

**NOTES**

1. ALL WORKS TO BE IN ACCORDANCE WITH WAIKATO REGIONAL INFRASTRUCTURE TECHNICAL SPECIFICATIONS.
2. COORDINATES IN TERMS OF NZ GEODETIC DATUM BAY OF PLENTY 2000. LEVELS IN TERMS OF THE NEW ZEALAND VERTICAL DATUM 2016.
3. THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS THAT MAY BE AFFECTED BY THEIR OPERATIONS.
4. CONTRACTOR TO CHECK ALL DIMENSIONS PRIOR TO CONSTRUCTION FABRICATION.
5. HEAVY DUTY MANHOLE LIDS AND FRAMES TO BE USED IN TRAFFICED AREAS.
6. ALL MANHOLES ARE TO BE 105MM Ø PRE CAST CONCRETE UNLESS SHOWN OTHERWISE.
7. REFER TO ADEQUATE SPECIFICATION FOR RELEVANT WASTEWATER PUMP STATION SPECS AND INSTALLATION PROCESS.
8. ALL LINES SHALL BE MARKED AS PER THE UNIT OPERATIONS MANUAL AND ALL MANHOLES AND OUTSINGING PIPES NOT MORE THAN 600mm AWAY FROM THE MANHOLE WALL.

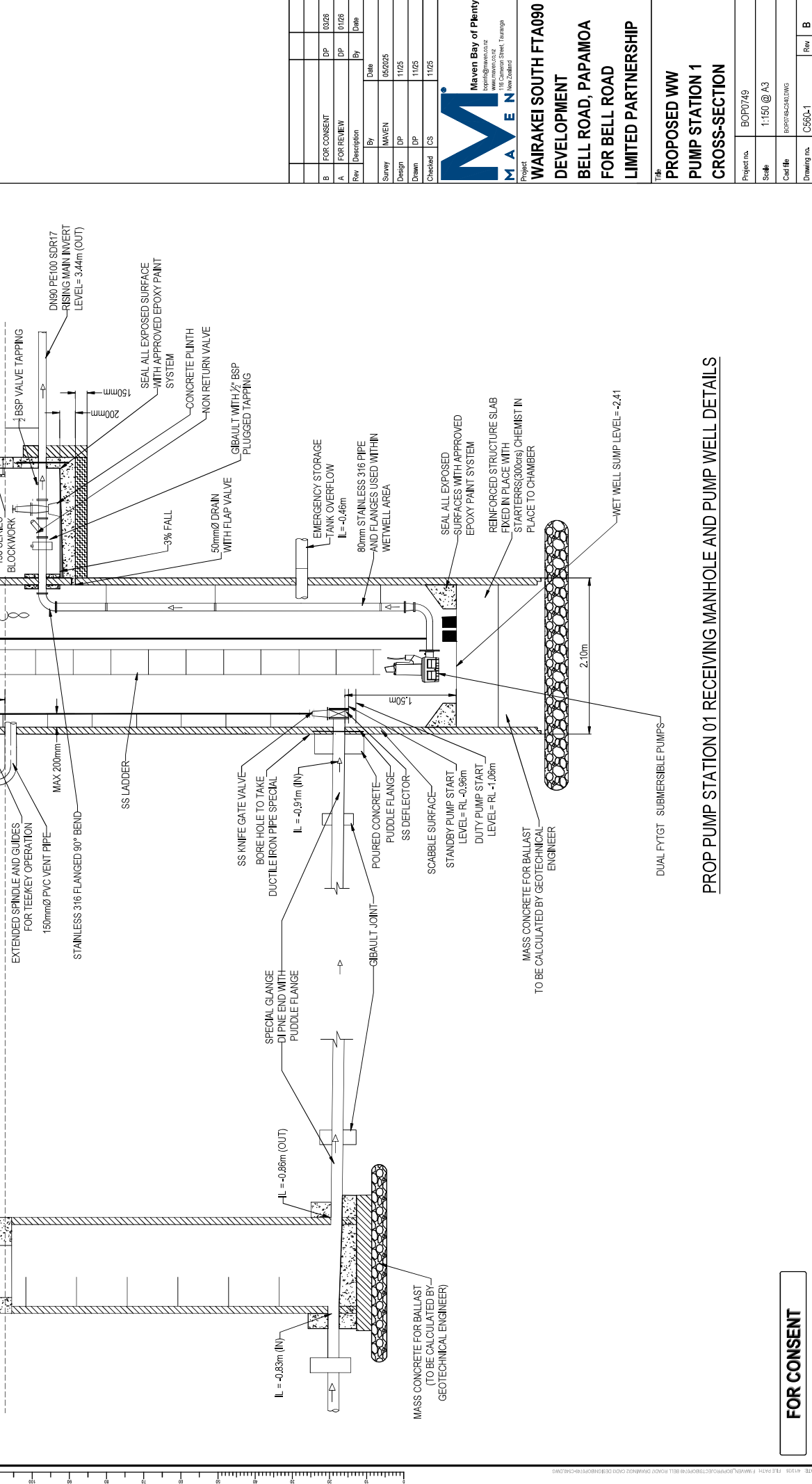
FOR CONSENT	DP	03/26	
FOR REVIEW	DP	01/26	
Rev	Description	By	Date
Survey	M/A/E/N		05/2025
Design	DP		11/25
Drawn	DP		11/25
Checked	CS		11/25

**M A E N**  
 Maven Bay of Plenty  
 118 Cameron Street, Tauranga  
 www.maven.co.nz  
 07 778 9222

**Project**  
**WAIRAKEI SOUTH FTA090 DEVELOPMENT**  
**BELL ROAD, PAPAMOA FOR BELL ROAD LIMITED PARTNERSHIP**

**Title**  
**PROPOSED WW PUMP STATION 1 CROSS-SECTION**

**Project no.** BOP0749  
**Scale** 1:150 @ A3  
**Cad file** BOP090CSA01.DWG  
**Drawing no.** CS500-1  
**Rev** B



- NOTES**
- ALL WORKS TO BE IN ACCORDANCE WITH WAIKATO REGIONAL INFRASTRUCTURE TECHNICAL SPECIFICATIONS.
  - COORDINATES IN TERMS OF NZ GEODETIC DATUM BAY OF PLENTY 2000 LEVELS IN TERMS OF THE NEW ZEALAND VERTICAL DATUM 2016.
  - IT IS THE CONTRACTORS RESPONSIBILITY TO OBTAIN ALL NECESSARY PERMITS THAT MAY BE AFFECTED BY THEIR OPERATIONS.
  - CONTRACTOR TO CHECK ALL DIMENSIONS PRIOR TO CONSTRUCTION/FABRICATION.
  - HEAVY DUTY MANHOLE LIDS AND FRAMES TO BE USED IN TRAFFICKED AREAS.
  - ALL MANHOLES ARE TO BE 1050MMØ PRE CAST CONCRETE UNLESS SHOWN OTHERWISE.
  - REFER TO ADEQUATE SPECIFICATION FOR RELEVANT WASTEWATER PUMP STATION SPECS AND INSTALLATION PROCESS.
  - ALL LINES SHALL BE 1:1 SCALE UNLESS NOTED OTHERWISE. THE MANHOLE SHALL BE 1200mm Ø. THE SPRAY NOZZLE SHALL BE 1200mm Ø. THE SPRAY NOZZLE SHALL BE 1200mm Ø. THE SPRAY NOZZLE SHALL BE 1200mm Ø.

- ELECTRONIC SOLENOID VALVE IN STANDARD VALVE BOX ON EACH STORAGE LINE
- CONNECT TO THE SITES RPZ
- RL = TO BE CONFIRMED

BETE 316SS 1/2" 8FC-8 120 DEG SPRAY NOZZLE ENGINEERING

SPRAY SPARGE

PROMAX 1900mmØ HDPE STORAGE TANK  
LENGTH = 8.52m | VOLUME = 20000L

50mm 316SS

MAX 1200mm

1.00% GRADE

STANDARD MANHOLE COVER AND FRAME WITH 600Ø OPENING

MH (1050mmØ)  
LID LEVEL = -4.44m  
BASE = -0.37

LID LEVEL OF LOWEL W/MH IN INDEPENDENT = -3.89m

150mmØ uPVC @ 0.70%  
IL = -0.37 (OUT) TO PUMP WELL

HARD FILL (GAP) COMPACTED IN PLACE AROUND BOTH TANKS

FLOW

SCALE 1:50 @ A3

**PUMP 01 EMERGENCY STORAGE TANK SECTION**

MAVEN Bay of Plenty  
118 Cameron Street, Tauranga  
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07 770 0000

Project: **WAIRAKEI SOUTH FTA090 DEVELOPMENT**

**BELL ROAD, PAPAMOA FOR BELL ROAD LIMITED PARTNERSHIP**

Title: **PROPOSED WW PUMP STATION 1 CROSS-SECTION**

Project no. BOP0749

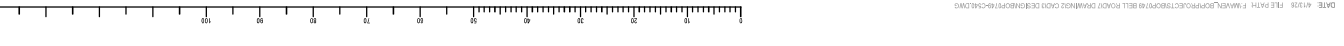
Scale 1:150 @ A3

Client file BOP0749/01/01/01/01/01/01

Drawing no. CS500-2

Rev	Description	By	Date
B	FOR CONSENT	DP	03/26
A	FOR REVIEW	DP	01/26

ORIGINAL SIZE: A3

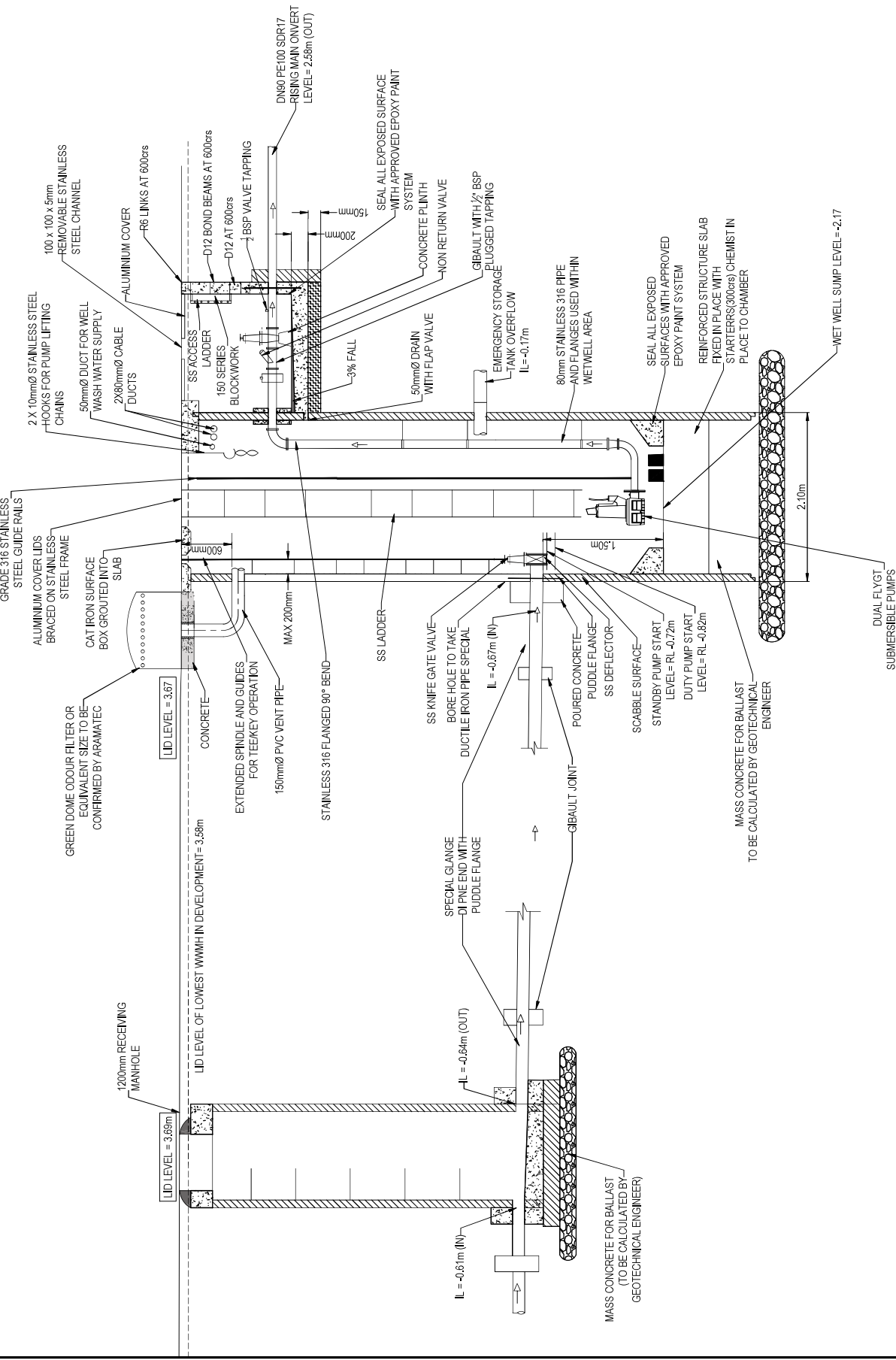


**FOR CONSENT**

GEO TECHNICAL ENGINEER TO CONFIRM BUOYANCY CALCULATIONS

**NOTES**

1. ALL WORKS TO BE IN ACCORDANCE WITH WAIKATO REGIONAL INFRASTRUCTURE TECHNICAL SPECIFICATIONS.
2. COORDINATES IN TERMS OF NZ GEODETIC DATUM BAY OF PLENTY 2000 LEVELS IN TERMS OF THE NEW ZEALAND VERTICAL DATUM 2016.
3. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS THAT MAY BE AFFECTED BY THEIR OPERATIONS.
4. CONTRACTOR TO CHECK ALL DIMENSIONS PRIOR TO CONSTRUCTION FABRICATION.
5. HEAVY DUTY MANHOLE LIDS AND FRAMES TO BE USED IN TRAFFICKED AREAS.
6. ALL MANHOLES ARE TO BE 105MM Ø PRE CAST CONCRETE UNLESS SHOWN OTHERWISE.
7. REFER TO ADEQUATE SPECIFICATION FOR RELEVANT WASTEWATER PUMP STATION SPECS AND INSTALLATION PROCESS.
8. ALL LINES SHALL BE CLEARLY IDENTIFIABLE UNIT OUTSIDING PIPES NOT MORE THAN 60mm AWAY FROM THE MANHOLE WALL.



