

1.

DESIGNER AND WSC:
ORION CONSULTING ENGINEERS PTY LTD
SUITE 4.04/12 Century Circuit, Norwest, NSW 2153
PH.: 02 8660 0035
www.theoriongroup.au

FOR: MRVAC HOMES (NSW) PTY LTD
ADDRESS : LEVEL 28/200 GEORGE ST SYDNEY NSW 200
CONTACT : 0416 623 295
2.

THE PROPOSED WORKS AND MATERIALS IN ACCORDANCE WITH THE SYDNEY WATER TECHNICAL SPECIFICATION – CIVIL VERSION 11.0 AS WELL AS THE SEWERAGE CODE OF AUSTRALIA WSA 02-2002-2.2 SYDNEY WATER EDITION VERSION 4 (2017) INCLUDING THE SYDNEY WATER SUPPLEMENT & APPENDICES.
3.

ALL STRUCTURES CONSTRUCTED TO PROPOSED FINISHED SURFACE LEVELS. ALL LEVELS REFER TO PROPOSED FINISHED SURFACE LEVELS. CONTRACTOR LIAISED WITH ROAD AND/OR CIVIL CONTRACTOR TO VERIFY ALL LEVELS IN PARTICULAR IN OR ADJACENT TO ROADS.
4.

ALL BUILDING LAYOUTS, FINISHED SURFACE LEVELS, STORMWATER INFORMATION, AND GENERAL CIVIL ENGINEERING DETAILS TAKEN FROM 'ORION CONSULTING ENGINEERS' ENGINEERING PLANS REVISION 'A' DATED '29.07.24'
5.

THE CONTRACTOR APPLIED THE CONDITIONS OF THE SYDNEY WATER TECHNICAL SPECIFICATION – CIVIL VERSION 11.0 REGARDING BACKFILLING AND TESTING (SECTIONS C2.7 AND C2.8). A CONSTRUCTION QUALITY ASSURANCE SUBMITTED TO THE WSC AS PER THE REQUIREMENTS.

THIS PLAN IS TO CLEARLY SPECIFY THE NUMBER OF TESTS REQUIRED FOR THE WORKS.

NOTE: A HIGHER LEVEL OF COMPACTION MAY BE REQUIRED AND COMPLIED WITH (FOR EXAMPLE IN TNSW ROADS, ETC). THE CONTRACTOR LIAISED WITH THE CIVIL CONTRACTOR OR SITE SUPERINTENDENT REGARDING REQUIREMENTS.

6.

ALL LEVELS ELECTRONICALLY GENERATED. NO LEVEL BOOK AVAILABLE.
7.

THE REVIEW OF ENVIRONMENTAL FACTORS WAS AN INTEGRAL PART OF THIS DESIGN AND WAS READ IN CONJUNCTION WITH THIS PLAN. ALL MITIGATION MEASURES IN THE REF WAS ADHERED TO.
8.

PRIOR TO ANY EXCAVATION THE CONSTRUCTOR HAD A CURRENT COPY OF THE UNDERGROUND SERVICES REPORT, THIS WAS READ IN CONJUNCTION WITH THIS PLAN.
9.

SERVICES SHOWN FROM 'DIAL BEFORE YOU DIG' SERVICES SEARCH WERE INDICATIVE ONLY AND WAS CONFIRMED BY THE CONTRACTOR PRIOR TO ANY EXCAVATION WORKS ON SITE.
10.

BUILDING OVER/ADJACENT TO SEWER – CONDITIONS MAY APPLY. REFER TO ORION CONSULTING ENGINEERS PTY LTD FOR DETAILS.
11.

ALL EXCAVATION, SHORING EXCAVATION AND STABILITY OF ANY ADJACENT STRUCTURES, SERVICES OR DWELLINGS IS THE RESPONSIBILITY OF THE CONTRACTOR. USE OF SHORING BOXES WAS NOT A FORM OF STABILITY CONTROL, NEITHER WAS SAND CEMENT BACKFILL OR CONCRETE ENCASEMENT.
12.

ALL JUNCTIONS FOR THE PCS'S WAS LOCATED 0.7m MIN. OFF THE DOWNSTREAM PROPERTY BOUNDARY (CURRENT AND FUTURE) OR DOWNSTREAM EASEMENT BOUNDARY OR MINIMUM 1.0m MIN. OFF THE DOWNSTREAM STRUCTURE. ALL PCS's WERE CLEAR OF DRIVEWAYS, FOR LOCATION OF DRIVEWAYS CONTRACTOR TO LIAISE WITH CIVIL CONTRACTOR OR SITE SUPERINTENDENT FOR CONFIRMATION OF LOCATIONS.
↘ DENOTES STANDARD PCS CONNECTION (REFER DTC-2120 ISSUE B DATE 31.07.24)
13.

IT WAS THE CONTRACTORS RESPONSIBILITY TO PROVIDE THE CHAINAGES FOR THE PCS's, THE LENGTH OF THE PCS's, THE TYPE OF CONNECTION USED, THE LOCATION OF THE IO AND THE INVERT LEVEL AT THE POP (IF APPLICABLE) TO THE WSC FOR WAC PURPOSES.
14.

THE TOTAL LENGTH OF THE DN100 PCS's EXCLUDING RISERS ARE 21.0m. PCS's AND HAVE MINIMUM STIFFNESS RATING OF SN10. JOINTING TO BE SOLVENT WELDED.
15.

CONTRACTOR ENSURED THAT WORKS ARE CONSTRUCTED IN ACCORDANCE WITH SYDNEY WATER'S DEEMED TO COMPLY DRAWINGS:
FOR ALL MH'S DTC-2000 (ISSUE D 31.07.24), DTC-2220 (ISSUE E 31.07.24), DTC-2202 (ISSUE F 31.07.24), DTC-2203 (ISSUE C 31.07.24), DTC-2221 (ISSUE D 31.07.24), DTC-2222 (ISSUE D 31.07.24), DTC-2223 (ISSUE C 31.07.24)
16.

CONCRETE ENCASED PIPE SHOWN ACCORDINGLY:  – REFER TO SEW-1205-V
17.

ALL MCs & MSs CONFORMED TO WSA-137-2019 VERSION 3.1, "INDUSTRY STANDARD FOR UNPLASTICISED POLYVINYL CHLORIDE (PVCU), POLYPROPYLENE (PP) AND POLYETHYLENE (PE) MAINTENANCE SHAFTS, MAINTENANCE CHAMBERS AND MAINTENANCE HOLES FOR SEWERAGE".
18.

