Ref: A0123-B2-VWA-197 7th April 2011

Mr. Phil Narezzi
Veolia Water Australia
Level 4, Bay Centre,
65 Pirrama Road
Pyrmont NSW 2009

Dear Phil,

Re: ROSEHILL / CAMELLIA RECYCLED WATER SCHEME
Proposed Modification to Rosehill Recycled Water Scheme
Major Project Application No.: 07_0121 - As-Built Building Heights

Attachments:
Attachment #1: DOP Letter to Aquanet dated 11th February 2011
Attachment #2: Aquanet Letter to VWA dated 21st February 2011
Attachment #3: VWS Letter to VWA, A0123-B2-VWA-183 dated 13th January 2011
Attachment #4: Degasser Plan View, A0123-H-5014-03 Rev E1
Attachment #5: Reverse Osmosis Permeate Collection Tank Plan View, A0123-M-6310-50 Rev B
Attachment #6: Process Building Plan View, A0123-H-2000-04 Rev B1
Attachment #7: Surveyors Report 9091 033 Tank Levels

With reference to above attachment #1, VWS responds as follows to the specific advice listed in the DOP letter, i.e. provide plans and an explanation of why the height limits were not complied with

Item #1 – Provision of Plans & Explanation of why the height limits were not complied with

1. As-built Status
As previously advised in letter from VWS to VWA, A0123-B2-VWA-183, dated 13th January 2011, Three plant items have been constructed higher than the approved DoP height. These are detailed below along with the relevant engineering plans and drawings for the items in question:

Out-of-Spec Item #1: Degasser Tower

Reference Plans:	1. Degasser Plan View A0123-H-5014-03 Rev E1 2. Surveyors Report 9091 033 Tank Levels
Allowable Height:	15.9m
As-built Height:	16.03m
Deviation:	0.13m

Out-of-Spec Item #2: Reverse Osmosis Permeate Collection Tank

Reference Plans:	1. Reverse Osmosis Permeate Collection Tank Plan View A0123-M-6310-50 Rev B 2. Surveyors Report 9091 033 Tank Levels
Allowable Height:	12.0m
As-built Height:	12.175m
Deviation:	0.175m

Out-of-Spec Item #3: Process Building

Reference Plans:	1. Process Building Plan View A0123-H-2000-04 Rev B1 2. Surveyors Report 9091 033 Tank Levels
Allowable Height:	18.4m
As-built Height:	18.3m (vent-pipe is 1.5m in excess of this)
Deviation:	1.5 m for the vent pipe only

3. Causative Factors

The deviations between the as-built heights and allowable heights were caused by a number of issues:

- Changes to critical personnel during the project, including 3 different Project Managers being engaged between January 2010 and April 2010, resulted in inadequate communication between parties.
- Vendor standard dimensions for the above equipment pieces were not available at the time submissions were made to the DOP. When orders were placed for equipment, a cross check of the vendor equipment size versus the approved height was not undertaken to full effect against DOP requirements.

4. Impact Assessment

Impact of all items is considered to be low, as per the details provided in A0123-B2-VWA-183.

I trust this provides enough information to satisfy the DOP request and to enable Aquanet to proceed to submit a request to modify the project in accordance with s75W of the *Environmental Planning and Assessment Act 1979*. Please do not hesitate to contact me should any item require discussion or should any additional information be required.

Yours sincerely,
Veolia Water Solutions & Technologies (Australia) Pty Ltd

Regards,

Tom Roche
Project Manager,
Level 4, Bay Centre,
65 Pirrama Road
PYRMONT NSW 2009
Australia

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Mob: +61 (0) 438 880 470
Email: tom.roche@veoliawater.com

NSW GOVERNMENT | Planning

Contact: Belinda Scott
Phone: (02) 9228 6472
Fax: (02) 9228 6355
Email: belinda.scott@planning.nsw.gov.au

Our ref: 10/21092

Mr Colin Thompson
Business Manager
AquaNet Sydney Pty Ltd
100 Bennelong Parkway
Homebush Bay NSW 2127

Dear Mr Thompson

Subject: Rosehill Recycled Water Scheme (MP 07_0121) – Mod 1

Thank you for your letter, dated 25 January 2011, confirming the heights of structures built on the recycled water treatment plant site at Fairfield. The Department's also notes your email, dated 31 January 2011, confirming that only 70% designs for the surface facilities at the recycled water treatment plant were submitted to the Department.

A review of the information provided in your letter and the Conditions of Approval, indicates that the heights as surveyed differ from the heights specified in Table 1 of Condition 2.37. As such the Department's view is that those structures exceeding the heights specified in Condition 2.37 are not generally in accordance with the conditions of approval.

To address this non-compliance you are advised to submit a request to modify the project in accordance with s75W of the *Environmental Planning and Assessment Act 1979* to permit the use of these structures at the height built. Your request will need to be accompanied with plans together with an explanation of why the height limits were not complied with.

You are also advised that a Building Certificate will also be required from Fairfield Council to regularise the structures.

The Department has reviewed this non-compliance in accordance with its published Compliance Policy and Breach Management Guidelines, which apply to all projects approved by the Minister for Planning. As the breach is of low severity and does not appear to pose a significant environmental impact, the Department has determined it to be of low overall significance. Accordingly, the Department has determined on this occasion to issue AquaNet Sydney Pty Ltd with a warning that if further breaches of this nature occur a higher level of enforcement action would be considered, which may include a Penalty Notice or court action.

Therefore AquaNet's cooperation is sought to ensure the remainder of the project and any future projects of this nature are carried out in accordance with the conditions of the project approval.

The Department's contact officer for this project, Belinda Scott, can be contacted on (02) 9228 6472 or via email at Belinda.Scott@planning.nsw.gov.au. Please mark all correspondence regarding the proposal to the attention of the contact officer.

Yours sincerely

11/2/11

Daniel Keary
Director Infrastructure Projects
As delegate for the Director General

21 February 2011

Mr Phil Narezzi
Veolia Water Australia Pty Ltd
Level 4, Bay Centre,
65 Pirrama Road
Pyrmont NSW 2009

Dear Phil,

Re: Rosehill Camellia Recycled Water Treatment Plant - 1 East Pde (also known as Gale Pde), Fairfield (Site)

Further to our previous correspondence, I attach a notice from the NSW Department of Planning (**DOP**) dated 11 February in relation to height restrictions under the Project Approval and the non-compliance at the Site regarding the building.

Please review the attached notice and prepare the draft documentation contemplated in the letter for consideration and approval by AquaNet (**Modification Application**). Given the circumstances, it is reasonable for Veolia to pay AquaNet's cost in relation to the non-compliance (if any). We will use our reasonable endeavours to keep you informed of such costs. Presently, I do not expect that there will be any external costs if the draft Modification Application is satisfactory and the DOP accepts the Modification Application.

Regrettably, AquaNet has been issued with a formal warning by the DOP in connection with this height non-compliance. In the spirit of ensuring project success for all parties, please ensure there are no further violations of the Project Approval by Veolla.

Yours faithfully

Colin Thompson
Business Manager
AquaNet Sydney Pty Limited
100 Bennelong Parkway
Homebush Bay NSW 2127

Ref: A0123-B2-VWA-183 13 January 2011

Mr. Phil Narezzi
Veolia Water Australia
Level 4, Bay Centre,
65 Pirrama Road
Pyrmont NSW 2009

Dear Phil,

Re: ROSEHILL / CAMELLIA RECYCLED WATER SCHEME
Department of Planning Building and Tank Heights Condition 2.37

With regards to the Department of Planning (DoP) Approval for Major Project Application 07_0121 for the Camellia and Rosehill Recycled Water Scheme, dated 01 June 2009 and subsequently modified on 01 April 2010, in particular clause 2.37 - Visual Amenity and Urban Design, the D&C Contractor notifies the Veolia Company of the as built heights of the process building and various tanks on the project site. A site survey was completed and information provided in December 2010.

With regards to Table 1 (Maximum Height of Surface Facilities) of clause 2.37 of the DoP approval, the as built heights are shown in the below table;

Item	**Height Limit - per clause 2.37 of DoP Approval (mAHD)**	**Height Limit (including any access ladders, safety rails, roof ventilation apparatus - per clause 2.37 of DoP Approval (mAHD)**	**As built height from survey December 2010 (mAHD)**	**Comments**
Recycled Water Storage Tank	15.1	16.3	13.88	Complies
Feed Balance Tank	14.7	16.0	13.67	Complies
Detention Tank	14.9	16.2	14.53	Complies
Filtration (Reverse Osmosis) Building	17.1	18.4	18.3 Building 19.8 Vent Pipe	**Building OK** **Vent Pipe 1.5 m HIGHER (approximate)**
Degasser	15.9	17.2	16.03	**130 mm HIGHER (No access ladders or handrails applicable)**
Flocculation Tank	13.5	14.7	N/A	Removed from scope
Reverse Osmosis Tank	13.6	14.9	13.3	Complies

Veolia Water Solutions & Technologies (Australia) Pty Ltd
(A.B.N. 35 055 254 003)
Level 4, Bay Centre, 65 Pirrama Road - PYRMONT NSW 2009 AUSTRALIA
Tel: + 61 2 8572 0400 - Fax: + 61 2 8572 0410
Email: systems@veoliawater.com
Web: www.veoliawater.com.au

Item	Height Limit - per clause 2.37 of DoP Approval (mAHD)	Height Limit (including any access ladders, safety rails, roof ventilation apparatus - per clause 2.37 of DoP Approval (mAHD)	As built height from survey December 2010 (mAHD)	Comments
Reverse Osmosis Permeate Collection Tank	12.0	13.2	12.175	**175 mm HIGHER**

Also attached are a series of photographs (refer attachment A) identifying the project site as viewed from a variety of locations around the project site including from North Street which is the street adjacent to the Northern side of the plant and on which four local residents houses are located.

In summary the above table indicates that with the plant layout (as per drawing A0123-M-0000-01 Issue A) that the tanks located adjacent to the residents of North Street are all in compliance with the heights specified in the DoP approval (ie feed balance tank, detention tank, recycled water storage tank). The reverse osmosis permeate collection tank is 175 mm higher than the DoP approval condition, however, it is noted that this tank is both located behind the recycled water storage tank and is lower in overall height than the recycled water storage tank and as such the reverse osmosis permeate collection tank is obscured from view when the plant is viewed from North Street. The degasser tower structure is 130 mm higher than the DoP approval, however, the location of the degasser structure (as per the layout drawing A0123-M-0000-01 Issue A) enables the degasser structure to be obscured from view when the plant is viewed from North Street.