Rev	Description	By	Date
B	FOR CONSENT	DP	03/26
A	FOR REVIEW	DP	11/25

Survey	MAEN	Date
05/2025		
Design	DP	11/25
Drawn	DP	11/25
Checked	CS	11/25

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 07 770 0000

**Project**  
**WAIRAKEI SOUTH FTA090 DEVELOPMENT**  
**BELL ROAD, PAPAMOA**  
**FOR BELL ROAD LIMITED PARTNERSHIP**

<b>Title</b> PROPOSED WW PUMP STATION 2 CROSS-SECTION	
<b>Project no.</b> BOP0749	<b>Scale</b> 1:150 @ A3
<b>Clerk file</b> BOP0749CS01.DWG	<b>Drawing no.</b> CS500-3
<b>Rev</b>	<b>B</b>

**PROP PUMP STATION 02 RECEIVING MANHOLE AND PUMP WELL DETAILS**

**FOR CONSENT**

- NOTES
- ALL WORKS TO BE IN ACCORDANCE WITH WAIKATO REGIONAL INFRASTRUCTURE TECHNICAL SPECIFICATIONS.
  - COORDINATES IN TERMS OF NZ GEODETIC DATUM BAY OF PLENTY 2000. LEVELS IN TERMS OF THE NEW ZEALAND VERTICAL DATUM 2016.
  - IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN ALL NECESSARY PERMITS AND APPROVALS PRIOR TO COMMENCING OPERATIONS.
  - CONTRACTOR TO CHECK ALL DIMENSIONS PRIOR TO CONSTRUCTION/FABRICATION.
  - HEAVY DUTY MANHOLE LIDS AND FRAMES TO BE USED IN TRAFFICKED AREAS.
  - ALL MANHOLES ARE TO BE 1050MM Ø PRE CAST CONCRETE UNLESS SHOWN OTHERWISE.
  - REFER TO AQUIFE SPECIFICATION FOR RELEVANT WASTEWATER PUMP STATION SPECS AND INSTALLATION PROCESS.
  - ALL PIPES SHALL HAVE A 1.0% SLOPE UNTIL THE MANHOLE OR VALVE. ALL DOWN-SLOPING AND OUTSLOPING PIPES NOT MORE THAN 600mm AWAY FROM THE MANHOLE WALL.

Rev	Description	By	Date
B	FOR CONSENT	DP	03/26
A	FOR REVIEW	DP	11/25

By	Date
MAVEN	05/2025
DP	11/25
DP	11/25
CS	11/25

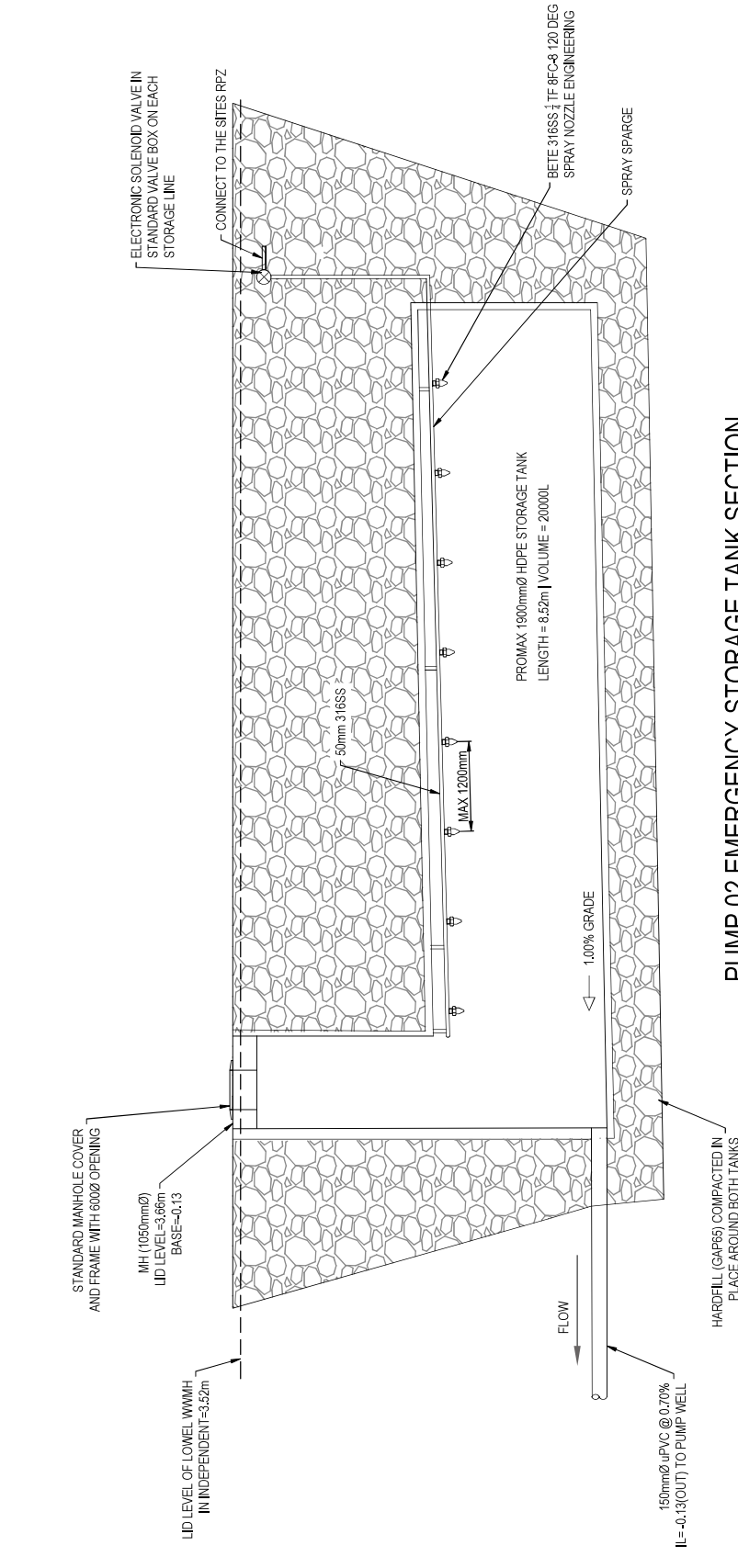
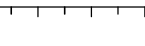
**M A V E N**  
 M A V E N Bay of Plenty  
 118 Cameron Street, Tauranga  
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**Project**  
**WAIRAKEI SOUTH FTA090 DEVELOPMENT**  
**BELL ROAD, PAPAMOA FOR BELL ROAD LIMITED PARTNERSHIP**

**Title**  
**PROPOSED WW PUMP STATION 2 CROSS-SECTION**

**Project no.** BOP0749  
**Scale** 1:150 @ A3  
**Client** BOP/PP/CS/L/D/W/E  
**Drawing no.** C-560-C-4  
**Rev** B

ORIGINAL SIZE: A3



**PUMP 02 EMERGENCY STORAGE TANK SECTION**  
 SCALE 1:50 @ A3

GEOTECHNICAL ENGINEER TO CONFIRM BUOYANCY CALCULATIONS

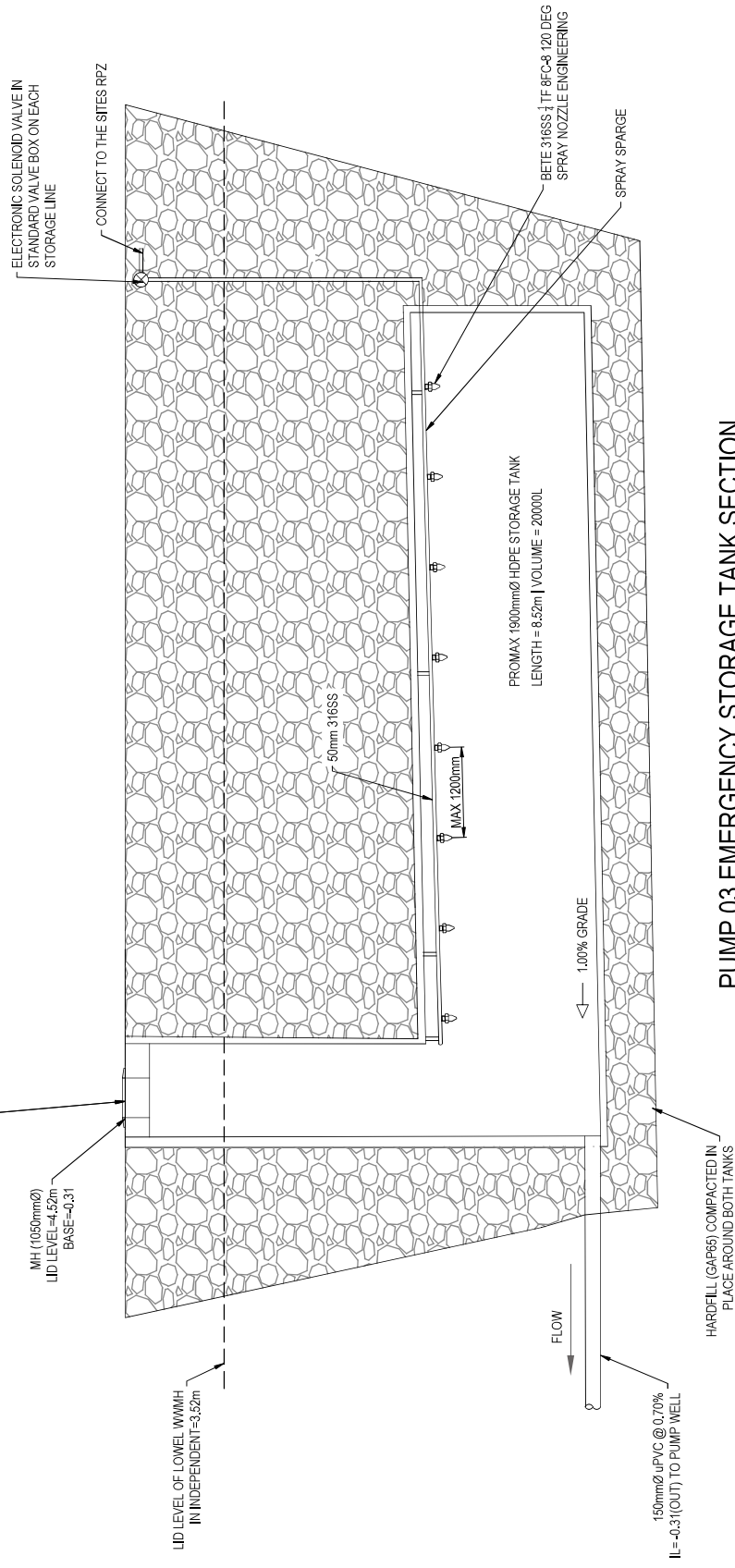
**FOR CONSENT**



**NOTES**

1. ALL WORKS TO BE IN ACCORDANCE WITH WAIKATO REGIONAL INFRASTRUCTURE TECHNICAL SPECIFICATIONS.
2. COORDINATES IN TERMS OF NZ GEODETIC DATUM BAY OF PLENTY 2000. LEVELS IN TERMS OF THE NEW ZEALAND VERTICAL DATUM 2016.
3. IT IS THE CONTRACTORS RESPONSIBILITY TO OBTAIN ALL NECESSARY PERMITS AND APPROVALS PRIOR TO COMMENCING OPERATIONS THAT MAY BE AFFECTED BY THESE OPERATIONS.
4. CONTRACTOR TO CHECK ALL DIMENSIONS PRIOR TO CONSTRUCTION/FABRICATION.
5. HEAVY DUTY MANHOLE LIDS AND FRAMES TO BE USED IN TRAFFICKED AREAS.
6. ALL MANHOLES ARE TO BE 1050MMØ PRE CAST CONCRETE UNLESS SHOWN OTHERWISE.
7. REFER TO ADEQUATE SPECIFICATION FOR RELEVANT WASTEWATER PUMP STATION SPECS AND INSTALLATION PROCESS.
8. ALL LINES SHALL BE MARKED WITH A RED SURFACE MOUNTED REFLECTOR OR REFLECTOR PIPES NOT MORE THAN 600mm AWAY FROM THE MANHOLE WALL.