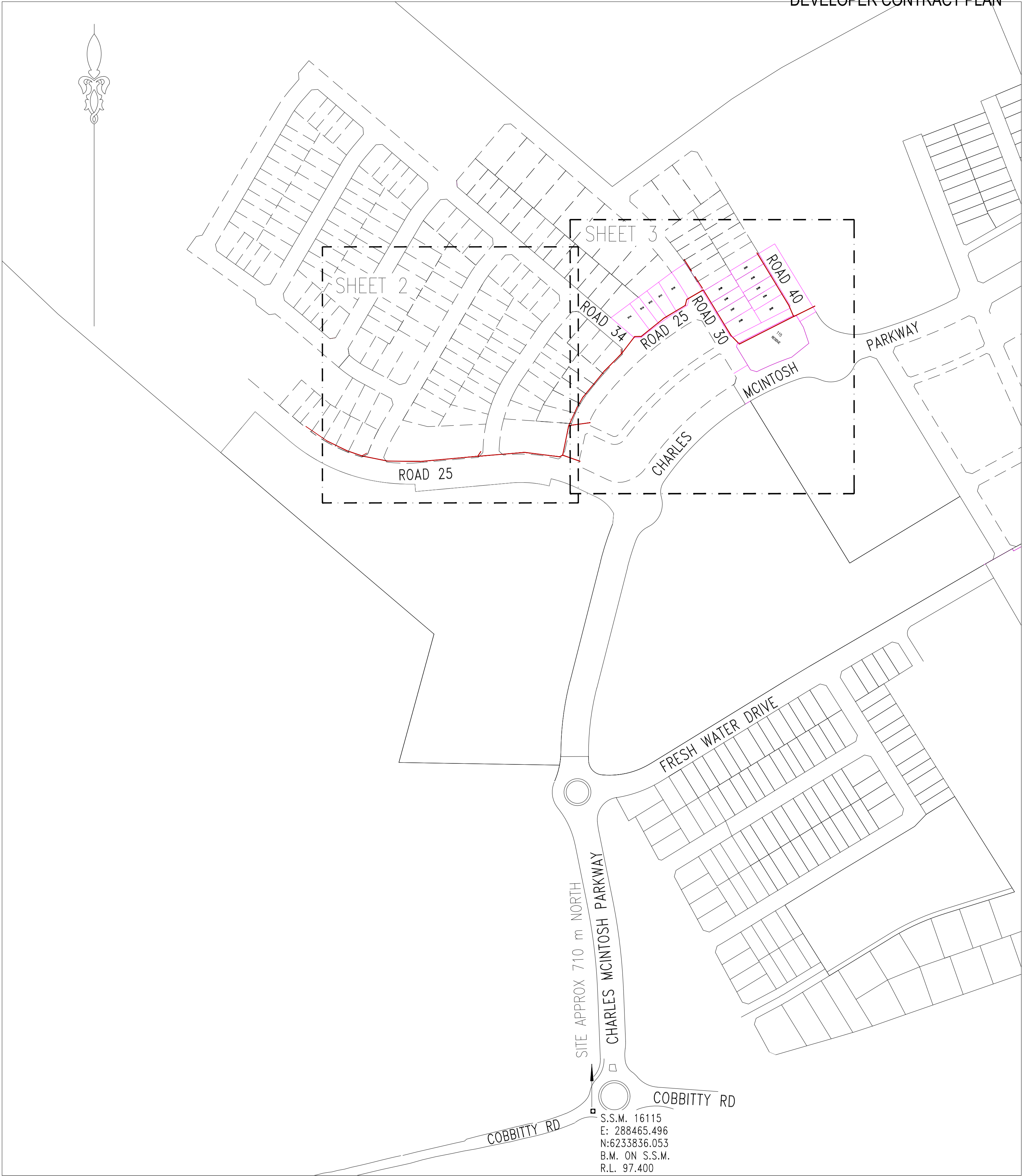
ANY CONCRETE WORKS CONFORMED TO SECTION 3 TECHNICAL SPECIFICATION – CIVIL VERSION 11.0, CONCRETE TESTING UNDERTAKEN AS PER SECTION 3.12.
19.

THE CONSTRUCTOR ONLY USED PRODUCTS AND MATERIALS APPROVED FOR USE BY SYDNEY WATER.

5	WORK AS CONSTRUCTED	RA	28.01.2026
4	LEAD IN L1&L2 TRANSFERRED FROM CASE214628WW	RA	03.04.2025
3	ISSUE TO ADDRESS SWC COMMENTS	RA	24.03.2025
2	ISSUE FOR APPROVAL	RA	19.11.2024
1	ISSUE FOR APPROVAL	RA	17.10.2024
No.	AMENDMENT DESCRIPTION	BY	DATE

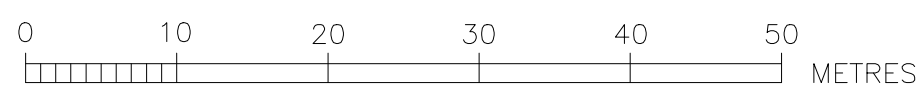
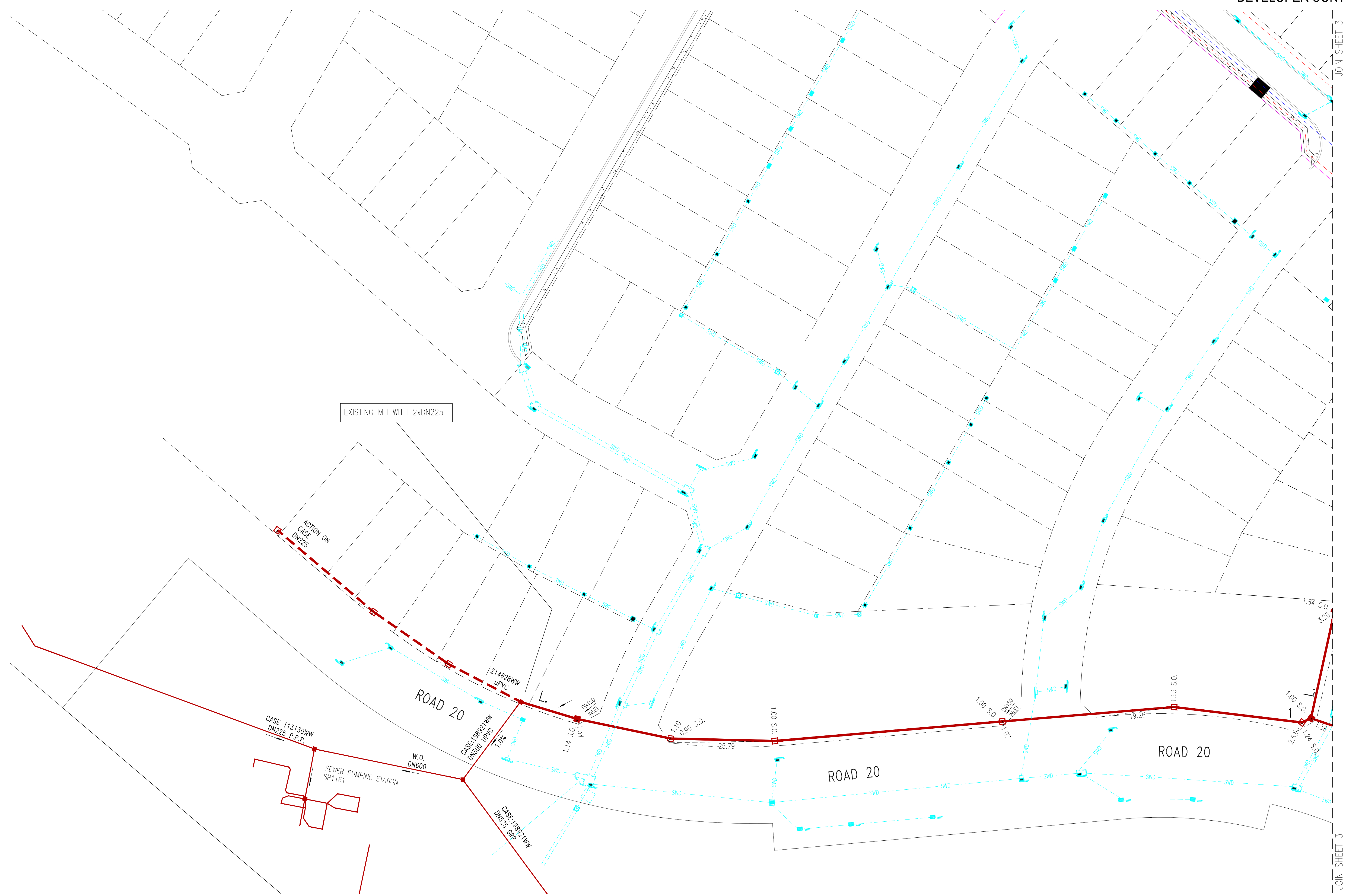
 DONATES A DN225 JUNCTION

