



**public works**

---

Department:  
Public Works  
**REPUBLIC OF SOUTH AFRICA**

**DEPARTMENT OF PUBLIC WORKS**  
**TENDER DOCUMENT**  
**FOR**  
**PHALABORWA 524: UPGRADING AND**  
**INSTALLATION OF KITCHEN EQUIPMENTS**

**TENDER NUMBER: PLK23/01**

**CLOSING DATE: 04/07/2023**

**TENDERER: .....**

**Consisting of:**

- Volume 1 : Tendering Procedure**
- Volume 2 : Returnable Documents**
- Volume 3 : Contract**

# TABLE OF CONTENTS

## VOLUME 1: TENDERING PROCEDURES

DESCRIPTION	DOCUMENT NAME	PAGE COLOUR	PAGE NO.
<b>TENDER DOCUMENT COVER</b> .....		White	1
Table of Contents (Volume 1, 2 and 3).....		White	2
Bid Map.....		White	3
<b>VOLUME 1: TENDERING PROCEDURES</b> .....		White	4
Tender Procedures.....		White	5
Table of Contents (Volume 1).....		White	6
T1.1 Tender Notice and Invitation to Tender.....		White	7
Notice and Invitation to Tender.....	PA-04(EC)	White	8
T1.2 Tender Data.....		Pink	19
Tender Data.....	DPW-03(EC)	Pink	20

## VOLUME 2: RETURNABLE DOCUMENTS

DESCRIPTION	DOCUMENT	PAGE COLOUR	PAGE NO.
<b>VOLUME 2: RETURNABLE DOCUMENTS</b> .....		White	28
Returnable Documents.....		White	29
Table of Contents (Volume 2).....		White	30
T2.1 List of Returnable Documents.....		Yellow	31
List of Returnable Documents.....	PA-09(EC)	Yellow	32
C1.1 Form of Offer and Acceptance.....		Yellow	36
Form of Offer and Acceptance.....	DPW-07(EC)	Yellow	37
C2.2 Bills of Quantities / Lump Sum Document (if a returnable document).....		Yellow	42
Bills of Quantities / Specification and Schedule of Rates / Final Summary.....	Bill of Quantity	Yellow	43
T2.2 Returnable Documents required for tender evaluation purposes.....		Yellow	61
Declaration of Interest and Tenderer's Past Supply Chain Management Practices.....	PA-11.1(EC)	Yellow	62
Certification of Independent Bid Determination.....	PA-29	Yellow	65
Resolution of Board of Directors.....	PA-15.1	Yellow	69
Resolution of Board of Directors to enter into Consortia or Joint Ventures.....	PA-15.2	Yellow	71
Site Inspection Meeting Certificate.....	DPW-16(EC)	Yellow	73
Preference Points Claim Form in terms of the Preferential Procurement Regulations 2011.....	PA-16	Yellow	74
Particulars of Tenderer's Projects.....	DPW-09(EC)	Yellow	84
T2.2 Returnable Documents that will be incorporated into the contract.....		Yellow	86
Declaration of Designated Groups for Preferential Procurement.....	PA-40	Yellow	87
Record of Addenda to tender documents.....	DPW-21(EC)	Yellow	89
Schedule of Proposed Subcontractors.....	DPW-15(EC)	Yellow	90
Particulars of Electrical Contractor.....	DPW-22(EC)	Yellow	91
Schedule for Imported Materials and Equipment.....	DPW-23(EC)	Yellow	92
T2.2 Returnable Documents: Other Documents that will be incorporated into the contract.....		Yellow	93

## VOLUME 3: CONTRACT

DESCRIPTION	DOCUMENT	PAGE COLOUR	PAGE NO.
<b>VOLUME 3: Returnable Documents</b> .....		White	94
Returnable Documents.....		White	95
Table of Contents (Volume 3).....		White	96
Part C1: Agreement and Contract Data.....		Yellow	97
C1.2 Contract Data.....		Yellow	98
Contract Data.....	Project specific. DPW-05(EC)	Yellow	99
C1.3 Form of Guarantee.....		White	112
Form of Guarantee.....	DPW-10.1(EC)	White	113
Form of Guarantee.....	DPW-10.3(EC)	White	116
Part C2: Pricing Data.....		Yellow	118
C2.1 Pricing Instructions.....		Yellow	119
Pricing Instructions.....	Project specific. PG-02.1(EC)	Yellow	120
C2.2 Bills of Quantities / Lump Sum Document (if not a returnable document).....		Yellow	124
Part C3: Scope of Work.....		Blue	125
C3 Scope of Work.....		Blue	126
Scope of Work.....	Project specific. PG-01.2(EC)	Blue	127
HIV/AIDS Specification and Schedules.....	PW 1544 Specification and Schedu	Blue	147
Occupational Health & Safety Specification.....	OHS Specifications	Blue	162
DPW Kitchen Equipment Specifications.....	Kitchen Equipment Specifications	Blue	212
DPW Drainage Specifications.....	Drainage Specifications	Blue	227
DPW Electrical Installations Specifications.....	Electrical Specifications	Blue	274
Part C4: Site Information.....		Green	301
C4 Site Information.....	Separation sheet	Green	302
Site Information.....	Project specific. PG-03.1(EC)	Green	303
C5 Site Drawings.....	Separation sheet	Green	304
Drawings.....		White	305

YOU ARE HEREBY INVITED TO TENDER TO THE GOVERNMENT OF THE REPUBLIC OF SOUTH AFRICA

PLEASE TAKE NOTE

CLOSING TIME: **11H00**

BID NUMBER: **PLK 23/01**

CLOSING DATE: **04/07/2023**

**TENDERS RECEIVED AFTER THE CLOSING TIME AND DATE ARE LATE AND WILL AS A RULE NOT BE ACCEPTED FOR CONSIDERATION**

The **Tax Clearance Certificate for Tender Purposes** from the Receiver of Revenue and the **Tender Form** must be completed and signed in the original that is in ink. Forms with photocopied signatures or other such reproduction of signatures may be rejected.

**TENDER DOCUMENTS MAY BE POSTED TO**

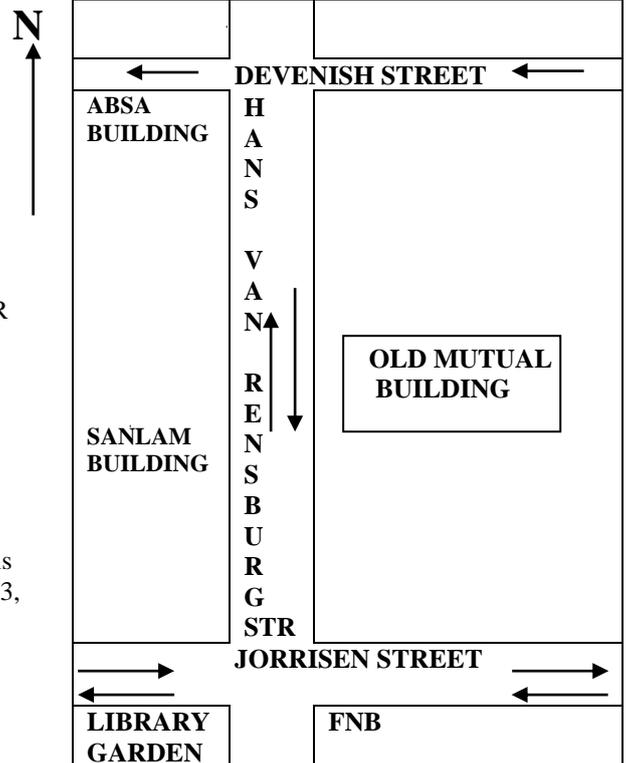
REGIONAL MANAGER  
Department of Public Works  
Private Bag X 9469  
POLOKWANE  
0700

ATTENTION: TENDER SECTION: ROOM 03, GROUND FLOOR

Tender documents that are posted must reach the Department of Public Works before the closing date of the tender.

**OR**

The tender documents may be deposited in the tender box which is identified as the tender box of the Department of Public Works which is located at 78 Hans van Rensburg Street, Old Mutual Building, Room 03, Ground Floor.



The tender box at the Regional Office: Department of Public Works: POLOKWANE is open (**Mondays to Fridays 07:30 – 12:15 / 13:00 – 16:00.**) However, if the tender is late, it will as a rule not be accepted for consideration.

*Tenderers should ensure that tenders are delivered timeously to the correct address.*

**SUBMIT ALL TENDERS ON THE OFFICIAL FORMS - DO NOT RETYPE.**

*Tenders by telegram, facsimile or other similar apparatus will not be accepted for consideration.*

**SUBMIT EACH TENDER IN A SEPARATE SEALED ENVELOPE.**

The Government Tender Bulletin is available on the Internet on the following web sites:

1. <http://www.treasury.gov.za>
2. <http://www.gov.za/tenders/>



public works

---

Department:  
Public Works  
REPUBLIC OF SOUTH AFRICA

# DEPARTMENT OF PUBLIC WORKS TENDER DOCUMENT

FOR

PHALABORWA 524: UPGRADING OF KITCHEN  
AND INSTALLATION OF KITCHEN EQUIPMENT

TENDER NUMBER: **PLK23/01**

CLOSING DATE: **04/07/2023**

**VOLUME 1: TENDERING PROCEDURE**

# TABLE OF CONTENTS

## VOLUME 1: TENDERING PROCEDURES

DESCRIPTION	DOCUMENT NAME	PAGE COLOUR	PAGE NO.
<b>VOLUME 1: TENDERING PROCEDURES</b>		White	4
Tender Procedures		White	5
Table of Contents (Volume 1)		White	6
T1.1 Tender Notice and Invitation to Tender		White	7
Notice and Invitation to Tender	PA-04(EC)	White	8
T1.2 Tender Data		Pink	19
Tender Data	DPW-03(EC)	Pink	20

# **VOLUME 1: TENDER PROCEDURES**

# **T1.1 Tender Notice and Invitation to Tender**

# PA-04 (EC): NOTICE AND INVITATION TO TENDER

THE DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE INVITES TENDERS FOR:

<b>Project title:</b>	PHALABORWA 524: UPGRADING OF KITCHEN AND INSTALLATION OF KITCHEN EQUIPMENT
-----------------------	--

<b>Tender no:</b>	PLK23/01	<b>Reference no:</b>	6017/0612
<b>Advertising date:</b>	09/06/2023	<b>Closing date:</b>	04/07/2023
<b>Closing time:</b>	11H00 Hrs	<b>Validity period:</b>	84 Calendar days

## 1. REQUIRED CIDB GRADING

It is estimated that tenderers should have a CIDB contractor grading designation of **3 ME** or **3 ME\*** or higher.  
\* Delete "or select tender value range select class of construction works" where only one class of construction works is applicable

It is estimated that potentially emerging enterprises should have a CIDB contractor grading designation of **3 ME PE** or **3 ME PE\*** or higher.

\* Delete "or select tender value range select class of construction works PE" where only one class of construction works is applicable

## 2. RESPONSIVENESS CRITERIA

### 2.1 Substantive responsiveness criteria

Only tenderers who are responsive to the following substantive responsiveness criteria are eligible to submit tenders. Failure to comply with the criteria stated hereunder shall result in the tender offer being disqualified from further consideration:

1	<input checked="" type="checkbox"/>	Only those tenderers who satisfy the eligibility criteria stated in the Tender Data may submit tenders.
2	<input checked="" type="checkbox"/>	Tender offer must be properly received on the tender closing date and time specified on the invitation, fully completed either electronically (if issued in electronic format), or by writing legibly in non-erasable ink. (All as per Standard Conditions of Tender).
3	<input checked="" type="checkbox"/>	Use of correction fluid is prohibited.
4	<input checked="" type="checkbox"/>	Registration on National Treasury's Central Supplier Database.
5	<input checked="" type="checkbox"/>	Submission of (DPW-07 EC): Form of Offer and Acceptance.
6	<input checked="" type="checkbox"/>	Submission of DPW-09 (EC): Particulars of Tenderer's Projects.
7	<input type="checkbox"/>	Submission of DPW-16 (EC): Site Inspection Meeting Certificate
8	<input type="checkbox"/>	Submission of record of attending compulsory virtual bid clarification / site inspection meeting.
9	<input checked="" type="checkbox"/>	Submission of DPW-21 (EC): Record of Addenda to tender documents
10	<input checked="" type="checkbox"/>	The tenderer shall submit his fully priced Bills of Quantities / Lump Sum Document (complete document inclusive of all parts) together with his tender.

**Tender no: PLK23/01**

11	<input checked="" type="checkbox"/>	The tenderer shall submit his fully priced and completed sectional summary- and final summary pages with the tender.
12	<input checked="" type="checkbox"/>	All parts of tender documents submitted must be fully completed in ink and signed where required
13	<input checked="" type="checkbox"/>	<p>Submission of registration as a Construction Health and Safety Officer (CHSO) or Construction Health and Safety Manager (CHSM) or Pr. Construction Health and Safety Agent (CHSA) with SACPCMP and a Construction Manager based on the Construction Regulation 2014, Regulation 8 (1) &amp; (5) and Regulation 7.</p> <p>Submission of registration with the Department of Labour &amp; Employment for accredited person as an installation electrician and that is accredited to issue certificate of compliance (COC) ranging from 0 to 380 Voltage.</p> <p>The tenderer is registered with the Unemployment Insurance Fund (UIF) with the department of Labour.</p> <p>The tenderer is registered with the Workmen's Compensation for Occupational Injuries and Diseases (COID) with the department of Labour. Submission of registration as a gas practitioner Category B for the installation and commissioning of air conditioning and refrigeration gas with the South African Qualification &amp; Certification Committee for the Fire Industry (SAQCC), based on the Guidance Notes to the Pressure Equipment Regulations 17, July 2009 of the Department of Labour for Occupational Health and Safety Act, Act 85 of 1993, Revision 1 of 2015 and must be able to issue a certificates of conformity (COC) in terms of regulation 17(3) of the pressure equipment regulations, 2009.</p> <p>Usage of correction fluid on the bid tender document is prohibited.</p> <p>All bidders are subject to positive vetting by the Departmental Security Section.</p> <p>The tenderer or any of its directors has not been listed on the Register of Tender Defaulters in terms of the Prevention and Combating of Corrupt Activities Act, 2004 (Act No. 12 of 2004) as a person prohibited from doing business with the public sector. The tenderer has not abused the Employer's Supply Chain Management System; or the tenderer has failed to perform on any previous contract and has been given a written notice to this effect. All individuals that are not born in South Africa and that are working or are employees or are directors / trustees / shareholders / members of a business in Republic of South Africa must submit the permanent residence certificate or relevant permit that are as follows ( In terms of Section 15, Section 19, Section 23 and Section 25 of Immigration Act No: 13 of 2002 as amended and must abide by the terms and conditions of Section 43 of Immigration Act No: 13 of 2002 as amended) or they must submit the relevant permit ( In terms of Section 22 permit or Section 24 permit or "Certification" or Section 27 of Refugee Act No: 130 of 1998 as amended) or they must submit Neutralisation Certificate ( In terms of section 5 of the South African Citizenship Act no: 88 of 1995 as amended). The concerned bidder must also submit a signed original stamped letter from the Immigration Section of the Department of Home Affairs Offices that will confirm that the above mentioned documents (permits or certificates) in terms of the above mentioned acts are authentic. No assessment of Section 43 of Immigration Act No: 13 of 2002 as amended will be performed on this tender in the absence of requested information/ relevant permit or certificate and will therefore render the tender as unacceptable and excluded from any and all further consideration.</p>

**2.2 Administrative responsiveness criteria**

The Employer reserves the right to request further information regarding the undermentioned criteria. Failing to submit further clarification and/or documentation within seven (7) calendar days from request or as specifically indicated, will disqualify the tender offer from further consideration.

1	<input checked="" type="checkbox"/>	Any correction to be initialled by the person authorised to sign the tender documentation as per PA 15.1 or PA 15.2 resolution of board/s of directors / or PA15.3 Special Resolution of Consortia or JV's .
---	-------------------------------------	--

Any reference to words "Bid" or Bidder" herein and/or in any other documentation shall be construed to have the same meaning as the words "Tender" or "Tenderer".

2	<input checked="" type="checkbox"/>	Submission of applicable (PA-15.1, PA-15.2, PA-15.3): Resolution by the legal entity, or consortium / joint venture, authorising a dedicated person(s) to sign documents on behalf of the firm / consortium / joint venture.
3	<input type="checkbox"/>	Submission of (PA-09 (EC)): List of Returnable Documents
4	<input checked="" type="checkbox"/>	Submission of (PA-11): Bidder's disclosure.
5	<input checked="" type="checkbox"/>	Submission of (PA-16): Preference Points Claim Form in terms of the Preferential Procurement Regulations 2022
6	<input checked="" type="checkbox"/>	Submission of (PA 40): Declaration of Designated Groups for Preferential Procurement.
7	<input checked="" type="checkbox"/>	Submission of proof of Registration on National Treasury's Central Supplier Database (CSD).
8	<input checked="" type="checkbox"/>	Submission of DPW-15 (EC): Schedule of proposed sub-contractors
9	<input type="checkbox"/>	The tenderer shall submit his fully priced Bills of Quantities (complete document inclusive of all parts) within 14 days from request.
10	<input checked="" type="checkbox"/>	Upon request, submission of fingerprints obtainable from local SAPS including any other additional documentation and information required for vetting purposes.
11	<input type="checkbox"/>	Upon request, submission of a fully completed security clearance application form with supporting documentation and information as required. The security clearance form will be provided by the Employer for projects requiring a security clearance.
12	<input checked="" type="checkbox"/>	Submission of (PA-29): Certificate of Independent Bid Determination  A non-compulsory site clarification/briefing/inspection meeting will be held.

### 3. Method to be used to calculate points for specific goals

<b><u>For procurement transaction with rand value greater than R2 000, 00 and up to R1 Million (Inclusive of all applicable taxes) the specific goals listed below are applicable.</u></b>				
<input type="checkbox"/>	Serial No	Specific Goals	Preference Points Allocated out of 20	Documentation to be submitted by bidders to validate their claim
	1.	An EME or QSE which is at least 51% owned by black people.	10	ID Copy. or SANAS Accredited BBBEE Certificate/ Sworn Affidavit. or CSD Report. or CIPC (Company registration)
	2.	Located in a specific Local Municipality or District Municipality or Metro or Province area for work to be done or services to be rendered in that area.	2	Office Municipal Rates Statement. or Permission to occupy from local chief in case of rural areas (PTO). or Lease Agreement
	3.	An EME or QSE which is at least 51% owned by women	4	ID Copy or CSD Report or CIPC (Company Registrations)
	4.	An EME or QSE which is at least 51% owned by people with disability.	2	Medical Certificate or South African Social Security Agency (SASSA) Registration or

Any reference to words "Bid" or Bidder" herein and/or in any other documentation shall be construed to have the same meaning as the words "Tender" or "Tenderer".

			National Council for Persons with Physical Disability in South Africa registration (NCPDPSA)	
	5.	An EME or QSE which is at least 51% owned by youth.	2 ID Copy or CSD Report Or CIPC	
☒	<b><u>For procurement transaction with rand value greater than R1 Million and up to R50 Million (Inclusive of all applicable taxes) the specific goals listed below are applicable.</u></b>			
	Serial No	Specific Goals	Preference Points Allocated out of 20	Documentation to be submitted by bidders to validate their claim
	1.	An EME or QSE which is at least 51% owned by black people.	10	ID Copy. or SANAS Accredited BBBEE Certificate/ Sworn Affidavit. or CSD Report. or CIPC (Company registration)
	2.	Located in a specific Local Municipality or District Municipality or Metro or Province area for work to be done or services to be rendered in that area.	2	Office Municipal Rates Statement. or Permission to occupy from local chief in case of rural areas (PTO). or Lease Agreement
	3.	An EME or QSE which is at least 51% owned by women	4	ID Copy or CSD Report or CIPC (Company Registrations)
	4.	An EME or QSE which is at least 51% owned by people with disability.	2	Medical Certificate or South African Social Security Agency (SASSA) Registration or National Council for Persons with Physical Disability in South Africa registration (NCPDPSA)
	5.	An EME or QSE which is at least 51% owned by youth (Mandatory)	2	ID Copy or CSD Report Or CIPC
<b><u>For procurement transaction with rand value greater than R50 Million (Inclusive of all applicable taxes) the specific goals listed below are applicable.</u></b>				

Any reference to words "Bid" or Bidder" herein and/or in any other documentation shall be construed to have the same meaning as the words "Tender" or "Tenderer".

Page 4 of

Serial No	Specific Goals	Preference Points Allocated out of 10	Documentation to be submitted by bidders to validate their claim
<input type="checkbox"/>	1. An EME or QSE which is at least 51% owned by black people.	4	ID Copy. or SANAS Accredited BBBEE Certificate/ Sworn Affidavit. or CSD Report. or CIPC (Company registration)
	2. Located in a specific Local Municipality or District Municipality or Metro or Province area for work to be done or services to be rendered in that area.	2	Office Municipal Rates Statement. or Permission to occupy from local chief in case of rural areas (PTO). or Lease Agreement
	3. An EME or QSE which is at least 51% owned by women	2	ID Copy or CSD Report or CIPC (Company Registrations)
	4. <input type="checkbox"/> An EME or QSE which is at least 51% owned by people with disability (Mandatory)  <b>OR</b>	2	Medical Certificate or South African Social Security Agency (SASSA) Registration or National Council for Persons with Physical Disability in South Africa registration (NCPDPSA)
	5. <input type="checkbox"/> An EME or QSE which is at least 51% owned by youth (Mandatory)  <b>NB. (The use of this goal is mandatory however the BSC must select either one of the two and not both)</b>	2	ID Copy or CSD Report Or CIPC

#### 4. Functionality criteria:

**Note:** All bids involving the acquisition of engineering and construction works from cidb Grade 3 and above are subjected to functionality.

**Note:** Functionality will be applied as a prequalification criterion. Such criteria are used to establish minimum requirements where after bids will be evaluated solely on the basis of price and preference.

<b>Functionality criteria:</b>	<b>Weighting factor:</b>
--------------------------------	--------------------------

<p>1. Work force</p> <p>Contractor to provide proof of work force or ability to provide work force to execute the project. (Trade test certificates of all required qualified artisans that are stated below, Company Organogram, CV and copy of ID of employed artisans as Electricians, Tilers, Painters, Plumbers and Carpenters) All four required documents must be submitted for evaluation purposes and for the bidder to score points.</p> <p>Electricians (Artisan) 5 above = 5 = 10 points 4 = 4 = 8 points 3 = 3 = 6 points 2 = 2 = 4 points 1 = 1 = 2 points</p> <p>Tilers (Artisan) 5 above = 5 = 5 points 4 = 4 = 4 points 3 = 3 = 3 points 2 = 2 = 2 points 1 = 1 = 1 points</p> <p>Painters (Artisan) 5 above = 5 = 5 points 4 = 4 = 4 points 3 = 3 = 3 points 2 = 2 = 2 points 1 = 1 = 1 points</p> <p>Plumbers (Artisan) 5 above = 5 = 5 points 4 = 4 = 4 points 3 = 3 = 3 points 2 = 2 = 2 points 1 = 1 = 1 point</p> <p>Carpenters (Artisan) 5 above = 5 = 5 points 4 = 4 = 4 points 3 = 3 = 3 points 2 = 2 = 2 points 1 = 1 = 1 point</p>	<p>10</p> <p>5</p> <p>5</p> <p>5</p> <p>5</p>
<p>2. Management 1</p> <p>Contractor to provide appointment letter and certificate of final completion/certificate of final approval as per approved CIDB forms of contract for all previous projects that are similar and completed successfully within the past 10 years.</p> <p>5 projects and above = 5 = 25 Points 4 projects = 4 = 20 Points 3 projects = 3 = 15 Points 2 projects = 2 = 10 Points 1 project = 1 = 5 Points</p>	<p>25</p>

<p><b>3. Management 2</b> Bidders must provide this three requirements: a copy of Company Registration, copy of ID and CV indicating years of experience of the Company Director within the Construction Sector if the experience the of the Company Director is going to be used to claim the points. To claim points using employed staff: Bidders must provide a copy of a threes year built enviroment qualification evaluated by SAQA, copy of ID and a CV indicating years of experience witin the Construction Sector of employed staff. The above three required documents must be submitted with the tender document for evaluation purposes and for the bidder to score points.</p> <p>5 years experience and above = 5 = 25 points 4 years experience = 4 = 20 points 3 years experience = 3 = 15 points 2 years experience = 2 = 10 points 1 year experience = 1 = 5 points</p>	25
<p><b>4. Equipment &amp; Plant</b> Contractor to provide evidence (Certificates of ownership) of utility vehicles retained by the Company Director or by the Company to execute the project</p> <p>3 Certificates of ownership and above = 5 = 10 points 2 Certificates of ownership = 4 = 8 points 1 Certificate of ownership = 3 = 6 points</p>	10
<p><b>5. Debt Income</b> Provide proof of debt to income from a Banking Institute to Justify credit risk Sub criteria</p> <p>Debt to income ratio of greater than 1 = 5 = 10 points Debt to income of equals to 1 = 4 = 8 points Debt to income of less than 1 = 3 = 6 points</p>	10
<b>Total</b>	<b>100 Points</b>

(Weights for functionality must add up to 100. Weightings will be multiplied by the scores allocated during the evaluation process to arrive at the total functionality points)

<b>Minimum functionality score to qualify for further evaluation:</b>	50
---	----

(Total minimum qualifying score for functionality is 50 Percent, any deviation below or above the 50 Percent, provide motivation below)

**5. BID EVALUATION METHOD**

This bid will be evaluated according to the preferential procurement model in the PPPFA: (Tick applicable preference point scoring system)

<input checked="" type="checkbox"/> <b>80/20</b> Preference points scoring system	<input type="checkbox"/> <b>90/10</b> Preference points scoring system	<input type="checkbox"/> <b>Either 80/20 or 90/10</b> Preference points scoring system
--	---	---

In case where below/above R 50 000 000 is selected, the lowest acceptable tender will be used to determine the applicable preference point system.

## 6. ELIGIBILITY IN RESPECT OF RISK TO THE EMPLOYER:

### Standard risk management assessment criteria in respect of tenders received for routine projects in the engineering and construction works environments:

Tender offers will be evaluated by an Evaluation Committee based on the technical and commercial risk criteria listed hereunder. Each criterion carries the same weight / importance and will be evaluated individually based on reports presented to the Bid Evaluation Committee by the Professional Team appointed on the project. A tender offer will be declared non-responsive and removed from any further evaluation if any one criterion is found to present an unacceptable risk to the Employer.

In order for the evaluation reports to be prepared by the Professional Team, the Tenderer is obliged to provide comprehensive information on form DPW-09 (EC). Failure to complete the said form will cause the tender to be declared non-responsive and removed from any further consideration. The Employer reserves the right to request additional information over and above that which is provided by the Tenderer on said form. The information must be provided by the Tenderer within the stipulated time as determined by the Bid Evaluation Committee, failing which the tender offer will *mutatis mutandis* be declared non-responsive.

### 6.1 Technical risks:

#### Criterion 1: Experience on comparable projects during the past 10 years.

The tendering Service Provider's experience on comparable projects during the past 10 years. The number of current and previous comparable projects performed by the Tenderer as per the evaluation report prepared by the Consultant Team, based on its research and inspection of a representative sample of the Tenderer's current and previous work as reflected on form DPW-09 (EC), as well as, if necessary, of any additional work executed by the Tenderer, not reflected on form DPW-09 (EC). Failing to provide contactable references will result in the tender offer will be *mutatis mutandis* declared non-responsive.

Aspects to be regarded as "comparable" includes (but may be extended according to circumstances): size of projects (measured against monetary value or other project quantifying parameters), nature of projects (building, engineering, high/low rise, etc.), locality/area of execution (site-specific influences, knowledge of local conditions, etc.), complexity of project, projects for similar client department irrespective of end purpose of buildings/facilities created or in progress of being created and time scales of projects (normal, fast track, etc.) and stage of its/their development.

#### Criterion 2: Contractual commitment and quality of performance on comparable projects during the past 10 years.

Adherence to contractual commitments and quality of performance of comparable current and previous projects performed by the Tenderer during the past 10 years as per the evaluation report prepared by the Consultant Team, based on its research and inspection of a representative sample of the Tenderer's current and previous work as reflected on form DPW-09 (EC), as well as, if necessary, of any additional work executed by the Tenderer, not reflected on form DPW-09 (EC). Failing to provide contactable references will result in the tender offer be *mutatis mutandis* declared non-responsive.

Aspects to be considered include, but are not limited to the following:

1. The level of progress on current projects in relation to the project programme or, if such is not available/applicable, to the contractual construction period in general;
2. The degree to which previous projects have been completed within the contractual completion periods and/or extensions thereto, and the extend of penalties imposed;
3. Project performance: time management & programming of works, timeous ordering of materials and appointment of subcontractors;
4. Financial management: payment to suppliers and cash flow problems;
5. Quality of workmanship: extent of reworks and timeous attention to remedial works;
6. Personnel resources: suitably qualified and experienced, turnover in site staff and labour force, specifically site manager and foreman;
7. Personnel management: extent of labour disputes and ability to resolving labour disputes amicably;

8. Sub-contractors: extent of turnover in subcontractors, general liaison and payment problems experienced;
9. Contract administration: contractual aspects such as complying to laws and regulations, insurances, security, submission of required documentation timeously, reaction to written contract instructions, appointments of subcontractors, etc. as can generally be expected in standard/normal conditions of contract.
10. Health & Safety: adherence to regulations and compliance, and number of transgressions & serious incidents.
11. Plant & equipment: sufficient resources on site and in time.
12. Delays: extent of causing delays, submission of claims timeously, and abuse of or exaggerated delay claims.
13. Final account: extent to which the contractor assisted in finalising the final account.

**Criterion 3: Suitably qualified and appropriately experienced human resources**

Allocation of suitably qualified and appropriately experienced human resources, both in respect of principals and/or other staff (contract manager, site agent, site foreman including other professional, technical and/or administrative) of the tendering Service Provider to the project, as proof that the tendering Service Provider will be able to react/respond appropriately to the Services required herein. The Company Organogram with CV's and certified ID's of all principals and employed workforce as well as proof of Professional Registration will be verified. Current and future workload of the tenderer in relation to capacity and capability will also be considered. The tenderer should demonstrate that he or she possesses the necessary professional and technical qualifications and -competence in relation to the scope of work and work to be undertaken.

**Criterion 4: Attendance of compulsory bid clarification meeting, if applicable**

If applicable, submission of confirmation of DPW-16.1 (PSB) attendance of compulsory bid clarification meeting or proof of attending the compulsory virtual meeting by a suitably qualified and experienced representative of the tenderer in terms of PA-04 (EC): Notice and Invitation to Tender.

**6.2 Commercial risks:**

The financial viability assessment evaluates the risk over the life of the construction period, as to whether the tenderer will be able to deliver the goods and services which are specified in the contract and / or be able to fulfil guarantees or warranties provided for in the contract in order to complete the project successfully for the amount tendered.

Aspects to be considered include but are not limited to, the respective rates tendered, bank rating, financial capability and capacity whether the tenderer has or has access to sufficient financial resources to deliver the goods or services described in the tender documentation (including fulfilling any guarantees or warranty claims), whether the tenderer is not subject to any current or impending legal action (either formal proceedings or notification of legal action) which could impact on the financial standing of the tenderer or the delivery of the goods or services, financial report from auditors as proof of current liquidity, and company or any parent company or investor guarantee/s and financial statements.

**7. CONTRACT PARTICIPATION GOAL TARGETS AND CIDB B.U.I.L.D. PROGRAMME**

The contractor shall achieve in the performance of the contract the following Contract Participation Goals (CPGs) as described in PG-01.2 (EC): Scope of Work and PG-02.2 (EC): Pricing Assumptions and in accordance with the feasibility study, which forms part of the specifications in the CPG Section of the Specification of this contract.

(a)	Minimum Targeted Local Manufacturers of Material Contract Participation Goal, in accordance with the cidb Standard for Contract Participation Goals for Targeting Enterprises and Labour through Construction Works Contracts as published in the Government Gazette Notice No. 41237 of 10 November 2017, as amended in cidb Best Practice Project Assessment Scheme Notice No. 43726 of 18 September 2020 – Condition of Contract.	<b>Not applicable</b>
-----	--	-----------------------

(b)	Minimum Targeted Local Building Material Suppliers Contract Participation Goal in accordance with the cidb Standard for Contract Participation Goals for Targeting Enterprises and Labour through Construction Works Contracts as published in the Government Gazette Notice No. 41237 of 10 November 2017, as amended in cidb Best Practice Project Assessment Scheme Notice No. 43726 of 18 September 2020 – Condition of Contract.	<b>Not applicable</b>
(c)	Minimum Targeted Local Labour Skills Development Contract Participation Goal in accordance with the cidb Standard for Contract Participation Goals for Targeting Enterprises and Labour through Construction Works Contracts as published in the Government Gazette Notice No. 41237 of 10 November 2017, as amended in cidb Best Practice Project Assessment Scheme Notice No. 43726 of 18 September 2020 – Condition of Contract.	<b>Not applicable</b>
(d)	<b>cidb BUILD Programme:</b> Minimum Targeted Enterprise Development Contract Participation Goal in accordance with the cidb Standard for Indirect Targeting for Enterprise Development through Construction Works Contracts, No 36190 Government Gazette, 25 February 2013, as amended in cidb Best Practice Project Assessment Scheme Notice No. 43726 of 18 September 2020 – Condition of Contract.	<b>Not applicable</b>
(e)	<b>cidb BUILD Programme:</b> Minimum Targeted Contract Skills Development Goal in accordance with the cidb Standard for Developing Skills through Infrastructure Contracts as published in the Government Gazette Notice No. 43495 of 3 July 2020, as amended in cidb Best Practice Project Assessment Scheme Notice No. 43726 of 18 September 2020 – Condition of Contract.	<b>Not applicable</b>

**Tender no:** PLK23/01

(f)	DPWI National Youth Service training and development programme (NYS) – Condition of Contract.	<b>Not applicable</b>
(g)	Labour Intensive Works – Condition of Contract.	<b>Not applicable</b>
(h)		<b>Select</b>
(i)		<b>Select</b>

## 8. COLLECTION OF TENDER DOCUMENTS

- Bid documents are available for free download on e-Tender portal [www.etenders.gov.za](http://www.etenders.gov.za)
- Alternatively; Bid documents may be collected during working hours at the following address 78 Hans Van Rensburg Street, Old Mutual Building, 0700. A non-refundable bid deposit of R 200.00 is payable (cash only) on collection of the bid documents.

## 9. SITE INSPECTION MEETING

A pre-tender site inspection meeting will **be** held in respect of this tender.  
Attendance of said pre- tender site inspection meeting is **not compulsory**

The particulars for said pre- tender site inspection meeting or virtual bid clarification / site inspection meeting. are:

<b>Venue:</b>	PHALABORWA SIGNAL 524 SQUADRON KITCHEN GPS CORDINATES 23°54'6.36"S, 31°6'41.56"E		
<b>Virtual meeting link:</b>	N/A		
<b>Date:</b>	22/06/2023	<b>Starting time:</b>	11H00

## 10. ENQUIRIES

Enquiries related to tender documents may be addressed to:

<b>DPWI Project Manager:</b>	Mr M. M. Raganya	<b>Telephone no:</b>	015 291 6344
<b>Cellular phone no:</b>	082 568 3912	<b>Fax no:</b>	015 297- 4411 / 086 734 3744
<b>E-mail:</b>	mashilo.raganya@dpw.gov.za		

## 11. DEPOSIT / RETURN OF TENDER DOCUMENTS

Telegraphic, telephonic, telex, facsimile, electronic and / or late tenders will not be accepted.

Requirements for sealing, addressing, delivery, opening and assessment of tenders are stated in the Tender Data.

All tenders must be completed in non-erasable ink and submitted on the official forms – (forms not to be re-typed).

<p><b>Tender documents may be posted to:</b></p> <p>The Director-General Department of Public Works and Infrastructure Private Bag X 9469 Polokwane 0700</p> <p><b>Attention:</b> <b>Procurement section: Room 10</b></p>	<b>OR</b>	<p><b>Deposited in the tender box at:</b></p> <p>78 Hans Van Rensburg Street Old Mutual Building Polokwane 0700</p>
---	-----------	---

## 12. COMPILED BY:

Mr M. M. Raganya		01/06/2023
Name of Project Manager	Signature	Date

## **T1.2 Tender Data**

## DPW-03 (EC): TENDER DATA

<b>Project title:</b>	<b>PHALABORWA 524: UPGRADING OF KITCHEN AND INSTALLATION OF KITCHEN EQUIPMENT</b>
<b>Reference no:</b>	6017/0612

<b>Tender / Quotation no:</b>	PLK23/01	<b>Closing date:</b>	04/07/2023
<b>Closing time:</b>	11H00	<b>Validity period:</b>	12 Weeks (84 Calender days)

<b>Clause number:</b>	
	<p>The conditions of tender are the Standard Conditions of Tender as contained in Annex C of the CIDB Standard for Uniformity in Construction Procurement as per Government Notice No. 423 published in Government Gazette No. 42622 of 8 August 2019 and as amended from time to time. (see www.cidb.org.za).</p> <p>The Standard Conditions of Tender make several references to the Tender Data for details that apply specifically to this tender. The Tender Data shall have precedence in the interpretation of any ambiguity or inconsistency between it and the Standard Conditions of Tender.</p> <p>Each item of data given below is cross-referenced to the clause marked "C" in the above mentioned Standard Conditions of Tender.</p>
<b>C.1.1</b>	The employer is the Government of the Republic of South Africa in its Department of Public Works and Infrastructure.
<b>C.1.2</b>	<p>For this contract the three volume approach is adopted.</p> <p>This procurement document has been formatted and compiled under the headings as contained in the CIDB's "Standard for Uniformity in Construction Procurement."</p> <p>The three volume procurement document issued by the employer comprises the following:</p> <p>Volume 1: Tendering procedures T1.1 - Notice and invitation to tender (PA-04 EC) T1.2 - Tender data (DPW-03 EC)</p> <p>Volume 2: Returnable documents T2.1 - List of returnable documents (PA-09 EC) C1.1 - Form of offer and acceptance (DPW-07 EC) C1.2 – Contract Data T2.2 - Returnable schedules</p> <p>Volume 3: Contract Part C1: Agreement and contract data C1.2 - Contract data (Part 1: Data provided by employer) (DPW-04 EC or DPW-05 EC) C1.3 - Form of guarantee (DPW-10.1 EC / DPW-10.3EC or DPW-10.2 EC/DPW-10.4 EC)</p> <p>Part C2: Pricing data C2.1 - Pricing Assumptions (PG-02.2 EC or PG-02.1EC) C2.2 - Bills of Quantities / Lump sum document (if not a returnable document)</p> <p>Part C3: Scope of work C3 - Scope of work (PG-01.2 EC or PG-01.1EC)</p> <p>Part C4: Site information C4 - Site information (PG-03.2 EC or PG03.1EC)</p>

Tender no: PLK23/01

C.1.4	The Employer's agent is:	
	Name:	<b>Mr M. M. Raganya</b>
	Capacity:	<b>Departmental Project Manager</b>
	Address:	<b>78 Hans Van Rensburg Street, Polokwane, Limpopo</b>
	Tel:	<b>015 291 6344</b>
	Fax:	<b>015 297-4411/086 734 3744</b>
	E-mail:	<b>mashilo.raganya@dpw.gov.za</b>
C.2.1 C.3.11	<p><b>A. <u>ELIGIBILITY IN RESPECT OF CIDB REGISTRATION:</u></b></p> <p>The following tenderers who are registered with the CIDB, or are *capable of being so registered prior to the evaluation of submissions, are eligible to have their tenders evaluated (* tenderers who are capable of being so registered, or who have applied for registration but have not yet received confirmation of such registration, must provide, <u>with this tender</u>, acceptable documentary proof thereof):</p> <p>a) contractors who have a contractor grading designation equal to or higher than a contractor grading designation determined in accordance with the sum tendered, or a value determined in accordance with Regulation 25 (1B) or 25 (7A) of the Construction Industry Development Regulations, for a <b>3 ME</b> or <b>3 ME**</b> class of construction work; and</p> <p>b) contractors registered as potentially emerging enterprises with the CIDB who are registered in one contractor grading designation lower than that required in terms of a) above: <b>Not applicable</b></p> <p>Joint ventures are eligible to submit tenders provided that:</p> <ol style="list-style-type: none"> <li>1. every member of the joint venture is registered with the CIDB;</li> <li>2. the lead partner has a contractor grading designation in the <b>3 ME</b> or <b>3 ME**</b> class of construction work; and</li> <li>3. the combined contractor grading designation calculated in accordance with the Construction Industry Development Regulations is equal to or higher than a contractor grading designation determined in accordance with the sum tendered, or a value determined in accordance with Regulation 25 (1B) or 25 (7A) of the Construction Industry Development Regulations for a <b>3 ME</b> or <b>3 ME**</b> class of construction work</li> </ol> <p><b>** Delete "or select tender value range select class of construction works" where only one class of construction works is applicable</b></p>	
<p>A contract will be entered into with a tenderer who has in his employ management and supervisory staff satisfying the requirements of the scope of work for labour intensive competencies for supervisory and management staff: <b>Not applicable</b></p>		

Tender no: PLK23/01

<p><b>B. <u>ELIGIBILITY IN TERMS OF PRE-QUALIFICATION CRITERIA FOR PREFERENTIAL PROCURMENT:</u></b></p> <table border="1"> <tr> <td style="width: 50px; vertical-align: top;"> <input type="checkbox"/> </td> <td>A tenderer having stipulated minimum B-BBEE status level of contributor:   <input type="checkbox"/> Level 1 or <input type="checkbox"/> Level 2 or <input type="checkbox"/> Level 3         </td> </tr> <tr> <td style="vertical-align: top;"> <input type="checkbox"/> </td> <td><input type="checkbox"/> An EME or <input type="checkbox"/> A QSE or <input type="checkbox"/> An EME or QSE</td> </tr> </table>		<input type="checkbox"/>	A tenderer having stipulated minimum B-BBEE status level of contributor:  <input type="checkbox"/> Level 1 or <input type="checkbox"/> Level 2 or <input type="checkbox"/> Level 3	<input type="checkbox"/>	<input type="checkbox"/> An EME or <input type="checkbox"/> A QSE or <input type="checkbox"/> An EME or QSE
<input type="checkbox"/>	A tenderer having stipulated minimum B-BBEE status level of contributor:  <input type="checkbox"/> Level 1 or <input type="checkbox"/> Level 2 or <input type="checkbox"/> Level 3				
<input type="checkbox"/>	<input type="checkbox"/> An EME or <input type="checkbox"/> A QSE or <input type="checkbox"/> An EME or QSE				
<p><b>C. <u>INDICATE THE FUNCTIONALITY WEIGHTING APPLICABLE TO THIS BID:</u></b></p> <p><b><i>Note:</i></b> All bids involving the acquisition of engineering and construction works from cidb Grade 4 and above are subjected to functionality.</p> <p><b><i>Note:</i></b> Functionality will only be applied as a prequalification criterion. Such criteria are used to establish minimum requirements where after bids will be evaluated solely on the basis of price and preference.</p> <table border="1"> <thead> <tr> <th style="text-align: left;"><b>Functionality Criteria</b></th> <th style="text-align: left;"><b>Weighting Factor</b></th> </tr> </thead> <tbody> <tr> <td> <p>1. Work force</p> <p>Contractor to provide proof of work force or ability to provide work force to execute the project. (Trade test certificates of all required qualified artisans that are stated below, Company Organogram, CV and copy of ID of employed artisans as Electricians, Tilers, Painters, Plumbers and Carpenters) All four required documents must be submitted for evaluation purposes and for the bidder to score points.</p> <p>Electricians (Artisan)            5 above = 5 = 10 points            4 = 4 = 8 points            3 = 3 = 6 points            2 = 2 = 4 points            1 = 1 = 2 points</p> <p>Tilers (Artisan)            5 above = 5 = 5 points            4 = 4 = 4 points            3 = 3 = 3 points            2 = 2 = 2 points            1 = 1 = 1 points</p> <p>Painters (Artisan)            5 above = 5 = 5 points            4 = 4 = 4 points            3 = 3 = 3 points            2 = 2 = 2 points            1 = 1 = 1 points</p> <p>Plumbers (Artisan)            5 above = 5 = 5 points            4 = 4 = 4 points            3 = 3 = 3 points            2 = 2 = 2 points            1 = 1 = 1 point</p> </td> <td style="vertical-align: middle; text-align: center;"> <p>10</p> <p>5</p> <p>5</p> <p>5</p> </td> </tr> </tbody> </table>		<b>Functionality Criteria</b>	<b>Weighting Factor</b>	<p>1. Work force</p> <p>Contractor to provide proof of work force or ability to provide work force to execute the project. (Trade test certificates of all required qualified artisans that are stated below, Company Organogram, CV and copy of ID of employed artisans as Electricians, Tilers, Painters, Plumbers and Carpenters) All four required documents must be submitted for evaluation purposes and for the bidder to score points.</p> <p>Electricians (Artisan)            5 above = 5 = 10 points            4 = 4 = 8 points            3 = 3 = 6 points            2 = 2 = 4 points            1 = 1 = 2 points</p> <p>Tilers (Artisan)            5 above = 5 = 5 points            4 = 4 = 4 points            3 = 3 = 3 points            2 = 2 = 2 points            1 = 1 = 1 points</p> <p>Painters (Artisan)            5 above = 5 = 5 points            4 = 4 = 4 points            3 = 3 = 3 points            2 = 2 = 2 points            1 = 1 = 1 points</p> <p>Plumbers (Artisan)            5 above = 5 = 5 points            4 = 4 = 4 points            3 = 3 = 3 points            2 = 2 = 2 points            1 = 1 = 1 point</p>	<p>10</p> <p>5</p> <p>5</p> <p>5</p>
<b>Functionality Criteria</b>	<b>Weighting Factor</b>				
<p>1. Work force</p> <p>Contractor to provide proof of work force or ability to provide work force to execute the project. (Trade test certificates of all required qualified artisans that are stated below, Company Organogram, CV and copy of ID of employed artisans as Electricians, Tilers, Painters, Plumbers and Carpenters) All four required documents must be submitted for evaluation purposes and for the bidder to score points.</p> <p>Electricians (Artisan)            5 above = 5 = 10 points            4 = 4 = 8 points            3 = 3 = 6 points            2 = 2 = 4 points            1 = 1 = 2 points</p> <p>Tilers (Artisan)            5 above = 5 = 5 points            4 = 4 = 4 points            3 = 3 = 3 points            2 = 2 = 2 points            1 = 1 = 1 points</p> <p>Painters (Artisan)            5 above = 5 = 5 points            4 = 4 = 4 points            3 = 3 = 3 points            2 = 2 = 2 points            1 = 1 = 1 points</p> <p>Plumbers (Artisan)            5 above = 5 = 5 points            4 = 4 = 4 points            3 = 3 = 3 points            2 = 2 = 2 points            1 = 1 = 1 point</p>	<p>10</p> <p>5</p> <p>5</p> <p>5</p>				

<p>Carpenters (Artisan) 5 above = 5 = 5 points 4 = 4 = 4 points 3 = 3 = 3 points 2 = 2 = 2 points 1 = 1 = 1 point</p>	<p>5</p>
<p>2. Management 1 Contractor to provide appointment letter and certificate of final completion/certificate of final approval as per approved CIDB forms of contract for all previous projects that are similar and completed successfully within the past 10 years. 5 projects and above = 5 = 25 Points 4 projects = 4 = 20 Points 3 projects = 3 = 15 Points 2 projects = 2 = 10 Points 1 project = 1 = 5 Points</p>	<p>25</p>
<p>3. Management 2 Bidders must provide this three requirements: a copy of Company Registration, copy of ID and CV indicating years of experience of the Company Director within the Construction Sector if the experience the of the Company Director is going to be used to claim the points. To claim points using employed staff: Bidders must provide a copy of a threes year built enviroment qualification evaluated by SAQA, copy of ID and a CV indicating years of experience witin the Construction Sector of employed staff. The above three required documents must be submitted with the tender document for evaluation purposes and for the bidder to score points. 5 years experience and above = 5 = 25 points 4 years experience = 4 = 20 points 3 years experience = 3 = 15 points 2 years experience = 2 = 10 points 1 year experience = 1 = 5 points</p>	<p>25</p>
<p>4. Equipment &amp; Plant Contractor to provide evidence (Certificates of ownership) of utility vehicles retained by the Company Director or by the Company to execute the project 3 Certificates of ownership and above = 5 = 10 points 2 Certificates of ownership = 4 = 8 points 1 Certificate of ownership = 3 = 6 points</p>	<p>10</p>
<p>5. Debt Income Provide proof of debt to income from a Banking Institute to Justify credit risk Sub criteria Debt to income ratio of greater than 1 = 5 = 10 points Debt to income of equals to 1 = 4 = 8 points Debt to income of less than 1 = 3 = 6 points</p>	<p>10</p>
<p><b>Total</b></p>	<p><b>100 Points</b></p>
<p><i>(Weightings will be multiplied by the scores allocated during the evaluation process to arrive at the total functionality points)</i></p>	
<p><b>Minimum functionality score to qualify for further evaluation:</b></p>	<p><b>50</b></p>

Tender no: PLK23/01

**D. ELIGIBILITY IN RESPECT OF RISK TO EMPLOYER:**

**Standard risk management assessment criteria in respect of tenders received for routine projects in the engineering and construction works environments:**

Tender offers will be evaluated by an Evaluation Committee based on the technical and commercial risk criteria listed hereunder. Each criterion carries the same weight / importance and will be evaluated individually based on reports presented to the Bid Evaluation Committee by the Professional Team appointed on the project. A tender offer will be declared non-responsive and removed from any further evaluation if any one criterion is found to present an unacceptable risk to the Employer.