ORIGINAL SIZE: A3



**PUMP 03 EMERGENCY STORAGE TANK SECTION**

SCALE 1:50 @ A3

Rev	Description	By	Date												
B	FOR CONSENT	DP	03/26												
A	FOR REVIEW	DP	11/25												
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Survey	MAVEN	05/2025													
Design	DP	11/25													
Drawn	DP	11/25													
Checked	CS	11/25													

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**Project**  
**WAIRAKEI SOUTH FTA090**  
**DEVELOPMENT**  
**BELL ROAD, PAPAMOA**  
**FOR BELL ROAD**  
**LIMITED PARTNERSHIP**

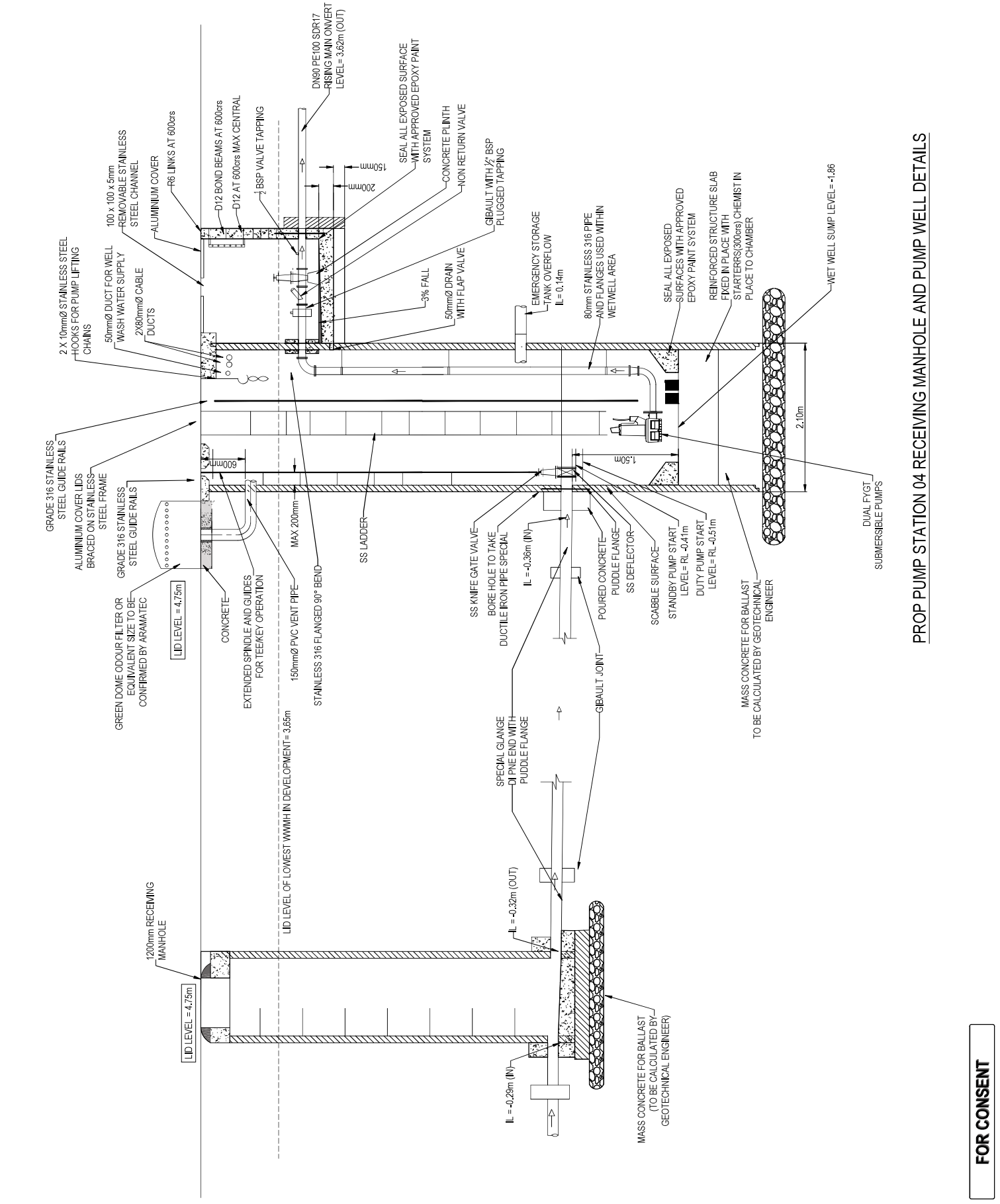
**Title**  
**PROPOSED WW**  
**PUMP STATION 3**  
**CROSS-SECTION**

Project no.	BOP0749
Scale	1:150 @ A3
Client	BOPWATER/DMG
Drawing no.	C550-C6
Rev	B

GEOTECHNICAL ENGINEER TO CONFIRM BUOYANCY CALCULATIONS

**FOR CONSENT**

- NOTES**
1. ALL WORKS TO BE IN ACCORDANCE WITH WAIKATO REGIONAL INFRASTRUCTURE TECHNICAL SPECIFICATIONS.
  2. COORDINATES IN TERMS OF NZ GEODETIC DATUM BAY OF PLENTY 2000, LEVELS IN TERMS OF THE NEW ZEALAND VERTICAL DATUM 2016.
  3. THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND LEVELS PRIOR TO THEIR OPERATIONS.
  4. CONTRACTOR TO CHECK ALL DIMENSIONS PRIOR TO CONSTRUCTION FABRICATION.
  5. HEAVY DUTY MANHOLE LIDS AND FRAMES TO BE USED IN TRAFFICKED AREAS.
  6. ALL MANHOLES ARE TO BE 105MMØ PRE CAST CONCRETE UNLESS SHOWN OTHERWISE.
  7. REFER TO ADEQUATE SPECIFICATION FOR RELEVANT WASTEWATER PUMP STATION SPECS AND INSTALLATION PROCESS.
  8. ALL LINES SHALL BE 1.4m RADIUS UNLESS OTHERWISE SHOWN. ALL MANHOLE CAPPING AND OUTGOING PIPES NOT MORE THAN 600mm AWAY FROM THE MANHOLE WALL.



Rev	Description	By	Date
B	FOR CONSENT	DP	03/26
A	FOR REVIEW	DP	11/25

Survey	By	Date
MAVEN		05/2025
Design	DP	11/25
Drawn	DP	11/25
Checked	CS	11/25

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**Project**  
**WAIRAKEI SOUTH FTA090**  
**DEVELOPMENT**  
**BELL ROAD, PAPAMOA**  
**FOR BELL ROAD**  
**LIMITED PARTNERSHIP**

**Title**  
**PROPOSED WW**  
**PUMP STATION 4**  
**CROSS-SECTION**

**Project no.** BOP0749  
**Scale** 1:150 @ A3  
**Clerk file** BPOPTSCS04/DWG  
**Drawing no.** CS500-7  
**Rev** B

**PROP PUMP STATION 04 RECEIVING MANHOLE AND PUMP WELL DETAILS**

- NOTES**
- ALL WORKS TO BE IN ACCORDANCE WITH WAIKATO REGIONAL INFRASTRUCTURE TECHNICAL SPECIFICATIONS.
  - COORDINATES IN TERMS OF NZ GEODETIC DATUM BAY OF PLENTY 2000. LEVELS IN TERMS OF THE NEW ZEALAND VERTICAL DATUM 2016.
  - IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY ALL DIMENSIONS THAT MAY BE AFFECTED BY THEIR OPERATIONS.
  - CONTRACTOR TO CHECK ALL DIMENSIONS PRIOR TO CONSTRUCTION/FABRICATION.
  - HEAVY DUTY MANHOLE LIDS AND FRAMES TO BE USED IN TRAFFICKED AREAS.
  - ALL MANHOLES ARE TO BE 105MMØ PRE CAST CONCRETE UNLESS SHOWN OTHERWISE.
  - REFER TO AQUE SPECIFICATION FOR RELEVANT WASTEWATER PUMP STATION SPECS AND INSTALLATION PROCESS.
  - ALL LINES SHALL BE 1:1 RATIO UNLESS OTHERWISE NOTED.
  - ALL MANHOLES SHALL BE 150MM Ø UNLESS OTHERWISE NOTED. ALL MANHOLES SHALL BE 150MM Ø UNLESS OTHERWISE NOTED. ALL MANHOLES SHALL BE 150MM Ø UNLESS OTHERWISE NOTED.

ELECTROMIC SOLENOID VALVE IN STANDARD VALVE BOX ON EACH STORAGE LINE

CONNECT TO THE SITES RPZ RL = TO BE CONFIRMED

BETE 316SS 1" TF 8FC-8 120 DEG SPRAY NOZZLE ENGINEERING

SPRAY SPARGE

50mm 316SS

MAX 1200mm

1.00% GRADE

FROM MAX 1900mm Ø HDPE STORAGE TANK LENGTH = 8.52m | VOLUME = 20000L

150mm Ø uPVC @ 0.70% IL = 0.2 (OUT) TO PUMP WELL

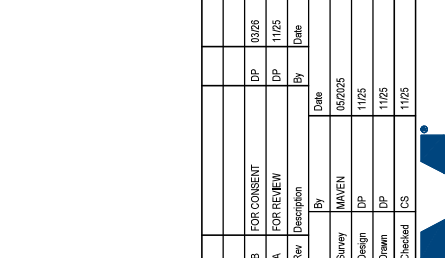
HARDFILL (GAP85) COMPACTED IN PLACE AROUND BOTH TANKS

