



Document No. 1190634  
GPC Ref: DA2015/10

## Gladstone Ports Corporation

*Growth, Prosperity, Community.*

### AMENDED DECISION NOTICE – DA 2015/10

Application:	<b>Port Application (Operational Works) for Sulphuric Acid Storage and Handling</b>
Applicant Name and address:	<b>IXOM Operations Pty Ltd Port Kembla Administration Private Bag 1004 PORT KEMBLA NSW 2505</b>
Owner:	<b>Gladstone Ports Corporation Limited</b>
Subject Land:	<b>Part of Lot 300 on SP239667 and Part of Lot 422 on SP111787</b>
Location:	<b>Mark Fenton Drive PORT CENTRAL GLADSTONE</b>
Present Zoning	<b>Strategic Port Land</b>
Proposed Use:	<b>Sulphuric acid storage facility, ship unloading, truck loading, installation of new pipeline and associated infrastructure</b>
Application Received:	<b>27 August 2015</b>

This development application was assessed on: ~~10 November 2015~~ 9 December 2015

#### 1. Details Of The Approval

##### Development Permit:

Sulphuric Acid Operations – Sulphuric acid storage, office, amenities and associated buildings, truck loading and associated infrastructure, ship unloading and transfer of sulphuric acid via pipeline, installation of new pipeline and partial removal of existing pipeline.

#### 2. Assessment Manager's Conditions

In general the facilities are in compliance with the requirements of Gladstone Ports Corporation. It is to be noted that the following conditions will be complied with in the granting of this Development Application.

##### GENERAL

1. The proposed development must be carried out generally in accordance with the plans as lodged with the application except where modified by conditions of this permit.
2. Unless otherwise stated, all conditions must be completed prior to the commencement of the use.

3. Where additional "approval" is required under these conditions by the Gladstone Ports Corporation for drawings or documentation, the proponent must submit for review, amend to the satisfaction of, and obtain written acceptance from the Gladstone Ports Corporation. Only in this manner can compliance with the condition be achieved.

Furthermore, GPC will require no less than 10 business days to initially assess the drawings or documentation provided prior to the initiation of works. Should further information be required to be provided for assessment, GPC will require a further 5 business days to complete the information request response.

4. All other relevant regulatory approvals must be obtained before commencement of works or operation of the facility.
5. The proponent must inform the GPC of completion of works within 14 days of practical completion and undertake a site inspection with GPC. The proponent must also certify that the development is fit for purpose and provide RPEQ certification that the development has been constructed in accordance with the approved plans.
6. The proponent must at its cost and expense, keep and maintain the subject area, including existing services, in a state that is satisfactory to the Port.

## **ENGINEERING**

7. The proponent must supply the Port with "As Constructed" plans in both hard copy (2 of) and electronic (CAD format) which illustrates all infrastructure on Port land which is associated with the activity (e.g. detailed positions of underground services i.e. sulphuric acid pipeline, electrical routes, water, sewage, stormwater drainage etc. and surface infrastructure e.g. office, amenities and other buildings, roads, truck loading area, guard rails etc.).
8. Site lighting should not impact on the visibility of Navigational Aids utilised for the primary shipping channels nor illuminate a landward glare beyond the site boundary. Lighting will be continually reviewed during construction and operations with respect to navigation and will be revised as required in response to negative impacts as they arise.
9. The proponent is to notify GPC of damage caused to any port roads and associated infrastructure e.g. signage in Port Central as a result of this activity. The proponent may undertake the repairs directly in consultation with GPC, however, depending upon the nature and location of the damage, GPC retains the right to undertake the repairs at the expense of the proponent.
10. The proponent will install a bollard instead of a guard rail to protect the power pole stay at the entrance to the storage facility.
11. Water charges will be issued by GPC which are subject to upstream changes made by the Gladstone Regional Council. The holder of this DA must install a water use meter on site in consultation with GPC.
12. Details of the sewer connection are to be provided to GPC for approval prior to construction.
13. Where the new pipeline crosses a road, a minimum of 250mm of base coarse material or 5% stabilising sand must be applied.
14. The proponent must maintain the property frontage in a clean and tidy manner, and mow any grassed areas regularly.
15. The holder must forward the final Construction Traffic Management Plan (CTMP) to GPC for approval prior to initiation of works. The CTMP must incorporate all traffic related security requirements e.g. C48 19 and C49 20.

16. Operational traffic must be carried out in compliance with the GPC approved version of the Operational Traffic Management Plan (OTMP). Any amendments to the OTMP must be submitted for approval by the Gladstone Ports Corporation prior to implementation.
17. In the section between Francis Ward Drive and Macfarlane Drive, the existing guardrail is to be removed and the pipeline aligned to where the guardrail is currently positioned, as illustrated by the hand drawn correction on dwg #AP001-10-003 Rev B.

**Additional**

18. The proponent is to install additional protective bollards around the wharf deck pumping system illustrated in dwg #AP001-50-010 Rev 1.

**SECURITY**

19. The CTMP must include all appropriate security measures as a result of road closures associated with the proposed works including but not limited to:
  - a) Access via Auckland Point 4 (AP4) Gate requires a Maritime Security Guard (MSG) to be provided on the gate;
  - b) When the main entry into Auckland Point is closed and all port traffic is diverted to enter and exit the facility via the AP4 gate, two (2) MSG's must be provided on the gate, one for entering traffic and one for exiting traffic for verification of credentials manually; and
  - c) When traffic is diverted to the AP4 gate and a driver is not a MSIC holder, an escort by a MSIC holder must be provided and the non-MSIC holder continuously monitored while within the maritime security zone.
20. The CTMP or Maritime Security Plan must include all appropriate security measures for security fence changes as a result of the proposed works including but not limited to:
  - a) When security fencing is removed and/or open, an MSG is required at the opening at all times; and
  - b) When operations are not occurring e.g. afterhours, the fence is required to be replaced with a strong temporary fence or gate (GPC security padlock) that can be closed and secured to the existing security fence line to prevent access.

**ENVIRONMENT**

21. Upon receipt of this Development Approval (DA), the holder must forward to GPC within 10 business days prior to operation of the activity, a copy of any environmental approvals issued for activities related to this land or DA, including those held by third parties e.g. an Environmental Authority. Any permissible changes or amendments to these approvals must also be forwarded to GPC within 20 business days of the variation coming into effect.
22. Operations must be carried out in compliance with the GPC approved version of the Operational Environmental Management Plan (OEMP). Any amendments to the OEMP must be submitted for approval by the Gladstone Ports Corporation Environmental Department at least 10 business days prior to implementation.
23. Where there is any conflict between the conditions of this approval and the OEMP, the conditions of this approval shall prevail.
24. The following procedures (as identified in the OEMP) are to be submitted to GPC for approval prior to commencement of operations:
  - a) Tanker loading; and
  - b) Bund water management.

25. Any complaints received by the holder of this approval, and non-compliance with conditions of this approval or any environmental approval obtained in relation to the works or operation of this facility must be reported to the Gladstone Ports Corporation Environmental Department Hotline on (07) 4976 1617.
26. Any material excavated during the construction period, which is not reused as fill, is to be removed from GPC lands.
27. Operations and associated works are not to be conducted in such a manner that would environmentally degrade Gladstone Ports Corporation land or infrastructure this includes but is not limited to:
- a) contamination of the land;
  - b) encouragement of pest and weed incursion;
  - c) loss of land through poor sediment and erosion controls; and
  - d) localised flooding from poor stormwater management practices/controls.

### 3. The Approved Plans –

The approved plans and/or documents forming part of this decision notice are listed in the following table:

Document Reference	Plan / Document Name	Date
AP001-10-001 Rev B	Gladstone - Sulphuric Acid – Storage & Loading G.A. of Sulphuric Acid Pipeline - hand written amendments 28/09/2015	01/09/2015
AP001-10-002 Rev B	Gladstone - Sulphuric Acid – Storage & Loading Sulphuric Acid Pipeline – Sheet 1 - hand written amendments 28/09/2015	01/09/2015
AP001-10-003 Rev B	Gladstone - Sulphuric Acid – Storage & Loading Sulphuric Acid Pipeline – Sheet 2 - hand written amendments 28/09/2015	01/09/2015
AP001-10-004 Rev B	Gladstone - Sulphuric Acid – Storage & Loading Sulphuric Acid Pipeline – Sheet 3 - hand written amendments 28/09/2015	01/09/2015
AP001-10-005 Rev B	Gladstone - Sulphuric Acid – Storage & Loading Sulphuric Acid Pipeline – Sheet 4	01/09/2015
AP001-10-006 Rev B	Gladstone - Sulphuric Acid – Storage & Loading Sulphuric Acid Pipeline – Sheet 5	01/09/2015
AP001-10-007 Rev B	Gladstone - Sulphuric Acid – Storage & Loading Sulphuric Acid Pipeline – Sheet 6 - hand written amendments 28/09/2015	01/09/2015
AP001-10-008 Rev B	Gladstone - Sulphuric Acid – Storage & Loading Tanker Loading Bay Modifications	01/09/2015

<b>Document Reference</b>	<b>Plan / Document Name</b>	<b>Date</b>
AP001-10-009 Rev B	Gladstone - Sulphuric Acid – Storage & Loading Pipe Support Plinth Detail	01/09/2015
AP001-10-010 Rev B	Gladstone - Sulphuric Acid – Storage & Loading Pipe Support Anchor Details	01/09/2015
AP001-10-011 Rev B	Gladstone - Sulphuric Acid – Storage & Loading G.A. of Transition Pits	01/09/2015
AP001-10-012 Rev B	Gladstone - Sulphuric Acid – Storage & Loading Transition Pit Details	01/09/2015
AP001-10-013 Rev B	Gladstone - Sulphuric Acid – Storage & Loading Transition Pit Sections	01/09/2015
AP001-10-014 Rev B	Gladstone - Sulphuric Acid – Storage & Loading Typ. Transitions Pit Cover Detail	01/09/2015
AP001-10-015 Rev B	Gladstone - Sulphuric Acid – Storage & Loading Typ. Pipe Trench Details	01/09/2015
AP001-10-017 Rev B	Gladstone - Sulphuric Acid – Storage & Loading Pipe Support Detail	01/09/2015
AP001-10-018 Rev B	Gladstone - Sulphuric Acid – Storage & Loading G.A. of Storage Shed & Details	01/09/2015
AP001-10-019 Rev B	Gladstone - Sulphuric Acid – Storage & Loading Loading Bay Sections	01/09/2015
AP001-10-020 Rev B	Gladstone - Sulphuric Acid – Storage & Loading Tanker Loading Bay Sections	01/09/2015
AP001-10-021 Rev B	Gladstone - Sulphuric Acid – Storage & Loading G.A. of Bund Sump & Detail	01/09/2015
AP001-10-022 Rev B	Gladstone - Sulphuric Acid – Storage & Loading Civil G.A. of Internal Tank Bunding	01/09/2015
AP001-10-023 Rev B	Gladstone - Sulphuric Acid – Storage & Loading G.A. of Tanker Bay & Effluent Bund Guardrail to be replaced with Bollard as per Information Request Response 28/09/2015	01/09/2015
AP001-10-024 Rev B	Gladstone - Sulphuric Acid – Storage & Loading Tanker Loading Sections	01/09/2015
AP001-10-025 Rev B	Gladstone - Sulphuric Acid – Storage & Loading Loading Bay Sump Detail – T09	01/09/2015
AP001-10-026 Rev A	Gladstone - Sulphuric Acid – Storage & Loading G.A. IXOM Lease & Road - hand written amendments 28/09/2015	01/09/2015
50956/101,33 5 Rev 1	Construction Environmental Management Plan	20/08/2015



Document Reference	Plan / Document Name	Date
SHE-APT-EMP-ENV-001 Rev 2	Auckland Point Environmental Management Plan - DRAFT	21/08/2015
AKP-WKI-002 Rev 1	Sulphuric Acid Unloading/Imports	04/08/2015
AKP-WKI-006 Rev 1	Operations Traffic Management Plan	07/08/2015
Rev 3	Emergency Plan – IXOM Auckland Point Sulphuric Acid Terminal	04/08/2015
102225A-01 Rev B	Floor plan for site office building	26/05/2011
837-LCP01 Rev A	Landscape Concept Plan	08/2015
<b>Additional AP001-50-010 Rev 1</b>	<b>Sulphuric Acid System – Storage &amp; Loading P16 Stripping Pump Isometric and BOM</b>	<b>02/07/2015</b>

#### 4. When the Development Approval Takes Effect –

If the application is approved, or approved subject to conditions, the decision notice, or if a negotiated decision notice is given, the negotiated decision notice, is taken to be the development approval and has effect on the date that the notice is signed by an authorised delegate of the Gladstone Ports Corporation.

#### 5. When Approval Lapses if Development Not Started

The relevant period stated below applies to each aspect of development in this approval, as outlined below:-

- 4 years

#### 6. Other Necessary Development Approvals

Listed below are the other development permits that are necessary to allow the development to be carried out:

- Environmentally Relevant Activity (ERA) 8(5) Chemical Storage: for storage of Sulphuric Acid 98%.
- Development Permit for Building Works for the construction of any new structures.

**7. Appeal Rights**

No legislated appeal rights are afforded with this decision notice as the application was not made under the provisions of The Sustainable Planning Act 2009.

If you have concerns or queries regarding the conditions, please contact the undersigned on 4976 1287.

**8. Assessment Manager Certification**



**Sarah Hunter**

**Senior Planning Officer**

~~10 November 2015~~ 9 December 2015





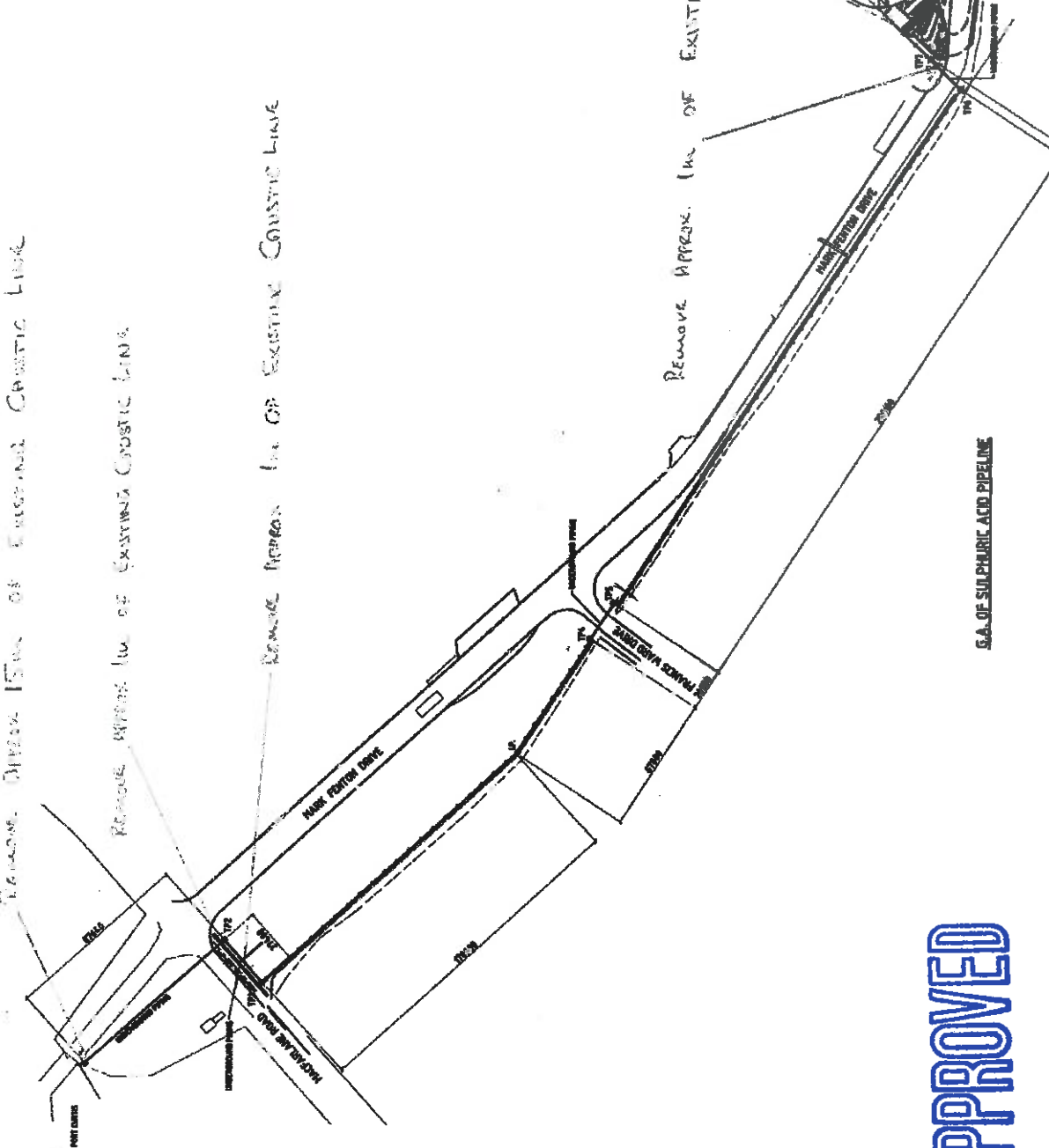
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APPROVED FOR CONSTRUCTION  
DATE: 10/15/2010

PROJECT NO. 1010-10-01 SHEET NO. 1010-10-01-B		<b>KBR</b> KBR ENERGY SERVICES 10000 WEST 10TH AVENUE, SUITE 1000 DENVER, CO 80202		<b>IXOIM</b> IXOIM 10000 WEST 10TH AVENUE, SUITE 1000 DENVER, CO 80202	
CLIENT: IXOIM PROJECT: SULPHURIC ACID PIPELINE SHEET: 1010-10-01-B	DESIGNER: [ ] CHECKER: [ ] APPROVED: [ ] DATE: 10/15/2010	PROJECT NO. 1010-10-01 SHEET NO. 1010-10-01-B	PROJECT NO. 1010-10-01 SHEET NO. 1010-10-01-B	PROJECT NO. 1010-10-01 SHEET NO. 1010-10-01-B	PROJECT NO. 1010-10-01 SHEET NO. 1010-10-01-B

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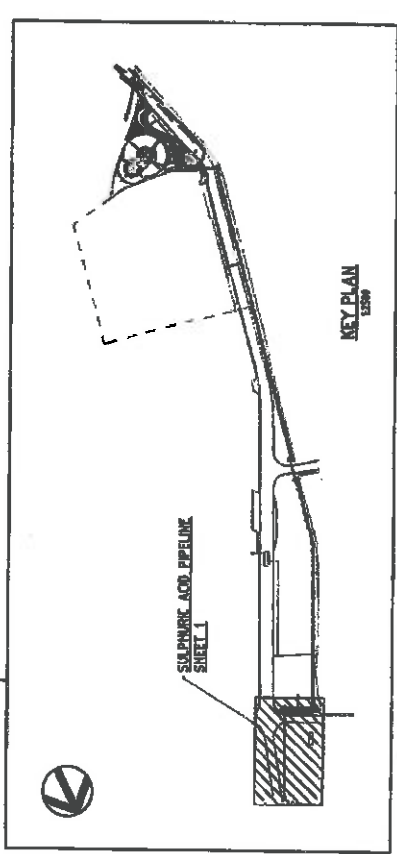
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REMOVING EXISTING CASTIC PIPELINE