In order for the evaluation reports to be prepared by the Professional Team, the Tenderer is obliged to provide comprehensive information on form DPW-09 (EC). Failure to complete the said form will cause the tender to be declared non-responsive and removed from any further consideration. The Employer reserves the right to request additional information over and above that which is provided by the Tenderer on said form. The information must be provided by the Tenderer within the stipulated time as determined by the Bid Evaluation Committee, failing which the tender offer will *mutatis mutandis* be declared non-responsive.

**D.1 Technical risks:**

**Criterion 1: Experience on comparable projects during the past 10 years.**

The tendering Service Provider's experience on comparable projects during the past 10 years. The number of current and previous comparable projects performed by the Tenderer as per the evaluation report prepared by the Consultant Team, based on its research and inspection of a representative sample of the Tenderer's current and previous work as reflected on form DPW-09 (EC), as well as, if necessary, of any additional work executed by the Tenderer, not reflected on form DPW-09 (EC). Failing to provide contactable references will result in the tender offer will be *mutatis mutandis* declared non-responsive.

Aspects to be regarded as "comparable" includes (but may be extended according to circumstances): size of projects (measured against monetary value or other project quantifying parameters), nature of projects (building, engineering, high/low rise, etc.), locality/area of execution (site-specific influences, knowledge of local conditions, etc.), complexity of project, projects for similar client department irrespective of end purpose of buildings/facilities created or in progress of being created and time scales of projects (normal, fast track, etc.) and stage of its/their development.

**Criterion 2: Contractual commitment and quality of performance on comparable projects during the past 10 years.**

Adherence to contractual commitments and quality of performance of comparable current and previous projects performed by the Tenderer on comparable projects during the past 10 years as per the evaluation report prepared by the Consultant Team, based on its research and inspection of a representative sample of the Tenderer's current and previous work as reflected on form DPW-09 (EC), as well as, if necessary, of any additional work executed by the Tenderer, not reflected on form DPW-09 (EC). Failing to provide contactable references will result in the tender offer be *mutatis mutandis* declared non-responsive.

Aspects to be considered include, but are not limited to the following:

1. The level of progress on current projects in relation to the project programme or, if such is not available/applicable, to the contractual construction period in general;
2. The degree to which previous projects have been completed within the contractual completion periods and/or extensions thereto, and the extend of penalties imposed;

**Tender no:** PLK23/01

	<ol style="list-style-type: none"> <li>3. Project performance: time management &amp; programming of works, timeous ordering of materials and appointment of subcontractors;</li> <li>4. Financial management: payment to suppliers and cash flow problems;</li> <li>5. Quality of workmanship: extent of reworks and timeous attention to remedial works;</li> <li>6. Personnel resources: suitably qualified and experienced, turnover in site staff and labour force, specifically site manager and foreman;</li> <li>7. Personnel management: extent of labour disputes and ability to resolving labour disputes amicably;</li> <li>8. Sub-contractors: extent of turnover in subcontractors, general liaison and payment problems experienced;</li> <li>9. Contract administration: contractual aspects such as complying to laws and regulations, insurances, security, submission of required documentation timeously, reaction to written contract instructions, appointments of subcontractors, etc. as can generally be expected in standard/normal conditions of contract.</li> <li>10. Health &amp; Safety: adherence to regulations and compliance, and number of transgressions &amp; serious incidents.</li> <li>11. Plant &amp; equipment: sufficient resources on site and in time.</li> <li>12. Delays: extent of causing delays, submission of claims timeously, and abuse of or exaggerated delay claims.</li> <li>13. Final account: extent to which the contractor assisted in finalising the final account.</li> </ol> <p><b>Criterion 3: Suitably qualified and appropriately experienced human resources</b></p> <p>Allocation of suitably qualified and appropriately experienced human resources, both in respect of principals and/or other staff (contract manager, site agent, site foreman including other professional, technical and/or administrative) of the tendering Service Provider to the project, as proof that the tendering Service Provider will be able to react/respond appropriately to the Services required herein. The Company Organogram with CV's and certified ID's of all principals and employed workforce as well as proof of Professional Registration will be verified. Current and future workload of the tenderer in relation to capacity and capability will also be considered. The tenderer should demonstrate that he or she possesses the necessary professional and technical qualifications and -competence in relation to the scope of work and work to be undertaken.</p> <p><b>Criterion 4: Attendance of compulsory bid clarification meeting, if applicable</b></p> <p>If applicable, submission of confirmation of DPW-16.1 (PSB) attendance of compulsory bid clarification meeting or proof of attending the compulsory virtual meeting by a suitably qualified and experienced representative of the tenderer in terms of PA-04 (EC): Notice and Invitation to Tender.</p> <p><b>D.2 Commercial risks:</b></p> <p>The financial viability assessment evaluates the risk over the life of the construction period, as to whether the tenderer will be able to deliver the goods and services which are specified in the contract and / or be able to fulfil guarantees or warranties provided for in the contract in order to complete the project successfully for the amount tendered.</p> <p>Aspects to be considered include but are not limited to, the respective rates tendered, bank rating, financial capability and capacity whether the tenderer has or has access to sufficient financial resources to deliver the goods or services described in the tender documentation (including fulfilling any guarantees or warranty claims), whether the tenderer is not subject to any current or impending legal action (either formal proceedings or notification of legal action) which could impact on the financial standing of the tenderer or the delivery of the goods or services, financial report from auditors as proof of current liquidity, and company or any parent company or investor guarantee/s and financial statements.</p>
<b>C.2.7</b>	For particulars regarding a pre-tender site inspection meeting, see Notice and Invitation to Tender T1.1

Tender no: PLK23/01

<p><b>C.2.12</b></p>	<p>If a tenderer wishes to submit an alternative tender offer, the only criteria permitted for such alternative tender offer is that it demonstrably satisfies the Employer's standards and requirements. A tenderer may submit alternative tender offers only if a main tender offer, strictly in accordance with all the requirements of the tender documents, is also submitted. Provided that the tenderer's main tender offer is according to specification and would under normal circumstances be recommended for acceptance, his alternative tender offer may also be considered for the purpose of the award of the contract.</p> <p>Calculations, drawings and all other pertinent technical information and characteristics as well as modified or proposed Pricing Data must be submitted with the alternative tender offer to enable the Employer to evaluate the efficacy of the alternative and its principal elements, to take a view on the degree to which the alternative complies with the Employer's standards and requirements and to evaluate the acceptability of the pricing proposals. Calculations must be set out in a clear and logical sequence and must clearly reflect all design assumptions. Pricing Data must reflect all assumptions in the development of the pricing proposal.</p> <p>Acceptance of an alternative tender offer will mean acceptance in principle of the offer. It will be an obligation of the contract for the tenderer, in the event that the alternative is accepted, to accept full responsibility and liability that the alternative offer complies in all respects with the Employer's standards and requirements.</p> <p>The modified Pricing Data must include an amount equal to 5% of the amount tendered for the alternative offer to cover the Employer's costs of confirming the acceptability of the detailed design before it is constructed.</p> <p>Alternative tender offer permitted: <span style="float: right;">Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></span></p>
<p><b>C.2.13.2</b></p>	<p>The list of Returnable Documents identifies which of the documents a tenderer must complete when submitting a tender offer. The tenderer must submit his tender offer by completing the Returnable Documents, signing the "Offer" section in the "Form of Offer and Acceptance" and delivering the Returnable Documents back to the Department.</p>
<p><b>C.2.13.5</b></p>	<p>The Employer's address for delivery of tender offers and identification details to be shown on each tender offer package are as per Notice and Invitation to Tender T1.1.</p>
<p><b>C.2.13.6</b> <b>C.3.5</b></p>	<p>A two-envelope procedure will not be followed.</p>
<p><b>C.2.15</b></p>	<p>The closing time for submission of tender offers is as per Notice and Invitation to Tender T1.1.</p>
<p><b>C.2.16</b></p>	<p>The tender offer validity period is as per Notice and Invitation to Tender T1.1.</p>
<p><b>C2.16.3</b></p>	<p>Omit the wording of the last sentence for those projects which are subject to CPAP</p>
<p><b>C.2.18</b></p>	<p>The tenderer will be required to submit his fully priced Bills of Quantities / Lump Sum Document (complete document inclusive of all parts):</p> <p><input type="checkbox"/> Together with his tender; or <input checked="" type="checkbox"/> The tenderer shall submit his fully priced and completed sectional summary- and final summary pages with the tender and thereafter submit the fully completed Bills of Quantities within fourteen (14) calendar days of the date requested to do so prior to the award of the contract.</p>
<p><b>C.2.19</b></p>	<p>Access shall be provided for inspections, tests and analysis as may be required by the Employer.</p>
<p><b>C.3.4.1</b> <b>C.3.4.2</b></p>	<p>The location for opening of the tender offers, immediately after the closing time thereof shall be at: <b>78 Hans Van Resburg Street, Old Mutual Building, First Floor Office No. 10 Polokwane, 0700</b></p>
<p><b>C.3.8</b></p>	<p>The words "responsive tender" and "acceptable tender" shall be construed to have the same meaning.</p>

**Tender no: PLK23/01**

<b>C.3.9.3</b>	Omit the wording and replace with the following: “Notify the tenderer of all errors, omissions and/or rate imbalances that are identified in the tender offer and request the tenderer to, within a stipulated time, accept the total of prices as corrected in accordance with C.3.9.4.”
<b>C.3.9.4</b>	Omit the wording of the first sentence and replace with the following: “In cases where tender offers contain errors, omissions and/or rate imbalances, these are to be corrected as follows:”
<b>C.3.9.4</b>	Add sub paragraph c) to C.3.9.4, as follows: “c) If the tenderer does not accept the corrected tender offer, or cannot reach consensus with the Employer on a corrected tender offer, the tender is to be classified as not acceptable/non responsive and removed from further contention.”
<b>C.3.11.1</b>	The procedure for the evaluation of responsive tenders is Method 2: Financial Offer and Preference.
<b>C.3.13</b>	Add the following to sub paragraph a), as follows:  The tenderer or any of its directors is not listed on the Register of Tender Defaulters in terms of the Prevention and Combating of Corrupt Activities Act, 2004 (Act No. 12 of 2004) as a person prohibited from doing business with the public sector;
<b>C.3.17</b>	Provide to the successful tenderer one copy of the signed contract document.



public works

---

Department:  
Public Works  
**REPUBLIC OF SOUTH AFRICA**

# **DEPARTMENT OF PUBLIC WORKS TENDER DOCUMENT**

**FOR**

**PHALABORWA 524: UPGRADING AND  
INSTALLATION OF KITCHEN EQUIPMENTS**

**TENDER NUMBER: **PLK23/01****

**CLOSING DATE: **04/07/2023****

**VOLUME 2: TENDERING PROCEDURE**

# TABLE OF CONTENTS

## VOLUME 2: RETURNABLE DOCUMENTS

DESCRIPTION	DOCUMENT	PAGE COLOUR	PAGE NO.
<b>VOLUME 2: RETURNABLE DOCUMENTS</b>		White	28
Returnable Documents		White	29
Table of Contents (Volume 2)		White	30
T2.1 List of Returnable Documents		Yellow	31
List of Returnable Documents	PA-09(EC)	Yellow	32
C1.1 Form of Offer and Acceptance		Yellow	35
Form of Offer and Acceptance	DPW-07(EC)	Yellow	36
C2.2 Bills of Quantities / Lump Sum Document (if a returnable document)		Yellow	41
Bills of Quantities / Specification and Schedule of Rates / Final Summary	Bill of Quantity	Yellow	42
T2.2 Returnable Documents required for tender evaluation purposes		Yellow	60
Declaration of Interest and Tenderer's Past Supply Chain Management Practices	PA-11.1(EC)	Yellow	61
Certification of Independent Bid Determination	PA-29	Yellow	64
Resolution of Board of Directors	PA-15.1	Yellow	68
Resolution of Board of Directors to enter into Consortia or Joint Ventures	PA-15.2	Yellow	70
Site Inspection Meeting Certificate	DPW-16(EC)	Yellow	72
Preference Points Claim Form in terms of the Preferential Procurement Regulations 2011	PA-16	Yellow	73
Particulars of Tenderer's Projects	DPW-09(EC)	Yellow	83
T2.2 Returnable Documents that will be incorporated into the contract		Yellow	85
Declaration of Designated Groups for Preferential Procurement	PA-40	Yellow	86
Record of Addenda to tender documents	DPW-21(EC)	Yellow	88
Schedule of Proposed Subcontractors	DPW-15(EC)	Yellow	89
Particulars of Electrical Contractor	DPW-22(EC)	Yellow	90
Schedule for Imported Materials and Equipment	DPW-23(EC)	Yellow	91
T2.2 Returnable Documents: Other Documents that will be incorporated into the contract		Yellow	92

**VOLUME 2: RETURNABLE  
DOCUMENTS**

## **T2.1 List of Returnable Documents**

## PA-09 (EC): LIST OF RETURNABLE DOCUMENTS

<b>Project title:</b>	<b>PHALABORWA 524: UPGRADING OF KITCHEN AND INSTALLATION OF KITCHEN EQUIPMENT</b>		
<b>Tender / Quotation no:</b>	PLK23/01	<b>Reference no:</b>	6017/0612
<b>Receipt Number:</b>			

### 1. RETURNABLE DOCUMENTS REQUIRED FOR TENDER EVALUATION PURPOSES

**Note:** Failure to submit the applicable documents will result in the tender offer being disqualified from further consideration.

Tender document name	Number of pages issued	Returnable document
Form of Offer and Acceptance (DPW-07 EC)	4 Pages	Yes
Submission of Bidder's disclosure (PA-11)	3 Pages	Yes
Resolution of Board of Directors (PA-15.1) <i>(if applicable)</i>	1 Page	Yes
Resolution of Board of Directors to enter into Consortia or JV's (PA-15.2) <i>(if applicable)</i>	2 Pages	Yes
Special Resolution of Consortia or JV's (PA-15.3) <i>(if applicable)</i>	3 Pages	Yes
Preference points claim form in terms of the Preferential Procurement Regulations 2017 (PA – 16.1)	5 Pages	Yes
Declaration Certificate for Local Production and Content for designated sectors (PA – 36 and Annexure/s C)	-	Yes
Fully completed Declaration of Designated Groups for Preferential Procurement (PA 40)	2 Pages	Yes
Registration on National Treasury's Central Supplier Database (CSD).	-	Yes
Particulars of Tenderer's Projects (DPW-09 EC)	2 Pages	Yes
Site Inspection Meeting Certificate (DPW-16 EC) <i>(if applicable)</i> .	1 Page	N/A
Record of attending compulsory virtual bid clarification / site inspection meeting <i>(if applicable)</i> .	1 Page	N/A
Record of Addenda to tender documents (DPW-21 EC)	1 Page	Yes
Proof of 30% Subcontracting participation and related documents in terms of the Preferential Procurement Regulations 2017 <i>(if applicable)</i> .	-	-
Submission of (PA-29): Certificate of Independent Bid Determination	4 Pages	Yes

\* In compliance with the requirements of the cidb SFU Annexure G

Tender / Quotation no: PLK23/01

**2. ADDITIONAL RETURNABLE DOCUMENTS REQUIRED FOR TENDER EVALUATION PURPOSES**

**Note:** Failure to submit the applicable documents will result in the Tenderer having to submit same upon request within a stipulated time and if not complied with, will result in the tender offer being disqualified from further consideration. [See also C.2.18 of the Standard Conditions of Tender]

Tender document name	Number of pages issued	Returnable document
Any <u>additional</u> information required to complete a risk assessment ( <i>if applicable</i> )	-	Yes
Any correction to be initialled by the person authorised to sign the tender documentation as per PA15.1 or PA15.2 resolution of board/s of directors / or PA15.3 Special Resolution of Consortia or JV's .	5 Pages	Yes
Submission of applicable (PA-15.1, PA-15.2, PA-15.3): Resolution by the legal entity, or consortium / joint venture, authorising a dedicated person(s) to sign documents on behalf of the firm / consortium / joint venture.	5 Pages	Yes

**3. RETURNABLE DOCUMENTS THAT WILL BE INCORPORATED INTO THE CONTRACT**

**Note:** Failure to submit the applicable documents will result in the Tenderer having to submit same upon request within a stipulated time and if not complied with, will result in the tender offer being disqualified from further consideration. [See also C.2.18 of the Standard Conditions of Tender]

Tender document name	Number of pages issued	Returnable document
Schedule of proposed sub-contractors (DPW-15 EC) ( <i>if applicable</i> )	1 Page	Yes
Particulars of Electrical Contractor (DPW-22 EC) ( <i>if applicable</i> )	1 Page	Yes
Mechanical / Electrical / Security Work material and equipment schedules ( <i>if applicable</i> )	6 Pages	Yes
Schedule for Imported Materials and Equipment (DPW-23 EC) ( <i>if applicable</i> )	1 Page	Yes

**4. OTHER DOCUMENTS THAT WILL BE INCORPORATED INTO THE CONTRACT**

(Insert a tick in the "Returnable document" column to indicate which documents must be returned with the tender)

**Note:** Failure to submit the applicable documents will result in the tender offer being disqualified from further consideration.

Tender document name	Number of pages issued	Returnable document
Priced Bills of Quantities / Lump Sum Document (complete document inclusive of all parts)	18 Pages	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Fully priced and completed sectional summary- and final summary pages with the tender.	- Pages	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Tender / Quotation no: PLK23/01

Tender document name	Number of pages issued	Returnable document
	Pages	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Pages	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Pages	<input type="checkbox"/> Yes <input type="checkbox"/> No

**5. ADDITIONAL INFORMATION THAT MAY BE REQUIRED FOR TENDER EVALUATION PURPOSES**

Legal Status of Tendering Entity: If the Tendering Entity is:	Documentation to be submitted with the tender, or which may be required during the tender evaluation:
a. A close corporation, incorporated prior to 1 May 2011 under the Close Corporations Act, 1984 (Act 69 of 1984, as amended)	Copies of the Founding Statement – CK1
b. A profit company duly registered as a private company.  [including a profit company that meets the criteria for a private company, whose Memorandum of Incorporation states that the company is a personal liability company in terms of Section 8(2)(c) of the Companies Act, 2008 (Act 71 of 2008, as amended)].	Copies of: i. Certificate of Incorporation – CM1; ii. Shareholding Certificates of all Shareholders of the company, plus a signed statement of the company's Auditor, certifying each Shareholder's ownership / shareholding percentage relative to the total; and/or iii. Memorandum of Incorporation in the case of a personal liability company.
c. A profit company duly registered as a private company in which any, or all, shares are held by one or more other close corporation(s) or company(ies) duly registered as profit or non-profit company(ies).	Copies of documents referred to in a. and/or b. above in respect of all such close corporation(s) and/or company(ies).
d. A profit company duly registered as a public company.	Copy of Certificate of Incorporation – CM1, and a signed statement of the company's Secretary or Auditor confirming that the company is a public company.
e. A non-profit company, incorporated in terms of Section 10 and Schedule 1 of the Companies Act, 2008 (Act 71 of 2008, as amended).	Copies of: i the Founding Statement – CK1; and ii the Memorandum of Incorporation setting out the object of the company, indicating the public benefit, cultural or social activity, or communal or group interest.
f. A natural person, sole proprietor or a Partnership	Copy(ies) of the Identity Document(s) of: i. such natural person/ sole proprietor, or each of the Partners to the Partnership.
g. A Trust	Deed of Trust duly indicating names of the Trustee(s) and Beneficiary (ies) as well as the purpose of the Trust and the mandate of the Trustees.

**Signed by the Tenderer**

<b>Name of representative</b>	<b>Signature</b>	<b>Date</b>

## **C1.1 Form of Offer and Acceptance**

## DPW-07 (EC): FORM OF OFFER AND ACCEPTANCE

<b>Project title:</b>	<b><i>Phalaborwa 524: Upgrading of Kitchen and Installation of Kitchen Equipment</i></b>		
<b>Tender / Quotation no:</b>	PLK23/01	<b>Reference no:</b>	6017/0612

### OFFER

The Employer, identified in the acceptance signature block, has solicited offers to enter into a contract for the procurement of:

***This project is for upgrading of Kitchen Equipment and related installations at Phalaborwa 524 Signal Military Base Kitchen. This will involve the removal of old kitchen equipment and replacement with new kitchen equipment, such as stoves, Bain Marries and kitchen ventilation systems, as well as installations of some new kitchen equipment. Installation of new Gas line, Fire Suppression and Large Scale Refrigeration equipment. Maintenance works required on the roof, kitchen floors, and kitchen electrical installations Compliance certification and commissioning of critical installations such as electrical and gas installations***

The Tenderer, identified in the offer signature block, has examined the documents listed in the tender data and addenda thereto as listed in the returnable schedules, and by submitting this offer has accepted the conditions of tender.

By the representative of the Tenderer, deemed to be duly authorized, signing this part of this form of offer and acceptance, the Tenderer offers to perform all of the obligations and liabilities of the Contractor under the contract including compliance with all its terms and conditions according to their true intent and meaning for an amount to be determined in accordance with the conditions of contract identified in the contract data.

**THE TOTAL OFFER INCLUSIVE OF ALL APPLICABLE TAXES (All applicable taxes" includes value- added tax, pay as you earn, income tax, unemployment insurance fund contributions and skills development levies) IS:**

<b>Rand (in words):</b>	..... ..... .....
<b>Rand in figures:</b>	R .....

The amount in words takes precedence over the amount in figures. The award of the tender may be subjected to further price negotiation with the preferred tenderer(s). The negotiated and agreed price will be considered for acceptance as ***a firm and final offer***.

This offer may be accepted by the Employer by signing the acceptance part of this form of offer and acceptance and returning one copy of this document to the Tenderer before the end of the period of validity stated in the tender data, whereupon the Tenderer becomes the party named as the Contractor in the conditions of contract identified in the contract data.

**THIS OFFER IS MADE BY THE FOLLOWING LEGAL ENTITY:** (cross out block which is not applicable)

\*Any reference to words "Bid" or "Bidder" herein and/or in any other documentation shall be construed to have the same meaning as the words "Tender" or "Tenderer".

\*\*Any reference to the words "payment reduction" herein shall be construed to have the same meaning as the word "retention"

Company or Close Corporation:  
.....  
.....  
And: Whose Registration Number is:  
.....  
And: Whose Income Tax Reference Number is:  
.....  
CSD supplier number:.....

OR

Natural Person or Partnership:  
.....  
.....  
Whose Identity Number(s) is/are:  
.....  
Whose Income Tax Reference Number is/are:  
.....  
CSD supplier number:.....

**Tender / Quotation no:** PLK23/01

<b>AND WHO IS (if applicable):</b>	
Trading under the name and style of: .....	
<b>AND WHO IS:</b>	
Represented herein, and who is duly authorised to do so, by:  Mr/Mrs/Ms: ..... In his/her capacity as: .....	<b>Note:</b>  A Resolution / Power of Attorney, signed by all the Directors / Members / Partners of the Legal Entity must accompany this Offer, authorising the Representative to make this offer.

**SIGNED FOR THE TENDERER:**

Name of representative	Signature	Date

**WITNESSED BY:**

Name of witness	Signature	Date

This Offer is in respect of: (Please indicate with an "X" in the appropriate block)

- The official documents .....
- The official alternative .....
- Own alternative (only if documentation makes provision therefore) .....

**(N.B.: Separate Offer and Acceptance forms are to be completed for the main and for each alternative offer)**

**SECURITY OFFERED:**

- (a) the Tenderer accepts that in respect of contracts up to R1 million, a payment reduction\*\* of 5% of the contact value (excluding VAT) will be applicable and will be deducted by the Employer in terms of the applicable conditions of contract
- (b) in respect of contracts above R1 million, the Tenderer offers to provide security as indicated below:

\*Any reference to words "Bid" or "Bidder" herein and/or in any other documentation shall be construed to have the same meaning as the words "Tender" or "Tenderer".

\*\*Any reference to the words "payment reduction" herein shall be construed to have the same meaning as the word "retention"

- (1) cash deposit of 10 % of the Contract Sum (excluding VAT) Yes  No
- (2) variable construction guarantee of 10 % of the Contract Sum (excluding VAT) Yes  No
- (3) payment reduction of 10% of the value certified in the payment certificate (excluding VAT) Yes  No
- (4) cash deposit of 5% of the Contract Sum (excluding VAT) and a payment reduction of 5% of the value certified in the payment certificate (excluding VAT) Yes  No
- (5) fixed construction guarantee of 5% of the Contract Sum (excluding VAT) and a payment reduction of 5% of the value certified in the payment certificate (excluding VAT) Yes  No

NB. Guarantees submitted must be issued by either an insurance company duly registered in terms of the Insurance Act [Long-Term Insurance Act, 1998 (Act 52 of 1998) or Short-Term Insurance Act, 1998 (Act 35 of 1998)] or by a bank duly registered in terms of the Banks Act, 1990 (Act 94 of 1990) on the pro-forma referred to above. No alterations or amendments of the wording of the pro-forma will be accepted.

**Tender / Quotation no:** PLK23/01

The Tenderer elects as its *domicilium citandi et executandi* in the Republic of South Africa, where any and all legal notices may be served, as (physical address):

.....  
 .....

**Other Contact Details of the Tenderer are:**

Telephone No..... Cellular Phone No. ....  
 Fax No .....  
 Postal address .....  
 Banker ..... Branch.....  
 Registration No of Tenderer at Department of Labour .....  
 CIDB Registration Number: .....

**ACCEPTANCE**

By signing this part of this form of offer and acceptance, the Employer identified below accepts the Tenderer's offer. In consideration thereof, the Employer shall pay the Contractor the amount due in accordance with the conditions of contract identified in the contract data. Acceptance of the Tenderer's offer shall form an agreement between the Employer and the Tenderer upon the terms and conditions contained in this agreement and in the contract that is the subject of this agreement.

**The terms of the contract are contained in:**

- Part C1 Agreement and contract data, (which includes this agreement)
- Part C2 Pricing data
- Part C3 Scope of work
- Part C4 Site information and drawings and documents or parts thereof, which may be incorporated by reference into the above listed Parts.

Deviations from and amendments to the documents listed in the tender data and any addenda thereto as listed in the tender schedules as well as any changes to the terms of the offer agreed by the Tenderer and the Employer during this process of offer and acceptance, are contained in the schedule of deviations attached to and forming part of this agreement. No amendments to or deviations from said documents are valid unless contained in this schedule.

\*Any reference to words "Bid" or "Bidder" herein and/or in any other documentation shall be construed to have the same meaning as the words "Tender" or "Tenderer".

\*\*Any reference to the words "payment reduction" herein shall be construed to have the same meaning as the word "retention" Page 3 of 5

The Tenderer shall within two weeks after receiving a completed copy of this agreement, including the schedule of deviations (if any), contact the Employer's agent (whose details are given in the contract data) to arrange the delivery of any securities, bonds, guarantees, proof of insurance and any other documentation to be provided in terms of the conditions of contract identified in the contract data. Failure to fulfil any of these obligations in accordance with those terms shall constitute a repudiation of this agreement.

Notwithstanding anything contained herein, this agreement comes into effect on the date when the tenderer receives one fully completed original copy of this document, including the schedule of deviations (if any). Unless the tenderer (now contractor) within five (5) working days of the date of such receipt notifies the employer in writing of any reason why he/she cannot accept the contents of this agreement, this agreement shall constitute a binding contract between the parties.

**For the Employer:**

Name of signatory	Signature	Date

**Tender / Quotation no: PLK23/01**

<b>Name of Organisation:</b>	Department of Public Works and Infrastructure
<b>Address of Organisation:</b>	

**WITNESSED BY:**

Name of witness	Signature	Date

**Schedule of Deviations**

<b>1.1.1. Subject:</b>	
<b>Detail:</b>	
<b>1.1.2. Subject:</b>	
<b>Detail:</b>	
<b>1.1.3. Subject:</b>	
<b>Detail:</b>	
<b>1.1.4. Subject:</b>	
<b>Detail:</b>	
<b>1.1.5. Subject:</b>	

\*Any reference to words "Bid" or "Bidder" herein and/or in any other documentation shall be construed to have the same meaning as the words "Tender" or "Tenderer".

\*\*Any reference to the words "payment reduction" herein shall be construed to have the same meaning as the word "retention"

**Detail:**

**1.1.6. Subject:**

**Detail:**

By the duly authorised representatives signing this agreement, the Employer and the Tenderer agree to and accept the foregoing schedule of deviations as the only deviations from and amendments to the documents listed in the tender data and addenda thereto as listed in the tender schedules, as well as any confirmation, clarification or changes to the terms of the offer agreed by the Tenderer and the Employer during this process of offer and acceptance.

It is expressly agreed that no other matter whether in writing, oral communication or implied during the period between the issue of the tender documents and the receipt by the Tenderer of a completed signed copy of this Agreement shall have any meaning or effect in the contract between the parties arising from this agreement.

\*Any reference to words "Bid" or "Bidder" herein and/or in any other documentation shall be construed to have the same meaning as the words "Tender" or "Tenderer".

\*\*Any reference to the words "payment reduction" herein shall be construed to have the same meaning as the word "retention"  
For Internal & External Use

## **C2.2 Bills of Quantities / Lump Sum Document (if a returnable document)**

PHALABORWA 524 SIGNAL SQN: UPGRADING OF KITCHEN EQUIPMENT

ITEM	REFERENCE	CATEGORY	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
1	SABS Pay Ref SABS 1200A		<b>PRELIMINARY AND GENERAL</b> Applicable to the whole of the Works				
1.1	8.3		<b>FIXED CHARGE ITEMS</b>				
1.1.1	8.3.1		Contractual Requirements			SUM	
	8.3.2		Establishment of Facilities on Site				
1.1.2	8.3.2		Facilities for Engineer				
1.1.2.1	8.3.2.1a		Furnished Offices			SUM	
1.1.2.2	8.3.2.1b		Telephone			SUM	
1.1.2.3	8.3.2.1c		Name boards			SUM	
1.1.3	8.3.2.2		Facilities for Contractor				
1.1.3.1	8.3.2.2a		Offices and Storage Sheds			SUM	
1.1.3.2	8.3.2.2b		Workshops			SUM	
1.1.3.3	8.3.2.2c		Laboratories			SUM	
1.1.3.4	8.3.2.2d		Living Accommodation			SUM	
1.1.3.5	8.3.2.2e		Ablution and Latrine Facilities			SUM	
1.1.3.6	8.3.2.2f		Tools and Equipment			SUM	
1.1.3.7	8.3.2.2g		Water supplies, electric poser, communications, dealing with water and access			SUM	
1.1.3.8	8.3.2.2j		Plant			SUM	
1.1.3.9	8.3.3		Other fixed obligations			SUM	
1.1.3.10	8.3.4	LI	Removal of site establishment			SUM	
1.2	8.3		<b>VALUE RELATED ITEMS</b>				
1.2.1	8.3.1		Contractual Requirements			SUM	
	8.3.3		Establishment of Facilities on the Site				
1.2.2	8.3.2.1		Facilities for Engineer				
1.2.2.1	8.3.2.1a		Furnished Offices			SUM	
1.2.2.2	8.3.2.1b		Telephone			SUM	
1.2.2.3	8.3.2.1c		Name boards			SUM	
1.2.3	8.3.2.2		Facilities for Contractor				
1.2.3.1	8.3.2.2a		Offices and Storage Sheds			SUM	
1.2.3.2	8.3.2.2b		Workshops			SUM	
1.2.3.3	8.3.2.2c		Laboratories			SUM	
1.2.3.4	8.3.2.2d		Living Accommodation			SUM	
1.2.3.5	8.3.2.2e		Ablution and Latrine Facilities			SUM	
1.2.3.6	8.3.2.2f		Tools and Equipment			SUM	
<b>CARRIED FORWARD</b>							

PHALABORWA 524 SIGNAL SQN: UPGRADING OF KITCHEN EQUIPMENT

ITEM	REFERENCE	CATEGORY	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
<b>BROUGHT FORWARD</b>							
1.2.3.7	8.3.2.2g		Water supplies, electric poser, communications, dealing with water and access			SUM	
1.2.3.8	8.3.2.2j		Plant			SUM	
1.2.3.9	8.3.3		Other value related obligations			SUM	
1.2.3.10	8.3.4		Removal of Site establishment			SUM	
1.4	8.4		<b>TIME RELATED ITEMS</b>				
1.4.1	8.4.1		Contractual requirements			SUM	
	8.4.2		Operation and Maintenance of Facilities on Site, for Duration of Construction, (Unless otherwise stated)				
1.4.2	8.4.2.1		Facilities for Engineer				
1.4.2.1	8.4.2.1a		Furnished Offices			SUM	
1.4.2.2	8.4.2.1b		Telephone			SUM	
1.4.2.3	8.4.2.1c		Name boards			SUM	
1.4.2.4	8.4.2.1c		Survey assistants and materials			SUM	
1.4.3	8.4.2.2		Facilities for Contractor				
1.4.3.1	8.4.2.2a		Offices and Storage Sheds			SUM	
1.4.3.2	8.4.2.2b		Workshops			SUM	
1.4.3.3	8.4.2.2c		Laboratories			SUM	
1.4.3.4	8.4.2.2d		Living Accommodation			SUM	
1.4.3.5	8.4.2.2e		Ablution and Latrine Facilities			SUM	
1.4.3.6	8.4.2.2f		Tools and Equipment			SUM	
1.4.3.7	8.4.2.2g		Water supplies, electric poser, communications, dealing with water and access			SUM	
1.4.3.8	8.4.2.2j		Plant			SUM	
1.4.3.9	8.4.3		Supervision for the duration of construction			SUM	
1.4.3.10	8.4.4		Company and head office overhead costs for duration of construction			SUM	
1.4.3.11	8.4.5		Other time related obligations			SUM	
1.5	8.5		<b>PROVISIONAL SUMS FOR:</b>				
1.5.1	8.5a		Work to be executed by Contractor and valued in terms of "valuations of variations" clause in the conditions of contract.			SUM	
1.5.2	8.5b.1		work to be executed by the employer or Nominated Sub-Contractor			SUM	
1.5.3	8.5b.2		Overheads, charges and profit on (a) above			SUM	
1.5.4	8.5b.3		Specified activities associated with or independent of (a) or (b) above			SUM	
<b>CARRIED FORWARD</b>							

PHALABORWA 524 SIGNAL SQN: UPGRADING OF KITCHEN EQUIPMENT

ITEM	REFERENCE	CATEGORY	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
<b>BROUGHT FORWARD</b>							
1.6	8.6		<b>PRIME COST ITEMS</b>				
1.6.1	8.6a		Prime cost of goods of materials to be supplied to the site of Works in terms of the contract.			SUM	
1.6.2	8.6b		Overheads, charges and profit on (a) above			SUM	
1.6.3	8.6c		Transport and labour to handle and install (a) above			SUM	
1.7	8.7		<b>DAY WORK</b>				
1.7.1	8.8		<b>TEMPORARY WORKS</b>				
1.7.1.1	8.8.1		Main access to road and works			SUM	
1.7.1.2	8.8.2		Dealing with or accommodation of traffic			SUM	
1.7.1.3	8.8.3		Protection with structure until construction in vicinity is complete			SUM	
1.8	8.8.4		Existing services				
1.8.1	8.8.4a		Supply or high specialist equipment for detection of a particular service			SUM	
1.8.2	8.8.4b		The use of equipment referred to in (a) above				
1.8.3	8.8.4c		Excavation by hand in soft material	m <sup>3</sup>		0.00	
1.8.4	8.8.4d		Temporary protection, as required in terms of the project specification			SUM	
1.9	8.8.5		Cost of survey in terms of Land Survey Act				
1.9.1	8.8.5a		Trigonometrical survey and plot boundary peges - locate and record			SUM	
1.9.2	8.8.5b		Trigonometrical survey and plot boundary peges - protect and re-establish			SUM	
1.9.3	8.8.6		Special water control in terms of Project Specifications			SUM	
1.10			<b>Insurances</b>				
1.10.1			Works Insurance			SUM	
1.10.2			Workmen's Compensation			SUM	
1.10.3			Third Party Insurance			SUM	
1.11			Workshop drawings				
1.11.1			Builders work drawings			SUM	
1.11.2			Allowance for drawings in electric format			SUM	
1.11.3			Operation and maintenance manuals			SUM	
1.11.4			One year written guarantee, maintenance for 12 months			SUM	
1.12			<b>Health and Safety</b>				
1.12.1			Safety, Health and Environmental Management			SUM	
1.12.2			Personal Protective Clothing			SUM	
1.12.3			Training of client's staff			SUM	
<b>CARRIED FORWARD</b>							



PHALABORWA 524 SIGNAL SQN: UPGRADING OF KITCHEN EQUIPMENT

ITEM	REFERENCE	CATEGORY	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
			<b>KITCHEN EQUIPMENT</b>				
<b>2.1</b>			<b>COOKING EQUIPMENT</b>				
			Supply and Install food storage equipment complete with fixtures and fittings as well as commissioning as specified and shown on the drawing. The equipment supplied should be Stainless Steel according to unless stated otherwise below.				
2.1.1			SABS Approved Three Solid Top Electric Range With Oven and Two Oven racks provided. Dimensions : 1000x850x1110mm 270kg Power : 18kw, 380V, 3Ph, AC.	No	1		
2.1.2			SABS Approved Six Open Gas Burner with Oven and Two Oven racks provided Dimensions : 1000x850x910mm 223kg Gas : 177000KJ/HR.	No	1		
2.1.3			SABS Approved 80 Litre Electric Tilting Frying Pan with Swivel Water Filler Tap. Dimensions : 1310x785x915mm 155kg Power: 15KW, 380V, 3Ph AC	No	1		
2.1.4			Repairs to 225L Boiling Pot Leaking Outlet Tap Reconnecting Electrical Connections	No	1		
2.1.5			10 Pan Rational Combie Steamer *Complete with all fixtures and fittings Electrics: 19KW,3N, AC,380V Dimensions: 847x771x1017mm 148kg Rational Combie Steamer Fixtures, Fittings and Connections Waste Pipe Bracket Top (for Drain) Water Pipe Bracket Bottom (for Water Inlet) Wire Grids GN 1/1 Insert GN 1/1 x 55mm Solid Insert GN 1/1 x 55mm Perforated Dimensions: 570 x 460 x 370mm 15kg (The inserts and lids fitted into 1x box) Combi Rinse 25Lt Container CombiWash 25Lt Container Floor Stand with Storage under Dimensions: 870x710x700mm 25kg	No	1		
2.1.5			<b>KITCHEN VENTILATION SYSTEM</b>				
2.1.5.1			304 Stainless Steel Hood Canopy with Supply Air Dimensions: 2800 x 2800 x 600 mm (l x w x h) Island Hood Complete with 6 x Grease Filter Buffers with Dimensions 500 x 500mm (l x h) x 50 mm (thickness) Complete with Electrical Control Panel Complete With Switches and Indicators	No	1		
2.1.5.2			Ø 630mm Aluminium Cased upBlast Variable Speed Motor Exhaust Fan complete with galvanized steel ducting Complete with Fittings and Hinges Power: 0.75 - 1.5 kW, 230/415V, 1/3Ph Extraction Flowrate: 10-20 m³/S	No	1		
2.1.5.3			Type A, Explosion Proof Fluorescent Luminaire Complete with Two (2) x 40w Fluorescents per Luminaire with Electrical Connections mounted on inside of the Extraction Hood Canopy	No	4		
<b>TOTAL CARRIED TO FORWARD</b>							

PHALABORWA 524 SIGNAL SQN: UPGRADING OF KITCHEN EQUIPMENT

ITEM	REFERENCE	CATEGORY	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
<b>TOTAL BROUGHT TO FORWARD</b>							
2.1.5.4			Kitchen Ventilation System Fire Suppression System Complete with Copper Fire Fighting Agent (2 x 9kg F-Class Fire Extinguisher), Distribution Pipes, Distribution Nozzles, Detection Brackets (all affixed to hood with hangers), and Emergency Fire Suppression Activation Switch	No	1		
<b>2.2</b>			<b>FOOD PREPERATION AND SERVING</b>				
			Supply and Install food storage equipment complete with fixtures and fittings as well as commissioning as specified and shown on the drawing. The equipment supplied should be stainless steel unless stated otherwise below.				
2.2.1			SABS 907 304 Stainless Steel table with stainless steel under counter and can opener Dimensions: 2250 x 650 x 910mm(H)	No	1		
2.2.2			SABS 907 304 Stainless Steel table with stainless steel under counter Dimensions: 2250 x 650 x 910mm(H)	No	1		
2.2.3			Replace galvanised undercounter with stainless steel undercounter on stainless steel table Dimensions: 2250 x 650 x 910mm(H)	No	1		
2.2.4			Wrapper Dispenser	No	1		
2.2.5			Meat Band Saw Repairs	No	1		
2.2.6			SABS Approved Mincer With Aluminium Casting Stainless Steel Mincing Group, Hopper and Recivening Tray Process 180kg/hr Dinensions: 470 x 280 x 420mm(h)	No	1		
2.2.7			SABS Approved, 3 Division SABS Approved Bain Marie Hot Cupboard Complete with Inserts Dimensions: 1105 x 750 x 910mm(H) Power: 5.5kW, 230V 1Ph, AC	No	1		
2.2.8			Stainless Steel Insert with Lid 24Lt Full Size, 150mm Deep	No	2		
2.2.9			Stainless Steel Insert with Lid 11Lt Half Size, 150mm Deep	No	2		
2.2.10			SABS Approved, 5 Division SABS Approved Bain Marie Hot Cupboard Complete with Inserts Dimensions: 1105 x 750 x 910mm(H) Power: 5.5kW, 230V 1Ph, AC	No	1		
2.2.10.1			Stainless Steel Insert with Lid 24Lt Full Size, 150mm Deep	No	3		
2.2.10.2			Stainless Steel Insert with Lid 11Lt Half Size, 150mm Deep	No	4		
2.2.11			SABS Approved Stainless steel Shelf Spice 4 Tire Shelf with 300mm spacing Dimensions: 425 x 250 x 1300 (LxWxH)	No	1		
2.2.12			22 Hook Cooking Utensils Rack SABS Approved Stainless Steel with Fixed Shelving Dimensions 3750 x 50 x 600 (LxWxH)	No	1		
<b>TOTAL CARRIED TO FORWARD</b>							