Both the degasser structure and the reverse osmosis permeate collection tank areas are lower in height than the process building and, therefore, are completely obscured from view with the plant is viewed from the Southern side.

The process building structure at 18.4 metres is within the limits of the DoP approval, however, a small diameter plastic (PVC) vent extraction pipe from the administration building laboratory roof is estimated to be approximately 1.5 metres higher than the DoP approval limit. This small diameter plastic vent pipe can be indentified in image 1, 2 and 3 of attachment A. When viewing the plant from North Street this small plastic vent pipe is not clearly visible.

In conclusion, the D&C Contractor reviews these minor increases in height of equipment are of minimal impact to the overall visual amenity of the project site and requests a concession be issued by any relevant parties.

The D&C Contractor informs the Veolia Company of these matters and should the Veolia Company require further information on the above matters the D&C Contractor remains available for discussion. The D&C Contractor requests that the Veolia Company also provide this information to the Project Company, AquaNet.

The D&C Contractor awaits a response from the Veolia Company.

Yours faithfully
Veolia Water Solutions & Technologies (Australia) Pty Ltd

Charles Edwards

Charles Edmiston
Contractor's Representative
Operations Manager

Attachments

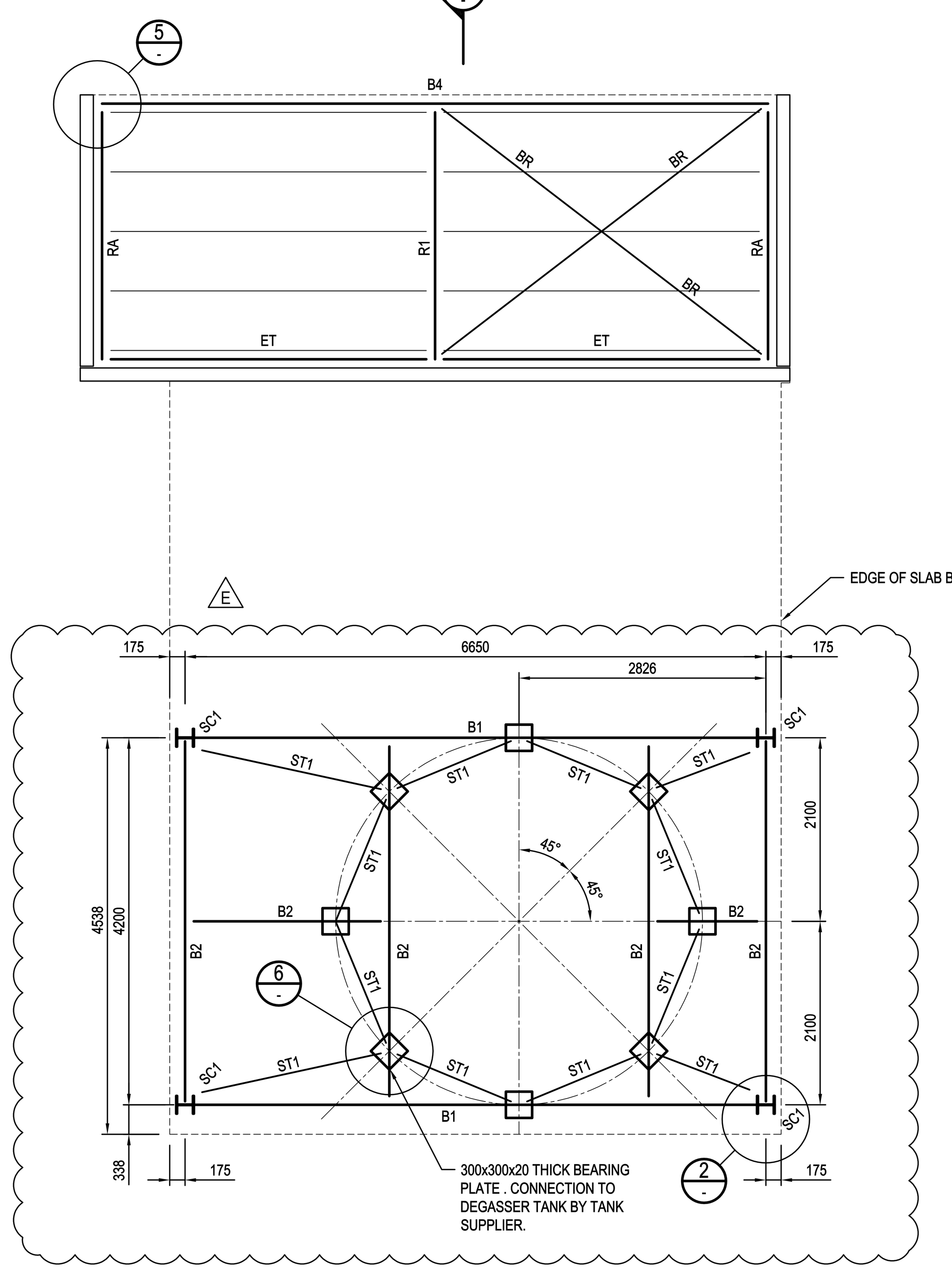
1. Site Photos January 2011
2. Site Layout Drawing A0123-M-0000-01 Issue A

MEMBER SCHEDULE

MEMBER TAG	MEMBER SIZE
RAFTERS	
R1	180 PFC GALVANISED
BEAMS	
B1	410 UB 54 GALVANISED
B2	310 UB 32 GALVANISED
STRUTS	
ST1	Ø114 x 3.6 CHS GALVANISED
COLUMNS	
SC1	200 UC 46 GALVANISED
BRACES	
BR	Ø10 ROD GALVANISED WITH TURNBUCKLE
ET	90 x 6 EA GALVANISED
RA	90 x 6 EA GALVANISED
PURLINS	
P1	C15015 PURLINS AT 900 max. CENTRES 800 max. END SPAN (SHEETING) 1 ROW OF BRIDGING

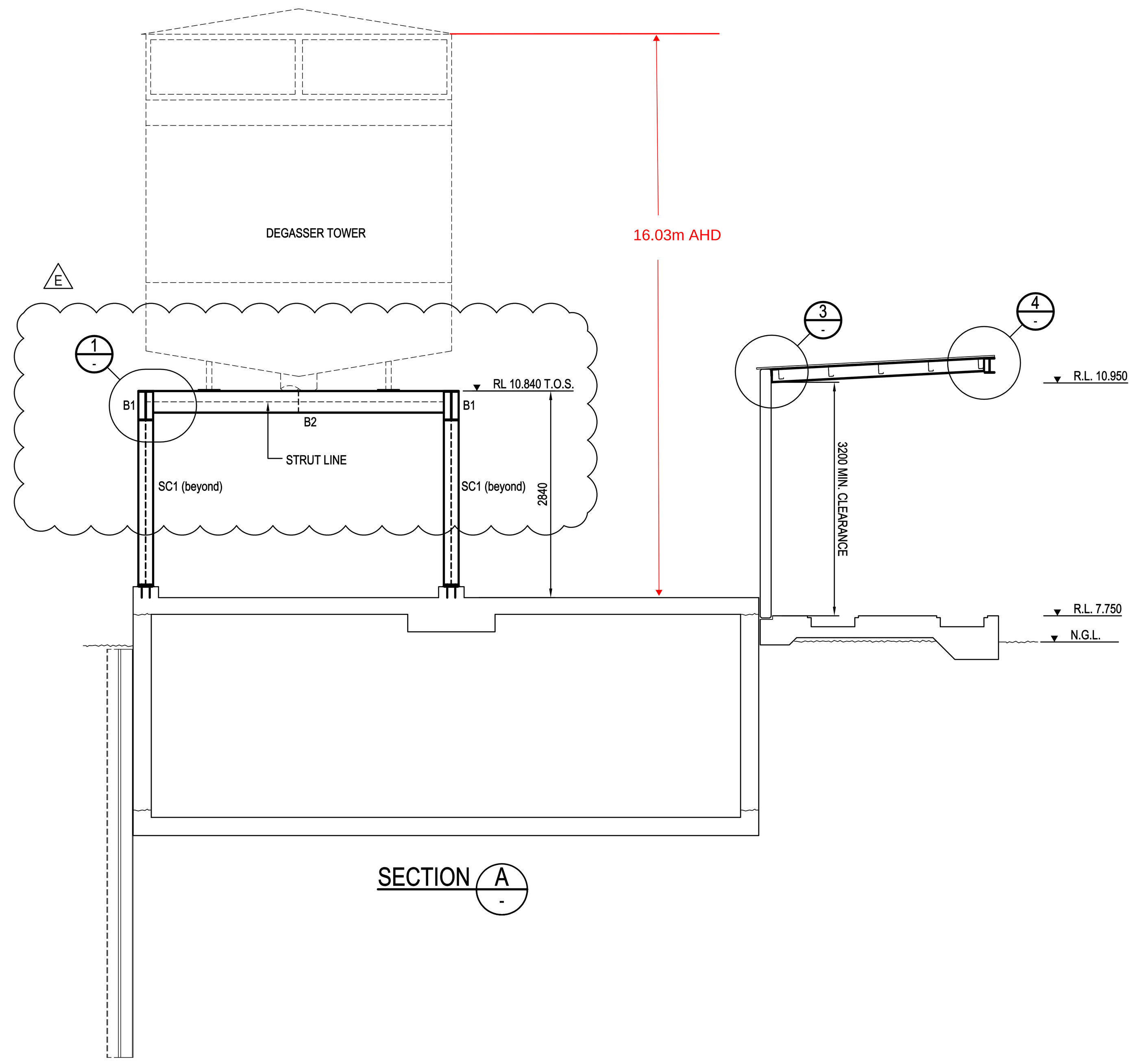
NOTES:

1. FOR ALL GENERAL STEELWORK NOTES REFER CONSTRUCTION NOTES ON DRAWING 01
2. REFER PANEL ELEVATIONS FOR FERRULE LOCATIONS.
3. ALL BOLTS FOR FERRULE CONNECTIONS SHALL BE GRADE 8.8/S WITH 30mm MINIMUM ENGAGEMENT TO FERRULES.
4. ALL BOLTS FOR STEEL TO STEEL CONNECTIONS SHALL BE M20 GRADE 8.8/S U.N.O.
5. ALL BRACE MEMBERS SHALL BE TIED TO EVERY SECOND PURLIN CROSSED WITH UNISTRUT STRAP TO PREVENT SAG.
6. PRECAMBER TO ALL STRUCTURAL STEEL RAFTERS, TRUSSES AND PORTALS SHALL BE 5mm FOR EVERY 2000mm OF SPAN UNLESS NOTED OTHERWISE ON PLAN. (REFER LEGEND BELOW FOR DESIGNATION)
7. UNLESS NOTED OTHERWISE ALL EXTERNAL STRUCTURAL STEEL SHALL BE HOT DIPPED GALVANISED.
8. PROVIDE FIRE PROTECTION TO ALL STRUCTURAL STEEL ELEMENTS AS REQUIRED (REFER ARCHITECTS DRAWINGS FOR FIRE RATING REQUIREMENTS)

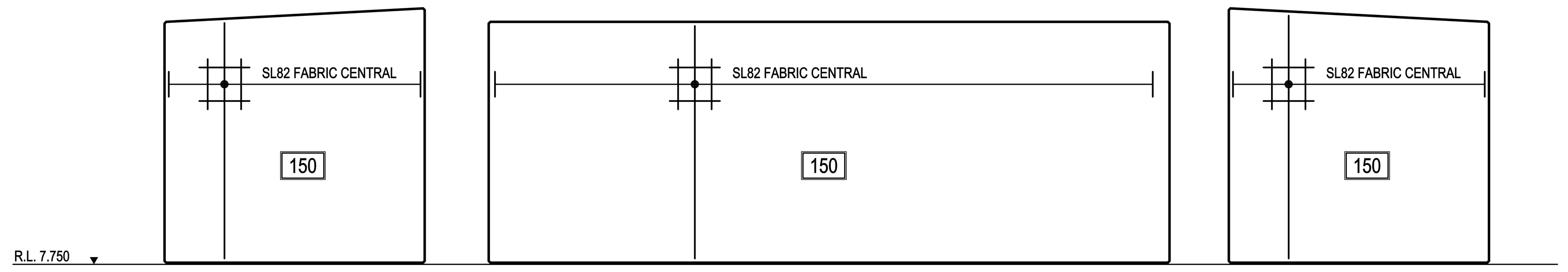


REGEN WASTE TANK/CHEMICAL BUND STRUCTURAL STEEL MARKING PLAN

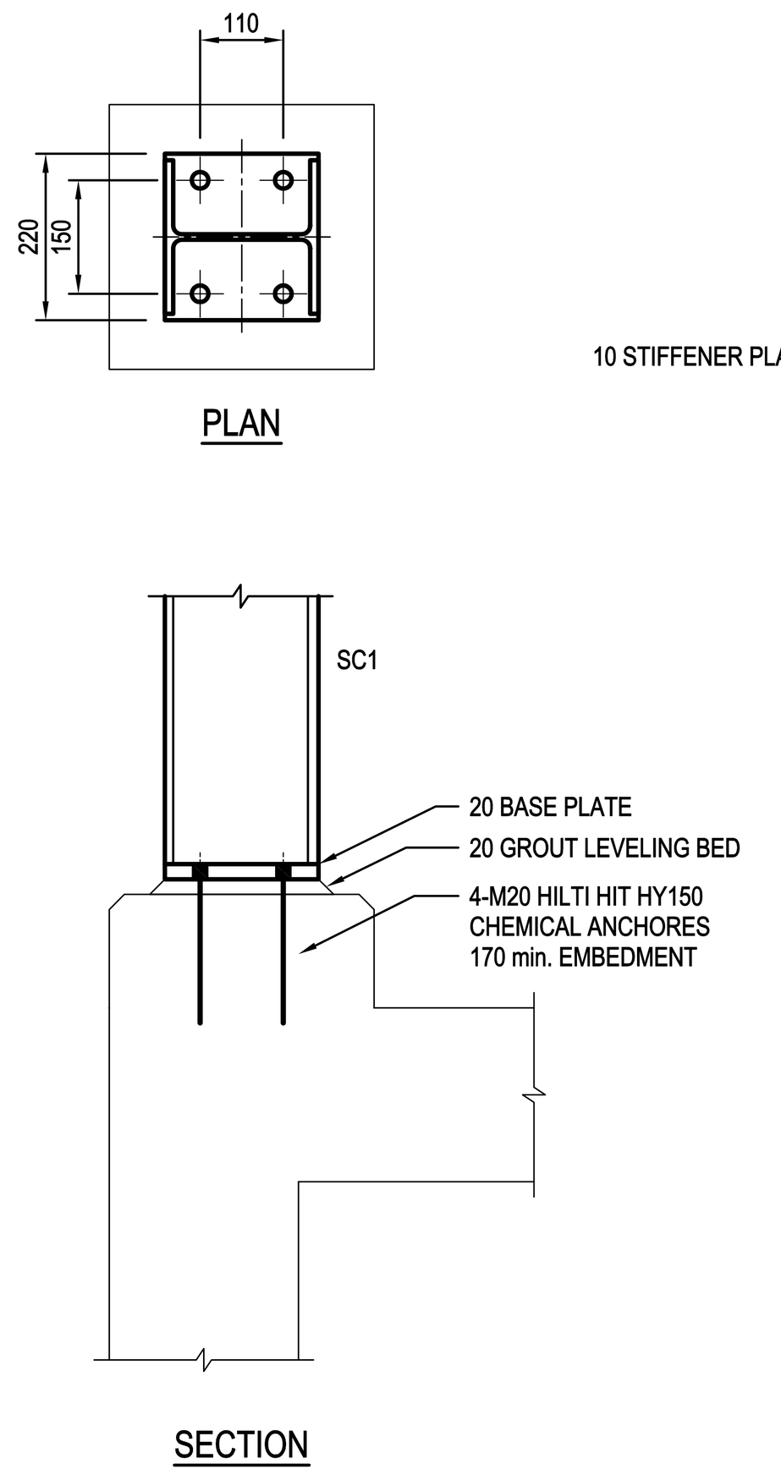
ALL PURLINS TO BE P1 U.N.O.