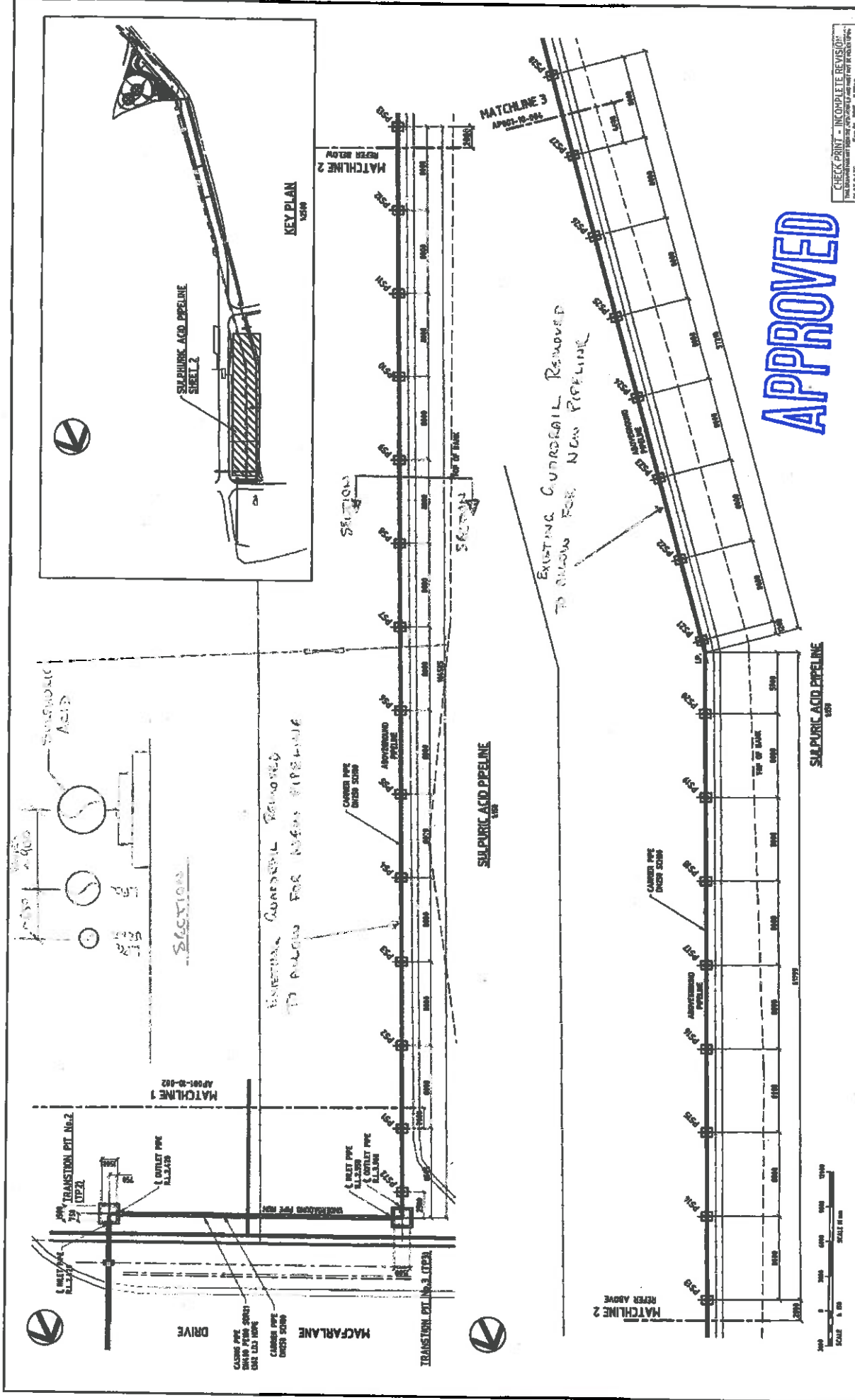
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**APPROVED**

SULPHURIC ACID PIPELINE

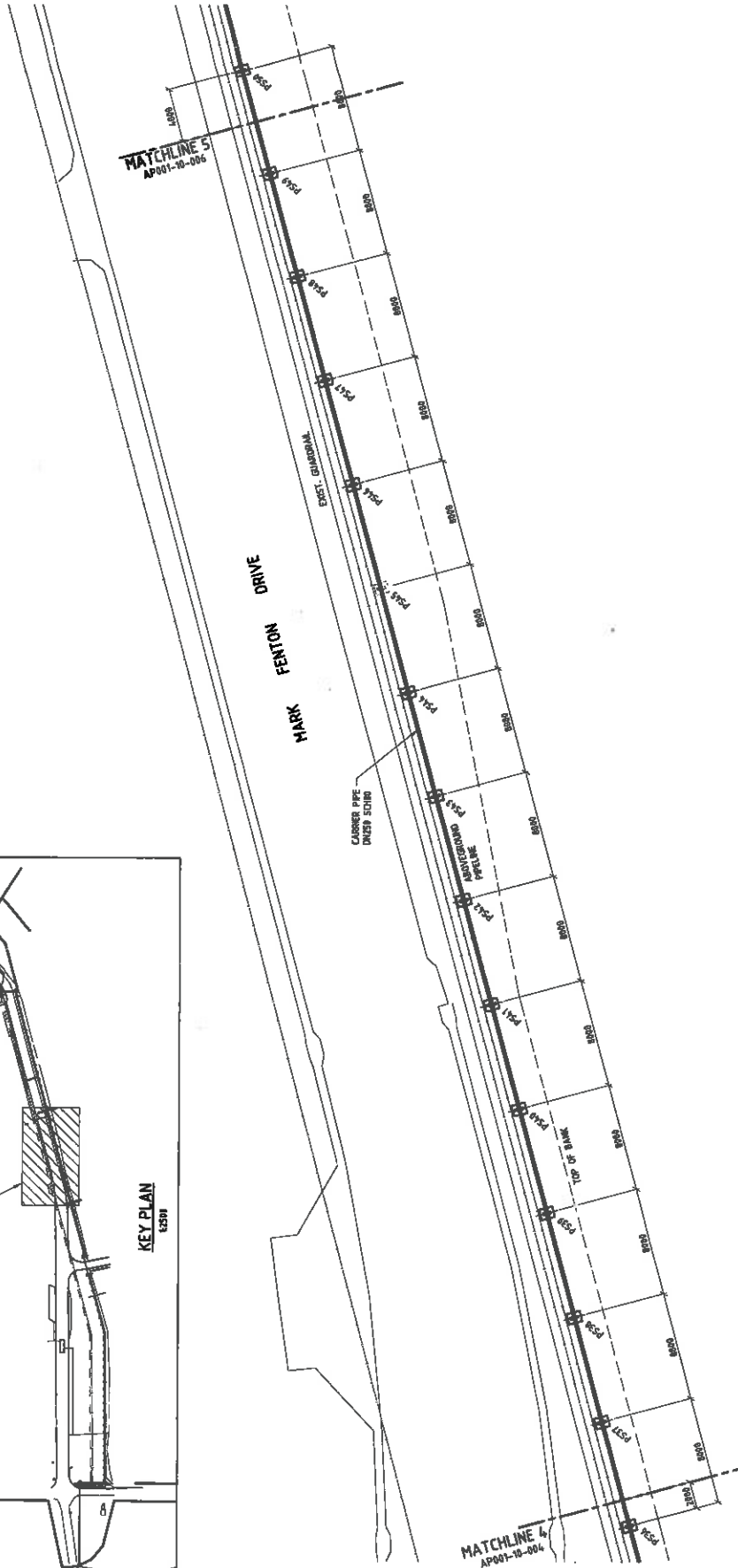
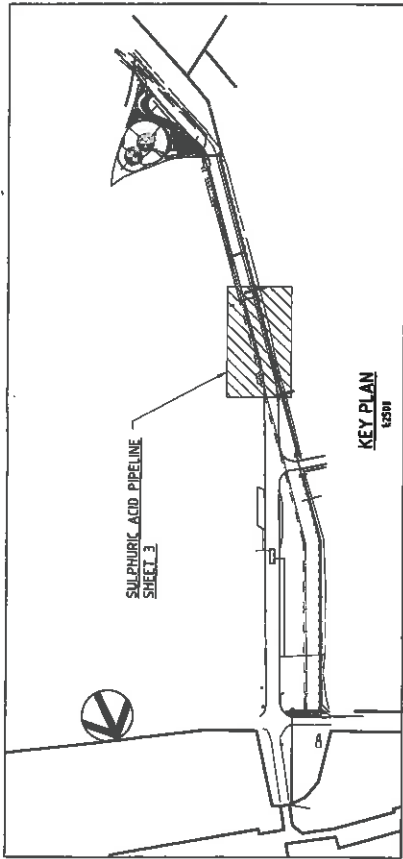
CHECK PRINT - INCOMPLETE REVISION  
 1. TO CORRECT DRAWING FROM APPROVED AND FOR THE REVISIONS  
 PROJECT NO. AP001-0-002.8  
 SHEET NO. 8

<p><b>IXOM</b></p> <p>GLADSTONE</p> <p>SULPHURIC ACID - STORAGE &amp; LOADING</p> <p>SULPHURIC ACID PIPELINE - SHEET 1</p>		<p>DATE: 11/11/03</p> <p>SCALE: 1/8" = 1'-0"</p>
<p>DESIGNER: L. MARTELLI</p> <p>CHECKED: R. ANDERSON</p> <p>DATE: 11/11/03</p>	<p>PROJECT: SULPHURIC ACID STORAGE &amp; LOADING</p> <p>CLIENT: IXOM</p> <p>LOCATION: GLADSTONE</p>	<p>DATE: 11/11/03</p> <p>SCALE: 1/8" = 1'-0"</p>
<p>THIS DRAWING AND DESIGN ARE THE PROPERTY OF IXOM. NO PARTS OF THIS DRAWING OR DESIGN ARE TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, WITHOUT THE WRITTEN PERMISSION OF IXOM.</p>		
<p>NO. 1: 11/11/03</p> <p>NO. 2: 11/11/03</p> <p>NO. 3: 11/11/03</p> <p>NO. 4: 11/11/03</p> <p>NO. 5: 11/11/03</p> <p>NO. 6: 11/11/03</p> <p>NO. 7: 11/11/03</p> <p>NO. 8: 11/11/03</p> <p>NO. 9: 11/11/03</p> <p>NO. 10: 11/11/03</p>	<p>DATE: 11/11/03</p> <p>SCALE: 1/8" = 1'-0"</p>	<p>DATE: 11/11/03</p> <p>SCALE: 1/8" = 1'-0"</p>



<b>IXOM</b> GLAUSTONE SULPHURIC ACID - STORAGE & LOADING SULPHURIC ACID PIPELINE - SHEET 2		SCALE: 1/8" = 1'-0" DATE: 1989	PROJECT NO.: AP001-10-003 B SHEET NO.: 207 TOTAL SHEETS: 207
DESIGNER: J. ANDERSON CHECKER: J. ANDERSON APPROVED: J. ANDERSON	CLIENT: Ixom PROJECT: Sulphuric Acid Pipeline	DRAWN BY: J. ANDERSON DATE: 1989	PROJECT NO.: AP001-10-003 B SHEET NO.: 207 TOTAL SHEETS: 207
CONTRACTOR: KBR PROJECT NO.: AP001-10-003 B SHEET NO.: 207 TOTAL SHEETS: 207	DESIGNER: J. ANDERSON CHECKER: J. ANDERSON APPROVED: J. ANDERSON	DRAWN BY: J. ANDERSON DATE: 1989	PROJECT NO.: AP001-10-003 B SHEET NO.: 207 TOTAL SHEETS: 207





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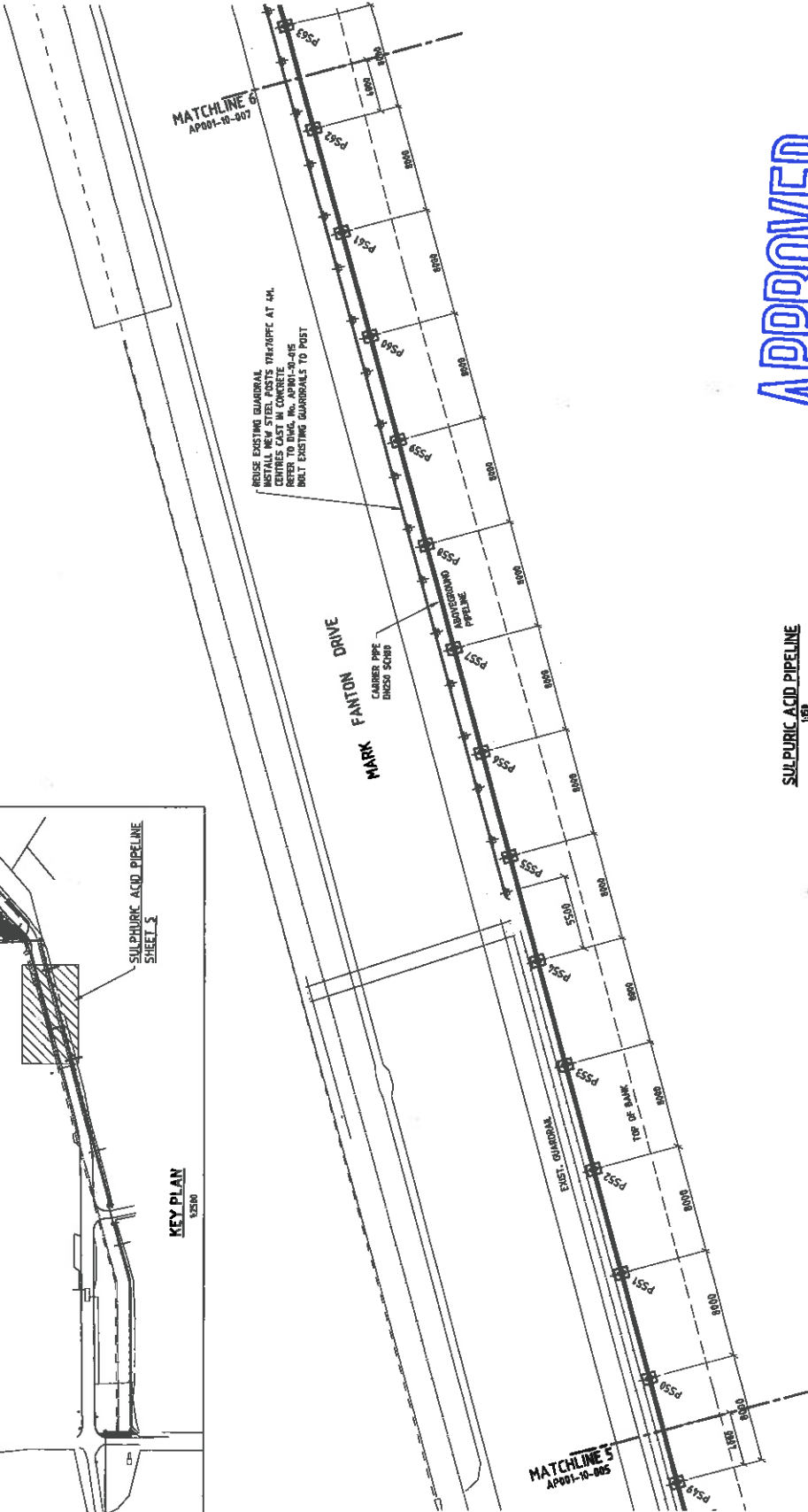
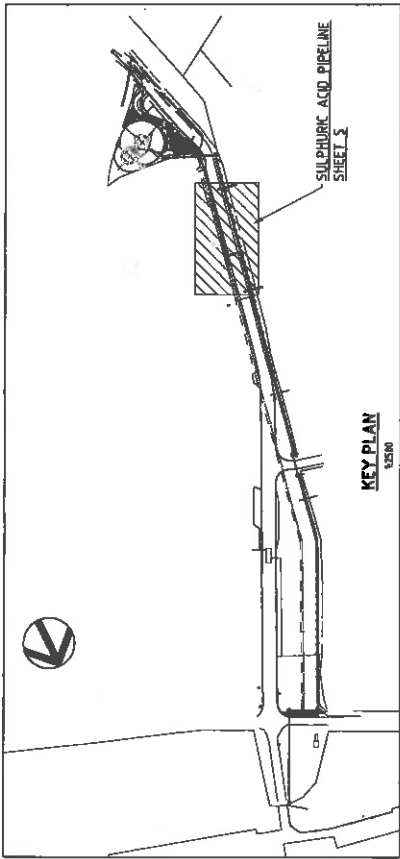
SULPHURIC ACID PIPELINE  
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THIS DRAWING IS NOT TO BE REPRODUCED  
WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER  
DATE: 20/01/2019 12:28 PM

<b>IXOM</b> GLADSTONE SULPHURIC ACID - STORAGE & LOADING SULPHURIC ACID PIPELINE - SHEET 4		SHEET NO. 4 OF 4 SHEETS DRAWING NO. AP001-03-005 B REV. DATE 20/01/2019
PROJECT NO. 15309 PROJECT NAME SULPHURIC ACID PIPELINE PROJECT LOCATION GLADSTONE PROJECT APPROVAL R. ANDERSON CLIENT APPROVAL	DESIGNER L. PORTELLI DESIGN CHECKER H. ROBINSON PROJECT MANAGER DESIGN APPROVAL R. ANDERSON PROJECT APPROVAL CLIENT APPROVAL	DATE 20/01/2019 SCALE 1:500
SHEET NO. 4 OF 4 SHEETS DRAWING NO. AP001-03-005 B REV. DATE 20/01/2019	PROJECT NO. 15309 PROJECT NAME SULPHURIC ACID PIPELINE PROJECT LOCATION GLADSTONE PROJECT APPROVAL R. ANDERSON CLIENT APPROVAL	SHEET NO. 4 OF 4 SHEETS DRAWING NO. AP001-03-005 B REV. DATE 20/01/2019