PHALABORWA 524 SIGNAL SQN: UPGRADING OF KITCHEN EQUIPMENT

ITEM	REFERENCE	CATEGORY	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
<b>TOTAL BROUGHT TO FORWARD</b>							
2.4			<b>DISH WASHING</b>				
			Supply and Install food storage equipment complete with fixtures and fittings as well as commissioning as specified and shown on the drawing. The equipment supplied should be stainless steel unless stated otherwise below.				
2.4.1			Stainless steel Pots wash sink repairs Repairs to sheering steel and drainage	No	1		
2.4.2			Stainless steel food preparation sink repairs Repairs to sheering steel and drainage	No	1		
2.5			Dishwasher Station				
2.5.1			Dishwasher Machine Output/Hr. 65/42/30 @ 100% Efficiently Cycles: 55,85 or 120 Seconds Wash Pump: 15kW, 400V @ 3Ph and 50Hz Dimensions: 625 x 760 x 1460mm (LxWxH)	No	1		
2.5.2			Wall Mounted Stainless Steel Condenser Hood Dimensions: 1000 x 1000 x 600 mm (LxWxH)	No	1		
2.5.3			Plastic Plate Drying Rack	No	2		
2.5.4			Cups Drying Rack	No	2		
2.5.5			Crockery Drying Rack	No	1		
2.5.6			Stainless Steel Output Table Dimensions: 1150 x 620	No	1		
2.5.7			Rear Mounted Basket Shelf	No	1		
2.6			<b>GAS SUPPLY LINE</b>				
			Supply, delivery, installation, commissioning and testing of a Liquid Petroleum Gas Supply Line, complete with piping, regulators, emergency shut off valves and gas equipment regulators according to SABS 087-2 for at least 6 x 50kg Gas Canisters with Dual Bank Manifold System				
2.6.1			Ø13mm or 1/2", 16 Guage Copper Gas Line Piping	m	45		
2.6.2			Ø13mm or 1/2" Flexible Reinforced Hose Pigtails Rated Pressure 2.5 KPA	No	6		
2.6.3			Ø13mm or 1/2" Nylon Reinforced Flexible Gas Hose	m	20		
2.6.4			Low Pressure Second Stage LPG Regulator Complete with Mountings Capacity: 29 Kg/hour Set outlet pressure: 2.8 KPA Inlet thread: 6.35mm 1/4" BSP Outlet thread: 10mm or 3/8"BSP	No	1		
<b>TOTAL CARRIED TO FORWARD</b>							

PHALABORWA 524 SIGNAL SQN: UPGRADING OF KITCHEN EQUIPMENT

ITEM	REFERENCE	CATEGORY	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
<b>TOTAL BROUGHT TO FORWARD</b>							
2.6.5			Low Pressure Single Stage LPG Regulator Complete with Mountings Capacity: 12 Kg/hour Set outlet pressure: 2.8 KPA Inlet thread: 6.35mm 1/4" BSP Outlet thread: 10mm or 3/8"BSP	No	2		
2.6.6			Main Line 13mm Ball Shut Off Valve (Red)	No	4		
2.6.7			Copper Tube Cappiliary Fittings, Pipe Holder Bats Fittings, Sealants and Accessories	Sum	1		
<b>2.7</b>			<b>TEST &amp; COMMISSIONING</b>				
			Provide testing and commisioning of <b>ALL</b> the kitchen equipment installed, repaired or altered. The kitchen equipment includes <b>ALL</b> equipment powered by Electricity and Gas as well as the Gas line				
2.7.1			Test and commissioning of <b>ALL</b> Kitchen Equipment	Sum	1		
2.7.2			Gas Line Certificate of Compliance	Sum	1		
<b>TOTAL CARRIED TO SUMMARY (KITCHEN EQUIPMENT)</b>							

ITEM	REFERENCE	CATEGORY	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
			<b>REFRIGERATION, HEATING VENTILATION AND AIR-CONDITIONING</b>				
3.1			<b>REFRIGERATION</b>				
			Repair, commissioning and testing of a Containerised Cold and Freezer Room Combo, complete with fixtures and fittings. Supply and Install stainless steel shelving as specified and shown on the drawing. The equipment supplied and installation method should be according to SANS 10147:2011				
3.1.1			<b>COLD AND FREEZER ROOM COMBO</b>				
3.1.1.1			Cold Room (Operating Temperature: 0 Deg C) Cold Room Dimensions: 3400 x 2500 x 2400mm (H) Doors: 1 x Hinged Doors to Fit Opening 800 x 2000mm (H) Isulation Panels: 100mm Polystyrene Finish: Chromadek/Galvanised	Set	1		
			Freezer Room (Operating Temperature: -20 Deg C) Freezer Room Dimensions: 2000 x 2500 2400mm (h) Doors: 1 x Hinged Doors to Fit Opening 800 x 2000mm (H) Isulation Panels: 100mm Polystyrene Freezer Floor: 50mm Isulation, 50mm Screed Finish: Chromadek/Galvanised				
3.1.1.2			Piping, Accessories and Connections	Sum	1		
3.1.2			<b>SHELVING</b>				
3.1.2.1			Stainless Steel Cold Room Shelving Rack, Modularised 3 Tire shelving with 400mm spacing Set 1 and 2: 3000 x 500 x 1200 (LxWxH)	Set	2		
3.1.2.2			Stainless Steel Freezer Room Shelving Rack, Modularised 3 Tire shelving with 400mm spacing Set 1 and 2: 1100 x 500 x 1200 (LxWxH) Set 3: 2300 x 500 x 1200 (LxWxH)	Set	3		
3.2			<b>HEATING, VENTILATION AND AIR-CONDITIONING</b>				
			Supply, delivery, installation, commissioning and testing of a Air-Conditioning Units with Cooling and Heating Capacity, complete with insulated refrigerant piping, condensate drains, trunking, electric wiring and connection and controls				
3.2.1			Ceiling Cassette split units, 10.52 kW cooling capacity (with heat pump)	No.	3		
3.2.2			Refrigerant piping pair (liquid and gas)	m	9		
3.2.3			Drain piping	m	12		
3.2.4			Support brackets	No.	6		
3.2.5			Galvanised steel trunking, and painted as per architectural requirements	m	15		
3.3			<b>TEST &amp; COMMISSIONING</b>				
3.3.1			Test and commissioning of ALL Refrigeration, Heating, Ventilation and Air-Conditioning Equipment	Sum	1		
<b>TOTAL CARRIED TO SUMMARY (REFRIGERATION, HEATING, VENTILATION AND AIRCONDITIONING)</b>							

ITEM	REFERENCE	CATEGORY	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
4			<b>CIVIL AND STRUCTURAL</b>				
4.1	SABS 1200 G		<b>CONCRETE AND BRICK WORK</b>				
4.1.1			<b>COLD AND FREEZER ROOM CONCRETE PLINTH</b>				
			Strength concrete 25MPa/19mm in:				
4.1.1.1			Demolition of Current Concrete Floor in Preparation for Plinth	m <sup>2</sup>	15		
4.1.1.2			Foundations and Ground Preparations	m <sup>2</sup>	15		
4.1.1.3			300mm Thick Concrete Slab (Plinth) with allowance for water run off on the open side	m <sup>2</sup>	15		
4.1.2			<b>COOKING AREA PLINTH</b>				
			Strength concrete 25MPa/19mm in:				
4.1.2.1			Demolition of Current Concrete Floor in Preparation for Plinth	m <sup>2</sup>	12		
4.1.2.2			Foundations and Ground Preparations	m <sup>2</sup>	12		
4.1.2.3			200mm Thick Concrete Slab (Plinth)	m <sup>2</sup>	12		
4.1.3			<b>REINFORCEMENT</b>				
			Mild steel bars:				
4.1.3.1			10mm	Tonnes	0.5		
4.1.4			<b>BRICK WALL</b>				
4.1.4.1			Cooking Area Brick Wall 230mm Thick by 1m (Height)	m <sup>2</sup>	0		
4.1.5			<b>FINISHING</b>				
			Unformed Concrete Surface finish				
4.1.5.1			Wood-Floated Finish	m <sup>2</sup>	0		
4.2			<b>WALL OPENING</b>				
4.2.1			Demolition of existing wall to create an opening Opeing of 1100 (Width) and 2200 (Height)	m <sup>2</sup>	0		
4.2.2			Reinforced Sqaure Concrete Slab 1000 x 230 x 230mm (H)	No	1		
4.2.3			Reinforced Sqaure Concrete Pillar 2200 x 230 x 230mm (H)	No	2		
4.2.1			<b>FINISHING</b>				
			Unformed Concrete Surface finish				
4.2.1.1			Extra Brick and Concrete Work required	Sum	1		
4.2.1.2			Wood-Floated Finish	m <sup>2</sup>	5		
4.2.1.3			150mm Thick Cavity Wall Insulation 3000mm x 3000mm x 150mm (Thickness)	m2	9		
4.3			<b>KITCHEN AND BATHROOM FLOOR AND WALLS</b>				
4.3.1		LI	Removal of Kitchen and Bathroom Floor Tiles	m <sup>2</sup>	0		
4.3.2			Antimicrobial Treated Slip Proof Polyurethane Resin Floor Coating with Layer Thickness: 6-9mm	m <sup>2</sup>	160		
<b>CARRIED FORWARD</b>							

<b>BROUGHT FORWARD</b>					
4.3.3		LI	Removal of Kitchen Wall Tiles	m <sup>2</sup>	0
4.3.4			Antimicrobial Treated Polyurethane Resin Wall Coating with Layer Thickness: 3-6mm	m <sup>2</sup>	200
4.4			<b>BATHROOM AND TOILET FITTINGS</b>		
4.4.1			Toilet seats	No	3
4.4.2			32mm Dia. Stainless Steel side grab rail (DL3)	No	1
4.4.3			32mm Dia. Stainless Steel vertical grab rail (SR1)	No	1
	SANS 1200LD		<b>Extra over uPVC pipes for fittings</b>		
4.4.4			50mm Access bend, adaptor, Junction	No	20
4.4.5			110mm Access bend, adaptor, Junction	No	20
4.5			<b>PAINTWORK AND SEALANT</b>		
			<b>ON FLOATED PLASTER</b>		
4.5.1			Three coats paint to walls	m <sup>2</sup>	210
			<b>ON METAL</b>		
4.5.2			On door frame	m <sup>2</sup>	15
4.5.3			On Steel Pipes and Structure	m <sup>2</sup>	80
4.5.4			Red Oxide Primer Paint	m <sup>2</sup>	50
			<b>ON WOOD</b>		
4.5.5			Three coats clear varnish		
4.5.6			On doors	m <sup>2</sup>	60
			<b>ON PLASTERBOARD CEILING</b>		
4.5.7			Ceiling Water Proof Paint	m <sup>2</sup>	100
			<b>ON ROOFING</b>		
4.5.8			Roof Pure Acrylic Emulsion Paint Roof Waterproofing and Painting	m <sup>2</sup>	650
			<b>COOKING AREA WALL SEALANT</b>		
4.5.9			Clear Silicone Sealant for Walls and Plasterboard	Litre	5
4.6			<b>TAPS, VALVES, AND WATER SUPPLIES ETC</b>		
4.6.1			<b>TAPS AND VALVES</b>		
4.6.1.1			15mm CP Sink Taps	No	10
4.6.1.2			15mm CP Shower Taps	No	10
			<b>WATER SUPPLIES</b>		
4.6.2			<b>CLASS 2 COPPER PIPES</b>		
	SANS 1200L		Supply and install copper cold and hot water pipes from medium pressure water supply		
4.6.2.1			22mm Pipes	m	60
4.6.2.2			15mm Pipes	m	210
<b>CARRIED FORWARD</b>					

BROUGHT FORWARD						
4.6.3			<b>EXTRA OVER CLASS 2 COPPER PIPES FOR CAPILLARY FITTINGS AND VALVES</b>			
4.6.3.1			22mm Fittings, Couplings, Accessories	No	45	
4.6.3.2			15mm Fittings, Couplings, Accessories	No	35	
4.6.3.3			22mm Valves	No	10	
4.6.3.4			15mm Valves	No	15	
4.6.4			<b>INSULATION</b>			
4.6.4.1			22mm Lagging/Thermal Insulation	m	60	
4.6.4.2			15mm Lagging/Thermal Insulation	m	210	
4.7			<b>PLUMBING AND DRAINAGE</b>			
	SANS 1200LD		<b>uPVC SINK BENDS</b>			
4.7.1			40mm x 40mm Combination for double bowl with deep-seal "P" or "S" trap with couplings	No	10	
			<b>STAINLESS STEEL CHANNEL DRAINAGE</b>			
4.7.2			Complete Insyallation of 150mm Stainless Steel Open Channel Kitchen Drainage. Supply and Install matching Stainless Steel Grate Cover	m	50	
4.7.3			<b>uPVC PIPES</b>			
4.7.3.1			50mm pipes	m	60	
4.7.3.2			110mm pipes	m	70	
4.7.4			<b>GREASE/FAT TRAPS</b>			
4.7.4.1	SANS 51825-1 : 2009		Stainless Steel Grease/Fat Traps Flowrate: 4.5 l/s Inlet/Outlet $\varnothing$ 110mm	No	1	
4.7.4.2			Grease Traps Concrete Casting Reinfoced concrete - 30Mpa	m <sup>3</sup>	6	
4.8			<b>COLD AND FREEZER ROOM SHED</b>			
			The Shed should be able to house a Cold and Freezer Room of Dimensions, 5400 x 2400 x 2800mm (H) The standard measurements of the shed is: 3500mm depth (Open Side) 4000mm (Closed Side) - Angle of elevation is at least 10°, 2700mm width (Uniform) and 5600mm (Length).			
4.8.1			<b>GROUND PREPERATION AND FOUNDATION</b>			
			Ground Preparations and Excavations Digging of 9 holes or $\varnothing$ 200 x 1000mm (Depth)	m <sup>3</sup>	16	
			Foundation: Grade 25 Concrete	m <sup>3</sup>	8	
4.8.2			<b>SHED STEEL STRUCTURE</b>			
			All metal structure components must be finished in hot dip galvanized coating according to Structural steel standard SANS 50025 / EN 10025:2004 and SANS 10160-2.	Ton	0.5	
CARRIED FORWARD						



PHALABORWA 524 SIGNAL SQN: UPGRADING OF KITCHEN EQUIPMENT

ITEM	REFERENCE	CATEGORY	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
5			<b>ELECTRICAL INSTALLATIONS</b>				
5.1			<b>Dismantling of Kitchen Distribution Board</b>				
5.1.1			Install New Kitchen Distribution Board into a new position(Wall). Supply and install correctly as specified with all equipment.	No	1		
5.2			<b>Extend cabling to new position of DB</b>				
5.2.1			Supply and install main incoming cables into a DB	m	25		
5.3			<b>Isolators</b>				
5.3.1			20A Triple weather-proof ( IP56) Isolator for kitchen equipment	No	3		
5.3.2			30A Triple weather-proof ( IP56) Isolator for kitchen equipment	No	1		
5.3.3			45A Triple weather-proof ( IP56) Isolator for kitchen equipment	No	1		
5.3.4			60A Triple weather-proof ( IP56) Isolator for kitchen equipment	No	2		
5.3.5			Rigid Isolator Mount (1200m H)	No	4		
5.4			<b>Socket outlets</b>				
5.4.1			16 Amp single switched socket outlet mounted on wall/ partition complete with flush box.	No	20		
5.5			<b>Light Switches</b>				
5.5.1			1 Lever 1 way	No	5		
5.5.2			2 Lever 1 way	No	5		
5.5.3			1 Lever 2 way	No	5		
5.6			<b>Light fittings</b>				
5.6.1			Type A, Explosion Proof Fluorescent Luminaire	No	16		
5.7			<b>Cable Sleeves and Conduit</b>				
5.7.1			Ø25mm² 4 Core Cable	m	240		
5.7.2			Ø50mm PVC Conduit	m	8		
5.7.3			Ø25mm² Ferrets and Lugs	Sum	1		
5.7.4			Compression Glands	Sum	1		
5.8			<b>Cable Trunking</b>				
5.8.1			3m( h) 76 x 127mm Galvanised Steel Trunking	No	2		
5.8.2			Ceiling Flange and Mounting	No	2		
5.8.3			Baseplate Flange and Mountings	No	2		
5.8.4			End Caps	No	2		
<b>CARRIED TO SUMMARY (ELECTRICAL INSTALLATIONS)</b>							





PHALABORWA 524 SIGNAL SQN: UPGRADING OF KITCHEN EQUIPMENT

ITEM	DESCRIPTION	ESTIMATED TENDERED AMOUNT
1	PRELIMINARY AND GENERAL	
2	KITCHEN EQUIPMENT	
3	REFRIGERATION, HEATING, VENTILATION AND AIR-CONDITIONING	
4	CIVIL AND STRUCTURAL WORKS	
5	ELECTRICAL WORKS	
	<b>COST OF CONSTRUCTION EXCLUDING 15%VAT</b>	
	15% VAT ON CONSTRUCTION AMOUNT	
	<b>COST OF CONSTRUCTION EXCLUDING 15%VAT</b>	
6	CREDIT FOR OLD MATERIALS, FOR DEMOLITIONS, ALTERATIONS AND REMOVAL OF EQUIPMENT	
	<b>TOTALS</b>	

## **C2.2 Bills of Quantities / Lump Sum Document (if a returnable document)**

## PA-11: BIDDER'S DISCLOSURE

### 1. PURPOSE OF THE FORM

Any person (natural or juristic) may make an offer or offers in terms of this invitation to bid. In line with the principles of transparency, accountability, impartiality, and ethics as enshrined in the Constitution of the Republic of South Africa and further expressed in various pieces of legislation, it is required for the bidder to make this declaration in respect of the details required hereunder.

Where a person/s are listed in the Register for Tender Defaulters and / or the List of Restricted Suppliers, that person will automatically be disqualified from the bid process.

### 2. Bidder's declaration

- 2.1 Is the bidder, or any of its directors / trustees / shareholders / members / partners or any person having a controlling interest (1) in the enterprise, employed by the state?

**YES / NO**

- 2.1.1 If so, furnish particulars of the names, individual identity numbers, and, if applicable, state employee numbers of sole proprietor/ directors / trustees / shareholders / members/ partners or any person having a controlling interest in the enterprise, in table below.

Full Name	Identity Number	Name of State institution

(1) the power, by one person or a group of persons holding the majority of the equity of an enterprise, alternatively, the person/s having the deciding vote or power to influence or to direct the course and decisions of the enterprise.

2.2 Do you, or any person connected with the bidder, have a relationship with any person who is employed by the procuring institution?

**YES / NO**

2.2.1 If so, furnish particulars:

.....  
.....

2.3 Does the bidder or any of its directors / trustees / shareholders / members / partners or any person having a controlling interest in the enterprise have any interest in any other related enterprise whether or not they are bidding for this contract?

**YES / NO**

2.3.1 If so, furnish particulars:

.....  
.....

### 3 DECLARATION

I, the undersigned, (name).....  
in submitting the accompanying bid, do hereby make the following statements that I certify to be true and complete in every respect:

- 3.1 I have read and I understand the contents of this disclosure;
- 3.2 I understand that the accompanying bid will be disqualified if this disclosure is found not to be true and complete in every respect;
- 3.3 The bidder has arrived at the accompanying bid independently from, and without consultation, communication, agreement or arrangement with any competitor. However, communication between partners in a joint venture or consortium<sup>2</sup> will not be construed as collusive bidding.
- 3.4 In addition, there have been no consultations, communications, agreements or arrangements with any competitor regarding the quality, quantity, specifications, prices, including methods, factors or formulas used to calculate prices, market allocation, the intention or decision to submit or not to submit the bid, bidding with the intention not to win the bid and conditions or delivery particulars of the products or services to which this bid invitation relates.
- 3.5 The terms of the accompanying bid have not been, and will not be, disclosed by the bidder, directly or indirectly, to any competitor, prior to the date and time of the official bid opening or of the awarding of the contract.
- 3.6 There have been no consultations, communications, agreements or arrangements made by the bidder with any official of the procuring institution in relation to this procurement process prior to and during the bidding process except to provide clarification on the bid submitted where so required by the institution; and the bidder was not involved in the drafting of the specifications or terms of reference for this bid.

---

<sup>2</sup> Joint venture or Consortium means an association of persons for the purpose of combining their expertise, property, capital, efforts, skill and knowledge in an activity for the execution of a contract.

3.7 I am aware that, in addition and without prejudice to any other remedy provided to combat any restrictive practices related to bids and contracts, bids that are suspicious will be reported to the Competition Commission for investigation and possible imposition of administrative penalties in terms of section 59 of the Competition Act No 89 of 1998 and or may be reported to the National Prosecuting Authority (NPA) for criminal investigation and or may be restricted from conducting business with the public sector for a period not exceeding ten (10) years in terms of the Prevention and Combating of Corrupt Activities Act No 12 of 2004 or any other applicable legislation.

I CERTIFY THAT THE INFORMATION FURNISHED IN PARAGRAPHS 1, 2 and 3 ABOVE IS CORRECT.

I ACCEPT THAT THE STATE MAY REJECT THE BID OR ACT AGAINST ME IN TERMS OF PARAGRAPH 6 OF PFMA SCM INSTRUCTION 03 OF 2021/22 ON PREVENTING AND COMBATING ABUSE IN THE SUPPLY CHAIN MANAGEMENT SYSTEM SHOULD THIS DECLARATION PROVE TO BE FALSE.

.....  
Signature

.....  
Date

.....  
Position

.....  
Name of bidder

**This form has been aligned with SBD4**

## **PA- 29: CERTIFICATION OF INDEPENDENT BID DETERMINATION**

<b>Project title:</b>	PHALABORWA 524: UPGRADING OF KITCHEN AND INSTALLATION OF KITCHEN EQUIPMENT		
<b>Bid no:</b>	PLK23/01	<b>Reference no:</b>	6017/0612

### **INTRODUCTION**

1. This PA-29 [Certificate of Independent Bid Determination] must form part of all bids<sup>1</sup> invited.
2. Section 4 (1) (b) (iii) of the Competition Act No. 89 of 1998, as amended, prohibits an agreement between, or concerted practice by, firms, or a decision by an association of firms, if it is between parties in a horizontal relationship and if it involves collusive bidding (or bid rigging).<sup>2</sup> Collusive bidding is a *pe se* prohibition meaning that it cannot be justified under any grounds.
3. Treasury Regulation 16A9 prescribes that accounting officers and accounting authorities must take all reasonable steps to prevent abuse of the supply chain management system and authorizes accounting officers and accounting authorities to:
  - a. disregard the bid of any bidder if that bidder, or any of its directors have abused the institution's supply chain management system and or committed fraud or any other improper conduct in relation to such system.
  - b. cancel a contract awarded to a supplier of goods and services if the supplier committed any corrupt or fraudulent act during the bidding process or the execution of that contract.
4. This form (PA-29) serves as a certificate of declaration that would be used by institutions to ensure that, when bids are considered, reasonable steps are taken to prevent any form of bid-rigging.
5. In order to give effect to the above, the attached Certificate of Bid Determination (PA-29) must be completed and submitted with the bid:

---

<sup>1</sup> Includes price quotations, advertised competitive bids, limited bids and proposals.

<sup>2</sup> Bid rigging (or collusive bidding) occurs when businesses, that would otherwise be expected to compete, secretly conspire to raise prices or lower the quality of goods and / or services for purchasers who wish to acquire goods and / or services through a bidding process. Bid rigging is, therefore, an agreement between competitors not to compete.

## **CERTIFICATE OF INDEPENDENT BID DETERMINATION**

I, the undersigned, in submitting the accompanying bid:

---

**(Bid Number and Description)**

in response to the invitation for the bid made by:

---

**(Name of Institution)**

do hereby make the following statements that I certify to be true and complete in every respect:

I certify, on behalf of: \_\_\_\_\_ that:

**(Name of Bidder)**

1. I have read and I understand the contents of this Certificate.
2. I understand that the accompanying bid will be disqualified if this Certificate is found not to be true and complete in every respect.
3. I am authorized by the bidder to sign this Certificate, and to submit the accompanying bid, on behalf of the bidder.
4. Each person whose signature appears on the accompanying bid has been authorized by the bidder to determine the terms of, and to sign the bid, on behalf of the bidder.
5. For the purposes of this Certificate and the accompanying bid, I understand that the word "competitor" shall include any individual or organization, other than the bidder, whether or not affiliated with the bidder, who:
  - (a) has been requested to submit a bid in response to this bid invitation;
  - (b) could potentially submit a bid in response to this bid invitation, based on their qualifications, abilities or experience; and

- (c) provides the same goods and services as the bidder and/or is in the same line of business as the bidder.
6. The bidder has arrived at the accompanying bid independently from, and without consultation, communication, agreement or arrangement with any competitor. However communication between partners in a joint venture or consortium<sup>3</sup> will not be construed as collusive bidding.
7. In particular, without limiting the generality of paragraphs 6 above, there has been no consultation, communication, agreement or arrangement with any competitor regarding:
- (a) prices;
  - (b) geographical area where product or service will be rendered (market allocation)
  - (c) methods, factors or formulas used to calculate prices;
  - (d) the intention or decision to submit or not to submit, a bid;
  - (e) the submission of a bid which does not meet the specifications and conditions of the bid; or
  - (f) bidding with the intention not to win the bid.
8. In addition, there have been no consultations, communications, agreements or arrangements with any competitor regarding the quality, quantity, specifications and conditions or delivery particulars of the products or services to which this bid invitation relates.
9. The terms of the accompanying bid have not been, and will not be, disclosed by the bidder, directly or indirectly, to any competitor, prior to the date and time of the official bid opening or of the awarding of the contract.

I am aware that, in addition and without prejudice to any other remedy provided to combat any restrictive practices related to bids and contracts, bids that are suspicious will be reported to the Competition Commission for investigation and possible imposition of administrative penalties in terms of section 59 of the Competition Act No 89 of 1998 and or may be reported to the National Prosecuting Authority (NPA) for criminal investigation and or may be restricted from conducting business with the public

<sup>3</sup> Joint venture or Consortium means an association of persons for the purpose of combining their expertise, property, capital, efforts, skill and knowledge in an activity for the execution of a contract.

sector for a period not exceeding ten (10) years in terms of the Prevention and Combating of Corrupt Activities Act No 12 of 2004 or any other applicable legislation.

Name of Bidder	Signature	Date	Position

## PA-15.1: RESOLUTION OF BOARD OF DIRECTORS

**RESOLUTION** of a meeting of the Board of \*Directors / Members / Partners of:

\_\_\_\_\_ (legally correct full name and registration number, if applicable, of the Enterprise)

Held at \_\_\_\_\_ (place)

on \_\_\_\_\_ (date)

**RESOLVED that:**

- The Enterprise submits a Bid / Tender to the Department of Public Works in respect of the following project:

\_\_\_\_\_ (project description as per Bid / Tender Document)

Bid / Tender Number: \_\_\_\_\_ (Bid / Tender Number as per Bid / Tender Document)

- \*Mr/Mrs/Ms: \_\_\_\_\_

in \*his/her Capacity as: \_\_\_\_\_ (Position in the Enterprise)

and who will sign as follows: \_\_\_\_\_

be, and is hereby, authorised to sign the Bid / Tender, and any and all other documents and/or correspondence in connection with and relating to the Bid / Tender, as well as to sign any Contract, and any and all documentation, resulting from the award of the Bid / Tender to the Enterprise mentioned above.

	Name	Capacity	Signature
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			

15			
16			
17			
18			
19			
20			

The bidding enterprise hereby absolves the Department of Public Works from any liability whatsoever that may arise as a result of this document being signed.

**Note:**

- \* Delete which is not applicable.
- NB:** This resolution must, where possible, be signed by all the Directors / Members / Partners of the Bidding Enterprise.
- In the event that paragraph 2 cannot be complied with, the resolution must be signed by Directors / Members / Partners holding a majority of the shares / ownership of the Bidding Enterprise (attach proof of shareholding / ownership hereto).
- Directors / Members / Partners of the Bidding Enterprise may alternatively appoint a person to sign this document on behalf of the Bidding Enterprise, which person must be so authorized by way of a duly completed power of attorney, signed by the Directors / Members / Partners holding a majority of the shares / ownership of the Bidding Enterprise (proof of shareholding / ownership and power of attorney are to be attached hereto).
- Should the number of Directors / Members / Partners exceed the space available above, additional names and signatures must be supplied on a separate page.

**ENTERPRISE STAMP**

## PA-15.2: RESOLUTION OF BOARD OF DIRECTORS TO ENTER INTO CONSORTIA OR JOINT VENTURES

**RESOLUTION** of a meeting of the Board of \*Directors / Members / Partners of:

---

---

*(Legally correct full name and registration number, if applicable, of the Enterprise)*

Held at \_\_\_\_\_ *(place)*

on \_\_\_\_\_ *(date)*

**RESOLVED that:**

1. The Enterprise submits a Bid /Tender, in consortium/Joint Venture with the following Enterprises:

---

---

*(List all the legally correct full names and registration numbers, if applicable, of the Enterprises forming the Consortium/Joint Venture)*

to the Department of Public Works in respect of the following project:

---

---

*(Project description as per Bid /Tender Document)*

Bid / Tender Number: \_\_\_\_\_ *(Bid / Tender Number as per Bid / Tender Document)*

2. \*Mr/Mrs/Ms: \_\_\_\_\_

in \*his/her Capacity as: \_\_\_\_\_ *(Position in the Enterprise)*

and who will sign as follows: \_\_\_\_\_

be, and is hereby, authorised to sign a consortium/joint venture agreement with the parties listed under item 1 above, and any and all other documents and/or correspondence in connection with and relating to the consortium/joint venture, in respect of the project described under item 1 above.

3. The Enterprise accepts joint and several liability with the parties listed under item 1 above for the due fulfilment of the obligations of the joint venture deriving from, and in any way connected with, the Contract to be entered into with the Department in respect of the project described under item 1 above.
4. The Enterprise chooses as its *domicilium citandi et executandi* for all purposes arising from this joint venture agreement and the Contract with the Department in respect of the project under item 1 above:

Physical address: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_ (code)



Postal Address: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ (code)

Telephone number: \_\_\_\_\_

Fax number: \_\_\_\_\_

	Name	Capacity	Signature
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			

The bidding enterprise hereby absolves the Department of Public Works from any liability whatsoever that may arise as a result of this document being signed

**Note:**

- \* Delete which is not applicable.
- NB:** This resolution must, where possible, be signed by all the Directors / Members / Partners of the Bidding Enterprise.
- In the event that paragraph 2 cannot be complied with, the resolution must be signed by Directors / Members / Partners holding a majority of the shares / ownership of the Bidding Enterprise (attach proof of shareholding / ownership hereto).
- Directors / Members / Partners of the Bidding Enterprise may alternatively appoint a person to sign this document on behalf of the Bidding Enterprise, which person must be so authorized by way of a duly completed power of attorney, signed by the Directors / Members / Partners holding a majority of the shares / ownership of the Bidding Enterprise (proof of shareholding / ownership and power of attorney are to be attached hereto).
- Should the number of Directors / Members / Partners exceed the space available above, additional names and signatures must be supplied on a separate page.

**ENTERPRISE STAMP**

## DPW-16 (EC): SITE INSPECTION MEETING CERTIFICATE

<b>Project title:</b>	<b>PHALABORWA 524: UPGRADING OF KITCHEN AND INSTALLATION OF KITCHEN EQUIPMENT</b>		
<b>Tender no:</b>	PLK23/01	<b>Reference no:</b>	6017/0612
<b>Closing date:</b>	04/07/2023		

This is to certify that I, \_\_\_\_\_ representing  
 \_\_\_\_\_ in the company of  
 \_\_\_\_\_ visited the site on: **22/06/2023**

I have made myself familiar with all local conditions likely to influence the work and the cost thereof. I further certify that I am satisfied with the description of the work and explanations given at the site inspection meeting and that I understand perfectly the work to be done, as specified and implied, in the execution of this contract.

Name of Tenderer	Signature	Date

Mr M. M. Raganya		
Name of DPW Representative	Signature	Date



## PA-16: PREFERENCE POINTS CLAIM FORM IN TERMS OF THE PREFERENTIAL PROCUREMENT REGULATIONS 2022

This preference form must form part of all tenders invited. It contains general information and serves as a claim form for preference points for specific goals.

**NB: BEFORE COMPLETING THIS FORM, TENDERERS MUST STUDY THE GENERAL CONDITIONS, DEFINITIONS AND DIRECTIVES APPLICABLE IN RESPECT OF THE TENDER AND PREFERENTIAL PROCUREMENT REGULATIONS, 2022**

### 1. GENERAL CONDITIONS

1.1 The following preference point systems are applicable to invitations to tender:

- the 80/20 system for requirements with a Rand value of up to R50 000 000 (all applicable taxes included); and
- the 90/10 system for requirements with a Rand value above R50 000 000 (all applicable taxes included).

### 1.2 Preference Points System to be applied

*(Tick whichever is applicable).*

- The applicable preference point system for this tender is the **80/20** preference point system.
- The applicable preference point system for this tender is the **90/10** preference point system.
- Either the **90/10 or 80/20** preference point system will be applicable in this tender. The lowest/ highest acceptable tender will be used to determine the accurate system once tenders are received.

### 1.3 Points for this tender shall be awarded for:

1.3.1 Price; and

1.3.2 Specific Goals

### 1.4 The maximum points for this tender are allocated as follows:

CHOOSE APPLICABLE PREFERENCE POINT SCORING SYSTEM	<input checked="" type="checkbox"/> 80/20	<input type="checkbox"/> 90/10
PRICE	80	
SPECIFIC GOALS	20	
<b>Total points for Price and Specific Goals</b>	<b>100</b>	

1.5 Breakdown Allocation of Specific Goals Points

1.5.1 For Procurement transactions with rand value greater than R2 000.00 and up to R1 Million (Inclusive of all applicable taxes), the specific goals as listed in table 1 below are applicable.

All Acquisitions

Table 1

Serial No	Specific Goals	Preference Points allocated out of 20	Documentation to be submitted by bidders to validate their claim for points
1.	An EME or QSE which is at least 51% owned by <b>black people</b>	10	ID Copy Or SANAS Accredited BBEE Certificate or sworn affidavit where applicable Or CSD Report Or CIPC (company registration)
2.	<b>Located</b> in a specific Local Municipality or District Municipality or Metro or Province area for work to be done or services to be rendered in that area	2	Office Municipal Rates Statement Or Permission To Occupy from local chief in case of rural areas (PTO) Or Lease Agreement
3.	An EME or QSE which is at least 51% owned by <b>women</b>	4	ID Copy Or CSD Report Or CIPC (company registration)

PREFERENCE POINTS CLAIM FORM IN TERMS OF THE PREFERENTIAL PROCUREMENT REGULATION 2022

Serial No	Specific Goals	Preference Points allocated out of 20	Documentation to be submitted by bidders to validate their claim for points
4.	An EME or QSE which is at least 51% owned by people with <b>disability</b>	2	Medical Certificate Or South African Social Security Agency (SASSA) registration Or National Council for Persons with Physical Disability in South Africa registration (NCPDPSA)
5.	An EME or QSE which is at least 51% owned by <b>youth</b> .	2	ID Copy Or CSD Report Or CIPC (company registration)

1.5.2 **For procurement transactions with rand value greater than R1 Million and up to R50 Million (Inclusive of all applicable taxes) the specific goals as listed in table 2 below are applicable:**

All Acquisitions

Table 2

Serial No	Specific Goals	Preference Points allocated out of 20	Documentation to be submitted by bidders to validate their claim for points
1.	An EME or QSE or any entity which is at least 51% owned by <b>Historically Disadvantaged Individuals (HDI)</b>	10	ID Copy Or SANAS Accredited BBBEE Certificate or sworn affidavit where applicable Or CSD Report

PREFERENCE POINTS CLAIM FORM IN TERMS OF THE PREFERENTIAL PROCUREMENT REGULATION 2022

Serial No	Specific Goals	Preference Points allocated out of 20	Documentation to be submitted by bidders to validate their claim for points
			Or CIPC (company registration)
2.	<b>Located</b> in a specific Local Municipality or District Municipality or Metro or Province area for work to be done or services to be rendered in that area	2	Office Municipal Rates Statement Or Permission To Occupy from local chief in case of rural areas (PTO) Or Lease Agreement
3.	An EME or QSE or any entity which is at least 51% owned by <b>women</b>	4	ID Copy Or CSD Report Or CIPC (company registration)
4.	An EME or QSE or any entity which is at least 51% owned by people with <b>disability</b>	2	Medical Certificate Or South African Social Security Agency (SASSA) registration Or National Council for Persons with Physical Disability in South Africa registration (NCPDPSA)
5.	An EME or QSE or any entity which is at least 51% owned by <b>youth</b> .	2	ID Copy Or CSD Report Or CIPC (company registration)

**1.5.3 For procurement transactions with rand value greater than R50 Million (Inclusive of all applicable taxes) the specific goals as listed in table 3 below are applicable**

All Acquisitions

Table 3

Serial No	Specific Goals	Preference Points allocated out of 10	Documentation to be submitted by bidders to validate their claim for points
1.	An EME or QSE or any entity which is at least 51% owned by <b>Historically Disadvantaged Individuals (HDI)</b>	4	ID Copy Or SANAS Accredited BBBEE Certificate or sworn affidavit where applicable Or CSD Report Or CIPC (company registration)
2.	<b>Located</b> in a specific Local Municipality or District Municipality or Metro or Province area for work to be done or services to be rendered in that area	2	Office Municipal Rates Statement Or Permission To Occupy from local chief in case of rural areas (PTO) Or Lease Agreement
3.	An EME or QSE or any entity which is at least 51% owned by <b>women</b>	2	ID Copy Or CSD Report Or CIPC (company registration)
4. <input type="checkbox"/>	An EME or QSE or any entity which is at least 51% owned by people with <b>disability</b>	2	Medical Certificate Or

PREFERENCE POINTS CLAIM FORM IN TERMS OF THE PREFERENTIAL PROCUREMENT REGULATION 2022

Serial No	Specific Goals	Preference Points allocated out of 10	Documentation to be submitted by bidders to validate their claim for points
5. <input type="checkbox"/>	<p>OR</p> <p>An EME or QSE or any entity which is at least 51% owned by <b>youth</b>.</p> <p>(only one specific goal is applicable between specific goal number 4 and specific goal number 5 under 90/10 Preference Point System)</p>		<p>South African Social Security Agency (SASSA) registration</p> <p>Or</p> <p>National Council for Persons with Physical Disability in South Africa registration (NCPDPSA)</p> <p>ID Copy</p> <p>Or</p> <p>CSD Report</p> <p>Or</p> <p>CIPC (company registration)</p>

1.6 Failure on the part of the tenderer to submit proof or documentation required in terms of this tender to claim points for specific goals, if the service provider/ tenderer did not submit proof or documentation required to claim for specific goals will be interpreted to mean that preference points for specific goals are not claimed.

1.7 The organ of state reserves the right to require of a service provider/tenderer, either before a tender is adjudicated or at any time subsequently, to substantiate any claim in regard to preferences, in any manner required by the organ of state.

**2. DEFINITIONS**

- (a) **“tender”** means a written offer in the form determined by an organ of state in response to an invitation to provide goods or services through price quotations, competitive tendering process or any other method envisaged in legislation;
- (b) **“price”** means an amount of money tendered for goods or services, and includes all applicable taxes less all unconditional discounts;
- (c) **“rand value”** means the total estimated value of a contract in Rand, calculated at the time of bid invitation, and includes all applicable taxes;
- (d) **“tender for income-generating contracts”** means a written offer in the form determined by an organ of state in response to an invitation for the origination of income-generating contracts through any method envisaged in legislation that will result in a legal agreement between the organ of state and a third party that produces revenue for the organ of state, and includes, but is not limited to, leasing and disposal of assets and concession contracts, excluding direct sales and disposal of assets through public auctions; and
- (e) **“the Act”** means the Preferential Procurement Policy Framework Act, 2000 (Act No.

5 of 2000).

### 3. FORMULAE FOR PROCUREMENT OF GOODS AND SERVICES

#### 3.1. POINTS AWARDED FOR PRICE

##### 3.1.1. THE 80/20 OR 90/10 PREFERENCE POINT SYSTEMS

A maximum of 80 or 90 points is allocated for price on the following basis:

$$\begin{array}{ccc} \mathbf{80/20} & \mathbf{or} & \mathbf{90/10} \\ \\ \mathbf{Ps = 80} \left( \mathbf{1 - \frac{Pt - P_{min}}{P_{min}}} \right) & \mathbf{or} & \mathbf{Ps = 90} \left( \mathbf{1 - \frac{Pt - P_{min}}{P_{min}}} \right) \end{array}$$

Where

Ps = Points scored for price of tender under consideration

Pt = Price of tender under consideration

Pmin = Price of lowest acceptable tender

#### 3.2. FORMULAE FOR DISPOSAL OR LEASING OF STATE ASSETS AND INCOME GENERATING PROCUREMENT

##### 3.2.1. POINTS AWARDED FOR PRICE

A maximum of 80 or 90 points is allocated for price on the following basis:

$$\begin{array}{ccc} \mathbf{80/20} & \mathbf{or} & \mathbf{90/10} \\ \\ \mathbf{Ps = 80} \left( \mathbf{1 + \frac{Pt - P_{max}}{P_{max}}} \right) & \mathbf{or} & \mathbf{Ps = 90} \left( \mathbf{1 + \frac{Pt - P_{max}}{P_{max}}} \right) \end{array}$$

Where

Ps = Points scored for price of tender under consideration

Pt = Price of tender under consideration

Pmax = Price of highest acceptable tender

### 4. POINTS AWARDED FOR SPECIFIC GOALS

- 4.1. In terms of Regulation 4(2); 5(2); 6(2) and 7(2) of the Preferential Procurement Regulations, preference points must be awarded for specific goals stated in the tender. For the purposes of this tender the tenderer will be allocated points based on the goals stated in table 1,2 and 3 above as may be supported by proof/ documentation stated in the conditions of this tender:

PREFERENCE POINTS CLAIM FORM IN TERMS OF THE PREFERENTIAL PROCUREMENT REGULATION 2022

4.2. In cases where organs of state intend to use Regulation 3(2) of the Regulations, which states that, if it is unclear whether the 80/20 or 90/10 preference point system applies, an organ of state must, in the tender documents, stipulate in the case of—

- (a) an invitation for tender for income-generating contracts, that either the 80/20 or 90/10 preference point system will apply and that the highest acceptable tender will be used to determine the applicable preference point system; or
- (b) any other invitation for tender, that either the 80/20 or 90/10 preference point system will apply and that the lowest acceptable tender will be used to determine the applicable preference point system,

then the organ of state must indicate the points allocated for specific goals for both the 90/10 and 80/20 preference point system.

**Table 1: Specific goals for the tender and points claimed are indicated per the table below.**

***(Note to organs of state: Where either the 90/10 or 80/20 preference point system is applicable, corresponding points must also be indicated as such.)***

***Note to tenderers: The tenderer must indicate how they claim points for each preference point system.)***

The specific goals allocated points in terms of this tender	Number of points allocated (90/10 system) (To be completed by the organ of state)	Number of points allocated (80/20 system) (To be completed by the organ of state)	Number of points claimed (90/10 system) (To be completed by the tenderer)	Number of points claimed (80/20 system) (To be completed by the tenderer)
1. An EME or QSE or any entity which is at least 51% owned by <b>Historically Disadvantaged Individuals (HDI)</b>	4	10		
2. <b>Located</b> in a specific Local Municipality or District Municipality or Metro or Province area for work to be done or services to be rendered in that area	2	2		
3. An EME or QSE or any entity which is at least 51% owned by <b>women</b>	2	4		

PREFERENCE POINTS CLAIM FORM IN TERMS OF THE PREFERENTIAL PROCUREMENT REGULATION 2022

The specific goals allocated points in terms of this tender	Number of points allocated (90/10 system) (To be completed by the organ of state)	Number of points allocated (80/20 system) (To be completed by the organ of state)	Number of points claimed (90/10 system) (To be completed by the tenderer)	Number of points claimed (80/20 system) (To be completed by the tenderer)
4. An EME or QSE or any entity which is at least 51% owned by people with <b>disability</b>  or  5. An EME or QSE or any entity which is at least 51% owned by <b>youth</b> .  (only one specific goal is applicable between specific goal number 4 and specific goal number 5 under 90/10 Preference Point System)	2	2		

**Note:** \*in respect of the 90/10 point system a selection of either disability or youth may be made with an allocation of 2 points for either of them.