MAINTENANCE STRUCTURE SCHEDULE						
LINE	CHAINAGE	TYPE	DN RISER	CLASS OF COVER	MATERIAL	COMMENTS
1	14.29	M.H.	DN1050	D	CONCRETE	DTC-2203
1	37.60	M.C.	DN600	B	P.P.	AWASHAFT PP 600
1	62.80	M.C.	DN600	B	P.P.	AWASHAFT PP 600
1	118.65	M.C.	DN600	B	P.P.	AWASHAFT PP 600
1	160.68	M.C.	DN600	B	P.P.	AWASHAFT PP 600
1	192.06	M.C.	DN600	B	P.P.	AWASHAFT PP 600
1	194.48	M.H.	DN1050	D	CONCRETE	DTC-2203
2	26.95	M.H.	DN1050	D	CONCRETE	DTC-2203
2	45.27	M.C.	DN600	B	P.P.	AWASHAFT PP 600
2	55.66	M.C.	DN600	B	P.P.	AWASHAFT PP 600
2	85.73	M.C.	DN600	B	P.P.	AWASHAFT PP 600
2	106.40	M.H.	DN1050	D	CONCRETE	DTC-2203
2	126.69	M.H.	DN1050	D	CONCRETE	DTC-2203
3	5.38	M.H.	DN1050	D	CONCRETE	DTC-2203
3	31.78	M.H.	DN1050	D	CONCRETE	DTC-2203
3	53.06	M.H.	DN1050	D	CONCRETE	DTC-2203
3	58.93	M.H.	DN1050	D	CONCRETE	DTC-2203
3	75.93	M.H.	DN1050	D	CONCRETE	DTC-2203
3	122.83	M.C.	DN600	D	P.P.	AWASHAFT PP 600
3	133.85	M.C.	DN600	D	P.P.	AWASHAFT PP 600
3	188.06	M.H.	DN1050	D	CONCRETE	DTC-2203
3	209.67	T.M.S.	DN300	D	P.V.C.	
4	10.34	M.S.	DN300	D	P.V.C.	AYMROO TYPE
4	65.64	M.C.	DN600	D	P.P.	AWASHAFT PP 600
5	16.55	M.C.	DN600	B	P.P.	AWASHAFT PP 600
6	18.98	M.H.	DN1050	D	CONCRETE	DTC-2203

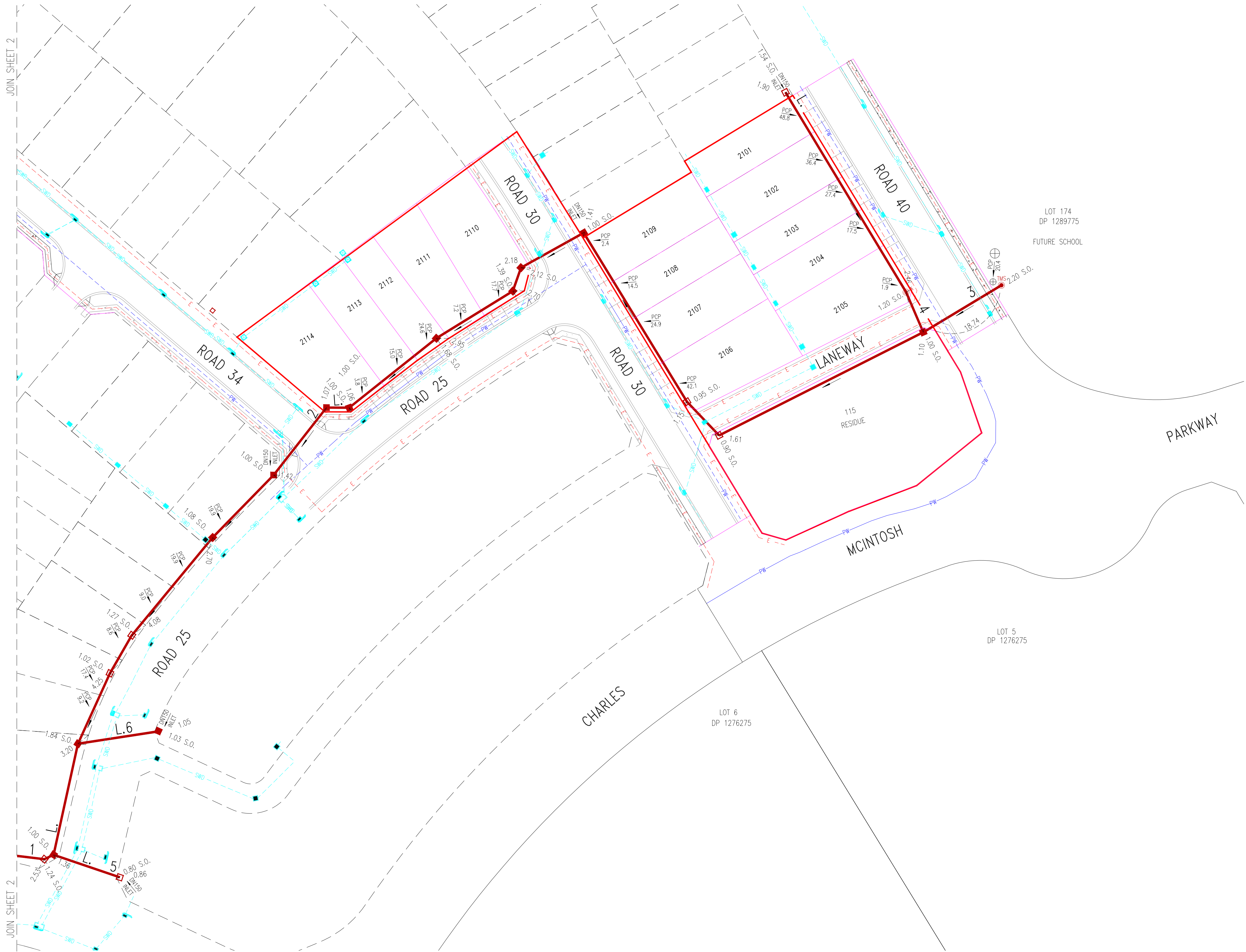


PM & LOCALITY PLAN
(NOT TO SCALE)

