

DO NOT SCALE THIS DRAWING  
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REVISIONS

No	Description	Date	By
A	FOR APPROVAL	05.02.19	RW
B	NON-CONFORMING NOTES ADDED	07.02.19	RW
C	UNITYWATER R4 AMENDMENT	21.02.19	RW



Associated Consultants

Client



16 - 22 VIERITZ ROAD  
BELLMERE



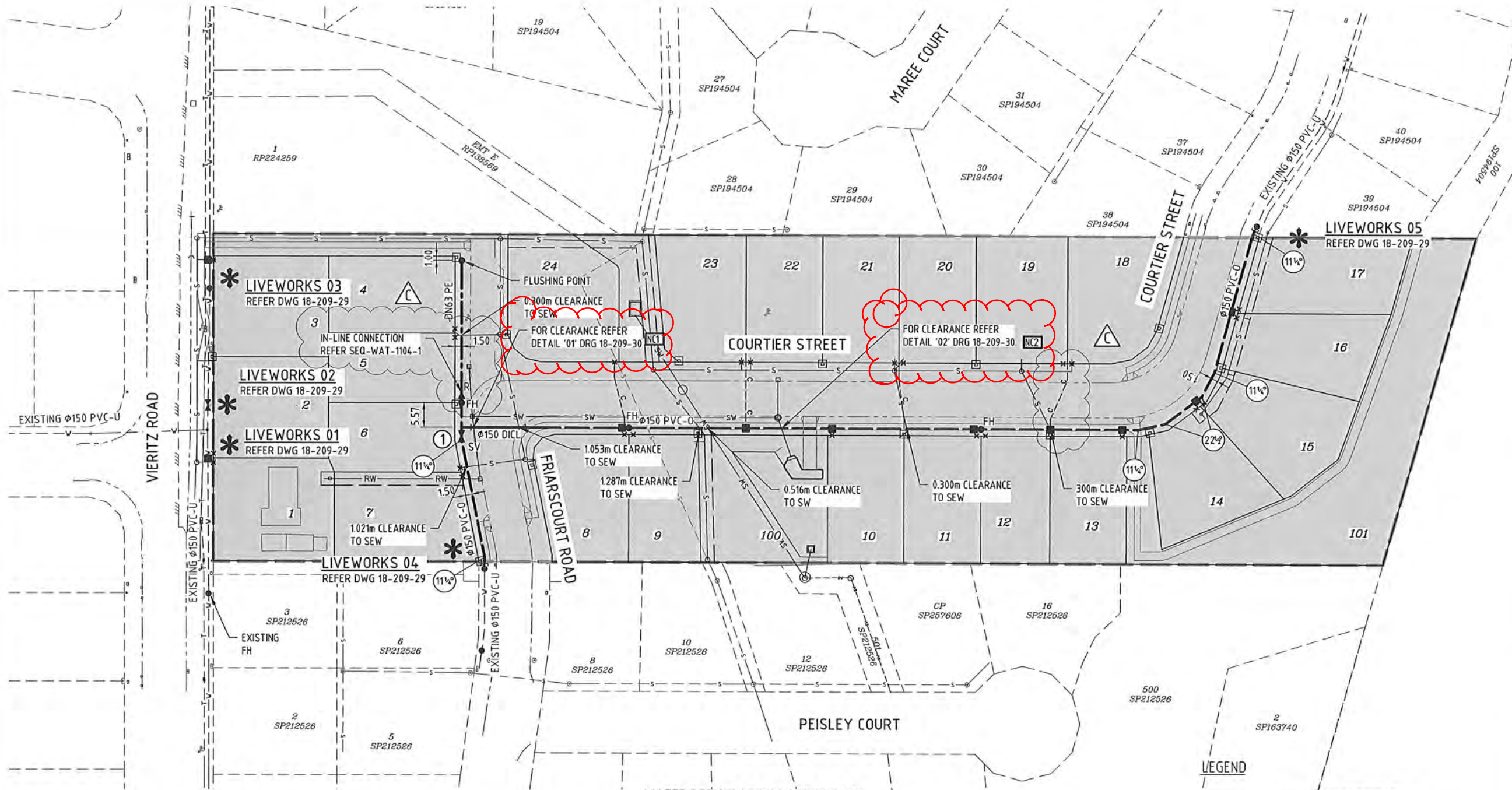
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Approved Director - RPEQ 17544

M.L. 5.3.19

Drawing Title  
WATER RETICULATION  
LAYOUT PLAN

Drawn	Designed	Checked	Date
RW	JB	MS	JAN 19
Scale AS SHOWN			Sheet 28 of 36
Drawing No A1 18-209-28		Revision C	