STANDARD MANHOLE COVER AND FRAME WITH 600Ø OPENING

MH (1050mm Ø)  
LID LEVEL = 4.70m  
BASE = 0.21

LID LEVEL OF LOWEL W/MH IN INDEPENDENT = 3.65m

FLOW



**PUMP 04 EMERGENCY STORAGE TANK SECTION**

SCALE 1:50 @ A3

Rev	Description	By	Date
B	FOR CONSENT	DP	03/26
A	FOR REVIEW	DP	11/25

Survey	MAVEN	05/2025
Design	DP	11/25
Drawn	DP	11/25
Checked	CS	11/25

**M A V E N**

Maven Bay of Plenty

118 Cameron Street, Tauranga  
New Zealand

**Project**

WAIRAKEI SOUTH FTA090 DEVELOPMENT

BELL ROAD, PAPAMOA FOR BELL ROAD LIMITED PARTNERSHIP

**Title**

PROPOSED WW PUMP STATION 4 CROSS-SECTION

**Project no.** BOP0749

**Scale** 1:150 @ A3

**Client file** BOP0749CSA01DWG

**Drawing no.** CS504-8

**Rev** B

ORIGINAL SIZE: A3

100m

90

80

70

60

50

40

30

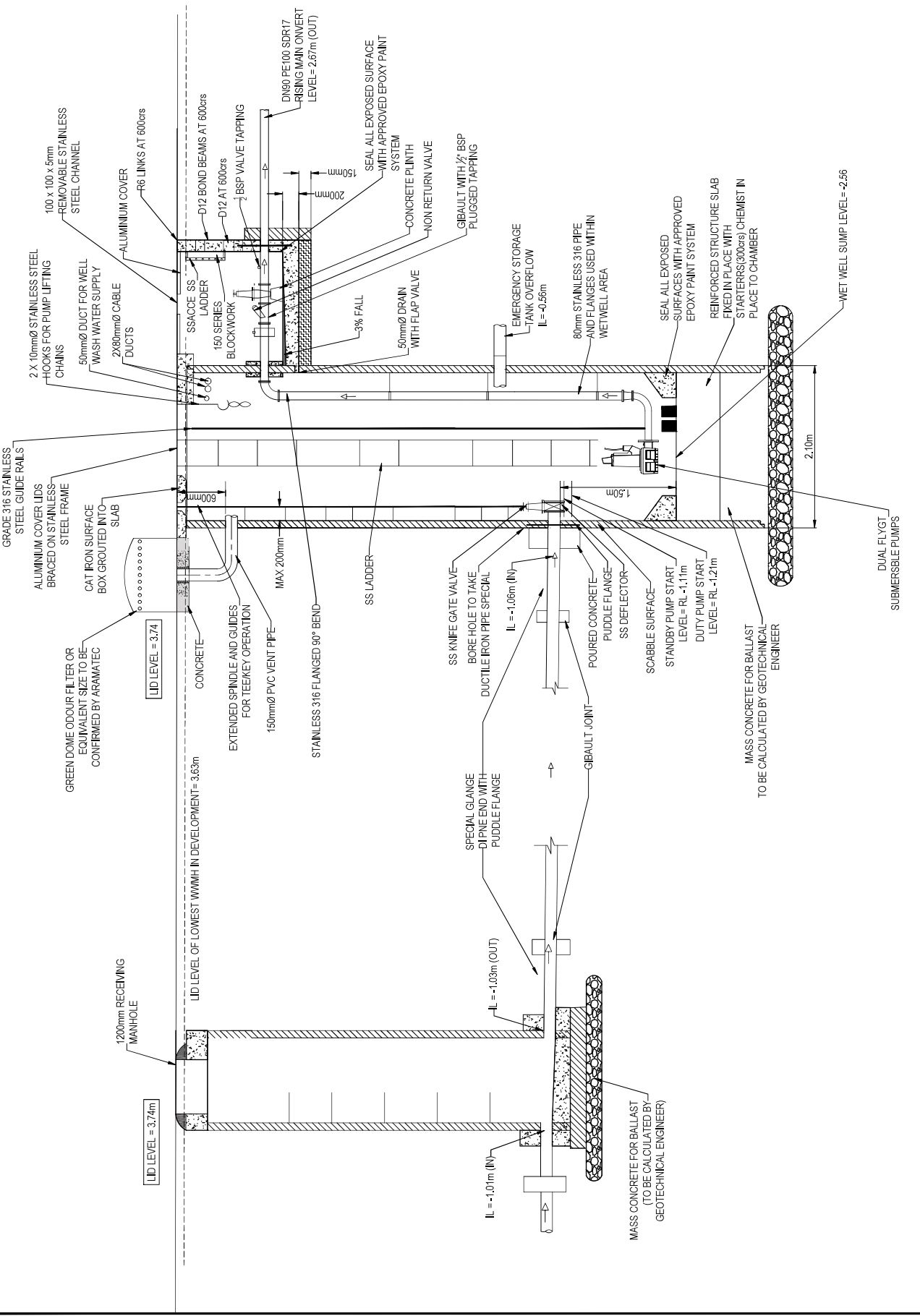
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10

GEOTECHNICAL ENGINEER TO CONFIRM BUOYANCY CALCULATIONS

**FOR CONSENT**

ORIGINAL SIZE: A3



- NOTES**
- ALL WORKS TO BE IN ACCORDANCE WITH WAIKATO REGIONAL INFRASTRUCTURE TECHNICAL SPECIFICATIONS.
  - COORDINATES IN TERMS OF NZ GEODETIC DATUM BAY OF PLENTY 2000. LEVELS IN TERMS OF THE NEW ZEALAND VERTICAL DATUM 2016.
  - THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS PRIOR TO THEIR OPERATIONS.
  - CONTRACTOR TO CHECK ALL DIMENSIONS PRIOR TO CONSTRUCTION FABRICATION.
  - HEAVY DUTY MANHOLE LIDS AND FRAMES TO BE USED IN TRAFFICKED AREAS.
  - ALL MANHOLES ARE TO BE 105MM Ø PRE CAST CONCRETE UNLESS SHOWN OTHERWISE.
  - REFER TO ADJACENT SPECIFICATION FOR RELEVANT WASTEWATER PUMP STATION SPECS AND INSTALLATION PROCESS.
  - ALL LINES SHALL BE 1.5m RADIUS UNLESS OTHERWISE SPECIFIED. ALL LINKS COMING AND GOING TO THE MANHOLE SHALL BE 150mm Ø UNLESS OTHERWISE SPECIFIED.

Rev	Description	By	Date
B	FOR CONSENT	DP	03/26
A	FOR REVIEW	DP	11/25

Survey	MAVEN	Date	05/2025
Design	DP	11/25	
Drawn	DP	11/25	
Checked	CS	11/25	

**M A V E N**

Maven Bay of Plenty  
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**Project**  
**WAIRAKEI SOUTH FTA090**  
**DEVELOPMENT**  
**BELL ROAD, PAPAMOA**  
**FOR BELL ROAD**  
**LIMITED PARTNERSHIP**

**Title**  
**PROPOSED WW**  
**PUMP STATION 5**  
**CROSS-SECTION**

Project no.	BOP0749
Scale	1:150 @ A3
Client file	BPOPP05CROSS.DWG
Drawing no.	C560-9
Rev	B

**PROP PUMP STATION 05 RECEIVING MANHOLE AND PUMP WELL DETAILS**

**FOR CONSENT**

- NOTES**
1. ALL WORKS TO BE IN ACCORDANCE WITH WAIKATO REGIONAL INFRASTRUCTURE TECHNICAL SPECIFICATIONS.
  2. COORDINATES IN TERMS OF NZ GEODETIC DATUM BAY OF PLENTY 2000 LEVELS IN TERMS OF THE NEW ZEALAND VERTICAL DATUM 2016.
  3. IT IS THE CONTRACTORS RESPONSIBILITY TO OBTAIN ALL NECESSARY PERMITS AND APPROVALS PRIOR TO COMMENCING ANY WORKS THAT MAY BE AFFECTED BY THESE OPERATIONS.
  4. CONTRACTOR TO CHECK ALL DIMENSIONS PRIOR TO CONSTRUCTION/FABRICATION.
  5. HEAVY DUTY MANHOLE LIDS AND FRAMES TO BE USED IN TRAFFICKED AREAS.
  6. ALL MANHOLES ARE TO BE 1050MMØ PRE CAST CONCRETE UNLESS SHOWN OTHERWISE.
  7. REFER TO ADEQUATE SPECIFICATION FOR RELEVANT WASTEWATER PUMP STATION SPECS AND INSTALLATION PROCESS.
  8. ALL LINES SHALL HAVE A 10mm CLEARANCE FROM THE MANHOLE ON ALL WORKING AND OUTGOING PIPES NOT MORE THAN 60mm AWAY FROM THE MANHOLE WALL.

Rev	Description	By	Date
B	FOR CONSENT	DP	03/26
A	FOR REVIEW	DP	11/25

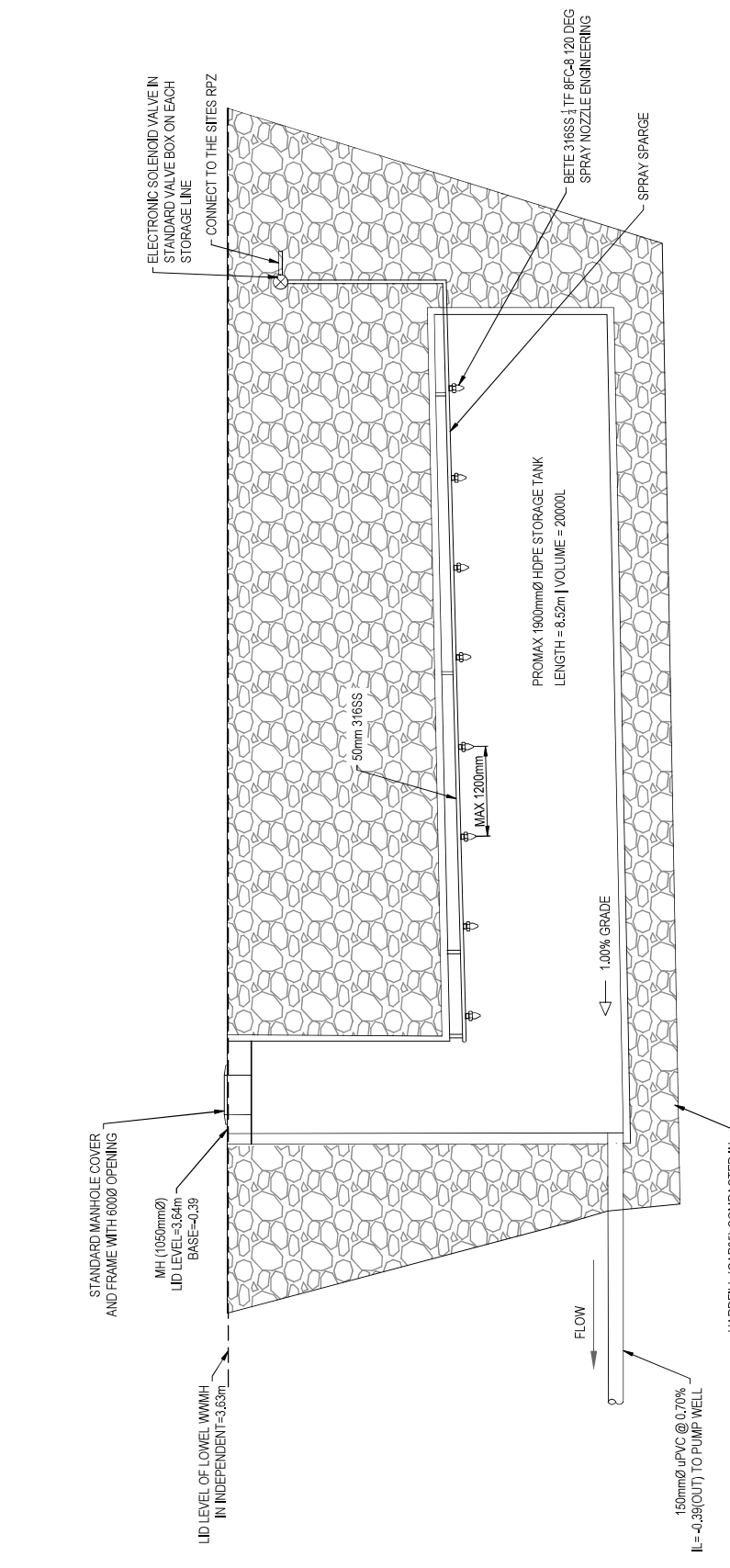
Survey	MAVEN	05/2025
Design	DP	11/25
Drawn	DP	11/25
Checked	CS	11/25

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**Project**  
**WAIRAKEI SOUTH FTA090**  
**DEVELOPMENT**  
**BELL ROAD, PAPAMOA**  
**FOR BELL ROAD**  
**LIMITED PARTNERSHIP**

**Title**  
**PROPOSED WW**  
**PUMP STATION 5**  
**CROSS-SECTION**

Project no.	BOP0749
Scale	1:150 @ A3
Client	BOP/WRAS/CLW/ENG
Drawing no.	C-563-10
Rev	B



**PUMP 05 EMERGENCY STORAGE TANK SECTION**  
 SCALE 1:50 @ A3

GEOTECHNICAL ENGINEER TO CONFIRM BUOYANCY CALCULATIONS

**FOR CONSENT**



- NOTES**
1. ALL WORKS TO BE IN ACCORDANCE WITH WAIKATO REGIONAL INFRASTRUCTURE TECHNICAL SPECIFICATIONS.
  2. COORDINATES IN TERMS OF NZ GEODETIC DATUM BAY OF PLENTY 2000 LEVELS IN TERMS OF THE NEW ZEALAND VERTICAL DATUM 2016.
  3. THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE DIMENSIONS THAT MAY BE AFFECTED BY THEIR OPERATIONS.
  4. CONTRACTOR TO CHECK ALL DIMENSIONS PRIOR TO CONSTRUCTION FABRICATION.
  5. HEAVY DUTY MANHOLE LIDS AND FRAMES TO BE USED IN TRAFFICKED AREAS.
  6. ALL MANHOLES ARE TO BE 1050MMØ PRE CAST CONCRETE UNLESS SHOWN OTHERWISE.
  7. REFER TO ADEQUATE SPECIFICATION FOR RELEVANT WASTEWATER PUMP STATION SPECS AND INSTALLATION PROCESS.
  8. ALL LINES SHALL HAVE A 4.5% MIN. SLOPE UNLESS OTHERWISE SHOWN ON THE DRAWING AND OUTGOING PIPES NOT MORE THAN 600mm AWAY FROM THE MANHOLE WALL.