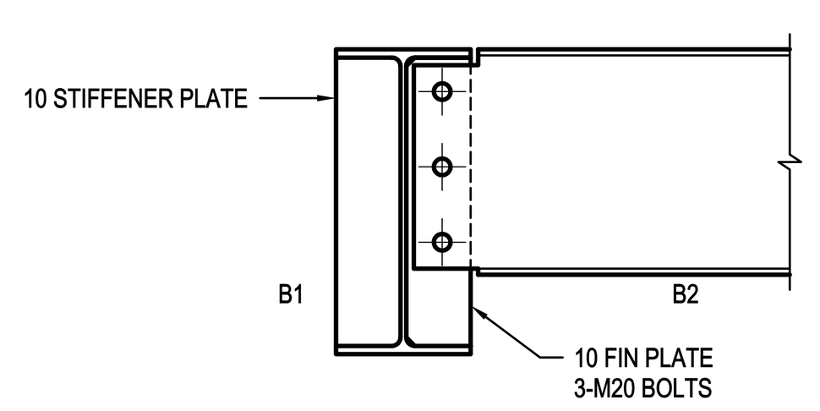
SECTION A



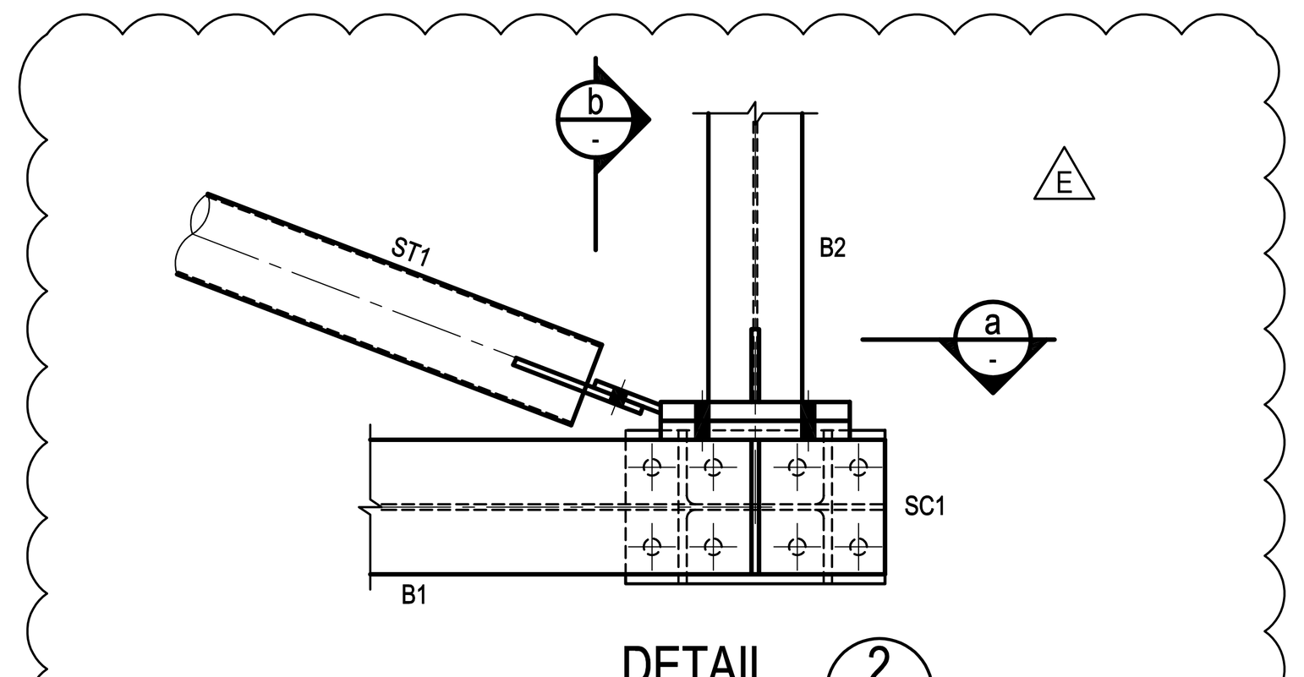
TYPICAL PANEL ELEVATIONS



TYPICAL SC1 BASE PLATE DETAIL



DETAIL 1



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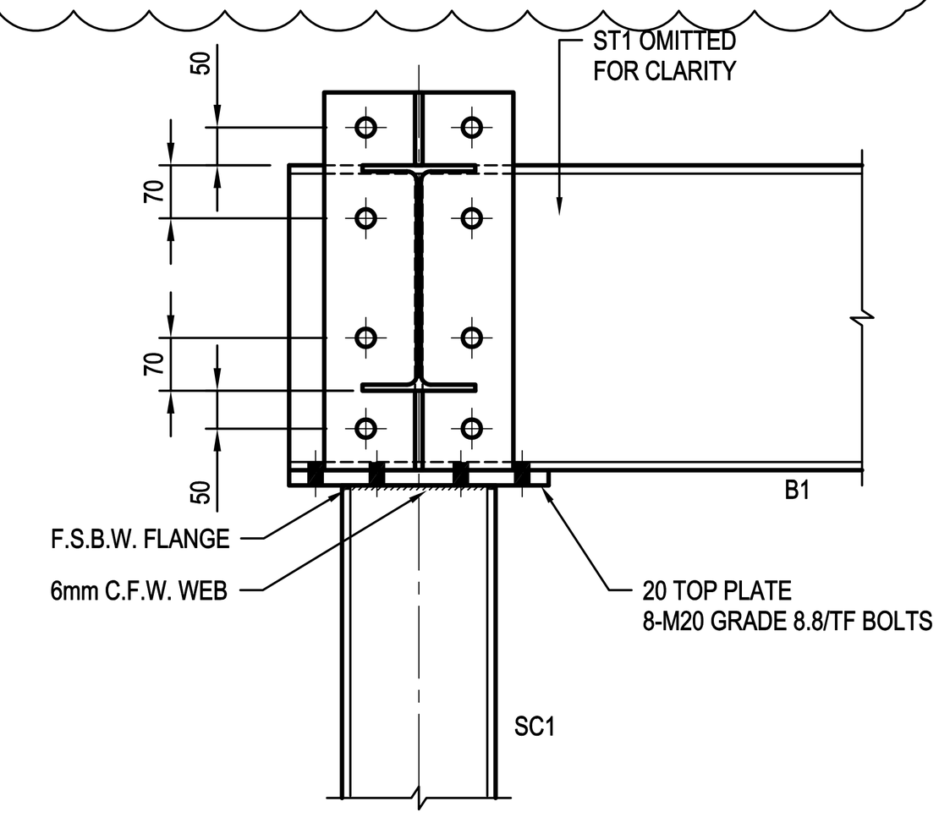
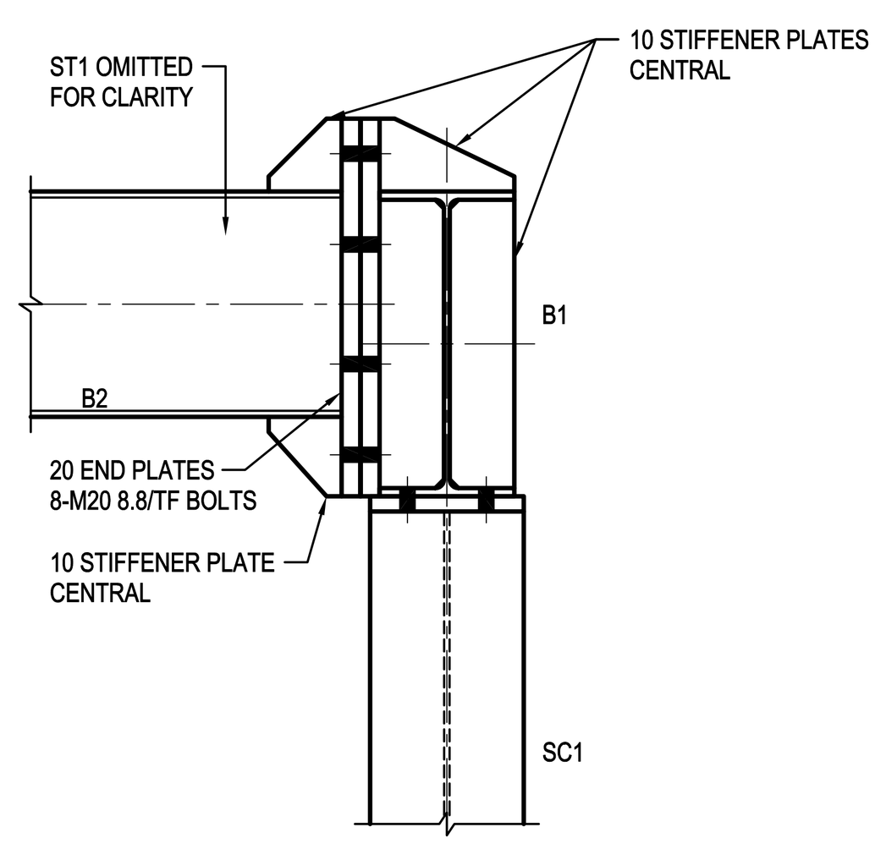


SECTION a



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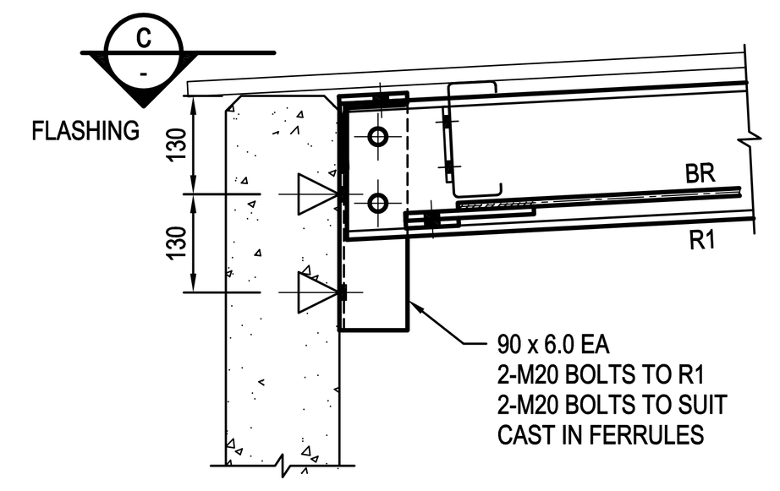

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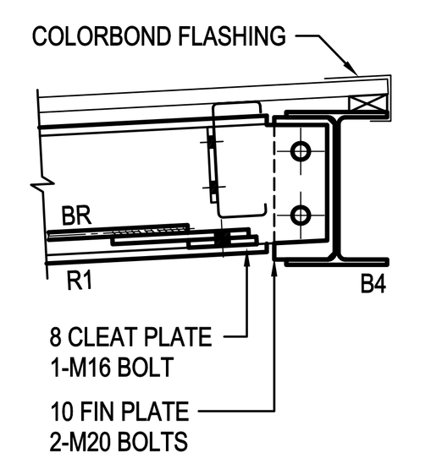

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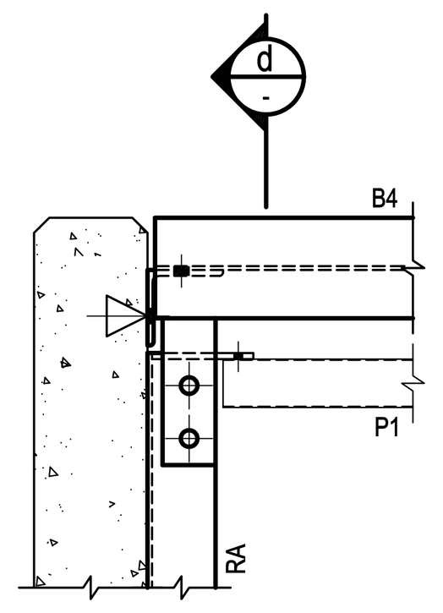

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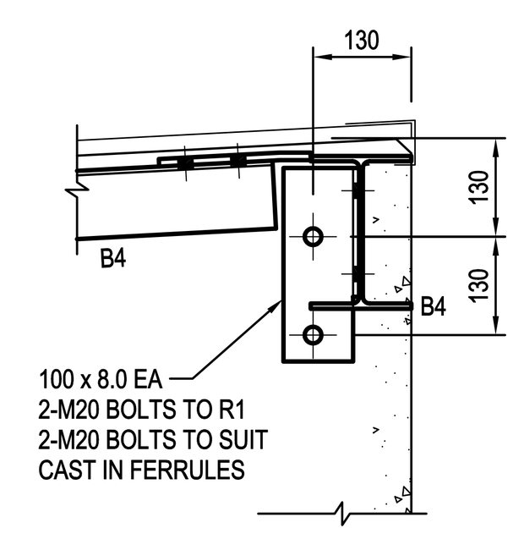
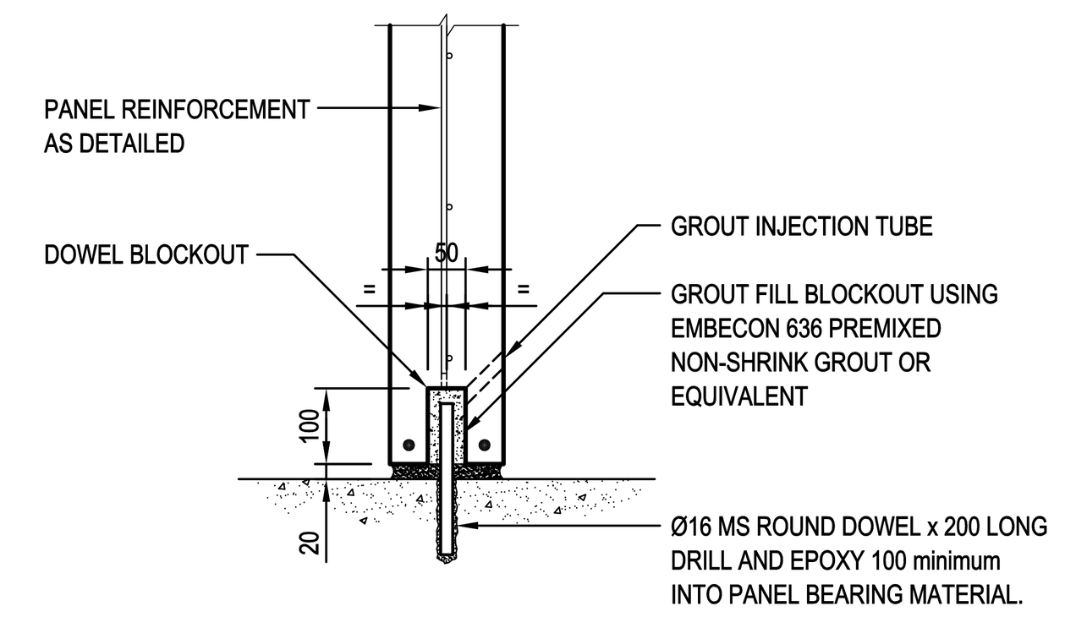
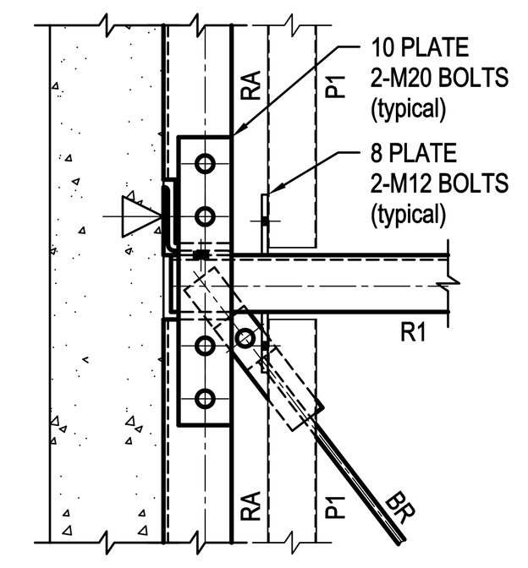