**APPROVED**

SULPHURIC ACID PIPELINE  
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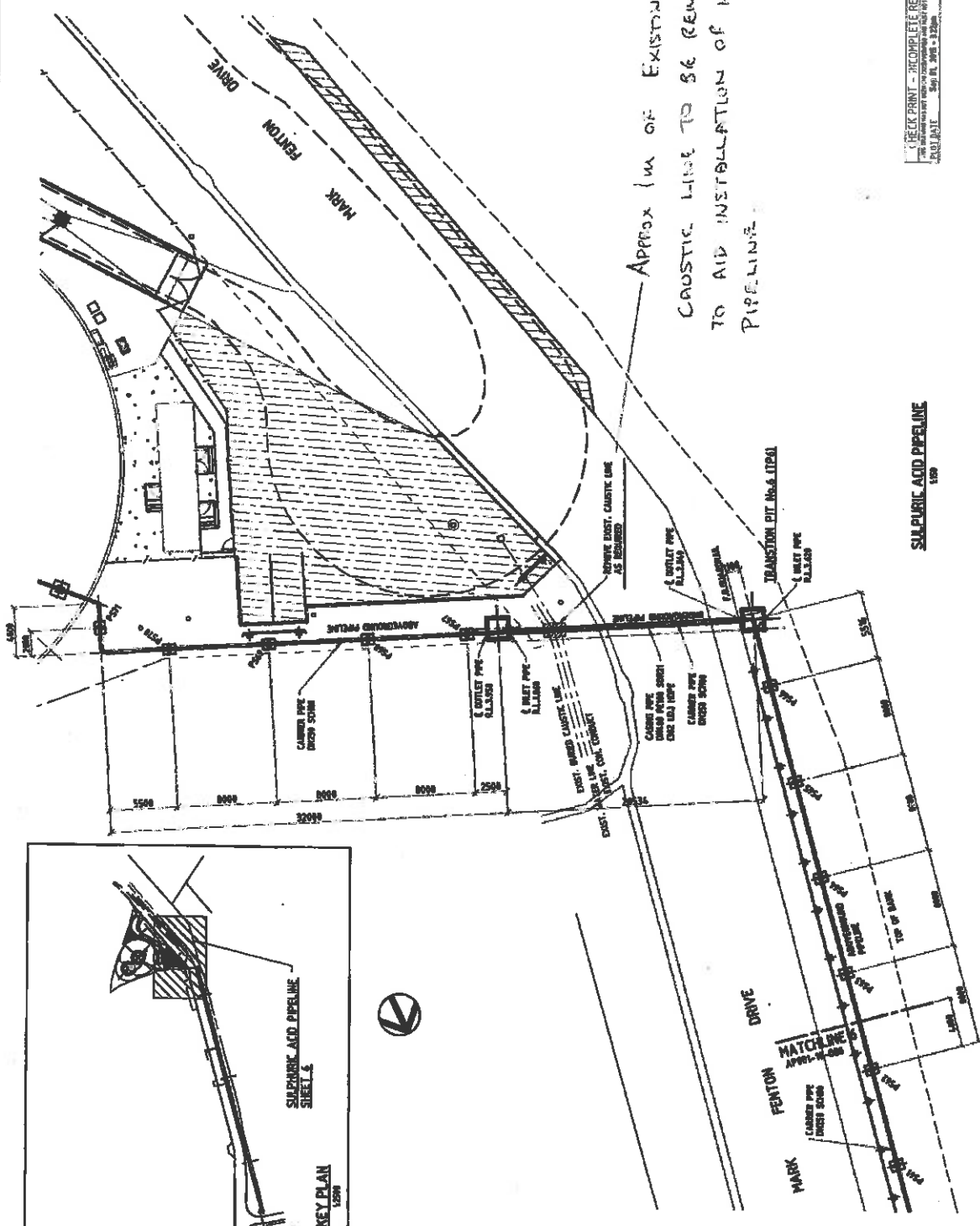


CHECK PRINT - INCOMPLETE REVISION  
THIS DRAWING IS THE PROPERTY OF ICOM  
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CONSENT OF ICOM  
REV. DATE: 2015-09-01

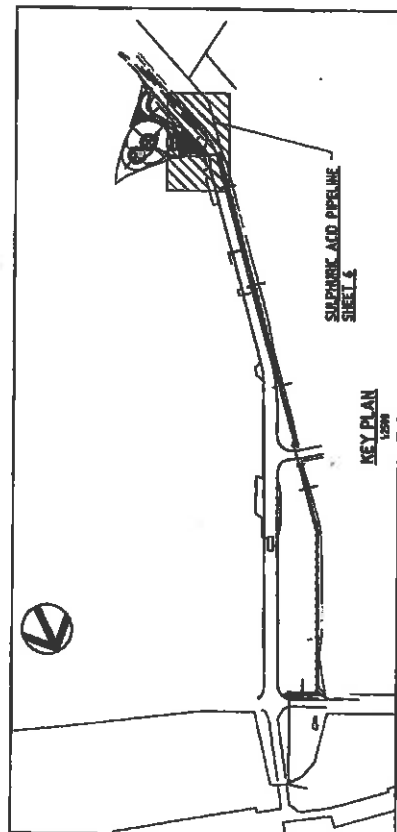
<p><b>IXOM</b> GLADSTONE SULPHURIC ACID - STORAGE &amp; LOADING SULPHURIC ACID PIPELINE - SHEET 5</p>		<p>WORDS: GLADSTONE PLANT: SULPHURIC ACID SECTION: SULPHURIC ACID LOADING SCALE: 1:50</p>	<p>1/7/75 L. PORTELLI DESIGNER DESIGN CHECKER: H. ROBINSON PROJECT MANAGER: R. ANDERSON TECHNICAL APPROVAL: R. ANDERSON PROJECT APPROVAL: R. ANDERSON CLIENT APPROVAL:</p>
<p><b>KBR</b> Kellogg Brown &amp; Root Pty Ltd Building Services &amp; Steel Pty Ltd JAB #100 04 07</p> <p>THIS DRAWING AND DESIGN ARE THE PROPERTY OF KBR. NO PARTS OF THIS DRAWING ARE TO BE REPRODUCED OR USED WITHOUT THE EXPRESS CONSENT OF ICOM.</p>		<p>PROJECT NO.: AP001-03-006 DRAWING NO.: B REV. NO.: 1 REV. DATE: 2015-09-01</p>	<p>PROJECT NO.: AP001-03-006 DRAWING NO.: B REV. NO.: 1 REV. DATE: 2015-09-01</p>
<p>REV. NO. 1 REV. DATE 2015-09-01 REV. DESCRIPTION: REVISION EXCEPTOR</p>	<p>DATE: 2015-09-01 APPROVED: R. ANDERSON PASSED: H. ROBINSON CHECKED: L. PORTELLI DRAWN: L. PORTELLI</p>	<p>DATE: 2015-09-01 APPROVED: R. ANDERSON PASSED: H. ROBINSON CHECKED: L. PORTELLI DRAWN: L. PORTELLI</p>	<p>DATE: 2015-09-01 APPROVED: R. ANDERSON PASSED: H. ROBINSON CHECKED: L. PORTELLI DRAWN: L. PORTELLI</p>

CHECK PRINT - RECOMPLETE REVISION  
 FOR APPROVAL AND RECORD DRAWING FOR THE PROJECT  
 PROJECT DATE: 20th Dec 2008 - 3:20pm

APPROX 1m OF EXISTING  
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 TO AID INSTALLATION OF NEW  
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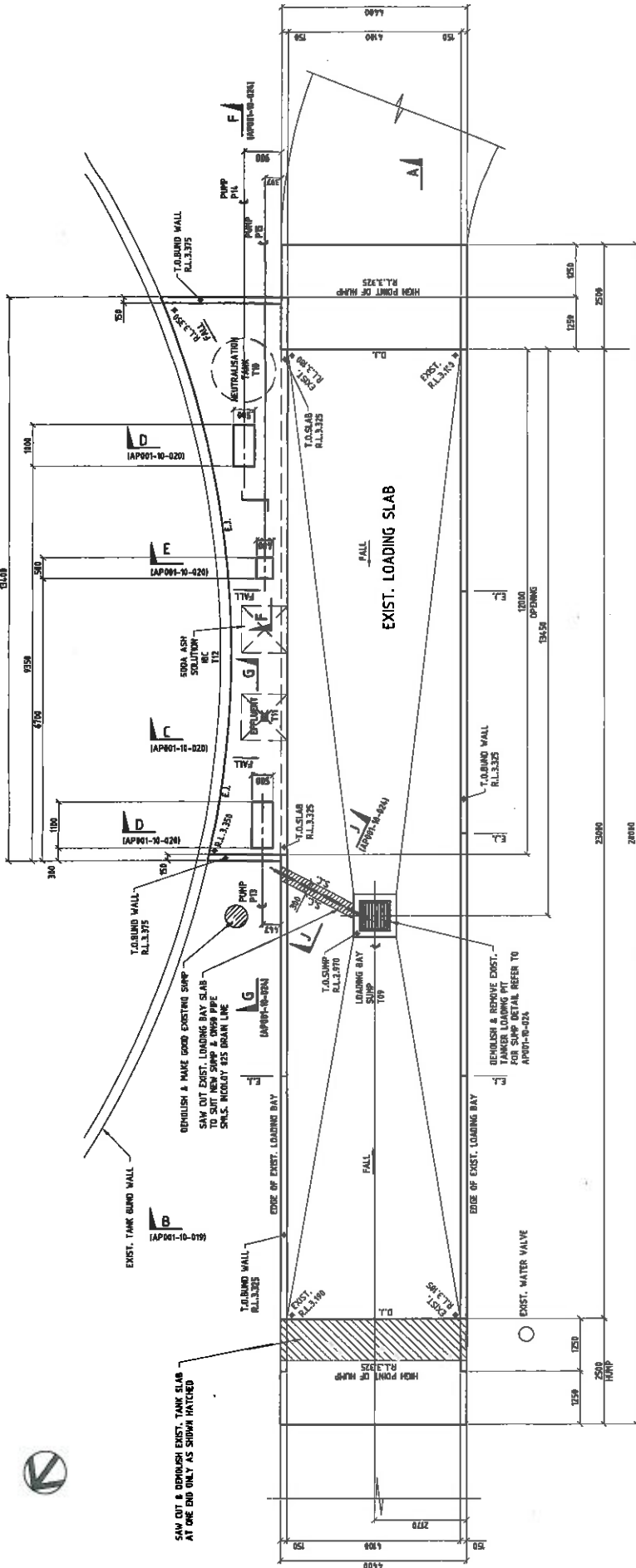
SULPHURIC ACID PIPELINE  
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**APPROVED**



<b>IXOM</b> GLAUSTONE SULPHURIC ACID - STORAGE & LOADING SULPHURIC ACID PIPELINE - SHEET 6		SHEET NO. 10-007 B SCALE 1:500
CLIENT: KBR PROJECT: SULPHURIC ACID PIPELINE DESIGNER: R. ANDERSON CHECKED: R. ANDERSON APPROVED: R. ANDERSON	DATE: 20/12/08 DRAWN BY: R. ANDERSON CHECKED BY: R. ANDERSON APPROVED BY: R. ANDERSON	PROJECT NO. 10-007 B SCALE 1:500
SHEET NO. 10-007 B SCALE 1:500	SHEET NO. 10-007 B SCALE 1:500	SHEET NO. 10-007 B SCALE 1:500



APPROVED

TANKER LOADING BAY MODIFICATIONS & EFFLUENT SYSTEMS BUNDLING - DETAIL '1' (AP001-0-031)

T.O.BUND WALL & HUMP  
R.L. 3.375

T.O.BUND WALL & HUMP  
R.L. 3.375

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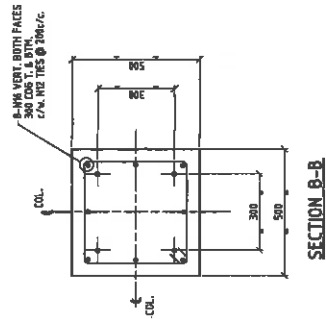
NOTE  
FOR ALL CIVIL NOTES REFER TO DWG. No. AP001-0-017

**SECTIONAL ELEVATION A-A**

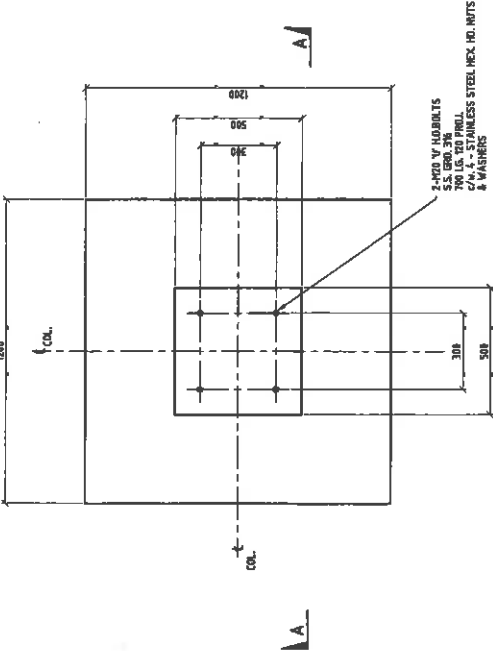
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A		ANDERSON				
1		ANDERSON				

Killogg Brown & Root Pty Ltd <b>KBR</b> Killing Street & East Pty Ltd 100M		DESIGNER L. PORTELLI	CLIENT GLADSTONE
THE DRAWING AND DESIGN ARE THE PROPERTY OF KBR. NO PARTS MAY BE REPRODUCED OR USED WITHOUT THE EXPRESS CONSENT OF KBR.		CHECKED H. ROBINSON	PLANT TITLE SULPHURIC ACID
THIS DRAWING IS A CONTRACT DOCUMENT AND SHALL BE USED ONLY FOR THE PROJECT SPECIFIED IN THE CONTRACT DOCUMENTS.		DRAWN L. PORTELLI	SECTION TITLE SULPHURIC ACID TANKER LOADING BAY MODIFICATIONS
SCALE 1:50		PROJECT APPROVAL R. ANDERSON	SCALE 1:50
PROJECT NO. - AP001-0-008		PROJECT APPROVAL R. ANDERSON	SCALE 1:50
REV. 002		CLIENT APPROVAL	SCALE 1:50

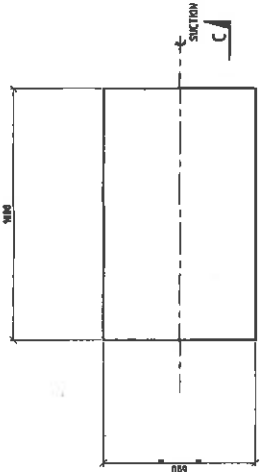


SECTION B-B

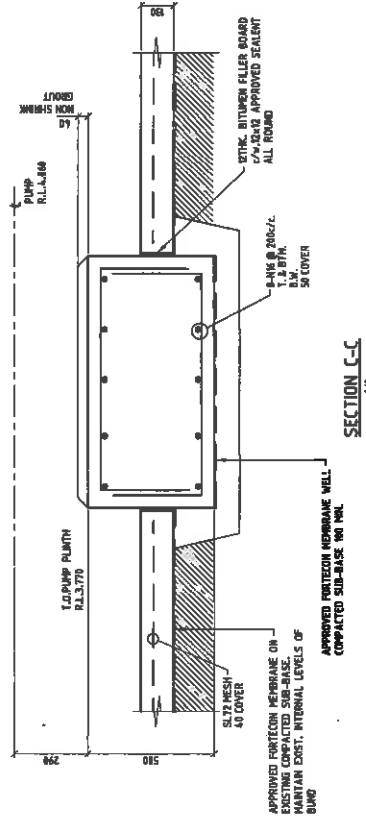


PLAN - PIPE SUPPORT PS-1 & PS-2 PLINTH (APPROX. B-022)

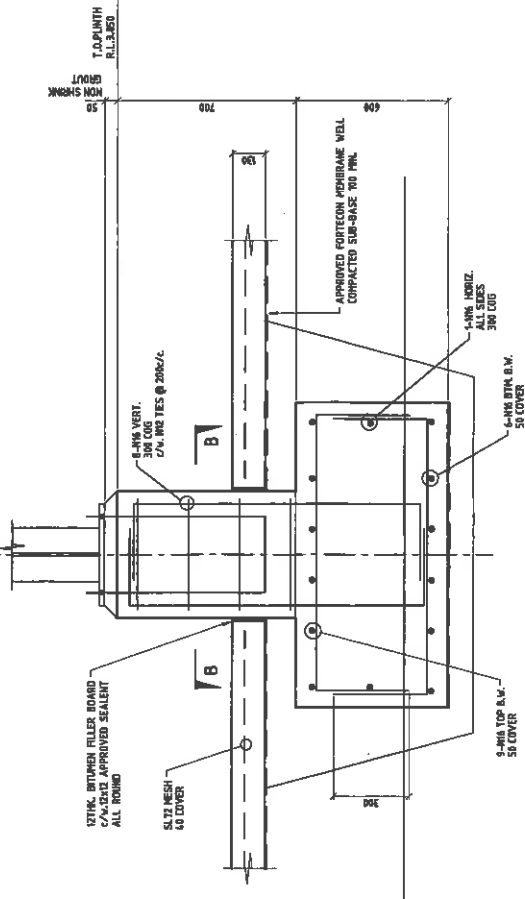
NOTE  
ALL HOLDING DOWN BOLTS & ANCHOR BOLTS TO BE STAINLESS STEEL GRADE 316



PLAN  
SULPHURIC ACID TANKER LOADING PUMP PLINTH (APPROX. B-022)



SECTION C-C



SECTION A-A

APPROVED

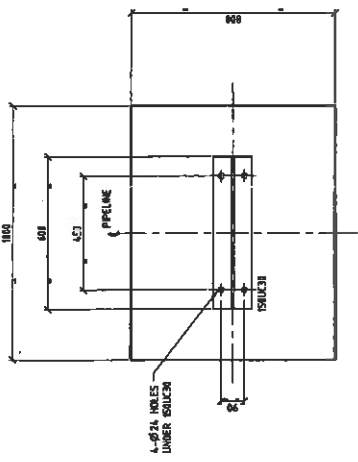
CHECK PRINT - INCOMPLETE REVISION  
FOR EXAMINE THIS PRINT MUST BE RECORDED IN THE PROJECT FILE  
P.L. DATE: Sep 21, 2015 - 09:28

NOTE  
FOR ALL CIVIL NOTES REFER TO DNG. NO. AP001-9-077

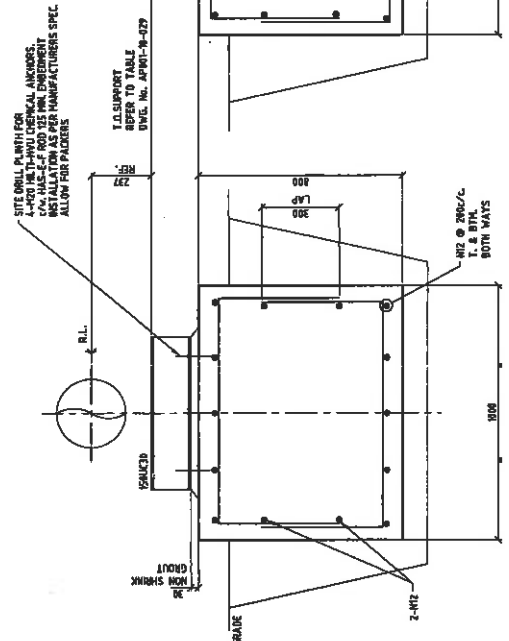
<p><b>IXOM</b> GLADSTONE SULPHURIC ACID - STORAGE &amp; LOADING PIPE SUPPORT PLINTH DETAIL</p>		<p>WORKS GLADSTONE</p>
<p>DESIGNER L. PORTELLI</p>	<p>DESIGN CHECKER H. ROBINSON</p>	<p>PROJECT MANAGER R. ANDERSON</p>
<p>CLIENT APPROVAL R. ANDERSON</p>	<p>TOPICAL APPROVAL R. ANDERSON</p>	<p>CLIENT APPROVAL R. ANDERSON</p>
<p>SCALE 1:50</p>	<p>PROJECT No. S0504</p>	<p>SCALE 1:50</p>
<p>REV. NO. B</p>	<p>DATE 20 09 2015</p>	<p>REV. NO. B</p>
<p>REV. NO. A1</p>	<p>DATE 20 09 2015</p>	<p>REV. NO. A1</p>

**KBR**  
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NO.	DATE	APPROVED	REVISIONS AND APPROVALS
B		L. PORTELLI	COMMENTS INCORPORATED
A		L. PORTELLI	INFORMATIVE ONLY

