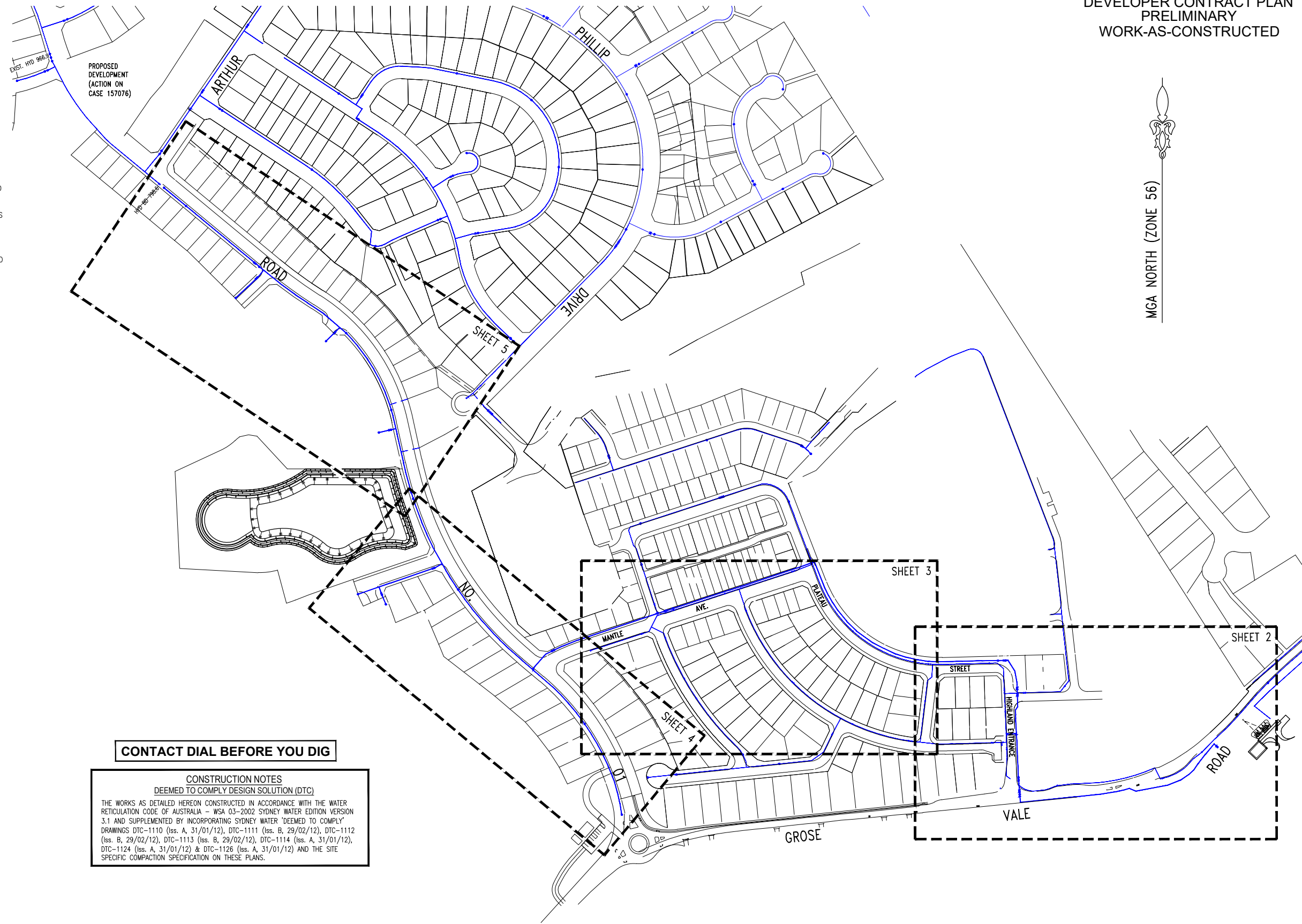


- NOTES :**
- WATER SERVICING COORDINATOR AND DESIGNER:
CALIBRE CONSULTING (NSW) PTY LTD
P.O. BOX 8300 Baulkham Hills BC NSW 2153
Ph: (02) 8808 5000
FOR:
REDBANK COMMUNITIES
76 ARTHUR PHILLIP DRIVE
NORTH RICHMOND NSW 2754
 - MAIN LAID GENERALLY 2.6m P.L. AT STANDARD DEPTH BELOW TOP OF KERB EXCEPT WHERE OTHERWISE SHOWN.
 - MAIN LAID OVER STORMWATER & SEWER LINES UNLESS OTHERWISE INDICATED.
 - WHERE MAINS LAID IN EXISTING OR PROPOSED ROAD CARRIAGEWAYS - PLEASE REFER TO SITE SPECIFIC COMPACTION SPECIFICATION. (SHEET 4)
 - THRUST/ANCHOR BLOCKS CONSTRUCTED AT ALL BENDS, TEES, TAPERS, FITTINGS & PARTS OF PIPELINE WHERE UNBALANCED THRUST OCCURS. REFER SYDNEY WATER DEEMED TO COMPLY DRAWING DTC-1110 (BENDS), DTC-1111(TYPE 2 BENDS), DTC-1112 (TAPERS), DTC-1113 (TEES), DTC-1114 (HYDRANT BENDS) & DTC-1115 (STOP VALVES)
 - THRUST BLOCKS AT CONNECTION POINTS PREPOURED AGAINST UNDISTURBED GROUND AND CURED FOR A MINIMUM 7 DAYS BEFORE SUBJECT TO THRUST LOADINGS.
 - ALL PROPERTY (MAIN TO METER) SERVICES CONSTRUCTED TO SYDNEY WATER'S INSTALLATION REQUIREMENTS BY A LICENSED PLUMBER. THE WORKS INSTALLED IN ACCORDANCE WITH THE CURRENT SYDNEY WATER PROPERTY (MAIN TO METER) SERVICE INSTALLATIONS TECHNICAL REQUIREMENTS, NSW CODE OF PRACTICE FOR PLUMBING AND DRAINAGE AND AS/NZS3500.
 - THE MINIMUM NUMBER OF FIELD COMPACTION TESTS REQUIRED TO SATISFY THE WATER SUPPLY CODE OF AUSTRALIA ARE:
PIPE EMBEDMENT ZONE: - 19 TRENCH FILL ZONE:
- TRAFFICABLE: NIL SEE NOTE 6
- NON-TRAFFICABLE: - 19