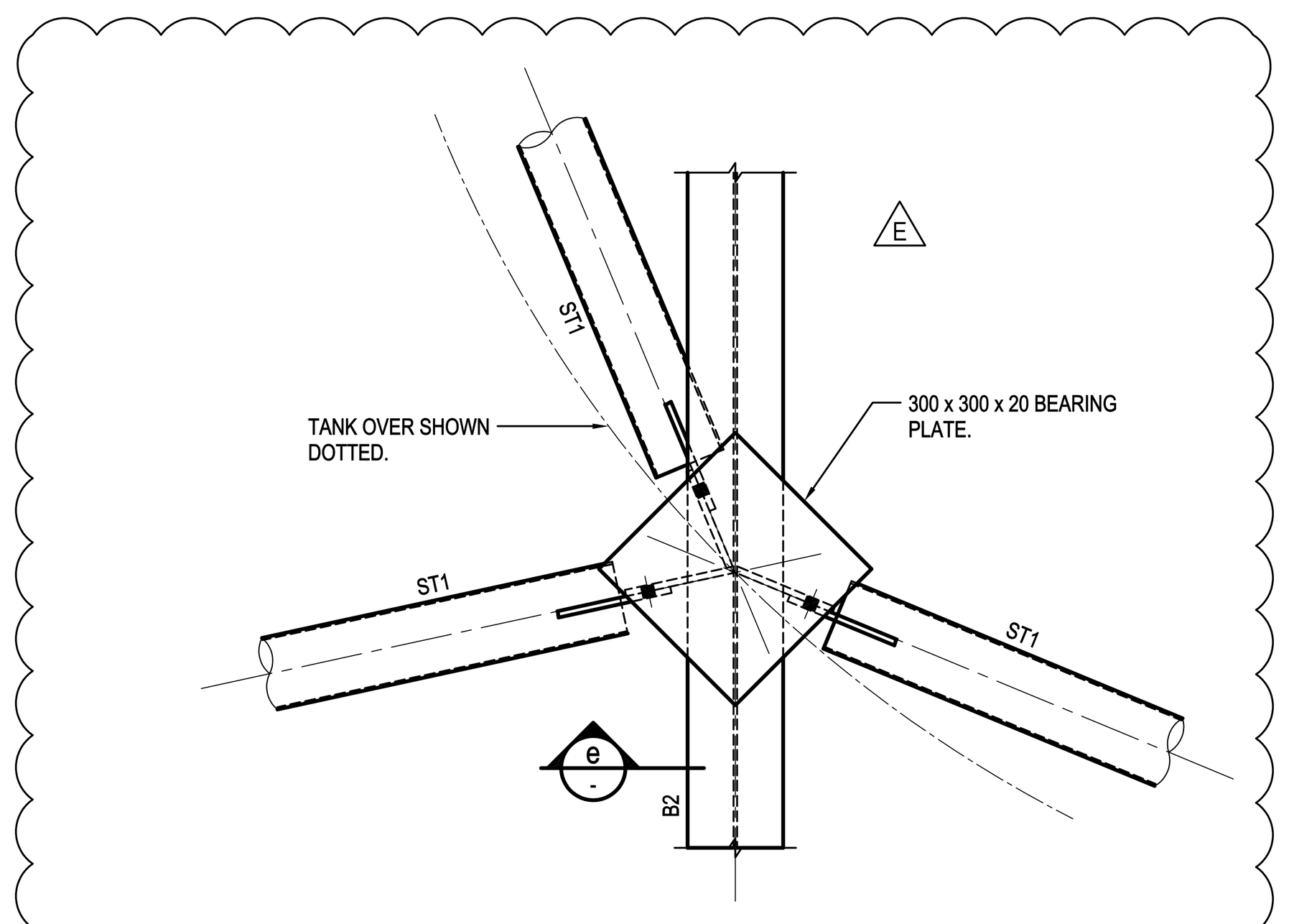
SECTION d



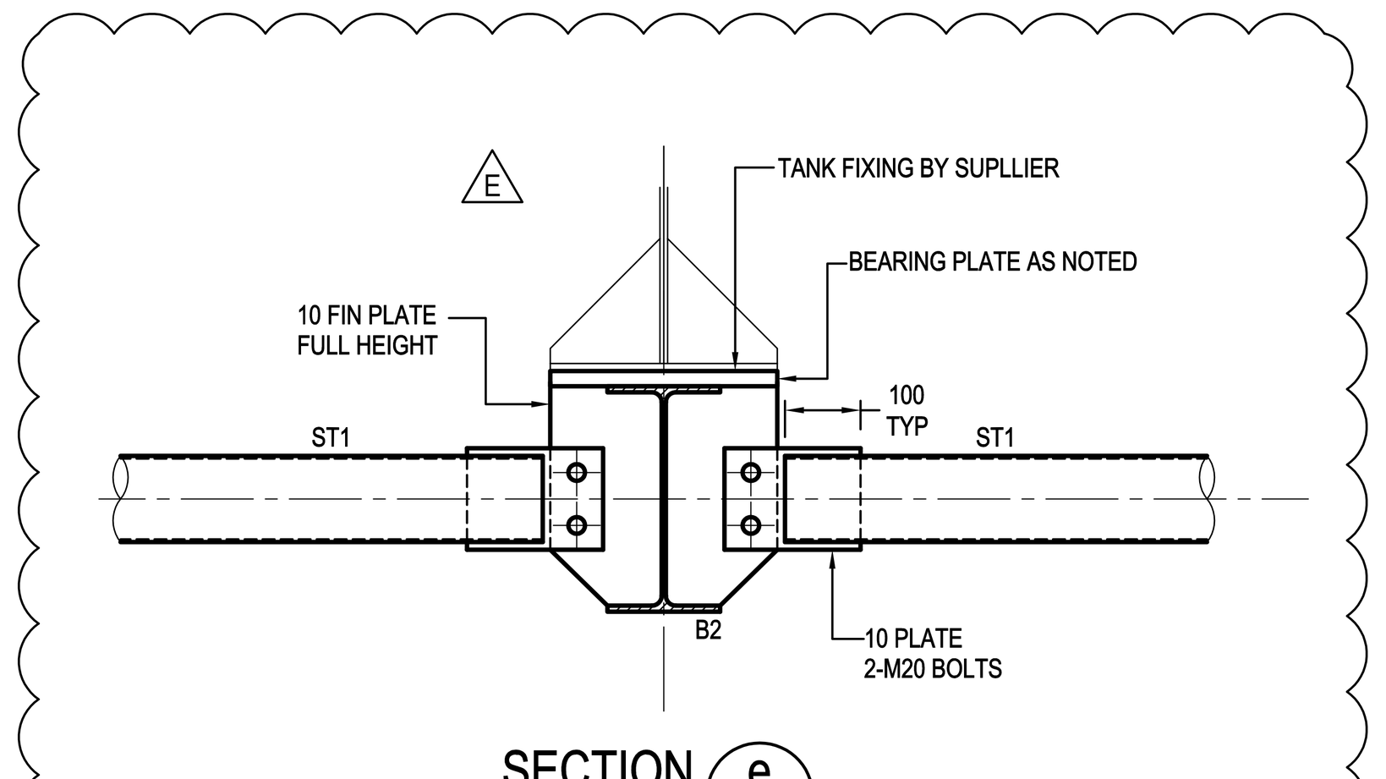
TYPICAL PANEL DOWEL DETAIL



SECTION c



DETAIL 6



SECTION e

SUPPLIERS DOCUMENT REVIEW

Approval or review by VWS does not affect, limit or relieve the Supplier from its responsibilities for defects or errors in the Supplier's documents, or from compliance with the requirements of the Contract or the requirements of any applicable legislation, regulation, standard or code of practice.