PLAN TO BE READ IN CONJUNCTION WITH CURRENT SYDNEY WATER STANDARDS SYDNEY WATER CORPORATION	TYPE		DATE	REF.	TYPE	DATE	REF.	WORK AS CONSTRUCTED CERTIFICATION				PIPE SCHEDULE						AUSTRALIAN HEIGHT DATUM		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.	Sydney WATER SYDNEY WATER CORPORATION	
	PROP. WATER: DN100 WATER		02.07.24	DESIGN				DEVELOPER	MRIVAC HOMES PTY LTD			SIZE DN	TYPE	CLASS	LENGTH	PIPE JOINING METHOD / NOTES	SCALES		Case No. 214673WW			
	PROP. STORMWATER: SWD		29.07.24	ENG.				WATER SERVICE CO-ORDINATOR	ORION CONSULTING ENGINEERS PTY LTD			150	U.P.V.C.	SN8	101.17	RRJ	PLAN 1:500 SECTION { HOR. 1:500 VERT. 1:125					
								CONSTRUCTOR	GLENMORE PARK PLUMBING & DRAINAGE			225	U.P.V.C.	SN8	530.84	RRJ	CROSS SECTIONS NATURAL					
								COMPLETED	23/10/2025 W.A.C. PREPARED 28/01/2026													
PRIOR TO COMMENCEMENT OF EXCAVATION FOR PROPOSED AND EXISTING SERVICES CONTACT :- DIAL BEFORE YOU DIG Ph. 1100 ELECTRICITY ENDEAVOUR ENERGY Ph. 131 003 GAS JEMENA GAS Ph. 1300 880 906 TELECOMMUNICATIONS TELSTRA Ph. 1800 114 918 SYDNEY WATER Ph. 132 092 GIVING AT LEAST 48 HOURS NOTICE.								DESIGNER	Rimon Awad			DESIGN HEAD		m	NO BOUNDARY TRAPS REQUIRED.		LENGTHS, DEPTHS & LEVELS ARE IN METRES.		U.B. DIRECTORY 304 / B13 (41st ED)	WEST CAMDEN SEWERAGE DRAINS TO WEST CAMDEN STP VIA SP1161 AND SP0673		
I CERTIFY THAT THE WORKS HAVE BEEN CONSTRUCTED IN ACCORDANCE WITH THE WORK AS CONSTRUCTED DRAWINGS.																		SHEET 1 OF 6		File No. 23-0088		



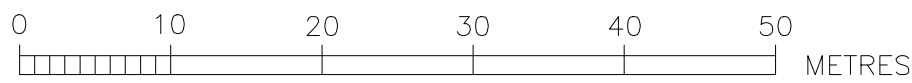
WORK AS CONSTRUCTED CERTIFICATION		Sydney WATER		SYDNEY WATER CORPORATION	
DEVELOPER	MIRVACH HOMES PTY LTD	Case No. 214673WW SHT 2 OF 6 SHTS.			
W.S.C.	ORION CONSULTING ENGINEERS PTY LTD				
CONSTRUCTOR	GLENMORE PARK PLUMBING & DRAINAGE				
COMPLETED	23/10/2025				
W.A.C. PREPARED	28/01/2025				
DESIGNER	Rimon Awad	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			



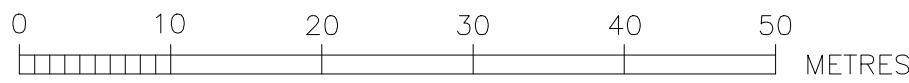
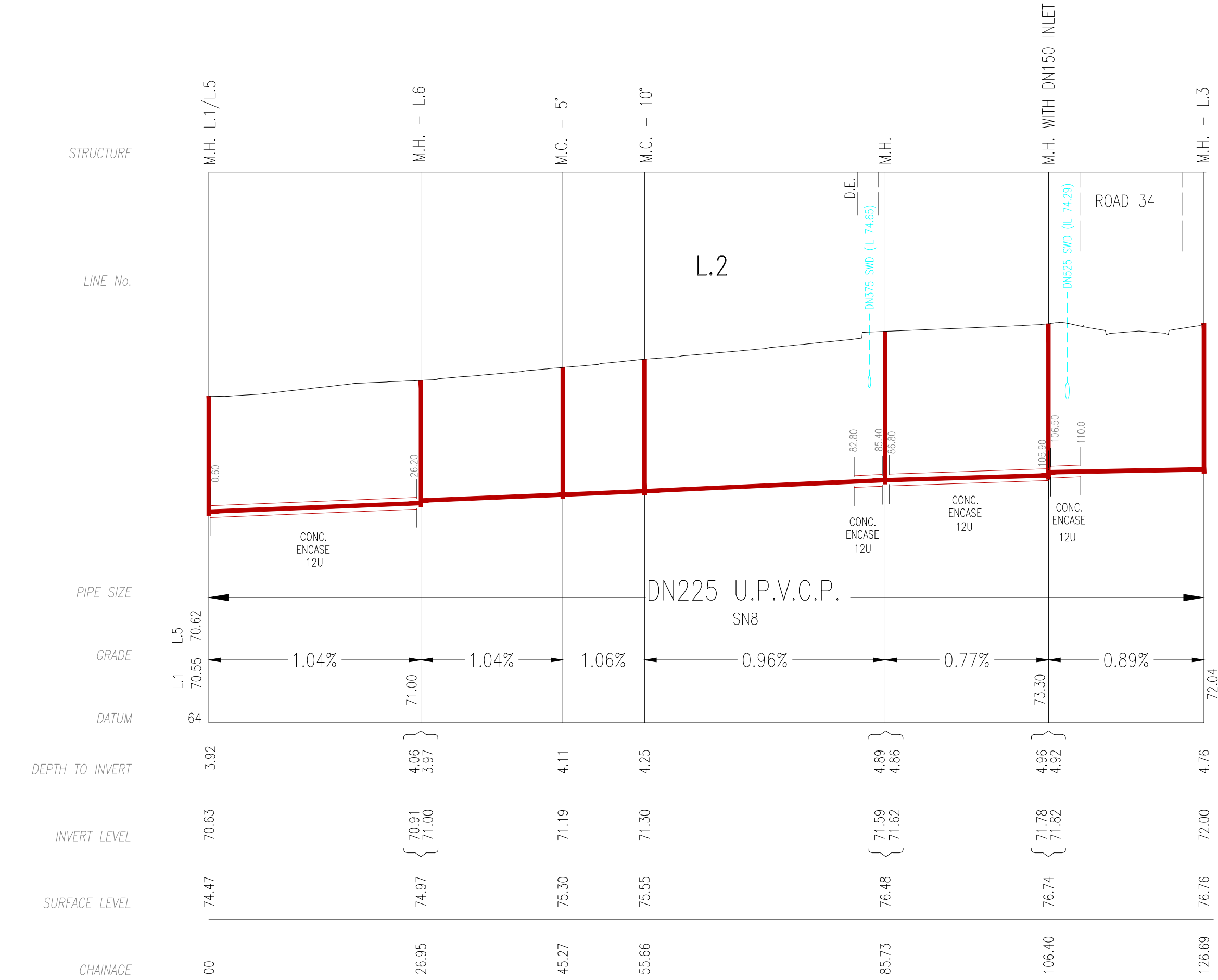
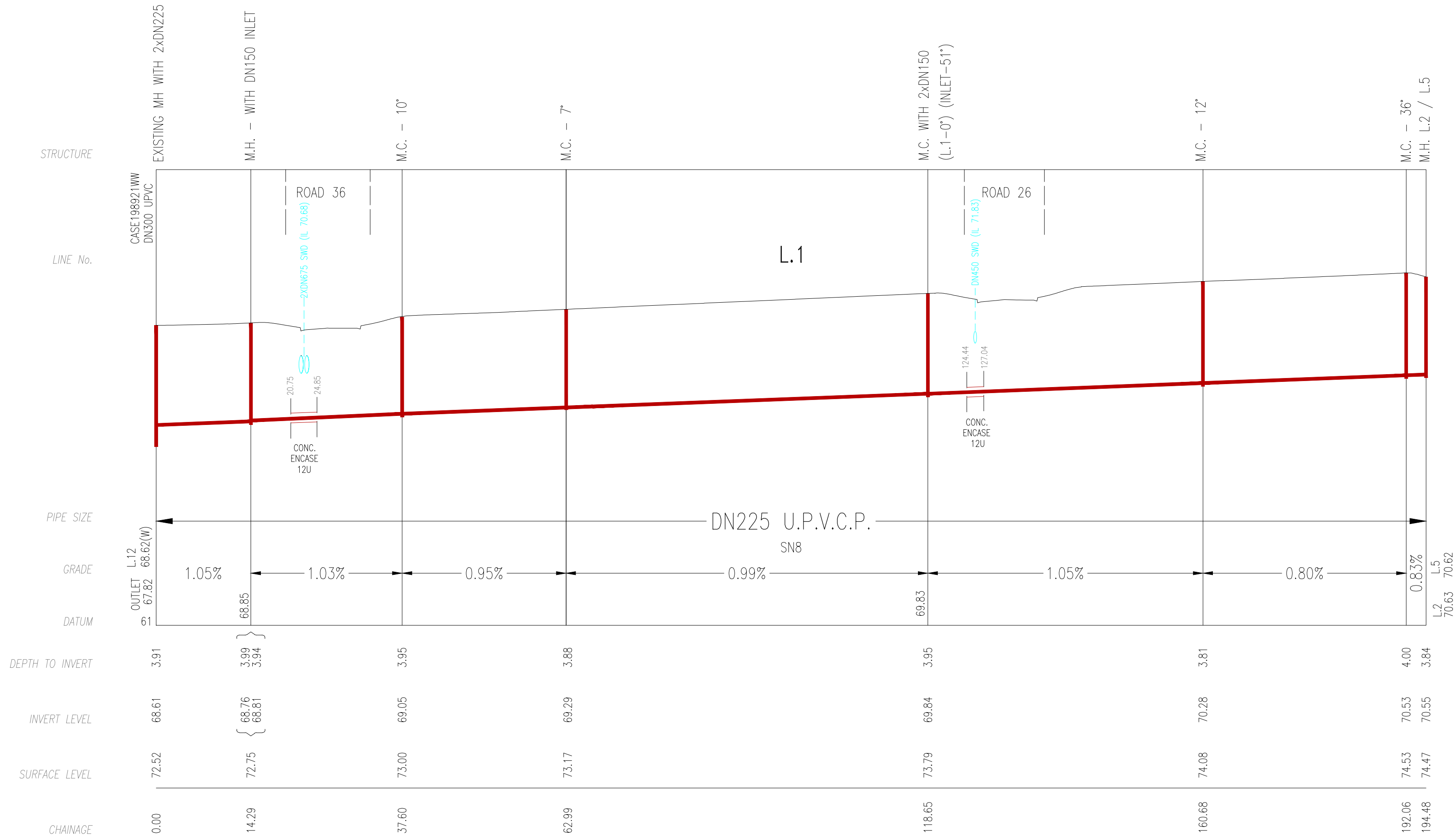
JOIN SHEET 2