**DECLARATION WITH REGARD TO COMPANY/FIRM**

4.3. Name of company/firm.....

4.4. Company registration number: .....

4.5. TYPE OF COMPANY/ FIRM

- Partnership/Joint Venture / Consortium
- One-person business/sole propriety
- Close corporation
- Public Company
- Personal Liability Company
- (Pty) Limited
- Non-Profit Company
- State Owned Company

[TICK APPLICABLE BOX]

4.6. I, the undersigned, who is duly authorised to do so on behalf of the company/firm,

PREFERENCE POINTS CLAIM FORM IN TERMS OF THE PREFERENTIAL PROCUREMENT REGULATION 2022

certify that the points claimed, based on the specific goals as advised in the tender, qualifies the company/ firm for the preference(s) shown and I acknowledge that:

- i) The information furnished is true and correct;
- ii) The preference points claimed are in accordance with the General Conditions as indicated in paragraph 1 of this form;
- iii) In the event of a contract being awarded as a result of points claimed as shown in paragraphs 1.4 and 4.2, the contractor may be required to furnish documentary proof to the satisfaction of the organ of state that the claims are correct;
- iv) If the specific goals have been claimed or obtained on a fraudulent basis or any of the conditions of contract have not been fulfilled, the organ of state may, in addition to any other remedy it may have –
  - (a) disqualify the person from the tendering process;
  - (b) recover costs, losses or damages it has incurred or suffered as a result of that person’s conduct;
  - (c) cancel the contract and claim any damages which it has suffered as a result of having to make less favourable arrangements due to such cancellation;
  - (d) recommend that the tenderer or contractor, its shareholders and directors, or only the shareholders and directors who acted on a fraudulent basis, be restricted from obtaining business from any organ of state for a period not exceeding 10 years, after the *audi alteram partem* (hear the other side) rule has been applied; and
  - (e) forward the matter for criminal prosecution, if deemed necessary.

.....	
<b>SIGNATURE(S) OF TENDERER(S)</b>	
<b>SURNAME AND NAME:</b>	.....
<b>DATE:</b>	.....
<b>ADDRESS:</b>	.....
	.....

## DPW-09 (EC): PARTICULARS OF TENDERER'S PROJECTS

<b>Project title:</b>	<b>PHALABORWA 524: UPGRADING OF KITCHEN AND INSTALLATION OF KITCHEN EQUIPMENT</b>		
<b>Tender / quotation no:</b>	PLK23/01	<b>Closing date:</b>	04/07/2023
<b>Advertising date:</b>	09/06/2023	<b>Validity period:</b>	84 days

**Note: The Tenderer is required to furnish the following particulars and to attach additional pages if more space is required. Failure to furnish the particulars will result in the tender offer being disqualified from further consideration.**

### 1. PARTICULARS OF THE TENDERER'S CURRENT AND PREVIOUS COMMITMENTS

#### 1.1. Current projects

Projects currently engaged in	Name of Employer or Representative of Employer	Contact tel. no.	Contract sum	Contractual commencement date	Contractual completion date	Current percentage progress
1						
2						
3						
4						
5						
6						
7						
8						

**1.2. Completed projects**

Projects completed in the previous 5 (five) years	Name of Employer or Representative of Employer	Contact tel. no.	Contract sum	Contractual commencement date	Contractual completion date	Date of Certificate of Practical Completion
1						
2						
3						
4						
5						
6						
7						
8						
9						

Name of Tenderer	Signature	Date

## **C2.2 Bills of Quantities / Lump Sum Document (if a returnable document)**

## PA- 40: DECLARATION OF DESIGNATED GROUPS FOR PREFERENTIAL PROCUREMENT

Name of Tenderer .....

EME<sup>1</sup>  QSE<sup>2</sup>  Non EME/QSE (tick applicable box)

**1. LIST ALL PROPRIETORS, MEMBERS OR SHAREHOLDERS BY NAME, IDENTITY NUMBER, CITIZENSHIP AND DESIGNATED GROUPS.**

Name and Surname #	Identity/ Passport number and Citizenship##	Percentage owned	Black	Indicate if youth	Indicate if woman	Indicate if person with disability	Indicate if living in rural / under developed area/township	Indicate if military veteran
1.		%	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No				
2.		%	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No				
3.		%	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No				
4.		%	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No				
5.		%	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No				
6.		%	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No				
7.		%	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No				
8.		%	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No				
9.		%	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No				
10.		%	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No				
11.		%	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No				
12.		%	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No				

# Where Owners are themselves a Company, Close Corporation, Partnership etc, identify the ownership of the Holding Company, together with Registration number

## State date of South African citizenship obtained (not applicable to persons born in South Africa )

<sup>1</sup> EME: Exempted Micro Enterprise

<sup>2</sup> QSE: Qualifying Small Business Enterprise

**2. DECLARATION:**

**The undersigned, who warrants that he/she is duly authorized to do so on behalf of the Tenderer, hereby confirms that:**

- 1 The information and particulars contained in this Affidavit are true and correct in all respects;
- 2 The Broad-based Black Economic Empowerment Act, 2003 (Act 53 of 2003), Preferential Procurement Policy Framework Act, 2000 (Act 5 of 2000), the Preferential Procurement Regulations, 2017, National Small Business Act 102 of 1996 as amended and all documents pertaining to this Tender were studied and understood and that the above form was completed according to the definitions and information contained in said documents;
- 3 The Tenderer understands that any intentional misrepresentation or fraudulent information provided herein shall disqualify the Tenderer's offer herein, as well as any other tender offer(s) of the Tenderer simultaneously being evaluated, or will entitle the Employer to cancel any Contract resulting from the Tenderer's offer herein;
- 4 The Tenderer accepts that the Employer may exercise any other remedy it may have in law and in the Contract, including a claim for damages for having to accept a less favourable tender as a result of any such disqualification due to misrepresentation or fraudulent information provided herein;
- 5 Any further documentary proof required by the Employer regarding the information provided herein, will be submitted to the Employer within the time period as may be set by the latter;

**Signed by the Tenderer**

<b>Name of representative</b>	<b>Signature</b>	<b>Date</b>

## DPW-21 (EC): RECORD OF ADDENDA TO TENDER DOCUMENTS

<b>Project title:</b>	<b>PHALABORWA 524: UPGRADING OF KITCHEN AND INSTALLATION OF KITCHEN EQUIPMENT</b>		
<b>Tender no:</b>	PLK23/01	<b>Reference no:</b>	6017/0612

1. I / We confirm that the following communications received from the Department of Public Works before the submission of this tender offer, amending the tender documents, have been taken into account in this tender offer: *(Attach additional pages if more space is required)*

	Date	Title or Details
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		
11.		
12.		
13.		

Name of Tenderer	Signature	Date

2. I / We confirm that no communications were received from the Department of Public Works before the submission of this tender offer, amending the tender documents.

Name of Tenderer	Signature	Date

## DPW-15 (EC): SCHEDULE OF PROPOSED SUBCONTRACTORS

<b>Project title:</b>	<b><i>PHALABORWA 524: UPGRADING OF KITCHEN AND INSTALLATION OF KITCHEN EQUIPMENT</i></b>		
<b>Tender no:</b>	<i>PLK23/01</i>	<b>Reference no:</b>	<i>6017/0612</i>

We notify you that it is our intention to employ the following Subcontractors for work in this contract.

We confirm that all subcontractors who are contracted to construct a house are registered as home builders with the National Home Builders Registration Council.

	Name and address of proposed Subcontractor	Nature and extent of work	Previous experience with Subcontractor
1			
2			
3			
4			
5			

<b>Name of representative</b>	<b>Signature</b>	<b>Capacity</b>	<b>Date</b>

<b>Name of organisation:</b>	
------------------------------	--

## DPW-22 (EC): PARTICULARS OF ELECTRICAL CONTRACTOR

<b>Project title:</b>	<b><i>PHALABORWA 524: UPGRADING OF KITCHEN AND INSTALLATION OF KITCHEN EQUIPMENT</i></b>		
<b>Tender no:</b>	PLK23/01	<b>Reference no:</b>	<b>6017/0612</b>

<b>Name of Electrical Contractor:</b>	
<b>Address:</b>	
<b>Electrical Contractor registration number at the Electrical Contracting Board of S.A.:</b>	

Name of Tenderer	Signature	Date

## DPW-23 (EC): SCHEDULE FOR IMPORTED MATERIALS AND EQUIPMENT

<b>Project title:</b>	<b>PHALABORWA 524: UPGRADING OF KITCHEN AND INSTALLATION OF KITCHEN EQUIPMENT</b>		
<b>Tender no:</b>	PLK23/01	<b>Reference no:</b>	6017/0612

This schedule should be completed by the tenderer. *(Attach additional pages if more space is required)*

Item	Material / Equipment	Rand (R) (Excluding VAT)
1.		R
2.		R
3.		R
4.		R
5.		R
6.		R

**The Contractor shall list imported items, materials and/or equipment which shall be excluded from the Contract Price Adjustment Provisions (if applicable) and shall be adjusted in terms of currency fluctuations only.** Copies of the supplier's quotations for the items, materials or equipment (provided that such costs shall not be higher than the relevant contract rate as listed above) should be lodged with the Principal Agent / Engineer of the Department of Public Works within 60 (sixty) days from the date of acceptance of the tender. No adjustment of the local VAT amount, nor the contractor's profit, discount, mark-up, handling costs, etc. shall be allowed.

These net amounts will be adjusted as follows:

### FORMULA:

The net amount to be added to or deducted from the contract sum:

$$A = V \left( \frac{Z}{Y} - 1 \right)$$

A = the amount (R) of adjustment

V = the net amount (supplier's quotation) (R) of the imported item

Y = exchange rate at the closing date of tender submission

Z = exchange rate on the date of payment.

Name of Tenderer	Signature	Date

## **C2.2 Bills of Quantities / Lump Sum Document (if a returnable document)**



public works

---

Department:  
Public Works  
**REPUBLIC OF SOUTH AFRICA**

# **DEPARTMENT OF PUBLIC WORKS**

## **TENDER DOCUMENT**

**FOR**

**PHALABORWA 524: UPGRADING AND  
INSTALLATION OF KITCHEN EQUIPMENTS**

**TENDER NUMBER: **PLK23/01****

**CLOSING DATE: **04/07/2023****

**VOLUME 3: CONTRACT**

# TABLE OF CONTENTS

## VOLUME 3: CONTRACT

DESCRIPTION	DOCUMENT	PAGE COLOUR	PAGE NO.
<b>VOLUME 3: Returnable Documents</b>		White	93
Returnable Documents		White	94
Table of Contents (Volume 3)		White	95
Part C1: Agreement and Contract Data		Yellow	96
C1.2 Contract Data		Yellow	97
Contract Data	Project specific. DPW-05(EC)	Yellow	98
C1.3 Form of Guarantee		White	111
Form of Guarantee	DPW-10.1(EC)	White	112
Form of Guarantee	DPW-10.3(EC)	White	115
Part C2: Pricing Data		Yellow	117
C2.1 Pricing Instructions		Yellow	118
Pricing Instructions	Project specific. PG-02.1(EC)	Yellow	119
Part C3: Scope of Work		Blue	123
C3 Scope of Work		Blue	124
Scope of Work	Project specific. PG-01.2(EC)	Blue	125
HIV/AIDS Specification and Schedules	PW 1544 Specification and Schedules	Blue	145
Occupational Health & Safety Specification	OHS Specifications	Blue	160
DPW Kitchen Equipment Specifications	Kitchen Equipment Specifications	Blue	210
DPW Drainage Specifications	Drainage Specifications	Blue	225
DPW Electrical Installations Specifications	Electrical Specifications	Blue	272
Part C4: Site Information		Green	299
C4 Site Information	Separation sheet	Green	300
Site Information	Project specific. PG-03.1(EC)	Green	301
C5 Site Drawings	Separation sheet	Green	302
Drawings		White	303

# **VOLUME 3: CONTRACT**

# **Part C1: Agreement and Contract Data**

## **C1.2 Contract Data**

## DPW-05: (EC) CONTRACT DATA - (GCC (2010) 2<sup>nd</sup> EDITION: 2010)

<b>Project title:</b>	PHALABORWA 524: UPGRADING OF KITCHEN AND INSTALLATION OF KITCHEN EQUIPMENT
-----------------------	--

<b>Tender / Quotation no:</b>	PLK23/01	<b>WCS no:</b>		<b>Reference no:</b>	6017/0612
-------------------------------	----------	----------------	--	----------------------	-----------

	<b>PART 1: DATA PROVIDED BY THE EMPLOYER</b>
	<b>CONDITIONS OF CONTRACT</b>
	<p>The General Conditions of Contract for Construction Works, Second Edition, 2010, published by the South African Institution of Civil Engineering, Private Bag X200, Halfway House, 1685, is applicable to this Contract and is obtainable from <a href="http://www.saice.org.za">www.saice.org.za</a></p> <p>Bidders to note that materials procured for the works should be from South African manufactures and suppliers. Imported materials shall only be considered under exceptional circumstances, based on compelling technical justifications, and subject to the approval by the NDPWI.</p>

<b>CONTRACT SPECIFIC DATA</b>	
The following contract specific data, referring to the General Conditions of Contract for Construction Works, Second Edition, 2010, are applicable to this Contract:	
<b>CLAUSES</b>	<b>COMPULSORY DATA</b>
1.1.1.8	<p>Amend Clause 1.1.1.8 to include the word “rights” to read as follows:</p> <p>“Contract Data” means the specific data which, together with these General Conditions of Contract, collectively describe the rights, risks, liabilities and obligations of the contracting parties and the procedures for the administration of the Contract.</p>
1.1.1.13	<p>Amend Clause 1.1.1.13 as follows, clarify when the defects liability period starts:</p> <p>“Defects Liability Period” means the period stated in the Contract Data, commencing on the date indicated on the Certificate of Completion or Certificates of Completion in the event of more than one Certificate of Completion is issued for different parts of the Works, during which the Contractor has both the right and the obligation to make good defects in the materials, Plant and workmanship covered by the Contract.</p> <p>Defects liability period is: <b>12 months</b>.</p>
1.1.1.14 & 5.14.7	<p>The time for achieving Practical Completion of the whole of the works is: <b>4 Months</b> measured from the <u>Commencement</u> Date. The time thus stated includes special non-working days and the year-end break.</p> <p><b><i>or, if Practical Completion in portions is required,</i></b></p> <p>The times for achieving Practical Completion for the portions as set out in the Scope of Works are <i>mutatis mutandi</i>:</p> <p>For portion 1 within</p> <p>For portion 2 within</p> <p>For portion 3 within</p>

**Tender no:** PLK23/01

	For portion 4 within <i>(followed by further portions as required)</i>
	The time for achieving Practical Completion of the whole of the Works is: <b>4 Months, measured from the Commencement Date. The time thus stated includes special non-working days and the year-end break.</b>
1.1.1.15	The name of the Employer is: <b>The Government of the Republic of South Africa in its Department of Public Works and Infrastructure.</b>
1.1.1.16	The name of the Engineer is: <b>AES Consulting cc</b>
1.1.1.26	The Pricing Strategy is a: <b>Re-measurement Contract.</b>
1.1.1.31	Not applicable to this Contract.
1.1.1.35	Insert the definition of “Value of Works” as Clause 1.1.1.35: “Value of Works” means the value of the Works certified by the Engineer as having been satisfactorily executed and shall include the value of the works done, the value of the materials and/or plant and Contract Price Adjustments.
1.2.1.2	<b>Employer’s address:</b>  Physical Address: <b>77 Hans Van Rensburg Polokwane 0700</b>  Postal Address: <b>Private Bag Polokwane 0787</b>  Facsimile: <b>015 291 4411</b>  Telephone: <b>015 291 6344</b>
	<b>Engineer’s address:</b>  Physical Address: <b>125 Marshal Street Polokwane 0700</b>  Postal Address: <b>P.O Box 15439 Polokwane 0787</b>  Facsimile: <b>086 568 1274</b>  Telephone: <b>015 291 1879</b>
1.3.4	Not applicable to this Contract.

Tender no: PLK23/01PLK23/01

<p>1.3.5</p>	<p>Replace Clause 1.3.5 with the following provisions:</p> <ul style="list-style-type: none"> <li>(a) The Employer will become the owner of the information, documents, advice, recommendation and reports collected, furnished and/or compiled by the Contractor during the course of, and for the purposes of executing this Contract, all of which will be handed over to the Employer on request, but in any event on the termination and/or cancellation of this Contract for whatever reason. The Contractor relinquishes its retention or any other rights thereon to which it may be entitled.</li> <li>(b) The copyright of all documents, recommendations and reports compiled by the Contractor during the course of and for the purposes of finalizing the Works will vest in the Employer, and may not be reproduced or distributed or made available to any person outside the Employer's service, or to any institution in any way, without the prior written consent of the Employer. The Employer shall have the right to use such material for any other purpose without the approval of information or payment to the Contractor.</li> <li>(c) The copyright of all electronic aids, software programmes etc. prepared or developed in terms of the Contract shall vest in the Employer, who shall have the right to use such material for any other purpose without the approval of, information or payment to the Contractor.</li> <li>(d) In case of the Contractor providing documents, electronic aids, software programs or like material to the Employer, the development of which has not been at the expense of the Employer, copyright shall not vest in the Employer. The Contractor shall be required to indicate to which documents, electronic aids, software programs or like material this provision applies.</li> <li>(e) The Contractor hereby indemnifies the Employer against any action, claim, damages or legal cost that may be instituted against the Employer on the grounds of an alleged infringement of any copyright, patents or any other intellectual property right in connection with the Works outlined in this Contract.</li> <li>(f) All information, documents, recommendations, programs and reports collected or compiled must be regarded as confidential and may not be communicated or made available to any person outside the Employer's service and may not be published either during the currency of this Contract or after termination thereof without the prior written consent of the Employer.</li> </ul>
<p>3.1.3</p>	<p>1. The Engineer's authority to act and/or to execute functions or duties or to issue instructions are expressly <b>excluded</b> in respect of the following:</p> <ul style="list-style-type: none"> <li>(a) Appointment of nominated Sub-contractors – clause 4.4.3;</li> <li>(b) Granting of an extension of time and/or ruling on claims associated with claims for extension of time – clauses 5.12.3, 10.1.5;</li> <li>(c) Acceleration of the rate of progress and determination of the cost for payment of such acceleration – clause 5.12.4;</li> <li>(d) Rulings on claims and disputes – clauses 10.1.5, 10.2.3 and 10.3.3;</li> <li>(e) Suspension of the Works – clause 5.11.1;</li> <li>(f) Final Payment Certificate – clause 6.10.9;</li> <li>(g) Issuing of <i>mora</i> notices to the Contractor – clauses 9.1.1, 9.1.2.1 and 9.2.1;</li> <li>(h) Cancellation of the contract between the Employer and Contractor – clauses 9.1.1, 9.1.2.1 and 9.2.1.</li> </ul>

Tender no: PLK23/01

	<p>2. In order to be legally binding and have legal bearing and consequence, any ruling in respect of the above matters (a) to (h) must be on an official document, signed and issued by the Employer to the Contractor.</p> <p>3. The Contractor must submit claims, demands, notices, notifications, updated particulars and reports in writing, as well as any other supporting documentation pertaining thereto, in respect of any of the above listed matters (a) to (h), to the Engineer within the time periods and in the format(s) as determined in the relevant clauses of the Conditions of Contract. Failing to deliver such to the Engineer timeous and in the correct format will invalidate any claim and the consequences of such failure will <i>mutatis mutandis</i> be as stated in clause 10.1.4.</p> <p>4. Clauses 6.10.9 and 10.1.5 shall be amended as follows to indicate the limitation on the Engineer's authority in respect thereof:</p> <p><b>Clause 6.10.9 – Amend to read as follows:</b></p> <p>Within 14 days of the date of final approval as stated in the Final Approval Certificate, the Contractor shall deliver to the Engineer a final statement claiming final settlement of all moneys due to him (save in respect of matters in dispute, in terms of Clauses 10.3 to 10.11, and not yet resolved). The Employer shall within 14 days issue to the Contractor a Final Payment Certificate the amount of which shall be paid to the Contractor within 28 days of the date of such certificate, after which no further payments shall be due to the Contractor (save in respect of matters in dispute, in terms of Clauses 10.3 to 10.11 and not yet resolved).</p> <p><b>Clause 10.1.5 – Amend to read as follows:</b></p> <p>Unless otherwise provided in the Contract, the Employer shall, within 28 days after the Contractor has delivered his claim in terms of Clause 10.1.1 as read with Clause 10.1.2, deliver to the Contractor his written and adequately reasoned ruling on the claim (referring specifically to this Clause). The amount thereof, if any, allowed by the Employer shall be included to the credit of the Contractor in the next payment certificate.</p> <p>5. Insert the following under 3.1.3: Provided that, notwithstanding any provisions to the contrary in the Contract, the Employer shall have the right to reverse and, should it deem it necessary, to amend any certificate, instruction, decision or valuation of the Engineer and to issue a new one, and such certificate instruction, decisions or valuations shall for the purposes of the Contract be deemed to be issued by the Engineer, provided that the Contractor shall be remunerated in the normal manner for work executed in good faith in terms of an instruction issued by the Engineer and which has subsequently been rescinded.</p>
3.2.2.1	<p>Amend Clause 3.2.2.1 to insert the word "Plant" to read as follows:</p> <p>Observe the execution of the Works, examine and test material, Plant and workmanship, and receive from the Contractor such information as he shall reasonably require.</p>
3.2.3.2	<p>Amend Clause 3.2.3.2 to insert the word "Plant" to reads as follows:</p> <p>Notwithstanding any authority assigned to him in terms of Clauses 3.2.2 and 3.2.4, failure by the Engineer's Representative to disapprove of any work, workmanship, Plant or materials shall not prejudice the power of the Engineer thereafter to disapprove thereof and exercise any of his powers in terms of the Contract in respect of thereof.</p>
4.8.2.1	<p>Amend Clause 4.8.2.1 to include the word "person", as follows:</p> <p>Makes available to the Employer, or to any such contractor, person or authority, any roads or ways for the maintenance of which the Contractor is responsible, or</p>

Tender no: PLK23/01

4.8.2.2	Amend Clause 4.8.2.2 to include “Employer” and “contractors”, as follows: Provides any other facility or service of whatsoever nature to the Employer or to any of the said contractors, persons or authorities,
5.3.1	The documentation required before commencement with Works execution are:  Health and Safety Plan (Refer to Clause 4.3) Initial programme (Refer to Clause 5.6) Security (Refer to Clause 6.2) Insurance (Refer to Clause 8.6) <b>Works Insurance for the duration of the project</b> <b>Valid COIDA (from the Department of Labour)</b>
5.3.2	The time to submit the documentation required before commencement with Works execution is: <b>21 days.</b>
5.4.2	The access to, and possession of, the Site referred to in Clause 5.4.1 shall be <b>“exclusive”</b> to the Contractor. In the event of access to, and possession of, the Site is not exclusive to the Contractor, the following limitations apply:  <b><i>Insert an The facility is a secure national key point therefore access to the contractor and the contractor's personnel will be subject to vetting and sole approval by the National Department of Public Works and National Defence Forces.</i></b>
5.8.1	The non-working days are: <b>Saturdays and Sundays</b>  The special non-working days are: <b>(1) Public Holidays;</b> <b>(2) The year-end break commencing on 16 December until the Sunday preceding the first working Monday of January of the succeeding year.</b>
5.9.1	Amend Clause 5.9.1 as follows:  On the Commencement Date, the Engineer shall deliver to the Contractor three (3) copies, at no cost to the Contractor, of the drawings and any instructions required for the commencement of the Works. The cost of any additional copies of such drawings and/or instructions, as may be required by the Contractor, will be for the account of the Contractor.
5.13.1	The penalty for failing to complete the Works is: <b>R 1,900.00 per day</b>  <b><u>or, if completion in portions is required,</u></b>  The penalty for failing to complete portion 1 of the Works is: <b>R per day.</b> The penalty for failing to complete portion 2 of the Works is: <b>R per day.</b> The penalty for failing to complete portion 3 of the Works is: <b>R per day.</b> The penalty for failing to complete portion 4 of the Works is: <b>R per day.</b> <i>Followed by further portions as required.</i>  The penalty for failing to complete the whole of the works is: <b>R 1,900.00 per day.</b>

**Tender no:** PLK23/01

5.14.1	<p>Amend the second paragraph of Clause 5.14.1 as follows:</p> <p>When the Works are about to reach the said stage, the Contractor shall, in writing, request a Certificate of Practical Completion and the Engineer shall, within 14 days after receiving such request, issue to the Contractor a written list setting out the work to be completed to justify Practical Completion. Should the Engineer not issue such a list within the 14 days, the Contractor shall notify the Employer accordingly. Should the Employer not issue such a list within 7 days of receipt of such notice, Practical Completion shall be deemed to have been achieved on the 14<sup>th</sup> day after the contractor requested the Certificate of Practical Completion.</p>
5.16.1	Amend Clause 5.16.1 to delete the proviso in the third paragraph of this clause.
5.16.2	<p>Amend Clause 5.16.2 as follows:</p> <p>No certificate other than the Final Approval Certificate referred to in Clause 5.16.1 shall be deemed to constitute approval of the Works or shall be taken as an admission of the due performance of the Contract or any part thereof, nor of the accuracy of any claim made by the Contractor, nor shall any other certificate exclude or prejudice any of the powers of the Engineer and/or the Employer.</p>
5.16.3	The latent defect period for all works is: <b>5 years</b> .
6.2.1	The type of security for the due performance of the Contract, as selected by the Contractor in the Contract Data, must be delivered to the Employer.
6.2.3	<p>Amend Clause 6.2.3 as follows:</p> <p>If the Contractor has selected a performance guarantee as security, he shall ensure that it remains valid and enforceable as required in terms of the Contract.</p>
6.5.1.2.3	<p>The percentage allowance to cover overhead charges is:</p> <p><b>33%, except on material cost where the percentage allowance is 10%.</b></p>
6.8.2	<p>Contract Price Adjustment (CPA) will be applicable: <b>"No"</b>.</p> <p>If CPA is indicated as "Yes" above the value of payment certificates is to be adjusted by a Contract Price Adjustment Factor:</p> <p>The value of the certificates issued shall be adjusted in accordance with the Contract Price Adjustment Schedule with the following values:</p> <p>The value of "x" is 0.15.</p> <p>The values of the coefficients are:</p> <p>a = 0.25. (Labour) b = 0.3 (Contractor's equipment) c = 0.3 (Material) d = 0.15 (Fuel)</p> <p>The values of the coefficients for "Repair and Maintenance Project" (RAMP) contracts are:</p> <p>a = 0.35 (Labour) b = 0.20 (Contractor's equipment) c = 0.35 (Material) d = 0.10 (Fuel)</p>

**Tender no:** PLK23/01

6.8.2	<p>The urban area nearest the Site is <b>Phalaborwa</b>. (Select urban area from Statistical News Release, P0141, Table 7.1.)</p> <p>The applicable industry for the Producer Price Index for materials is <b>N/A</b>. (Select the applicable industry from Statistical News Release, P01421, Table 11.)</p> <p>The area for the Producer Price Index for fuel is <b>N/A</b>. (Select the area from Statistical News Release, P01421, Table 12.)</p> <p>The base month is <b>N/A 20N/A</b>. (The month prior to the closing of the tender.)</p>
6.8.3	Price adjustments for variations in the costs of special materials are not allowed.
6.10.1.5	The percentage advance on materials not yet built into the Permanent Works is: <b>85 %</b> .
6.10.3	The limit of retention money is dependent on the security to be provided by the Contractor in terms of Clause 6.2.1.
6.10.5	<p>Replace Clause 6.10.5 with the following:</p> <p><u>In respect of contracts up to R2 million and in respect of contracts above R2 million where the Contractor elects a security by means of a 10% retention</u>, 50% of the retention shall be released to the Contractor when the Engineer issues the Certificate of Completion in terms of clause 5.14.4. The remaining 50% of the retention shall be released in accordance with the provisions of the conditions of contract and will become due and payable when the Contractor becomes entitled, in terms of Clause 5.16.1, to receive the Final Approval Certificate.</p> <p><u>In respect of contracts above R2 million, where the Contractor elects a security by means of a cash deposit or fixed guarantee of 5% of the Contract Sum (excl. VAT) and a 5% retention of the Value of the Works (excl. VAT)</u>, the cash deposit or fixed guarantee, whichever is applicable, shall be refunded to the Contractor or return to the guarantor, respectively, when the Engineer issues the Certificate of Completion in terms of Clause 5.14.4. The 5% retention of the Value of the Works (excl. VAT) shall become due and payable when the Contractor becomes entitled, in terms of Clause 5.16.1, to receive the Final Approval Certificate.</p> <p><u>In respect of contracts above R2 million, where the Contractor elects a security by means of a cash deposit or a variable guarantee of 10% of the Contract Sum (excl. VAT)</u>, the cash deposit or the variable guarantee, whichever is applicable, will be reduced to 5% of the Value of the Works (excl. VAT) when the Engineer issues the Certificate of Completion in terms of Clause 5.14.4. The balance of the cash deposit shall become due and payable or the variable guarantee shall expire when the Contractor becomes entitled in terms of Clause 5.16.1 to receive the Final Approval Certificate.</p>
7.9.1	<p>Insert the following at the end of Clause 7.9.1:</p> <p>Provided that, should the Contractor on demand not pay the amount of such costs to the Employer, such amount may be determined and deducted by the Employer from any amount due to or that may become due to the Contractor under this or any other previous or subsequent contract between the Contractor and the Employer.</p>
8.2.2.1	<p>Insert the following as a second paragraph to Clause 8.2.2.1:</p> <p>The Contractor shall at all times proceed immediately to remove or dispose of any debris arising from damage to or destruction of the Works and to rebuild, restore, replace and/or repair the Works, failing which the Employer may cause same to be done and recover the reasonable costs associated therewith from the Contractor.</p>

**Tender no:** PLK23/01

8.4.3	<p>Insert a new Clause 8.4.3 as follows:</p> <p>The Contractor shall on receiving a written instruction from the Engineer immediately proceed at his own cost to remove or dispose of any debris and to rebuild, restore, replace and/or repair such property and to execute the Works.</p>
8.6.1.1.1	Amend Clause 8.6.1.1.1 to read as follows: Contract Sum plus 10%.
8.6.1.1.2	The value of Plant and materials supplied by the Employer to be included in the insurance sum is: <b>Nil</b>
8.6.1.1.3	The amount to cover professional fees for repairing damage and loss to be included in the insurance sum is: <b>Nil</b>
8.6.1.3	<p>Amend Clause 8.6.1.3 to delete reference to limit of indemnity, to read as follows:</p> <p>Liability insurance that covers the Contractor against liability for the death of, or injury to any person, or loss of, or damage to any property (other than property while it is insured in terms of Clause 8.6.1.1) arising from or in the course of the fulfillment of the Contract, from the Commencement Date to the date of the end of the Defects Liability Period, if there is one, or otherwise to the issue of the Certificate of Completion.</p>
8.6.1.5	<p>1. <b>Public liability insurance</b> to be effect by the Contractor to a minimum value of:</p> <p><input checked="" type="checkbox"/> R5 million</p> <p><b>or</b></p> <p><input type="checkbox"/> R</p> <p>With a deductible not exceeding 5% of each and every claim.</p> <p>2. <b>Support insurance</b> is to be effected by the Contractor to a minimum value of:</p> <p><b>R 2,500,000.00 (Two Million and Five Hundred Thousand Rand Only)</b></p> <p>With a deductible not exceeding 5% of each and every claim.</p>
8.6.5	<p>Amend Clause 8.6.5 as follows:</p> <p>Save as otherwise provided in the Contract Data, the insurances referred to in Clause 8.6.1 shall be effected with an insurance company registered in the Republic of South Africa. The Contractor shall submit the insurance policy to the Employer for approval, if so requested.</p>
8.6.7	<p>Amend Clause 8.6.7 as follows:</p> <p>If the Contractor fails to effect and keep in force any of the insurances referred to in Clause 8.6.1, the Employer may cancel the Contract in terms of Clause 9.2.</p>
8.6.8	<p>Insert a new Clause 8.6.8 in provide for high risk insurance for projects executed on areas classified as “High Risk Areas”.</p> <p><b>HIGH RISK INSURANCE</b></p> <p>In the event of the project being executed in a geological area classified as a “High Risk Area”, that is an area which is subject to highly unstable subsurface conditions that might result in catastrophic ground movement evident by sinkhole or doline formation the following will apply:</p>

Tender no: PLK23/01

8.6.8	<p>(1) <b>Damage to the Works</b> The Contractor shall, from the date of Commencement of the Works until the date of the Certificate of Completion, bear the full risk of and hereby indemnifies and holds harmless the Employer against any damage to and/or destruction of the Works consequent upon a catastrophic ground movement as mentioned above. The Contractor shall take such precautions and security measures and other steps for the protection of the Works as he may deem necessary.</p> <p>When so instructed to do so by the Engineer, the Contractor shall proceed immediately to remove and/or dispose of any debris arising from damage to or destruction of the Works and to rebuild, restore, replace and/or repair the Works, at the Contractor's own costs.</p> <p>(2) <b>Injury to Persons or Loss of or damage to Properties</b> The Contractor shall be liable for and hereby indemnifies and holds harmless the Employer against any liability, loss, claim or proceeding arising during the Contract Period whether arising in common law or by Statute, consequent upon personal injuries to or the death of any person whomsoever resulting from, arising out of or caused by a catastrophic ground movement as mentioned above.</p> <p>The Contractor shall be liable for and hereby indemnifies the Employer against any and all liability, loss, claim or proceeding consequent upon loss of or damage to any moveable, or immovable or personal property or property contiguous to the Site, whether belonging to or under the control of the Employer or any other body or person whomsoever arising out of or caused by a catastrophic ground movement, as mentioned above, which occurred during the Contract Period.</p> <p>(3) It is the responsibility of the Contractor to ensure that he has adequate insurance to cover his risk and liability as mentioned in Clauses 8.6.8(1) and 8.6.8 (2) above. Without limiting his obligations in terms of the Contract, the Contractor shall, within 21 days of the Commencement Date and before Commencement of the Works, submit to the Employer proof of such insurance policy, if requested to do so.</p> <p>(4) The Employer shall be entitled to recover any and all losses and/or damages of whatever nature suffered or incurred consequent upon the Contractor's default of his obligations as set out in Clauses 8.6.8 (1), 8.6.8 (2) and 8.6.8 (3). Provided that, should the Contractor on demand not pay the amount of such costs to the Employer, such amount may be determined and deducted by the Employer from any amount due to or that may become due to the Contractor under this or any other existing or subsequent contract between the Contractor and the Employer.</p>
9.1.4	<p>Amend Clause 9.1.4 as follows:</p> <p>In the circumstances referred to in Clauses 9.1.1, 9.1.2 or 9.1.3 (provided that the circumstances in 9.1.3 is not due to the fault of the Contractor, his employees, contractors or agents), and whether or not the Contract is terminated under the provisions of this Clause, the Contractor shall be entitled to payment of any increased cost of or incidental to the execution of the Works which is specifically attributable to, or consequent upon the circumstances defined in Clauses 9.1.1, 9.1.2 or 9.1.3;</p>
9.1.5	<p>Amend Clause 9.1.5 as follows:</p> <p>If the Contract is terminated on any account in terms of this Clause (provided that the circumstances in 9.1.3 is not due to the fault of the Contractor, his employees, contractors or agents) , the Contractor shall be paid by the Employer (insofar as such amounts or items have not already been covered by payments on account made to the Contractor) for all measured work executed prior to the date of termination, the amount (without retention), payable in terms of the Contract and, in addition:</p>

9.1.6	This Clause is not applicable to this Contract.
-------	---

**Tender no:** PLK23/01

9.2.1.3.8	<p>Insert a new Clause 9.2.1.3.8 as follows:</p> <p>Has failed to effect and keep in force any of the insurances referred to in Clause 8.6.1,</p>
9.2.4	<p>Insert a new Clause 9.2.4 as follows, to provide for unilateral termination by the Employer:</p> <p>The Employer shall be entitled at any time to unilaterally terminate or cancel this Contract or any part thereof. Save for the following, the Contractor shall not be entitled to claim any other amounts whatsoever in respect of such termination or cancellation of this Contract. The Employer shall be obliged to pay the Contractor as damages and/or loss of profit the lesser of:</p> <p>9.2.4.1 An amount not exceeding 10% of the Contract Sum;</p> <p>9.2.4.2 10% of the value of incomplete work; or</p> <p>9.2.4.3 The Contractor's actual damage or loss as determined by the Employer after receipt of evidence substantiating any such damage or loss.</p>
9.3.2.2	<p>Amend Clause 9.3.2.2 as follows to delete the proviso on lien:</p> <p>The ownership of Plant and unused materials brought onto the Site by the Contractor, and for which the Employer has not made any payment, shall revert to the Contractor and he shall, with all reasonable dispatch, remove from the Site such Plant, materials and all Construction Equipment and Temporary Works.</p>
9.3.3	<p>Insert the following at the end of Clause 9.3.3</p> <p>After cancellation of the Contract by the Contractor, the Contractor, when requested by the Employer to do so, shall not be entitled to refuse to withdraw from the Works on the grounds of any lien or a right of retention or on the grounds of any other right whatsoever.</p>
10.1.3.1	<p>Amend Clause 10.1.3.1 as follows to insert the word "Plant":</p> <p>All facts and circumstances relating to the claims shall be investigated as and when they occur or arise. For this purpose, the Contractor shall deliver to the Engineer, records in a form approved by the Engineer, of all the facts and circumstances which the Contractor considers relevant and wishes to rely upon in support of his claims, including details of all Construction Equipment, labour, Plant and materials relevant to each claim. Such records shall be submitted promptly after the occurrence of the event giving rise to the claim.</p>
10.1.6	<p>Insert a new Clause 10.1.6 as follows:</p> <p>If the Employer fails to give his ruling within the period referred to in Clause 10.1.5 he shall be deemed to have given a ruling dismissing the claim.</p>
10.2.1	<p>Amend Clause 10.2.1 as follows:</p> <p>In respect of any matter arising out of or in connection with the Contract, which is not required to be dealt with in terms of Clause 10.1 or which does not require the decision or ruling of the Employer, the Contractor or the Employer shall have the right to deliver a written dissatisfaction claim to the Engineer. This written claim shall be supported by particulars and substantiated.</p>
10.2.2	<p>Amend Clause 10.2.2 as follows:</p> <p>If, in respect of any matter arising out of or in connection with the Contract, which is not required to be dealt with in terms of Clause 10.1 or which does not require the decision or ruling of the Employer, the Contractor</p>

	or the Employer fails to submit a claim within 28 days after the cause of dissatisfaction, he shall have no further right to raise any dissatisfaction on such matter.
--	--

**Tender no:** PLK23/01

10.3.2	Amend Clause 10.3.2 as follows to replace “adjudication” with “court”: If either party shall have given notice in compliance with Clause 10.3.1, the dispute shall be referred to court proceedings in terms of Clause 10.8, unless amicable settlement is contemplated.
10.3.3	Replace “Engineer” with “Employer”.
10.4.2	Amend Clause 10.4.2 as follows to provide for submission to court: If the other party rejects the invitation to amicable settlement in writing or does not respond in writing to the invitation within 14 days, or amicable settlement is unsuccessful, either party may submit the dispute to court.
10.4.4	Amend Clause 10.4.4 to delete reference to “adjudication” and “arbitration” to read as follows: Save for reference to any portion of any settlement or decision which has been agreed to be final and binding on the parties, no reference shall be made by or on behalf of either party in any subsequent court proceedings, to any outcome of an amicable settlement, or to the fact that any particular evidence was given, or to any submission, statement or admission made in the course of the amicable settlement.
10.5 10.6 & 10.7	The entire provisions of these Clauses are not applicable to this Contract.
10.10.3	Amend Clause 10.10.3 as follows to reword and remove reference to “arbitrator”: The court shall have full power to open up, review and revise any ruling, decision, order, instruction, certificate or valuation of the Engineer and Employer and neither party shall be limited in such proceedings before such court to the evidence or arguments put before the Engineer or Employer for the purpose of obtaining his ruling.

## CONTRACT PARTICIPATION GOAL TARGETS AND CIDB B.U.I.L.D. PROGRAMME

The contractor shall achieve in the performance of the contract the following Contract Participation Goals (CPGs) as described in PG-01.2 (EC): Scope of Work and PG-02.2 (EC): Pricing Assumptions and in accordance with the feasibility study, which forms part of the specifications in the CPG Section of the Specification of this contract.

(a)	Minimum 30% mandatory Subcontracting to SMMEs in accordance with the Preferential Procurement Policy Framework Act, 2000: Preferential Procurement Regulations, 2017 as published in the Government Gazette Notice No. 40553 of 20 January 2017 – Condition of Tender.	<b>Not applicable</b>
(b)	Minimum Targeted Local Manufacturers of Material Contract Participation Goal, in accordance with the cidb Standard for Contract Participation Goals for Targeting Enterprises and Labour through Construction Works Contracts as published in the Government Gazette Notice No. 41237 of 10 November 2017, as amended in cidb Best Practice Project Assessment Scheme Notice No. 43726 of 18 September 2020 – Condition of Contract.	<b>Not applicable</b>

(c)	Minimum Targeted Local Building Material Suppliers Contract Participation Goal in accordance with the cidb Standard for Contract Participation Goals for Targeting Enterprises and Labour through Construction Works Contracts as published in the Government Gazette Notice No. 41237 of 10 November 2017, as amended in cidb Best Practice Project Assessment Scheme Notice No. 43726 of 18 September 2020 – Condition of Contract.	<b>Not applicable</b>
-----	---	-----------------------

**Tender no:** PLK23/01

(d)	Minimum Targeted Local Labour Skills Development Contract Participation Goal in accordance with the cidb Standard for Contract Participation Goals for Targeting Enterprises and Labour through Construction Works Contracts as published in the Government Gazette Notice No. 41237 of 10 November 2017, as amended in cidb Best Practice Project Assessment Scheme Notice No. 43726 of 18 September 2020 – Condition of Contract.	<b>Not applicable</b>
(e)	cidb BUILD Programme: Minimum Targeted Enterprise Development Contract Participation Goal in accordance with the cidb Standard for Indirect Targeting for Enterprise Development through Construction Works Contracts, No 36190 Government Gazette, 25 February 2013, as amended in cidb Best Practice Project Assessment Scheme Notice No. 43726 of 18 September 2020 – Condition of Contract.	<b>Not applicable</b>
(f)	cidb BUILD Programme: Minimum Targeted Contract Skills Development Goal in accordance with the cidb Standard for Developing Skills through Infrastructure Contracts as published in the Government Gazette Notice No. 43495 of 3 July 2020, as amended in cidb Best Practice Project Assessment Scheme Notice No. 43726 of 18 September 2020 as amended in cidb Best Practice Project Assessment Scheme Notice No. 43726 of 18 September 2020 – Condition of Contract.	<b>Not applicable</b>
(g)	DPWI National Youth Service training and development programme (NYS) – Condition of Contract.	<b>Not applicable</b>
(h)	Labour Intensive Works – Condition of Contract.	<b>Not applicable</b>
(i)		<b>Not applicable</b>
(j)		<b>Not applicable</b>

Tender no: PLK23/01

PART 2: DATA PROVIDED BY THE BIDDER	
1.1.1.9	The name of the Bidder is: _____
1.2.1.2	<p>The address of the Bidder is:</p> <p>Postal address:</p> <p>_____</p> <p>_____</p> <p style="text-align: right;"><b>Postal Code:</b> _____</p> <p>Tel: _____ Fax: _____</p> <p>TAX / VAT Registration No: _____</p> <p>Physical address:</p> <p>_____</p> <p>_____</p> <p style="text-align: right;"><b>Postal Code:</b> _____</p> <p>E-mail address: _____</p>
6.2.1	<p>The security to be provided by the Contractor shall be one of the following:</p> <p>(a) Cash deposit of 10 % of the Contact Sum (excl. VAT) <input type="checkbox"/> YES or <input type="checkbox"/> NO</p> <p>(b) Variable performance guarantee of 10 % of the Contract Sum (excl. VAT) <input type="checkbox"/> YES or <input type="checkbox"/> NO</p> <p>(c) Retention of 10 % of the value of the Works (excl. VAT) <input type="checkbox"/> YES or <input type="checkbox"/> NO</p> <p>(d) Cash deposit of 5 % of the Contract Sum (excl. VAT) plus retention of 5 % of the value of the Works (excl. VAT) <input type="checkbox"/> YES or <input type="checkbox"/> NO</p> <p>(e) Performance guarantee of 5 % of the Contract Sum (excl. VAT) plus retention of 5 % of the value of the Works (excl. VAT) <input type="checkbox"/> YES or <input type="checkbox"/> NO</p> <p><b>NB: Guarantees submitted must be issued by either an insurance company duly registered in terms of the Insurance Act [Long-Term Insurance Act, 1998 (Act 52 of 1998) or Short-Term Insurance Act, 1998 (Act 53 of 1998)] or by a bank duly registered in terms of the Banks Act, 1990 (Act 94 of 1990) on the pro-forma referred to above. No alterations or amendments of the wording of the pro-forma will be accepted.</b></p>

## **C1.3 Form of Guarantee**

## DPW-10.2 (EC): VARIABLE CONSTRUCTION GUARANTEE – (GCC (2010) 2<sup>nd</sup> EDITION: 2010)

Director-General  
 Department of Public Works  
 Government of the Republic of South Africa

To: **THE PROJECT MANAGER**  
 Private Bag X9469  
**Polokwane**  
**0700**

Sir,

### VARIABLE CONSTRUCTION GUARANTEE FOR THE EXECUTION OF A CONTRACT IN TERMS OF GCC (2010) 2<sup>nd</sup> EDITION 2010

1. With reference to the contract between \_\_\_\_\_  
 \_\_\_\_\_ (hereinafter referred to as the “**contractor**”) and the Government of the Republic of South Africa in its Department of Public Works (hereinafter referred to as the “**employer**”), Contract/Tender No: \_\_\_\_\_, for the \_\_\_\_\_ (**description of works**) (hereinafter referred to as the “**contract**”) for the sum of R \_\_\_\_\_, (\_\_\_\_\_ **amount in word**), (hereinafter referred to as the “**contract sum**”).

I / We, \_\_\_\_\_

in my/our capacity as \_\_\_\_\_ and hereby

representing \_\_\_\_\_ (hereinafter referred to as the “**guarantor**”) advise that the **guarantor** holds at the **employer’s** disposal the sum of R \_\_\_\_\_, (\_\_\_\_\_ **amount in words**) being 10% of the **contract sum** (excluding VAT), for the due fulfilment of the **contract**.