Rev	Description	By	Date
B	FOR CONSENT	DP	03/26
A	FOR REVIEW	DP	11/25

Survey	MAVEN	Date	05/2025
Design	DP		11/25
Drawn	DP		11/25
Checked	CS		11/25

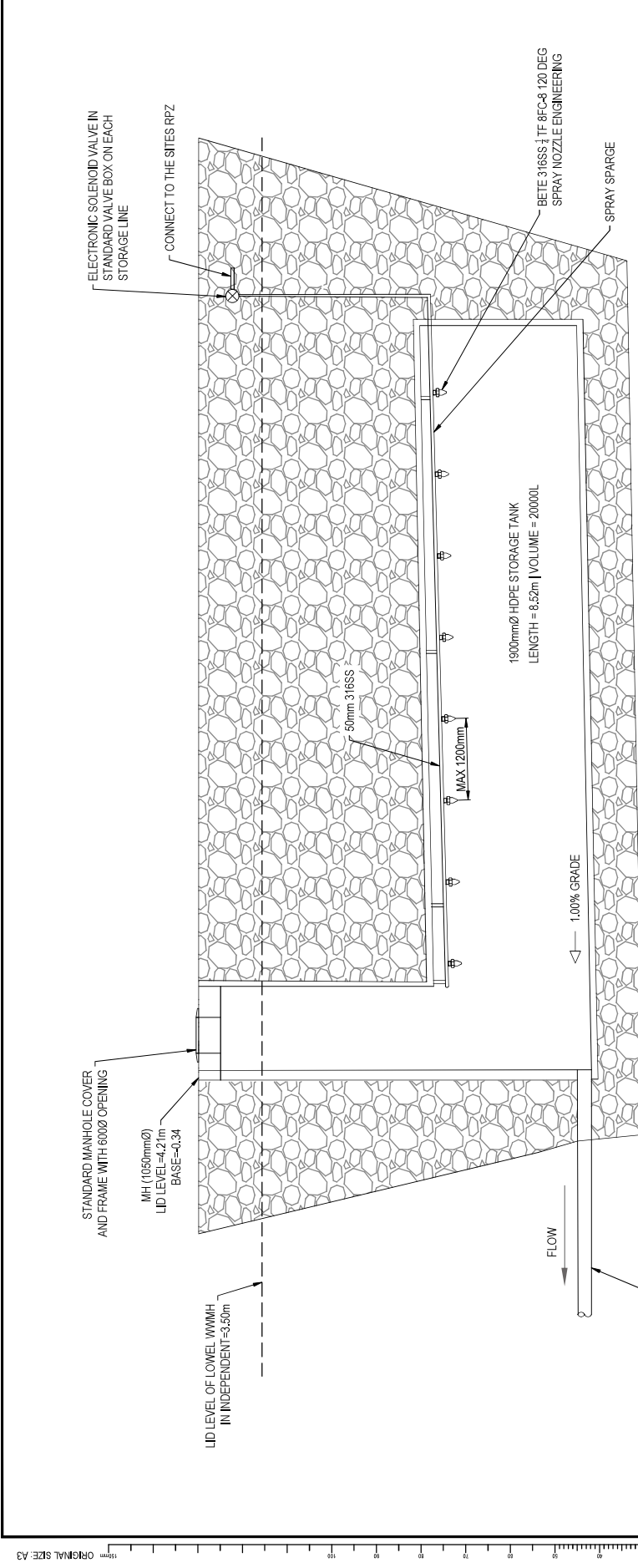


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**Project**  
**WAIRAKEI SOUTH FTA090 DEVELOPMENT**  
**BELL ROAD, PAPAMOA FOR BELL ROAD LIMITED PARTNERSHIP**

**Title**  
**PROPOSED WW PUMP STATION 6 CROSS-SECTION**

Project no.	BOP0749
Scale	1:150 @ A3
Client	BOP/MASS/DWG
Drawing no.	C-550-12
Rev	B



**PUMP 06 EMERGENCY STORAGE TANK SECTION**  
 SCALE 1:50 @ A3

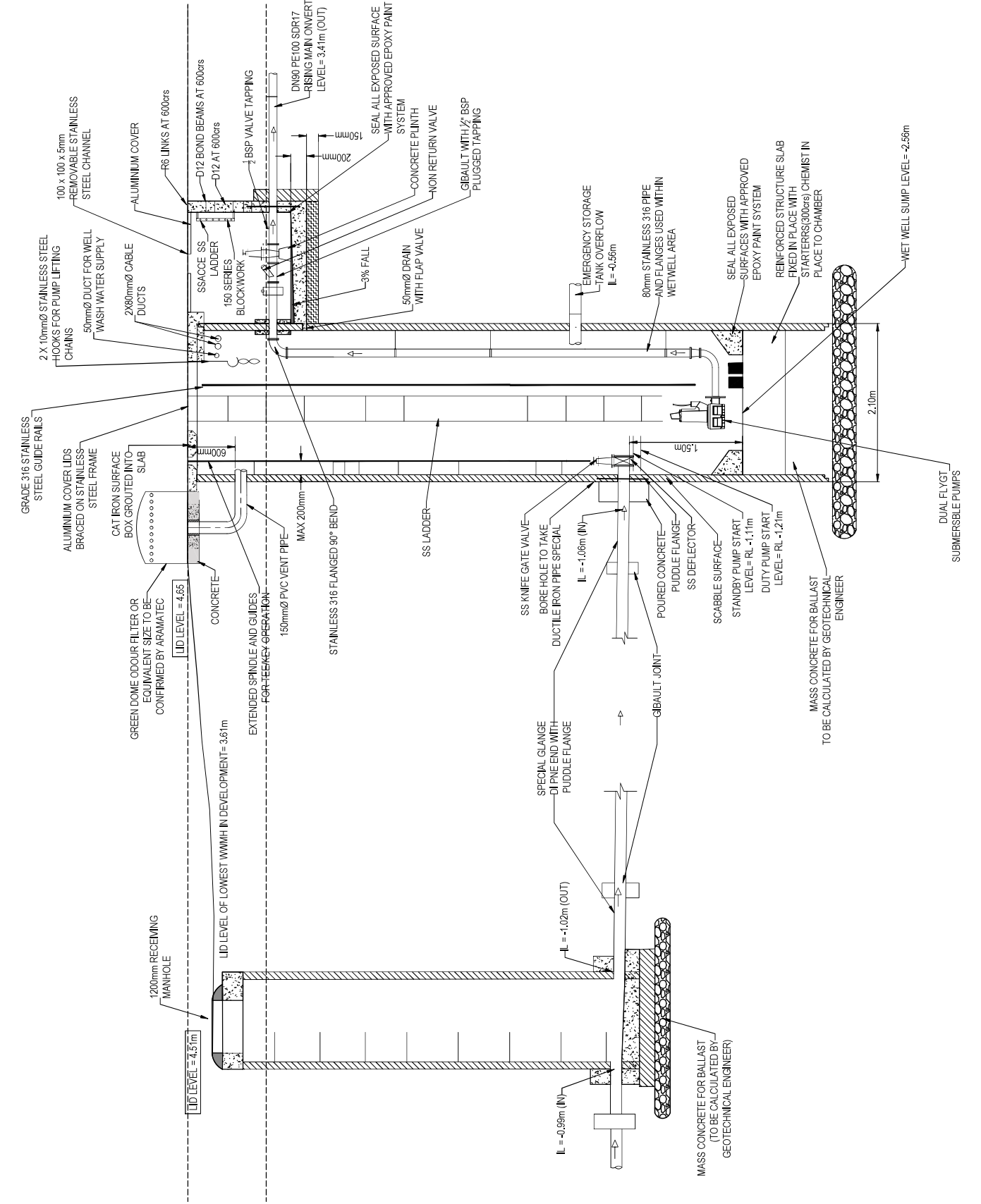
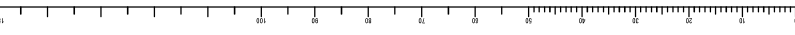
GEOTECHNICAL ENGINEER TO CONFIRM BUOYANCY CALCULATIONS

**FOR CONSENT**

**NOTES**

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2. COORDINATES IN TERMS OF NZ GEODETIC DATUM BAY OF PLENTY 2000. LEVELS IN TERMS OF THE NEW ZEALAND VERTICAL DATUM 2000.
3. THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS PRIOR TO THEIR OPERATIONS.
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5. HEAVY DUTY MANHOLE LIDS AND FRAMES TO BE USED IN TRAFFICKED AREAS.
6. ALL MANHOLES ARE TO BE 1050MM Ø PRE CAST CONCRETE UNLESS SHOWN OTHERWISE.
7. REFER TO ADEQUATE SPECIFICATION FOR RELEVANT WASTEWATER PUMP STATION SPECS AND INSTALLATION PROCESS.
8. ALL LINES SHALL BE TO A 1:1 SCALE UNLESS OTHERWISE SHOWN. THE MANHOLE CAN LINKS AND OUTGOING PIPES NOT MORE THAN 600mm AWAY FROM THE MANHOLE WALL.

ORIGINAL SIZE: A3



**PROP PUMP STATION 07 RECEIVING MANHOLE AND PUMP WELL DETAILS**

**FOR CONSENT**

Rev	Description	By	Date
B	FOR CONSENT	DP	03/26
A	FOR REVIEW	DP	11/25

Survey	MAVEN	05/2025
Design	DP	11/25
Drawn	DP	11/25
Checked	CS	11/25

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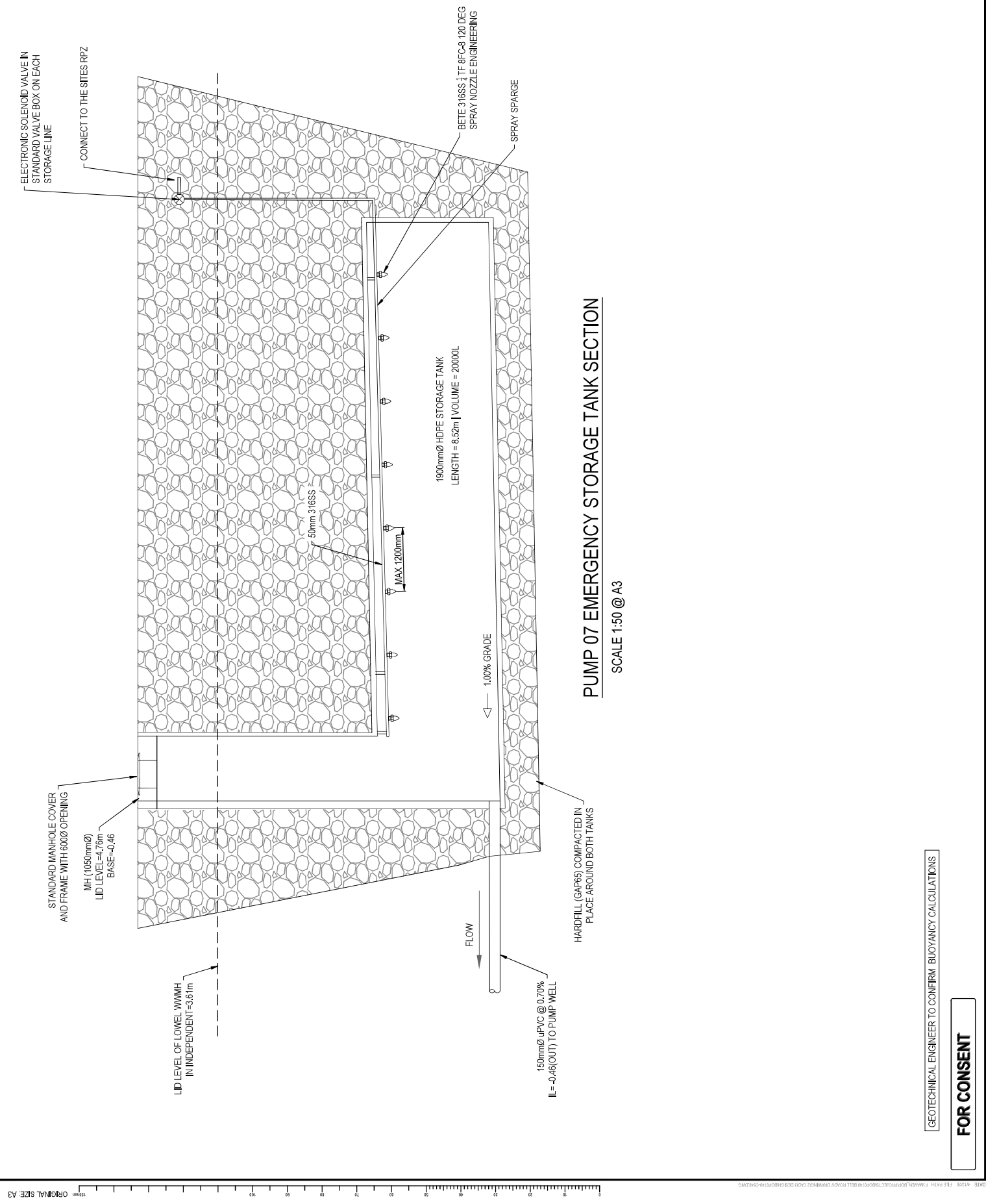
**Project**  
**WAIRAKEI SOUTH FTA090**  
**DEVELOPMENT**  
**BELL ROAD, PAPAMOA**  
**FOR BELL ROAD**  
**LIMITED PARTNERSHIP**