JOIN SHEET 2

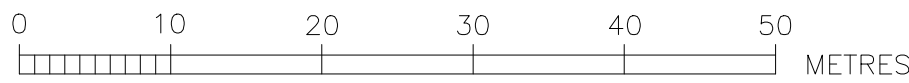
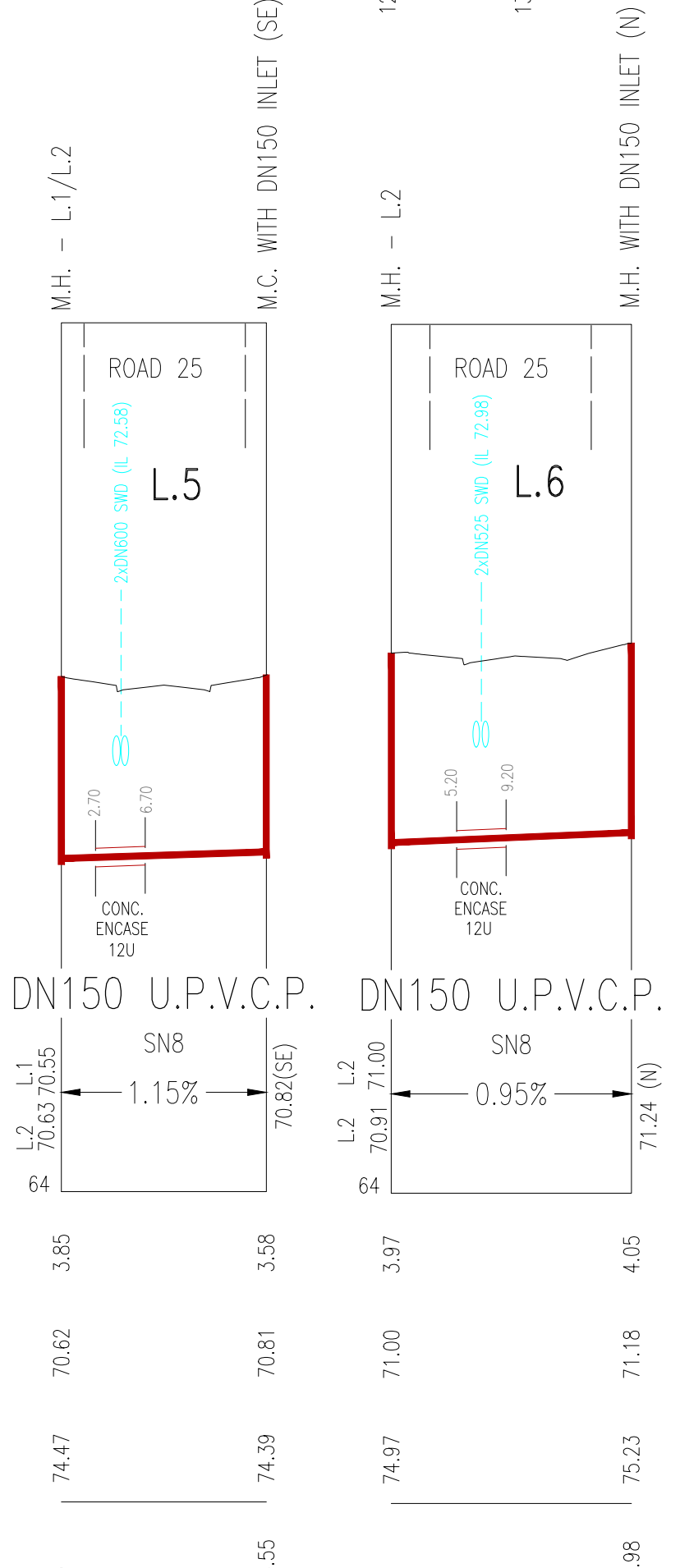