2. I / We advise that the **guarantor’s** liability in terms of this guarantee shall be as follows:
- (a) From and including the date on which this guarantee is issued and up to and including the day before the date on which the last **certificate of completion** of works is issued, the **guarantor** will be liable in terms of this guarantee to the maximum amount of 10% of the **contract sum** (excluding VAT);
  - (b) The **guarantor’s** liability shall reduce to 5 % of the **value of the works** (excluding VAT) as determined at the date of the last **certificate of completion** of works, subject to such amount not exceeding 10% of the **contract sum** (excluding VAT);
  - (c) This guarantee shall expire on the date of the last **final approval certificate**.
3. The **guarantor** hereby renounces the benefits of the exceptions *non numeratae pecunia; non causa debiti; excussionis et divisionis; and de duobus vel pluribus reis debendi* which could be pleaded against the enforcement of this guarantee, with the meaning and effect whereof I/we declare myself/ourselves to be conversant, and undertake to pay the **employer** the amount guaranteed on receipt of a written demand from the **employer** to do so, stating that (in the **employer’s** opinion and sole discretion):
- (a) the **contractor** has failed or neglected to comply with the terms and/or conditions of the **contract**; or
  - (b) the **contractor’s** estate is sequestrated, liquidated or surrendered in terms of the insolvency laws in force within the Republic of South Africa.

4. Subject to the above, but without in any way detracting from the **employer's** rights to adopt any of the procedures provided for in the **contract**, the said demand can be made by the **employer** at any stage prior to the expiry of this guarantee.
5. The amount paid by the **guarantor** in terms of this guarantee may be retained by the **employer** on condition that upon issue of the last **final approval certificate**, the **employer** shall account to the **guarantor** showing how this amount has been expended and refund any balance due to the **guarantor**.
6. The **employer** shall have the absolute right to arrange his affairs with the **contractor** in any manner which the **employer** deems fit and the **guarantor** shall not have the right to claim his release on account of any conduct alleged to be prejudicial to the **guarantor**. Without derogating from the foregoing, any compromise, extension of the construction period, indulgence, release or variation of the **contractor's** obligation shall not affect the validity of this guarantee.
7. The **guarantor** reserves the right to withdraw from this guarantee at any time by depositing the guaranteed amount with the **employer**, whereupon the **guarantor's** liability ceases.
8. This guarantee is neither negotiable nor transferable, and
  - (a) must be surrendered to the **guarantor** at the time when the **employer** accounts to the **guarantor** in terms of clause 5 above, or
  - (b) shall lapse in accordance with clause 2 (c) above.
9. This guarantee shall not be interpreted as extending the **guarantor's** liability to anything more than payment of the amount guaranteed.

**SIGNED AT** \_\_\_\_\_ **ON THIS** \_\_\_\_\_ **DAY OF**  
 \_\_\_\_\_ **200**\_\_

**AS WITNESS**

1. \_\_\_\_\_
2. \_\_\_\_\_

\_\_\_\_\_  
**By and on behalf of**  
 \_\_\_\_\_  
 \_\_\_\_\_

\_\_\_\_\_  
**(insert the name and physical address of the guarantor)**

**NAME:** \_\_\_\_\_

**CAPACITY:** \_\_\_\_\_  
**(duly authorised thereto by resolution attached marked Annexure A)**

**DATE:** \_\_\_\_\_

- A. No alterations and/or additions of the wording of this form will be accepted.**
- B. The physical address of the guarantor must be clearly indicated and will be regarded as the guarantor's *domicilium citandi et executandi*, for all purposes arising from this guarantee.**

**C. This GUARANTEE must be returned to:** \_\_\_\_\_  
\_\_\_\_\_

## DPW-10.4 (EC): FIXED CONSTRUCTION GUARANTEE - (GCC (2010) 2nd EDITION: 2010)

Director-General  
 Department of Public Works  
 Government of the Republic of South Africa

To: **The Project Manager**  
 Private Bag **X9459**  
**Polokwane**  
**0700**

Sir,

### FIXED CONSTRUCTION GUARANTEE FOR THE EXECUTION OF A CONTRACT IN TERMS OF GCC (2010) 2<sup>ND</sup> EDITION 2010

1. With reference to the contract between \_\_\_\_\_  
 \_\_\_\_\_ (hereinafter referred to as the “**contractor**”) and the Government of the Republic of South Africa in its Department of Public Works (hereinafter referred to as the “**employer**”), Contract/Tender No: \_\_\_\_\_, for the \_\_\_\_\_ (**description of works**) (hereinafter referred to as the “**contract**”), for the sum of R \_\_\_\_\_ (**amount**), ( \_\_\_\_\_ (**amount in words**), (hereinafter referred to as the “**contract sum**”).

I / We, \_\_\_\_\_  
 in my/our capacity as \_\_\_\_\_ and hereby

representing \_\_\_\_\_ (hereinafter referred to as the “**guarantor**”) advise that the **guarantor** holds at the **employer**’s disposal the sum of R \_\_\_\_\_ (**amount**), ( \_\_\_\_\_ (**amount in words**) being 5% of the **contract sum** (excluding VAT), for the due fulfillment of the **contract**.

2. The **guarantor** hereby renounces the benefits of the exceptions *non numeratae pecunia; non causa debiti; excussionis et divisionis; and de duobus vel pluribus reis debendi* which could be pleaded against the enforcement of this guarantee, with the meaning and effect whereof I/we declare myself/ourselves to be conversant, and undertake to pay the **employer** the amount guaranteed on receipt of a written demand from the **employer** to do so, stating that (in the **employer**’s opinion and sole discretion):
  - (a) the **contractor** has failed or neglected to comply with the terms and/or conditions of the **contract**; or
  - (b) the **contractor**’s estate is sequestrated; liquidated or surrendered in terms of the insolvency laws in force within the Republic of South Africa.
3. Subject to the above, but without in any way detracting from the **employer**’s rights to adopt any of the procedures provided for in the **contract**, the said demand can be made by the **employer** at any stage prior to the expiry of this guarantee.
4. The amount paid by the **guarantor** in terms of this guarantee may be retained by the **employer** on condition that upon the issue of the last **final approval certificate**, the **employer** shall account to the **guarantor** showing how this amount has been expended and refund any balance due to the **guarantor**.
5. The **employer** shall have the absolute right to arrange his affairs with the **contractor** in any manner which the **employer** deems fit and the **guarantor** shall not have the right to claim his release on account of any conduct alleged to be prejudicial to the **guarantor**. Without derogating from the

aforegoing, any compromise, extension of the construction period, indulgence, release or variation of the **contractor's** obligation shall not affect the validity of this guarantee.

- 6. The **guarantor** reserves the right to withdraw from this guarantee at any time by depositing the guaranteed amount with the **employer**, whereupon the **guarantor's** liability ceases.
- 7. This guarantee is neither negotiable nor transferable, and
  - (a) must be surrendered to the **guarantor** at the time when the **employer** accounts to the **guarantor** in terms of clause 4 above, or
  - (b) shall lapse on the date of the last **certificate of completion** of works.
- 8. This guarantee shall not be interpreted as extending the **guarantor's** liability to anything more than the payment of the amount guaranteed.

**SIGNED AT** \_\_\_\_\_ **ON THIS** \_\_\_\_\_ **DAY OF**  
 \_\_\_\_\_ **20**\_\_\_\_\_.

**AS WITNESS**

- 1. \_\_\_\_\_
- 2. \_\_\_\_\_

\_\_\_\_\_

**By and on behalf of**

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**(insert the name and physical address of the guarantor)**

**NAME:** \_\_\_\_\_

**CAPACITY:** \_\_\_\_\_  
**(duly authorised thereto by resolution attached marked Annexure A)**

**DATE:** \_\_\_\_\_

- A. No alterations and/or additions of the wording of this form will be accepted.**
- B. The physical address of the guarantor must be clearly indicated and will be regarded as the guarantor's *domicilium citandi et executandi*, for all purposes arising from this guarantee.**
- C. This GUARANTEE must be returned to:** \_\_\_\_\_

\_\_\_\_\_

## **Part C2: Pricing Data**

## **C2.1 Pricing Instructions**

## PG-02.1 (EC) PRICING INSTRUCTIONS – (GCC (2010) 2<sup>nd</sup> EDITION: 2010)

<b>Project title:</b>	<b>PHALABORWA 524: UPGRADING OF KITCHEN AND INSTALLATION OF KITCHEN EQUIPMENT</b>		
<b>Tender no:</b>	PLK23/01	<b>Reference no:</b>	6017/0612

### C2.1 Pricing Instructions

#### 1. GENERAL

The Bill of Quantities forms part of the Contract Documents and must be read and priced in conjunction with all the other documents comprising the Contract Documents, which include the Conditions of Tender, Conditions of Contract, the Specifications (including the Standard, Project and Particular Specifications) and the Drawings.

#### 2. DESCRIPTION OF ITEMS IN THE SCHEDULE

The Bill of Quantities has been drawn up generally in accordance with Civil Engineering Quantities 1990 issued by the SA Institution of Civil Engineers.

The short descriptions of the items in the Bill of Quantities are for identification purposes only and the measurement and payment clause of the Standardized Specifications and the Particular Specifications, read together with the relevant clauses of the Project Specification and directives on the drawings, set out what ancillary or associated work and activities are included in the rates for the operations specified.

#### 3. QUANTITIES REFLECTED IN THE SCHEDULE

The quantities given in the Bill of Quantities are estimates only, and subject to remeasuring during the execution of the work. The Contractor shall obtain the Engineer's detailed instructions for all work before ordering any materials or executing work or making arrangements for it.

The Works as finally completed in accordance with the Contract shall be measured and paid for as specified in the Bill of Quantities and in accordance with the General and Special Conditions of Contract, the Standard, Project and Particular Specifications and the Drawings. Unless otherwise stated, items are measured net in accordance with the Drawings, and no allowance has been made for waste.

The validity of the contract will in no way be affected by differences between the quantities in the Bill of Quantities and the quantities finally certified for payment.

#### 4. PROVISIONAL SUMS

Where Provisional sums or Prime Cost sums are provided for items in the Bill of Quantities, payment for the work done under such items will be made in accordance with Clause 6.6 of the General Conditions of Contract 2010. The Employer reserves the right, during the execution of the works, to adjust the stated amounts upwards or downwards according to the work actually done under the item, or the item may be omitted altogether, without affecting the validity of the Contract.

The Tenderer shall not under any circumstances whatsoever delete or amend any of the sums inserted in the "Amount" column of the Bill of Quantities and in the Summary of the Bill of Quantities unless ordered or authorized in writing by the Employer before closure of tenders. Unauthorized changes made by the Tenderer to provisional items in the Bill of Quantities, or to the provisional percentages and sums in the Summary of the Bill of Quantities will lead to the disqualification of the Tenderer.

#### 5. PRICING OF THE BILL OF QUANTITIES

The prices and rates to be inserted by the Tenderer in the Bill of Quantities shall be the full inclusive prices to be paid by the Employer for the work described under the several items, and shall include full compensation for all costs and expenses that may be required in and for the completion and maintenance during the defects liability period of all the work described and as shown on the drawings as well as all overheads, profits, incidentals and the cost of all general risks, liabilities and obligations set forth or implied in the documents on which the Tender is based.

**Tender no:** PLK23/01

Each item shall be priced and extended to the “Total” column by the Tenderer, with the exception of the items for which only rates are required, or items which already have Prime Cost or Provisional Sums affixed thereto. If the Tenderer omits to price any items in the Bill of Quantities, then these items will be considered to have a nil rate or price.

All items for which terminology such as “inclusive” or “not applicable” have been added by the Tenderer will be regarded as having a nil rate which shall be valid irrespective of any change in quantities during the execution of the Contract.

The Tenderer shall fill in rates for all items where the words “rate only” appear in the “Total” column. “Rate Only” items have been included where:

- (a) an alternative item or material is contemplated;
- (b) variations of specified components in the make-up of a pay item may be expected; and
- (c) no work under the item is foreseen at tender stage but the possibility that such work may be required is not excluded.

For ‘Rate Only’ items no quantities are given in the “Quantity” column but the quoted rate shall apply in the event of work under this item being required. The Tenderer shall however note that in terms of the Tender Data the Tenderer may be asked to reconsider any such rates which the Employer may regard as unbalanced.

All rates and amounts quoted in the Bill of Quantities shall be in rands and cents and shall include all levies and taxes (other than VAT). VAT will be added in the summary of the Bill of Quantities.

The Tenderer shall be deemed to have inspected and examined the Site and its surroundings and information available in connection therewith and to have satisfied himself before submitting his tender (as far as is practicable) as to:

- (a) the form and nature of the Site and its surroundings, including subsurface conditions,
- (b) the hydrological and climatic conditions,
- (c) the extent and nature of work and materials necessary for the execution and completion of the Works,
- (d) the means of access to the Site and the accommodation he may require

and, in general, shall be deemed to have obtained all information (as far as is practicable) as to risks, contingencies and all other circumstances which may influence or affect his Tender.

## **6. CORRECTION OF ENTRIES**

Incorrect entries shall not be erased or obliterated with correction fluid but must be crossed out neatly. The correct figures must be entered above or adjacent to the deleted entry, and the alteration must be initialed by the Tenderer.

## **7. ARITHMETICAL ERRORS**

Arithmetical errors found in the Bill of Quantities as a result of faulty multiplication or addition, will be corrected by the Engineer at the tender evaluation stage, as set out in the Tender Data.

**Tender no:** PLK23/01

## **8. UNITS OF MEASUREMENT**

The units of measurement described in the Bill of Quantities are metric units for which the standard international abbreviations are used. Non-standard abbreviations which may appear in the Bill of Quantities are as follows:

No.	=	Number
%	=	Percent
Sum	=	Lump sum
PCsum	=	Prime cost sum
Prov sum	=	Provisional sum
m <sup>3</sup> .km	=	Cubic metre - kilometre
Km-pas	=	kilometre - pass
m <sup>2</sup> .pass	=	square metre – pass

**Tender no:** PLK23/01

## **C2.1 Bill of Quantities**

**Refer To Bill Of Quantities in Volume 2 - C2.2 Bills of Quantities / Lump Sum Document (if a returnable document)**

## **Part C3: Scope of Work**

## **C3 Scope of Work**

## PG-01.1 (EC) SCOPE OF WORKS – (GCC (2010) 2<sup>nd</sup> EDITION: 2010)

<b>Project title:</b>	<b><i>PHALABORWA 524: UPGRADING OF KITCHEN AND INSTALLATION OF KITCHEN EQUIPMENT</i></b>		
<b>Tender no:</b>	<i>PLK23/01</i>	<b>Reference no:</b>	<i>6017/0612</i>

### C3. Scope of Works

#### CONTENTS

#### C3.1 STANDARD SPECIFICATIONS

#### C3.2 PROJECT SPECIFICATIONS

##### A: GENERAL

##### PS-1 PROJECT DESCRIPTION

Refer to "General and Technical Specification"

##### PS-2 DESCRIPTION OF SITE AND ACCESS

Refer to "General and Technical Specification"

##### PS-3 DETAILS OF CONTRACT

Refer to "General and Technical Specification"

##### PS-4 CONSTRUCTION AND MANAGEMENT REQUIREMENTS

Refer to "General and Technical Specification"

##### PS-5 CONSTRUCTION PROGRAMME

Refer to "General and Technical Specification"

##### PS-6 SITE FACILITIES AVAILABLE

Refer to "General and Technical Specification"

##### PS-7 SITE FACILITIES REQUIRED

Refer to "General and Technical Specification"

##### PS-8 REQUIREMENTS FOR ACCOMMODATION OF TRAFFIC

Refer to "General and Technical Specification"

##### PS-9 OCCUPATIONAL HEALTH AND SAFETY

Refer to "Health and Safety Specifications and Health and Safety Specifications for the Principal Contractor"

##### PS-10 ADVERSE WEATHER CONDITIONS

"General and Technical Specification"

##### B: AMENDMENTS TO THE PARTICULAR SPECIFICATIONS

Refer to "General and Technical Specification"

#### C3.3 PARTICULAR SPECIFICATIONS

List particular specifications

### **C3.4 STANDARD SPECIFICATIONS:**

The standard specifications on which this contract is based are the **South African Bureau of Standards Standardized Specifications for Civil Engineering Construction SABS 1200**. *(Note to compiler. "SABS" has been changed to "SANS"; the SABS 1200 specifications are due to be replaced in the foreseeable future by SANS 2100)*

Although not bound in nor issued with this Document, the following Sections of the Standardized Specifications of SABS 1200 shall form part of this Contract:

**Refer to "General and Technical Specification"**

### **3.5 PROJECT SPECIFICATIONS:**

#### **Status**

The Project Specification, consisting of two parts, forms an integral part of the contract and supplements the Standard Specifications.

Part1 A contains a general description of the works, the site and the requirements to be met.

Part B contains variations, amendments and additions to the Standardized Specifications and, if applicable, the Particular Specifications.

In the event of any discrepancy between a part or parts of the Standardised of Particular Specifications and the Project Specification, the Project Specification shall take precedence. In the event of a discrepancy between the specifications, (including the Project Specifications) and the drawings and / or the Bill of Quantities, the discrepancy shall be resolved by the Engineer before the execution of the work under the relevant item.

#### **3.5.1 GENERAL**

##### **PS-1 PROJECT DESCRIPTION:**

**This project is for upgrading of Kitchen Equipment and related installations at Phalaborwa 524 Signal Military Base Kitchen.**

**This will involve the removal of old kitchen equipment and replacement with new kitchen equipment, such as stoves, Bain Marries and kitchen ventilation systems, as well as installations of some new kitchen equipment. Installation of new Gas line, Fire Suppression and Large-Scale Refrigeration equipment. Maintenance works required on the roof, kitchen floors, and kitchen electrical installations Compliance certification and commissioning of critical installations such as electrical and gas installations**

#### **3.5.2 AMENDMENTS TO THE STANDARD AND PARTICULAR SPECIFICATION:**

**Insert amendments**

#### **C3.5.3 PARTICULAR SPECIFICATIONS:**

SABS 10400: The Applications of the National Building Regulations, as amended

The Machinery and Occupational Health and Safety Act No. 85 of 1993

Occupational Health and Safety Act No. 85 of 1993

SANS 10087-2-2011 (SABS 087-2)

SABS Code of Practice for the Wiring of Premises No. 0142 of 1981

### C3.6 STANDARD MINIMUM REQUIREMENTS

In terms of section 5(2) of the Construction Industry Development Board Act, 2000 (Act no. 38 of 2000) (the Act), the Construction Industry Development Board is empowered to establish and promote best practice standards, Standard Requirements and Guidelines which includes the following but not limited to:

- C3.6.1 cidb Best Practice: Green Building Certification, No. 34158 Government Gazette, 1 April 2011
- C3.6.2 cidb Standard for Developing Skills through Infrastructure Contracts, No. 36760 Government Gazette, 23 August 2013
- C3.6.3 cidb Standard for Indirect Targeting for Enterprise Development through Construction Works Contracts, No 36190 Government Gazette, 25 February 2013
- C3.6.4 Preferential Procurement Policy Framework Act, 2000: Preferential Procurement Regulations, 2017, No. 40553 Government Gazette, 20 January 2017
- C3.6.5 cidb Standard for Contract Participation Goals for Targeting Enterprises and Labour through Construction Works Contracts, No. 41237 Government Gazette, 10 November 2017
- C3.6.6 cidb Standard for Minimum Requirements for Engaging Contractors and Sub-Contractors on Construction Works Contracts, No. 41237 Government Gazette, 10 November 2017
- C3.6.7 cidb Standard for Minimum Requirements for Engaging Contractors and Sub- Contractors on Construction Works Contracts, No. 42021 Government Gazette, 9 November 2018
- C3.6.8 cidb Standard for Developing Skills through Infrastructure Contracts, No. 43495 Government Gazette, 3 July 2020

### C3.7 CONTRACT PARTICIPATION GOALS AND CIDB BUILD PROGRAMME

The contractor shall achieve in the performance of the contract the following Contract Participation Goals (CPGs) as indicated below. Provision for pricing of compliance with the achieving the CPGs is made in the Contract Participation Goal Section of the Bills of Quantities and it is explicitly pointed out that all requirements in respect of the aforementioned are deemed to be priced thereunder and no additional claims in this regard shall be entertained:

#### C3.7.1 Minimum Thirty Percent (30%) Mandatory Sub-contracting Contract Participation Goal

##### **MINIMUM THIRTY PERCENT (30%) MANDATORY SUBCONTRACTING TO SMMEs: IMPLEMENTATION OF PREFERENTIAL PROCUREMENT REGULATIONS 2017**

**30% Mandatory subcontracting is "not applicable" to this project.**

It is the requirement of the employer that the contractor enhances the use of local Small, Micro and Medium Enterprises (SMME's) in executing this contract, irrespective whether the 30% Participation Goal is applicable or not.

The thirty percent (30%) mandatory Sub-contracting shall be achieved in the execution of the contract. in terms of in accordance with the Preferential Procurement Policy Framework Act, 2000: Preferential Procurement Regulations, 2017 as published in the Government Gazette Notice No. 40553 of 20 January 2017.

- (a) SMME's involvement of at least **zero (0) percent** of the tender amount at the time of tender to be sourced from within **zero (0) km** radius of the project site with the intention to maximize use of local SMMEs within **South Africa**,
- (b) SMME's involvement of at least **zero (0) percent** of the Tender Value to be sourced from within **zero (0) km** radius of the project site.

Bidders are cautioned not to under-price items earmarked to be executed by SMMEs as adjustment to too low rates will not be entertained by the Employer.

Bidders to sub-contract a minimum of thirty percent (30%) of the tender amount including VAT at the time of tender (All inclusive, Including VAT). to any one or more of the following categories:

- a. An EME or QSE
- b. An EME or QSE which is at least 51% owned by black people
- c. An EME or QSE which is at least 51% owned by black people who are youth
- d. An EME or QSE which is at least 51% owned by black people who are women
- e. An EME or QSE which is at least 51% owned by black people with disabilities
- f. An EME or QSE which is at least 51% owned by black people living in rural or underdeveloped areas or townships
- g. A co-operative which is at least 51% owned by black people
- h. An EME or QSE which is at least 51% owned by black people who are Military veterans
- i. More than one of the categories referred to in paragraphs (a) to (h).

Bidders to refer to the CSD for a list of prospective sub-contractors provided with the tender. The bidder to refer to the CSD website should the list provided be insufficient.

**Bidders must ensure that the sub-contractors conform to the following:**

- a. Possess relevant accreditation where applicable;
- b. Be registered with relevant bodies (CIDB, various Councils, etc.) where applicable;
- c. Possess necessary capabilities to deliver the sub-contracted work;
- d. Meet the requirements in terms of the stipulated designated groups; and
- e. Geographical located at the place where the project will be delivered. Geographical location must be determined using the following criteria:
  - Relevant Ward. If not available;
  - Relevant neighbouring Wards. If not available;
  - Relevant Local Municipality. If not available;
  - Relevant District Municipality. If not available;
  - Relevant Metro. If not available;
  - Relevant Province. If not available;
  - Relevant Neighbouring Province. And If not available;
  - Anywhere within the borders of South Africa .

It is the bidder's responsibility to source alternative SMMEs should the parties with whom agreements were entered into at the time of tendering either no longer exist or do not perform or render work of an acceptable standard, subject to the approval by the Employer. Failure to achieve the **minimum thirty percent (30%) SMME participation** based on the tender amount including VAT, will result in a **insert applicable percentage, both in words and figures** penalty on the amount of work on which there is no compliance (Excluding VAT), unless the contractor can prove to the Employer's satisfaction that the non-achievement was beyond his/her control.

The bidder shall submit monthly reports in terms of monthly achievement and accumulative targets achieved including audited supporting documentation to the Employer's Representative.

The bidder shall submit monthly reports in terms of monthly achievement and accumulative targets achieved including audited supporting documentation to the Employer's Representative.

### **C3.7.2 Minimum Targeted Local Material Manufacturer Contract Participation Goal**

**The Minimum Targeted Local Building Material Manufacturers CPG is "not applicable" to this project.**

It is the requirement of the employer that the contractor enhances the use of local Small, Micro and Medium Enterprise Local Material Manufacturers (SMME's) in executing this contract, irrespective whether a minimum percentage Participation Goals is applicable or not.

The Minimum Targeted Local Manufacturers of Material Contract Participation Goal, in accordance with the cidb Standard for Contract Participation Goals for Targeting Enterprises and Labour through Construction Works Contracts as published in the Government Gazette Notice No. 41237 of 10 November 2017, as amended in cidb Best Practice Project Assessment Scheme Notice No. 43726 of 18 September 2020.

A Targeted Local Material Manufacturer is a targeted enterprise that operates or maintains a factory or establishment that produces on its premises materials or goods required by the principal contractor for the performance of the contract.

Note: Adapted from SANS 10845-7:2015, definition 2.13

Preference shall be given to the Targeted Local Material Manufacturer where feasible in **South Africa**, and provided that:

- (a) Such materials comply in all respects with the specific requirements of PW371 and SANS specifications,
- (b) The non-availability of such materials shall not adversely affect the desired progress of the specific works,
- (c) The use of such suppliers shall not constitute grounds for any claim for increased cost in respect thereof,
- (d) Materials of at least **zero (0) percent** of the total value of materials purchased excluding VAT to be sourced from within **zero (0) km** radius of the project site,
- (e) Material of at least **zero (0) percent** of the total value of materials purchased excluding VAT to be sourced from within **zero (0) km** radius of the project site.

Failure to achieve the minimum **zero (0) percent** Targeted Local Material Manufacturer participation expressed as a percentage of the original tender amount, excluding allowances and VAT, will result in a **zero (0) percent** penalty of the prorated targeted value of materials not complied with unless the contractor can prove to the Employer's satisfaction that the non-achievement was beyond his/her control.

The bidder shall submit monthly reports in terms of monthly achievement and accumulative targets achieved including audited supporting documentation to the Employer's Representative.

### **C3.7.3 Minimum Targeted-Local Building Material Suppliers Contract Participation Goal**

**The Minimum Targeted Local Building Material Suppliers CPG is "not applicable" to this project.**

It is the requirement of the employer that the contractor enhances the use of local Small, Micro and Medium Enterprise Local Material Suppliers (SMME's) in executing this contract, irrespective whether a minimum percentage Participation Goals is applicable or not.

The Minimum Targeted Local Manufacturers of Material Contract Participation Goal shall be achieved in accordance with the cidb Standard for Contract Participation Goals for Targeting Enterprises and Labour through Construction Works Contracts as published in the Government Gazette Notice No. 41237 of 10 November 2017, as amended in cidb Best Practice Project Assessment Scheme Notice No. 43726 of 18 September 2020 – Condition of Contract..

A targeted supplier is a targeted enterprise that

- a) owns, operates or maintains a store, warehouse or other establishment in which goods are bought, kept in stock and regularly sold to wholesalers, retailers or the public in the usual course of business; and
- b) engages, as its principal business and in its own name, in the purchase and sale of goods.

Note: Adapted from SANS 10845-7:2015, definition 2.14

Preference shall be given to the local material suppliers where feasible in the **South Africa**, and provided that:

- (a) Such materials comply in all respects with the specific requirements of PW371 and SANS specifications,
- (b) The none availability of such materials shall not adversely affect the desired progress of the specific works,

- (c) The use of such suppliers shall not constitute grounds for any claim for increased cost in respect thereof,
- (d) Materials of at least **zero (0) percent** of the total value of materials purchased excluding VAT to be sourced from within **zero (0) km** of the project site,
- (e) Material of at least **zero (0) percent** of the total value of materials purchased excluding VAT to be sourced from within **zero (0)km** of the project site.

Failure to achieve the minimum **zero (0) percent** Targeted Local Material Manufacturer participation expressed as a percentage of the original tender amount, excluding allowances and VAT, will result in a **zero (0) percent** penalty of the prorated targeted value of materials not complied with, unless the contractor can prove to the Employer's satisfaction that the non-achievement was beyond his/her control.

The bidder shall submit monthly reports in terms of monthly achievement and accumulative targets achieved including audited supporting documentation to the Employer's Representative.

#### **C3.7.4 Minimum Targeted Local Labour Skills Development Contract Participation Goal**

**The Minimum Targeted Local Labour Skills Development CPG is "not applicable" to this project.**

It is the requirement of the employer that the contractor enhances the use of local labour in executing this contract. This is required to be done through the use of both traditional building techniques and labour-intensive construction techniques careful and considered construction planning and implemented in the project irrespective whether a minimum percentage Participation Goal is applicable or not.

The Minimum Targeted Local Skills Development Contract Participation Goal shall be achieved in accordance with the cidb Standard for Contract Participation Goals for Targeting Enterprises and Labour through Construction Works Contracts as published in the Government Gazette Notice No. 41237 of 10 November 2017, as amended in cidb Best Practice Project Assessment Scheme Notice No. 43726 of 18 September 2020 – Condition of Contract.

Targeted labour: individuals who:

- a) are employed by the principal contractor, sub-contractor or targeted enterprises in the performance of the contract;
- b) are defined as the target group in the targeting data; and
- c) permanently reside in the target area or who are recognized as being residents of the target area on the basis of identification and association with and recognition by the residents of the target area.

Adapted from SANS 10845-7:2015, definition 2.12

Targeting of labour by skills categories is only permissible within categories of semi-skilled and unskilled labour.

Contract participation goals for semi-skilled and unskilled labour shall be limited to on-the-job training to targeted labour to enable such labour to master the basic work techniques required to undertake the work in accordance with the requirements of the contract and in a manner that does not compromise worker health and safety. In the case of targeted labour, the certification of records shall be in accordance with SANS 10845-8.

Beneficiaries will be sourced from the **South Africa** for the full duration of the Construction Period, employed by either the principal contractor, sub-contractors or targeted enterprises. The total number of working days to complete the Works amount to **(refer to the construction period)** working days. The minimum CPG participation for Targeted Local Labour Skills Development is **zero (0) percent**, expressed as a percentage of the total number of working days required to complete the Works. The contractor shall attain or exceed the CPG in the performance of the contract. Failure to achieve the minimum Targeted Local Labour Skills Development CPG will result in a payment reduction of **R5 000** (Excluding VAT), per working day which training has not been provided to the workforce in attendance, unless the contractor can prove to the Employer's satisfaction that the non-achievement was beyond his/her control.

The bidder shall submit monthly reports in terms of monthly achievement and accumulative targets achieved including audited supporting documentation to the Employer's Representative.

### **C3.7.5 CIDB BUILD PROGRAMME: Minimum Targeted Enterprise Development Contract Participation Goal**

**The Minimum Targeted Enterprise Development CPG is "not applicable" to this project.**

The aim of this best practice standard for indirect targeting for enterprise development in accordance with the Standard for Indirect Targeting for Enterprise Development (published in Government Gazette 36190 of 25 February 2013), as amended in cidb Best Practice Project Assessment Scheme Notice No. 43726 of 18 September 2020 – Condition of Contract, is to promote enterprise development by providing for a minimum contract participation goal (CPG) of **five percent (5%)** of the contract amount as defined in the Standard (Tender amount, excluding allowances and VAT on selected contracts to be undertaken by joint-venture partners or to be sub-contracted to developing contractors that are also to be beneficiaries of enterprise development support from the main contractor.

The lead partner or main contractor shall dedicate a **minimum five percent (5%)** of the tender value at the time of award, excluding allowances and VAT, to provide developmental support to targeted subcontractor or joint venture partner applicable to contracts in Grades 7 to 9, General Building and Civil Engineering contracts. Preference will be given to N/A Enterprises.

The contractor shall attain or exceed the enterprise development goal in the performance of the contract. Failing to achieve the Participation Goal will result in A) a thirty percent (30%) penalty of the value not achieved, excluding VAT, unless the contractor can prove to the Employer's satisfaction that the non-achievement was beyond his/her control.

The bidder shall submit monthly reports in terms of monthly achievement and accumulative targets achieved including audited supporting documentation to the Employer's Representative.

#### **C3.7.5.1 Criteria**

The main or lead partner of the successful bidder shall:

- (a) There must be a needs analysis for indirect targeting and development or skill standard and should be development in at least any two developmental areas namely;
  - Administrative and cost control systems
  - construction management systems and plans
  - planning, tendering and programming
  - business; technical; procurement skills
  - legal compliance
  - credit rating/history; financial loan capacity/history
  - contractual knowledge
- (b) The above needs analysis shall be mutually agreed upon between contractor and targeted enterprise
- (c) The contractor shall appoint an enterprise development coordinator to:
  - perform needs analysis on the targeted enterprise to identify developmental goals
  - develop a project specific enterprise development plan to improve the targeted enterprise/s performance in the identified developmental areas
  - provide internal mentorship support to improve the targeted enterprise/s performance
  - monitor and submit to the employer's representative a monthly enterprise development report thereby reporting on the progress of the agreed development areas with the targeted enterprise/s
  - submit a project completion report to the Employer's representative for each targeted enterprise.

#### C3.7.5.2 Management

The contractor shall provide a competent person/s to provide internal mentorship to the Targeted Enterprise/s in the two agreed developmental areas.

#### C3.7.5.3 Competence Criteria for an Enterprise Development Co-ordinator

The enterprise development co-ordinator shall have the following competencies:

- Minimum experience of 5 years in the construction industry at Managerial level as a Site Agent, Contracts Manager, Site Manager, Construction Manager, Business Development Manager or Enterprise Development Manager.
- Minimum experience of 2 years in training and development in Building or Construction; and
- National Diploma or B Degree in the Built Environment or Business Management

#### C3.7.5.4 Format of Communications

The contractor shall submit to the Employer's Representative:

- *Project interim reports* in the specified format (**ED105P**) detailing interim values of the CPG that was achieved together with an assessment of the enterprise development support provided should be tabled and discussed at least monthly at progress meetings between employer's representative and the contractor;
- *Project completion report* in the specified format (**ED101P**) to the Employer's Representative for acceptance within 15 days of achieving practical completion. The report shall include the value of the CPG that was certified in accordance with the contract, cidb registration numbers of each and every targeted enterprise, and the value of the subcontracted works or of the joint venture entered into; and the participation parameter
- *Enterprise development declaration* (**ED104P**).

#### C3.7.5.5 The Key Personal

The contractor shall appoint an Enterprise Development Co-ordinator and a competent person/s to provide internal mentorship.

#### C3.7.5.6 Management Meetings

The contractor shall report to the Employer's Representative on the implementation and progress of the targeted enterprise development and CPG at monthly progress site meetings.

#### C3.7.5.7 Forms for contract administration

The contractor shall submit to the Employer's Representative the following proformas:

- Form ED 105P Project Interim Report
- Form ED 104P Enterprise Development Declaration
- Form ED 101P Project Completion Report

#### C3.7.5.8 Records

The contractor shall:

- keep records of the targeted enterprise development

- keep records of the payments made to the targeted enterprises in relation to the CPG.
- ensure all the documentation required in terms of the Standard is provided with each monthly progress payment certificate and according to a prescribed format where applicable.

#### C3.7.5.9 Payment Certificates

The contractor shall:

- achieve the measurable CPG and providing enterprise development support to the targeted enterprise/s as per the Standard.
- submit payment certificates to the Employer Representative at intervals determined in the Contract.

#### C3.7.5.10 Compliance requirements

##### **Non-compliance with the Best Practice Project Assessment Scheme**

The wording of regulation 27A of the cidb regulations makes provision for the Board to enforce the cidb code of conduct in the event of clients being found to be in breach of the best practice project assessment scheme.

- Not including the requirements of the cidb standards in the conditions of tender
- Not registering the award of contract on the cidb Register of Projects (RoP)
- Not reporting practical completion on the cidb Register of Projects (RoP)

#### 3.7.6 **CIDB BUILD PROGRAMME: Minimum Targeted Contract Skills Development Goal (CSDG)**

**The Minimum Targeted Contract Skills Development CPG is "not applicable" to this project.**

The contractor shall achieve or exceed in the performance of the contract the Contract Skills Development Goal (CSDG) established in the Standard for Developing Skills through Infrastructure Contracts (published in Government Gazette No 43495 of 3 July 2020, as amended in cidb Best Practice Project Assessment Scheme Notice No. 43726 of 18 September 2020 – Condition of Contract.

Failing to achieve the targeted Contract Skills Development Goal will result in A) a **thirty percent (30%)** penalty of the value of the portion not achieved, excluding VAT, and B) the issuing of completion certificates only after the completion certificate of achieving the skills development goal, counter-signed by the relevant individuals has been submitted, unless the contractor can prove to the Employer's satisfaction that the non-achievement was beyond his/her control.

The contractor shall apportion the learners in the different construction activities based on the scope of work. The cost of accommodating learners will be determined by using Table 3 in the Standard and this cost will be used to determine the value in Rand and will be added to the provision for training as provided for in the Preliminary and General section in the Bill of Quantities/Pricing schedules/Activity schedule.

#### C3.7.6.1 Methodology

The contractor shall achieve the measurable contract skills development goal by providing opportunities to learners requiring structured workplace learning using one or a combination of any of the following in relation to work directly related to the contract or order:

Method 1: structured workplace learning opportunities for learners towards the attainment of a part or a full occupational qualification;

Method 2: structured workplace learning opportunities for apprentices or other artisan learners towards the attainment of a trade qualification leading to a listed trade (GG No. 35625, 31 August

2012) subject to at least sixty percent (60%) of the artisan learners being holders of public TVET college qualifications;

Method 3: work integrated learning opportunities for University of Technology or Comprehensive University students completing their national diplomas;

Method 4: structured workplace learning opportunities for candidates towards registration in a professional category by a statutory council listed in Table 1 above.

The contract skills participation goals, expressed in Rand, shall not be less than the contract amount multiplied by a percentage (%) factor given in Table 2 in the Standard for the applicable class of construction works.

*Table 2: Contracting skills development goals for different classes of engineering and construction works contracts*

Class of construction works as identified in terms of Regulation 25 (3) of the Construction Industry Regulations 2004		Construction skills development goal (CSDG) (%)
Designation	Description	
CE	Civil Engineering	0.25
CE and GB	Civil engineering and General Building	0.375
EE	Electrical Engineering works (buildings)	0.25
EP	Electrical Engineering works (infrastructure)	0.25
GB	General Building	0.5
ME	Mechanical Engineering works	0.25
SB	Specialist	0.25

The contractor shall apportion the learners in the different construction activities based on the scope of work. The cost of accommodating learners will be determined by using Table 3 in the Standard and this cost will be used to determine the value in Rand and will be added to the provision for training as provided for in the Preliminary and General section in the Bill of Quantities/Pricing schedules/Activity schedule.

*Table 3: Notional Cost of Training per Headcount*

*Source: cidb Standard for Skills Development*

Type of Training Opportunity	Provision for stipends (Unemployed learners only)	Provisions for mentorship	Provisions for additional costs*	Total costs	
				Unemployed learners	Employed learners
<b>Method 1</b>					
Occupational qualification	R7 000	R0	R9 000	R16 000	R9 000
<b>Method 2</b>					
TVET College graduates	R14 000	R0	R9 000	R23 000	N/A
Apprenticeship	R14 000	R0	R12 000	R26 000	R12 000
<b>Method 3</b>					
P1 and P2 learners	R24 000	R20 000	R4 500	R48 500	N/A
<b>Method 4</b>					
Candidates with a 3 year diploma	R37 000	R20 000	R4 500	R61 500	R20 000
Candidates with 4 year qualification	R47 000	R20 000	R4 500	R71 500	R20 000

*Note: the required CPG will be recalculated based on the awarded tender amount and "Contract amount" once the beneficiaries have been appointed and actual costs are known. The notional cost of providing training opportunities will increase by CPI on an annual basis based on April CPI. Should the rates increase after bid award or during construction the rates will be adjusted as a re-measurable item.*

- (a) (a) The successful contractor may employ part/full occupational qualification learners, trade qualification learners, work integrated learners or candidates directly or through a Skills Development Agency (SDA), (A1 - List of cidb accredited SDAs).
- (b) The successful contractor must employ at least sixty percent (60%) of the learners from an FET / TVET college should the contractor select to have part/full occupational qualification learners and trade qualification learners contributing to the CSDG.
- (c) The successful contractor shall employ at least **zero (0) percent** from eligible part/full occupational qualification learners, trade qualification learners, work integrated learners or candidates in the employment of the employer.
- (d) The successful contractor shall ensure that no single method shall contribute more than seventy five percent (75%) of the CSDG for the contract.
- (e) The successful contractor may only place thirty three percent (33%) employed employees or that of his subcontractors contributing to the CSDG.
- (f) The contractor shall employ at least sixty percent (60%) of the learners from a Public FET / TVET college should the contractor select to have trade qualification learners (Method 2) contributing to the CSDG.
- (g) One of the objectives of the project is to train **zero (0) percent** Occupational qualifications, trade qualification, work integrated learners – P1 and P2 learners, professional candidates.

#### C3.7.6.2 Management

- (a) The successful contractor must keep site records regarding the part/full occupational qualification learners', trade qualification learners', work integrated learners' or candidates' (delete that which is not applicable) progress, site attendance, hours worked and other relevant information as required by the Standard.
- (b) The successful contractor shall provide the required number of appropriately qualified mentors to the maximum number of part/full occupational qualification learners, trade qualification learners, work integrated learners in the proportion as specified in the Standard.

- (c) The successful contractor shall provide a supervisor to manage the training of the part/full occupational qualification learners, trade qualification learners, work integrated learners, candidate
- (d) The successful contractor shall submit to the employer's representative a baseline training plan in the specified format (Pro-forma A2) for the part/full occupational qualification learners, trade qualification learners, work integrated learners, candidates 30 days of start of the contract.
- (e) The successful contractor shall submit to the employer's representative project interim report in the specified format (Pro-forma A3) on the progress of each of part/full occupational qualification learner, trade qualification learner, work integrated learner, candidate three months.
- (f) The successful contractor shall submit to the employer's representative the names and particulars in the specified format (Pro-forma A4) of the supervisor, mentors for the part/full occupational qualification learners, trade qualification learners, work integrated learners or candidates within 30 days of start of the contract.
- (g) The successful contractor shall keep a daily record of all the part/full occupational qualification learners, trade qualification learners, work integrated learners, candidates on site and their daily activities and shall be made available to the employer's representative on request.
- (h) The successful contractor shall submit to the employer's representative the reports on the progress and status of the part/full occupational qualification learners, trade qualification learners, work integrated learners or candidates with the monthly invoice for the payment certificate.
- (i) The successful contractor shall have health and safety inductions for all part/full occupational qualification learners, trade qualification learners, work integrated learners or candidates.
- (j) The successful contractor shall conduct entry and exit medical tests of all part/full occupational qualification learners, trade qualification learners, work integrated learners or candidates
- (k) The successful contractor shall provide personal protective equipment (PPE) to all part/full occupational qualification learners, trade qualification learners, work integrated learners or candidates at the start of their employment on site.
- (l) Based on the agreed skills methods the contractor may employ part/full Occupational Qualification Learners and /or Trade Qualification Learners and/or Work Integrated Learners and/or Candidates directly or through a Skills Development Agency (SDA), training provider or skills development facilitator (Form A1 - List of cidb accredited SDAs). The contractor shall ensure that no more than one Method shall be applied to any individual concurrently in the calculation of the CSDG for the contract.

### **C3.7.7 NATIONAL YOUTH SERVICE TRAINING AND DEVELOPMENT PROGRAMME (NYS)**

**The National Youth Service Training and Development Programme is *"not applicable"* to this project.**

The programme shall be implemented in terms of the Implementation of the National Youth Service Programme under the Expanded Public Works (EPWP) and shall be priced in the CPG section of the Bills of Quantities. Monthly reports are to be submitted to the Employer's Representative.

Failure by the contractors to achieve the specified number to be trained in the NYS section of the CPG section within the Bills of quantities will result in a payment reduction as per bill of quantities per person, excluding VAT unless the contractor can prove to the Employer's satisfaction that the non-achievement was beyond his/her control.

### **C3.7.8 LABOUR-INTENSIVE WORKS**

**Labour Intensive Works is *"not applicable"* to this project.**

Where labour intensive work is specified in the Bill of Qualities and indicated by “LI” the contractor must price for and include in rates. Contractors are expected to use their initiative to identify additional activities that can be done labour-intensively to comply with the set minimum labour intensity target. Allowance must be made for submitting monthly reports illustrating the value of the works executed under Labour Intensive Works.

Failure by the contractor to achieve the specified value of the Labour Intensive Participation Goal as stipulated within the Bills of quantities will result in a thirty percent (30%) penalty of the value of the works not done by means of labour intensive methods, excluding VAT, unless the contractor can prove to the Employer’s satisfaction that the non-achievement was beyond his/her control.

Employer’s objectives:

The employer’s objectives are to deliver public infrastructure using labour-intensive methods in accordance with EPWP Guidelines.

Labour-intensive works:

Labour-intensive works shall be constructed/maintained using local workers who are temporarily employed in terms of the scope of work. A **thirty percent (30%)** penalty of the value of the works will be imposed on items where unauthorised use of plant was used to carry out work which was to be done labour-intensively.

Labour-intensive competencies of supervisory and management staff:

Contractors shall only engage supervisory and management staff in labour-intensive works that have completed the skills programme including Foremen/ Supervisors at NQF level 4 “National Certificate: Supervision of Civil Engineering Construction Processes” and Site Agent/ Manager at NQF level 5 “Manage Labour-Intensive Construction Processes” or equivalent QCTO qualifications (See Appendix C) at NQF outlined in Table 1

### C3.7.8.1 GENERIC LABOUR-INTENSIVE SPECIFICATION

Contractors are referred to the Guidelines for the Implementation of Labour-intensive Infrastructure Projects under the Expanded Public Works Programme (EPWP) for the generic labour-intensive specification applicable to the contract.