(PLEASE REFER TO SITE SPECIFIC COMPACTION SPECIFICATION. - SHEET 4)
 - DICLSC PIPES AND FITTINGS WRAPPED IN BLUE POLYETHYLENE SLEEVING.
 - DICLSC PIPES REQUIRED FOR ANCHOR BLOCKS NOT INCLUDED IN PIPE SCHEDULE.



CONTACT DIAL BEFORE YOU DIG

CONSTRUCTION NOTES
DEEMED TO COMPLY DESIGN SOLUTION (DTC)

THE WORKS AS DETAILED HEREON CONSTRUCTED IN ACCORDANCE WITH THE WATER RETICULATION CODE OF AUSTRALIA - WSA 03-2002 SYDNEY WATER EDITION VERSION 3.1 AND SUPPLEMENTED BY INCORPORATING SYDNEY WATER 'DEEMED TO COMPLY' DRAWINGS DTC-1110 (Iss. A, 31/01/12), DTC-1111 (Iss. B, 29/02/12), DTC-1112 (Iss. B, 29/02/12), DTC-1113 (Iss. B, 29/02/12), DTC-1114 (Iss. A, 31/01/12), DTC-1124 (Iss. A, 31/01/12) & DTC-1126 (Iss. A, 31/01/12) AND THE SITE SPECIFIC COMPACTION SPECIFICATION ON THESE PLANS.

LOCALITY SKETCH
(NOT TO SCALE)

06	PRELIMINARY WORK AS CONSTRUCTED	A.S.	13/11/18
05	DTC-1124 AT COLLINS ST ADDED	A.S.	01/08/18
04	DETAIL C-C AMENDED	A.S.	14/05/18
03	AMENDED FOR SW COMMENTS	A.S.	26/04/18
02	AMENDED FOR CLIENT COMMENTS	A.S.	07/02/18
01	ISSUE FOR CLIENT REVIEW	A.S.	25/01/18
No.	AMENDMENT DESCRIPTION	BY	DATE

PLAN TO BE READ IN CONJUNCTION WITH CURRENT SYDNEY WATER STANDARDS SYDNEY WATER CORPORATION

PRIOR TO COMMENCEMENT OF EXCAVATION FOR PROPOSED AND EXISTING SERVICES CONTACT :

DIAL BEFORE YOU DIG
ELECTRICITY: ENDEAVOUR ENERGY . Ph. 1100 . Ph. 131 003
GAS: JEMENA GAS . Ph. 1300 880 906
TELECOMMUNICATIONS: TELSTRA . Ph. 1800 114 918
STONEY WATER . Ph. 132 092
GIVING AT LEAST 48 HOURS NOTICE.