**Title**  
**PROPOSED WW**  
**PUMP STATION 7**  
**CROSS-SECTION**

Project no.	BOP0749
Scale	1:150 @ A3
Client	BOP/PCS/SL/DWG
Drawing no.	C350-13
Rev	B

**NOTES**

1. ALL WORKS TO BE IN ACCORDANCE WITH WAIKATO REGIONAL INFRASTRUCTURE TECHNICAL SPECIFICATIONS.
2. COORDINATES IN TERMS OF NZ GEODETIC DATUM BAY OF PLENTY 2000. LEVELS IN TERMS OF THE NEW ZEALAND VERTICAL DATUM 2016.
3. IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND LEVELS PRIOR TO THEIR OPERATIONS.
4. CONTRACTOR TO CHECK ALL DIMENSIONS PRIOR TO CONSTRUCTION/FABRICATION.
5. HEAVY DUTY MANHOLE LIDS AND FRAMES TO BE USED IN TRAFFICKED AREAS.
6. ALL MANHOLES ARE TO BE 1050MMØ PRE CAST CONCRETE UNLESS SHOWN OTHERWISE.
7. REFER TO ADEQUATE SPECIFICATION FOR RELEVANT WASTEWATER PUMP STATION SPECS AND INSTALLATION PROCESS.
8. ALL LINES SHALL BE CLEARLY MARKED AND OUTGOING PIPES NOT MORE THAN 600mm AWAY FROM THE MANHOLE WALL.



**PUMP 07 EMERGENCY STORAGE TANK SECTION**  
SCALE 1:50 @ A3

Rev	Description	By	Date
B	FOR CONSENT	DP	03/26
A	FOR REVIEW	DP	11/25

Survey	MAVEN	05/2025
Design	DP	11/25
Drawn	DP	11/25
Checked	CS	11/25

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**Project**  
WAIRAKEI SOUTH FTA090  
DEVELOPMENT  
BELL ROAD, PAPAMOA  
FOR BELL ROAD  
LIMITED PARTNERSHIP

**Title**  
PROPOSED WW  
PUMP STATION 7  
CROSS-SECTION

Project no.	BOP0749
Scale	1:150 @ A3
Client file	BOP0749/CS/11/25
Drawing no.	C-550-14
Rev	B

GEOTECHNICAL ENGINEER TO CONFIRM BUOYANCY CALCULATIONS

**FOR CONSENT**

- NOTES**
- ALL WORKS TO BE IN ACCORDANCE WITH WAIKATO REGIONAL INFRASTRUCTURE TECHNICAL SPECIFICATIONS.
  - COORDINATES IN TERMS OF NZ GEODETIC DATUM BAY OF PLENTY 2000. LEVELS IN TERMS OF THE NEW ZEALAND VERTICAL DATUM 2016.
  - LIST THE CONTRACTORS RESPONSIBILITY TO THE OPERATIONS THAT MAY BE AFFECTED BY THEIR OPERATIONS.
  - CONTRACTOR TO CHECK ALL DIMENSIONS PRIOR TO CONSTRUCTION FABRICATION.
  - HEAVY DUTY MANHOLE LIDS AND FRAMES TO BE USED IN TRAFFICKED AREAS.
  - ALL MANHOLES ARE TO BE 105MM Ø PRE CAST CONCRETE UNLESS SHOWN OTHERWISE.
  - WASTEWATER PUMP STATION SPECS AND INSTALLATION PROCESS.
  - ALL LINES SHALL BE 1.6m EMBLE UNIT UNLESS OTHERWISE SHOWN. ALL LINKS AND OUTGOING PIPES NOT MORE THAN 600mm AWAY FROM THE MANHOLE WALL.

Rev	Description	By	Date
B	FOR CONSENT	DP	03/26
A	FOR REVIEW	DP	11/25

Survey	MAVEN	Date	05/2025
Design	DP		11/25
Drawn	DP		11/25
Checked	CS		11/25

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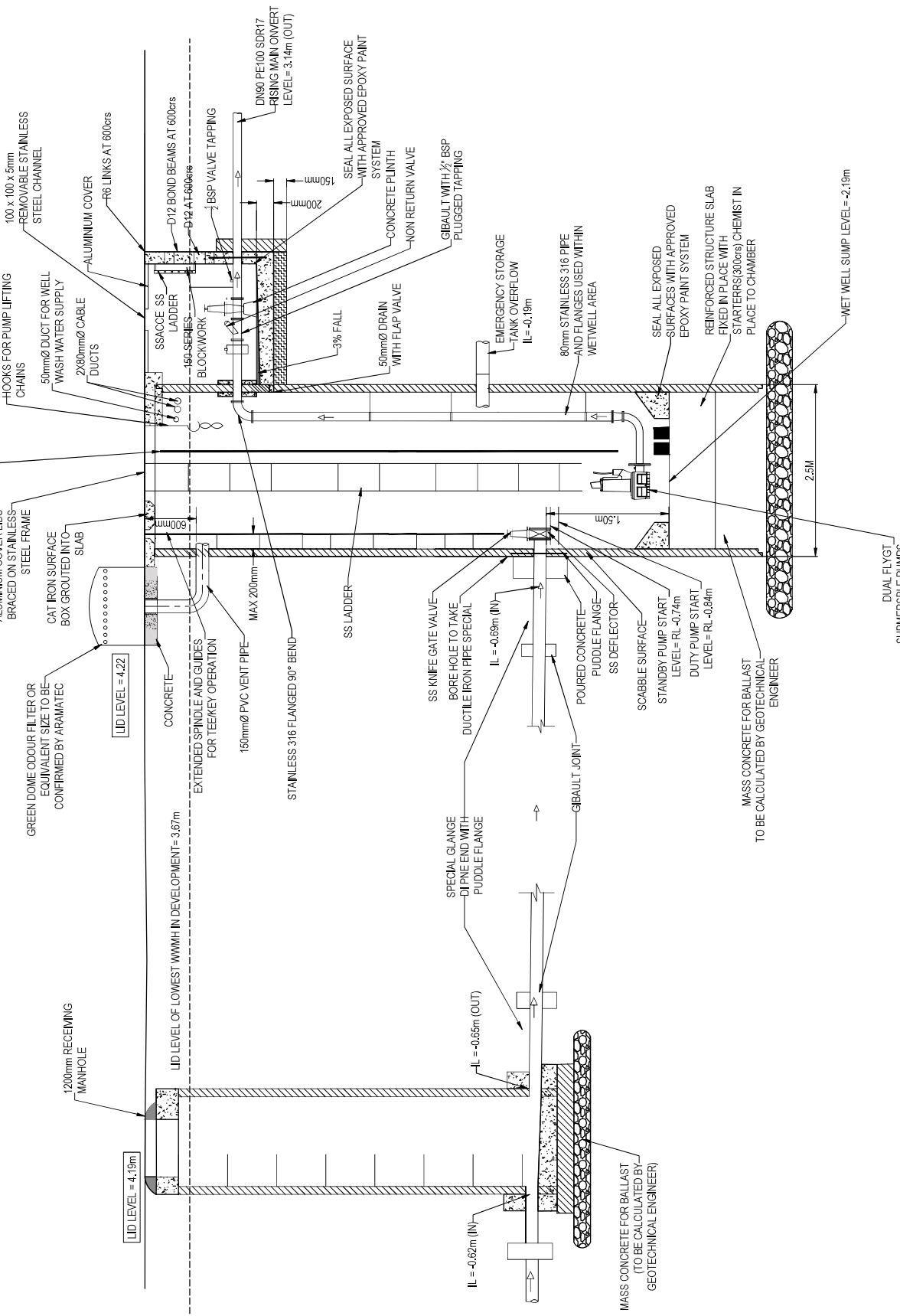
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**Project**  
**WAIRAKEI SOUTH FTA090 DEVELOPMENT**  
**BELL ROAD, PAPAMOA**  
**FOR BELL ROAD LIMITED PARTNERSHIP**

**Title**  
**PROPOSED WW PUMP STATION 8 CROSS-SECTION**

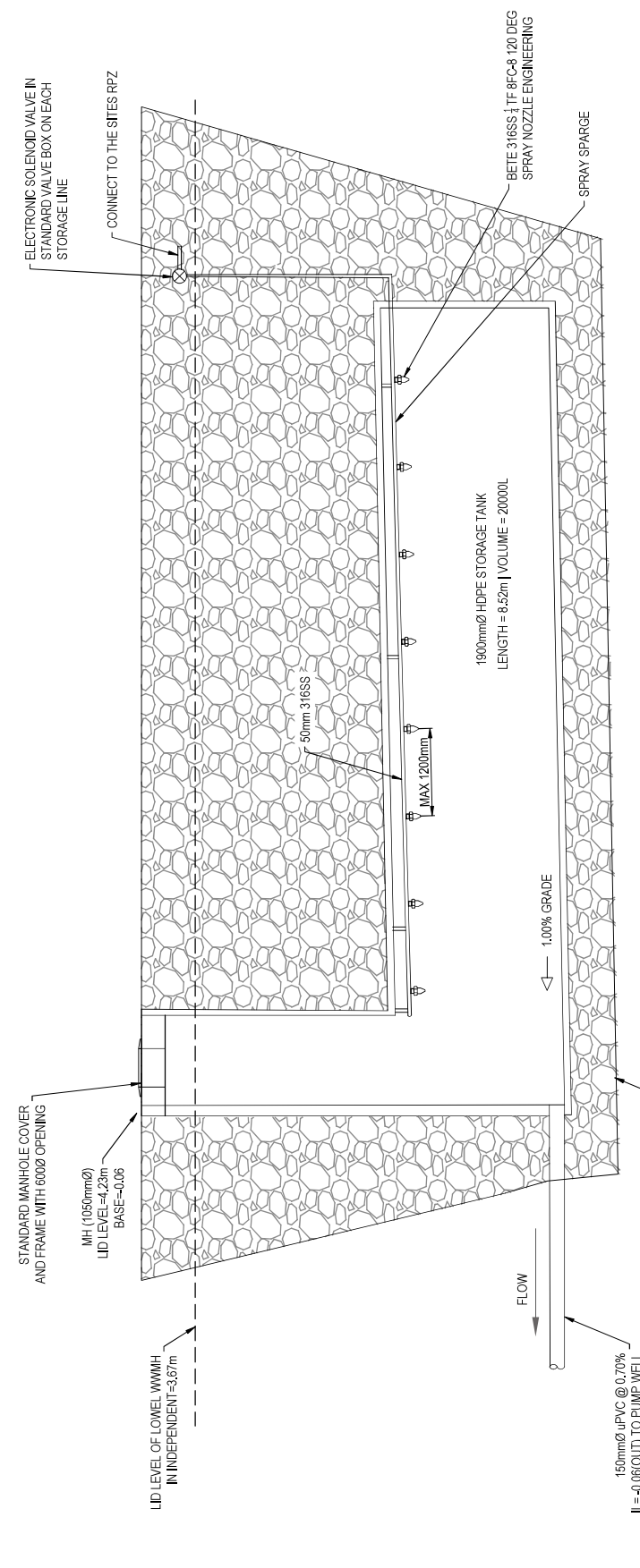
Project no.	BOP0749
Scale	1:150 @ A3
Client	BOP/PLC/SL/DWG
Drawing no.	C350-15

Rev	B
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**PROP PUMP STATION 08 RECEIVING MANHOLE AND PUMP WELL DETAILS**

**FOR CONSENT**



**PUMP 08 EMERGENCY STORAGE TANK SECTION**

SCALE 1:50 @ A3

- NOTES**
1. ALL WORKS TO BE IN ACCORDANCE WITH WAIKATO REGIONAL INFRASTRUCTURE TECHNICAL SPECIFICATIONS.
  2. COORDINATES IN TERMS OF NZ GEODETIC DATUM BAY OF PLENTY 2000 LEVELS IN TERMS OF THE NEW ZEALAND VERTICAL DATUM 2016.
  3. IT IS THE CONTRACTORS RESPONSIBILITY TO OBTAIN ALL NECESSARY PERMITS THAT MAY BE AFFECTED BY THEIR OPERATIONS.
  4. CONTRACTOR TO CHECK ALL DIMENSIONS PRIOR TO CONSTRUCTION/FABRICATION.
  5. HEAVY DUTY MANHOLE LIDS AND FRAMES TO BE USED IN TRAFFICKED AREAS.
  6. ALL MANHOLES ARE TO BE 1050MMØ PRE CAST CONCRETE UNLESS SHOWN OTHERWISE.
  7. REFER TO ADEQUATE SPECIFICATION FOR RELEVANT WASTEWATER PUMP STATION SPECS AND INSTALLATION PROCESS.
  8. ALL LINES SHALL BE MARKED WITH A DOUBLE WHITE LINE. THE MANHOLE SHALL BE MARKED AND OUTSINGING PIPES NOT MORE THAN 600mm AWAY FROM THE MANHOLE WALL.

