Date :- 10/11/2021

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Field Compaction Report

Sampling Procedure AS1289.1.2.1 cl6.4(b) (Compacted Layers)
Test Procedure AS1289.2.1.1 AS1289.5.7.1 AS1289.5.8.1

Sample Identification

	Testing of Fill	Testing of Fill	Testing of Fill	Testing of Fill
	Sediment Basin Extention Fill Area South East Corner	**Sediment Basin Extention Fill Area** South East Corner	**Sediment Basin Extention Fill Area** South East Corner	**Sediment Basin Extention Fill Area** South East Corner
	East: 7829.3 North: 39390.0 RL: 56.58	East: 7847.6 North: 39395.8 RL: 56.14	East: 7861.0 North: 39392.1 RL: 55.80	East: 7877.6 North: 39389.4 RL: 54.9
Test No & Description	144(Fill)	145(Fill)	146(Fill)	147(Fill)
Sample No	25900DR1	25900DR2	25900DR3	25900DR4

Field Test Data

Date Tested & Sampled		29/10/2021	29/10/2021	29/10/2021	29/10/2021
Time Tested & Sampled		AM	AM	AM	AM
Depth Tested	mm	150	150	150	150
Layer Depth	mm	Unknown	Unknown	Unknown	Unknown
Wet Oversize	%	0 @ 19mm	0 @ 19mm	0 @ 19mm	0 @ 19mm
Dry Oversize	%	0 @ 19mm	0 @ 19mm	0 @ 19mm	0 @ 19mm
Field Wet Density	t/m^3	2.08	2.08	2.05	2.06
Field Dry Density	t/m^3	1.93	1.94	1.86	1.86
Field Moisture Content	%	7.4	7.2	10.0	10.5

Laboratory Test Data

Date Tested		08/11/2021	08/11/2021	08/11/2021	08/11/2021
Compaction Reference		25900DR1	25900DR2	25900DR3	25900DR4
Modified / Standard		Standard	Standard	Standard	Standard
Hilf Density Ratio Method		Yes	Yes	Yes	Yes
Peak Converted Wet Density	t/m^3	2.03	2.05	2.09	2.07
Adj. PCWD	t/m^3	2.03	2.05	2.09	2.07
Moisture Variation	%	2.0	2.5	2.0	2.0
Adj. Moisture Variation	%	2.0	2.5	2.0	2.0
Dryer / Wetter than Optimum Moisture		2% Dryer than OMC	2.5% Dryer than OMC	2% Dryer than OMC	2% Dryer than OMC

Density Ratio	%	**102.0**	**101.5**	**98.0**	**99.5**

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WORLD RECOGNISED ACCREDITATION

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Remarks:

Authorised Signatory: Greg Gibson

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Project :- Monterea Cadance Boundary
Client :- CCA Winslow

Report No :- 21/330/30
Issue No :- 1
Page No :- 1 of 2
Lab Ref No :- 25908
Date :- .

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Field Compaction Report

Sampling Procedure AS1289.1.2.1 cl6.4(b) (Compacted Layers)
Test Procedure AS1289.2.1.1 AS1289.5.7.1 AS1289.5.8.1

Sample Identification	Testing of Allotment Fill	Testing of Allotment Fill	Testing of Allotment Fill	Testing of Allotment Fill
	Stage 10	Stage 10	Basin Extention	Basin Extention
	Lot 421	Lot 422	South East Corner	South East Corner
	East: 7926.3 North: 39480.1 RL: Final Level	East: 7912.0 North: 39484.6 RL: Final Level	East: 7885.9 North: 39363.0 RL: 54.7	East: 7868.8 North: 39363.2 RL: 55.1
Test No & Description	148(Allotment Fill)	149(Allotment Fill)	150(Allotment Fill)	151(Allotment Fill)
Sample No	25908DR1	25908DR2	25908DR3	25908DR4

Field Test Data

Date Tested & Sampled		01/11/2021	01/11/2021	01/11/2021	01/11/2021
Time Tested & Sampled		AM	AM	AM	AM
Depth Tested	mm	150	150	150	150
Layer Depth	mm	Unknown	Unknown	Unknown	Unknown
Wet Oversize	%	0 @ 19mm	0 @ 19mm	0 @ 19mm	0 @ 19mm
Dry Oversize	%	0 @ 19mm	0 @ 19mm	0 @ 19mm	0 @ 19mm
Field Wet Density	t/m^3	2.17	2.12	2.15	2.13
Field Dry Density	t/m^3	2.01	1.92	1.99	1.94
Field Moisture Content	%	7.8	10.7	8.5	9.6

Laboratory Test Data

Date Tested		08/11/2021	09/11/2021	09/11/2021	09/11/2021
Compaction Reference		25908DR1	25908DR2	25908DR3	25908DR4
Modified / Standard		Standard	Standard	Standard	Standard
Hilf Density Ratio Method		Yes	Yes	Yes	Yes
Peak Converted Wet Density	t/m^3	2.08	2.10	2.08	2.12
Adj. PCWD	t/m^3	2.08	2.10	2.08	2.12
Moisture Variation	%	2.0	2.0	2.5	1.5
Adj. Moisture Variation	%	2.0	2.0	2.5	1.5
Dryer / Wetter than Optimum Moisture		2% Dryer than OMC	2% Dryer than OMC	2.5% Dryer than OMC	1.5% Dryer than OMC