UTILITIES			
TYPE	DATE	REF.	
PROP SEWER: S	27.08.18		
PROP STORMWATER: SWD	14.12.17	JWP	
SEWER: S	01.02.17	QALCHEK	
STORMWATER: SWD	01.02.17	JWP	
TELECOMM: TEL	10.01.18	DBYD	
ELECTRICAL: E	31.03.16	NRJV	
OPTICAL FIBRE: OPT-FIB	14.01.16	NRJV	

WORK AS CONSTRUCTED CERTIFICATION	
DEVELOPER	NORTH RICHMOND JOINT VENTURE
WATER SERVICE CO-ORDINATOR	CALIBRE CONSULTING (NSW) PTY LTD
CONSTRUCTOR	JONISHAN PTY LTD
COMPLETED	W.A.C. PREPARED PRELIM 13/11/2018
DESIGNER	CALIBRE CONSULTING (NSW) PTY LTD
I CERTIFY THAT THE WORKS HAVE BEEN CONSTRUCTED IN ACCORDANCE WITH THE WORK AS CONSTRUCTED DRAWINGS.	

PIPE SCHEDULE			
SIZE DN	TYPE	CLASS	LENGTH
100	O.P.V.C.	PN16	327.1
150	O.P.V.C.	PN16	17.0
200	O.P.V.C.	PN16	63.8
300	O.P.V.C.	PN16	1237.6
2500D	PE100	SDR11	222.8
2190D	SCL	SPL	3.0
200	DICLSC	PN35	5.0

PIPE JOINING METHOD / NOTES
RUBBER RING
RUBBER RING
RUBBER RING
EF WELDED
DTC-1126
BOUNDARY TRAPS REQUIRED.

DESIGN HEAD, 120 m

AUSTRALIAN HEIGHT DATUM	
SCALES	
PLAN	1:1000
CROSS SECTIONS	NATURAL
LENGTHS, DEPTHS & LEVELS ARE IN METRES.	

NO AMENDMENTS ARE TO BE MADE TO THIS PLAN WITHOUT REFERENCE TO SYDNEY WATER. THIS PLAN IS NOT NECESSARILY UP TO DATE OR CORRECT AND SYDNEY WATER ACCEPTS NO RESPONSIBILITY.

U.B. DIRECTORY MAP 63/J14 (41st ED)