WATER RETICULATION LAYOUT PLAN  
SCALE 1:500

UNITYWATER LIVE WATER  
CONNECTION TABLE

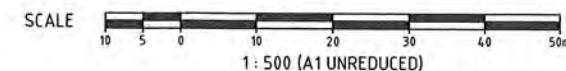
LOCATION	DIAMETER
FRIARSCOURT ROAD ADJACENT TO LOT 7	φ150
COURTIER STREET ADJACENT TO LOT 17	φ150
VIERITZ ROAD ADJACENT TO LOT 1 AND 2	φ150
VIERITZ ROAD ADJACENT TO LOT 2	φ150
VIERITZ ROAD ADJACENT TO LOT 3	φ150

LEGEND

- STAGE BOUNDARY
- WATER READY TAP
- PROPOSED φ63 PE WATER MAIN
- PROPOSED 150φ PVC WATER MAIN
- PROPOSED CONDUIT
- x x FH WATER SERVICE LOCATION
- FIRE HYDRANT
- TFH TEMPORARY DUCK FOOT HYDRANT END
- SV STOP VALVE
- φ150 PVC-O R DN63PE REDUCER
- \* CONNECTION REQUIRED BY UNITYWATER
- PROPOSED/FUTURE STORMWATER MAIN
- PROPOSED/FUTURE SEWER MAIN
- EXISTING WATER MAIN
- EXISTING STORMWATER MAIN
- EXISTING SEWER MAIN
- ELECTRICITY SERVICE POINT
- NC# DENOTES NON-CONFORMING DESIGN ASPECT. REFER TO NON-CONFORMING DESIGN ASPECT NOTES ON KN DWG No. 16-209-30 FOR DETAILS.

NOTE

- ALL WORK ON EXISTING WATER MAINS TO BE CARRIED OUT BY UNITYWATER, AT THE DEVELOPERS EXPENSE.
- WATER MAIN CROSSING UNDER ROAD TO BE LOCATED UNDER ROAD PAVEMENT
- ALL FIRE HYDRANTS TEES AND RISERS TO BE DN100



The Essential First Step.