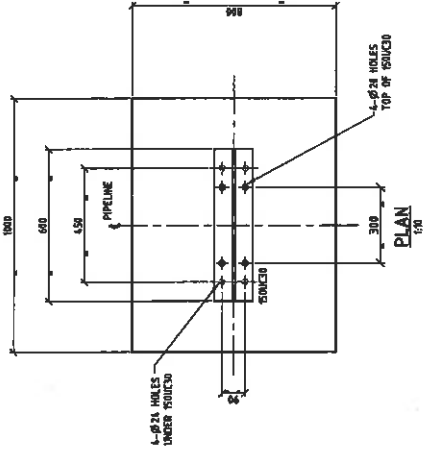


PLAN 110

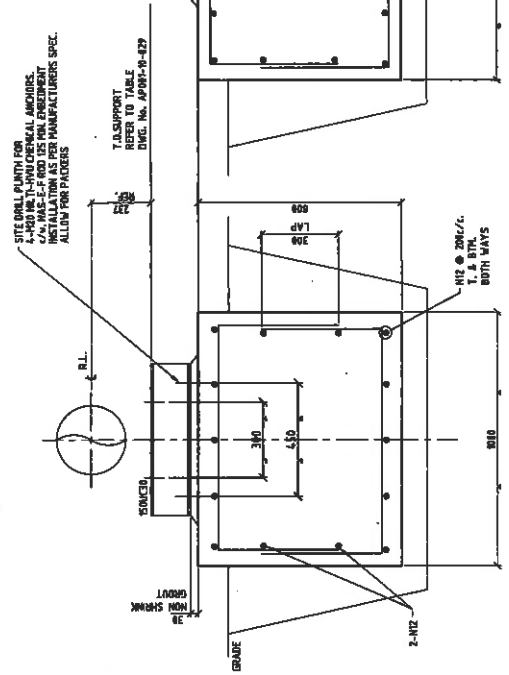


ELEVATION 110

PIPE SUPPORT ANCHOR -  
SI REQUIRED



PLAN 110



ELEVATION 110

PIPE SUPPORT ANCHOR -  
SI REQUIRED

**APPROVED**

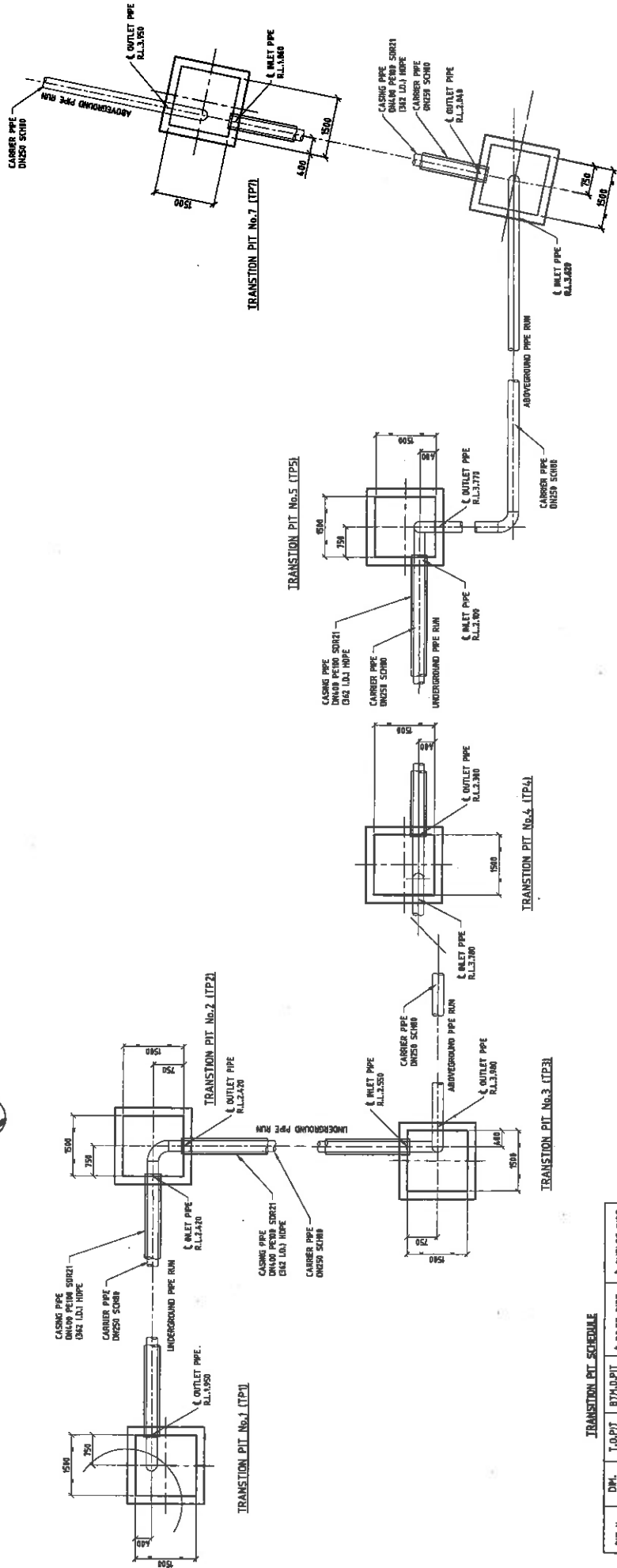
CHECK PRINT - INCOMPLETE REVISION  
THIS DRAWING HAS NOT BEEN CHECKED/REVIEWED AND SHALL NOT BE RELEASED FOR PLOT (INT)  
5/11/01, 2015 - 01/11/01

WELL  
FOR ALL DIM. NOTES REFER TO DIMC. NO. AP001-10-07

<b>IXOM</b> GLADSTONE SULPHURIC ACID - STORAGE & LOADING PIPE SUPPORT ANCHOR DETAILS		WORKS GLADSTONE T.M.	DRAWN L. PORTELLI	DESIGN CHECKER H. ROBINSON	PROJECT MANAGER R. ANDERSON	SECTION SULPHURIC ACID SUBSECTION SCALERS	DRAWING No. AP001-10-010 B	REV. 01 AND DRAWING TO BE AMENDED BY THE DRAWING OFFICE THE DRAWING
SHEET No. A	SHEET No. B	SHEET No. C	SHEET No. D	SHEET No. E	SHEET No. F	SHEET No. G	SHEET No. H	SHEET No. I
COMMENTS INCORPORATED INFORMATION ONLY	CHECKED L. PORTELLI	CHECKED H. ROBINSON	CHECKED H. ROBINSON	APPROVED R. ANDERSON	DATE 11/11/01	DATE 11/11/01	DATE 11/11/01	DATE 11/11/01
REVISIONS AND APPROVALS	REVISIONS AND APPROVALS	REVISIONS AND APPROVALS	REVISIONS AND APPROVALS	REVISIONS AND APPROVALS	REVISIONS AND APPROVALS	REVISIONS AND APPROVALS	REVISIONS AND APPROVALS	REVISIONS AND APPROVALS

**KBH**  
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 100 King Street, Melbourne, VIC 3000  
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 CONSENT OF THE  
 COMPANY





**TRANSITION PIT SCHEDULE**

PIT No.	Dim. 'A'	T.O.P. IT R.L.	BYADPIT R.L.	INLET PIPE R.L.	OUTLET PIPE R.L.
TP1	2300	3.870	1.570	2.620	1.550
TP2	3000	5.100	2.100	2.420	2.420
TP3	2300	4.550	2.250	3.980	3.980
TP4	2200	4.200	2.000	3.780	2.300
TP5	2700	4.350	1.650	2.100	3.770
TP6	2300	4.050	1.750	3.620	2.040
TP7	3000	4.300	1.300	1.860	3.950

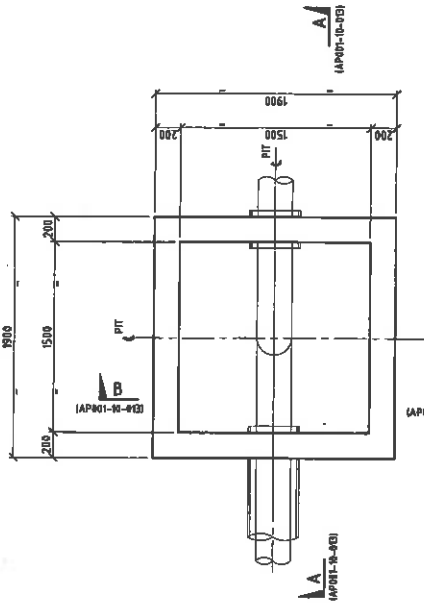
APPROVED

G.A. OF TRANSITION PITS TP1 TO TP7  
150

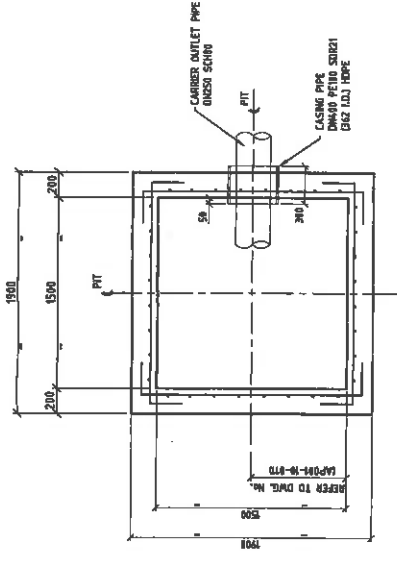
CHECK PRINT - INCOMPLETE REVISION  
THIS DRAWING IS NOT TO BE REPRODUCED OR COPIED IN ANY MANNER WITHOUT THE EXPRESS WRITTEN PERMISSION OF THE ENGINEER  
DATE: 01/10/1981

NOTE  
FOR ALL CIVIL NOTES REFER TO DIME No. AP001-9-87

<b>KBR</b> Kellogg Brown & Root Pty Ltd 100/100 Collins Street, Melbourne, Victoria 3000 Tel: (03) 536 2000				<b>IXOM</b> GLADSTONE SULPHURIC ACID - STORAGE & LOADING G.A. OF TRANSITION PITS	
DESIGNER: L. PORTELLI CHECKED: H. ROBINSON PROJECT ENGINEER: R. ANDERSON DESIGN APPROVAL: R. ANDERSON TECHNICAL APPROVAL: R. ANDERSON PRELIMINARY APPROVAL: R. ANDERSON		WORKS: GLADSTONE PLANT: SULPHURIC ACID SECTION: SULPHURIC ACID LOADING REFERENCE No.: SB1501		DRAWING No.: AP001-10-011 B DATE: 10/01/81 BY: [Signature] CHECKED BY: [Signature]	
APPROVED: [Signature] DATE: 10/01/81 FOR: G.A. OF SULPHURIC ACID PIPELINES MAX. TELL		REVISIONS AND APPROVALS:			

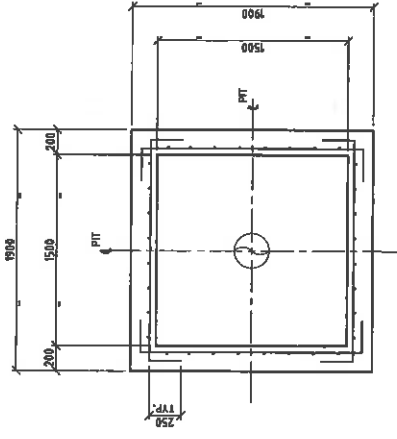


**PLAN**  
TRANSITION PIT DETAILS IF REQUIRED  
1/20

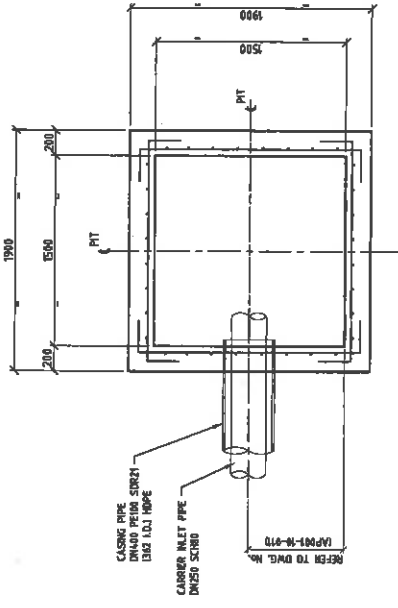


**SECTION C-C** (AP001-10-071)  
1/20

(REFER TO DRAWING No. AP001-10-071 FOR PIT/PIPE ORIENTATIONS & DIMENSIONS)

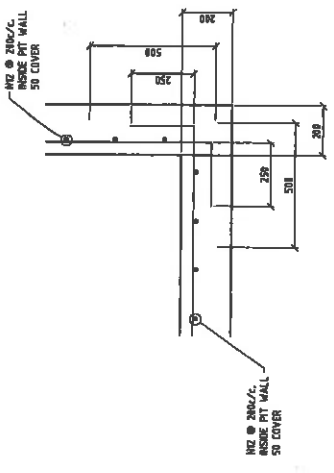


**SECTION D-D** (AP001-10-071)  
1/20



**SECTION E-E** (AP001-10-071)  
1/20

(REFER TO DRAWING No. AP001-10-071 FOR PIT/PIPE ORIENTATIONS & DIMENSIONS)



**TYP. PIT CORNER DETAIL**  
1/20

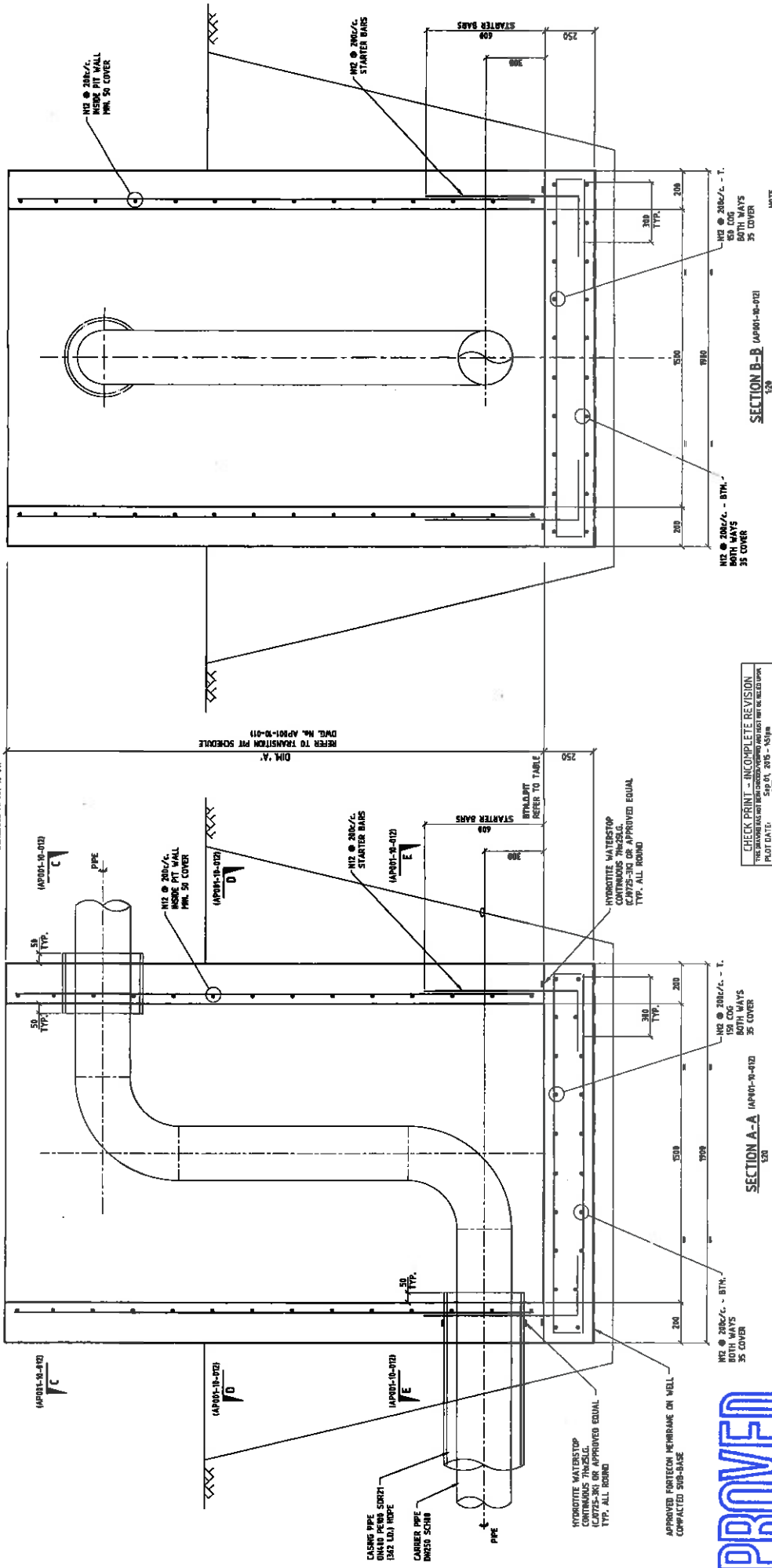
**APPROVED**

CHECK PRINT - INCOMPLETE REVISION  
THIS DRAWING HAS NOT BEEN REVISIONED FOR THIS REVISION  
PLOT DATE: Sep 14, 2015 - 15:09pm

**NOTE**  
FOR ALL DIM. NOTES REFER TO Dwg. No. AP001-10-071

<b>IXOM</b> GLADSTONE SULPHURIC ACID - STORAGE & LOADING TRANSITION PIT DETAILS		WORKS GLADSTONE PLANT SULPHURIC ACID SECTION LOADING SCALE 50:1501	DRAWING NO. AP001-10-071 B	REV. NO. 1	REV. DATE 	REV. BY 	REV. FOR 	REV. DATE 	REV. BY 	REV. FOR 	REV. DATE 	REV. BY 	
DRAWN BY L. SPORTELLI	CHECKED BY H. ROBINSON	DESIGNED BY H. ROBINSON	PROJECT MANAGER R. ANDERSON	TECHNICAL APPROVAL R. ANDERSON	PROJECT APPROVAL R. ANDERSON	CLIENT APPROVAL 	KBR Kellogg Brown & Root Pty Ltd 1500 This drawing and design are the property of KBR. THE DRAWING OR DESIGN MUST NOT BE REPRODUCED OR USED IN WHOLE OR IN PART WITHOUT THE WRITTEN PERMISSION OF KBR.	SECTION SULPHURIC ACID LOADING SCALE 50:1501	DRAWING NO. AP001-10-071 B	REV. NO. 1	REV. DATE 	REV. BY 	REV. FOR 

T.O. TRANSMISSION PIT  
REFER TO TRANSMISSION PIT  
SCHEDULE AP001-11-011



**APPROVED**

CHECK PRINT - INCOMPLETE REVISION  
THIS DRAWING HAS NOT BEEN REVISIONED, REVISED AND MUST NOT BE USED UNLESS  
DATE: 29 OCT 2016 9:51 AM

REFER TO DRAWING No. AP001-10-011 FOR PIT/WPE ORIENTATIONS & DIMENSIONS!  
FOR ALL CIVIL NOTES REFER TO DWG. No. AP001-10-017