Density Ratio	%	**104.5**	**101.0**	**103.5**	**100.0**

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Remarks:

Authorised Signatory: Greg Gibson

G. Gibson

Project :- Monterea Cadance Boundary
Client :- CCA Winslow

Report No :- 21/330/30
Issue No :- 1
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Lab Ref No :- 25908
Date :- 11/11/2021

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Field Compaction Report

Sampling Procedure	AS1289.1.2.1 cl6.4(b) (Compacted Layers)
Test Procedure	AS1289.2.1.1 AS1289.5.7.1 AS1289.5.8.1

Sample Identification

		Testing of Allotment Fill Basin Extention South East Corner East: 7832.2 North: 39376.8 RL: 57.1	Testing of Allotment Fill Basin Extention South East Corner East: 3867.9 North: 39392.0 RL: 56.4	
Test No & Description		152(Allotment Fill)	153(Allotment Fill)	
Sample No		25908DR5	25908DR6	

Field Test Data

Date Tested & Sampled		01/11/2021	01/11/2021		
Time Tested & Sampled		AM	AM		
Depth Tested	mm	150	150		
Layer Depth	mm	Unknown	Unknown		
Wet Oversize	%	0 @ 19mm	0 @ 19mm		
Dry Oversize	%	0 @ 19mm	0 @ 19mm		
Field Wet Density	t/m^3	2.11	2.11		
Field Dry Density	t/m^3	1.91	1.85		
Field Moisture Content	%	10.5	13.8		

Laboratory Test Data

Date Tested		09/11/2021	09/11/2021		
Compaction Reference		25908DR5	25908DR6		
Modified / Standard		Standard	Standard		
Hilf Density Ratio Method		Yes	Yes		
Peak Converted Wet Density	t/m^3	2.16	2.09		
Adj. PCWD	t/m^3	2.16	2.09		
Moisture Variation	%	-1.5	4.5		
Adj. Moisture Variation	%	-1.5	4.5		
Dryer / Wetter than Optimum Moisture		1.5% Wetter than OMC	4.5% Dryer than OMC		

Density Ratio	%	**98.0**	**100.5**		

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Remarks:

Authorised Signatory: Greg Gibson

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25/03/21

Project :- Monterea Cadance Boundary
Client :- CCA Winslow

Report No :- 21/330/31
Issue No :- 1
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Lab Ref No :- 25927
Date :- 23/11/2021

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Field Compaction Report

Sampling Procedure AS1289.1.2.1 cl6.4(b) (Compacted Layers)
Test Procedure AS1289.2.1.1 AS1289.5.7.1 AS1289.5.8.1

Sample Identification

		Testing of Fill Sediment Basin Extention Fill Area	Testing of Fill Sediment Basin Extention Fill Area	Testing of Fill Sediment Basin Extention Fill Area
		East: 7609.5 North: 39394.0 RL: 58.8	East: 7808.6 North: 39384.0 5m off N'bouring Basin	East:7810.4 North: 39371.0 5m off N'bouring Basin
Test No & Description		154(Fill)	155(Fill)	156(Fill)
Sample No		25927DR1	25927DR2	25927DR3

Field Test Data

Date Tested & Sampled		03/11/2021	03/11/2021	03/11/2021	
Time Tested & Sampled		PM	PM	PM	
Depth Tested	mm	150	150	150	
Layer Depth	mm	Unknown	Unknown	Unknown	
Wet Oversize	%	0 @ 19mm	0 @ 19mm	0 @ 19mm	
Dry Oversize	%	0 @ 19mm	0 @ 19mm	0 @ 19mm	
Field Wet Density	t/m^3	2.12	2.11	2.09	
Field Dry Density	t/m^3	1.92	1.91	1.90	
Field Moisture Content	%	10.5	10.3	9.9	

Laboratory Test Data

Date Tested		11/11/2021	11/11/2021	11/11/2021	
Compaction Reference		25927DR1	25927DR2	25927DR3	
Modified / Standard		Standard	Standard	Standard	
Hilf Density Ratio Method		Yes	Yes	Yes	
Peak Converted Wet Density	t/m^3	2.14	2.12	2.14	
Adj. PCWD	t/m^3	2.14	2.12	2.14	
Moisture Variation	%	2.0	0.5	1.5	
Adj. Moisture Variation	%	2.0	0.5	1.5	
Dryer / Wetter than Optimum Moisture		2% Dryer than OMC	0.5% Dryer than OMC	1.5% Dryer than OMC	
Density Ratio	%	**99.5**	**99.5**	**98.0**	

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Remarks:

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25/03/21

Project :- Monterea Cadance Boundary
Client :- CCA Winslow

Report No :- 21/330/32
Issue No :- 1
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Lab Ref No :- 25951
Date :- 23/11/2021