SCHEDULE OF FITTINGS

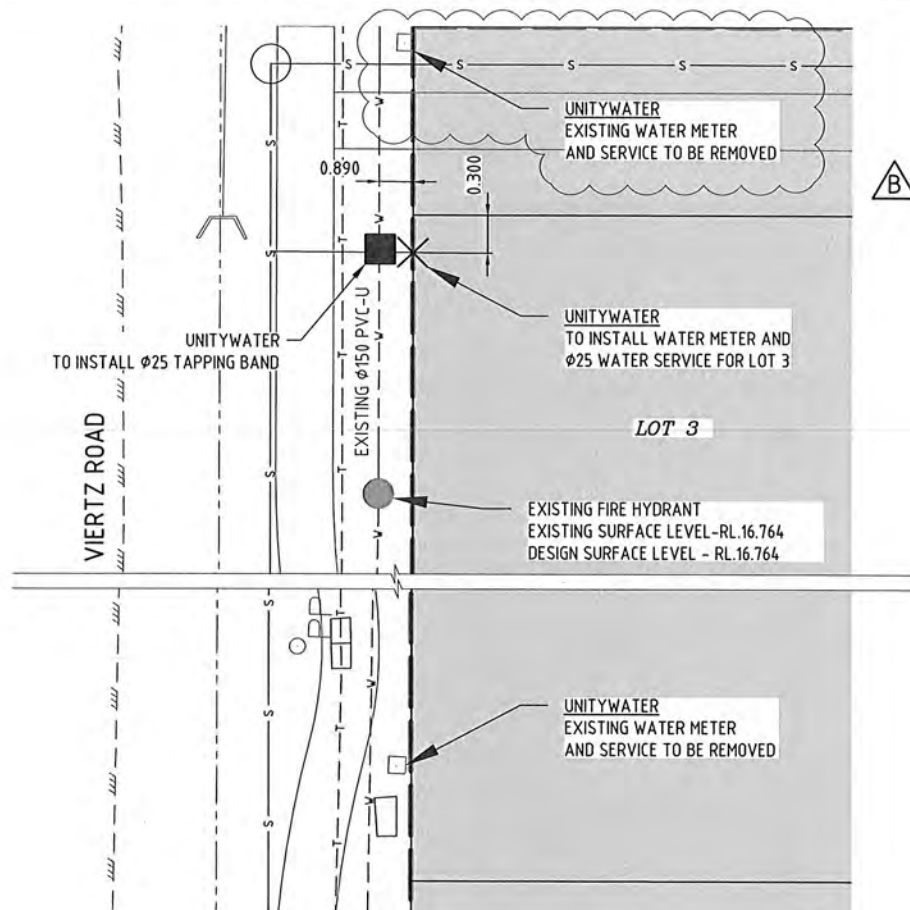
- ① φ150 x φ150 x φ150 TEE 1 REQUIRED

SCHEDULE OF PIPES AND FITTINGS

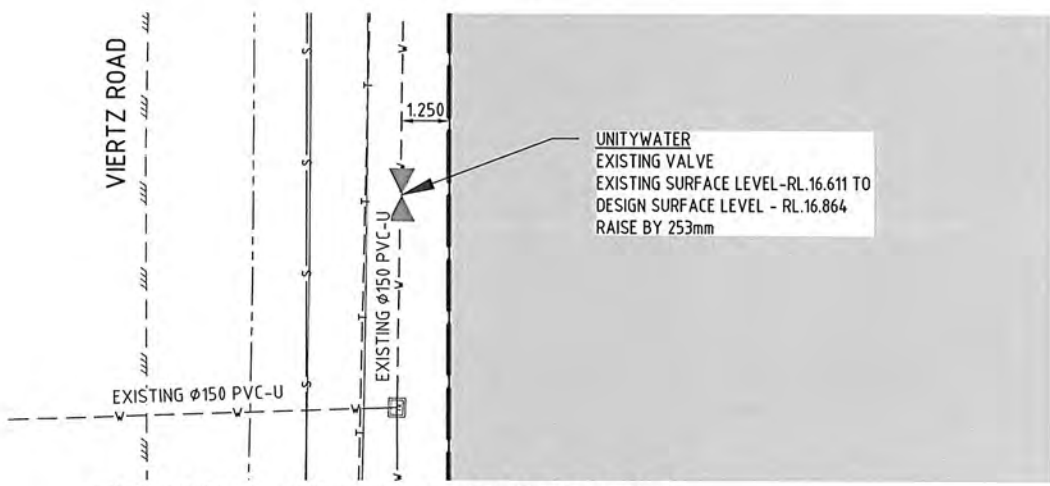
PIPE SIZE	LENGTH(m)	VALVE	FIRE HYDRANT	TEMP FIRE HYDRANT	11° BEND	22½° BEND	45° BEND	90° BEND
DN63 PE	32.0	-	-	-	-	-	-	-
φ150 PVC-O	229.6	1	4	-	4	2	-	-
φ150 DI CL	16.5	-	-	-	-	-	-	-

NOTE - "DUCTILE IRON" PIPEWORK UNDER ROAD CARRIAGEWAYS DENOTES DI CL CLASS PN35 OR PVC CLASS 20.