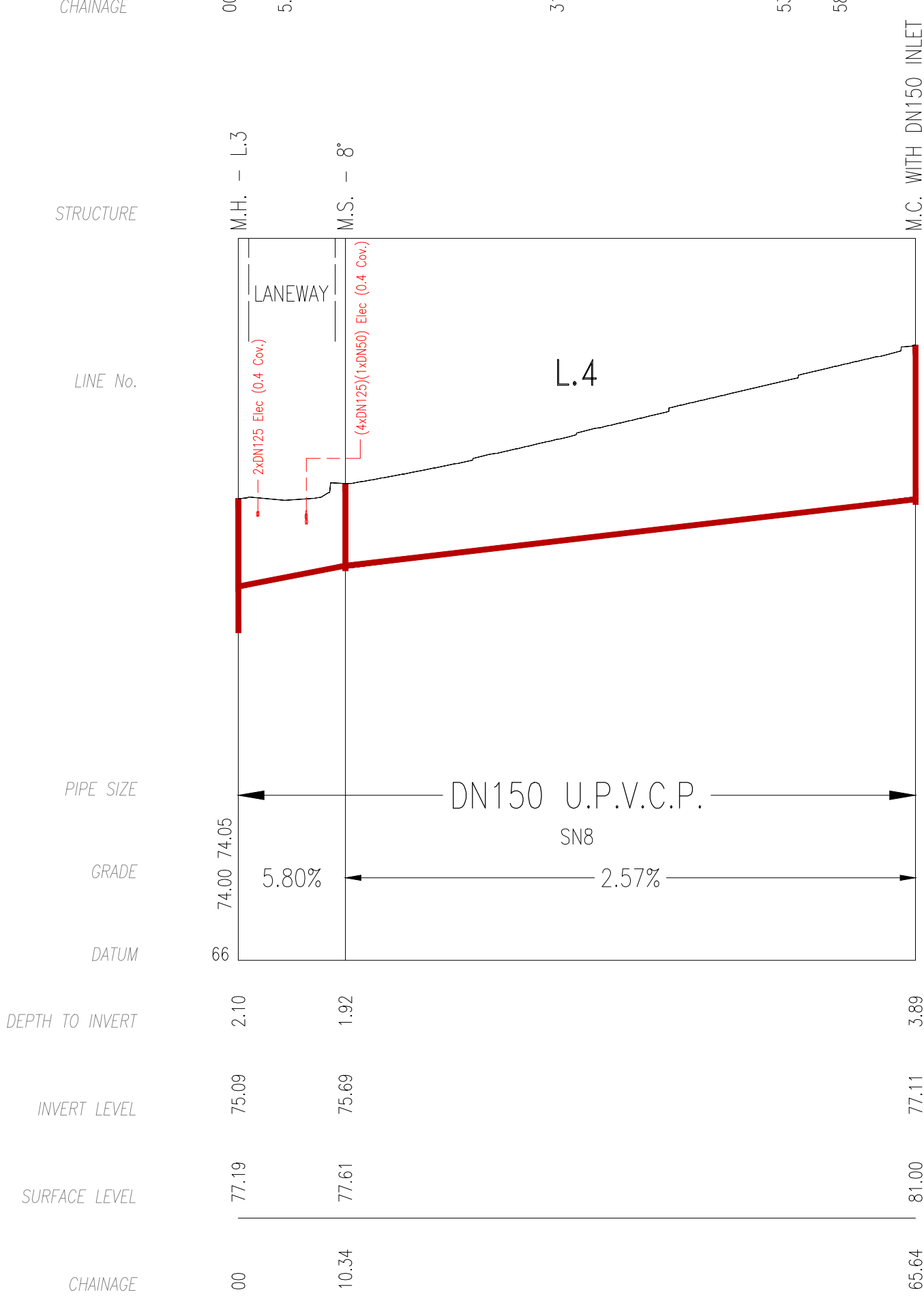
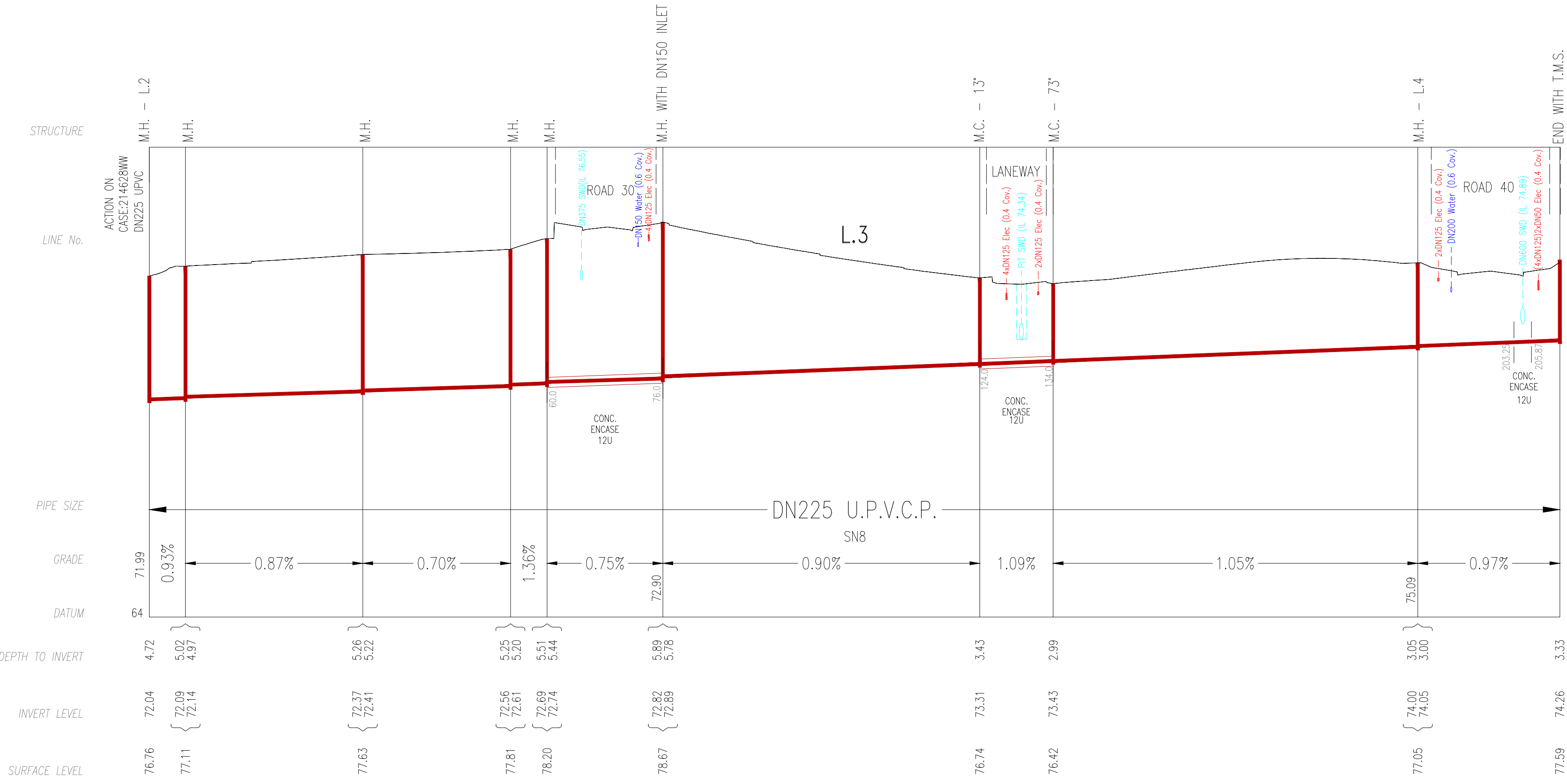
⊕ DONATES A DN225 JUNCTION