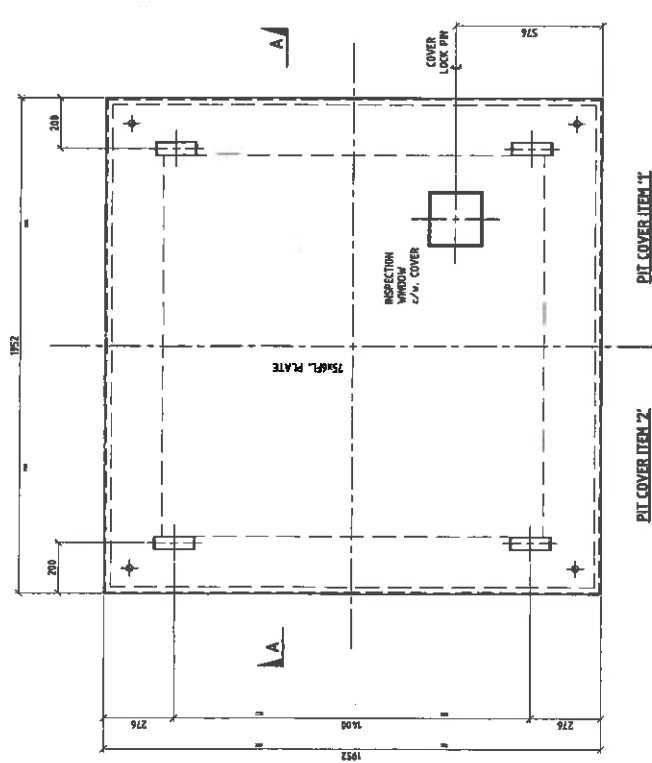
<p>PROJECT: TRANSMISSION PIT SCHEDULE AP001-11-011</p> <p>DATE: 29 OCT 2016 9:51 AM</p>		<p>DESIGNER: L. PORTELLI</p> <p>DRAWN: L. PORTELLI</p>		<p>CLIENT: GLADSTONE</p> <p>PROJECT: SULPHURIC ACID STORAGE &amp; LOADING</p>	
<p>DESIGN CHECKER: H. ROBINSON</p> <p>CALCULATING ENGINEER: H. ROBINSON</p> <p>PROJECT MANAGER: R. ANDERSON</p>		<p>SCALE: 1:20</p> <p>REVISIONS: 01</p>		<p>ISSUED FOR: SULPHURIC ACID STORAGE &amp; LOADING</p>	
<p>TECHNICAL APPROVAL: R. ANDERSON</p> <p>PROJECT APPROVAL: R. ANDERSON</p> <p>CLEAR APPROVAL: R. ANDERSON</p>		<p>SCALE: 1:20</p> <p>REVISIONS: 01</p>		<p>ISSUED FOR: SULPHURIC ACID STORAGE &amp; LOADING</p>	

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 500 MCGOWAN STREET, SYDNEY NSW 1585  
 AUSTRALIA

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REV. NO.	DATE	APPROVED	BY	DESCRIPTION
1				
2				
3				

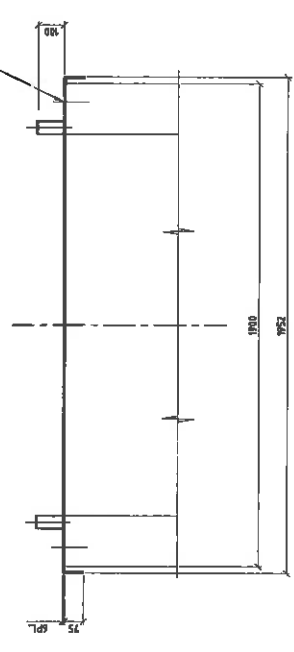
REV. NO.	DATE	APPROVED	BY	DESCRIPTION
1				
2				
3				



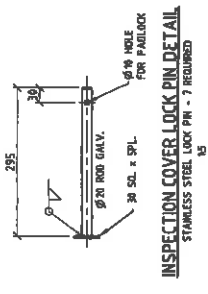
IYP. TRANSITION PIT COVER DETAIL (7 REQUIRED)

ALL MATERIAL  
6THL FLOOR PLATE - ALUMINUM

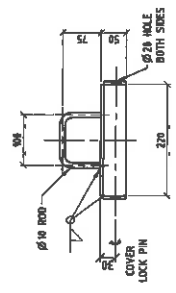
NOTE: SITE DRILL PIT FOR  
4-1/2" DIA. TYPICAL CHEMICAL ANCHORS.  
Z/A HAS 4-1/2" ROD 105 MIN. EMBEDMENT  
REINSTALLATION AS PER MANUFACTURERS SPEC.



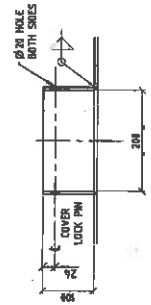
SECTION A-A  
1/8"



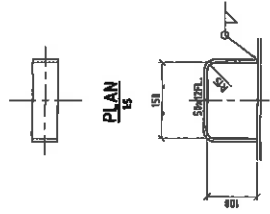
INSPECTION COVER LOCK PIN DETAIL  
STAINLESS STEEL LOCK PIN - 7 REQUIRED



INSPECTION WINDOW COVER



INSPECTION WINDOW DETAIL



TYP. LIFTING LUG DETAIL

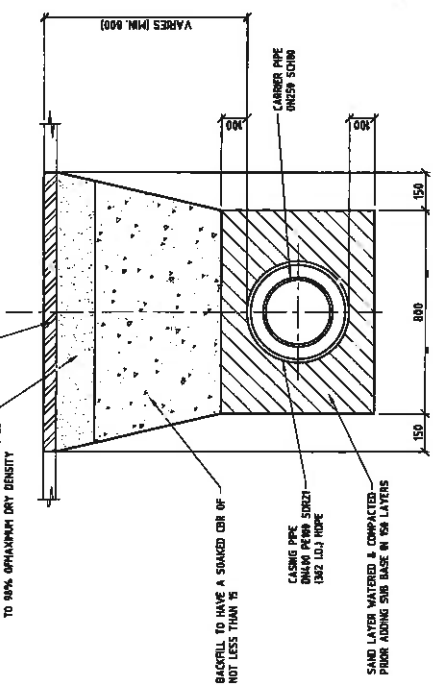
APPROVED

CHECK POINT - INCOMPLETE REVISION  
THIS DRAWING IS NOT TO BE USED FOR CONSTRUCTION UNLESS APPROVED BY THE DESIGNER  
PLOT DATE: Sep 01, 2015 - 15:50pm

<p>NOTE: FOR ALL OVER NOTES REFER TO Dwg. No. AP001-10-017</p>		<p>IXOM</p>	
<p>GLADSTONE</p>		<p>GLADSTONE</p>	
<p>SULPHURIC ACID - STORAGE &amp; LOADING</p>		<p>SULPHURIC ACID</p>	
<p>TYP. TRANSITIONS PIT COVER DETAIL</p>		<p>SECTION</p>	
<p>SCALE: 1/8" = 1'-0"</p>		<p>SCALE: 1/8" = 1'-0"</p>	
<p>PROJECT No. 501501</p>		<p>PROJECT No. 501501</p>	
<p>CLIENT APPROVAL: R. ANDERSON</p>		<p>CLIENT APPROVAL: R. ANDERSON</p>	
<p>DESIGNER: L. PORTELLI</p>		<p>DESIGNER: L. PORTELLI</p>	
<p>CHECKED: H. ROBINSON</p>		<p>CHECKED: H. ROBINSON</p>	
<p>PROJECT MANAGER: R. ANDERSON</p>		<p>PROJECT MANAGER: R. ANDERSON</p>	
<p>TECHNICAL APPROVAL: R. ANDERSON</p>		<p>TECHNICAL APPROVAL: R. ANDERSON</p>	
<p>PROJECT APPROVAL: R. ANDERSON</p>		<p>PROJECT APPROVAL: R. ANDERSON</p>	
<p>QUALITY APPROVAL: R. ANDERSON</p>		<p>QUALITY APPROVAL: R. ANDERSON</p>	
<p>Keillogg Brown &amp; Root Pty Ltd</p>			
<p>KBR</p>			
<p>Keillogg Brown &amp; Root Pty Ltd 100 St Georges Road</p>			
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<p>DATE: 01/09/10</p>		<p>DATE: 01/09/10</p>	
<p>APPROVED BY: R. ANDERSON</p>		<p>APPROVED BY: R. ANDERSON</p>	
<p>DATE: 01/09/10</p>		<p>DATE: 01/09/10</p>	
<p>PROJECT No. 501501</p>		<p>PROJECT No. 501501</p>	
<p>SCALE: 1/8" = 1'-0"</p>		<p>SCALE: 1/8" = 1'-0"</p>	
<p>SECTION: TYP. TRANSITIONS PIT COVER DETAIL</p>		<p>SECTION: TYP. TRANSITIONS PIT COVER DETAIL</p>	
<p>PLANT: GLADSTONE</p>		<p>PLANT: GLADSTONE</p>	
<p>WORK: SULPHURIC ACID STORAGE &amp; LOADING</p>		<p>WORK: SULPHURIC ACID STORAGE &amp; LOADING</p>	
<p>CLIENT: IXOM</p>		<p>CLIENT: IXOM</p>	
<p>PROJECT No. 501501</p>		<p>PROJECT No. 501501</p>	
<p>SCALE: 1/8" = 1'-0"</p>		<p>SCALE: 1/8" = 1'-0"</p>	
<p>SECTION: TYP. TRANSITIONS PIT COVER DETAIL</p>		<p>SECTION: TYP. TRANSITIONS PIT COVER DETAIL</p>	
<p>PLANT: GLADSTONE</p>		<p>PLANT: GLADSTONE</p>	
<p>WORK: SULPHURIC ACID STORAGE &amp; LOADING</p>		<p>WORK: SULPHURIC ACID STORAGE &amp; LOADING</p>	
<p>CLIENT: IXOM</p>		<p>CLIENT: IXOM</p>	

NEW BITUMEN ACCESS WEAR COURSE TO BE 50mm AC4. SURFACE SHALL BE FINISHED TO A FINISH GRADE TO BE UNIFORM. AFTER A TACK COAT SHALL THEN BE UNIFORMLY APPLIED. ALL CONTACT SURFACES SHALL BE PAINTED WITH A THIN UNIFORM TACK COAT.

150 BASE COURSE - MKD 2.1 COMPACTED TO 98% OF MAXIMUM DRY DENSITY



BACKFILL TO HAVE A SLOPED GR OF NOT LESS THAN 1%.

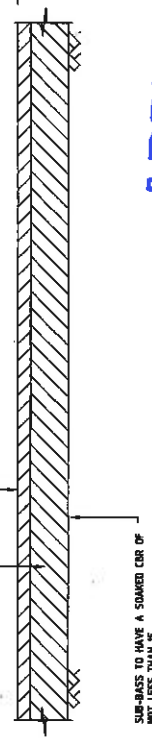
CASING PIPE 150MM PERM STRICH (62 LIT PIPE)

SAND LAYER WATERED & COMPACTED PRIOR ADDING SUB BASE IN 50 LAYERS

TYP. ROAD CROSSING TRENCH DETAIL 1/10

NEW BITUMEN ACCESS WEAR COURSE TO BE 50mm AC4. PRIOR TO APPLICATION PAVEMENT SURFACE SHALL BE THOROUGHLY CLEANED TO REMOVE ALL FOREIGN MATTER. A TACK COAT SHALL THEN BE UNIFORMLY APPLIED. ALL CONTACT SURFACES SHALL BE PAINTED WITH A THIN UNIFORM TACK COAT.

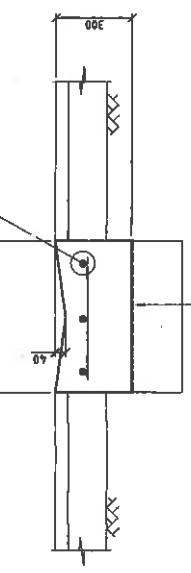
50 BASE COURSE - MKD 2.1 COMPACTED TO 98% OF MAXIMUM DRY DENSITY



SUB-BASS TO HAVE A SLOPED GR OF NOT LESS THAN 1%

TYP. BITUMEN ACCESS DETAIL 1/10

150mm 50 COVER TOP APPLY A DOVELLED EXPANSION JOINT (D.E.J.) 2-MOD INTO EXIST. DSH DRAIN & WREN 8 600mm

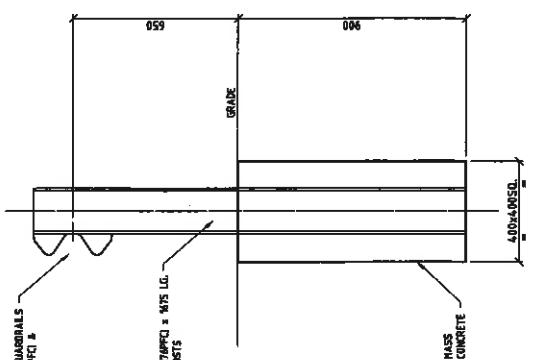


APPROVED CONCRETE MEMBRANE ON EXISTING COMPACTED SUB-BASE.

TYP. DISH DRAIN DETAIL 1/10

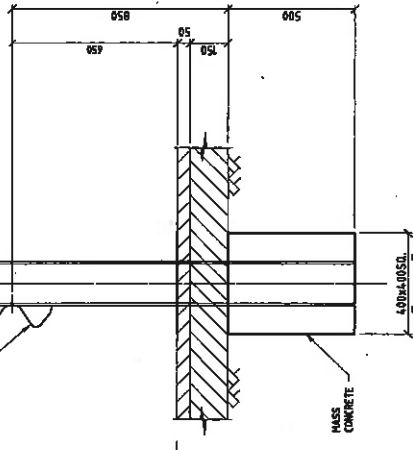
BRASS CAST FLEXOR-BEAM GUARDRAILS STANDARD STEEL POSTS (76 X 76 PFC) & GUARDRAIL BOLTED TO POSTS

NEW STANDARD STEEL POSTS (76X76PFC) & 150 LG. & EXIST. GUARDRAIL BOLTED TO POSTS



TYP. SAFETY BARRIER DETAIL ALONG MARK FENTON DRIVE 1/10

FLEXOR-BEAM GUARDRAIL STANDARD STEEL POSTS (76 X 76 PFC) & GUARDRAIL BOLTED TO POSTS



TYP. SAFETY BARRIER DETAIL AT LOADING BAY 1/10

APPROVED

CHECK PRINT - INCOMPLETE REVISION  
THIS DRAWING HAS BEEN CHECKED AND FOUND TO BE CORRECT FOR PLOT DATE: Sep 17, 2015 - 8:13am

NOTE FOR ALL CIVIL NOTES REFER TO DING. No. AP001-9-077

REVISIONS AND APPROVALS		REFERENCE DRAWINGS	
REV.	DESC.	DATE	APPROVER
B	SHR-10K COMMENTS INCORPORATED		L.PORTELLI
A	SHR-10K INFORMATION ONLY		L.PORTELLI
			H.ROBINSON
			R. ANDERSON

PROJECT NO.	AP001-10-015	REV.	04
PLANT NO.		SCALE	1:10
SECTION	SULPHURIC ACID STORAGE & LOADING	DATE	
PLANT	SULPHURIC ACID	DRAWING NO.	
WORKS	GLADSTONE	PLANT	
CLIENT	GLADSTONE	SECTION	

DESIGNER	L.PORTELLI	WORKS	GLADSTONE
CHECKER	H.ROBINSON	PLANT	SULPHURIC ACID
DRAWING CHECKER	H.ROBINSON	SECTION	SULPHURIC ACID STORAGE & LOADING
PROJECT MANAGER		SCALE	1:10
TECHNICAL APPROVAL	R. ANDERSON	DATE	
PRODUCT APPROVAL		CLIENT APPROVAL	

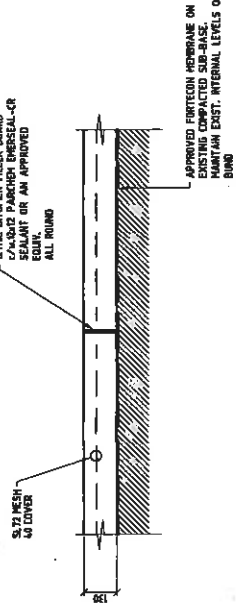
  

CLIENT	Keillogg Brown & Root Pty Ltd
CLIENT ADDRESS	Keillogg Brown & Root Pty Ltd, Unit 11, 100 St Georges Road, Gladstone, QLD 4850, Australia
CLIENT CONTACT	
CLIENT PHONE	
CLIENT FAX	
CLIENT EMAIL	
CLIENT WEBSITE	

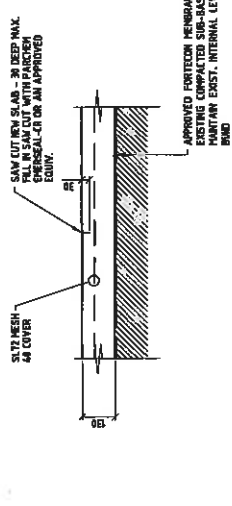
  

PROJECT NO.	AP001-10-015
PLANT NO.	
SECTION	SULPHURIC ACID STORAGE & LOADING
PLANT	SULPHURIC ACID
WORKS	GLADSTONE
CLIENT	GLADSTONE

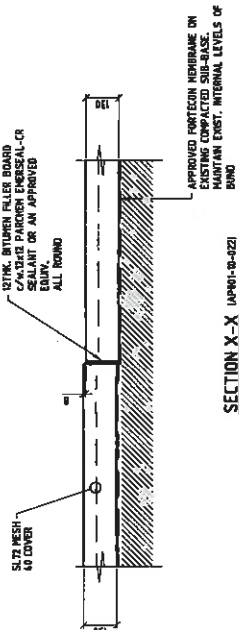




TYP. EXPANSION JOINT DETAIL - E.J. (APR91-9-422)

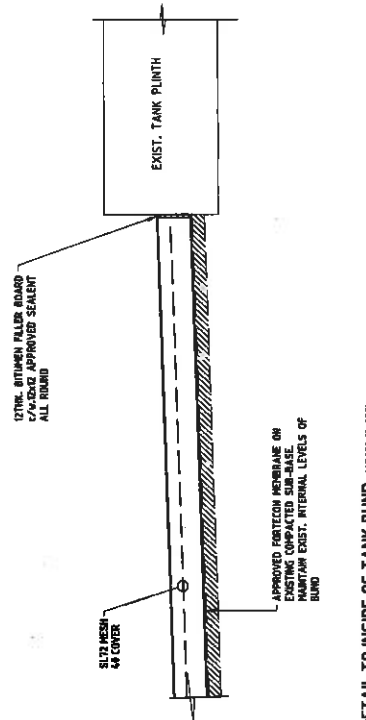


TYP. SAW CUT DETAIL - S.C. (APR91-9-422)



SECTION X-X (APR91-9-422)

EXIST. BUND WALL



TYP. SLAB DETAIL TO INSIDE OF TANK BUND (APR91-9-422)

**APPROVED**

CHECK PRINT - INCOMPLETE REVISION  
 THE DRAWING IS NOT VALID FOR CONSTRUCTION  
 PLOT DATE: Sep 01, 2015 - 8:14 AM

NOTE  
 FOR ALL CIVIL NOTES REFER TO DING. No. AP001-9-077

<b>IXOM</b> GLADSTONE SULPHURIC ACID - STORAGE & LOADING TYP. SLAB DETAIL TO INSIDE OF TANK BUND		WORKS GLADSTONE PLANT SULPHURIC ACID SECTION SULPHURIC ACID LOADING RES PROJECT No. 581801 SCALES 1:50	DRAWING No. <b>AP001-10-016</b> REV. <b>B</b> DATE 10/10/15	REV. <b>A1</b> DATE 10/10/15
Draughtsman: L. PORTELLI Designer: H. ROBINSON Project Engineer: R. ANDERSON Technical Approval: R. ANDERSON Project Approval: R. ANDERSON Client Approval:		Kellogg Brown & Root Pty Ltd <b>KBR</b> Kellogg Brown & Root Pty Ltd 10/10/15 THE DRAWING AND DESIGN ARE THE PROPERTY OF IXOM NO PART OF THIS DRAWING IS TO BE REPRODUCED OR USED WITHOUT THE EXPRESS CONSENT OF IXOM. REFERENCE DRAWING:		
NO. No. REV. No.	DATE APPROVED PASSED CHECKED DRAWN	L. PORTELLI H. ROBINSON L. PORTELLI H. ROBINSON H. ROBINSON	R. ANDERSON R. ANDERSON R. ANDERSON R. ANDERSON R. ANDERSON	DATE APPROVED PASSED CHECKED DRAWN

**FOOTINGS & FOUNDATIONS**

- F1. FOOTINGS AND SLAB ON GROUND HAVE BEEN DESIGNED FOR AN ALLOWABLE INTENSITY OF BEARING PRESSURE OF 100PSF.
- F2. THE CONTRACTOR SHALL OBTAIN APPROVAL OF FOUNDATION & SUBGRADE MATERIALS FROM CONSTRUCTION ENGINEER BEFORE PLACING REINFORCEMENT & CONCRETE.