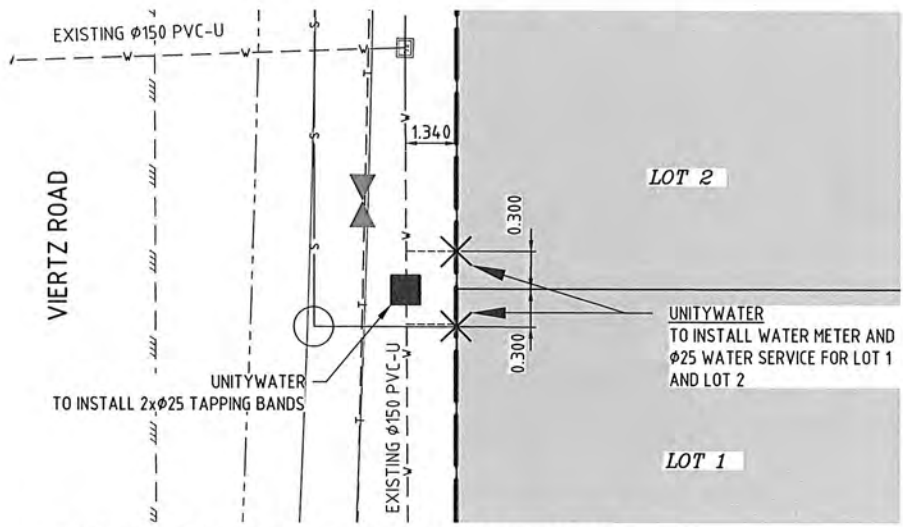




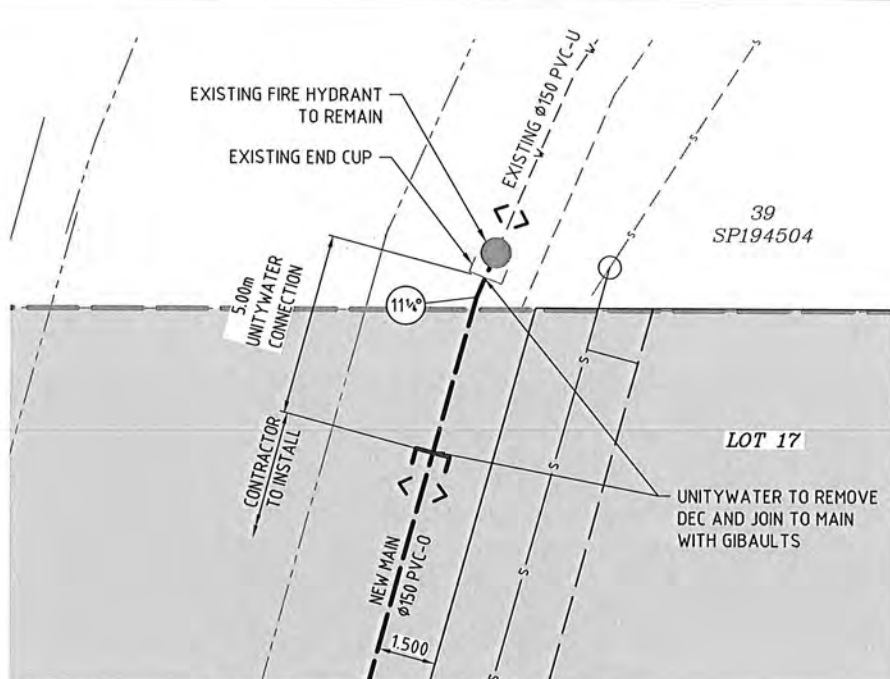
**LIVE CONNECTION 03 - VIERZ ROAD ADJACENT TO LOT 3**  
SCALE 1:100



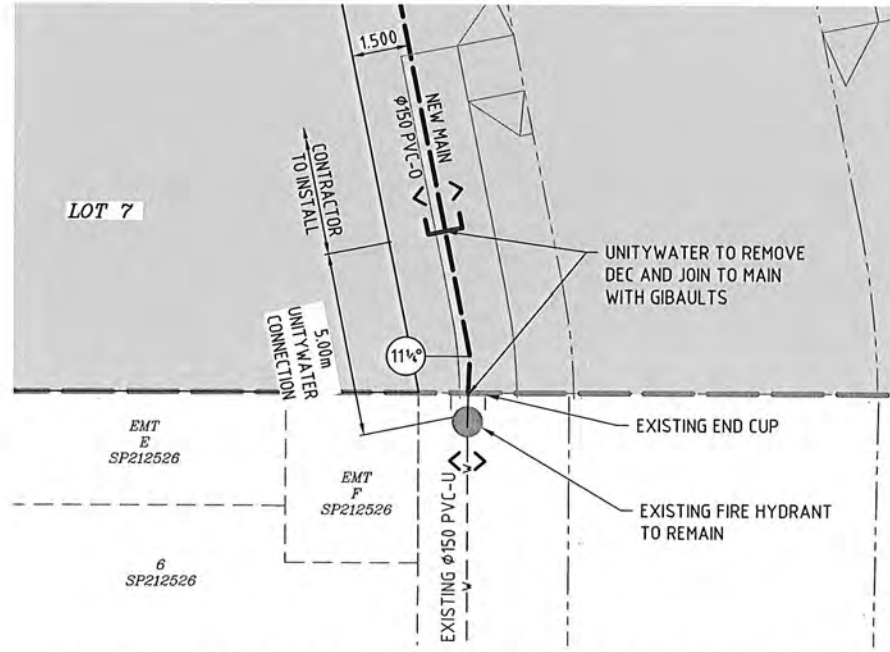
**LIVEWORKS 02 - VIERZ ROAD ADJACENT TO LOT 2**  
SCALE 1:100



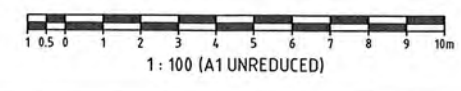
**LIVEWORKS 01 - VIERZ ROAD ADJACENT TO LOT 1**  
SCALE 1:100



**LIVE CONNECTION 05 - COURTIER STREET ADJACENT TO LOT 39 SP194504**  
SCALE 1:100



**LIVE CONNECTION 04 - FRIARSCOURT ROAD ADJACENT TO LOT 6 SP212526**  
SCALE 1:100



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REVISIONS

No	Description	Date	By
A	FOR APPROVAL	05.02.19	RW
B	UNITYWATER RFI AMENDMENT	21.02.19	RW