This specification establishes general requirements for activities which are to be executed by hand involving the following:

- trenches having a depth of less than 1.5 metres
- stormwater drainage
- roads
- sidewalks and non-motorised transport infrastructure
- water and sanitation

**Precedence**

Where this specification is in conflict with any other standard or specification referred to in the Scope of Works to this Contract, the requirements of this specification shall prevail

**Hand excavatable material**

Hand excavatable material is:

**a) granular materials:**

- i) whose consistency when profiled may in terms of table 2 be classified as very loose, loose, medium dense, or dense; or
- ii) where the material is a gravel having a maximum particle size of 10mm and contains no cobbles or isolated boulders, no more than 15 blows of a dynamic cone penetrometer is required to penetrate 100mm;

**b) cohesive materials:**

- i) whose consistency when profiled may in terms of table 2 be classified as very soft, soft, firm, stiff and stiff / very stiff; or
- ii) where the material is a gravel having a maximum particle size of 10mm and contains no cobbles or isolated boulders, no more than 8 blows of a dynamic cone penetrometer is required to penetrate 100mm;

**Note**

- 1) A boulder is material with a particle size greater than 200mm, a cobble and gravel is material between 60 and 200mm.
- 2) A dynamic cone penetrometer is an instrument used to measure the in-situ shear resistance of a soil comprising a drop weight of approximately 10 kg which falls through a height of 400mm and drives a cone having a maximum diameter of 20mm (cone angle of 60° with respect to the horizontal) into the material being used.

<b>Table 2: Consistency of materials when profiled</b>			
<b>GRANULAR MATERIALS</b>		<b>COHESIVE MATERIALS</b>	
<b>CONSISTENCY</b>	<b>DESCRIPTION</b>	<b>CONSISTENCY</b>	<b>DESCRIPTION</b>
Very loose	Crumbles very easily when scraped with a geological pick.	Very soft	Geological pick head can easily be pushed in as far as the shaft of the handle.
Loose	Small resistance to penetration by sharp end of a geological pick.	Soft	Easily dented by thumb; sharp end of a geological pick can be pushed in 30-40 mm; can be moulded by fingers with some pressure.
Medium dense	Considerable resistance to penetration by sharp end of a geological pick.	Firm	Indented by thumb with effort; sharp end of geological pick can be pushed in up to 10 mm; very difficult to mould with fingers; can just be penetrated with an ordinary hand spade.
Dense	Very high resistance to penetration by the sharp end of a geological pick; requires many blows for excavation.	Stiff	Can be indented by thumb-nail; slight indentation produced by pushing geological pick point into soil; cannot be moulded by fingers.
Very dense	High resistance to repeated blows of a geological pick.	Very stiff	Indented by thumb-nail with difficulty; slight indentation produced by blow of a geological pick point.

**Trench excavation**

All hand excavatable material in trenches having a depth of less than 1,5 metres shall be excavated by hand.

**Compaction of backfilling to trenches (areas not subject to traffic)**

Backfilling to trenches shall be placed in layers of thickness (before compaction) not exceeding 100mm. Each layer shall be compacted using hand stampers;

- a) to ninety percent (90%) Mod AASHTO;
- b) such that in excess of 5 blows of a dynamic cone penetrometer (DCP) is required to penetrate 100 mm of the backfill, provided that backfill does not comprise more than ten (10%) gravel of size less than 10mm and contains no isolated boulders, or
- c) such that the density of the compacted trench backfill is not less than that of the surrounding undisturbed soil when tested comparatively with a DCP.

**Excavation**

All excavatable material including topsoil classified as hand excavatable shall be excavated by hand. Harder material may be loosened by mechanical means prior to excavation by hand. Any material which presents the possibility of danger or injury to workers shall not be excavated by hand.

### **Clearing and grubbing**

Grass and bushes shall be cleared by hand.

### **Shaping**

All shaping shall be undertaken by hand.

### **Loading**

All loading shall be done by hand. Haulage equipment should be selected in a manner that allows loading by hand to the greatest extent possible.

### **Haul**

Excavation material shall be hauled to its point of placement by means of wheelbarrows where the haul distance is not greater than 150m.

### **Offloading**

All material, however transported, is to be off-loaded by hand, unless tipper-trucks are utilised for haulage.

### **Spreading**

All material shall be spread by hand.

### **Compaction**

Small areas may be compacted by hand provided that the specified compaction is achieved. Appropriate rollers should be used where higher (than can be achieved by hand) levels of compaction are required or for large areas.

### **Grassing**

All grassing shall be undertaken by sprigging, sodding, or seeding by hand.

### **Stone pitching and rubble concrete masonry**

All stone required for stone pitching and rubble concrete masonry, whether grouted or dry, must to be collected, loaded, off loaded and placed by hand.

Sand and stone shall be hauled to its point of placement by means of wheelbarrows where the haul distance is not greater than 150m.

Grout shall be mixed and placed by hand.

### **Manufactured Elements**

Elements manufactured or supplied by the Contractor, such as manhole rings and cover slabs, precast concrete planks and pipes, masonry units and edge beams shall not individually, have a mass of more than 320kg. Where the mass of an element exceeds 55 kg, consideration should be given to the size of the element relative to its total mass related to the number of workers who would be needed to lift such mass

## **C3.8 Submission of Accrual Reports**

The Contractor shall submit accrual reports to the client representative at the end of March and September each year for the duration of the Service Contract period from the date of appointment up to and including project closeout. This is to ensure that PMTE complies with the accounting framework GRAP, which requires that PMTE disclose all its accruals as at the end of each reporting date.

## **C.3.9 Submission of Monthly Local Material Utilisation Report (Local Content)**

The contractors shall be responsible for record keeping, documenting and submission of monthly local material utilization report with supporting documentation to the Employer's representative within 7 working days of the beginning of the successive month, in terms of DTI&C designated industry/sector/sub-sector schedule as per the PA36 and Annexures C attached to the tender document. The final percentage achievement to be reconciled upon completion of the project and form part of the final account.

Failure by the contractors to achieve the specified percentage of local content per designated industry/sector/sub-sector as listed will result in a thirty percent thirty percent (30%) penalty of the

value not achieved, excluding VAT, unless the contractor can prove to the Employer's satisfaction that the non-achievement was beyond his/her control. Allowance must be made for submitting monthly reports illustrating the value of local material utilisation report.

## Examples of calculating CPGs and related penalties

CPGs values are based on the Tender Amount at the time of the award. Determining the actual values is based either on the Tender Amount including allowances and Vat or the Tender Amount at the time of award excluding allowances and VAT, where Allowances include the following:

- Provisional amounts
- CPG allowances
- Nominated and/or selected subcontractors
- Contract price adjustment (Not provided for within the B of Q by NDPWI)
- Contingency amounts (Not provided for within the B of Q by NDPWI)

**CPG values in the CPG Bill of Quantities Section will be recalculated based on the “Tender Amount” or the “Contract Amount” which ever applicable and the provisional amounts adjusted accordingly. Sanctions (penalties) are applicable to all CPGs where the contractor fails to achieve the minimum specified requirements, unless the contractor can prove to the Employer’s satisfaction that the non-achievement was beyond his/her control. No penalties will be applied should the CPG value, based on the original “Tender Amount” or the “Contract Amount”, has been achieved.**

### 1.1. 30% SMME mandatory subcontracting CPG

When applicable, a minimum of 30% of the total tender amount at the time of award, including all allowances and VAT are to be subcontracted to SMMEs.

#### CPG calculation example:

“Tender Amount” = R150 mil

CPG 30% subcontracting value = R45 Mil

#### Calculation of penalty:

Percentage penalty applicable = 5% as specified in the Scope of Works (PG01.1)

CPG Achieved = R30 Mil (R15 Mil shortfall)

Penalty = R15 Mil x 5% = R750 000 Excl. VAT

### 1.2 Targeted Local Building Material Manufacturers CPG

When applicable, the CPG is expressed as a percentage of the “Contract Amount”, i.e. the Tender Amount at the time of award excluding allowances and VAT.

#### CPG calculation example:

“Tender Amount” = R150 Mil all inclusive of allowances and VAT

“Contract Amount” = R130 Mil (Tender Amount at the time of award excluding allowances and VAT)

CPG to be achieved = 5% as specified in the Scope of Works (PG01.1)

CPG target value = R130 Mil x 5% = R 6,5 Mil (Value of material to be purchased from local manufacturers, excluding VAT)

#### Calculation of penalty:

Percentage penalty applicable = 10% as specified in the Scope of Works (PG01.1)

CPG target value = R6,5 Mil excluding VAT

CPG Achieved = R5,5 Mil (R1 Mil shortfall) excluding VAT

Penalty = R1 Mil x 10% = R100 000 excluding VAT

### 1.3 Targeted Local Building Material Suppliers CPG

When applicable, the CPG is expressed as a percentage of the “Contract Amount”, i.e. the Tender Amount at the time of award excluding allowances and VAT.

#### CPG calculation example:

“Tender Amount” = R150 Mil all inclusive of allowances and VAT

“Contract Amount” = R130 Mil (Tender Amount at the time of award excluding allowances and VAT)

CPG to be achieved = 5% as specified in the Scope of Works (PG01.1)

CPG target value = R130 Mil x 5% = R 6,5 Mil (Value of material to be purchased from local suppliers, excluding VAT)

Calculation of penalty:

Percentage penalty applicable = 20% as specified in the Scope of Works (PG01.1)

CPG target value = R6,5 Mil excluding VAT

CPG Achieved = R5,5 Mil (R1 Mil shortfall) excluding VAT

Penalty = R1 Mil x 20% = R200 000 excluding VAT

#### **1.4 Targeted Local Labour Skills Development CPG**

When applicable, the CPG is expressed as a percentage of the total number working days required to complete the Works.

CPG calculation example:

“Tender Amount” = R150 Mil all inclusive of allowances and VAT

“Contract amount” = R130 Mil (Tender Amount at the time of award excluding allowances and VAT)

Number of working days required to complete the Works based on the construction period = 600 days

CPG percentage participation to be achieved = 30% as specified in the Scope of Works (PG01.1)

Required number of working days training to be provided = 180 days (600 x 30%)

Calculation of penalty:

Payment reduction = R 5 000 per day for not providing training as specified in the Scope of Works (PG01.1)

CPG = 600 working days x 30% = 180 working days training to be provided

CPG Achieved = 160 days (20 days shortfall where no training was provided)

Penalty = 20 days x R5 000 payment reduction per day= R100 000 excluding VAT

#### **1.5 National Youth Service Programme (NYS) CPG**

When applicable, a separate NYS Bill of Quantities will be included in the tender documentation will indicate the number of beneficiaries to be trained.

Calculation of penalty:

Payment reduction per person not trained as stipulated in the NYS Bill of Quantities = R 2 500 per person.

Total number of NYS Beneficiaries as stipulated in the NYS Bill of Quantities = 25

Total Number of NYS beneficiaries trained = 20 (shortfall of 5 beneficiaries)

Penalty = 5 x R2 500 = R12 500 Excl. VAT

#### **1.6 Labour Intensive Works CPG**

When applicable, the work to be done by way of Labour intensive methods are specified in the Bills of Quantities with a “LI”.

CPG calculation example:

“Tender Amount” = R150 Mil all inclusive of allowances and VAT

“Contract Amount” = R130 Mil (Tender Amount at the time of award excluding allowances and VAT)

CPG value = R10 Mil (Total value of labour-intensive works specified in the Bills of Quantities)

Calculation of penalty:

CPG value = R10 Mil

Percentage penalty applicable = 30% as specified in the PG01.1 Scope of Work

CPG Achieved = 9 Mil (R1 Mil shortfall)

Penalty = R1 Mil x 30% = R300 000 Excl. VAT

#### **1.7 Cidb BUILD Programme: Enterprise Development**

When applicable, the Enterprise Development CPG expressed as a percentage of the “Contract amount” = Tender amount at the time of award excluding allowances and VAT. Failure to achieve the minimum Targeted Local Labour Skills Development CPG will result in a payment reduction of an amount specified in the Scope of Works (PG01.1) per working day where training was not provided.

The monetary value of training to be provided is stipulated in the CPG BoQ section. The number of beneficiaries to be trained is dependent on the “Contract Amount” as well the number of beneficiaries appointed which will generally resort under the Grade 1 and 2 cidb categories. The provisional amount will therefore be adjusted in terms of the “contract Amount”, the number of beneficiaries to be trained and the actual cost for providing the training.

**Part 1: Calculation of 5% CPG example:**

“Tender Amount” = R150 Mil all inclusive of allowances and VAT

“Contract Amount” = R130 Mil (Tender Amount at the time of award excluding allowances and VAT)

CPG percentage participation to be achieved = 5% as specified in the Scope of Works (PG01.1)

CPG value = R6,5 Mil (Value of work to be subcontracted to emerging enterprises)

**Calculation of penalty**

Percentage penalty applicable = 30% as specified in the Scope of Works (PG01.1)

CPG Minimum 5% = R6,5 Mil

Achieved = R5,5 Mil (Only subcontracted work to the value of R5,5 Mil, i.e. R1 Mil shortfall)

Penalty = R1 Mil x 30% = R300 000 Excl. VAT

**Part 2: Calculations in terms of training to be done:**

The number of enterprises to be developed is subject to the contract amount and the apportionment of the work as per Example 1 below.

Number of enterprises to be trained = 6 x 1 GB subcontractors

Total cost for training = R 1 660 000

**Calculation of penalty**

Total number of enterprises to be trained = 6

Total number trained = 4 (2 Shortfall)

Training cost per beneficiary = R1 660 000 / 6 = R 276 666,67 per beneficiary

Penalty = R 276 666,67 x 2 x 30% = R166 000 Excl. VAT

B of Q Item	Description	Unit	Rate	Quantity	Amount (R)
<b>5</b>	<b>Enterprise Development</b>				
5.1	Enterprise Development of Targeted Enterprise or JV partners				
5.1.1	Appointment of training co-ordinator	Per Quarter	45 000	8	360 000
5.1.2	Appointment of Mentor /Training Service provider	Per Quarter	135 000	8	1 080 000
5.1.3	Needs Analysis and Enterprise Development Plan per Targeted Enterprise	No.	5 000	6	30 000
5.1.4	Monitoring and Interim reporting per targeted enterprise	Per Quarter	20 000	8	160 000
5.1.5	Project Completion report per Targeted Enterprise	No.	5 000	6	30 000
	<b>Provisional Sum to be carried over to CPG bill of quantities</b>				<b>1 660 000</b>

“Contract amount” Tender amount excl. allowances and VAT, 130 000 000

CPG Monetary value (5%) to be subcontracted to beneficiaries for training 6 500 000

No of enterprises based on the CPG value 6 Grade 1 / 2 GB/CE,ETC.

Contract period (months) 24

**Note: Rates to be determined by PQS and adjusted to accepted quotation amounts**

**1.8 Cidb BUILD Programme: Skills Development (Principal contractor including subcontractors and consultants)**

When applicable, the contract skills development participation goals, expressed in Rand, shall be no less than the “contract amount” multiplied by a percentage (%) factor for the applicable class of construction works.

The monetary value of training to be provided is stipulated in the CPG BoQ section. The number of beneficiaries to be trained is dependent on the “Contract Amount” as well the number of beneficiaries appointed which will generally resort under the Grade 1 and 2 cidb categories. The provisional amount will therefore be adjusted in terms of the “Contract Amount”, the number of beneficiaries to be trained from which *Method* and the actual cost for providing the training.

## CPG Calculation

### Table 2: Contracting skills development goals for different classes of engineering and construction works contracts

Source: cidb Standard for Developing Skills through Infrastructure Contracts as published in the Government Gazette Notice No. 43495 of 3 July 2020 (Page 7)

Class of construction works as identified in terms of Regulation 25 (3) of the Construction Industry Regulations 2004		Construction skills development goal (CSDG) (%)
Designation	Description	
CE	Civil Engineering	0.25
CE and GB	Civil engineering and General Building	0.375
EE	Electrical Engineering works (buildings)	0.25
EP	Electrical Engineering works (infrastructure)	0.25
GB	General Building	0.5
ME	Mechanical Engineering works	0.25
SB	Specialist	0.25

“Contract amount” = Tender amount at the time of award excluding allowances and expenses, and VAT

### Contractor CPG:

CPG calculation

“Contract amount” x factor from Table 3 above.

CPG calculation example:

“Tender Amount” = R150 Mil for GB, all inclusive of allowances and VAT

“Contract Amount” = R130 Mil (Tender Amount at the time of award excluding allowances and VAT)

Factor for GB = 0,5% (as per Table 2 above)

CPG in R value = R130 Mil x 0,5% = R650 000 i.e. total cost of training to amount to R650 000

Calculation of penalty:

Percentage penalty applicable = 30% as specified in the Scope of Works (PG01.1)

CPG value = R650 000

Achieved = R550 000 = R100 000 Shortfall

Penalty = R100 000 x 30% = R30 000 Excl. VAT

### Calculations based on “Contract Amount” after bid award and after bid award and appointment of beneficiaries

Actual CPG training requirement value after award upon selecting method/s of training and appointment of beneficiaries = R676 000 (Table 4 below) and the provisional amount allowed for to be adjusted accordingly. The new monetary value of training required will then form the basis for determining penalties applicable. No penalties will be applied should the CPG value, based on the “Contract Amount” be achieved.

Table 4: Notional cost recalculation upon appointment of beneficiaries.

Source: cidb Standard for Developing Skills through Infrastructure Contracts as published in the Government Gazette Notice No. 43495 of 3 July 2020 (Page 10)

Skills Types	Number of learners	Notional Cost / Learner / Quarter	Notional cost / learner / year	Total Notional Cost over 12 months Contract
<b>Method 2:</b> Workplace learning opportunities, with unemployed TVET graduates	2	R23 000	R92 000	R184 000
<b>Method 3:</b> Candidacy for an unemployed learner with a 3-year qualification	2	R61 500	R246 000	R492 000
Total	4			R676 000

*Note: the required CPG will be recalculated based on the awarded Tender amount and “Contract Amount” once the beneficiaries have been appointed and actual costs are known*

*Note: The notional cost of providing training opportunities will increase by CPI on an annual basis based on April CPI as published by Stats SA. The rates will be adjusted as an adjustment to the provisional amounts should the rates increase after bid award or during the construction period*



# **DEPARTMENT OF PUBLIC WORKS**

## **HIV/AIDS**

### **SPECIFICATION**

**OCTOBER 2004**

## **SECTION**

### **HIV/AIDS SPECIFICATION**

#### **HIV/AIDS REQUIREMENTS**

##### **1 SCOPE**

This specification contains all requirements applicable to the Contractor for creating HIV/AIDS awareness amongst all of the Workers involved in this project for the duration of the construction period, through the following strategies:

- Raising awareness about HIV/AIDS through education and information on the nature of the disease, how it is transmitted, safe sexual behaviour, attitudes towards people affected and people living with HIV/AIDS, how to live a healthy lifestyle with HIV/AIDS, the importance of voluntary testing and counselling, the diagnosis and treatment of Sexually Transmitted Infections and the closest health Service Providers;
- Informing Workers of their rights with regard to HIV/AIDS in the workplace;
- Providing Workers with access to condoms and other awareness material that will enable them to make informed decisions about sexual practices.

##### **2 DEFINITIONS AND ABBREVIATIONS**

###### **2.1 Definitions**

Service Provider: The natural or juristic person recognised and approved by the Department of Public Works as a specialist in conducting HIV/AIDS awareness programmes.

Service Provider Workshop Plan: A plan outlining the content, process and schedule of the training and education workshops, presented by a Service Provider which has been approved by the Representative/Agent.

Worker: Person in the employ of the Contractor or under the direction or supervision of the Contractor or any of his Sub-contractors, who is on site for a minimum period of 30 days in all.

###### **2.2 Abbreviations**

- HIV : Human Immunodeficiency Virus.
- AIDS : Acquired Immune Deficiency Syndrome.
- STI : Sexually Transmitted Infection.

##### **3 BASIC METHOD REQUIREMENT**

###### **3.1 The Contractor shall, through a Service Provider, conduct onsite workshops with the Workers.**

The Service Provider shall develop and compile a Service Provider Workshop Plan to be presented at the workshops and which will be best suited for this project to achieve the specified objectives with regard to HIV/AIDS awareness.

The Service Provider Workshop Plan shall be based on the following information provided by the Contractor:

- Number of Workers and Sub-contractors on site;
- When new Workers or Sub-contractors will join the construction project;
- Duration of Workers and Sub-contractors on site;
- How the maximum number of Workers can be targeted with workshops;
- How the Contractor prefers workshops to be scheduled, e.g. three hourly sessions per Worker, or one 2.5 hour workshop per Worker;
- Profile of Workers, including educational level, age and gender (if available);
- Preferred time of day or month to conduct workshops;
- A Gantt chart reflecting the construction programme, for scheduling of workshops;
- Suitable venues for workshops.

The Contractor shall submit the Service Provider Workshop Plan for approval within 21 days after the tender acceptance date. After approval by the Representative/Agent, the Contractor shall make available a suitable venue that will be conducive to education and training.

3.2 The Service Provider Workshop Plan shall address, but will not be limited to the following:

- 3.2.1 The nature of the disease;
- 3.2.2 How it is transmitted;
- 3.2.3 Safe sexual behaviour;
- 3.2.4 Post exposure services such as voluntary counselling and testing (VCT) and nutritional plans for people living with HIV/AIDS;
- 3.2.5 Attitudes towards other people with HIV/AIDS;
- 3.2.6 Rights of the Worker in the workplace;
- 3.2.7 How the Awareness Champion will be equipped prior to commencement of the HIV/AIDS awareness programme with basic HIV/AIDS information and the necessary skills to handle questions regarding the HIV/AIDS awareness programme on site sensitively and confidentially;
- 3.2.8 How the Service Provider will support the Awareness Champion;
- 3.2.9 Location and contact numbers of the closest clinics, VCT facilities, counselling services and referral systems;
- 3.2.10 How the workshops will be presented, including frequency and duration;
- 3.2.11 How the workshops will fit in with the construction programme;
- 3.2.12 How the Service Provider will assess the knowledge and attitude levels of attendees to structure workshops accordingly;
- 3.2.13 How the video will be used;
- 3.2.14 How the Service Provider will elicit maximum participation from the Workers;
- 3.2.15 A questions and answers slot (interactive session).

The Service Provider Workshop Plan shall encompass the Specific Learning Outcomes (SLO) as stipulated.

## **4 HIV/ AIDS AWARENESS EDUCATION AND TRAINING**

### **4.1 Workshops**

The Contractor shall ensure that all Workers attend the workshops.

The workshops shall adequately deal with all the aspects contained in the Service Provider Workshop Plan. A video of HIV/AIDS in the construction industry, which can be obtained from all Regional Offices of the Department of Public Works, is to be screened to Workers at workshops. In order to enhance the

learning experience, groups of not exceeding 25 people shall attend the interactive sessions of the workshops.

## **4.2 Recommended practice**

### **4.2.1 Workshop Schedule**

Presenting information contained in the Service Provider Workshop Plan can be divided in as many workshop sessions as deemed practicable by the Contractor, provided that all Workers are exposed to all aspects of the workshops as outlined in the Service Provider Workshop Plan.

Breaking down the content of information to be presented to Workers into more than one workshop session however, has the added advantage that messages are reinforced over time while providing opportunity between workshop sessions for Workers to reflect and test information. Workers will also have an opportunity to ask questions at a following session.

### **4.2.2 Service Providers**

A database of recommended Service Providers is available from all Regional Offices of the Department of Public Works.

### **4.2.3 HIV/AIDS Specific Learning Outcomes and Assessment Criteria**

Workers shall be exposed to workshops for a minimum duration of two-and-a-half hours. In order to set a minimum standard requirement, the following specific learning outcomes and assessment criteria shall be met.

#### **4.2.3.1 UNIT 1: The nature of HIV/AIDS**

After studying and understanding this unit, the Worker will be able to differentiate between HIV and AIDS and comprehend whether or not it is curable. The Worker will also be able to explain how the HI virus operates once a person is infected and identify the symptoms associated with the progression of HIV/AIDS.

Assessment Criteria:

1. Define and describe HIV and AIDS;
2. List and describe the progression of HIV/AIDS.

#### **4.2.3.2 UNIT 2: Transmission of the HI virus**

After studying and understanding this unit, the Worker will be able to identify bodily fluids that carry the HI virus. The Worker will be able to recognise how HIV/AIDS is transmitted and how it is not transmitted.

Assessment Criteria:

1. Record in what bodily fluids the HI virus can be found;
2. Describe how HIV/AIDS can be transmitted;
3. Demonstrate the ability to distinguish between how HIV/AIDS is transmitted and misconceptions around transmittance of HIV/AIDS.

#### **4.2.3.3 UNIT 3: HIV/AIDS preventative measures**

After studying and understanding this unit, the Worker will comprehend how to act in a way that would minimise the risk of HIV/AIDS infection and to use measures to prevent the HI virus from entering the bloodstream.

Assessment Criteria:

1. Report on how to minimise the risk of HIV/AIDS infection;
2. Report on precautions that can be taken to prevent HIV/AIDS infection;
3. Explain or demonstrate how to use a male and female condom;
4. List the factors that could jeopardize the safety of condoms provided against HIV/AIDS Transmission.

#### 4.2.3.4 UNIT 4: Voluntary HIV/AIDS counselling and testing

After studying and understanding this unit, the Worker will be able to recognise methods of testing for HIV/AIDS infection. The Worker will be able to understand the purpose of voluntary HIV/AIDS testing and pre- and post-test counseling.

Assessment Criteria:

1. Describe methods of testing for HIV/AIDS infection;
2. Report on why voluntary testing is important;
3. Report on why pre- and post-test counselling is important.

#### 4.2.3.5 UNIT 5: Living with HIV/AIDS

After studying and understanding this unit, the Worker will be able to recognise the importance of caring for people living with HIV/AIDS and be able to manage HIV/AIDS.

Assessment Criteria:

1. List and describe ways to manage HIV/AIDS;
2. Describe nutritional needs of people living with HIV/AIDS;
3. Describe ways to embrace a healthy lifestyle as a person living with HIV/AIDS;
4. Explain the need for counselling and support to people living with HIV/AIDS.

#### 4.2.3.6 UNIT 6: Treatment options for people with HIV/AIDS

After studying and understanding this unit, the Worker will be familiar with the various treatments available to HIV/AIDS infected or potentially HIV/AIDS infected people.

Assessment Criteria:

1. Discuss anti-retroviral therapy;
2. List methods of treatment to prevent HIV/AIDS transmission from mother-to-child;
3. Describe the need for treatment of opportunistic diseases for people living with HIV/AIDS;
4. Describe post exposure prophylactics.

#### 4.2.3.7 UNIT 7: The rights and responsibilities of Workers in the workplace with regard to HIV/AIDS

After studying and understanding this unit, the Worker will be able to identify the rights and responsibilities of the Worker living with HIV/AIDS in the workplace. The Worker will recognise the importance of accepting colleagues living with HIV/AIDS and treating them in a non-discriminative way.

Assessment Criteria:

1. Discuss the rights of a person living with HIV/AIDS in the workplace;
2. Discuss the responsibilities of a person living with HIV/AIDS in the workplace;
3. Report on why acceptance and non-discrimination of colleagues living with HIV/AIDS is important.

### **4.3 Displaying of plastic laminated posters and distribution of information booklets**

The Contractor shall obtain a set of four laminated posters conveying different key messages and information booklets. The contractor should include the costs of posters and information booklets in his/her tender price.

The above-mentioned posters and information booklets have been prepared to raise awareness and to share information about HIV/AIDS and STI's.

Posters or display stands shall be displayed on site as soon as possible, but not later than 14 days after the date of site handover.

Posters shall be displayed in areas highly trafficked by Workers, including toilets, rest areas, the site office and compounds.

The posters on display must always be intact, clear and readable.

Information booklets must be distributed to all Workers as soon as possible, but not later than 14 days after site handover, or as soon as the Worker joins the site.

## **5 PROVIDING WORKERS WITH ACCESS TO CONDOMS**

The Contractor shall provide and maintain condom dispensers and make both male and female condoms, complying with the requirements of SABS ISO 4074, available at all times to all Workers at readily accessible points on site, for the duration of the contract. The Contractor may obtain condom dispensers from the Department of Health and condoms may be obtained from the Local Clinic or the Department of Health.

At least one male and one female condom dispenser and a sufficient supply of condoms, all to the approval of the Representative/Agent, shall be made available on site within 14 days of site hand over. Contractors should note that arrangements to obtain condoms from the Department of Health Clinics prior to site hand over may be necessary, to ensure that condoms are available within 14 days of site handover.

Condoms shall be made available in areas highly trafficked by Workers, including toilets, the site office and compounds.

## **6 ENSURING ACCESS TO HIV/AIDS TESTING AND COUNSELLING FACILITIES AND TREATMENT OF SEXUALLY TRANSMITTED INFECTIONS (STI)**

The Contractor shall provide Workers with the names of the closest Service Providers that provide HIV/AIDS testing and counselling and Clinics providing Sexually Transmitted Infection (STI) diagnosis and treatment. Information on these Service Providers and Clinics must be displayed on a poster of a size not smaller than A1 in an area highly trafficked by Workers.

## **7 APPOINTMENT OF AN HIV/AIDS AWARENESS CHAMPION**

- 7.1 Within 14 days of site handover the Contractor shall appoint an Awareness Champion from amongst the Workers, who speaks, reads and writes English, who speaks and understands all the local languages spoken by the Workers and who shall be on site during all stages of the construction period. The Contractor shall ensure that the Awareness Champion has been trained by the Service Provider on basic HIV/AIDS information, the support services available and the necessary skills to handle questions regarding the HIV/AIDS programme in a sensitive and confidential manner.

7.2 The Awareness Champion shall be responsible for:

7.2.1 Liaising with the Service Provider on organising awareness workshops;

7.2.2 Filling condom dispensers and monitoring condom distribution;

7.2.3 Handing out information booklets;

7.2.4 Placing and maintaining posters.

## **8 MONITORING**

The Contractor shall grant to the Representative/Agent reasonable access to the construction site, in order to establish that the Contractor complies with his obligations regarding HIV/AIDS awareness under this contract.

The Contractor must report problems experienced in implementing the HIV/AIDS requirements to the Representative/Agent.

The attached SITE CHECKLIST (SCHEDULE A) shall be completed and submitted at every construction progress inspection to the Representative/Agent.

The attached SERVICE PROVIDER REPORT (SCHEDULE B) shall be completed and submitted on a monthly basis to the Department's Project Manager, through the Representative/Agent.

The attached CONTRACTOR HIV/AIDS PROGRAMME REPORT (SCHEDULE C), a close out programme report, shall be completed by the Contractor at the end of the contract.

## SCHEDULE A

### HIV/AIDS PROGRAMME: SITE CHECKLIST

When did construction commence: \_\_\_\_\_

Name of Departmental Project Manager: \_\_\_\_\_

*Please refer to HIV/AIDS Programme activities during the reporting period*

<i>Tick the block if Contractor satisfactorily complied with specifications</i>																												
DATE	PI																											
	D	D	M	M	D	D	M	M	D	D	M	M	D	D	M	M	D	D	M	M	D	D	M	M	D	D	M	M
Programme implemented within 14 days of site handover																												
Awareness champion on site																												
HIV/AIDS awareness service provider report																												
Male condom dispenser																												
Sufficient male condoms available																												
Male condom dispenser in a highly trafficked area																												
Female condom dispenser																												
Sufficient female condoms available																												
Female condom dispenser in a highly trafficked area																												
All four types of posters displayed																												
Posters in a good condition																												
Posters in a highly trafficked area																												
Posters displayed on local support services: clinic & VCT centre																												
Support service poster/s in highly trafficked area																												
Support service poster/s in a good condition																												

<i>Please indicate the applicable number for the reporting period</i>							
Workers on payroll (at PI)							
Sub-Contractors who will be on site for longer than 30 days (at PI)							
Workshop attendees							
Number of workshops held							
Scheduled workshops according to approved workshop plan							
Booklets distributed							
Male condoms distributed							
Female condoms distributed							

\_\_\_\_\_  
Representative/Agent

\_\_\_\_\_  
Date

\_\_\_\_\_  
Contractor

\_\_\_\_\_  
Date

Date of progress inspection: (ccyy/mm/dd)

Reporting period: (ccyy/mm/dd) \_\_\_\_\_ to (ccyy/mm/dd) \_\_\_\_\_

Deviations from HIV/AIDS awareness programme plan:

Corrective actions:

\_\_\_\_\_  
Representative/Agent

\_\_\_\_\_  
Departmental Project Manager

\_\_\_\_\_  
Date

\_\_\_\_\_  
Date

## SCHEDULE B

### HIV/AIDS AWARENESS PROGRAMME: SERVICE PROVIDER REPORT

Reporting period: (ccyy/mm/dd) \_\_\_\_\_ to (ccyy/mm/dd) \_\_\_\_\_

Number of workshops conducted in reporting period: \_\_\_\_\_

Number of scheduled workshops according to approved workshop plan: \_\_\_\_\_

Deviations from workshop plan:

State reasons for deviating from workshop plan:

Corrective actions:

\_\_\_\_\_  
Service Provider

\_\_\_\_\_

\_\_\_\_\_  
Date

\_\_\_\_\_  
Date

**HIV/AIDS AWARENESS PROGRAMME : WORKSHOP CONTENT ADDRESSED**

<i>Fill in the applicable information with regard to each workshop conducted</i>																												
DATE	W/S																											
	D	D	M	M	D	D	M	M	D	D	M	M	D	D	M	M	D	D	M	M	D	D	M	M	D	D	M	M
<b>Content of workshop:</b> (Mark the content included)																												
SLO1																												
SLO2																												
SLO3																												
SLO4																												
SLO5																												
SLO6																												
SLO7																												
HIV/AIDS in construction video																												
Indicate the duration of the workshop in hours																												
Total number of Workers																												
Indicate workshop venue																												



## SCHEDULE C

### CONTRACTOR HIV/AIDS PROGRAMME REPORT

Project name: \_\_\_\_\_

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

Contract value of project: R\_\_\_\_\_

Department of Public Works Project Manager: \_\_\_\_\_

HIV/AIDS Programme duration: (ccyy/mm/dd) \_\_\_\_\_ to (ccyy/mm/dd) \_\_\_\_\_

#### AWARENESS MATERIAL

Describe location of posters displayed during the programme: \_\_\_\_\_

\_\_\_\_\_

Comments on posters: \_\_\_\_\_

Indicate total number of booklets distributed: \_\_\_\_\_

Comments on booklets: \_\_\_\_\_

\_\_\_\_\_

#### CONDOMS

Indicate total number of male condoms distributed: \_\_\_\_\_

Indicate total number of female condoms distributed: \_\_\_\_\_

Describe where male condom dispenser was placed: \_\_\_\_\_

Describe where female condom dispenser was placed: \_\_\_\_\_

#### HIV/AIDS WORKSHOPS

Indicate the total number of HIV/AIDS workshops conducted: \_\_\_\_\_

Indicate the duration of workshops: \_\_\_\_\_

Indicate the total number of Workers that participated in the HIV/AIDS workshops: \_\_\_\_\_

Indicate the total number of Workers that were exposed to the video on HIV/AIDS in the Construction Industry:

\_\_\_\_\_

Comments on HIV/AIDS workshops on site: \_\_\_\_\_

\_\_\_\_\_

**GENERAL**

Briefly describe programme activities and satisfaction with outcome: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

Additional comments, suggestions or needs with regard to the HIV/AIDS awareness programmes on site:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Please indicate if your company has a formal HIV/AIDS policy focussing on HIV/AIDS awareness raising and care and support of HIV/AIDS Workers:

Yes	No	Currently developing one
-----	----	--------------------------

Please indicate if, to your knowledge, you have lost any workers during the duration of the project to HIV/AIDS related sicknesses. One or more of the following might indicate an HIV/AIDS related death:

Excessive weight loss  
Reactive TB  
Hair loss  
Severe tiredness

Coughing or chest pain  
Pain when swallowing  
Persistent fever  
Diarrhoea

Vomiting  
Meningitis  
Memory loss  
Pneumonia

Number of HIV/AIDS-related deaths: \_\_\_\_\_

\_\_\_\_\_  
**Contractor**

\_\_\_\_\_  
**Date**

\_\_\_\_\_  
**Departmental Project Manager**

\_\_\_\_\_  
**Date**



public works

Department:  
Public Works  
REPUBLIC OF SOUTH AFRICA

## CONSTRUCTION HEALTH & SAFETY SPECIFICATIONS

CLIENT: DEPARTMENT OF PUBLIC WORKS

PROJECT: UPGRADING OF KITCHEN EQUIPMENT AT PHALABORWA 524 SQN SIGNAL

PROJECT LOCATION: PHALABORWA 524 SQN SIGNAL

<b>DOCUMENT TITLE</b>	CONSTRUCTION H&S SPECIFICATIONS
<b>DOCUMENT OWNER</b>	DEPARTMENT OF PUBLIC WORKS
<b>CONSTRUCTION HEALTH &amp; SAFETY AGENT</b>	SHEQ and EnviroProjects
<b>REVERSION</b>	00
<b>TOTAL PAGES</b>	26
<b>UNIQUE IDENTIFIER</b>	SHEQ005
<b>CONTRACT NUMBER</b>	██████████
<b>ISSUED DATE</b>	JUNE 2015
<b>DOCUMENT CLASSIFICATION</b>	PUBLIC

Document Control	Compiled	Approved	Approved
<b>Name:</b>	Matumba TW	Mr. Mango TC	Mr. Raganya MM
<b>Company/Consultant:</b>	SHEQ and EnviroProjects	AES Consulting Engineers	Dept. Public Works
<b>Role:</b>	CHA	Engineer	Client
<b>Designation:</b>	SHEQ Manager	Electrical Engineer	CPM
<b>Signature:</b>			
<b>Date:</b>	02 June 2015	05 July 2015	05 July 2015

## Index

No	Content	Pages
<b>1.</b>	<b>Scope</b>	<b>2</b>
<b>2</b>	<b>Definitions; Abbreviations and Explanations</b>	<b>2</b>
<b>3.</b>	<b>General Administrative and Requirements</b>	<b>4</b>
<b>3.1.</b>	<b>Supporting clauses</b>	<b>5</b>
<b>3.2.</b>	<b>Interpretation</b>	<b>5</b>
<b>3.3.</b>	<b>Notification of construction work</b>	<b>5</b>
<b>3.4.</b>	<b>Copy of the Act and Company H&amp;S Policy</b>	<b>5</b>
<b>3.5.</b>	<b>Letter of Good Standing – COID Act CR 5(1)(j)</b>	<b>5</b>
<b>3.6.</b>	<b>Mandatory Agreements</b>	<b>6</b>
<b>3.7.</b>	<b>Emergency procedure</b>	<b>6</b>
<b>3.8.</b>	<b>Principal Contractor</b>	<b>6</b>
<b>3.9.</b>	<b>Contractors or Sub-contractors</b>	<b>7</b>
<b>3.10.</b>	<b>Construction Supervisor</b>	<b>7</b>
<b>3.11.</b>	<b>Employees</b>	<b>8</b>
<b>3.12.</b>	<b>Health and Safety File</b>	<b>8</b>
<b>3.13.</b>	<b>Risk Assessment</b>	<b>8</b>
<b>3.14.</b>	<b>Health and safety plans</b>	<b>9</b>
<b>3.15.</b>	<b>Fall protection plan</b>	<b>10</b>
<b>3.16.</b>	<b>Legal appointments</b>	<b>11</b>
<b>3.17.</b>	<b>Organogramme</b>	<b>14</b>
<b>3.18.</b>	<b>Compliance Audits</b>	<b>15</b>
<b>3.19.</b>	<b>Medical Certificates</b>	<b>15</b>
<b>3.20.</b>	<b>Training</b>	<b>15</b>
<b>a)</b>	<b>Induction training</b>	<b>15</b>
<b>b)</b>	<b>Site specific and awareness training</b>	<b>16</b>
<b>3.21.</b>	<b>Health and Safety Representative</b>	<b>16</b>
<b>3.22.</b>	<b>First aid</b>	<b>16</b>
<b>3.23.</b>	<b>Accident/ Incidents forms</b>	<b>17</b>
<b>3.24.</b>	<b>Emergency preparedness</b>	<b>17</b>
<b>a)</b>	<b>Fire Safety</b>	<b>18</b>
<b>b)</b>	<b>First aid planning and emergency care</b>	<b>18</b>
<b>c)</b>	<b>Emergency escape route</b>	<b>18</b>
<b>3.25.</b>	<b>Health and Safety Communication</b>	<b>19</b>
<b>3.26.</b>	<b>COC Electrical certificates</b>	<b>19</b>
<b>3.27.</b>	<b>Construction Employee's facilities</b>	<b>19</b>
<b>3.28.</b>	<b>Public Safety</b>	<b>19</b>
<b>3.29.</b>	<b>Vehicle and mobile plant operators</b>	<b>19</b>

 <b>public works</b> Department Public Works REPUBLIC OF SOUTH AFRICA	<b>SAFETY AND HEALTH</b>	Rev	00
		Ref No	██████████
		Date	02/06/2015
		Class	Public
		Page No	2 of 26
SPECIFICATIONS			

<b>3.30.</b>	<b>Electrical installations and machinery</b>	<b>20</b>
<b>3.31.</b>	<b>Hazardous chemical substances (HCS)</b>	<b>20</b>
<b>3.32.</b>	<b>Gas; Pressurised systems and Vessels under Pressure</b>	<b>20</b>
<b>3.33.</b>	<b>Flammable goods</b>	<b>21</b>
<b>3.34.</b>	<b>Cutting, Welding, and Hot Work</b>	<b>21</b>
<b>3.35.</b>	<b>Excavation</b>	<b>21</b>
<b>3.36.</b>	<b>Demolition work</b>	<b>21</b>
<b>3.37.</b>	<b>Ladder</b>	<b>22</b>
<b>3.38.</b>	<b>Scaffold</b>	<b>22</b>
<b>3.39.</b>	<b>Substance abuse</b>	<b>22</b>
<b>3.40.</b>	<b>House keeping</b>	<b>23</b>
<b>3.41.</b>	<b>Workplace Signage and Colour Coding</b>	<b>23</b>
<b>3.42.</b>	<b>Personal Protective Equipment (PPE)</b>	<b>23</b>
<b>3.43.</b>	<b>Unlawful orders</b>	<b>23</b>
<b>3.44.</b>	<b>Work stoppage</b>	<b>24</b>
<b>a)</b>	<b>The conditions that lead to work stoppages are based on</b>	<b>24</b>
<b>b)</b>	<b>The relevant activity must be stopped</b>	<b>24</b>
<b>c)</b>	<b>Before the workforce is allowed back in the area</b>	<b>24</b>
<b>3.45.</b>	<b>Employer's Construction Health and Safety Agent (CHA)</b>	<b>24</b>
<b>4</b>	<b>Acceptance of Health and Safety Specifications</b>	<b>25</b>
<b>Table</b>		
<b>1.</b>	<b>Example of Health and Safety plans</b>	<b>9</b>
<b>2.</b>	<b>Legal Appointments with references</b>	<b>12</b>

 <b>public works</b> Department Public Works REPUBLIC OF SOUTH AFRICA	<b>SAFETY AND HEALTH</b>	Rev	00
		Ref No	██████████
	Date	02/06/2015	
	Class	Public	
	Page No	3 of 26	
SPECIFICATIONS			

## 1. Scope

In terms of Construction Regulation 5 (7) of the Occupational Health and Safety Act, 1993 (Act 85 of 1993), the Principal Contractor shall prepare and submit site specific Health and Safety (H&S) file for the project (upgrade kitchen equipment for Phalaborwa 524 SQN Signal) as per specifications provided by Client and/or its Agent. The Principal Contractor shall be responsible for the Health and Safety policy for the site in terms of Section 7 of the Act and in line with Construction Regulation 2014 (5) as well as the Health and Safety Plan for the project with a view to achieving a common goal, that is, Zero Harm.

The H&S Specifications has been has been prepared as per Construction Regulations promulgated on 2014. The Principal Contractor is accountable for taking all the necessary steps to protect all persons (including employees, visitors, and the general public), to protect the environment and property against any harm during the course of performing work or services in relation to their contractual obligations. In addition, all work procedures and equipment will be carried out in accordance with legislative requirements. DPW's contractors have the fundamental accountability and responsibility for executing on-site safety, health, and environment issues for their activities, services, products, and work. The contractor is responsible for ensuring that its employees and the employees of any appointed contractors comply with all occupational health and safety statutory requirements and the policies and procedures.

## 2. Definitions; Abbreviations and Explanations

**Act** – the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993)

**Agent** – means any person who acts as a representative for a client;

**Baseline Risk Assessment** - baseline operational risks refer to the health and safety risks associated with all standard processes and routine activities in the business

**Client** – means any person for whom construction work is performed;

**Construction Work** is defined as any work in connection with –

- (a) the erection, maintenance, alteration, renovation, repair, demolition or dismantling of or addition to a building or any similar structure;
- (b) the installation, erection, dismantling or maintenance of a fixed plant where such work includes the risk of a person falling;
- (c) the construction, maintenance, demolition or dismantling of any bridge, dam, canal, road, railway, runway, sewer or water reticulation system or any similar civil engineering structure; or
- (d) the moving of earth, clearing of land, the making of an excavation, piling, or any similar type of work;

 <b>public works</b> Department Public Works REPUBLIC OF SOUTH AFRICA	<b>SAFETY AND HEALTH</b>	Rev	00
		Ref No	██████████
	Date	02/06/2015	
	Class	Public	
	Page No	4 of 26	
SPECIFICATIONS			

**Contractor** – means an employer, as defined in Section 1 of the Act, who performs construction work and includes Principal Contractors;

**Health and Safety File** – means a file, or other record in permanent form, containing the information required a contemplated in the regulations;

**Health and Safety Plan** – means a documented plan which addresses hazards identified and includes safe work procedures to mitigate, reduce or control the hazards identified;

**Hazard:** a source of or exposure to danger

**Health and Safety Specification** – means a documented specification of all health and safety requirements pertaining to the associated works on a construction site, so as to ensure the health and safety of persons;

**Method Statement** – means a document detailing the key activities to be performed in order to reduce as reasonably as practicable the hazards identified in any risk assessment;

**Principal Contractor** – means an employer, as defined in section 1 of the Act who performs construction work and is appointed by the client to be in overall control and management of a part of or the whole of a construction site;

**Risk Assessment** – means a program to determine any risk associated with any hazard at a construction site, in order to identify the steps needed to be taken to remove, reduce or control such hazard.