The review indicates the following status code:

- ☐ Code 5 — Information Only
- ☐ Code 4 — Reviewed No Comments
- ☐ Code 3 — Reviewed with Comments
- ☐ Code 2 — Unsatisfactory - Resubmit
- ☐ Code 1 — Rejected

Mech. .... Elec. ....
Proc. .... E.M. ....
Dwg. .... P.E. ....
Date ______

FOR CONSTRUCTION

0 1000 2000 3000 4000 5000mm
1000 600 200
SCALE 1:50

REVISION	AMENDMENT	DRAWN	DESIGNED	DATE
E	DEGASSER SUPPORT FRAME REVISED AS PER VWS REQUEST.	R.B	L.M.	31-05-10
D	REVISED AS CLOUDED	S.R.W.	L.M.	22-02-10
C	ROOF LEVELS REVISED	M.L.D.	L.M.	09-02-10
B	LEVELS REVISED	M.L.D.	L.M.	27-01-10
A	ISSUED FOR CONSTRUCTION	M.L.D.	L.M.	21-12-09
03	ISSUED FOR 80% REVIEW	A.C.W.	L.M.	06-11-09
01	ISSUED FOR TENDER	M.L.D.	L.M.	28-08-09

REVISION	AMENDMENT	DRAWN	DESIGNED	DATE

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- DO NOT SCALE FROM THIS DRAWING

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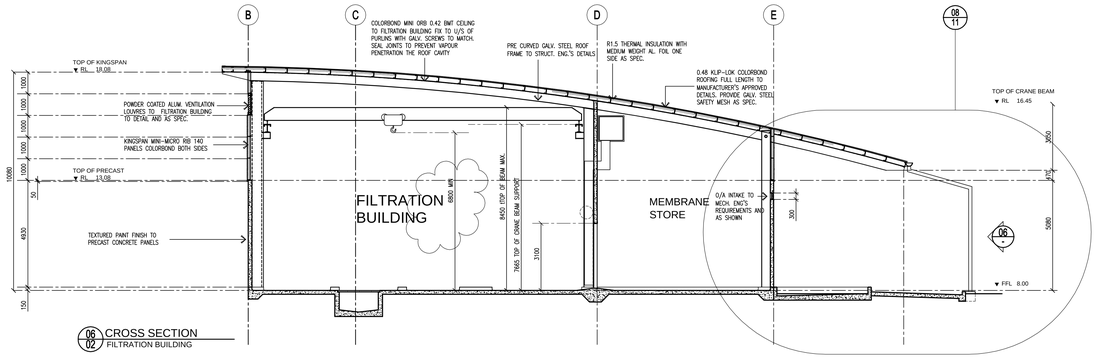
Email: systems@veoliawater.com
VEOLIA WATER
Solutions & Technologies
Tel: 61 2 8572 0400
Fax: 61 2 8572 0410

Project	Drawn	Designed	Date
ROSEHILL RWTP EAST PARADE & NORTH STREET FAIRFIELD	M.L.D.	L.M.	JULY 09'
	Checked	**Approved**	**Scale**
	L.M.	R.K.	1:50, 1:10

Title	Drawing number	Revision
REGEN WAST TANK / CHEMICAL BUND STEEL WORK PLANS AND DETAILS	A0123-H-5014-03	E



NOTES:
1- ALL INTERNAL INSITU CONCRETE SHALL BE EPOXY PAINT FINISH AS SPECIFIED BY STRUCTURAL ENGINEER

2- ALL INTERNAL STEEL SHALL BE HOT DIP GALVANIZED AS SPECIFIED BY STRUCTURAL ENGINEER

3- KINGSPAN PANELS SHALL BE COLORBOND FINISH BOTH SIDES AND SHALL BE CONCEALED FIXED TO MANUFACTURERS AND STRUCTURAL ENGINEERS APPROVED DETAILS

4- COLORBOND MINI ORB SHALL BE SCREW FIXED TO UNDERSIDE OF ROOF PURLINS TO MANUFACTURERS APPROVED DETAILS. SCREW HEADS SHALL MATCH COLOUR OF COLORBOND. SEAL ALL JOINTS BETWEEN MINI ORB TO STOP VAPOUR PENETRATION INTO THE ROOF CAVITY

SUPPLIERS DOCUMENT REVIEW

Approval or review by VWS does not affect, limit or relieve the Supplier from its responsibilities for defects or errors in the Supplier's documents, or from compliance with the requirements of the Contract or the requirements of any applicable legislation, regulation, standard or code of practice.
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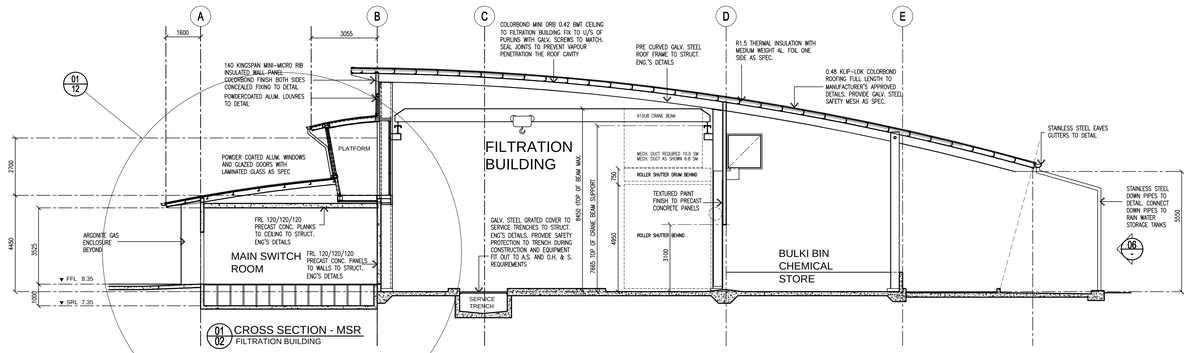
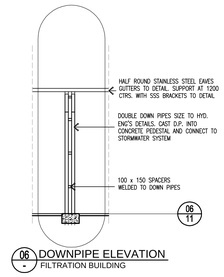
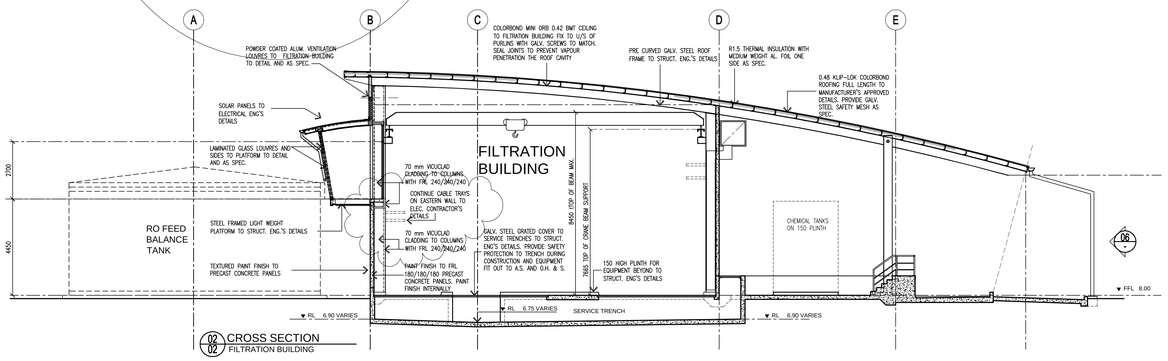
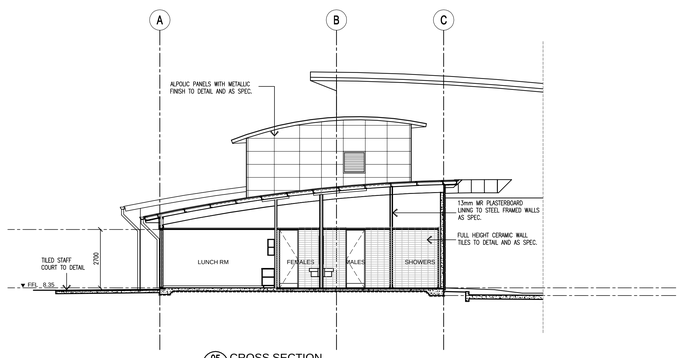
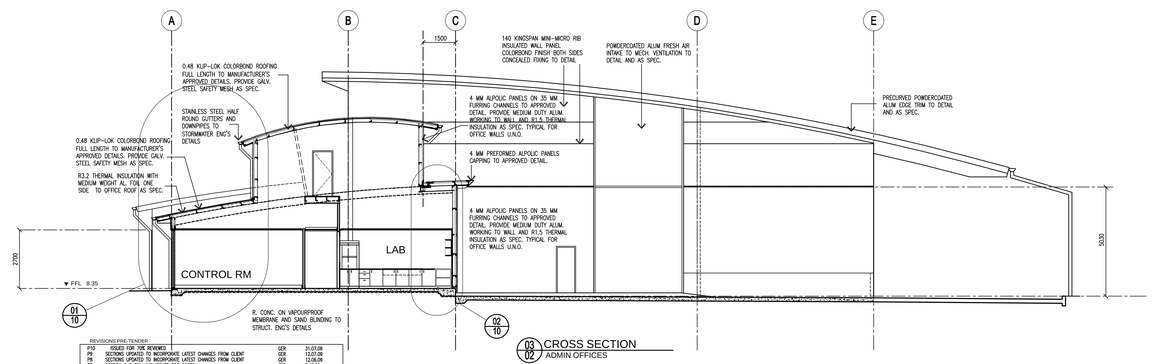
Mech. ..... Elec. .....
Proc. ..... E.M. .....
Dwg. ..... P.E. .....
Date _____

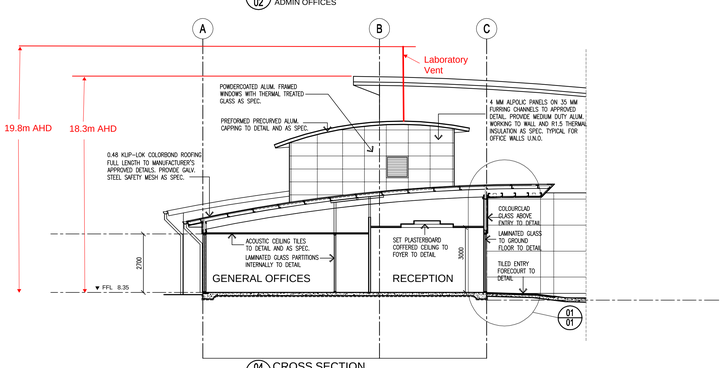












REVISIONS PRE-TENDER			
P10	ISSUED FOR TOE REVIEWED	GER	31.07.09
P9	SECTIONS UPDATED TO INCORPORATE LATEST CHANGES FROM CLIENT	GER	12.07.09
P8	SECTION 'A' SHOWN AND ISSUED FOR COORD. LATEST CHANGES FROM CLIENT	GER	10.07.09
P7	SECTION 'A' SHOWN AND ISSUED FOR COORD.	GER	3.06.09
P6	PLATFORM SECTION SHOWN AND ISSUE FOR COORD.	GER	1.05.09
P5	UPDATED SECTION'S OVERHAG	GER	28.04.09
P4	UPDATED SECTIONS	GER	20.04.09
P3	SECTIONS UPDATED. DIM. SHOWN, MSR CEILING HEIGHT REVISED. MONORAIL SERVICING CHEM. TANKS SHOWN. ISSUED FOR APPROVAL	GER	30.03.09
P2	ISSUED FOR ARCHITECTURAL CONCEPT APPROVAL	GER	16.03.09
P1	GENERAL UPDATE OF SECTIONS	GER	13.07.09