Associated Consultants

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Client



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Approved Director - RPEQ 17544  
*M.L.* 5.3.19

Drawing Title  
**WATER RETICULATION  
LIVE CONNECTION  
DETAILS**

Drawn RW	Designed JB	Checked MS	Date JAN 19
Scale AS SHOWN	Sheet 29 of 36		Revision B
Drawing No 18-209-29			

HA\2018\18209-16-22 Vierz Road Bellmere\Engineering\Acad\18-209-28-30-WATER.dwg Plotted by: Rfw on 19/02/2019 12:19:32 PM



DO NOT SCALE THIS DRAWING  
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REVISIONS

No	Description	Date	By
A	FOR APPROVAL	05.02.19	RW
B	WATER CROSSING NOTE AMENDED	07.02.19	RW
C	UNITYWATER RII AMENDMENT	21.02.19	RW

GENERAL NOTES

- ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH CURRENT SEQ WS&S AND D&C SPECIFICATIONS AND STANDARDS.
- UNLESS SPECIFIED OTHERWISE ALL MATERIALS AND WORK SHALL COMPLY WITH THE RELEVANT AUSTRALIAN STANDARDS.
- ADOPT LIP OF KERB OR SHOULDER OF ROAD AS PERMANENT LEVEL.
- COVER OVER MAINS FROM PERMANENT LEVEL TO IN ACCORDANCE WITH TABLE 7.2 OF WSA03-2011 AND STD DRG SEQ-WAT-1200-2.
- MINIMUM EMBEDMENT SHALL BE IN ACCORDANCE WITH STANDARD DRAWING Nos. SEQ-WAT-1200-2 TO SEQ-WAT-1203-1.
- THRUST BLOCKS SHALL BE IN ACCORDANCE WITH AND PRESSURE TESTED TO 1200kPa AS PER STANDARD DRAWING No. SEQ-WAT-1205-1, SEQ-WAT-1206-1 AND SEQ-WAT-1207-1.
- CONDUITS AND SERVICES TO BE INSTALLED IN ACCORDANCE WITH THE STANDARD DRAWING No. SEQ-WAT-1108-1 & SEQ-WAT-1108-2.
- A WATER METER SUPPLIED AT THE DEVELOPER'S COST, IS TO BE INSTALLED AT THE SERVICE POINT OF EACH LOT IN ACCORDANCE WITH STANDARD DRAWING No. SEQ-WAT-1108-3.
- ALL MATERIALS USED IN THE WORKS SHALL BE AS FOLLOWS:  
- ALL CAST IRON FITTINGS SHALL BE TO AS2544 WITH SOCKET ENDS DESIGNED FOR USE WITH UPVC OR DUCTILE IRON PIPES AS APPLICABLE AND SHALL BE 'LIGHT' CEMENT LINED.  
- PRESSURE PIPES USED FOR WATER SUPPLY INSTALLATION SHALL BE RUBBER RING JOINTED PIPES AND SHALL BE PVC-0 PN16.  
- PIPES MUST BE AC/DUCTILE IRON OD COMPATIBLE. OTHER TYPES AND CLASSES OF PIPES SHALL NOT BE INSTALLED.  
- CAST IRON GATE (SLUICE) VALVES SHALL CONFORM TO AS2638.  
- ALL VALVES AND HYDRANTS SHALL BE COATED INTERNALLY AND EXTERNALLY WITH A FUSION BONDED EPOXY.  
- ALL NUTS AND WASHERS SHALL BE STAINLESS STEEL GRADE 316.  
- ALL NUTS AND WASHERS SHALL BE STAINLESS STEEL GRADE 316.  
- DETECTABLE MARKER TAPE TO BE INSTALLED ON ALL NEW WATERMAIN.
- ALL CONCRETE FOOTPATHS TO BE CLEAR OF WATER MAINS (WHERE APPLICABLE).
- TEST/CHLORINATION POINTS TO BE INSTALLED IN ACCORDANCE WITH STANDARD DRAWING No. SEQ-WAT-1410-1.
- MARKERS SHALL BE INSTALLED FOR ALL SERVICE CROSSINGS, HYDRANTS AND VALVES IN ACCORDANCE WITH STANDARD DRAWING Nos. SEQ-WAT-1108-1 & -2, SEQ-WAT-1300-1 AND SEQ-WAT-1300-2.
- THE CONSTRUCTION OF THE WATER RETICULATION WORK SHOWN ON THIS DRAWING MUST BE SUPERVISED BY AN ENGINEER WHO HAS R.P.E.Q. REGISTRATION. WORKS NOT COMPLYING WITH THIS REQUIREMENT WILL NOT BE PERMITTED TO CONNECT TO THE RETICULATION SYSTEM.
- WATER MAIN SHALL BE LAID AT 1500m ALIGNMENT FROM PROPERTY BOUNDARY UNLESS NOTES OTHERWISE.  
WHERE PERMANENT HYDRANTS ARE NOT INSTALLED AT END OF MAINS OF EACH STAGE, A TEMPORARY HYDRANT WILL BE INSTALLED INSTEAD.  
NEW WATER MAINS UNDER EXISTING ROADS TO BE TUNNEL BORED, UNLESS NOTED OTHERWISE.
- ALL VALVE ASSEMBLY SHALL BE IN ACCORDANCE WITH SEQ-WAT-1301-1 TRAFFICABLE LID.
- ALL WATER SERVICES TO COMPRISE 20mm I.D. SERVICES PRE-TAPPED CONNECTOR & 20mm I.D. SERVICE WITH LOCKABLE BALL VALVE UPSTREAM OF WATER METER (REFER SEQ-WAT-1108-3 ITEM 2) TO BE PROVIDED FOR FUTURE LOTS
- MAXIMUM ALLOWABLE PIPE DEFLECTION IS 1° DEGREES OR AS PER MANUFACTURERS SPECIFICATION.
- ROAD CROSSING DEPTH MUST ACCOUNT FOR THE CONSTRUCTION PHASE OF THE DEVELOPMENT.
- WATERMAIN EMBEDMENT TO BE TYPE C SUPPORT AS PER SEQ-WAT-1201-1 OR AS DIRECTED BY SITE SUPERINTENDANT.