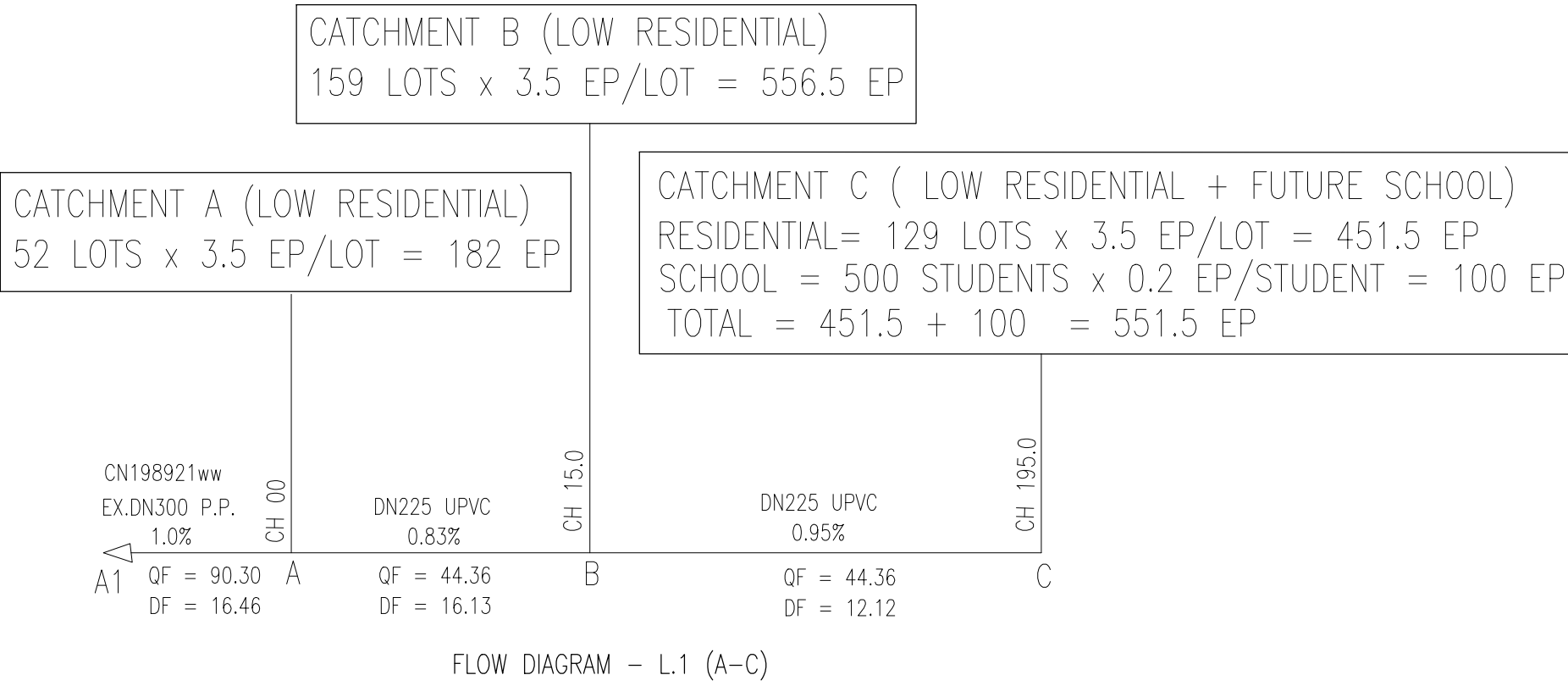
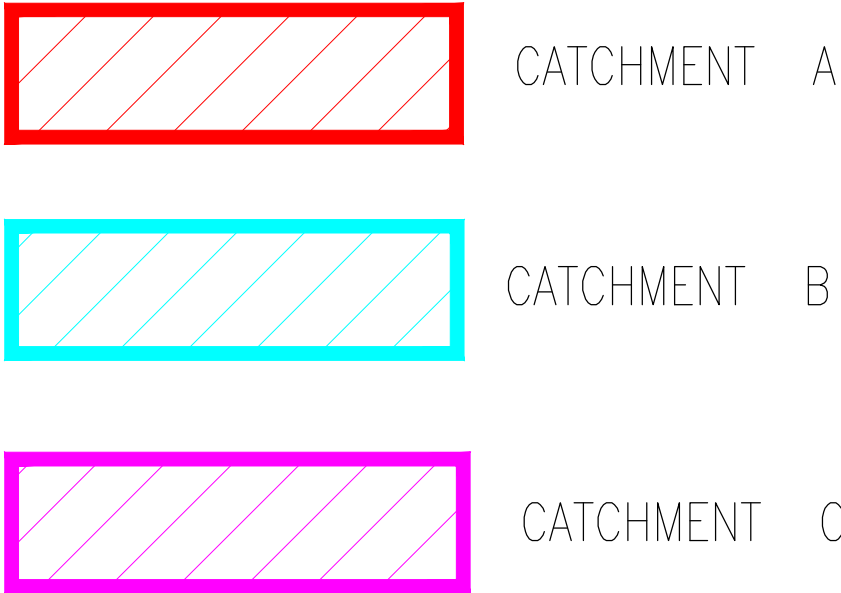
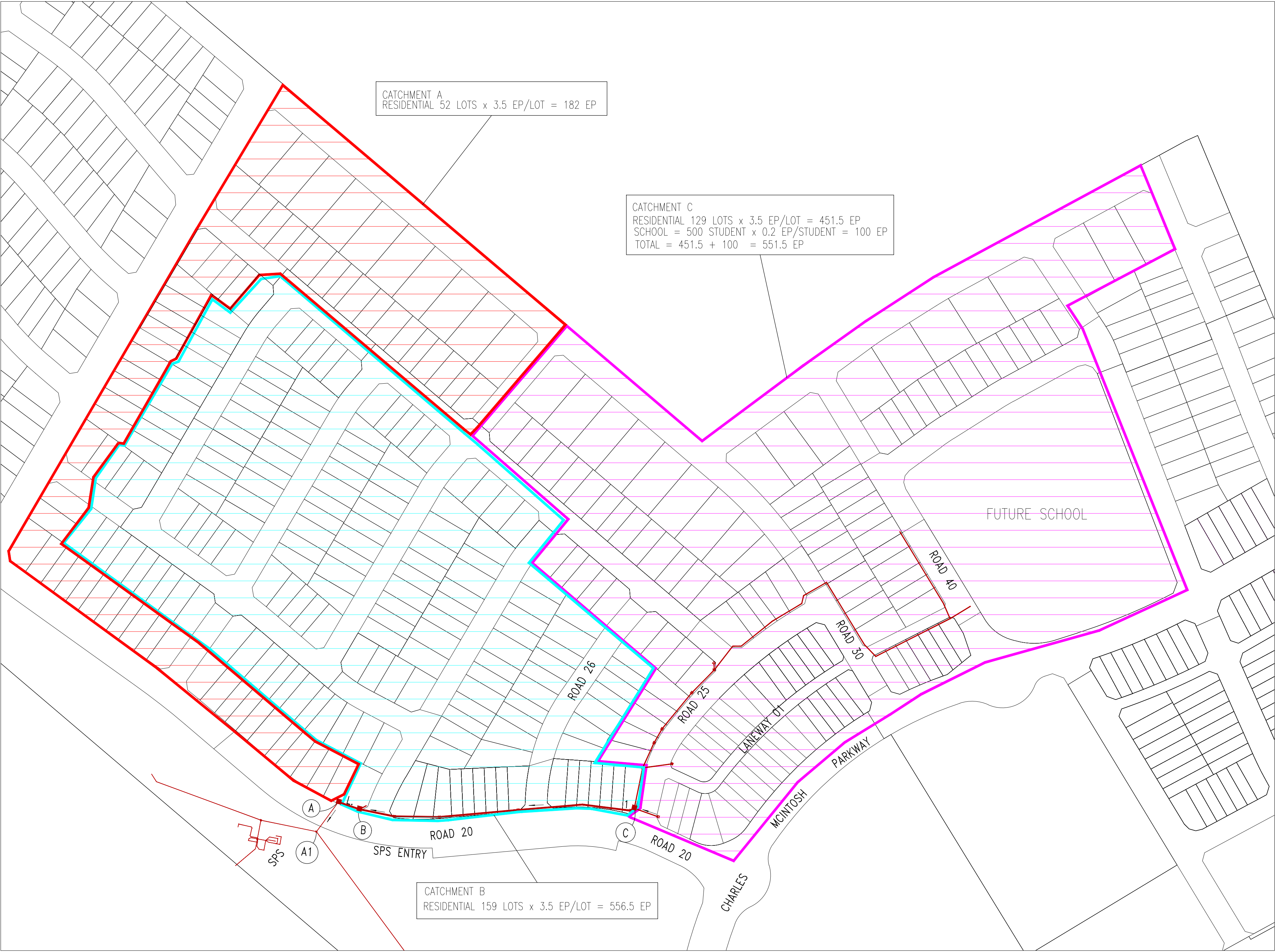
WORK AS CONSTRUCTED CERTIFICATION		SYDNEY WATER CORPORATION	
DEVELOPER	MIRVACH HOMES PTY LTD.		
W.S.C.	ORION CONSULTING ENGINEERS PTY LTD.		
CONSTRUCTOR	GLENMORE PARK PLUMBING & DRAINAGE	Case No. 214673WW	
COMPLETED	23/10/2025	SHT 3	OF 6 SHTS.
W.A.C. PREPARED	28/01/2025	SYDNEY WATER CORPORATION FOR DETAILS OF SERVICES SEE SHEET 1	
DESIGNER	Rimon Awad		
I CERTIFY THAT THE WORKS HAVE BEEN CONSTRUCTED IN ACCORDANCE WITH THE WORK AS CONSTRUCTED DRAWINGS			