**CONCRETE**

- C1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH A.S.S.300, CURRENT EDITION.
- C2. CONCRETE QUALITY:
  - ELEMENT ALL
  - MAX. AGG. SIZE 75mm
  - CONCRETE TYPE S1
  - CONCRETE GRADE 40MPa, U.U.I.D.
- C3. CONCRETE COVER TO REINFORCEMENT SHALL BE:
  - PLUMBING 50mm MIN.
  - CONCRETE SHALL BE PLACED, WORKED, FINISHED & CURED IN ACCORDANCE WITH THE REQUIREMENTS OF THE SPECIFICATIONS & A.S.S.300.
  - C4. PRIOR TO THE PLACEMENT OF NEW CONCRETE, EXISTING CONCRETE SURFACES SHALL BE THOROUGHLY CLEANED. THE SURFACES SHALL BE FREE FROM ALL OIL, GREASE, SCALE, RUST & ANY CHEMICAL SUBSTANCE.
  - C5. THE CONTRACTOR SHALL RESTORE ALL EXISTING CONCRETE SURFACES, SLABS & JUMPS AFTER THE CONSTRUCTION OF NEW CIVIL WORKS, ALL TO CONSTRUCTION ENGINEER'S APPROVAL.
  - C6. CONCRETE WORKMANSHIP SHALL CONFORM TO AS370 CONCRETE GRADE - 50MPa.

**REINFORCEMENT**

- R1. REINFORCEMENT IS PRESENTED DIMENSIONALLY AND IS NOT NECESSARILY SHOWN IN TRUE PROJECTION.
- R2. UNLESS OTHERWISE SHOWN, SPLICES TO REINFORCEMENT SHALL BE AS FOLLOWS:
  - FABRIC REINFORCEMENT 400 mm AT ENDS
  - REINFORCING BARS 500 mm AT ENDS
  - REINFORCEMENT NOTATION
- R3. REINFORCEMENT NOTATION
- R4. HARD DRAWN US30L WELDED WIRE FABRIC TO AS/NZS4571. R
- R5. STRUCTURAL GRADE R250M RIBBED BARS TO AS/NZS 4671. R
- R6. DEFORMED GRADE US30M BARS TO AS/NZS4671.

**STEELWORK FABRICATION NOTES**

- S1. ALL STEEL MEMBERS TO BE GRADE 30L.
- S2. ALL STEELWORK TO CONFORM TO A.S.S.300-198 INCLUDING 999 SUPPLEMENT.
- S3. ALL WELDING TO CONFORM TO A.S.2504-1:2004.
- S4. ALL STEEL MEMBERS TO BE PAINTED TO ORCA SYSTEM 9 UNO.
- S5. ALL JOINTS SHALL BE FULLY SEAL WELDED IN ADDITION TO REQUIRED STRUCTURAL WELDING.
- S6. FILLET WELDS SHALL BE 6mm CONTINUOUS WELDS UNLESS OTHERWISE SPECIFIED.

**NOTES**

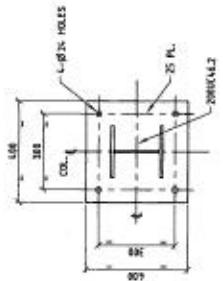
- G1. DIMENSIONS & LEVELS SHALL NOT BE OBTAINED BY SCALING THE STRUCTURAL DRAWINGS.
- G2. SETTING OUT DIMENSIONS AND LEVELS SHOWN ON THE DRAWING SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
- G3. DURING CONSTRUCTION, EXISTING STRUCTURES, SLABS, FOOTINGS & INSTALLATIONS SHALL BE MAINTAINED IN A STABLE CONDITION & NO PART SHALL BE OVERTRESSSED.
- G4. THE CONTRACTOR IS FULLY RESPONSIBLE FOR THE INSTALLATION OF SUITABLE SACRIFICIAL SHORING, TIMBER SHEETING & STRUTTING WHERE EXCAVATION WORK IS LEVEL TO CAUSE MOVEMENT TO ADJACENT SOIL, INSTABILITY OR DAMAGE TO EXISTING INSTALLATIONS OR SERVICES.
- G5. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CODES & SPECIFICATIONS.
- G6. DETAILS SHOWN ON DRAWINGS SHALL BE VERIFIED PRIOR TO CONSTRUCTION & IF NECESSARY AGREED WITH THE APPROVAL OF CONSTRUCTION ENGINEER TO SUIT EXISTING CONDITION & ARRANGEMENT.
- G7. THE CONTRACTOR SHALL VERIFY THE POSITION & LEVEL OF ANY ELECTRICAL CABLES OR SERVICES PRIOR TO STARTING OUT ANY EXCAVATION & DEMOLITION WORK.
- G8. ON COMPLETION OF WORK, THE CONTRACTOR SHALL REMOVE & DISPOSE OF ALL EXCAVATION MATERIALS AS WELL AS ALL EXISTING MATERIALS CLEAN TO ENGINEER'S SATISFACTION, AND EXCAVATION OR SOILING MATERIALS SHALL LEAVE THE SITE WITHOUT WRITTEN APPROVAL FROM CONSTRUCTION ENGINEER.
- G9. EXISTING BROKEN-OUT CONCRETE TO RECYCLE OR DISPOSAL. PRIOR REMOVAL EXCAVATED SOIL/MATERIALS TO BE TESTED BY NATA APPROVED INDEPENDENT LABORATORY & DISPOSED THERE-OF TO ODPB GUIDELINES.

APPROVED

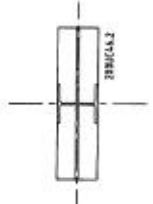
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FOR ALL CIVIL NOTES REFER TO DWG. NO. AP001-0-077

CHECK PRINT - INCOMPLETE REVISION  
THIS DRAWING HAS NOT BEEN REVISIONED AND THIS PRINT IS NOT FOR USE  
PLOT DATE: 24 SEP 11, 2011 - 1:58pm

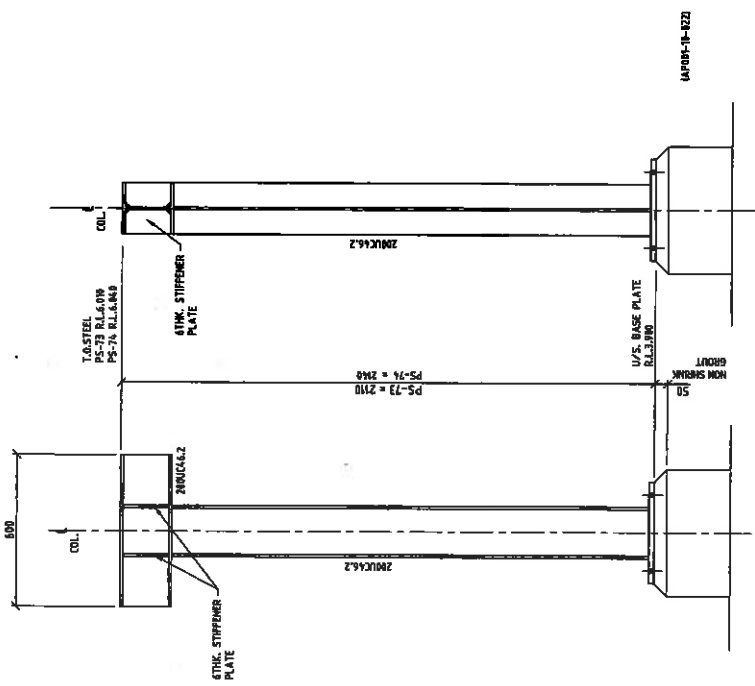
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<p>PROJECT: 991591</p>	<p>SCALE: 1/10</p>	<p>DATE: 24 SEP 11, 2011</p>
<p>DESIGNER: L. PORTELLI</p>	<p>CLIENT: R. ROBINSON</p>	<p>PROJECT: 991591</p>
<p>CHECKED: R. ANDERSON</p>	<p>DESIGN APPROVAL: R. ANDERSON</p>	<p>PROJECT APPROVAL: R. ANDERSON</p>
<p>DATE: 24 SEP 11, 2011</p>	<p>PROJECT APPROVAL: R. ANDERSON</p>	<p>CLIENT APPROVAL: R. ANDERSON</p>



**BASE PLATE DETAIL**  
1/10



**PLAN**  
**TYP. INTERNAL PIPE SUPPORT PS-73 & PS-74 DETAIL (AP001-0-022)**  
1/10



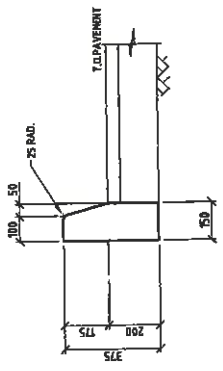
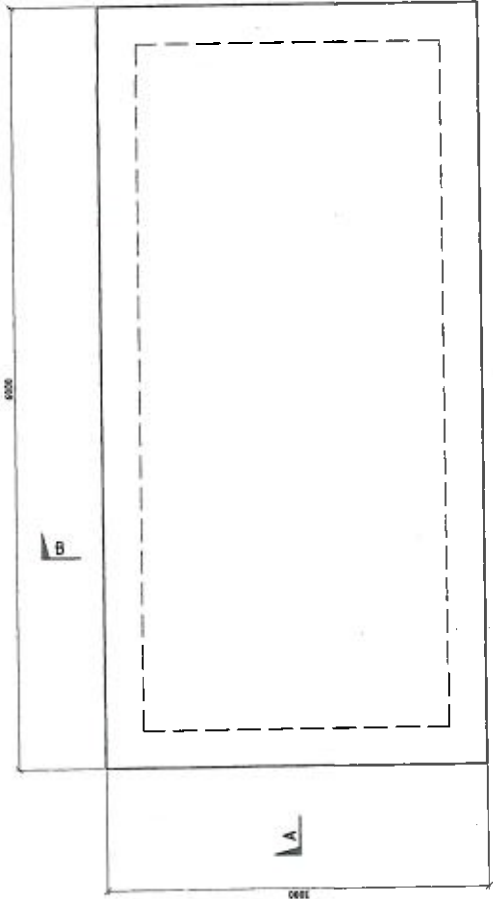
**END ELEVATION**  
1/10

**PIPE SUPPORT**  
2 REQUIRED  
1/10

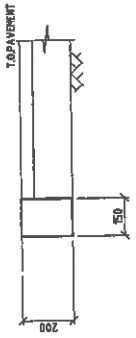
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B	1	24 SEP 11, 2011	L. PORTELLI	R. ANDERSON	COMMENTS INCORPORATED
A	1	24 SEP 11, 2011	L. PORTELLI	R. ANDERSON	PREPARATION ONLY

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<p>PROJECT: 991591</p>	<p>SCALE: 1/10</p>	<p>DATE: 24 SEP 11, 2011</p>
<p>DESIGNER: L. PORTELLI</p>	<p>CLIENT: R. ROBINSON</p>	<p>PROJECT: 991591</p>
<p>CHECKED: R. ANDERSON</p>	<p>DESIGN APPROVAL: R. ANDERSON</p>	<p>PROJECT APPROVAL: R. ANDERSON</p>
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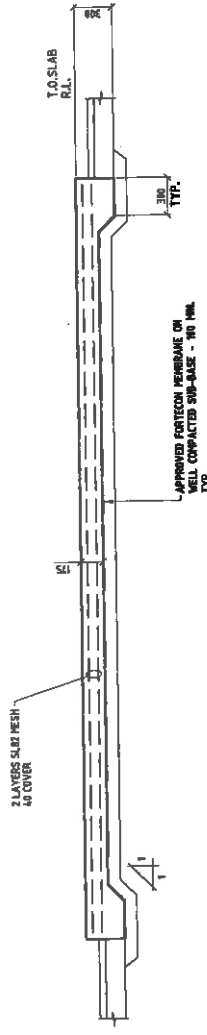


SECTION C-C  
TYP. EDGE KERB DETAIL. IAP001-10-023

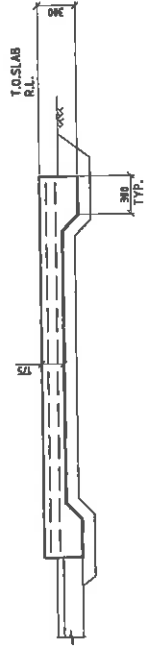


SECTION D-D  
TYP. EDGE KERB DETAIL. IAP001-10-021

STORAGE SHED  
1:20



SECTION A-A  
1:20



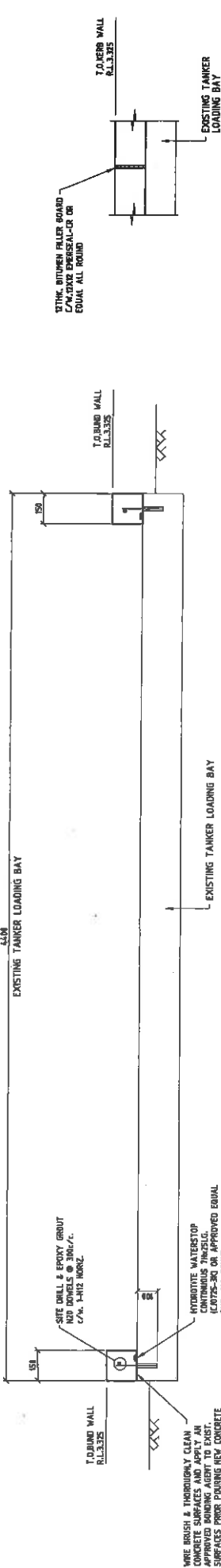
SECTION B-B  
1:20

APPROVED

CHECK PRINT - INCOMPLETE REVISION  
REVISION NO. 1  
DATE: 25 Sep 01, 2018 - 8:58am

NOTE  
FOR ALL CIVIL NOTES REFER TO DWG. No. AP001-10-017

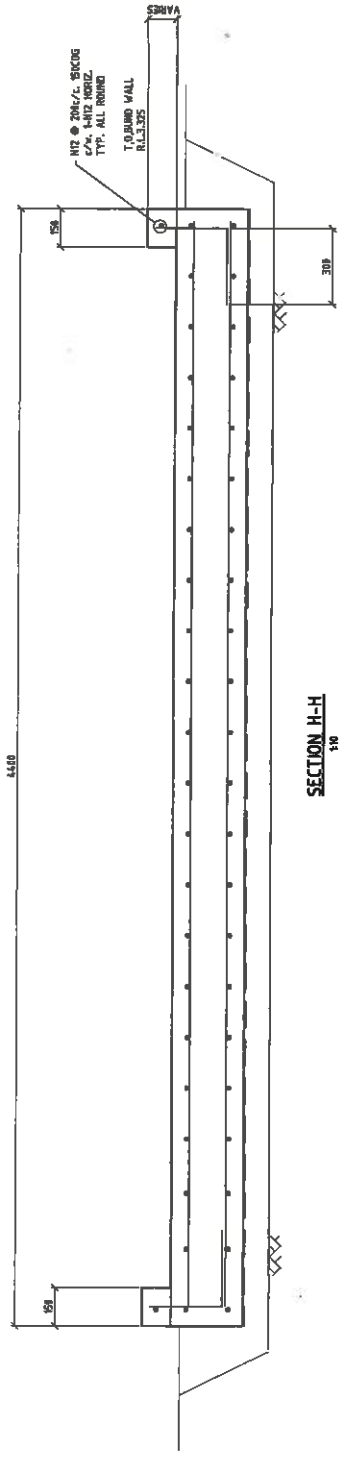
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CLIENT: Gladstone DESIGNER: L. PORTELLI CHECKER: H. ROBINSON PROJECT MANAGER: R. ANDERSON TECHNICAL APPROVAL: R. ANDERSON PROJECT APPROVAL: R. ANDERSON CLIENT APPROVAL: R. ANDERSON	KBR Koffing Brown & Mack Pty Ltd 1000 THIS DRAWING AND SPECIFICATIONS ARE THE PROPERTY OF KBR. THE DRAWING OR SPECIFICATIONS SHALL NOT BE REPRODUCED OR USED WITHOUT THE EXPRESS WRITTEN CONSENT OF KBR.	SHEET NO. 150 PROJECT NO. 150 DRAWING NO. 150 REV. NO. 150
SHEET NO. 150 PROJECT NO. 150 DRAWING NO. 150 REV. NO. 150	SHEET NO. 150 PROJECT NO. 150 DRAWING NO. 150 REV. NO. 150	SHEET NO. 150 PROJECT NO. 150 DRAWING NO. 150 REV. NO. 150



TYP. LOADING BAY EXPANSION JOINT DETAIL (E-J)

SECTION B-B (AP04-B-000)

1:10



SECTION H-H

1:10

NEW BITUMEN ACCESS SHALL BE TO 1/4\"/>

3/8\"/>

1/2\"/>

EXISTING TANKER LOADING BAY

2500 HUMP

500

500

EXISTING TANKER LOADING BAY

200

200

T.O. BOND WALL R.L. 3.325

APPROVED EPOXY MEMBRANE ON WELL COMPACTED SUB-BASE - 180 MIL TYP.