SHEET . 1 . OF . 5 File No. N/A

Sydney WATER SYDNEY WATER CORPORATION

Case No. 166501PW

WATERMAIN EXTENSION
GROSE VALE ROAD
NORTH RICHMOND HAWKESBURY

X15044.003.03

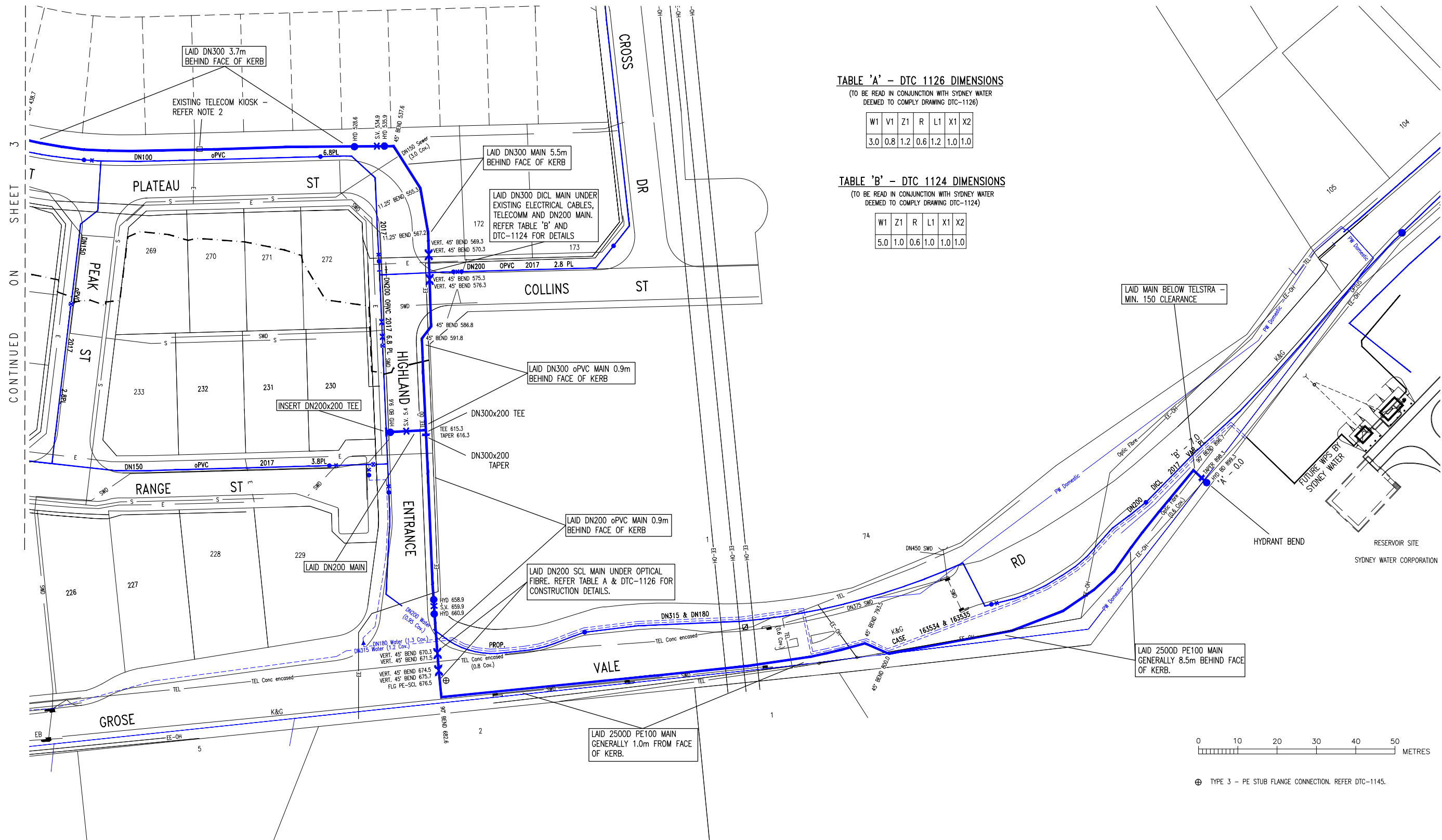


TABLE 'A' - DTC 1126 DIMENSIONS

(TO BE READ IN CONJUNCTION WITH SYDNEY WATER DEEMED TO COMPLY DRAWING DTC-1126)

W1	V1	Z1	R	L1	X1	X2
3.0	0.8	1.2	0.6	1.2	1.0	1.0

TABLE 'B' - DTC 1124 DIMENSIONS

(TO BE READ IN CONJUNCTION WITH SYDNEY WATER DEEMED TO COMPLY DRAWING DTC-1124)

W1	Z1	R	L1	X1	X2
5.0	1.0	0.6	1.0	1.0	1.0

MGA NORTH (ZONE 56)

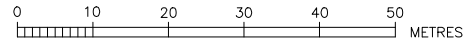
CONTINUED ON SHEET 3

PLAN DRAWN DATE: 13/11/2018 VERSION: 06 SHEET 2 OF 5 SHEETS

PLEASE NOTE SITE SPECIFIC
COMPACTION SPECIFICATION - SHEET 4

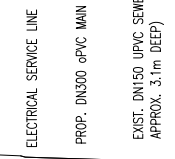
No.	AMENDMENT DESCRIPTION	BY	DATE
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01	ISSUE FOR CLIENT REVIEW	A.S.	25/01/18

WORK AS CONSTRUCTED CERTIFICATION		SYDNEY WATER CORPORATION	
DEVELOPER	NORTH RICHMOND JOINT VENTURE		Case No. 166501PW SHT 2 OF 5 SHTS
W.S.C.	CAUBRE CONSULTING (NSW) PTY LTD		
CONSTRUCTOR	JONSHAN PTY LTD	COMPLETED	
W.A.C. PREPARED	PRELIM 13/11/2018	DESIGNER: CAUBRE CONSULTING (NSW) PTY LTD	
I CERTIFY THAT THE WORKS HAVE BEEN CONSTRUCTED IN ACCORDANCE WITH THE WORK AS CONSTRUCTED DRAWINGS		SYDNEY WATER CORPORATION FOR DETAILS OF SERVICES SEE SHEET 1	