Abbreviation	Explanation
OHS Act	Occupational Health and Safety Act No. 83 of 1993
COID Act	Compensation for Occupational Injuries and Diseases Act
HIRA	Hazard identification and risk assessment
MSDS	Material Safety Data Sheet
SHE	Safety, Health, and Environment
CR	Construction Regulation
CHA	Construction Health Agent
DPW	Department of Public Works

 <b>public works</b> Department Public Works REPUBLIC OF SOUTH AFRICA	<h1>SAFETY AND HEALTH</h1>	Rev	00
		Ref No	██████████
		Date	02/06/2015
		Class	Public
		Page No	5 of 26
SPECIFICATIONS			

### 3. General Administrative and Requirements

#### 3.1. Supporting clauses

This specifications set out the minimum standards, legislative and organizational requirements and by virtue of explaining the need in each section or regulation makes provision for the Contractor to compile specific Health and Safety file in order to complement this specifications for their own compliance with requirements for the project upgrade kitchen equipment for Phalaborwa 524 SQN Signal. The Designer should follow this Health and Safety specification as contemplated on Construction Regulation 201 (6) and incorporate safety standards as indicated on Section 44 of the OSHA Act 1993. The following legal context were followed during preparation of the specifications and the Contractor should abide to these:

Occupational health and Safety Act, Act no 85 of 1993, and all its relevant regulations

General Administrative Regulations

General Safety regulations

Major hazard Installation Regulation

Regulations for hazardous Biological Agents

Explosive Regulations

Construction Regulations 2014

Asbestos Regulations

Environmental regulations for workplaces

Facilities Regulations

Hazardous Chemical Substances Regulations

Lead Regulations

Noise Induced Hearing Loss Regulations

Electrical Installation Regulation

The road traffic laws.

SANS Standards (Ladders, scaffolding, etc)

The works contract signed between Department of Public Works and the Principal Contractor:

Department of Public Works's health and safety specification

The Principal Contractor's site rules

The Principal Contractor's Health and Safety Policy

The Principal Contractor's safety plan

 <b>public works</b> Department Public Works REPUBLIC OF SOUTH AFRICA	<b>SAFETY AND HEALTH</b>	Rev	00
		Ref No	██████████
	Date	02/06/2015	
	Class	Public	
	Page No	6 of 26	
SPECIFICATIONS			

### 3.2. Interpretation

The Act and its associated regulations shall have precedence in the interpretation of any ambiguity or inconsistency between it and this specification.

Compliance with the requirements of this specification does not necessarily result in compliance with the provisions of the Act.

### 3.3. Notification of construction work

The Contractor shall notify the Provincial Director of Labour in writing at least 7 days before works commences, using a form similar to that contained in Annexure 2 of the Construction Regulations 2014 issued in terms of the Act and as contemplated on the CR4, before construction work commences and retain a copy of such notification in the health and safety file where such work:

- (a) include excavation work;
- (b) include working at a height where there is risk of falling;
- (c) include the demolition of a structure; or
- (d) include the use of explosives to perform construction work

The Contractor shall ensure that no work commences on an electrical installation which requires a new supply or an increase in electricity supply before the person who supplies or contracts or agrees to supply electricity to that electrical installation has been notified of such work.

### 3.4. Copy of the Act and Company H&S Policy

The Contractor shall ensure that a copy of the Act; Company Policy and relevant regulations is available on site for inspection by any person engaged in any activity on the site.

The Contractor shall prepare a written policy concerning the protection of the health and safety of his employees at work, including a description of his organization and the arrangements for carrying out and reviewing that policy. (Construction companies must all have a SHE(Q) or Health and Safety policy as contemplated on OSH Act 7(1). An employer shall prominently display a copy of the policy, signed by the CEO, in the workplace where his employees normally report for service, Section 7(3).

### 3.5. Letter of Good Standing – COID Act CR 5(1)(j)

The Contractor shall before commencing with any works on the site provide the Employer's Health and Safety Representative with proof of good standing with the compensation fund or with a licensed compensation insurer as contemplated in the Compensation for Occupational Injuries and Diseases Act, 1993 (Act No. 130 of 1993).

 <b>public works</b> Department Public Works REPUBLIC OF SOUTH AFRICA	<b>SAFETY AND HEALTH</b>	Rev	00
		Ref No	██████████
	Date	02/06/2015	
	Class	Public	
	Page No	7 of 26	
SPECIFICATIONS			

### 3.6. Mandatory Agreements

Section 37 of the OHS Act 1993 potentially punishes employers (principals) for the unlawful acts or omissions of mandataries (contractors) except where a written agreement between the parties has been concluded containing arrangements and procedures to ensure compliance with the said act by the mandatary. The section 37 (2) agreement recognizes that a contractor/supplier is an employer in its own right with duties as prescribed in the OHS Act and mandates the contractor/supplier to ensure that all work will be performed or machinery and plant used by their employees is in accordance with the provisions of the Act.

OHS Act Section 37 & CR 2014 (7)(1)(f) in addition to the documentation required in the health and safety file in terms of paragraph (c)(v) and sub-regulation (2)(b), include and make available the agreements between the parties and the type of work, being done.

This agreement constitutes the sole agreement between the parties and no variation, modification or waiver of any of the provisions of this agreement or consent to any departure therefrom shall in any manner be of any force or effect unless confirmed in writing and signed by the both parties and such variation, modification, waiver or consent shall be effective only in the specific instance and for the specific purpose and to the extent for which it was made or given.

### 3.7. Emergency procedure

The Contractor shall submit for acceptance to the Employer's Health and Safety Agent an emergency procedure which include but are not limited to fire, spills, accidents to employees, exposure to hazardous substances, which:

- a) identifies the key personnel who are to be notified of any emergency;
- b) sets out details including contact particulars of available emergency services; and
- c) the actions or steps which are to be taken during an emergency.

The Contractor shall within 24 hours of an emergency taking place notify the Employer's Health and Safety Agent in writing of the emergency and briefly outline what happened and how it was dealt with.

### 3.8. Principal Contractor

Principal contractors shall carry out the duties as contemplated in Section 8 and 9, the relevant regulations and duties as listed in CR 7. In terms of the Construction Regulations, when principal contractors appoint contractors, the principal contractor would then have the same accountability and responsibility in relation to the appointed contractors as the client/agent has in relation to the principal contractor.

 <b>public works</b> Department Public Works REPUBLIC OF SOUTH AFRICA	<b>SAFETY AND HEALTH</b>	Rev	00
		Ref No	██████████
	Date	02/06/2015	
	Class	Public	
	Page No	8 of 26	
SPECIFICATIONS			

It must be noted that the principal contractor remains accountable and responsible for his/her appointed contractors. None of the additional safety requirements specified by the clients/agents reduce the principal contractor's accountability and responsibility for the health and safety of his/her employees and appointed contractor employees within his/her working area. All project work performed consideration of the health and safety of all personnel on site shall be taken into account at all times.

### 3.9. Contractors or Sub-contractors

In terms of the Construction Regulations, all the duties that the client has towards the principal contractor, the principal contractor, in turn, has towards all his/her appointed contractors. It must be noted that the principal contractor remains accountable and responsible for his/her appointed contractors.

However, appointed contractors still have the accountability and responsibility for the health and safety of their employees and any appointed contractor employees within their working area. Any areas of concern should be discussed urgently with the principal contractor.

The relationship between the principal contractor and the appointed contractor will be governed by the contractual arrangements into which they have entered. Each Contractor must be appointed in writing as a Contractor and these documents must be filed in your safety file as well as the contractor's safety file for auditing purposes.

Contractors shall carry out the duties as contemplated in Section 8 and 9, the relevant regulations and duties as listed in Regulation 7 of the Construction Regulations 2014.

### 3.10. Construction Supervisor

Construction supervisors shall be appointed in writing in a full-time capacity for the duration of the construction project, with the primary responsibility of supervising the construction work as contemplated on the CR 8(1). Where required, contractors deemed may appoint additional employees as assistant construction supervisors. Persons appointed must be competent and have extended knowledge of the type of work they are required to supervise.

**Assistant construction supervisors** have the same responsibilities as construction supervisors CR 8(1). This appointment does not relieve the construction supervisors of any of their accountabilities and/or responsibilities.

 <b>public works</b> Department Public Works REPUBLIC OF SOUTH AFRICA	<b>SAFETY AND HEALTH</b>	Rev	00
		Ref No	██████████
		Date	02/06/2015
		Class	Public
		Page No	9 of 26
SPECIFICATIONS			

### 3.11. Employees

Section 14 of the OHS Act has reference; contractor employees are responsible for their own health and safety, as well as the health and safety of their colleagues while at work. The Client / Employer / Contract management cannot be expected to be totally responsible if any of their employees do not cooperate with legislative and health and safety requirements. Employees will be held jointly responsible where situations dictate. In their own interest, contractor employees must be aware of the responsibilities of their contractor management. Basic Condition of Employment Act no 11 as amended in 20012 will apply in terms of working conditions.

### 3.12. Health and Safety File

The Contractor shall maintain on site a health and safety file as contemplated on CR (7)(2)(b) and (7)(1)(c). The construction regulations, regulation 5(7) requires principal contractors to keep a SHE file which will contain all documentation required in terms of Construction Regulations 2014. A Health and Safety file means a file or other record in permanent form, containing the information about the project and sites health and safety management system during construction and all information relating to the post-construction phase after handover to the client.

All contractors are required to keep a Health and Safety file on project site or worksite. Contractors may keep additional files at their head office as additional records. The Health and Safety file shall be maintained by all the contractors on their construction site and shall be available on request for audit and inspection purposes. The Health and Safety file should be approved by the approved by the Contractor's supervisor before taken in to Client.

The laminated sleeves of INDEX should used to separate the items on the Health and Safety file. The file should be correctly labeled thus, showing the project name; projects construction site; and others.

### 3.13. Risk Assessment

A contractor must, before the commencement of any construction work and during such construction work, have on-site or site specific risk assessments performed by a competent person appointed in writing, which risk assessments form part of the health and safety plan to be applied on the site as contemplated on CR 2014 (9)(1), and must include:

- (a) the identification of the risks and hazards to which persons may be exposed to;
- (b) an analysis and evaluation of the risks and hazards identified based on a documented method;
- (c) a documented plan and applicable safe work procedures to mitigate, reduce or control the risks and hazards that have been identified;

 <b>public works</b> Department Public Works REPUBLIC OF SOUTH AFRICA	<b>SAFETY AND HEALTH</b>	Rev	00
		Ref No	██████████
	Date	02/06/2015	
	Class	Public	
	Page No	10 of 26	
SPECIFICATIONS			

(d) a monitoring plan; and (e) a review plan.

A contractor must ensure that all employees under his or her control are informed, instructed and trained by a competent person regarding any hazard and the related work procedures and or control measures before any work commences,

A contractor must consult with the health and safety committee or, if no health and safety committee exists, with a representative trade union or representative group of employees, on the monitoring and review of the risk assessments of the relevant site.

Note: A risk assessment is an important step in protecting workers as well as complying with the law. It helps to focus on the risks that really matter in a particular workplace – the ones with the potential to cause real harm. Workers and others have a right to be protected from harm caused by a failure to take reasonable control measures. The Contractor shall ensure that as far as is reasonably practicable, ergonomic related hazards are analyzed, evaluated and addressed in the risk assessment. Notwithstanding the provisions of the fall protection plan, the Contractor shall ensure that no person works in an elevated position, unless such work is performed safely as if working from a scaffold or ladder.

### 3.14. Health and safety plans

The Contractor shall prior to commencing the works to which this specification applies, submit to the Employer’s Health and Safety Agent for approval a suitable and sufficiently documented health and safety plan, based on this specification and the risk assessment that is conducted. The health and safety plan must cover all aspects of the health and safety procedures to be applied, for the duration of the contract by all contractors (principal and appointed).

The health and safety plan shall as a minimum provide: the information contained in Table 1 in respect of each of the hazards associated with work falling within the scope of the contract (see Figure 1); and an outline of the manner in which the Contractor intends complying with the requirements of this specification.

What are the hazards relating to work tasks?	Who might be harmed and how?	What are the safe work procedures for the site?	What action is necessary and further monitoring and review)?	Action by whom	Action by when

**Table 1. Example of the format of a health and safety plan**

 <b>public works</b> Department Public Works REPUBLIC OF SOUTH AFRICA	<b>SAFETY AND HEALTH</b>		Rev	00
			Ref No	██████████
			Date	02/06/2015
			Class	Public
	SPECIFICATIONS		Page No	11 of 26

The Contractor shall discuss the submitted health and safety plan with the Employer's Health and Safety Agent, modify such plan in the light of the discussions and resubmit the modified plan for approval

The Contractor shall apply the approved health and safety plan from the date of its commencement and for the duration of the works to which this specification applies.

The Contractor shall conduct periodic audits for compliance with the approved health and safety plan at intervals agreed upon with the Employer's Health and Safety Agent, but at least once every month.

The Contractor shall update the health and safety plan whenever changes to the works are brought about

### 3.15. Fall protection plan

The Contractor shall require a competent person to prepare a fall protection plan in compliance with the requirements of the 2014 Construction Regulations 10.

The Contractor shall ensure that the construction supervisor is in possession of the most recently updated version of the fall protection plan.

The fall protection plan as contemplated on CR 10 (1) must include: A risk assessment of all works carried out from a fall risk position; procedures and methods used to address all risks identified. The employee's medical fitness necessary to work at fall risk position and records thereof.

 <b>public works</b> Department Public Works REPUBLIC OF SOUTH AFRICA	<h2 style="margin: 0;">SAFETY AND HEALTH</h2> <p style="margin: 0;">SPECIFICATIONS</p>	Rev	00
		Ref No	[REDACTED]
		Date	02/06/2015
		Class	Public
		Page No	12 of 26

### 3.16. Legal appointments

"**competent person**" means as defined on the CR 1 a person who -

(a) has in respect of the work or task to be performed the required knowledge, training and experience and, where applicable, qualifications, specific to that work or task: Provided that where appropriate qualifications and training are registered in terms of the provisions of the National Qualification Framework Act, 2000 (Act No.67 of 2000), those qualifications and that training must be regarded as the required qualifications and training; and

(b) is familiar with the Act and with the applicable regulations made under the Act.

Regulation/ Section	Appointment	Explanation	Responsible Person
OHS Act 16(2)	CEO	Without derogating from his responsibility or liability, a chief executive officer may assign any duty to any person under his control, which person shall act subject to the control and directions of the chief executive officer	Contractor
CR 2014 (8)(1)	Construction Manager	A principal contractor must in writing appoint one full-time competent person as the construction manager with the duty of managing all the construction work on a single site, including the duty of ensuring occupational health and safety compliance	Contractor
CR 2014 (8)(7)	Construction Supervisors	A construction manager must in writing appoint construction supervisors responsible for construction activities and ensuring occupational health and safety compliance on the construction site	Contractor
CR 2014 (8)(8)	Assistant Construction Supervisor	A contractor must, upon having considered the size of the project, in writing appoint one or more competent employees for different sections thereof to assist the construction supervisor contemplated in sub-regulation (7), and every such employee has, to the extent clearly defined by the contractor in the letter of appointment, the same duties as the construction supervisor: Provided that the designation of any such employee does not relieve the construction supervisor of any personal accountability for failing in his or her supervisory duties in terms of this regulation.	Contractor

## SAFETY AND HEALTH

Rev	00
Ref No	██████████
Date	02/06/2015
Class	Public
Page No	13 of 26

### SPECIFICATIONS

CR 2014 (9)(1)	Risk Assessor	A contractor must, before the commencement of any construction work and during such construction work, have risk assessments performed by a competent person appointed in writing	Contractor
CR 2014 (10)(1)	Fall Protection Planner	A contractor must-(a) designate a competent person to be responsible for the preparation of a fall protection plan	Contractor
CR 2014 16 (1)	Scaffolding Inspector	A contractor must appoint a competent person in writing who must ensure that all scaffolding work operations are carried out under his or her supervision and that scaffold erectors, team leader and inspectors are competent to carry out their work.	Contractor
CR 2014 (29)(h)	Fire Equipment Inspector	A contractor must, in addition to compliance with the Environmental Regulations for Workplaces, 1987, ensure that:(h) the fire equipment contemplated in paragraph (g) is inspected by a competent person, who has been appointed in writing for that purpose, in the manner indicated by the manufacturer thereof	Contractor
OHS Act (17)(1)	Health and Safety Representatives	Every employer who has more than 20 employees in his employment at any workplace, shall designate in writing for a specific period, health and safety representatives for such workplace, or for different sections thereof.	Contractor
CR 2014 (8)(5)	Construction Health and Safety Officer	A constructor must, appoint a full-time or part-time construction health and safety officer in writing to assist in the control of all health and safety related aspects on the site.	Contractor
CR 2014 7 (2)(c )	Contractor (Sub)	Appointment of another contractor to perform construction work be reasonably satisfied that the contractor that he or she intends to appoint has necessary competencies and resources to perform the construction works safely	Contractor
GAR 9(2)	Incident Investigator	An employer or user shall cause every incident which must be recorded to be investigated by the employer, a person appointed by him or her, by a health and safety representative or a member of a health and safety committee.	Contractor
GSR 3(4)	First Aiders	Where more than 10 employees are employed at a workplace, the employer shall ensure that for every group of fifty employees, at least one	Contractor

		person is readily available and in possession of a valid certificate of competence in first aid	
CR 2014 (23)(1)(d)(i)	Construction vehicles and mobile plant Operators	A contractor must ensure that all construction vehicles and mobile plant(d) are operated by a person who- (i) has received appropriate training, is certified competent and in possession of proof of competency and is authorised in writing to operate those construction vehicles and mobile plant	Contractor
CR 2014 (28)(a)	Stacking and Storage Supervisor	A contractor must, in addition to compliance with the provisions for the stacking of articles in the General Safety Regulations, 2003, ensure that:- (a) a competent person is appointed in writing with the duty of supervising all stacking and storage on a construction site; (b) adequate storage areas are provided; (c) there are demarcated storage areas; and (d) storage areas are kept neat and under control.	Contractor
CR 2014 (24)(c)	Temporary Electrical Installation Controller	A contractor must, in addition to compliance with the Electrical Installation Regulations, 2009, and the Electrical Machinery Regulations, 1988, promulgated by Government Notice No. R. 1593 of 12 August 1988, ensure that- (c) the control of all temporary electrical installations on the construction site is designated to a competent person who has been appointed in writing for that purpose;	Contractor
CR 2014 (21)(2)(g)(i)	Explosive Actuated Fastening Device Controller	A contractor must ensure that:- (g) the issuing and collection of cartridges and nails or studs of an explosive actuated fastening device are-(i) controlled and done in writing by a person having been appointed in writing for that purpose; and (ii) recorded in a register by a competent person and that the recipient has accordingly signed for the receipt thereof as well as the returning of any spent and unspent cartridges.	Contractor
CR 2014 21(2)(b)	Explosive Actuated Fastening	A contractor must ensure that:- (b) an explosive actuated fastening device is cleaned and examined daily before use and as often as may	Contractor

 <b>public works</b> Department Public Works REPUBLIC OF SOUTH AFRICA	<b>SAFETY AND HEALTH</b>	Rev	00
		Ref No	██████████
	Date	02/06/2015	
	Class	Public	
SPECIFICATIONS		Page No	15 of 26

	Device Cleaner and Examiner	be necessary for its safe operation by a competent person who has been appointed for that purpose	
CR 2014 16 (1)	Scaffolding Erectors	A contractor must appoint person in writing who must ensure that all scaffolding work operates are carried out under his or her supervision and that all scaffold erectors, team leaders and inspectors are competent to carry out their work.	Contractor
CR 2014 16 (1)	Scaffolding Inspector	A contractor must appoint person in writing who must ensure that all scaffolding work operates are carried out under his or her supervision and that all scaffold erectors, team leaders and inspectors are competent to carry out their work.	Contractor
CR 2014 16 (1)	Scaffolding Supervisor	A contractor must appoint person in writing who must ensure that all scaffolding work operates are carried out under his or her supervision and that all scaffold erectors, team leaders and inspectors are competent to carry out their work.	Contractor
CR 2014 14 (1)	Demolition expert	A contractor must appoint a competent person to supervise and control all demolition work on site	Contractor
CR 2014 13 (1)	Excavation Supervisor	The contractor must ensure that all excavation work is carried out under the supervision of a competent person who has been appointed in writing for the purpose and evaluate as far as is reasonably practicable, the stability of the ground before excavation work begins	Contractor

**Table. 2. Legal appointments and references**

### 3.17. Organogramme

The Principal Contactor shall provide organisational organogramme related to this contract, showing the level of responsibilities from CEO down to the supervisors and every key personnel to the project. The diagram must list of the relevant names of appointees and legal appointment. The competencies and bridged resumes (Curriculum Vitae – CV) should be attached.

The Contractor organizational structure, organograms shall be updated timeously when appointments are changed and filed in the project SHE files.

 <b>public works</b> Department Public Works REPUBLIC OF SOUTH AFRICA	<h2 style="margin: 0;">SAFETY AND HEALTH</h2>	Rev	00
		Ref No	[REDACTED]
		Date	02/06/2015
		Class	Public
		Page No	16 of 26
SPECIFICATIONS			

### 3.18. Compliance Audits

In terms of CR 2014 (5)(1) A client must -

(o) ensure that periodic health and safety audits and document verification are conducted at intervals mutually agreed upon between the principal contractor and any contractor, but at least once every 30 days;

(p) ensure that a copy of the health and safety audit report contemplated in paragraph

(o) is provided to the principal contractor within seven days after the audit.

A Principal Contractor shall ensure that the periodic site audits and document verification are conducted at intervals mutually agreed upon between the principal contractor and any contractor, but at least once every 30 days as contemplated on CR 2014 (7)(c)(vii).

The Contractors are required to conduct internal audits on both their employees and their sub-contractors on the implementation of their SHE Plan on a monthly basis or when the scope of work changes. A summary of the findings and the proposed corrective actions shall be submitted to the CHA on the last day of the audit. The report shall be submitted within one week after completion of the audit.

### 3.19. Medical Certificates

As contemplated on CR 2014 (7)(1)(g) A principal contractor must (g) ensure that all his or her employees have a valid medical certificate of fitness specific to the construction work to be performed and issued by an occupational health practitioner in the form of Annexure..

### 3.20. Training

Appropriate training must be given to employees in order for them to be competent to be able to perform the tasks assigned and expected to perform. Training also gives an employee a chance to develop additional skills which will benefit any organization. The contractor at all times keep on his or her construction site records of the health and safety induction training contemplated in CR7(5) and (6) and such records must be made available on request to an inspector, the client, the client's agent or the principal contractor;

#### a) Induction training

All contractors, their employees and visitors are required to attend formal induction training courses. Such training shall be conducted by contractor management, construction safety officers, or construction supervisors. Induction training is a chance to inform persons of organizational requirements at the workplaces as well. CR 2014 (7)(5)

 <b>public works</b> Department Public Works REPUBLIC OF SOUTH AFRICA	<h2 style="margin: 0;">SAFETY AND HEALTH</h2>	Rev	00
		Ref No	[REDACTED]
		Date	02/06/2015
		Class	Public
		Page No	17 of 26
SPECIFICATIONS			

A principal contractor:- may not allow or permit any employee or person to enter any site, unless that employee or person has undergone health and safety induction training pertaining to the hazards prevalent on the site at the time of entry.

### **b) Site specific and awareness training**

Over and above induction training, contractors are required to ensure, before an employee commences work on the project, that the supervisor in control with responsibility for the employee has informed the employee of his/her scope of authority for that site / workplace.

### **3.21. Health and Safety Representative**

The requirements of sections 17 and 18 of the OHS Act shall be complied with. Where operational work is performed by contractors, they shall appoint health and safety representatives for each workplace. A health and safety representative is the go between the employer and the employee. If they perform their functions in terms of the requirements, they will certainly be an asset, not only to the employer, but to the employees as well.

Contractor managers shall permit their appointed health and safety representatives to carry out their functions as required by legislation and support them in fulfilling these functions.

### **3.22. First aid**

The Contractor shall where more than five employees are employed at a workplace, provide a first aid box or boxes at or near the workplace which shall be available and accessible for the treatment of injured persons at that workplace. Such first aid boxes shall contain suitable first aid equipment. The Contractor shall ensure that where there are more than 10 employees employed on the site that for every group of up to 50 employees at that workplace, at least one person is readily available during normal working hours, who is in possession of a valid certificate of competency in first aid.

The Contractor is require from you a "First Aid Register" where all first aid cases must be recorded. It must at least reflect the following information: Date; Name of injured person; ID Number; Type of injury; what treatment was administered; what was used from the first aid box; Annexure One number, if the patient received medical attention other than first aid.

 <b>public works</b> Department Public Works REPUBLIC OF SOUTH AFRICA	<b>SAFETY AND HEALTH</b>	Rev	00
		Ref No	██████████
	Date	02/06/2015	
	Class	Public	
	Page No	18 of 26	
SPECIFICATIONS			

### 3.23. Accident / Incident reports / Wcl 2 / Annexure 1/ First Medical form and Resumption forms

All incidents where someone received medical attention other than first aid, must be reported on an "Annexure 1" as contemplated in the OHS Act's General Administrative Regulations 9(1). The Department of Labour also doesn't accept any other form. GAR (9)(1) An employer or user shall keep at a workplace a record in the form of Annexure 1 for a period of at least 3 years, which record shall be open for inspection by an inspector, of all incidents which he or she is required to report in terms of section 24 of the Act and also of any other incident which resulted in the person concerned having had to receive medical treatment other than first aid.

An employer or user shall cause the findings of the investigation to be entered in Annexure 1 immediately after completion of such investigation, GAR (9)(3).

In terms of GAR (9)(3) An employer shall cause every Annexure 1 to be examined by the health and safety committee for that workplace at its next meeting and shall ensure that necessary actions, as may be reasonably practicable, are implemented and followed up to prevent the recurrence of such incident.

The following information will be needed for reporting: Photographs; Sketches; Proof of Toolbox Talk after accident; Proof of Toolbox Talk on the subject before the accident; Proof of competency; Proof of authorisation to operate; Proof of training; Copy of victims ID; Physical address & contact no of victim & his family; Proof of victims induction training; PPE Issue Register; Medicals of victim; WCL 2 forms (Annexure 13); Statements; Copy of Police docket; First medical form and resumption form.

All incident investigation reports shall be closed out once all the recommendations to prevent further incidents have been carried out and a copy of the investigation report must filed. Undue time delays must be avoided

### 3.24. Emergency preparedness

Emergency situations threaten, or may cause harm to the lives of employees, members of the public damage to property, infrastructure, equipment, degradation to the environment and disturb production and the rendering of services. The aim of emergency preparedness and response is to minimize the effects of any emergency and to restore normal activities as soon as practical.

 <b>public works</b> Department Public Works REPUBLIC OF SOUTH AFRICA	<b>SAFETY AND HEALTH</b>		Rev	00
			Ref No	██████████
			Date	02/06/2015
			Class	Public
	SPECIFICATIONS		Page No	19 of 26

The Principal Contractor, together with his appointed contractors, will develop their own emergency response plan for both their worksites. Where any office and or site is located within any Local Authorities area, then the plans must include their involvement. The contractor will ensure that all employees are trained on this plan.

Contingency plans will address all the identified risks of the organization to achieve a quick response and recovery to bring the situation back to normal in the shortest possible period of time and most cost effective way and to provide for:

**a) Fire Safety**

The Contractor shall ensure that staff are educated in fire prevention and will be held responsible to avoid the risk of fire. Ideally, all employees should receive basic training in fire prevention and use of fire equipment. Fire Safety is an integral part of the general safety and protection of an organization, its employees and members of the public from the effects of fire, heat and smoke. As a minimum, this is ensured by compliance to and the application of legislative and policy requirements. The discipline of Fire Risk Management has many facets and interfaces with many other disciplines and activities. Fire safety requirements are covered in the Construction regulations and the National Building regulations, SANS 10400 (T).

**b) First aid planning and emergency care**

Every person at a workplace should be afforded applicable and prompt medical treatment/assistance. In the event of an incident and to receive post-incident rehabilitation, organizations are required to meet the first-aid requirements of General Safety Regulation 3: “An employer shall take all reasonable steps that are necessary under the circumstances, to ensure that persons at work receive prompt first aid treatment in the case of injury or emergency.

**c) Emergency escape route**

The SANS 10400(T) regulations makes provisions for escape routes to be incorporated in buildings. Far too often, when there are fires within building, employees are fatally injured due to the fact that they were unable to evacuate a burning building. This is attributed to the fact that there were no escape routes and or, what routes were in the building, egress was impeded by the routes being used as storage areas

 <b>public works</b> Department Public Works REPUBLIC OF SOUTH AFRICA	<b>SAFETY AND HEALTH</b>	Rev	00
		Ref No	██████████
	Date	02/06/2015	
	Class	Public	
	Page No	20 of 26	
SPECIFICATIONS			

### 3.25. Health and Safety Communication

Communication is a two way process that involves the sending and receiving of symbols, signs or signals (words, pictures, things, actions). It is speaking and listening, writing and reading, behaving, observing behaviour. Its goal is to achieve understanding. The job, relevant procedures, associated hazards, safety measures, i.e., the task risk assessments shall be discussed during the Toolbox talks / Daily team talks / pre-job meetings.

### 3.26. COC Electrical certificates

All the electrical installation and temporary electrical distribution boxes must have a certificate of compliance (COC) issued by a registered body. Electrical Installation Regulations (7)(1), every user of an electrical installation shall have a valid certificate of compliance for that installation

### 3.27. Construction Employee's facilities

The Contractor shall provide and keep clean and fit for use at or within reasonable access of the site: at least one shower facility for every 15 workers; at least one sanitary facility for every 30 workers; changing facilities for each sex; and sheltered eating areas. When such facilities are provided, they must comply with the Facilities regulations of the Act and the SANS 10400 standard A to XA.

### 3.28. Public Safety

Legislation requires that employers shall be responsible, as far as reasonably practicable, for safeguarding persons other than those in their employment who may be directly affected by their activities so that they are not exposed to hazards to their health or safety (section 9 of the OHS Act)

### 3.29. Vehicle and mobile plant operators

All motor vehicles operated by Contractors within the area shall, in all respects, comply with the Road Traffic Ordinance and Road Traffic Act and as contemplated on the CR2014 (23). Designated drivers shall be in possession of a driver's license, valid for the class of vehicle. The driver's license shall be kept by the person so authorized who shall produce such card on request.

In terms of CR 2014 (23)(1)(d)(i) A contractor must ensure that all construction vehicles and mobile plant are operated by a person who-

 <b>public works</b> Department Public Works REPUBLIC OF SOUTH AFRICA	<b>SAFETY AND HEALTH</b>	Rev	00
		Ref No	██████████
		Date	02/06/2015
		Class	Public
		Page No	21 of 26
SPECIFICATIONS			

- (i) has received appropriate training, is certified competent and in possession of proof of competency and is authorized in writing to operate those construction vehicles and mobile plant;
- (ii) has a medical certificate of fitness to operate those construction vehicles and mobile plant, issued by an occupational health practitioner in the form of Annexure 3; A contractor must ensure that all construction vehicles and mobile plant as contemplated on CR 2014 (23)(1)(k), are inspected by the authorized operator or driver on a daily basis using a relevant checklist prior to use and that the findings of such inspection are recorded in a register kept in the construction vehicle or mobile plant.

### 3.30. Electrical installations and machinery

The Contractor must in addition to compliance with the electrical installation regulations as contemplated on CR 2014 (24), must make sure that all parts of electrical installations and machinery are adequate strength to withstand the working conditions on construction site; A competent p[erson for temporary electrical installations on the construction site and electrical machinery are inspected by authorized operator using daily relevant checklist prior to use and inspect are recorded in a register kept on construction site.

### 3.31. Hazardous chemical substances (HCS)

The handling and the application of hazardous materials has a major impact on the health and wellbeing of all persons and the environment. Various requirements for the handling and storage of hazardous materials and chemicals are listed in the OHS Act, Hazardous Chemical substance Regulations.

In the purchasing of hazardous materials and or chemicals, buying departments can fulfil the legislative requirements by ensuring that purchases are only done from the suppliers and manufacturers who comply with the requirements of Section 10 (General duties of manufacturers and others regarding articles and substances for use at work) and Section 22 (Sale of certain articles prohibited) of the OHS Act.

The storage requirements of any hazardous materials and chemicals, including paint; petrol; gasses must be in compliance to the legislative requirements, local municipal by-laws and SANS building standards.

### 3.32. Gas; Pressurised systems and Vessels under Pressure

The pressure equipment regulations covers various types of equipment, from gas cylinder, fixed plant compressors, mobile compressors, pressure vessels to fire extinguishers and all piping associated with such equipment. There are strict requirements as regulated by the Pressure Equipment Regulations made under the OSH Act 1993. A poorly maintained; storage and/or operated piece of equipment can have catastrophic consequences.

 <b>public works</b> Department Public Works REPUBLIC OF SOUTH AFRICA	<b>SAFETY AND HEALTH</b>	Rev	00
		Ref No	██████████
	Date	02/06/2015	
	Class	Public	
	Page No	22 of 26	
SPECIFICATIONS			

### 3.33. Flammable goods

Small quantities of flammable liquids must be stored in a "Flammable Liquid Store," which is well ventilated, with the appropriate symbolic signs, and an inventory of all liquids stored with quantities. All containers must be tightly closed. Enough and the correct fire extinguishers must be placed in conspicuous places. A bund wall, plastered must be able to contain a spillage if it occurs on the construction site. This should be done in accordance with General Safety Regulation (10); CR 2014 (25)(b)(c) and (e).

### 3.34. Cutting, Welding, and Hot Work

Prior to cutting or coring of concrete suspended slabs, cast in place or pre-cast walls, slab on grade the contractor must either X-ray the slab or if X-ray is not feasible provide other approved alternate method for determining live electrical concealed in slab or walls. Signage shall be posted to ensure no one enters the affected area during X-raying.

When welding or cutting work is performed, an adequate number of approved fire extinguishers shall be provided by the contractor. The contractor shall provide a thirty minute fire watch after the operations has ended to ensure that no fire starts.

### 3.35. Excavation

Almost all construction work involves some form of excavation, for foundations of plinth. These can vary greatly in depth and may be only a few centimetres deep or be very deep and very dangerous. The contractor must ensure that all excavation work is carried out under the supervision of a competent person who has been appointed in writing for the purpose and evaluate as far as is reasonably practicable, the stability of the ground before excavation work begins as contemplated of CR13, Excavation.

Falls through openings in walls, floors, excavations, approaching dangerous equipment and operations continue to pose a threat to persons. To prevent persons from any form of injury, through entering unauthorized entrances and or areas or approaching dangerous and or operating equipment, stringent precautions have to be taken to prevent such persons approaching. This is done by erecting substantial barriers, fencing or covers to a degree to prevent unauthorized removal and erecting appropriate signage.

### 3.36. Demolition work

Demolition of structures is an extremely hazardous task and can only be performed by competent persons. All demolition work must be planned, and all role players be involved in the planning, this includes conducting thorough risk assessments. All demolition work shall be carried out in accordance with Construction Regulation 14, Demolition Work.

 <b>public works</b> Department Public Works REPUBLIC OF SOUTH AFRICA	<b>SAFETY AND HEALTH</b>	Rev	00
		Ref No	██████████
	Date	02/06/2015	
	Class	Public	
	Page No	23 of 26	
SPECIFICATIONS			

### 3.37. Ladder

All ladders used on the site shall be in compliance with the OHS Act and Regulations. All Ladders shall have an identification tag, logged in a register, and inspected on a monthly basis and prior to use. Prior to work being performed, a risk assessment must be conducted, and work must be conducted as per General Safety Regulation 6 and 13 (A) and Construction Regulation 10 of the OHS Act.

### 3.38. Scaffold

A working platform can be virtually any surface from which work is carried out, such as a roof, floor, platform on a scaffold, a mobile elevated work platform, the treads of a stepladder, climbing irons, suspended platforms, boatswains chair etc. Working at heights where there is a risk of a fall causing personal injury then measures should be taken to prevent a fall and injury. Previously the notion that a fall occurs from a height (2 metres and above) is outdated. Falls occur at any level. The duty is to prevent falls. It is worth noting that there are almost as many low-fall injuries as high-fall injuries. The incidents of falling at the same level are increasing. Where it is reasonably practicable to take precautions to prevent a falls, steps should be taken to do so.

In an effort to prevent falls, including falling objects and or materials, fall protection plans are required to be compiled and implemented. The Occupational Health and Safety Act places duties on Employers, employees and anyone who controls the way work at height is undertaken. All equipment used for working at height must conform to the OHS Act and relevant SANS standards.

The contractor on site appoint the competent person in writing who must ensure that all scaffold work operations are carried under his or her supervisor and that scaffold, team leader and inspector are competent to carry out their work as contemplated on CR 2014 16(1). The checklist must be signed by the person doing the check and signed off by management. Any discrepancies noted must immediately be actioned and action taken must be noted on the checklist.

### 3.39. Substance abuse

Alcohol and substance abuse poses a significant threat to any business, more so in industrial incidents and the driving of vehicles. Persons are not permitted from entering or remaining on or at a workplace whilst under the influence of either or both substances, not permitted to be under the influence or consume intoxicating substance whilst at / in the workplace. There is provision regarding the taking of medication. General Safety Regulation 2A is clear on the legal stance regarding intoxication. The alcohol and drug permissible level is 0%.

 <b>public works</b> Department Public Works REPUBLIC OF SOUTH AFRICA	<b>SAFETY AND HEALTH</b>	Rev	00
		Ref No	██████████
	Date	02/06/2015	
	Class	Public	
	Page No	24 of 26	
SPECIFICATIONS			

### 3.40. House keeping

Good housekeeping fulfils five important functions, which are not only to the advantage of the worker but also to the employer: it saves time taken up by searching for equipment, tools and articles; injuries are prevented as passages, walk areas and workplaces are free from superfluous material; space is saved if equipment and articles are neatly packed and correctly stored; the risk of fire is diminished when provision is made for the correct placing of the right type of refuse bins, store areas comply with good storage practices and stacking is done in accordance with accepted stacking practices and access to emergency and/or safety equipment will be uninterrupted. Prompt disposal of waste materials, scrap, and rubbish is essential to prevent unnecessary storage.

### 3.41. Workplace Signage and Colour Coding

The purpose of symbolic safety signs is to convey a message without the use of a specific language. In this way instant recognition takes place or the employee can receive a message, order or warning. Symbolic signs are designed so that language, ethnic groups or literacy makes no difference. To prevent confusion symbolic signs should be applied throughout the entire organisation. All signs and notices shall conform to the requirements of SANS 1186 in terms of standard signs, safety colours, geometric forms, and dimensions.

In terms of identification regarding colour marking, ensure that the colours used match the appropriate colours of SANS 10140 and 1091.

### 3.42. Personal Protective Equipment (PPE)

Personal protective equipment (PPE) may be described as clothing and or equipment used in the workplace to protect the worker from risks and hazards. It includes equipment used to determine, measure or indicate danger. The objective of protective clothing is to prevent exposure or injury to any body parts exposed to operations. The issue register of PPE should be kept on the file for audit purposes. General Safety Regulation 2 of the OHS Act makes provision for the employers make the workplace safe and where required to provide appropriate PPE.

### 3.43. Unlawful orders

The OHS Act, section 14 (c) specifies that an employee, shall at work, carry out any lawful order given to him/her and obey the health and safety rules and procedures laid down by his/her employer or by anyone authorised thereto by his/her employer in the interest of health and safety. In construction industry, numerous incidents have resulted from workers being given unlawful instructions/orders which have resulted in either injuries and or property damage.

 <b>public works</b> Department Public Works REPUBLIC OF SOUTH AFRICA	<b>SAFETY AND HEALTH</b>	Rev	00
		Ref No	██████████
	Date	02/06/2015	
	Class	Public	
	Page No	25 of 26	
SPECIFICATIONS			

### 3.44. Work stoppage

**a) The conditions that lead to work stoppages are based on:**

Management of change – this is when there are changes to the work environment (e.g. climatic changes) and/construction work (e.g. modifications to the design), in any phase of the construction project; amendments; Unsafe acts/behaviours; Unsafe conditions and others.

**b) The relevant activity must be stopped:**

The DPW/CHA will immediately remove the workforce from the work area and correct the health and safety deficiencies by allowing only the people in the area that are competent to make the area safe. The Contractor and his/her subcontractors shall ensure that no other work is being performed during this time. Should the estimated time from the outset to make the area safe where life threatening/imminent danger situations exist, then the area will be barricaded and a sign placed with the wording “Unsafe Area – Authorized Access Only”.

**c) Before the workforce is allowed back in the area, Contractor and his subcontractors shall ensure:**

The area is re-inspected by Contractor Safety Officer and supervisor and note corrective actions taken; declare the area safe for work by signing off on the “work stoppage” notice issued by the CHA/Contractor.

To stop the Contractor from executing any construction activity which poses a threat the health and safety of person which is not in accordance with the Client’s health and safety specifications and the principal contractor’s contractor health and safety plan on the site, as contemplated on CR 2014 (q).

The Client, DPW reserves the right to terminate the contract in the event that the Contractor is found to be consistently non-compliance to any SHE related issue.

The Client, DPW reserves the right to impose penalties on Contractors due to poor Health and Safety performance. The terms and conditions shall form part of the initial Tender/Contract.

### 3.45. Employer’s Construction Health and Safety Agent (CHA)

The agent in appointed in terms of Occupational Health and Safety Act no 85 of 1993 under Construction Regulation 2014, regulation 5(7), the Agent shall:

- a) Audit the Contractor’s compliance with the requirements of this specification prior to the commencement of any physical construction activities on the site;
- b) Review; accept or reject all safety plans, giving reasons for rejecting such plans;
- c) Monitor the effective implementation of all safety plans

 <b>public works</b> Department Public Works REPUBLIC OF SOUTH AFRICA	<b>SAFETY AND HEALTH</b>	Rev	00
		Ref No	██████████
	Date	02/06/2015	
	Class	Public	
	Page No	26 of 26	
SPECIFICATIONS			

- d) conduct periodic and random audits on the health and safety file to establish compliance with the requirements of this specification
- e) Visit the site at regular intervals to conduct site inspections, and based upon such visits issue, wherever necessary, Improvement Notices, Contravention Notices and Prohibition Notices, to the Contractor or any of the Contractor's subcontractors with a copy to the Project Manager and, where relevant, to the Contractor

**4. Acceptance of Health and Safety Specifications**

I \_\_\_\_\_ the undersigned hereby declare that I have the authority to sign this document, and that I hereby accept the Health and Safety Specifications in accordance with Occupational Health and Safety Act No 85 of 1993 for the project, Upgrading o of kitchen equipment at Phalaborwa 524 SQN Signal.

<b>Acceptance by the Principal Contractor</b>	
<b>Company name:</b>	
<b>Your name:</b>	
<b>Designation:</b>	
<b>Signature:</b>	
<b>Date:</b>	



**public works**

---

Department:  
Public Works  
**REPUBLIC OF SOUTH AFRICA**

# Department of Public Works

(Client)

## HEALTH & SAFETY SPECIFICATION

For the

**the Principal Contractor**

(Principle Contractor)

FOR

**Site Name: Makhado Signal SQN**

**Scope of Works:**

**Upgrading of kitchen equipment**

# INDEX

1. This specification document
2. Notification of construction work
3. Client Baseline Risk Assessment (CR 2014 (5)(1)(a))
4. Mandatory Agreement ( OHS ACT Section 37)
5. Letter of Good Standing.
6. Letter of Appointment as Principal Contractor.
7. Safety Plan.
8. The Safety File
9. Sample Safety File Index
10. OHS Act Book & Poster
11. Health and safety policy.
12. Risk Assessments & Risk Assessments Method Document
13. Site Emergency Plan
14. Fall Protection Plan
15. List of Contractors.
16. Contractors.
- 16(a) Contractors Specification Documents
- 16(b) Contractors Appointment Letters.
- 16(c) Contractors "Letter of Good Standing."
- 16(d) Contractor's Safety Plans
- 16(e) Contractor's Safety files
- 16(f) Contractor's Mandatory Agreements
17. Legal Appointments.
  - 17 (1) 16.2 Appointee
  - 17 (2) Construction Manager
  - 17 (3) Construction Supervisors
  - 17 (5) Assistant Construction Supervisor
  - 17 (6) Risk Assessor
  - 17 (7) Scaffolding Inspector
  - 17 (8) Scaffolding Erectors
  - 17 (9) Explosive Actuated Fastening Device Cleaner and Examiner (Hilti)
  - 17 (10) Explosive Actuated Fastening Device Controller
  - 17 (11) Temporary Electrical Installation Controller
  - 17 (12) Stacking and Storage Supervisor
  - 17 (13) Fire Equipment Inspector
  - 17 (14) Health and Safety Representatives
  - 17 (15) Incident Investigator
  - 17 (16) First Aiders
  - 17 (18) Construction vehicles and mobile plant Operators
18. Compliance Audits
19. Medical Certificates
20. Induction Training
20. First Aid Register
21. Incident / Accident reports / Wcl 2 / Annexure one's
22. Safety Representative Elections & Inspections.
23. COC Electrical certificates
24. Risk Assessments
25. Scaffold Register
26. Explosive actuated fastening device
27. Electrical installations and machinery

- 28. Fire Equipment checklists**
- 29. Construction Welfare Facilities**
- 30. Construction Vehicles and Mobile Plant Operators**
- 31. Plant Hire and Labour only Contractor's Mandatory Agreements**
- 32. Flammable Goods**
- 33. Gas Installation**
- 34. Personal Protective equipment**

## 1. This specification document

This documents requirement is what is required in the documents mentioned herewith, for this project. The ultimate goal of this document is to direct you, the Principal Contractor, to be legal and thereby keep us, the Client, Department of Public Works, legal and free from prosecution.