FOR CONSENT	DP	03/26	
FOR REVIEW	DP	11/25	
Rev	Description	By	Date
Survey	M/AVEN		05/2025
Design	DP		11/25
Drawn	DP		11/25
Checked	CS		11/25

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**Project**  
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**DEVELOPMENT**  
**BELL ROAD, PAPAMOA**  
**FOR BELL ROAD**  
**LIMITED PARTNERSHIP**

**Title**  
**PROPOSED WW**  
**PUMP STATION 8**  
**CROSS-SECTION**

Project no.	BOP0749
Scale	1:150 @ A3
Client	BOP/WRAS/CDWG
Drawing no.	C-550-16
Rev	B

GEOTECHNICAL ENGINEER TO CONFIRM BUOYANCY CALCULATIONS

**FOR CONSENT**

- NOTES**
- ALL WORKS TO BE IN ACCORDANCE WITH WAIKATO REGIONAL INFRASTRUCTURE TECHNICAL SPECIFICATIONS.
  - COORDINATES IN TERMS OF NZ GEODETIC DATUM BAY OF PLENTY 2000. LEVELS IN TERMS OF THE NEW ZEALAND VERTICAL DATUM 2016.
  - THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND TO BE AFFECTED BY THEIR OPERATIONS.
  - CONTRACTOR TO CHECK ALL DIMENSIONS PRIOR TO CONSTRUCTION FABRICATION.
  - HEAVY DUTY MANHOLE LIDS AND FRAMES TO BE USED IN TRAFFICKED AREAS.
  - ALL MANHOLES ARE TO BE 105MM Ø PRE CAST CONCRETE UNLESS SHOWN OTHERWISE.
  - REFER TO ADEQUATE SPECIFICATION FOR RELEVANT WASTEWATER PUMP STATION SPECS AND INSTALLATION PROCESS.
  - ALL LINES SHALL BE MARKED WITH A RED WIRE UNIT. ALL MANHOLES SHALL BE MARKED WITH A RED WIRE UNIT. OUTSIGHT PIPES NOT MORE THAN 600mm AWAY FROM THE MANHOLE WALL.

Rev	Description	By	Date
B	FOR CONSENT	DP	03/26
A	FOR REVIEW	DP	11/25

Survey	MAVEN	Date	05/2025
Design	DP	Drawn	11/25
Checked	CS	11/25	

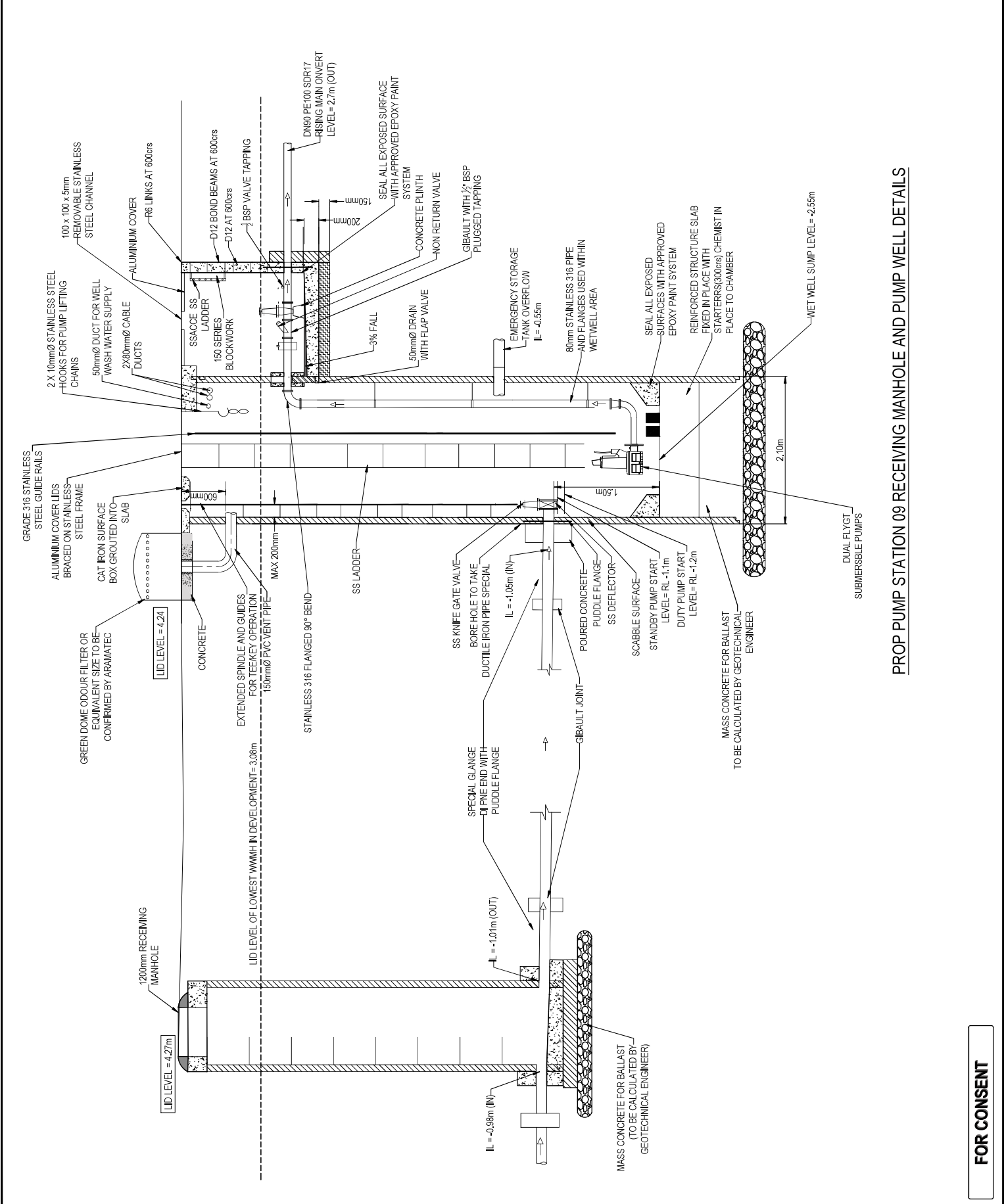


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**Project**  
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**BELL ROAD, PAPAMOA**  
**FOR BELL ROAD LIMITED PARTNERSHIP**

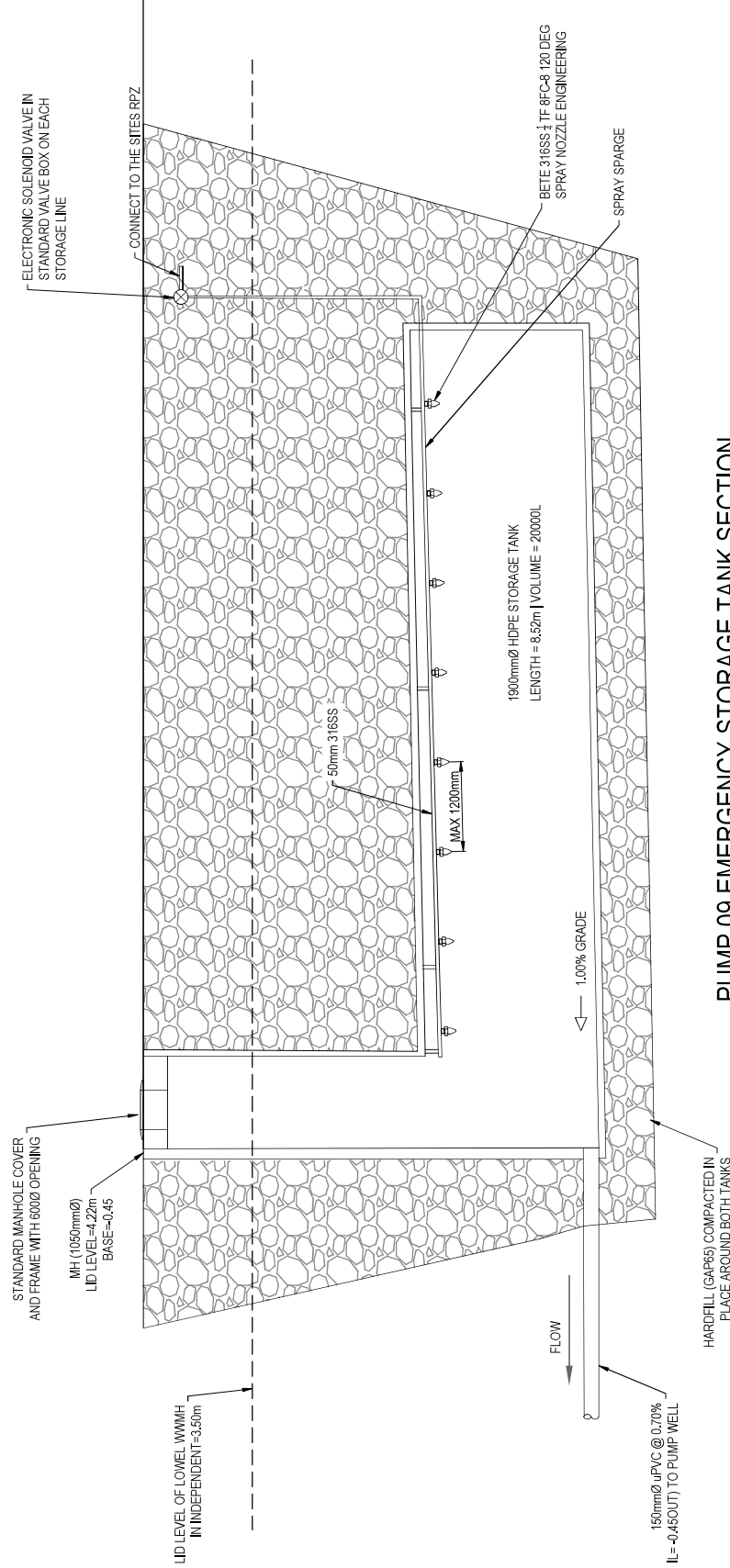
**Title**  
**PROPOSED WW PUMP STATION 9 CROSS-SECTION**

Project no.	BOP0749
Scale	1:150 @ A3
Client	BPP/09/04/01/01/01/01
Drawing no.	C350-17
Rev	B



**PROP PUMP STATION 09 RECEIVING MANHOLE AND PUMP WELL DETAILS**

**FOR CONSENT**



**PUMP 09 EMERGENCY STORAGE TANK SECTION**  
SCALE 1:50 @ A3

- NOTES**
- ALL WORKS TO BE IN ACCORDANCE WITH WAIKATO REGIONAL INFRASTRUCTURE TECHNICAL SPECIFICATIONS.
  - COORDINATES IN TERMS OF NZ GEODETIC DATUM BAY OF PLENTY 2000 LEVELS IN TERMS OF THE NEW ZEALAND VERTICAL DATUM 2016.
  - IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND LEVELS PRIOR TO THEIR OPERATIONS.
  - CONTRACTOR TO CHECK ALL DIMENSIONS PRIOR TO CONSTRUCTION/FABRICATION.
  - HEAVY DUTY MANHOLE LIDS AND FRAMES TO BE USED IN TRAFFICKED AREAS.
  - ALL MANHOLES ARE TO BE 1050MMØ PRE CAST CONCRETE UNLESS SHOWN OTHERWISE.
  - REFER TO AQUATE SPECIFICATION FOR RELEVANT WASTEWATER PUMP STATION SPECS AND INSTALLATION PROCESS.
  - ALL LINES SHALL HAVE A 1.0% SLOPE UNTIL THEY REACH THE MANHOLE OR LINKING AND OUTSINGING PIPES NOT MORE THAN 600mm AWAY FROM THE MANHOLE WALL.