1/2\"/>

1/2\"/>

1/2\"/>

1/2\"/>

1/2\"/>

1/2\"/>

1/2\"/>

1/2\"/>

1/2\"/>

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1/2\"/>

APPROVED

CHECK PRINT - INCOMPLETE REVISION  
THIS DRAWING HAS BEEN CONSIDERED CORRECT AND MUST NOT BE RE-DRAWN.  
PLT 01/11/16

NOTE  
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REV.		DATE	BY	CHK	APP	DATE	DESCRIPTION	REFERENCE DRAWING
B	2018-04-11						COMMENTS INCORPORATED	
A	2018-04-11						REVISION ONLY	

DESIGNER	L. PORTELLI	CHECKED	R. ANDERSON	DATE	
DRAWN	L. PORTELLI	CHECKED	R. ANDERSON	DATE	
IN CHARGE	H. ROBINSON	CHECKED	R. ANDERSON	DATE	
PROJECT MANAGER		CHECKED	R. ANDERSON	DATE	
CLIENT APPROVAL		CHECKED	R. ANDERSON	DATE	
CLEAR APPROVAL		CHECKED	R. ANDERSON	DATE	

NO.	1	DATE	16/01/2018
BY	EAH	PROJECT	AP001-B-017
SCALE	1:10		
PROJECT	AP001-10-019		
SECTION	B		
REVISION NO.	1		

REVISIONS AND APPROVALS	SCALE	REVISION NO.	SECTION	PROJECT	DATE	BY
APPROVED	1:10	1	B	AP001-10-019	16/01/2018	EAH

Kalgate Brown & Root Pty Ltd		KBR	
160 Collins Street, Melbourne VIC 3000		160 Collins Street, Melbourne VIC 3000	
Tel: +61 3 9593 9300		Tel: +61 3 9593 9300	
Fax: +61 3 9593 9301		Fax: +61 3 9593 9301	
www.kbr.com.au		www.kbr.com.au	
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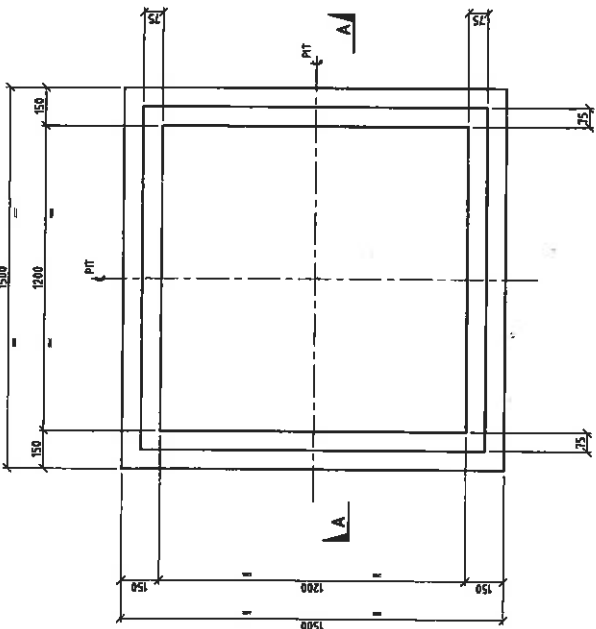
  

OWNER	GLADSTONE
DESIGNER	PLANT
CHECKED	SULPHURIC ACID
PROJECT MANAGER	SULPHURIC ACID LOADING
SECTION	SULPHURIC ACID LOADING
REVISION NO.	SP1591
SCALE	1:10

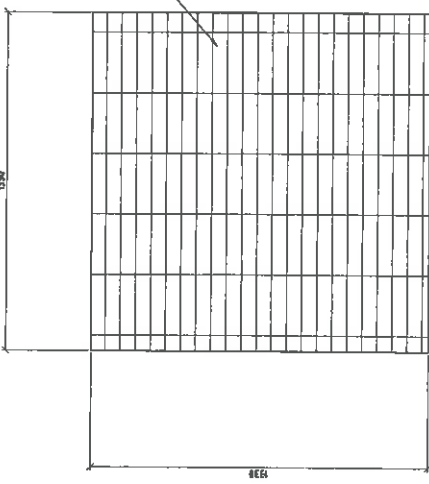
  

CLIENT	GLADSTONE
SECTION	SULPHURIC ACID - STORAGE & LOADING
SECTION	SULPHURIC ACID LOADING BAY SECTIONS

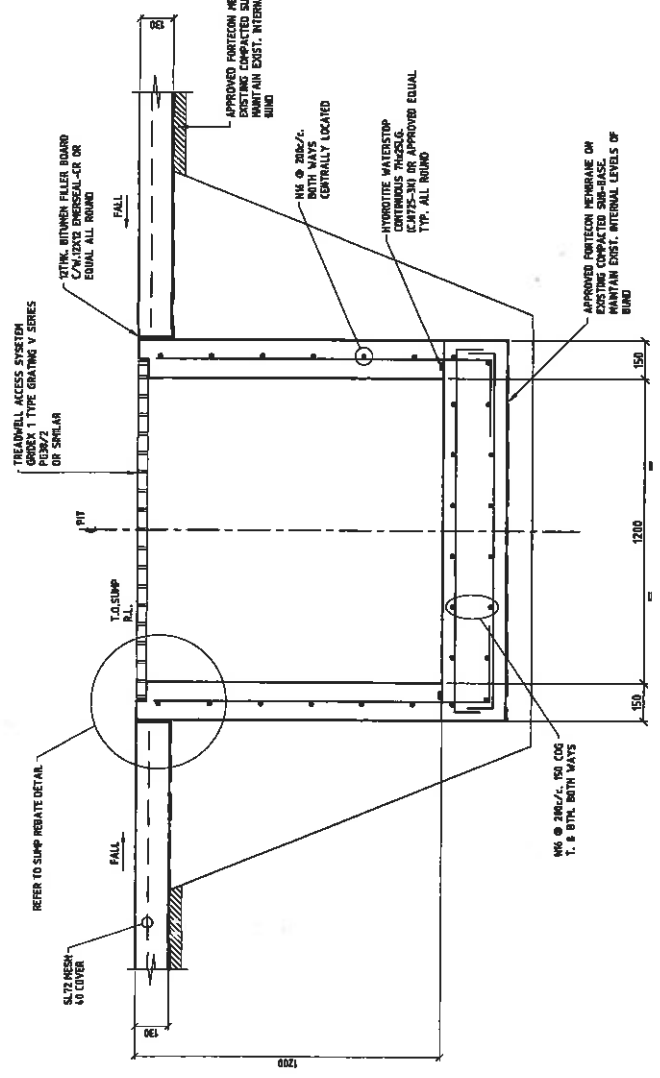




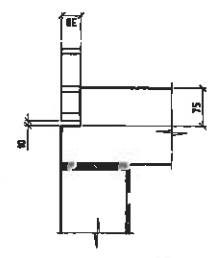
G.A. OF BUND SUMP - T08  
1:10



COVER DETAIL SUMP  
1:10



SECTION A-A  
1:10

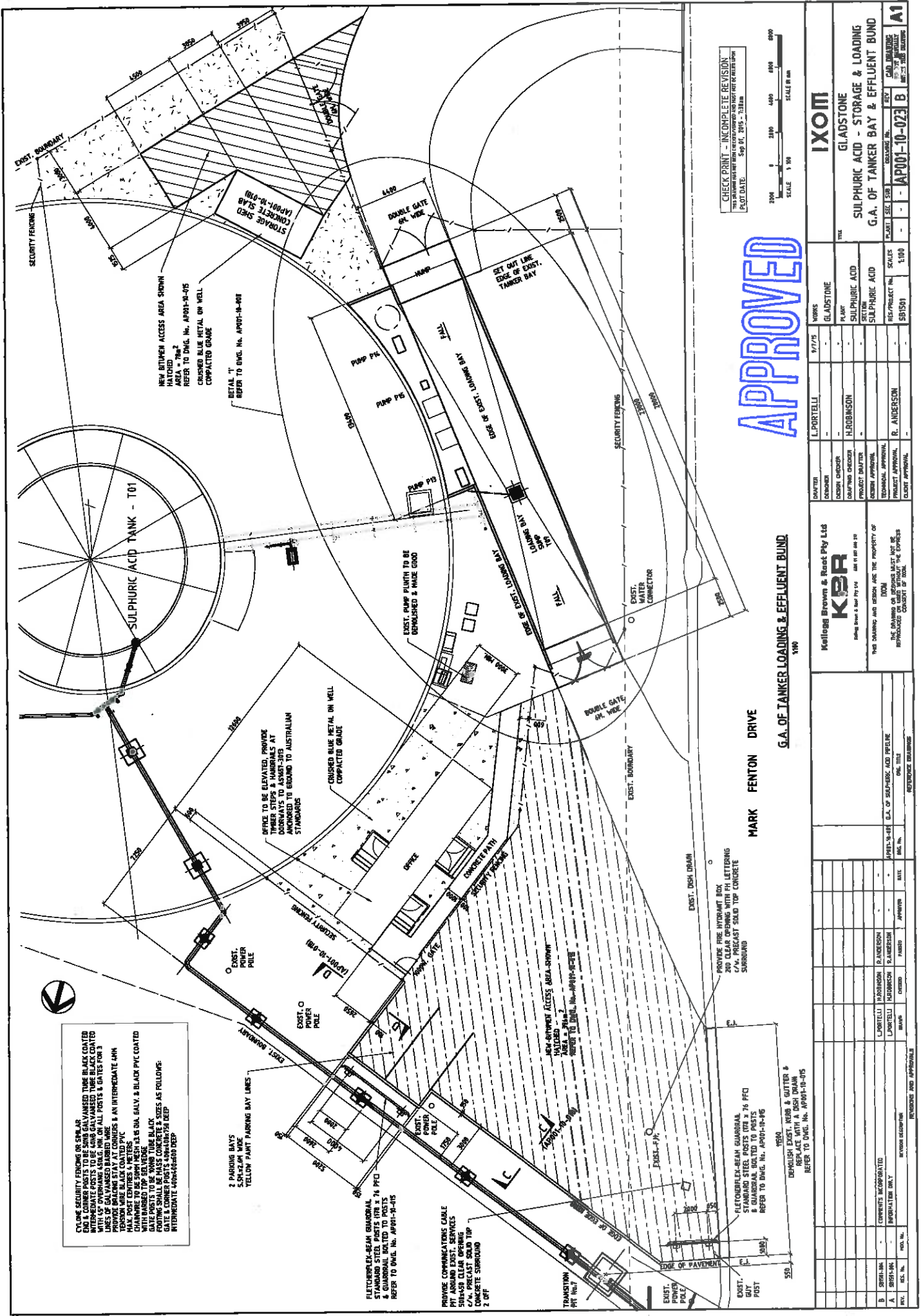


TYP. SUMP REBATE DETAIL  
1:5

APPROVED

NOTE  
FOR ALL CIVIL NOTES REFER TO DMC No. APP01-9-97

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DESIGNED BY: L. PORTELLI	CHECKED BY: H. ROBINSON	DATE: 10/01/01	PROJECT: SULPHURIC ACID LOADING	PROJECT NO: 501501	PROJECT TITLE: SULPHURIC ACID STORAGE & LOADING	PROJECT NO: 501501	PROJECT TITLE: SULPHURIC ACID STORAGE & LOADING	PROJECT NO: 501501	PROJECT TITLE: SULPHURIC ACID STORAGE & LOADING
DESIGNED BY: L. PORTELLI	CHECKED BY: H. ROBINSON	DATE: 10/01/01	PROJECT: SULPHURIC ACID LOADING	PROJECT NO: 501501	PROJECT TITLE: SULPHURIC ACID STORAGE & LOADING	PROJECT NO: 501501	PROJECT TITLE: SULPHURIC ACID STORAGE & LOADING	PROJECT NO: 501501	PROJECT TITLE: SULPHURIC ACID STORAGE & LOADING
DESIGNED BY: L. PORTELLI	CHECKED BY: H. ROBINSON	DATE: 10/01/01	PROJECT: SULPHURIC ACID LOADING	PROJECT NO: 501501	PROJECT TITLE: SULPHURIC ACID STORAGE & LOADING	PROJECT NO: 501501	PROJECT TITLE: SULPHURIC ACID STORAGE & LOADING	PROJECT NO: 501501	PROJECT TITLE: SULPHURIC ACID STORAGE & LOADING
DESIGNED BY: L. PORTELLI	CHECKED BY: H. ROBINSON	DATE: 10/01/01	PROJECT: SULPHURIC ACID LOADING	PROJECT NO: 501501	PROJECT TITLE: SULPHURIC ACID STORAGE & LOADING	PROJECT NO: 501501	PROJECT TITLE: SULPHURIC ACID STORAGE & LOADING	PROJECT NO: 501501	PROJECT TITLE: SULPHURIC ACID STORAGE & LOADING



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 LIST DATE: Sep 07, 2015, 10:28 AM

**APPROVED**

MARK FENTON DRIVE

G.A. OF TANKER LOADING & EFFLUENT BUND



REV.	REV. NO.	REV. DATE	REV. DESCRIPTION	APPROVED	DRAWN	CHECKED	DESIGN CHECKER	PROJECT MANAGER	PROJECT APPROVAL	CLIENT APPROVAL	SCALE	PROJECT NO.	ISSUE DATE	ISSUED BY
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C	01	07/15/15	ISSUE FOR PERMITTING											
D	01	07/15/15	ISSUE FOR PERMITTING											
E	01	07/15/15	ISSUE FOR PERMITTING											
F	01	07/15/15	ISSUE FOR PERMITTING											
G	01	07/15/15	ISSUE FOR PERMITTING											
H	01	07/15/15	ISSUE FOR PERMITTING											
I	01	07/15/15	ISSUE FOR PERMITTING											
J	01	07/15/15	ISSUE FOR PERMITTING											
K	01	07/15/15	ISSUE FOR PERMITTING											
L	01	07/15/15	ISSUE FOR PERMITTING											
M	01	07/15/15	ISSUE FOR PERMITTING											
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U	01	07/15/15	ISSUE FOR PERMITTING											
V	01	07/15/15	ISSUE FOR PERMITTING											
W	01	07/15/15	ISSUE FOR PERMITTING											
X	01	07/15/15	ISSUE FOR PERMITTING											
Y	01	07/15/15	ISSUE FOR PERMITTING											
Z	01	07/15/15	ISSUE FOR PERMITTING											
AA	01	07/15/15	ISSUE FOR PERMITTING											
AB	01	07/15/15	ISSUE FOR PERMITTING											
AC	01	07/15/15	ISSUE FOR PERMITTING											
AD	01	07/15/15	ISSUE FOR PERMITTING											
AE	01	07/15/15	ISSUE FOR PERMITTING											
AF	01	07/15/15	ISSUE FOR PERMITTING											
AG	01	07/15/15	ISSUE FOR PERMITTING											
AH	01	07/15/15	ISSUE FOR PERMITTING											
AI	01	07/15/15	ISSUE FOR PERMITTING											

**IXOM**  
 GLADSTONE  
 SULPHURIC ACID - STORAGE & LOADING  
 G.A. OF TANKER BAY & EFFLUENT BUND

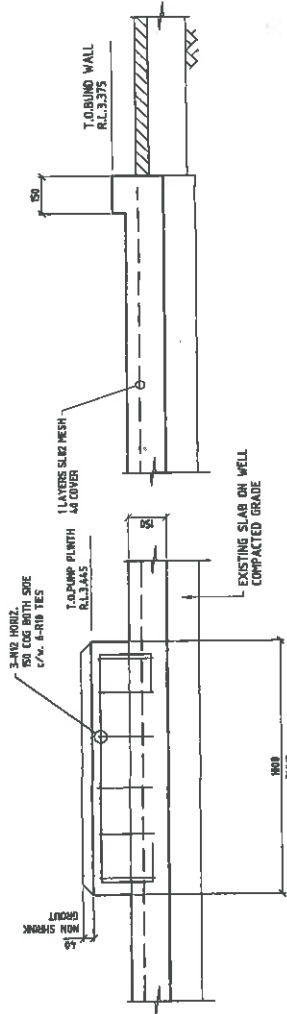
DESIGN CHECKER: H. ROBINSON  
 PROJECT MANAGER: R. ANDERSON  
 PROJECT APPROVAL: R. ANDERSON  
 CLIENT APPROVAL: R. ANDERSON

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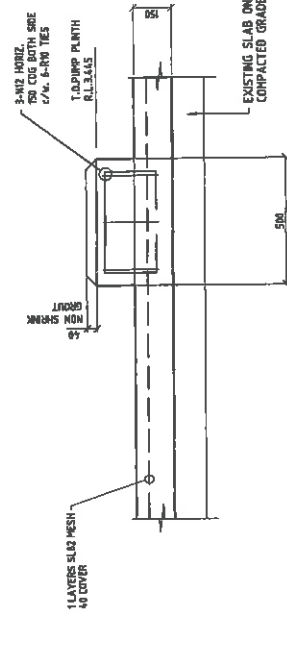
REVISIONS AND APPROVALS

REV.	REV. NO.	REV. DATE	REV. DESCRIPTION	APPROVED
A	01	07/15/15	ISSUE FOR PERMITTING	L. PORTELLI
B	01	07/15/15	ISSUE FOR PERMITTING	R. ANDERSON
C	01	07/15/15	ISSUE FOR PERMITTING	R. ANDERSON
D	01	07/15/15	ISSUE FOR PERMITTING	R. ANDERSON
E	01	07/15/15	ISSUE FOR PERMITTING	R. ANDERSON
F	01	07/15/15	ISSUE FOR PERMITTING	R. ANDERSON
G	01	07/15/15	ISSUE FOR PERMITTING	R. ANDERSON
H	01	07/15/15	ISSUE FOR PERMITTING	R. ANDERSON
I	01	07/15/15	ISSUE FOR PERMITTING	R. ANDERSON
J	01	07/15/15	ISSUE FOR PERMITTING	R. ANDERSON
K	01	07/15/15	ISSUE FOR PERMITTING	R. ANDERSON
L	01	07/15/15	ISSUE FOR PERMITTING	R. ANDERSON
M	01	07/15/15	ISSUE FOR PERMITTING	R. ANDERSON
N	01	07/15/15	ISSUE FOR PERMITTING	R. ANDERSON
O	01	07/15/15	ISSUE FOR PERMITTING	R. ANDERSON
P	01	07/15/15	ISSUE FOR PERMITTING	R. ANDERSON
Q	01	07/15/15	ISSUE FOR PERMITTING	R. ANDERSON
R	01	07/15/15	ISSUE FOR PERMITTING	R. ANDERSON
S	01	07/15/15	ISSUE FOR PERMITTING	R. ANDERSON
T	01	07/15/15	ISSUE FOR PERMITTING	R. ANDERSON
U	01	07/15/15	ISSUE FOR PERMITTING	R. ANDERSON
V	01	07/15/15	ISSUE FOR PERMITTING	R. ANDERSON
W	01	07/15/15	ISSUE FOR PERMITTING	R. ANDERSON
X	01	07/15/15	ISSUE FOR PERMITTING	R. ANDERSON
Y	01	07/15/15	ISSUE FOR PERMITTING	R. ANDERSON
Z	01	07/15/15	ISSUE FOR PERMITTING	R. ANDERSON
AA	01	07/15/15	ISSUE FOR PERMITTING	R. ANDERSON
AB	01	07/15/15	ISSUE FOR PERMITTING	R. ANDERSON
AC	01	07/15/15	ISSUE FOR PERMITTING	R. ANDERSON
AD	01	07/15/15	ISSUE FOR PERMITTING	R. ANDERSON
AE	01	07/15/15	ISSUE FOR PERMITTING	R. ANDERSON
AF	01	07/15/15	ISSUE FOR PERMITTING	R. ANDERSON
AG	01	07/15/15	ISSUE FOR PERMITTING	R. ANDERSON
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AI	01	07/15/15	ISSUE FOR PERMITTING	R. ANDERSON