SERVICE CONDUITS

- SERVICE CONDUITS TO BE INSTALLED UNDER THE ROADWORKS CONTRACT AND SHOWN THUS: \_\_\_\_\_ ON THE DRAWINGS AND SHALL BE LOCATED AND INSTALLED IN ACCORDANCE WITH SEQ-WAT-1108-1.
- CONDUITS UNDER ROADS ARE TO BE A SINGLE 100Ø UPVC PN9 SERIES 1 CONDUIT WITH 2 x 25Ø HDPE PE100 PN16 SERVICES FOR LENGTH LESS THAN OR EQUAL TO 20M OR 2 X DN32MM HDPE PE100 PN16 SERVICE PIPES FOR >20M AND <40M LONG.

VEGETATION PROTECTION (WHERE APPLICABLE)

- TREES LOCATED ALONG THE FOOTPATH SHALL BE, TRANSPLANTED PRIOR TO CONSTRUCTION, OR REPLACED IF DESTROYED.
- WHEN WORKING WITHIN 4m OF TREES, RUBBER OR HARDWOOD GIRDLES SHALL BE CONSTRUCTED WITH 1.8m BATTENS CLOSELY SPACED AND ARRANGED VERTICALLY FROM GROUND LEVEL. GIRDLES SHALL BE STRAPPED TO TREES PRIOR TO CONSTRUCTION AND REMAIN UNTIL COMPLETION.
- TREE ROOTS SHALL BE TUNNELLED UNDER, RATHER THAN SEVERED. IF ROOTS ARE SEVERED THE DAMAGED AREA SHALL BE TREATED WITH A SUITABLE FUNGICIDE. CONTACT RELEVANT COUNCIL ARBORIST FOR FURTHER ADVICE.
- ANY TREE LOPPING REQUIRED SHOULD BE UNDERTAKEN BY AN APPROVED ARBORIST.

SOIL (WHERE APPLICABLE)

- TOPSOIL AND SUBSOIL SHOULD BE STOCKPILED SEPARATELY.
- CARE SHOULD BE TAKEN TO PREVENT SEDIMENT FROM ENTERING THE STORMWATER SYSTEM. THIS MAY INVOLVE PLACING APPROPRIATE SEDIMENT CONTROL AROUND STOCKPILES.
- ACID SULPHATE SOILS (ASS) MAY BE ENCOUNTERED FOR WORKS BELOW RL 5.00. REFER NORTH HARBOUR RESIDENTIAL EARTHWORKS ASSMP DATED 20<sup>th</sup> DECEMBER 2016.