PLEASE NOTE SITE SPECIFIC
COMPACTION SPECIFICATION - SHEET 4

DEVELOPER CONTRACT PLAN
PRELIMINARY
WORK-AS-CONSTRUCTED



SECTION 'C-C'
(NOT TO SCALE)
REFER WATER SUPPLY CODE VER 03 - TABLE 5.5 AND NOTES

CONTINUED ON SHEET 4

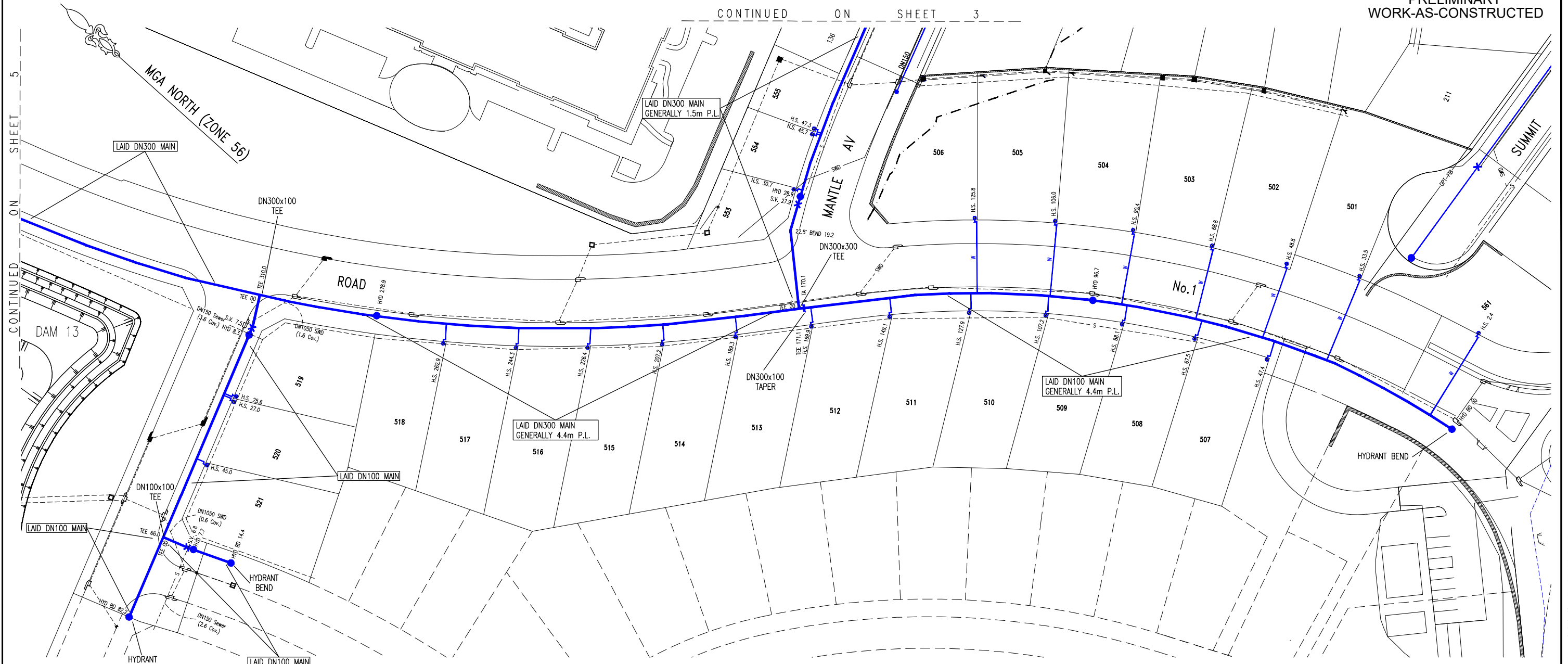
CONTINUED ON SHEET 2

No.	AMENDMENT DESCRIPTION	BY	DATE
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01	ISSUE FOR CLIENT REVIEW	AS	25/01/18