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Field Compaction Report

Sampling Procedure AS1289.1.2.1 cl6.4(b) (Compacted Layers)
Test Procedure AS1289.2.1.1 AS1289.5.7.1 AS1289.5.8.1

Sample Identification

	Testing of Fill	Testing of Fill	Testing of Fill	Testing of Fill
	Sediment Basin Extention Fill Area	**Sediment Basin Extention Fill Area**	**Sediment Basin Extention Fill Area**	**Sediment Basin Extention Fill Area**
	South East Corner	South East Corner	South East Corner	South East Corner
	East: 7921.9m	East: 7914.6m	East: 7904.4m	East: 7891.8m
	North: 39350.6m	North: 39355.6m	North: 39353.9m	North: 39359.8m
	RL: 53.3m	RL: 53.7m	RL: 54.0m	RL: 54.2m
Test No & Description	157(Fill)	158(Fill)	159(Fill)	160(Fill)
Sample No	25951DR1	25951DR2	25951DR3	25951DR4

Field Test Data

Date Tested & Sampled		06/11/2021	06/11/2021	06/11/2021	06/11/2021
Time Tested & Sampled		AM	AM	AM	AM
Depth Tested	mm	150	150	150	150
Layer Depth	mm	Unknown	Unknown	Unknown	Unknown
Wet Oversize	%	0 @ 19mm	0 @ 19mm	0 @ 19mm	0 @ 19mm
Dry Oversize	%	0 @ 19mm	0 @ 19mm	0 @ 19mm	0 @ 19mm
Field Wet Density	t/m^3	2.14	2.18	2.16	2.11
Field Dry Density	t/m^3	1.94	1.95	1.94	1.92
Field Moisture Content	%	10.6	12.1	11.2	9.8

Laboratory Test Data

Date Tested		12/11/2021	12/11/2021	12/11/2021	17/11/2021
Compaction Reference		25951DR1	25951DR2	25951DR3	25951DR4
Modified / Standard		Standard	Standard	Standard	Standard
Hilf Density Ratio Method		Yes	Yes	Yes	Yes
Peak Converted Wet Density	t/m^3	2.14	2.18	2.16	2.12
Adj. PCWD	t/m^3	2.14	2.18	2.16	2.12
Moisture Variation	%	1.0	-0.5	-0.5	1.5
Adj. Moisture Variation	%	1.0	-0.5	-0.5	1.5
Dryer / Wetter than Optimum Moisture		1% Dryer than OMC	0.5% Wetter than OMC	0.5% Wetter than OMC	1.5% Dryer than OMC

Density Ratio	%	**100.5**	**100.0**	**100.0**	**99.5**

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Remarks:

Authorised Signatory: Greg Gibson

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25/03/21

Project :- Monterea Cadance Boundary
Client :- CCA Winslow

Report No :- 21/330/33
Issue No :- 1
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Date :- 25/11/2021

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Field Compaction Report

Sampling Procedure AS1289.1.2.1 cl6.4(b) (Compacted Layers)
Test Procedure AS1289.2.1.1 AS1289.5.7.1 AS1289.5.8.1

Sample Identification

		Testing of Allotment Fill Sediment Basin Extention Fill Area East: 7930.6m North: 39368.8m RL: 54.0m	Testing of Allotment Fill Sediment Basin Extention Fill Area East: 7919.9m North: 39384.0m RL: 54.9m	Testing of Allotment Fill Sediment Basin Extention Fill Area East: 7910.0m North: 39377.7m RL: 54.1m
Test No & Description		161(Allotment Fill)	162(Allotment Fill)	163(Allotment Fill)
Sample No		25980DR1	25980DR2	25980DR3

Field Test Data

Date Tested & Sampled		16/11/2021	16/11/2021	16/11/2021
Time Tested & Sampled		AM	AM	AM
Depth Tested	mm	150	150	150
Layer Depth	mm	Unknown	Unknown	Unknown
Wet Oversize	%	1 @ 19mm	0 @ 19mm	0 @ 19mm
Dry Oversize	%	1 @ 19mm	0 @ 19mm	0 @ 19mm
Field Wet Density	t/m^3	2.14	2.17	2.16
Field Dry Density	t/m^3	1.95	1.97	1.93
Field Moisture Content	%	9.8	10.1	12.0

Laboratory Test Data

Date Tested		24/11/2021	24/11/2021	24/11/2021
Compaction Reference		25980DR1	25980DR2	25980DR3
Modified / Standard		Standard	Standard	Standard
Hilf Density Ratio Method		Yes	Yes	Yes
Peak Converted Wet Density	t/m^3	2.14	2.16	2.16
Adj. PCWD	t/m^3	2.14	2.16	2.16
Moisture Variation	%	2.0	-1.0	-1.0
Adj. Moisture Variation	%	2.0	-1.0	-1.0
Dryer / Wetter than Optimum Moisture		2% Dryer than OMC	1% Wetter than OMC	1% Wetter than OMC

Density Ratio	%	**100.5**	**100.5**	**100.0**

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Remarks:

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