CREEK CROSSINGS (WHERE APPLICABLE)

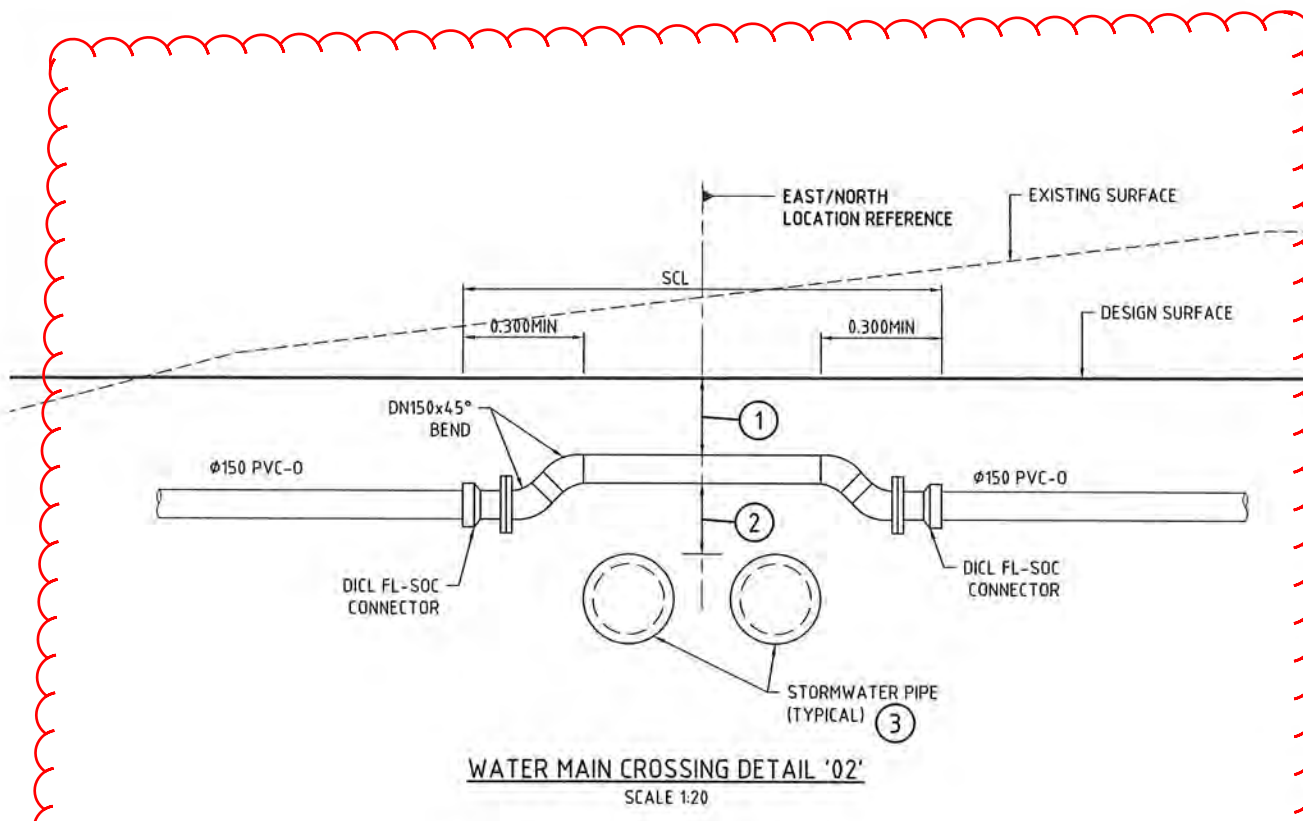
- SILTATION CONTROL MEASURES SHALL BE PLACED DOWNSTREAM OF ANY EXCAVATION WORK.
- APPROPRIATE SEDIMENT CONTROLS SHALL BE USED TO PREVENT SEDIMENT FROM ENTERING THE CREEK.
- NO SOIL SHOULD BE STOCKPILED WITHIN 5m OF CREEK.

REHABILITATION (WHERE APPLICABLE)