WORK AS CONSTRUCTED CERTIFICATION		SYDNEY WATER CORPORATION	
DEVELOPER	NORTH RICHMOND JOINT VENTURE		Case No. 166501PW SHT 3 OF 5 SHTS.
W.S.C.	CALIBRE CONSULTING (NSW) PTY LTD		
CONSTRUCTOR	JONISHAN PTY LTD	SYDNEY WATER CORPORATION FOR DETAILS OF SERVICES SEE SHEET 1	
COMPLETED			
W.A.C. PREPARED	PRELIM 13/11/2018	I CERTIFY THAT THE WORKS HAVE BEEN CONSTRUCTED IN ACCORDANCE WITH THE WORK AS CONSTRUCTED DRAWINGS	
DESIGNER	CALIBRE CONSULTING (NSW) PTY LTD		

YEOMANS ENTRY REDBANK

CONTINUED ON SHEET 3



SITE SPECIFIC COMPACTION SPECIFICATION

WITHIN FULL WIDTH OF ROAD CARRIAGEWAY PLUS 1.0M EITHER SIDE -

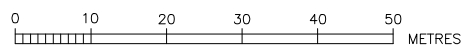
- ALL SUBGRADE SHALL BE CARRIED UP IN HORIZONTAL LAYERS, OF NOT MORE THAN 300MM THICK LOOSE MEASUREMENT, IF REQUIRED, AND SHALL HAVE EACH LAYER COMPACTED TO A 100% STANDARD DRY DENSITY RATIO DETERMINED IN ACCORDANCE WITH AS 1289 5.4.1-2007 'COMPACTION CONTROL TEST - DRY DENSITY RATIO, MOISTURE VARIATION AND MOISTURE RATIO'.
- ALL SUB-BASE COURSE SHALL BE PLACED AND COMPACTED TO AT LEAST 98% MODIFIED DRY DENSITY RATIO DETERMINED IN ACCORDANCE WITH AS 1289 5.4.1-2007 'COMPACTION CONTROL TEST - DRY DENSITY RATIO, MOISTURE VARIATION AND MOISTURE RATIO'.
- ALL BASE COURSE SHALL BE PLACED AND COMPACTED TO AT LEAST 98% MODIFIED DRY DENSITY RATIO DETERMINED IN ACCORDANCE WITH AS 1289 5.4.1-2007 'COMPACTION CONTROL TEST - DRY DENSITY RATIO, MOISTURE VARIATION AND MOISTURE RATIO'.
- ALL ROAD CROSSINGS TO BE PROVIDED IN EXISTING ROADS, THE TRENCHES SHALL BE BACKFILLED AND COMPACTED WITH A SAND/CEMENT BLEND 20:1 MIX TO SUBGRADE LEVEL, THEN DGB20 TO WITHIN 50MM OF THE ROAD SURFACE, OR IF REQUIRED TO A HIGHER SPECIFICATION BY A SPECIFIC UTILITY AUTHORITY, TO THAT SPECIFICATION AS INSTRUCTED BY THE PROJECT SUPERINTENDENT.
- ALL TESTS TO BE TAKEN EVERY 50 METRE LENGTH OF PAVEMENT, TAKEN 1.0M FROM ALTERNATE SIDES OF PAVEMENT, BY A NATA REGISTERED LABORATORY.
- THESE AND ALL OTHER REQUIREMENTS TO BE COMPLIED WITH, TO BE READ IN CONJUNCTION WITH HAWKESBURY CITY COUNCIL DCP PART II - CONSTRUCTION SPECIFICATION.
- ANY ERRORS, OMISSIONS OR QUERIES TO BE SUBMITTED TO THE PROJECT SUPERINTENDENT FOR INSTRUCTION.

WITHIN FULL WIDTH OF ROAD FOOTPATH / VERGE EXCLUDING 1.0M BESIDE ROAD CARRIAGEWAY EITHER SIDE -

- ALL FILL SHALL BE CARRIED OUT IN HORIZONTAL LAYERS, EXTENDING THE FULL WIDTH OF THE AREA BEING FILLED, OF NOT MORE THAN 300MM CONSOLIDATED THICKNESS. EACH LAYER SHALL BE COMPACTED TO AT LEAST 98% STANDARD DRY DENSITY RATIO DETERMINED IN ACCORDANCE WITH AS 1289 5.4.1-2007 'COMPACTION CONTROL TEST - DRY DENSITY RATIO, MOISTURE VARIATION AND MOISTURE RATIO'.
- ALL TESTS TO BE TAKEN EVERY 50 METRE LENGTH OF ROAD FOOTPATH / VERGE ON CENTRELINE, BY A NATA REGISTERED LABORATORY.
- ALL TRENCHES TO BE BACKFILLED TO HAVE THE SAME COMPACTION AS THE SURROUNDING ROAD FOOTPATH / VERGE.
- ALL TRENCH TESTS TO BE TAKEN IN EACH 300MM LAYER AND EVERY 50 METRES OF TRENCH, BY A NATA REGISTERED LABORATORY.
- THESE AND ALL OTHER REQUIREMENTS TO BE COMPLIED WITH, TO BE READ IN CONJUNCTION WITH HAWKESBURY CITY COUNCIL DCP PART II - CONSTRUCTION SPECIFICATION.
- ANY ERRORS, OMISSIONS OR QUERIES TO BE SUBMITTED TO THE PROJECT SUPERINTENDENT FOR INSTRUCTION.