FOR CONSENT	DP	03/26	
FOR REVIEW	DP	11/25	
Rev	Description	By	Date
Survey	MAVEN		05/2025
Design	DP		11/25
Drawn	DP		11/25
Checked	CS		11/25

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**Project**  
**WAIRAKEI SOUTH FTA090 DEVELOPMENT**  
**BELL ROAD, PAPAMOA FOR BELL ROAD LIMITED PARTNERSHIP**

**Title**  
**PROPOSED WW PUMP STATION 9 CROSS-SECTION**

Project no.	BOP0749
Scale	1:150 @ A3
Client	BOP/PL/CS/SL/DWG
Drawing no.	C-550-18
Rev	B

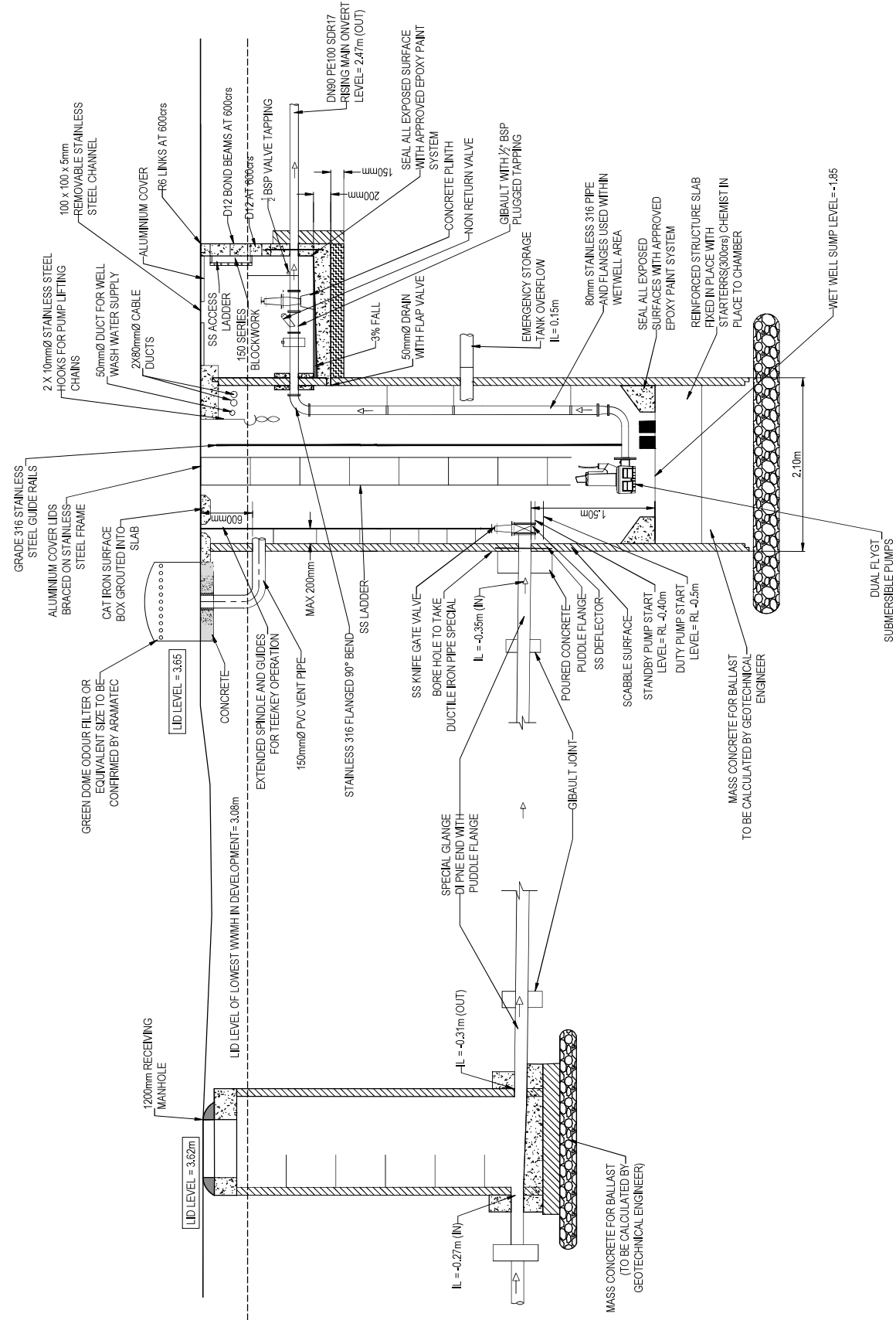
GEOTECHNICAL ENGINEER TO CONFIRM BUOYANCY CALCULATIONS

**FOR CONSENT**

**NOTES**

1. ALL WORKS TO BE IN ACCORDANCE WITH WAIKATO REGIONAL INFRASTRUCTURE TECHNICAL SPECIFICATIONS.
2. COORDINATES IN TERMS OF NZ GEODETIC DATUM BAY OF PLENTY 2000. LEVELS IN TERMS OF THE NEW ZEALAND VERTICAL DATUM 2016.
3. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND LEVELS PRIOR TO THEIR OPERATIONS.
4. CONTRACTOR TO CHECK ALL DIMENSIONS PRIOR TO CONSTRUCTION/FABRICATION.
5. HEAVY DUTY MANHOLE LIDS AND FRAMES TO BE USED IN TRAFFICKED AREAS.
6. ALL MANHOLES ARE TO BE 105MMØ PRE CAST CONCRETE UNLESS SHOWN OTHERWISE.
7. WASTEWATER PUMP STATION SPECS AND INSTALLATION PROCESS.
8. ALL LINES SHALL BE 1.6m ELEV. UNLESS OTHERWISE SHOWN. ALL MANHOLE CALLINGS AND OUTSING PIPES NOT MORE THAN 600mm AWAY FROM THE MANHOLE WALL.

ORIGINAL SIZE: A3



**PROP PUMP STATION 10 RECEIVING MANHOLE AND PUMP WELL DETAILS**

Rev	Description	By	Date
B	FOR CONSENT	DP	03/26
A	FOR REVIEW	DP	11/25

By	Date
MAVEN	05/2025
DP	11/25
DP	11/25
CS	11/25

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**FOR BELL ROAD LIMITED PARTNERSHIP**

**Title**  
**PROPOSED WW PUMP STATION 10 CROSS-SECTION**

Project no.	BOP0749
Scale	1:150 @ A3
Client	BOP/PLC/SL/DWG
Drawing no.	C3503-19

**FOR CONSENT**

Rev B





- NOTES**
- ALL WORKS TO BE IN ACCORDANCE WITH WAIKATO REGIONAL INFRASTRUCTURE TECHNICAL SPECIFICATIONS.
  - COORDINATES IN TERMS OF NZ GEODETIC DATUM BAY OF PLENTY 2000. LEVELS IN TERMS OF THE NEW ZEALAND VERTICAL DATUM 2016.
  - IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN ALL NECESSARY PERMITS PRIOR TO THEIR OPERATIONS.
  - CONTRACTOR TO CHECK ALL DIMENSIONS PRIOR TO CONSTRUCTION/FABRICATION.
  - HEAVY DUTY MANHOLE LIDS AND FRAMES TO BE USED IN TRAFFICKED AREAS.
  - ALL MANHOLES ARE TO BE 1050MM Ø PRE CAST CONCRETE UNLESS SHOWN OTHERWISE.
  - REFER TO AQUATE SPECIFICATION FOR RELEVANT WASTEWATER PUMP STATION SPECS AND INSTALLATION PROCESS.
  - ALL PIPES SHALL BE 4.5 BARIBLE UNIT UNLESS OTHERWISE SHOWN.
  - ALL PIPES SHALL BE 4.5 BARIBLE UNIT UNLESS OTHERWISE SHOWN.
  - OUTSING PRESS NOT MORE THAN 600mm AWAY FROM THE MANHOLE WALL.

Rev	Description	By	Date
B	FOR CONSENT	DP	03/26
A	FOR REVIEW	DP	11/25

Survey	M/AVEN	05/2025
Design	DP	11/25
Drawn	DP	11/25
Checked	CS	11/25

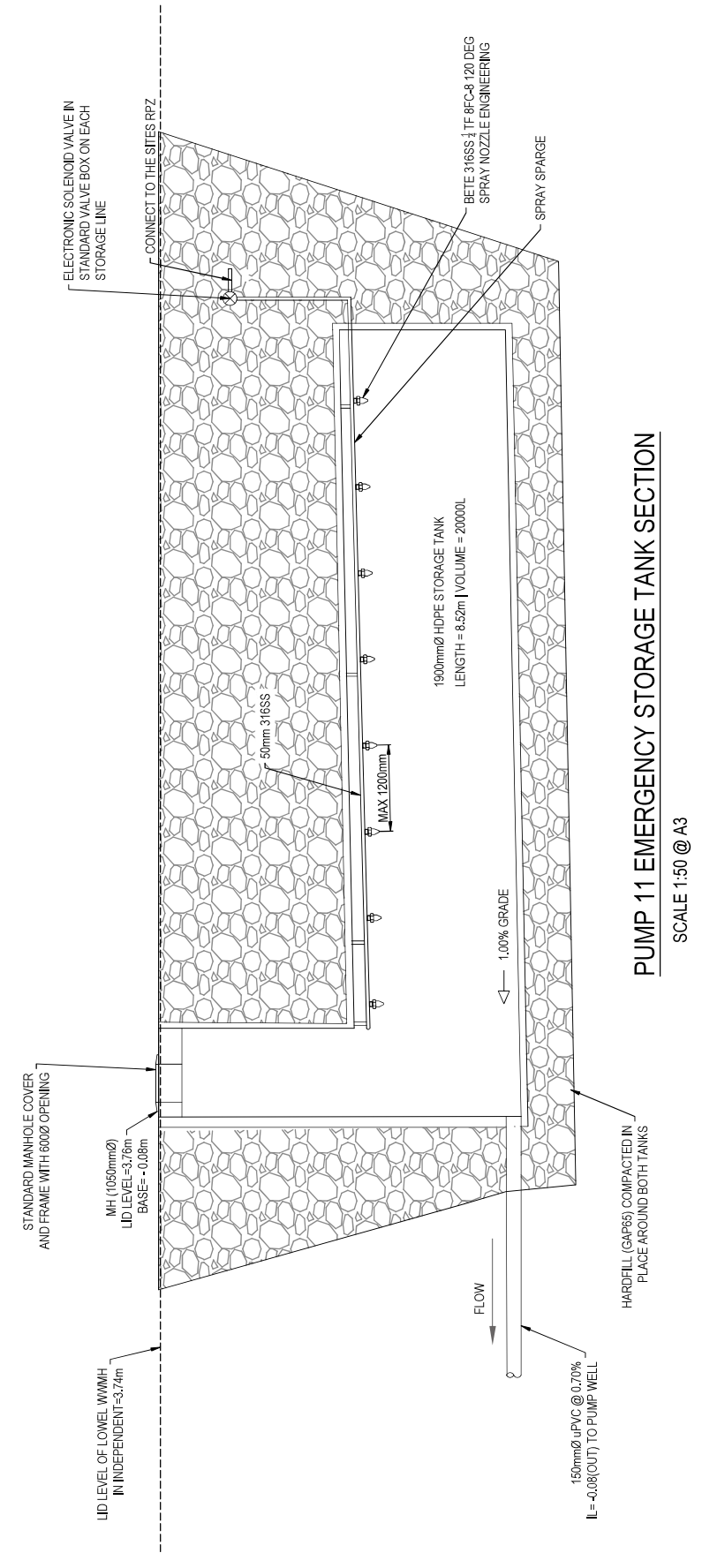
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**Project**  
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**DEVELOPMENT**  
**BELL ROAD, PAPAMOA**  
**FOR BELL ROAD**  
**LIMITED PARTNERSHIP**

**Title**  
**PROPOSED WW**  
**PUMP STATION 11**  
**CROSS-SECTION**

**Project no.** BOP0749  
**Scale** 1:150 @ A3  
**Client file** BOP0749/CS/11/25  
**Drawing no.** CS-500-22

**Rev** **B**



**FOR CONSENT**

GEOTECHNICAL ENGINEER TO CONFIRM BUOYANCY CALCULATIONS