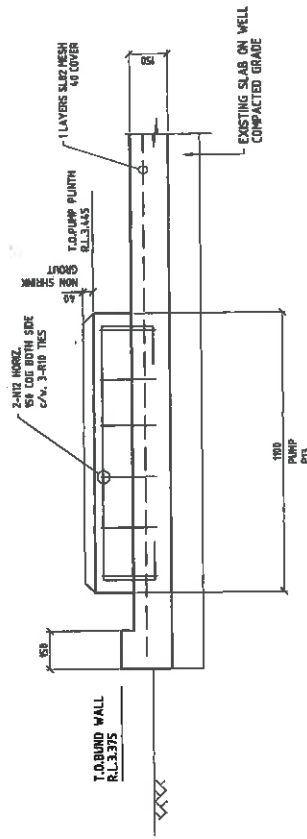




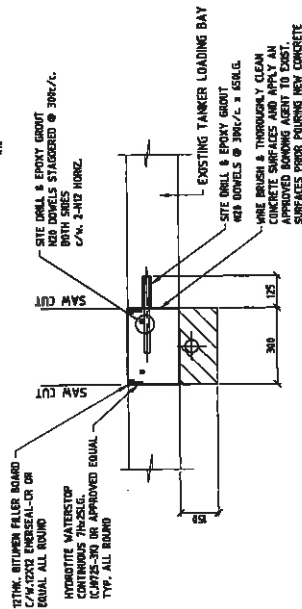
SECTION F-F (AP001-B-081)



SECTION G-G (AP001-B-081)



SECTION H-H (AP001-B-081)



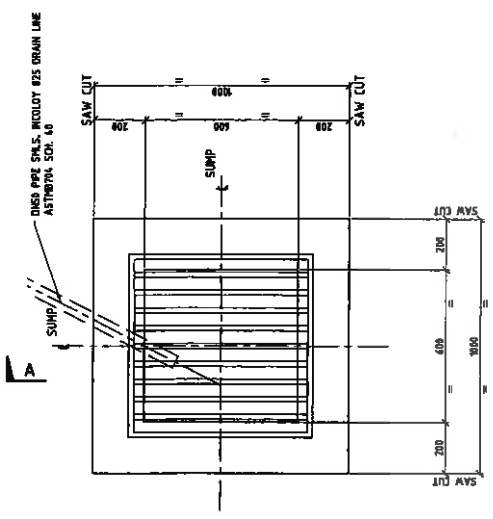
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APPROVED

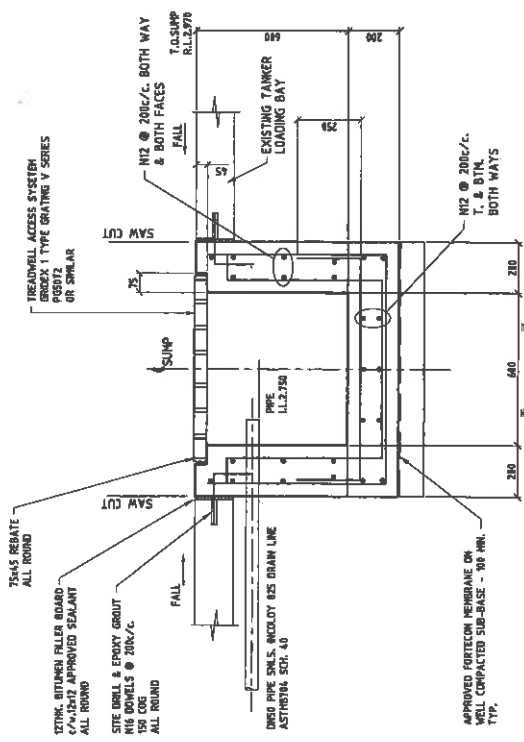
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 DATE: 11/01/2015 10:53:38

NOTE  
 FOR ALL CIVIL NOTES REFER TO DMS. No. AP001-B-477

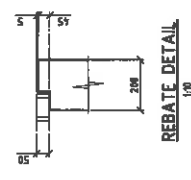
<b>IXOM</b> GLADSTONE SULPHURIC ACID - STORAGE & LOADING TANKER LOADING SECTIONS		WORKS GLADSTONE PLANT SULPHURIC ACID STORAGE TANKER ACID LOADING SECTIONS	DESIGNER L. PORTELLI DESIGN CHECKER R. ROBINSON PROJECT MANAGER R. ANDERSON TECHNICAL APPROVAL R. ANDERSON PROJECT APPROVAL R. ANDERSON	DRAWING No. - AP001-10-024 B REV. - SCALE 1:10	SHEET No. - OF SHEETS - DATE - DRAWN BY - CHECKED BY - APPROVED BY - DATE - REVISIONS AND APPROVALS
Kellogg Brown & Root Pty Ltd <b>KBR</b> Kellogg Brown & Root Pty Ltd 1000 THIS DRAWING AND DESIGN ARE THE PROPERTY OF KBR AND ARE NOT TO BE REPRODUCED OR USED WITHOUT THE EXPRESS WRITTEN CONSENT OF KBR.		REVISIONS AND APPROVALS			



**PLAN**  
**TANKER LOADING BAY SUMP - I02**  
5/8



**SECTION A-A**  
5/8



**REBATE DETAIL**  
1/8

APPROVED

CHECK PRINT - INCOMPLETE REVISION  
DATE: 2011-03-25  
PROJECT: 1001-10-025 B

NOTE  
FOR ALL CIVIL NOTES REFER TO DWG. NO. AP00-10-07

NO.		REV.	DESCRIPTION	DATE	BY	CHECKED	APPROVED	DATE	BY	SCALE	REVISION	PROJECT	NO.	REV.	DATE
B	1		CONCRETE INCORPORATED												
A	1		PROPORTION ONLY												
REV.	NO.		REVISION DESCRIPTION												
MECHANICAL AND APPROVALS															
DRAFTER: L. PORTELLI CHECKER: H. ROBINSON PROJECT MANAGER: H. ROBINSON TECHNICAL APPROVAL: H. ROBINSON PROJECT APPROVAL: H. ROBINSON CLIENT APPROVAL: H. ROBINSON															
<b>KBR</b> Kellogg Brown & Root Pty Ltd 100 MOUNT ST. SYDNEY NSW 2000 THE DRAWING AND TECHNICAL INFORMATION ARE THE PROPERTY OF KBR. NO PARTS MAY BE REPRODUCED OR USED IN ANY MANNER WITHOUT THE EXPRESS WRITTEN CONSENT OF KBR.															
<b>IXOM</b> GLADSTONE SULPHURIC ACID - STORAGE & LOADING LOADING BAY SUMP DETAIL - T09															
WORKS: GLADSTONE TYPE: SULPHURIC ACID LOADING RES/PROJECT No.: 591501 SCALES: 1:80															
DRAWING NO.: AP001-10-025 B SHEET NO.: 11 OF 11 DATE: 2011-03-25															





APPROVED

IXOM

Construction Environmental Management Plan  
Sulphuric Acid Storage and Pipeline Works  
Auckland Point, Gladstone Port

20 August 2015

50956/101,335 (Rev1)

JBS&G

**Standard Number: SHE-APT-EMP-ENV-001**

**Scope of Application:  
Auckland Point Sulfuric Acid Terminal  
IXOM Pty Ltd**

**Revision: 2.0**

**APPROVED**

**Issued: DRAFT 21 August 2015**

**Document Owner:  
Site Leader – Nathan Cook**



## *Traffic Management*

**Work Instruction Number: AKP-WKI-006**

**Critical Work Instruction: Yes**

**Scope of Application: Auckland Point Sulfuric Acid  
Terminal**

**Revision: 01**

**APPROVED**

**Issued: 07/08/2015**

**Document Owner: Nathan Cook**

**Document Approver: Trent Borserio**

## *Sulfuric Acid Unloading*

Work Instruction Number: AKP-WKI-002

Critical Work Instruction: Yes

Scope of Application: Auckland Point Sulfuric Acid  
Terminal / *Sulfuric Acid Import*

Revision: 01

**APPROVED**

Issued: 4/08/2015

Document Owner: Nathan Cook

Document Approver: Trent Borserio





APPROVED

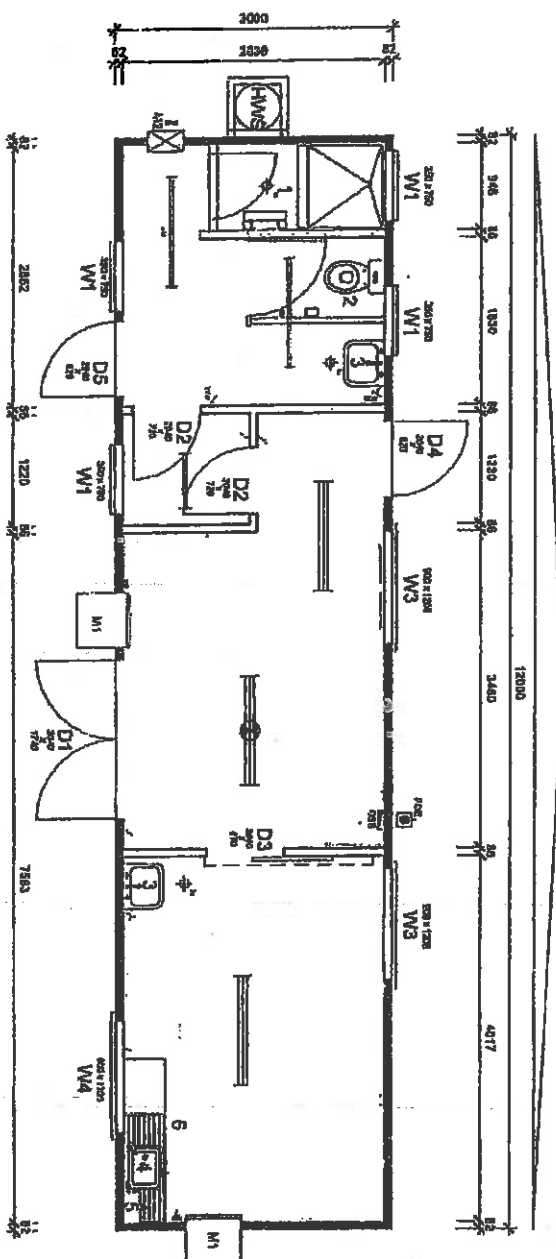
# EMERGENCY PLAN

***IXOM Auckland Point Sulfuric Acid Terminal***

Copy N°.:  
\_\_\_\_\_

Issue N°.:  
\_\_\_\_\_

Location:  
\_\_\_\_\_



1  
Floor Plan  
1 : 50

Notes  
 1. Study Specifications S  
 2. Fire lighting equipment supplied & installed by others.

**AS BOLD**

**Item List**

- D1 2040 x 7140 External Standard : Hollow Core MC
- D2 2040 x 720 Internal Door - Standard : Hollow Core
- D3 2040 x 720 Internal Door - Standard : Solid Hollow Core
- D4 2040 x 820 External Door - Standard : Hollow Core MC
- D5 2040 x 820 External Door - Standard : Hollow Core MC
- W1 350 x 750 Sliding Glass Window - Clear Glass
- W2 900 x 1200 Sliding Glass Window - Grey Glass
- W3 800 x 1200 Sliding Glass Window - Grey Glass
- W4
- M1 2.5kW RFD VFD Mounted Air Conditioner
- M2 VAV Mechanical Exhaust Fan - IP25 Fused
- 1 Shower enclosure over basin seat & cast bath
- 2 VAC Controls over toilet and holder
- 3 850 Handbasin over mirror over floor drain trap
- 4 1200x500 SIB GIB sink over basin
- 5 2.0L Automatic
- 6 1200mm stainless steel composite over extended top

**Electrical Legend**

- W Floor Wires
- MHS 125LW Heat venter system - mounted externally
- DSB Distribution Switchboard
- POE - Point Of Entry
- Light switches
- Two-way light switch
- Light switch - IP25 rated
- Isolation Switch
- 10amp Single GPO
- 10amp Double GPO
- 15amp Single GPO
- 15amp GPO - IP25 rated
- 25amp Single GPO
- 25amp Double GPO
- Indicates floor mounting
- Indicates ceiling mounting
- Comments - Draw when only
- P Type laboratory cabinet
- 200V Single drawer
- 200V Single surgeproof light
- 250V Double surgeproof light
- 250V Emergency Access Management light
- 300V Single surgeproof light - IP25 rated
- Emergency exit light
- Basin holder
- External light
- 18W Single Variable
- Cylinder light
- Photo electric light switch
- Grid light

Rev No: 1	Description	Date	By	This drawing represents the APPROVED ARCHITECTURAL DRAWING. IT MAY NOT BE REPRODUCED OR COPIED IN ANY MANNER WITHOUT THE WRITTEN AUTHORITY	QUALITY CONTROLLED BY ARCHITECTURAL DESIGNER	PRODUCT No.	DATE	SCALE	DRAWN BY	CHECKED BY	ATCO	TITLE	DESIGN WHO DUD	REVISION	SHEET SIZE
A	Added two Rooms	13-11	AS			12.0 x 3.0m First Aid Building	9.16.10	1:10	AB	TR	ATCO CONSULTANTS & ENGINEERS PTY. LTD. 120 LITTLE LANE, GARDEN LEASE, AVE MELBOURNE VIC 3000	Floor Plan	C2	B	A3
B	Added AC 2 Rooms & layout changes	08-5-11	JK									101225A-01			

**APPROVED**

**LANDSCAPE DESIGN GENERAL NOTES:**

1. The landscape design is based on the site conditions and information provided by the client. The design is subject to change based on site conditions and information provided by the client.

2. The landscape design is based on the site conditions and information provided by the client. The design is subject to change based on site conditions and information provided by the client.

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**PLANTING SCHEDULE:**

Planting schedule is provided for reference. Planting schedule is provided for reference. Planting schedule is provided for reference. Planting schedule is provided for reference. Planting schedule is provided for reference.

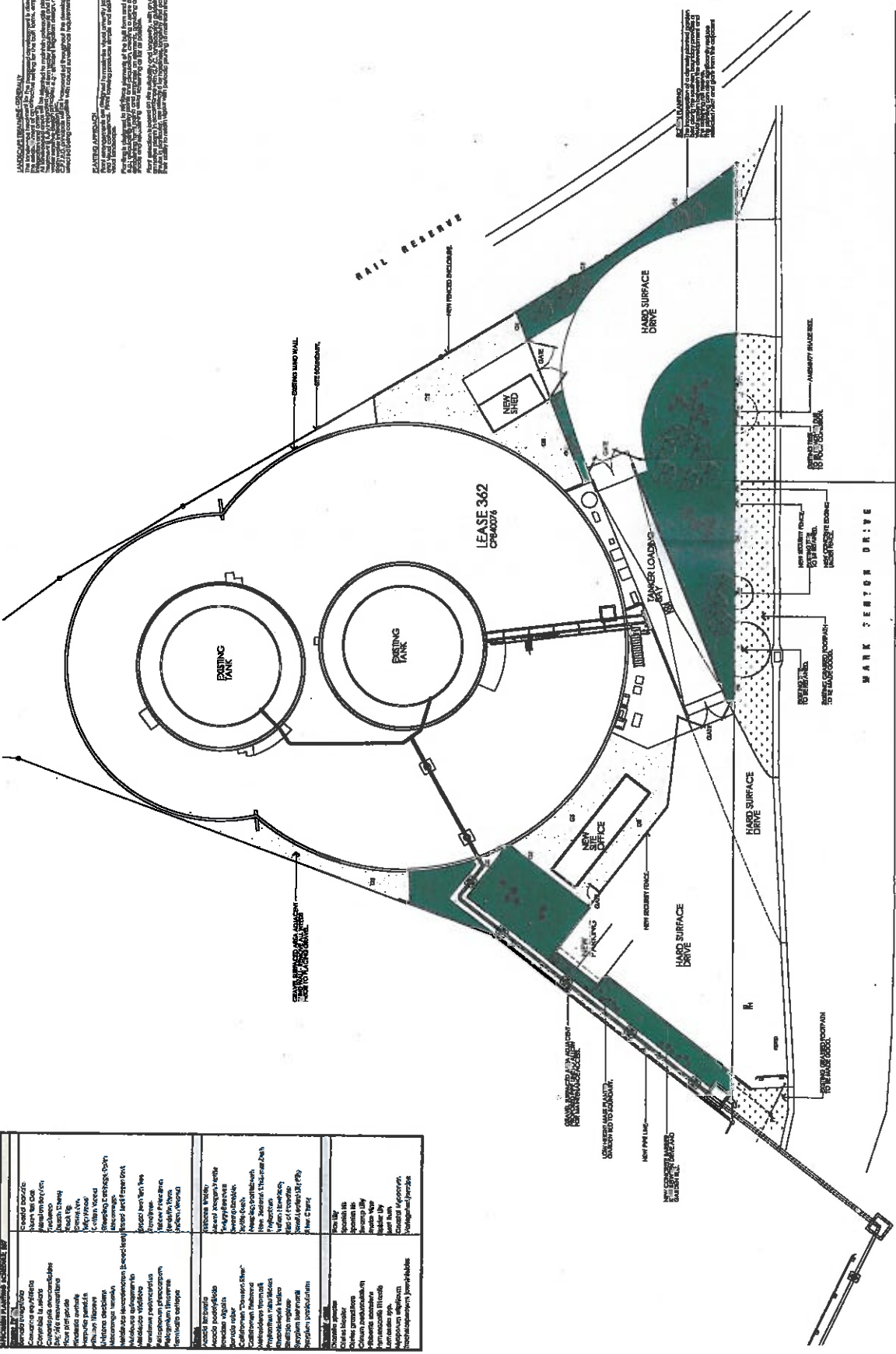
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Plant Name	Plant Name	Plant Name	Plant Name
Acacia saligna	Acacia saligna	Acacia saligna	Acacia saligna
Acacia saligna	Acacia saligna	Acacia saligna	Acacia saligna
Acacia saligna	Acacia saligna	Acacia saligna	Acacia saligna
Acacia saligna	Acacia saligna	Acacia saligna	Acacia saligna
Acacia saligna	Acacia saligna	Acacia saligna	Acacia saligna



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**LEGEND:**

- Grassed Area
- Mulched Garden Bed
- Gravel Surfacing
- Garden Edging
- Existing Tree
- Existing Tree Retention
- Amenity Shade Tree
- Screening Shrubs

<p><b>ALDERSON + ASSOCIATES LANDSCAPE ARCHITECTS</b></p> <p>ALAN 21 893 137 049          PHOENIX 01 863 719 250          12001 120th AVE, SUITE 100          GOLDEN VALLEY, CO 80123          EMAIL: alderson@aldersonlandscape.com</p>	<p><b>IXCOM</b></p> <p>MARK TENTOR DRIVE, GOLDSTONE</p>	<p><b>SULPHURIC ACID STORAGE+ LOADING FACILITY</b></p>	<p><b>LANDSCAPE CONCEPT PLAN</b></p>
<p>DATE: AUG. 2015          DRAWN: D8          SCALE: 1:200 AT A1</p>	<p>PROJECT NO: 837-LCP01          REVISION: A</p>	<p>DATE: AUG. 2015          DRAWN: D8          SCALE: 1:200 AT A1</p>	