WITHIN LOTS -

- ALL FILL SHALL BE CARRIED OUT IN HORIZONTAL LAYERS, EXTENDING THE FULL WIDTH OF THE AREA BEING FILLED, OF NOT MORE THAN 300MM CONSOLIDATED THICKNESS. EACH LAYER SHALL BE COMPACTED TO A DENSITY OF AT LEAST 98% STANDARD DRY DENSITY RATIO DETERMINED IN ACCORDANCE WITH AS 1289 5.4.1-2007 'COMPACTION CONTROL TEST - DRY DENSITY RATIO, MOISTURE VARIATION AND MOISTURE RATIO'. THE DEPTHS OF FILL AND THE COMPACTION THEREOF ARE TO BE VERIFIED BY THE SUBMISSION OF COMPACTION CERTIFICATES AND A PLAN SHOWING CONTOURED DEPTHS OF FILL IN RELATION TO LOT BOUNDARIES.
- ALL TESTS TO BE A MINIMUM OF TWO COMPACTION TESTS PER LOT PER LAYER ARE TO BE CARRIED OUT, BY A NATA REGISTERED LABORATORY.
- ALL TRENCHES TO BE BACKFILLED TO HAVE THE SAME COMPACTION AS THE SURROUNDING LOTS.
- ALL TRENCH TESTS TO BE TAKEN IN EACH 300MM LAYER AND EVERY 50 METRES OF TRENCH, BY A NATA REGISTERED LABORATORY.
- THESE AND ALL OTHER REQUIREMENTS TO BE COMPLIED WITH, TO BE READ IN CONJUNCTION WITH HAWKESBURY CITY COUNCIL DCP PART II - CONSTRUCTION SPECIFICATION.
- ANY ERRORS, OMISSIONS OR QUERIES TO BE SUBMITTED TO THE PROJECT SUPERINTENDENT FOR INSTRUCTION.