FOR CONSTRUCTION

SCALE 1:100

REVISION	AMENDMENT	DRAWN	DESIGNED	DATE
B	CRANE HOOK HEIGHT SHOWN, CABLE TRAYS SHOWN– M/U 17/02/10	GER		23.02.10
A	ISSUED FOR CONSTRUCTION	GER		1.02.10
02	CRANE BEAM HEIGHT ADJUSTED, CEILING TO ENTRY FOYER REVISED TO MATCH RCP	GER		26.10.09
01	TENDER ISSUE	GER		21.08.09

REVISION	AMENDMENT	DRAWN	DESIGNED	DATE

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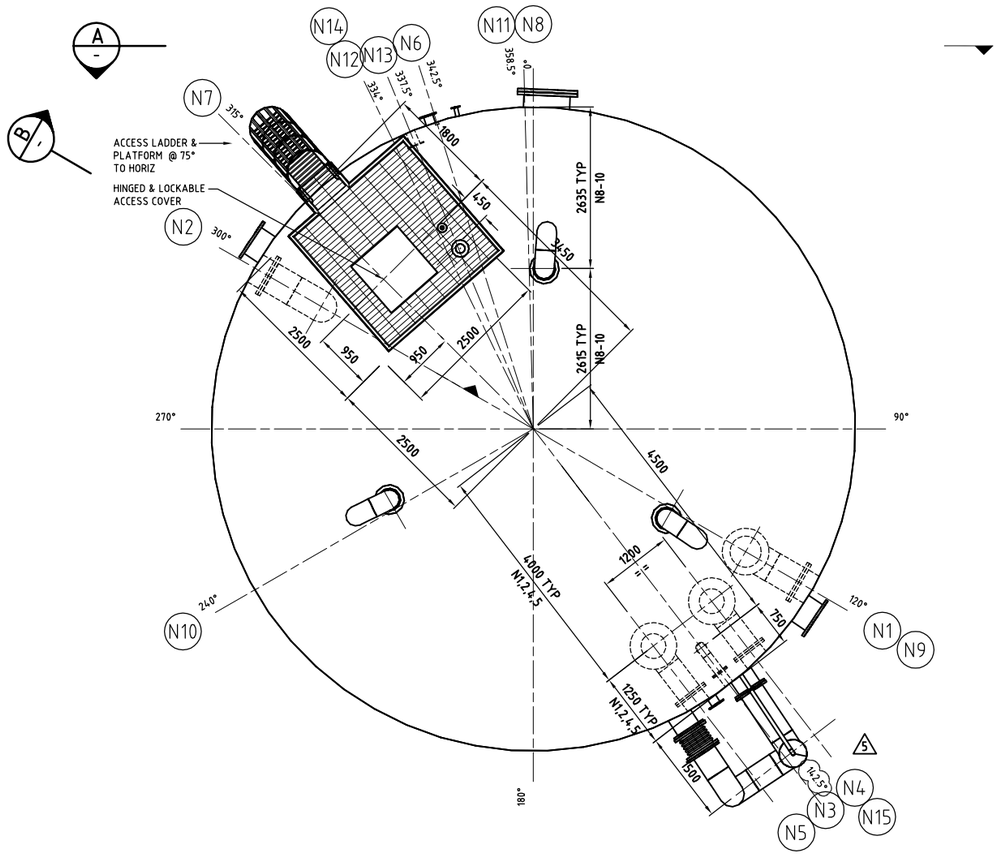
Project
ROSEHILL RWTP
EAST PARADE & NORTH STREET FAIRFIELD

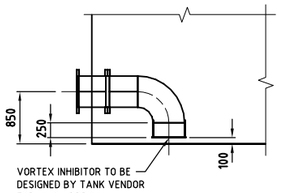
Title
GENERAL CROSS SECTIONS

Drawn	Designed	Date
NO	G ROTH	23.02.10
Checked	Approved	Scale
	GER	1:100

Drawing number
A0123-H-2000-04
Revision
[B]

J:\B49\CAD\PLOT\B49-TD-04.DWG





VIEW B
SCALE 1:50

TANK DATA SHEET - A0123-MD-6310

Application

Tag Number:	6310
Description:	RO PERMEATE COLLECTION TANK
Type:	Modular Panel tank with internal liner
No. Required:	1
Manufacturer:	
Model:	

Contents Characteristics

Stored Material	Demineralised water
SG (Density)	1
pH Range	3- 5
Temp Range	2 to 30 degrees C

Operating Data

Volume (L)	Operating	180600
	Nominal	TBD
Dimensions (mm)	Diameter	10500
	Height	4130
	Length	N/A
	Width	N/A
	Total Height	TBD
Pressure (kPa)	Design	atmospheric
	Test	atmospheric

Materials

Tank Material	Mild steel
Internal Fixings	HDGS/epoxy painted or SS316
Construction Std/Code	AS4100
Internal Lining	Industrial liners AS4020
External Cladding	N/A

Test Requirements

Hydrostatic	Required
Other	

Connections (mm)

Nozzle	Description	Size	Rating
N1	Inlet	500	Table E
N2	Outlet	500	Table E
N3	Drain	150	Table E
N4	Overflow 1	400	Table E
N5	Overflow 2	400	Table E
N6	Level Transmitter	50	Table E
N7	Roof Access Hatch	900Sq	
N8	Vent 1	300	
N9	Vent 2	300	
N10	Vent 3	300	
N11	Side Accessway	750	Table E
N12	High High alarm level switch	150	Table E
N13	Low low level Alarm switch	150	Table E
N14/N15	Potable Water Makeup/ Air Vent	50	Table E

Accessories/Special

Roof cover supported from the tank peripheral. accesshatch at the side & roof; access stair way to roof hatch, 3 off 300mm dia vermin proof air vent,. 2 off bell mouth overflow pipe.Nozzle N1,N2,N3, N4, N5 & N14 have internal and external stubs and flanges.

Surface Protection && Painting

Tank &accessway shall be hot dip galvanised to AS4680. Accesshatch hot dip galvanised and wetted j art painted, roof shall be Zincalum. Nozzle shall be SS, the liners shall be both side UV stabilised.

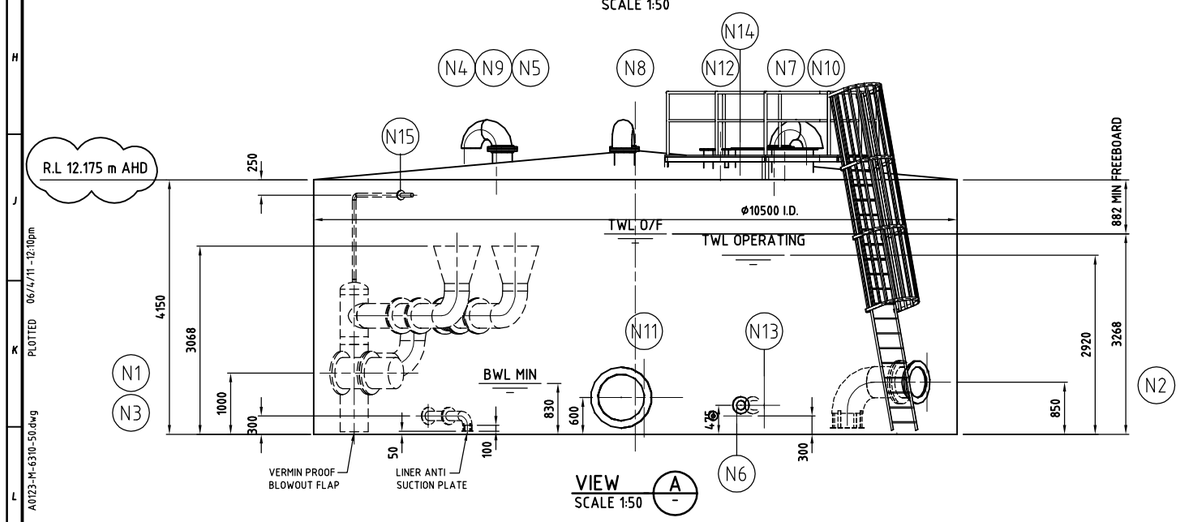
NOTES:

1. THE TANK WILL CONTAIN DEMINERALISED WATER WITH A pH OF 3 TO 5 AND CONTAIN LESS THAN 2ppm OF TOTAL CHLORINE AS CHLORAMINES.
2. THE TANK SHELL AND THE STRUCTURAL COMPONENTS SHALL BE HOT DIPPED GALVANISED IN ACCORDANCE WITH AS4680.
3. THE TANK SHALL BE COVERED AND THE ROOF SHALL BE NON CORRODING CLEAR SPAN SUPPORTED ON THE TANK PERIMETER.
4. NOZZLES AND BAFFLES SHALL BE PROVIDED AS PER DATA SHEET PROVIDED A0123-MD-6310.
5. THE TANK SHALL BE SUPPLIED WITH SPIRAL WELDED 316 STAINLESS STEEL SHORT RADIUS SUCTION BEND PIPEWORK COMPLETE WITH VORTEX INHIBITOR TO ENSURE THE MAXIMUM EFFECTIVE CAPACITY OF THE TANK CAN BE PUMPED OUT WITHOUT ANY PROBLEMS INCURRED BY THE INFLOW OF AIR TO HYDRAULIC SYSTEM.
6. THE TANK SHALL BE SUPPLIED WITH SPIRAL WELDED 316 STAINLESS STEEL INTERNAL DRAW DOWN PIPEWORK SHORT RADIUS BEND TO ALLOW THE TANK TO BE DRAINED TO THE LOWEST POSSIBLE LEVEL UP TO 300MM.
7. THE TANK SHALL BE SUPPLIED WITH TWO BELL MOUTHED OVERFLOW PIPEWORK AND EXTERNAL DOWN PIPE WORK AS PER DRAWING. ALL PIPEWORK SHALL BE OF SHORT RADIUS SPIRAL WELDED STAINLESS STEEL.
8. THE TANK SHALL BE SUPPLIED WITH SPIRAL WELDED 316 STAINLESS STEEL INLET PIPEWORK COMPLETE WITH BELL MOUTH AND SHORT RADIUS BEND MOUNTED INSIDE THE TANK FOR THE GRAVITY FLOW FROM DEGASSER TOWER.
9. THE TANK SHALL BE DESIGNED TO WIND LOAD IN ACCORDANCE TO AS1170.2 AND SEISMIC LOADING TO AS 1170.4. THE TANK TANKS SHALL BE DESIGNED TO RESIST BUCKLING AND OVERTURNING INDUCED THE TANK SHELL WHEN EMPTIED OF ITS CONTENT AS WELL AS WHEN FULL.
10. THE TANKS SHALL BE DESIGNED TO MEET THE REQUIREMENTS **AS DETAILED IN AWWA D103.**
11. THE CONCRETE FOUNDATION IS DESIGNED AND CONSTRUCTED BY OTHERS BASED ON TANK SUPPLIERS FOUNDATION GUIDELINE DRAWINGS.
12. THE TANK SHALL BE PROVIDED WITH SUITABLE CONTAINMENT LINERS TO HAVE MINIMUM 10 YEARS SERVICE LIFE. THE LINERS SHALL BE INDUSTRIAL QUALITY LINER, CONTAINS NO PLASTICISERS, HAS HIGH TENSILE AND TEAR STRENGTH, SHALL EXHIBITS MINIMUM SHRINKAGE AND SHALL BE DIMENSIONALLY STABLE OVER THE RANGE OF AMBIENT TEMPERATURE EVEN WHEN IT IS EMPTY. THE TEMPERATURE INSIDE THE TANK COULD EXCEED 60 C WHEN THE TANK IS EMPTY AND THE AMBIENT TEMPERATURE IS OVER 40 C. THE LINERS SHALL BE RESISTANT TO HARDENING AND CRACKING AND SHALL BE DESIGNED TO REMAIN SERVICEABLE FROM -5° C TO 70° C.
13. THE TANK SHALL BE DESIGNED TO HAVE 50 YEARS LIFE SPAN.
14. THE TANKS SHALL BE FITTED SACRIFICIAL ANODES TO PROTECT THE REINFORCING BARS AND THE SHELL, TO MITIGATE CORROSION AND PROVIDE PROTECTION.
15. ALL BOLTS SHALL BE HOT DIP GALVANISED OR STAINLESS STEEL TO ENSURE THEIR LONG TERM CORROSIVE RESISTANCE. THE BOLTS SHALL BE PLASTIC CAPPED AND INSULATED FOR DISSIMILAR MATERIAL CORROSION AND TO PROVIDE CORROSION PROTECTION IN THE OPERATING PROCESS ENVIRONMENT. TWO LUGS SHALL BE WELDED OPPOSITE SIDES OF THE TANK FOR EARTHING/BONDING.
16. ALL DISSIMILAR MATERIAL SHALL BE INSULATED FOR DISSIMILAR CORROSION.
17. ALL NOZZLE FLANGES SHALL BE HOT DIP GALVANISED AND EPOXY PAINTED OR STAINLESS STEEL WITH BACKING RING WITH RATING AS PER DATA SHEET.
18. ALL NOZZLES SHALL BE BRACED TO TANK WALL.
19. THE TANK SHALL HAVE TOP AND SIDE MAINTENANCE ACCESS WAYS AS PER DATA SHEET AND SHALL BE DESIGNED IN ACCORDANCE WITH AUSTRALIAN STANDARDS AS1657. THE ACCESS HATCH SHALL BE MANUFACTURED WITH HOT -DIP GALVANISED AND PAINTED INSIDE OR STAINLESS STEEL.
20. THE TANKS SHALL HAVE ACCESS LADDERS FOR ACCESS TO THE ROOF ACCESS HATCH TO COMPLY WITH AS1657 REQUIREMENT AND SHALL BE MADE OF ALUMINIUM RAIL AND RUNGS WITH HOT-DIP GALVANISED CAGES AND ACCESS PLAFTORM. LADDERS SHALL BE PROVIDED WITH LOCKING SAFETY CAGE DOORS. THE ROOF HATCH SHALL BE A HINGED AND LOCKABLE TYPE PROVIDED WITH SAFETY MESH UNDER THE COVER FOR INSPECTION.
21. TANKS SHALL BE PROVIDED WITH GRAVITY VENTS AND SHALL BE DESIGNED TO ALLOW AIR EXCHANGE DURING FILLING AND EMPTYING. VENT SHALL BE FITTED WITH CORROSION RESISTANCE VERMIN PROOF SCREENS.
22. THE WATER LEVEL FLUCTUATES BETWEEN BOTTOM WATER LEVEL & TOP WATER LEVEL. THE BOTTOM WATER LEVEL MINIMUM IS 550mm. MAXIMUM WATER OPERATING LEVEL IN THE TANK CAN'T EXCEED 2090mm ABOVE BOTTOM WATER LEVEL TO ALLOW GRAVITY FLOW FROM THE DEGASSER TOWER.
23. FREE BOARD MINIMUM = 330mm WHICH INCLUDES 150mm FREEBOARD ABOVE TWL O/F & 180 mm FOR EYELET CONNECTION OF LINERS.
24. DRAINAGE NOZZLE SHALL BE COMPLETE WITH BAFFLE PLATE TO PREVENT LINER SUCTION.

REFERENCE DRAWINGS:

A0123-H-5012-01 DETENTION, RO PERMATE AND RO FEED - TANK BASE DETAILS

PLAN
SCALE 1:50



VIEW A
SCALE 1:50

WORK AS EXECUTED

0 1 2 3 4 5m
SCALE 1:50

REV	REVISION	DRAWN	CHECKED	APPVD.	DATE
4	REVISIONS AS CLOUDED	JEM			16/10/09
3	TANK DATA SHEET TABLE & NOTES REVISED	JEM			21/08/09
2	70% DESIGN REVIEW	JEM			04/08/09
1	TENDER ISSUE	JEM			22/05/09
0	ORIGINAL	JEM			03/04/09

REV	REVISION	DRAWN	CHECKED	APPVD.	DATE
B	R.L ADDED FOR D.O.P	MR			06/04/11
A	WORK AS EXECUTED	JEM			01/01/10
S	REVISIONS AS CLOUDED	JEM			25/03/10

•DO NOT SCALE THIS DRAWING
• IF IN DOUBT ASK
• THIRD ANGLE PROJECTION

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Fax: 61 2 8572 0410

VEOLIA WATER Solutions & Technologies

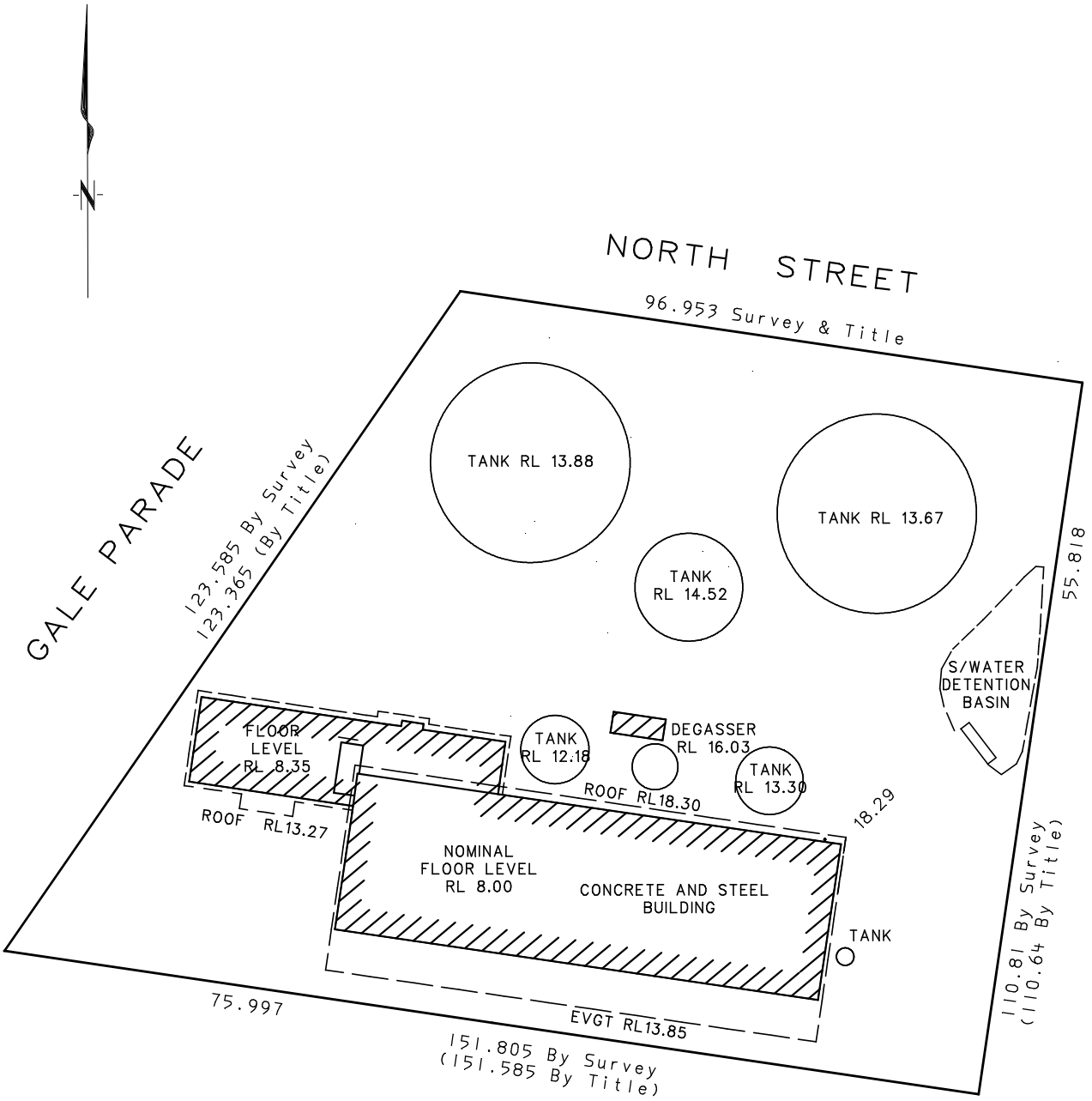
CUSTOMER: SYDNEY WATER

TITLE: ROSEHILL RECYCLED WATER TREATMENT PLANT
RO PERMEATE COLLECTION TANK
DATA SHEET

SCALE :1:50
CLIENT DRAWING No.
SIZE A1
DRAWING No. A0123-M-6310-50
ISSUE B

PLOTTED 06/4/11 - 12:10pm
A0123-M-6310-50.dwg
FILE-NO.

SURVEY REPORT



NOTE.
ALL TANK LEVELS ARE MEASURED TO TOP OF VERTICAL FACE.

TANK LEVELS
ROSEHILL RWTP
EAST PARADE & NORTH STREET
FAIRFIELD
NSW

DATE 22nd DECEMBER 2010