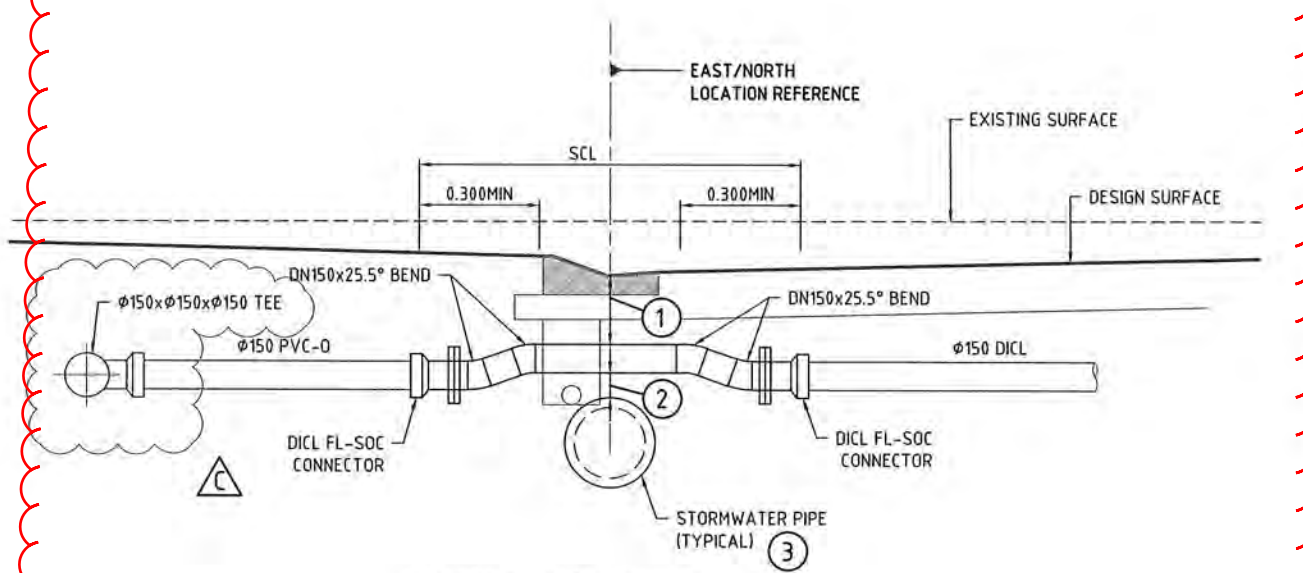
- PREDISTURBANCE SOIL PROFILES AND COMPACTION LEVELS SHALL BE REINSTATED.
- PREDISTURBANCE VEGETATION PATTERNS SHALL BE RESTORED.

NOTE  
WATER MAIN PIPES ARE TO BE INSTALLED UNDER PAVEMENT CONSTRUCTION

NOTE  
1. ALL WORK ON EXISTING WATER MAINS TO BE CARRIED OUT BY UNITYWATER, AT THE DEVELOPERS EXPENSE.  
2. WATER MAIN CROSSING UNDER ROAD TO BE LOCATED UNDER ROAD PAVEMENT  
3. ALL FIRE HYDRANTS TEES AND RISERS TO BE DN100



WATER MAIN CROSSING DETAIL '02'  
SCALE 1:20



WATER MAIN CROSSING DETAIL '01'  
SCALE 1:20

WATER MAIN CROSSING HIERARCHY:

- DICT PIPE BELOW ROAD BOXING WITH REDUCED COVER UNDER IMPOSED CONSTRUCTION LOADS AND MINIMUM CLEARANCE TO OTHER SERVICES ACHIEVED.
- FULLY WELDED SCL PIPE SEGMENT OVER STORMWATER WHERE MINIMUM 300mm COVER TO FSL CAN BE ACHIEVED AND MINIMUM CLEARANCE TO OTHER SERVICES CANNOT BE ACHIEVED  
a. PAVEMENT DEPTH IS GREATER THAN 300mm, ROAD AUTHORITY REQUIRED AND ENCASE SCL PIPE CROSSING AS PER SEQ-WAT-1203-1 TYPE J  
b. MINIMUM 50mm VERTICAL CLEARANCE IS MAINTAINED BETWEEN THE OUTSIDE DIAMETER OF THE WATER AND STORMWATER PIPES CONSIDERING JOINTS.

WATER MAIN MATERIAL	MINIMUM COVER TO FSL	WATER MAIN NB ≤ 200mm CLEARANCE TO STORMWATER
DICT	0.600m AND NOT IN ROAD BOX	0.100m
SCL	0.300m TYPE J SUPPORT IF IN ROAD BOX	0.050m
PE	0.600m PLUS PAVEMENT DEPTH OR UNDER OBSTRUCTION	0.300m UNDER

SCL CROSSING	COVER ①	CLEARANCE ②	SWØ ③	EAST	NORTH
01	0.360m	0.130m	Ø375	492681.474	7002938.992
02	0.400m	0.380m	2xØ375	492683.848	7002869.532

ALL PIPES AND MATERIALS SHALL COMPLY WITH THE CURRENT SEQ WATER SUPPLY AND SEWERAGE DESIGN AND CONSTRUCTION CODE "ACCEPTED PRODUCTS AND MATERIALS" LIST.



Associated Consultants



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BELLMERE



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Approved Director - RPEQ 17564  
*M.L. 5.3.19*

Drawing Title  
WATER RETICULATION NOTES

Drawn	Designed	Checked	Date
RW	JB	MS	JAN 19

Scale	Sheet
AS SHOWN	30 of 36

Drawing No	Revision
A1	C

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