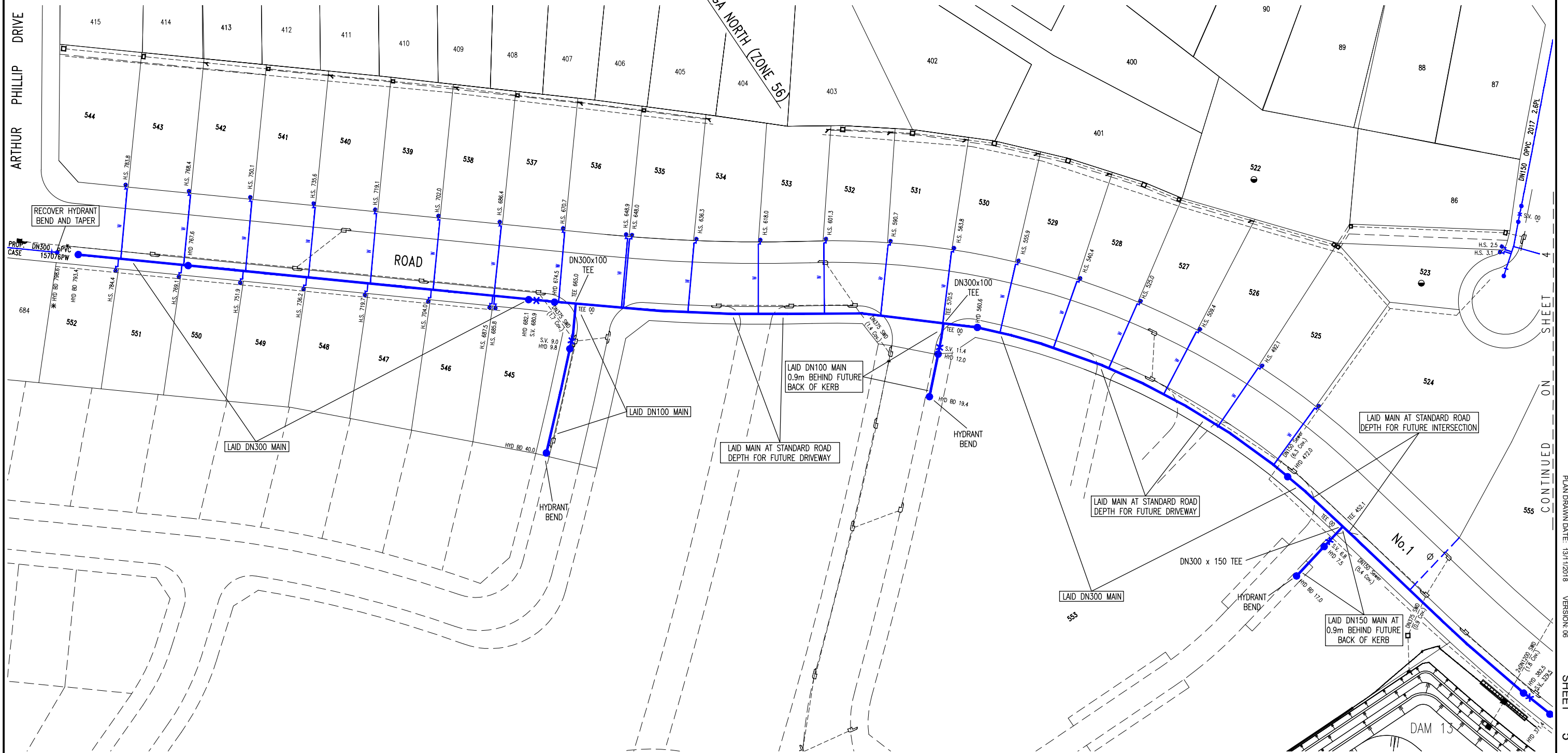
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YEOMANS ENTRY
REDBANK

WORK AS CONSTRUCTED CERTIFICATION		SYDNEY WATER CORPORATION	
DEVELOPER	NORTH RICHMOND JOINT VENTURE		Case No. 166501PW SHT 4 OF 5 SHTS
W.S.C.	CAUBRE CONSULTING (NSW) PTY LTD		
CONSTRUCTOR	JONSHAN PTY LTD	COMPLETED	
W.A.C. PREPARED	PRELIM 13/11/2018		
DESIGNER	CAUBRE CONSULTING (NSW) PTY LTD	SYDNEY WATER CORPORATION	
I CERTIFY THAT THE WORKS HAVE BEEN CONSTRUCTED IN ACCORDANCE WITH THE WORK AS CONSTRUCTED DRAWINGS		FOR DETAILS OF SERVICES SEE SHEET 1	

ARTHUR PHILLIP DRIVE

MGA NORTH (ZONE 56)



SHEET 4

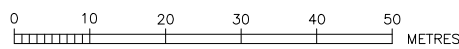
CONTINUED

PLAN DRAWN DATE: 13/11/2018 VERSION: 06

SHEET 5

OF 5 SHEETS

PLEASE NOTE SITE SPECIFIC
COMPACTION SPECIFICATION - SHEET 4



- PROPERTY SERVICE INSTALLED FROM EXISTING MAIN
- DN100 DUCT LAID FOR FUTURE PROPERTY SERVICE
- * REFER SHEET 1 FOR REFERENCE POINT OF CHAINAGES ON EXISTING MAIN.

No.	AMENDMENT DESCRIPTION	BY	DATE
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YEOMANS ENTRY
REDBANK

WORK AS CONSTRUCTED CERTIFICATION		SYDNEY WATER CORPORATION	
DEVELOPER	NORTH RICHMOND JOINT VENTURE . . .	Sydney WATER	Case No. 166501PW SHT 5 OF 5 SHTS.
W.S.C.	CAIBRE CONSULTING (NSW) PTY LTD . . .		
CONSTRUCTOR	JONISHAN PTY LTD . . .	FOR DETAILS OF SERVICES SEE SHEET 1	SYDNEY WATER CORPORATION
COMPLETED	. . .		
W.A.C. PREPARED	PRELIM. 13/11/2018 . . .	I CERTIFY THAT THE WORKS HAVE BEEN CONSTRUCTED IN ACCORDANCE WITH THE WORK AS CONSTRUCTED DRAWINGS	