WORK AS CONSTRUCTED CERTIFICATION		SYDNEY WATER CORPORATION	
DEVELOPER	MIRVAC HOMES PTY LTD.		
W.S.C.	ORION CONSULTING ENGINEERS PTY LTD.		
CONSTRUCTOR	GLENMORE PARK PLUMBING & DRAINAGE	Case No. 214673WW	
COMPLETED	23/10/2025	SHT 4	OF 6 SHTS.
W.A.C. PREPARED	28/01/2025	SYDNEY WATER CORPORATION FOR DETAILS OF SERVICES SEE SHEET 1	
DESIGNER	Rimon Aweid		
I CERTIFY THAT THE WORKS HAVE BEEN CONSTRUCTED IN ACCORDANCE WITH THE WORK AS CONSTRUCTED DRAWINGS			



WORK AS CONSTRUCTED CERTIFICATION		SYDNEY WATER CORPORATION	
DEVELOPER	MIRVACH HOMES PTY LTD.		
W.S.C.	ORION CONSULTING ENGINEERS PTY LTD		
CONSTRUCTOR	GLENMORE PARK PLUMBING & DRAINAGE	Case No. 214673WW	
COMPLETED	23/10/2025	SHT 5	OF 6 SHTS.
W.A.C. PREPARED	28/01/2025	SYDNEY WATER CORPORATION FOR DETAILS OF SERVICES SEE SHEET 1	
DESIGNER	Rimon Aweid		
I CERTIFY THAT THE WORKS HAVE BEEN CONSTRUCTED IN ACCORDANCE WITH THE WORK AS CONSTRUCTED DRAWINGS			



FLOW SCHEDULE

SUMMARY																					
Section	Line No	Chainage	Pipe Status	Total Area	Total Gravity	Total Grav + Pump	Pipe Material	Pipe Size	Pipe Size (ID)	Pipe Grade	Design Flow (DF)	Actual PDWF	Qf (Capacity)	Velocity @ Qf	Velocity @ PDWF	SHEAR STRESS	Grade Check	Max EP Check	Self Cleansing	Slime Control	Capacity Check
		m		Ha	EP	EP		mm	mm	%	L/s	L/s	L/s	m/s	m/s	Pa		for dia <= 300			
A-A1	A-A1	00	EXISTING	2.55	1430	1430	PVC-UPN16	300	291	1.00	17.29	8.07	90.30	1.36	0.88	3.73		RETIC 6950EP MAX	Self Cleansing OK	Slime Control OK	Capacity OK
B-A	B-A	15	NEW	2.39	1248	1248	PVC-UPN16	225	231	0.83	16.13	7.28	44.36	1.06	0.83	3.26		RETIC 2931EP MAX	Self Cleansing OK	NA - Reticulation	Capacity OK
C-B	C-B	195	NEW	2.27	632	632	PVC-UPN16	225	231	0.83	12.12	4.63	44.36	1.06	0.72	2.64		RETIC 2931EP MAX	Self Cleansing OK	NA - Reticulation	Capacity OK

WORK AS CONSTRUCTED CERTIFICATION

DEVELOPER

W.S.C.

CONSTRUCTOR

COMPLETED

W.A.C. PREPARED

DESIGNER

MIRVACH HOMES PTY LTD.

ORION CONSULTING ENGINEERS PTY LTD.

GLENMORE PARK PLUMBING & DRAINAGE

23/10/2025

28/01/2025

Rimon Aweid

Sydney WATER

Sydney Water Corporation

Case No. 214673WWW

SHT 6 OF 6 SHTS.

Sydney Water Corporation

FOR DETAILS OF SERVICES SEE SHEET 1

DESIGNED: R.A. DRAFTED: R.A. VERIFIED: M.K. REVIEWED: M.K. APPROVED: M.K. ISSUED: 28.01.2026