We will periodically measure your health and safety systems compliance against a set of rules (standards) mutually agreed upon. On this construction site, this agreement will be reached at the signing of the works contract. Therefore, this specification document forms part of the standards we will audit you against.

- o The Occupational health and Safety Act, Act no 85 of 1993, and all it's relevant regulations
- o General Administrative Regulations
- o General Safety regulations
- o Major hazard Installation Regulation
- o Regulations for hazardous Biological Agents
- o Explosive Regulations
- o Construction Regulations 2014
- o Asbestos Regulations
- o Environmental regulations for workplaces
- o Facilities Regulations
- o Hazardous Chemical Substances Regulations
- o Lead Regulations
- o Noise Induced Hearing Loss Regulations
- o Electrical Installation Regulation
- o The road traffic laws.
- o Common law regarding validating legal documents. (Signing, format, certification of copies, etc.)
- o SANS Standards (Ladders, scaffolding, etc)
- o The works contract signed between Department of Public Works and the Principal Contractor.
- o Department of Public Works's health and safety specification document (This document)
- o the Principal Contractor's site rules
- o the Principal Contractor's SHE Policy
- o the Principal Contractor's safety plan

It is also impossible to cover and discuss all the above mentioned standards in this specifications document. Thus, this document is only part of the above standards.

## 2. Notification of construction work

You must notify the Dept of labour that you intend doing construction work. This be done at least 7 days before you start to work. We want you to report your intended activities on a form similar to an "Annexure 2" as published in the Construction Regulation 2014. Do not fax or email the report form. Take two copies to the Dept of Labour where they will date stamp the report forms. This is the only proof that the Labour Dept accepts. One copy remains with them, file the other copy in your safety file for auditing purposes.

***(CR 2014 (4)(1) A contractor who intends to carry out any construction work other than work contemplated in regulation 3(1), must at least 7 days before that work is to be carried out notify the provincial director in writing in a form similar to Annexure 2 if the intended construction work will:-***

- (a) include excavation work;***
- (b) include working at a height where there is risk of falling;***
- (c) include the demolition of a structure; or***
- (d) include the use of explosives to perform construction work.)***

Department of Public Works's audit question numbers: 3, 4.

## 3. Client Baseline Risk Assessment (CR 2014 (5)(1)(a))

Department of Public Works will issue you with the project baseline risk assessment. This doesn't mean that you are now exempted from doing your own risk assessments. Our baseline risk assessment is for your information and knowledge to inform you of the risks we have identified, and to act as a guideline to assist you to do your own assessment of risks on your project.

***(CR 2014 (5)(1)(a) A client must prepare a baseline risk assessment for an intended construction work project;)***

Department of Public Works's audit question numbers: 5.

#### **4. Mandatory Agreement ( OHS ACT Section 37)**

You will be required to enter into a Mandatory agreement with us. Make sure that it is properly signed and all pages initialed by all parties concerned. This agreement must be filed in the safety file for auditing purposes.

Department of Public Works's audit question numbers: 7, 8, 9.

#### **5. Letter of Good Standing.**

Department of Public Works cannot allow you to let your workers work, without being insured against occupational injuries and diseases. Your "Letter of Good Standing" must be filed in your safety file and the expiry date closely monitored.

***(CR 2014 (5)(1)(j) A Client must ensure, before any work commences on a site, that every principal contractor is registered and in good standing with the compensation fund or with a licensed compensation insurer as contemplated in the Compensation for Occupational Injuries and Diseases Act, 1993 (Act No. 130 of 1993);)***

Department of Public Works's audit question numbers: 10.

#### **6. Letter of Appointment as Principal Contractor.**

It is your duty to see to it that your letter of appointment as a Principal Contractor, is filed in your safety file. If you do not have one, you must then request it from Department of Public Works. Your letter of award will suffice.

***CR 2014 (5)(1)(k) A Client must appoint every principal contractor in writing for the project or part thereof on the construction site;)***

Department of Public Works's audit question numbers: 11.

#### **7. Safety Plan.**

In answer to this safety specification document, you must design a health and safety plan to demonstrate how you will comply with the:

- the OHS Act and all its relevant regulations,
- the Construction Regulation 2014,
- the contract and
- this health and safety specification document.

All sections in this health and safety specification document, must be addressed in your safety plan.

Your safety plan must be site specific. This means that you cannot submit a generic document to us.

Your safety plan must be endorsed (signed) by your CEO as acknowledgement of the content of your safety plan.

Your safety plan must also contain:

- Your company name within the document,
- The Client's name within the document,
- The contract name or number,
- The site address,
- The scope of works.

Your safety plan must also contain your risk assessments at the start of the project.

Your health and safety plan will only be approved in writing when, and if, the above are in order. The approval letter must be filed with your safety plan in your safety file for auditing purposes.

#### **WARNING:**

- 1 Do not submit a generic safety plan.
- 2 Do not submit a safety plan that says some items in your plan may not be applicable to the site. that makes it generic. Make it site, and job specific. We don't want to pick which items is applicable.
- 3 If your safety plan is approved, you are obliged to implement everything mentioned in your safety plan.

CR 2014 (7)(1)(a) A principal contractor must provide and demonstrate to the client a suitable, sufficiently documented and coherent site specific health and safety plan, based on the client's documented health and safety specifications, which plan must be applied from the date of commencement of and for the duration of the construction work and which must be reviewed and updated by the principal contractor as work progresses;

CR 2014 (9)(1) A contractor must, before the commencement of any construction work and during such construction work, have risk assessments performed by a competent person appointed in writing, which risk assessments form part of the health and safety plan to be applied on the site.

CR 2014 (5)(1)(1) A Client must discuss and negotiate with the principal contractor the contents of the principal contractor's health and safety plan contemplated in regulation 7(1), and must thereafter finally approve that plan for implementation; Department of Public Works's audit question numbers: 12, 13, 14, 15.

## 8. The Safety File

- 1 Use a lever arch file to contain all the documents.
- 2 Divide the documents with dividers of the plastic type, numbered 1 to 31. Use another set of dividers behind the first, if the one set is not sufficient.
- 3 Clearly identify the file with the words "Safety File" and the Company name printed on the side with letters big enough to read from a distance for anyone on site to recognise it as the safety file.
- 4 Always have the safety file available in the site office. It will be handed to the Client at site handover. It may never leave the site.

**CR 2014 (7)(1) A principal contractor must -  
(b) open and keep on site a health and safety file, which must include all documentation required in terms of the Act and these Regulations, which must be made available on request to an inspector, the client, the client's agent or a contractor;**

Department of Public Works's audit question numbers: 16.

## 9. Sample Safety File Index

Please laminate the file index to prevent it from tearing. Paste it in front of the file. The following is a sample of a very comprehensive index. There are items that you would want to add or change to fit this site. You may do so. Please note that we need you to keep all documents separate with dividers. It makes it easier to find during an audit and your day to day activities in the file.

### **INDEX**

	Divider Number
Incident / Accident reports / Wcl 2 / Annexure one's	1
Monthly Safety Audit Reports (We will audit you monthly)	3
Letter of Good Standing	4
List of Contractors	6
the Principal Contractor's appointment letter as Principle Contractor	7
<b><u>Legal Appointments With proof of Competency &amp; Medicals</u></b>	
* 16.2 Appointee	8
* Construction Manager	9
* Construction Supervisors	12
* Risk Assessor	14
* Scaffolding Inspector	20
* Scaffolding Erectors	21
* Explosive Actuated Fastening Device Cleaner and Examiner (Hilti Gun)	24
* Explosive Actuated Fastening Device Controller	25
* Temporary Electrical Installation Controller	26
* Stacking and Storage Supervisor	27
* Fire Equipment Inspector	28

* Health and Safety Representatives	29
* Incident Investigator	31
* First Aiders	1
* Etc.	10
List of First Aiders	11
List of Plant on Site	12
Client Mandatory Agreement	13
Contractors Mandatory Agreements	14
Contractors Specification Documents	15
Contractors Appointment Letters	16
Plant Hire and Labour only Contractor's Mandatory Agreements	17
Health and Safety Plan	18
Health & Safety Policy Document	19
Risk Assessments Plan/Policy/Procedure	20
Principle Contractor Specification Document (This document)	22
Fall Protection Plan (If you are going to work at heights of more than 1,8m)	23
Emergency Plan	24
Notification of Construction Work	26

For your documents that you are using daily, we suggest you open a separate file. The following is a sample of such a file index. There may be items that you want to add or change to fit your style. You may do so. Please again note that we are keeping all documents separate with dividers.

<b><u>INDEX</u></b>		Divider Number
<b>Registers</b>	Toolbox Talks	1
	Induction Training Register	2
	PPE Issue Register	3
	Hazardous Chemical Substance Register	4
	Safety Harness Register	5
	First Aid Register	6
	Incident/Accident Register	7
	Lifting Equipment Register	8
	Electrical Equipment Register	10
	Fire Equipment Register	11
	Scaffold Register	12
	Explosive Powered Tool Register	14
<b>Checklists</b>	Electrical Extension Cords Checklist	15
	Hazardous Chemical Substance Checklist	16
	Safety Harnesses Checklist	17
	First Aid Boxes Checklist	18
	Lifting Equipment Checklists	19
	Fire Equipment Checklist	20
	Toilets Checklist	21
	Kitchen/Cooking Area Checklist	22
	Temporary Electrical DB Box Checklist	23
	Electric Drills Checklist	24
	Angle Grinder Checklist	25
	Skill Saw Checklist	26
	Ladder Checklist	27

Scaffold Checklist	28
Fire Extinguisher Checklist	29
Hand tools Checklist	2
Etc.	15

It must be clearly noted that we do not accept registers that are also a checklist. We herewith clearly state that the registers and checklists are separate documents and must be utilised as such.

## 10. OHS Act Book & Poster

You must have a copy of the complete OHS Act on site in book form. You can order it from LexisNexis at tel number: 011 525 9400, or at [compliance@lexisnexis.co.za](mailto:compliance@lexisnexis.co.za). You must ensure that it is readily available in the site office for everyone to use. An abbreviated copy of the OHS Act in Poster form, must also be posted on your notice board as part of your duty to inform?

**General Administrative Regulation 4 Copy of the Act - Every employer with five or more persons in his employ shall have a copy of the Act and the relevant regulations readily available in the workplace: ...**

Department of Public Works's audit question numbers: 17, 18, 19.

## 11. Health and safety policy.

You must submit a health and safety policy and it must contain at least:

- written policy concerning the protection of the health and safety of his employees at work,
- a description of your organization and
- arrangements for carrying out and reviewing the policy.

You must prominently display your health and safety policy document. This is normally done on the site notice board. In addition to displaying the policy, we require you to communicate the policy to your labour force and have an attendance register signed by everyone present during the communication session.

Your health and safety policy document must be signed by your CEO.

**OHS Act 7(1) ...to prepare a written policy concerning the protection of the health and safety of his employees at work, including a description of his organization and the arrangements for carrying out and reviewing that policy. (Construction companies must all have a she policy)**

**OHS Act 7(3) An employer shall prominently display a copy of the policy, signed by the CEO, in the workplace where his employees normally report for service.**

Department of Public Works's audit question numbers: 20, 21, 22, 23, 24.

## 12. Risk Assessments & Risk Assessments Method Document

You must submit a document explaining the method you use to do risk assessments. It must include a monitoring plan, and a review plan. This document must be signed (endorsed) by management.

All tasks performed on site must be backed by a risk assessment which determined the risks, the hazards and determines the best preventative measures to minimize the risks and hazards. All the risk assessments must have:

- 1 The site name on the risk assessment.
- 2 The date on the risk assessment.
- 3 The person/s name/s that did the risk assessment and their signatures.
- 4 Managements signature.
- 5 An attendance register as proof that the workforce was trained in the risk assessment.

Your risk assessment method document and your risk assessments must be approved by the safety committee.

**CR 2014 (9)(1)** A contractor must, before the commencement of any construction work and during such construction work, have risk assessments performed by a competent person appointed in writing, which risk assessments form part of the health and safety plan to be applied on the site, and must include-(a) the identification of the risks and hazards to which persons may be exposed to;

(b) an analysis and evaluation of the risks and hazards identified based on a documented method;

(c) a documented plan and applicable safe work procedures to mitigate, reduce or control the risks and hazards that have been identified;

(d) a monitoring plan; and

(e) a review plan.

(3) A contractor must ensure that all employees under his or her control are informed, instructed and trained by a competent person regarding any hazard and the related work procedures and or control measures before any work commences,

(5) A contractor must consult with the health and safety committee or, if no health and safety committee exists, with a representative trade union or representative group of employees, on the monitoring and review of the risk assessments of the relevant site.

Department of Public Works's audit question numbers: 25, 26, 27.

### **13. Site Emergency Plan**

You must develop a site specific emergency plan. Don't make it too complicated, it must be easily understood and executed by anyone. All possible emergencies for this site must be covered. The plan must at least have procedures for:

- small fires
- large fires. The procedure for responding and alerting the Fire Brigade.
- first aid cases. The procedure for responding and alerting the First Aider.
- serious medical cases. The procedure for responding and alerting the ambulance, doctors and hospital.
- also describe the procedure if the ambulance is not available.

- The emergency plan must be communicated to the workforce and proof thereof must be recorded and filed in the safety file.

- The emergency plan must also be pasted on the notice board and in the safety file.

- Emergency numbers must be prominently displayed on the notice board.

- You must install an effective fire alarm on site.

Department of Public Works's audit question numbers: 40, 41, 42, 43, 44, 45, 46, 47, 48.

### **14. Fall Protection Plan**

You must have a fall protection plan in your safety file. The plan must be developed by your appointed Fall Protection Planner. Your fall protection plan must be site specific and practically viable and must cover **this** sites anticipated fall hazards for your work area. Do not submit a generic fall protection plan, we know them all. Make sure that your Construction Manager is in possession of your latest fall protection plan. Your plan must also contain risk assessments for all the work that you will perform from a height. The risk assessments must reflect each location where work from a fall position will be executed. Everyone on site working on heights must have a medical certificate and the certificates must be readily available.

**CR 2014 (10)(1)** A contractor must-

(a) designate a competent person to be responsible for the preparation of a fall protection plan;

(b) ensure that the fall protection plan contemplated in paragraph (a) is implemented, amended where and when necessary and maintained as required; and

(c) take steps to ensure continued adherence to the fall protection plan.

(2) A fall protection plan contemplated in subregulation (1), must include-

(a) a risk assessment of all work carried out from a fall risk position and the procedures and methods used to address all the risks identified per location;

(b) the processes for the evaluation of the employees' medical fitness necessary to work at a fall risk position and the records thereof;

(3) A contractor must ensure that a construction manager appointed under regulation 8(1) is in possession of the most recently updated version of the fall protection plan.

- All persons working on heights, on site, must be trained in your fall protection plan. The attendance register for The training must be attached to The fall protection plan.
- The plan must also contain a procedure on how you will inspect, test and maintain All your fall protection equipment.
- The plan must also contain a rescue plan for workers hanging from a height in a harness. you only have five minutes to rescue the person hanging from a harness. your plan should include a practical rescue plan, containing a procedure, what personnel is part of the rescue team, and what equipment is used in a rescue. persons executing the rescue plan must be trained and trained in the plan. It must also contain proof of the rescue plan being practiced.
- your site management must endorse (sign) the plan.

**CR 2014 (10)(2) A contractor must-**

***(c) a programme for the training of employees working from a fall risk position and the records thereof;***

***(d) the procedure addressing the inspection, testing and maintenance of all fall protection equipment; and***

***(e) a rescue plan detailing the necessary procedure, personnel and suitable equipment required to affect a rescue of a person in the event of a fall incident to ensure that the rescue procedure is implemented immediately following the incident.***

Department of Public Works's audit question numbers: 49, 50, 51, 52, 53, 54, 55, 56, 57.

## **15. List of Contractors.**

Please note that the words; "Sub-contractor" are not used in the Act anymore. It is only "contractor." You must always have a comprehensive up to date list of all your contractors on site. This list must be readily available.

**CR 2014 (7)(1)(f) A principal contractor must-**

***(f) make available a comprehensive and updated list of all the contractors on site accountable to the principal contractor,***

Department of Public Works's audit question numbers: 58

## **16. Contractors.**

### **16(a) Contractors Specification Documents**

Each Contractor must be issued with a health and safety specification document written by the Principal Contractor. Remember you must issue a site specific, and a job specific health and safety specification document. We don't want to see generic specification documents. We also don't want to see this document (Department of Public Works's specifications) passed onto your Contractors as your specification document to them. Write your own. Only the sections applicable to your contractor may be duplicated in the specification document that you write for them. Contractors must sign for their specification documents.

**CR 2014 (7)(1) A principal contractor must-**

***(c) on appointing any other contractor, in order to ensure compliance with the provisions of the Act-(i) provide contractors who are tendering to perform construction work for the principal contractor, with the relevant sections of the health and safety specifications contemplated in regulation 5(1)(b) pertaining to the construction work which has to be performed;***

Department of Public Works's audit question numbers: 59, 60, 61.

### **16(b) Contractors Appointment Letters.**

Each Contractor must be appointed in writing as a Contractor. The letter of award where the Principal Contractor informed the Contractor of the allocation of the tender to them, would suffice. These documents must be filed in your safety file as well as the contractor's safety file for auditing purposes.

**CR 2014 (7)(c)(v) A principal contractor must-**

***(c) on appointing any other contractor, in order to ensure compliance with the provisions of the Act-***

***(v) appoint each contractor in writing for the part of the project on the construction site;***

Department of Public Works's audit question numbers: 62.

## **16(c) Contractors "Letter of Good Standing."**

Contractors may not be allowed to perform any work unless they submit a valid "Letter of Good Standing" as proof that they are in good standing with the Workman's Compensation Commissioner. These letters must be filed in the Contractor's safety files and the validation dates closely monitored.

**CR 2014 (7)(c)(iv)** *A principal contractor must-*

*(iv) ensure prior to work commencing on the site that every contractor is registered and in good standing with the compensation fund or with a licensed compensation insurer as contemplated in the Compensation for Occupational Injuries and Diseases Act, 1993;*

Department of Public Works's audit question numbers: 63.

## **16(d) Contractor's Safety Plans**

All your Contractor's safety plans must be scrutinised by you and if in line with this document, the OHS Act and your health and safety specification document mentioned in 18(a), it must be approved by you in writing. The approval letters must be filed in your and the Contractor's safety file for auditing purposes.

**CR 2014 (7)(c)(vi)** *A principal contractor must-*

*(c) on appointing any other contractor, in order to ensure compliance with the provisions of the Act-*

*(vi) take reasonable steps to ensure that each contractor's health and safety plan contemplated in subregulation (2)(a) is implemented and maintained on the construction site;*

*(d) ensure that a copy of his or her health and safety plan contemplated in paragraph (a), as well as the contractor's health and safety plan contemplated in subregulation (2)(a), is available on request to an employee, an inspector, a contractor, the client or the client's agent;*

Department of Public Works's audit question numbers: 64.

## **16(e) Contractor's Safety files**

You must see to it that each contractor on site has a safety file that is kept on site and readily available. The safety file must be audited every month by you and the discrepancies found must be actioned by the contractor. The monthly audit reports must be filed in your contractor's safety file. We will also do periodic audits randomly on your contractors.

**CR 2014 (7)(2)(b)** *A contractor must prior to performing any construction work-*

*(b) open and keep on site a health and safety file, which must include all documentation required in terms of the Act and these Regulations, and which must be made available on request to an inspector, the client, the client's agent or the principal contractor;*

**CR 2014 (7)(1)(c)** *A principal contractor must-*

*(c) on appointing any other contractor, in order to ensure compliance with the provisions of the Act-*

*(vii) ensure that the periodic site audits and document verification are conducted at intervals mutually agreed upon between the principal contractor and any contractor, but at least once every 30 days;*

Department of Public Works's audit question numbers: 65, 66.

## **16(f) Contractor's Mandatory Agreements**

It is the Principal Contractor's duty to see to it that a mandatory agreement is signed and entered into between the Principal Contractor and all their contractors on site before they come onto site. These agreements must be properly signed and all pages must be initialed by all parties. These mandatory agreements must be done in duplicate. One properly signed copy must be filed in your safety file. The other copy must be filed in the Contractors safety file. You must come to an agreement regarding the Safety Rep and the first aid arrangements with the Contractors. These arrangements must be written in the mandatory agreement. These arrangements are as follow; they must have at least one trained Safety Rep and at least one trained First Aider, whether they qualify to have one or not.

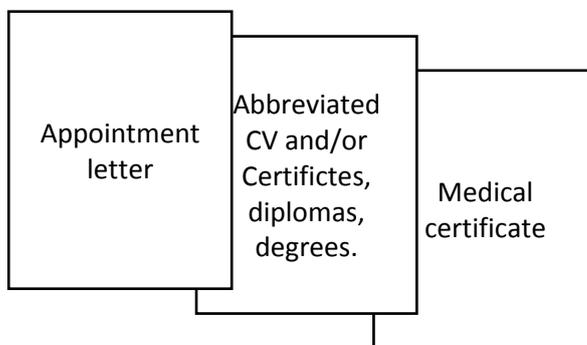
**OHS Act Section 37 & CR 2014 (7)(1)(f)** *in addition to the documentation required in the health and safety file in terms of paragraph (c)(v) and subregulation (2)(b), include and make available the agreements between the parties and the type of work, being done;*

### 17. Legal Appointments.

An appointment letter is a legal document and must be treated as such. Herewith, a list of, at least, the legal appointments we want on site. Herewith also a few notes:

- The appointment letters must be properly signed by all parties involved and in black pen.
- The appointment letters must be properly filled in with no blank spaces.
- The name of the appointment, for example: "CEO Delegation of Duties (16.2) Appointment," must be clearly written on the appointment.
- The site name and date must appear on the appointment letter.
- Proof of competency must be attached to the back of the appointment letter. Proof of competency may be proven with degrees, diploma's, certificates and/or a short abbreviated CV. Where the Act explicitly says, "Competent person," we will require certificates and or diplomas and degrees.
- All appointees must have a medical certificate attached behind the proof of competencies.
- We do not accept appointment letters that has two designation on it. Each designation must have it's own appointment letter.

To make it easier for the auditor (And we know we must never irretate the audit team) we suggest the following sequence for an appointee's documents:



Where the Act requires a "competent" person, the following extract of the Act will be the standard:

**CR 2014 (1) Definitions:- "competent person"** means a person who-(a) has in respect of the work or task to be performed the required knowledge, training and experience and, where applicable, qualifications, specific to that work or task: Provided that where appropriate qualifications and training are registered in terms of the provisions of the National Qualification Framework Act, 2000 (Act No.67 of 2000), those qualifications and that training must be regarded as the required qualifications and training; and  
(b) is familiar with the Act and with the applicable regulations made under the Act;

#### 17 (1) 16.2 Appointee

*OHS Act 16(2) Without derogating from his responsibility or liability, a chief executive officer may assign any duty to any person under his control, which person shall act subject to the control and directions of the chief executive officer.*

Department of Public Works's audit question numbers: 159, 160, 161 .

#### 17 (2) Construction Manager

*CR 2014 (8)(1) A principal contractor must in writing appoint one full-time competent person as the construction manager with the duty of managing all the construction work on a single site, including the duty of ensuring occupational health and safety compliance,*

Department of Public Works's audit question numbers: 162, 163, 164, 165, 166, 167.

#### 17 (3) Construction Supervisors

*CR 2014 (8)(7) A construction manager must in writing appoint construction supervisors responsible for construction activities and ensuring occupational health and safety compliance on the construction site.*

Department of Public Works's audit question numbers: 178, 179, 180, 181.

**17 (4) Assistant Construction Supervisor**

CR 2014 (8)(8) A contractor must, upon having considered the size of the project, in writing appoint one or more competent employees for different sections thereof to assist the construction supervisor contemplated in subregulation (7), and every such employee has, to the extent clearly defined by the contractor in the letter of appointment, the same duties as the construction supervisor: Provided that the designation of any such employee does not relieve the construction supervisor of any personal accountability for failing in his or her supervisory duties in terms of this regulation.

Department of Public Works's audit question numbers: 182, 183, 184, 185, 186, 187.

**17 (5) Risk Assessor**

CR 2014 (9)(1) A contractor must, before the commencement of any construction work and during such construction work, have risk assessments performed by a competent person appointed in writing,

Department of Public Works's audit question numbers: 188, 189, 190, 191, 192, 193.

**17 (6) Fall Protection Planner**

CR 2014 (10)(1) A contractor must-(a) designate a competent person to be responsible for the preparation of a fall protection plan;

Department of Public Works's audit question numbers: 194, 195, 196, 197, 198, 199.

**17 (7) Scaffolding Inspector**

SANS 10085-1:2004, Edition 1.1,

Section 12.2:- All scaffolding shall be carefully inspected by a person competent in scaffolding supervision, erection and maintenance at least once a week.

14.5 Inspection of the scaffolding

For scaffolding more than 6 m high, a person who is certificated as an Inspector of Scaffolding (see 16.2.6 and 16.3) shall be appointed to:

a) carry out scaffolding inspections;

Department of Public Works's audit question numbers: 236, 237, 238, 239, 240, 241.

**17 (8) Scaffolding Erectors**

SANS 10085-1:2004, Edition 1.1,

Section 16.1:- Three persons are identified by this part of SANS 10085 as important to the execution of scaffolds that comply with the requirements of this part of SANS 10085. These persons are

a) the scaffolding erector who is competent to erect and dismantle...

Definitions: Section 3.12:- competent person

person who is competent by virtue of his training and experience in the erection and dismantling of scaffolding.

Department of Public Works's audit question numbers: 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259.

**17 (9) Explosive Actuated Fastening Device Cleaner and Examiner (Hilti Gun)**

CR 2014 (21)(2)(b) A contractor must ensure that:- (b) an explosive actuated fastening device is cleaned and examined daily before use and as often as may be necessary for its safe operation by a competent person who has been appointed for that purpose;

Department of Public Works's audit question numbers: 272, 273, 274, 275, 276, 277.

**17 (10) Explosive Actuated Fastening Device Controller**

CR 2014 (21)(2)(g)(i) A contractor must ensure that:- (g) the issuing and collection of cartridges and nails or studs of an explosive actuated fastening device are-(i) controlled and done in writing by a person having been appointed in writing for that purpose; and (ii) recorded in a register by a competent person and that the recipient has accordingly signed for the receipt thereof as well as the returning of any spent and unspent cartridges.

Department of Public Works's audit question numbers: 278, 279, 280, 281, 282, 283.

### **17 (11) Temporary Electrical Installation Controller**

CR 2014 (24)(c) A contractor must, in addition to compliance with the Electrical Installation Regulations, 2009, and the Electrical Machinery Regulations, 1988, promulgated by Government Notice No. R. 1593 of 12 August 1988, ensure that-

(c) the control of all temporary electrical installations on the construction site is designated to a competent person who has been appointed in writing for that purpose;

Department of Public Works's audit question numbers: 284, 285, 286, 287, 288, 289.

### **17 (12) Stacking and Storage Supervisor**

CR 2014 (28)(a) A contractor must, in addition to compliance with the provisions for the stacking of articles in the General Safety Regulations, 2003, ensure that:-

- (a) a competent person is appointed in writing with the duty of supervising all stacking and storage on a construction site;
- (b) adequate storage areas are provided;
- (c) there are demarcated storage areas; and
- (d) storage areas are kept neat and under control.

Department of Public Works's audit question numbers: 290, 291, 292, 293, 294, 295.

### **17 (13) Fire Equipment Inspector**

CR 2014 (29)(h) A contractor must, in addition to compliance with the Environmental Regulations for Workplaces, 1987, ensure that:-

(h) the fire equipment contemplated in paragraph (g) is inspected by a competent person, who has been appointed in writing for that purpose, in the manner indicated by the manufacturer thereof;

Department of Public Works's audit question numbers: 296, 297, 298, 299, 300, 301.

### **17 (14) Health and Safety Representatives**

OHS Act (17)(1) - every employer who has more than 20 employees in his employment at any workplace, shall designate in writing for a specific period, health and safety representatives for such workplace, or for different sections thereof.

Whether you qualify to have a safety representative or not, we require that you will have at least one safety Representative. Even if you have less than 20 employees. Someone must supervise the safety on site.

Safety Representatives shall be provided with training needed to execute their duties.

OHS Act (18)(3) - An employer shall provide facilities, assistance and training as a safety representative may reasonably require and as have been agreed upon for the carrying out of their functions.

Department of Public Works's audit question numbers: 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 08, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318,319.

### **17 (15) Incident Investigator**

All incidents and accidents must be investigated and the results thereof must be recorded on an Annexure 1 as published in the Gazette. No other form may be used.

GAR 9(2) An employer or user shall cause every incident which must be recorded to be investigated by the employer, a person appointed by him or her, by a health and safety representative or a member of a health and safety committee...

GAR 9(3) An employer or user shall cause the findings of the investigation to be entered in Annexure 1 immediately after completion of such investigation.

Department of Public Works's audit question numbers: 351, 352, 353, 354, 355.

### **17 (16) First Aiders**

GSR 3(4) Where more than 10 employees are employed at a workplace, the employer shall ensure that for every group of fifty employees, at least one person is readily available and in possession of a valid certificate of competence in first aid, ...

Department of Public Works's audit question numbers: 351, 352, 353, 354, 355.

## **17 (18) Construction vehicles and mobile plant Operators**

**CR 2014 (23)(1)(d)(i) A contractor must ensure that all construction vehicles and mobile plant- (d) are operated by a person who-**

**(i) has received appropriate training, is certified competent and in possession of proof of competency and is authorised in writing to operate those construction vehicles and mobile plant;**

**Department of Public Works's audit question numbers: 356 to question number 513.**

## **18. Compliance Audits**

We will do a full health and safety audit on your site every month. The results and the report must be filed by you in the safety file. Discrepancies must be actioned within a week and signed off on the audit report. You must also do monthly safety audits on yourself and your Contractors on site, every month. The reports must be filed in the safety file.

**CR 2014 (5)(1) A client must**

**(o) ensure that periodic health and safety audits and document verification are conducted at intervals mutually agreed upon between the principal contractor and any contractor, but at least once every 30 days;**

**(p) ensure that a copy of the health and safety audit report contemplated in paragraph (o) is provided to the principal contractor within seven days after the audit;**

**CR 2014 (7)(c)(vii) A principal contractor shall ensure that the periodic site audits and document verification are conducted at intervals mutually agreed upon between the principal contractor and any contractor, but at least once every 30 days;**

**Department of Public Works's audit question numbers: 514, 515.**

## **19. Medical Certificates**

All your personnel on site must be certified medically fit to work on a construction site. They must all be certified by an Occupational Medical Practitioner using the form published in the gazette, Annexure 3. No other medical certificate will be accepted. No person may enter the site to work there if he/she doesn't have medical certification.

**CR 2014 (7)(1)(g) A principal contractor must ensure that all his or her employees have a valid medical certificate of fitness specific to the construction work to be performed and issued by an occupational health practitioner in the form of Annexure 3.**

**Department of Public Works's audit question numbers: 516.**

## **20. Induction Training**

You, the Principal Contractor, the Principle Contractor, will do the site specific induction training with everyone on site. All induction training must be recorded in an induction training register. No person or employee may be allowed or permitted to work on the site, unless such an employee or person has undergone the site's health and safety induction training, pertaining to the hazards prevalent on the site at the time of entry. The following documents must also be discussed in the induction training session with the employee:

Fall Protection Plan

Site Rules

Emergency Plan

Health & Safety Policy Document

The following shall apply in your recordkeeping:

- All ID numbers must be noted
- The induction date must be noted
- The employees must sign for the training
- There must be proof of what was taught in the induction training session

**CR 2014 (7)(5) A principal contractor:-**

**(5) may not allow or permit any employee or person to enter any site, unless that employee or person has undergone health and safety induction training pertaining to the hazards prevalent on the site at the time of entry.**

**(6) must ensure that all visitors to a construction site undergo health and safety induction pertaining to the hazards prevalent on the site and must ensure that such visitors have the necessary personal protective equipment.**

**(7) must at all times keep on his or her construction site records of the health and safety induction training contemplated in subregulation (5) and (6) and such records must be made available on request to an inspector, the client, the client's agent or the principal contractor:.**

**Department of Public Works's audit question numbers: 517, 518, 519, 520, 521.**

## **20. First Aid Register**

We require from you a "First Aid Register" where all first aid cases must be recorded. It must at least reflect the following information:

- Date
- Name of injured
- ID Number
- Type of injury
- What treatment was administered
- What was used from the first aid box

Annexure One number, if the patient received medical attention other than first aid.

**Department of Public Works's audit question numbers: 522, 523.**

## **21. Incident / Accident reports / Wcl 2 / Annexure one's**

All incidents where someone received medical attention other than first aid, must be reported on an "Annexure One" as contemplated in the OHS Act's General Administrative Regulations 9.(1). We will not accept any other form. The Dept of Labour also doesn't accept any other form. The following evidence must be attached to the "Annexure One" form and marked as "Exhibit A", "B" or whatever numbering system you want to use:

- Photographs
- Sketches
- Proof of Toolbox Talk after accident
- Proof of Toolbox Talk on the subject before the accident
- Proof of competency
- Proof of authorisation to operate
- Proof of training
- Copy of victims ID
- Physical address & contact no of victim & his family
- Proof of victims induction training
- PPE Issue Register
- Medicals of victim
- WCL 2 forms
- Statements
- Copy of Police docket

Each Annexure 1 form must be properly completed and submitted to the employer for comment wherafter it must be tabled at the health and safety committee meeting.

**GAR (9)(1) An employer or user shall keep at a workplace a record in the form of Annexure 1 for a period of at least 3 years, which record shall be open for inspection by an inspector, of all incidents which he or she is required to report in terms of section 24 of the Act and also of any other incident which resulted in the person concerned having had to receive medical treatment other than first aid.**

**GAR (9)(3) An employer or user shall cause the findings of the investigation to be entered in Annexure 1 immediately after completion of such investigation.**

**GAR (9)(3)** An employer shall cause every Annexure one to be examined by the health and safety committee for that workplace at its next meeting and shall ensure that necessary actions, as may be reasonably practicable, are implemented and followed up to prevent the recurrence of such incident.

Department of Public Works's audit question numbers: 522 to 554.

## **22. Safety Representative Elections & Inspections.**

Your appointed safety representatives must be nominated and elected by your workforce and proof thereof must be available for auditing purposes. Your safety reps must be involved in your internal audits and also do inspections of the workplace where they are responsible for. They must submit meaningful reports monthly.

**OHS Act (17)(2)** An employer and the employees shall consult in good faith regarding the arrangements and procedures for the nomination or election, period of office of health and safety representatives.

**OHS Act (18)(1)(g)** A health and safety representative may inspect the workplace, including any article, substance, plant, machinery or health and safety equipment at the workplace...

**OHS Act (18)(2)(f)** A safety representative is entitled to participate in any internal health and safety audit.

Department of Public Works's audit question numbers: 555, 556, 557.

## **23. COC Electrical certificates**

Your site electrical installation and all your temporary electrical distribution boxes must have a certificate of compliance (COC) issued by a registered body.

**Electrical Installation Regulations (7)(1)** Every user of an electrical installation shall have a valid certificate of compliance for that installation...

Department of Public Works's audit question numbers: 558, 559.

## **24. Risk Assessments**

All tasks performed on site must be backed by a risk assessment which determined the risks, the hazards and determines the best preventative measures to minimize the risks and hazards. All the risk assessments must have:

- 1 The site name on the risk assessment.
- 2 The date on the risk assessment.
- 3 The person/s name/s that did the risk assessment and their signatures.
- 4 An attendance register as proof that the workforce was trained in the risk assessment.
- 5 Proof that you consulted with the safety committee regarding the monitoring, review and possible approval of your risk assessments.

**CR 2014 (9)(1)** A contractor must, before the commencement of any construction work and during such construction work, have risk assessments performed by a competent person appointed in writing,

**CR 2014 (9)(1)** A contractor must, before the commencement of any construction work and during such construction work, have risk assessments performed by a competent person appointed in writing, and must include (e) a review plan.

**CR 2014 (9)(3)** A contractor must ensure that all employees under his or her control are informed, instructed and trained by a competent person regarding any hazard and the related work procedures and or control measures before any work commences, and thereafter at the times determined in the risk assessment monitoring and review plan of the relevant site.

Department of Public Works's audit question numbers: 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599,

## **25. Scaffold Register**

All scaffolding on site, whether completed or not, certified safe or not, must be listed on a register. (Example as per SANS underneath) Remember, there are two separate documents. The register and the checklist. All scaffolding on register must be inspected daily, or if any changes on the structure was made. The checklist must be signed by the person doing the check and signed off by management. Any discrepancies noted must immediately be actioned and action taken must be noted on the checklist. No discrepancy may be carried over to the next days checklist.

Your scaffolding must have some kind of identification on them to identify them.  
You need to post symbolic signs on your scaffold structures, at least the following:

- Safe/unsafe for use
- Warn the workers that this is hard hat area

When you have scaffolding on site you must have the following competent persons appointed in writing:

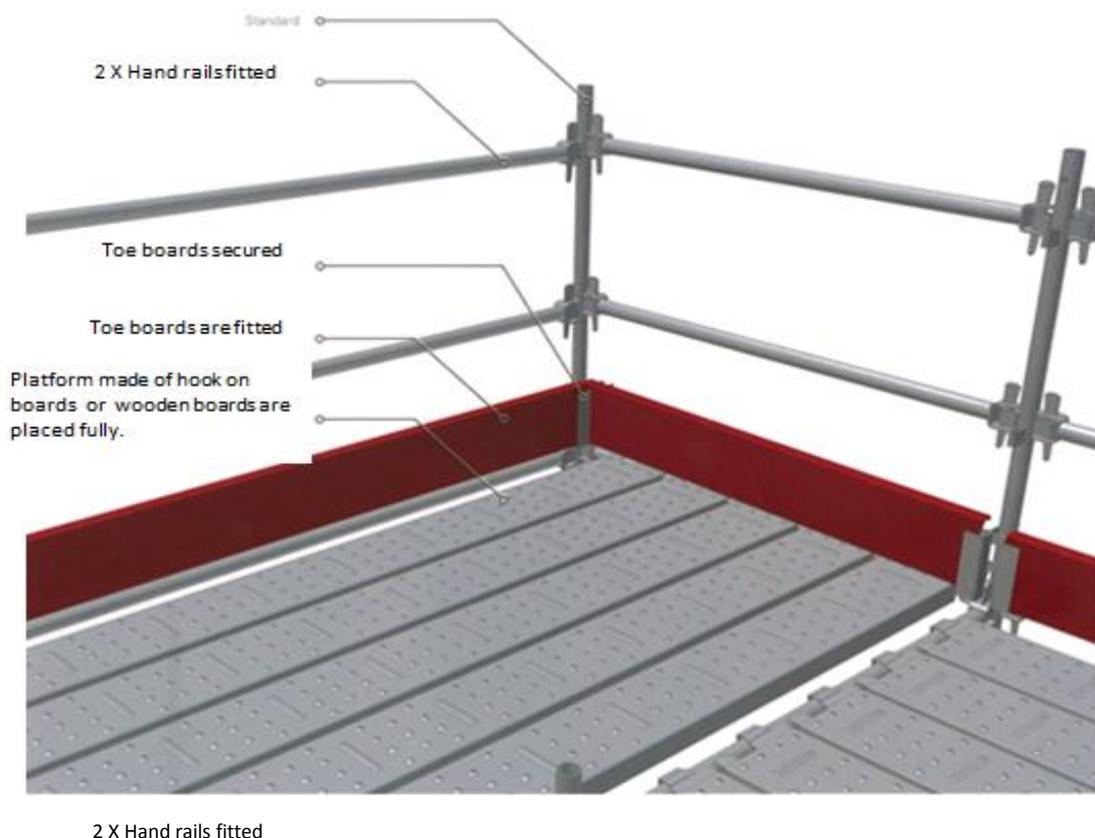
- Scaffold Supervisor
- Scaffold Team Leader
- Scaffold Inspector
- Scaffold Erector

Competent, in short, means that the above persons must have accredited certificates as per the safety standards incorporated for this purpose into the OHS Act Regulations under section 44 of the Act. (SANS 10085-1:2004, Edition

Each scaffold structure must be numbered to enable someone to identify the scaffold as per your scaffold register.

Scaffolding must at least be of the standard shown underneath:

We also require your scaffold supervisor to hand over the scaffolding structure to the person who requested the scaffold. The handover will be done after a thorough inspection of the scaffold. The scaffold supervisor will hand over a signed certificate to the person who will in turn sign the certificate as proof of accepting the scaffold structure as safe and secure.





SANS 10085-1:2004, Edition 1.1 - 11.2.1 Scaffolding shall not be

- a) left partly constructed or partly dismantled except for normal work stoppages (for example, over weekends),
- b) left in an unsafe condition, or

NOTE: If this is unavoidable, the scaffolding should be suitably fenced-off and provided with warning signs.

- c) moved or altered while work is in progress.

SANS 10085-1:2004 Edition 1.1 - 11.6 Safety signs

11.6.1 Symbolic safety signs that comply with the requirements for MV 3 ("Head protection shall be worn") of SANS 1186-1 and of size at least 205 mm × 205 mm shall, if not already required in terms of general site signage, be placed at or be attached to the nearest entry point to the scaffolding.

11.6.2 Symbolic safety signs that comply with the requirements of SANS 1186-1 and of size at least 205 mm × 205 mm shall be used to warn the public, and shall either be attached to the entry point to the scaffolding, or be placed at a prominent position. The symbolic safety signs shall be the appropriate of the following types (see SANS 1186-1):

- a) to warn the public of scaffolding operations (general warning of hazard);
- b) to warn the public of suspended scaffolding operations;
- c) to prevent workers from using incomplete scaffolding; and
- d) to advise workers that scaffolding is safe for use.

SANS 10085-1:2004 Edition 1.1 - 12

## 12 Inspection

12.2 All scaffolding shall be carefully inspected by a person competent in scaffolding supervision, erection and maintenance at least once a week.

12.5 All scaffolding shall be inspected immediately after inclement weather, after any mishap resulting in jarring, tilting or overloading, after alterations, and before dismantling to ensure that ties are at suitable positions for safe dismantling. Special attention shall be given to the condition of cables, ropes, winches, hoists, ties, baseplates and access ladders. The results of all inspections shall be recorded in the scaffold inspection register (see 12.6).

12.6 Upon completion of an inspection, the inspector shall record the details in a scaffold inspection register, including details of any faults found and corrected during his inspection. The minimum information required to be recorded shall be as shown in annex C, however, the presentation format may be varied to suit individual companies.

## Annex C (informative)

### Typical format for scaffold inspection register

Location/type of scaffold	Date of inspection	Faults found during inspection	Date corrected	Signature

SANS 10085-1:2004 Edition 1.1 - 14.6 Handover of the scaffold

Subsequent to a satisfactory final inspection, the scaffolding supervisor shall submit a handover certificate to the person requesting the scaffold to be built; this person shall, in turn, sign the certificate to indicate acceptance of the scaffold. The handover certificate shall contain details of the conditions of usage (including regular inspections) of the scaffold.

Department of Public Works's audit question numbers: 608, 609, 610, 611, 612, 613, 614, 615, 616, 617.

### 26. Explosive actuated fastening device

We are not sure whether you are going to use an Explosive actuated fastening device on this site. If you do, you must appoint an Explosive Actuated Fastening Device Controller and an Explosive Actuated Fastening Device Cleaner and Examiner for this site. You must also have a register for controlling the issuing and collection of cartridges and nails or studs of your explosive actuated fastening device.

You must submit proof of training for your user of the Explosive actuated fastening device before he will be allowed to use the device.

CR 2014 (21)(1)(b) No contractor may use or permit any person to use an explosive actuated fastening device, unless:

(b) the user is trained in the operation, maintenance and use of such a device;

CR 2014 (21)(1)(g) A contractor must ensure that:

(g) the issuing and collection of cartridges and nails or studs of an explosive actuated fastening device are-

(i) controlled and done in writing by a person having been appointed in writing for that purpose; and

(ii) recorded in a register by a competent person and that the recipient has accordingly signed for the receipt thereof as well as the returning of any spent and unspent cartridges.

Department of Public Works's audit question numbers: 618, 619.

### 27. Electrical installations and machinery

You must inspect your temporary electrical distribution boards (Installations) at least weekly. You need to keep the checklists for auditing purposes. You also need to have a temporary electrical installations inspection register where the results of the inspections are recorded. This register must be available for auditing purposes.

All your electrical machinery, (electric drill, angle grinder, skill saw, etc.) must be inspected daily before use by the operator of such electric machinery. The checklists must be kept for auditing purposes.

CR 2014 (24)(d) A contractor must, in addition to compliance with the Electrical Installation Regulations, 2009, and the Electrical Machinery Regulations, 1988, promulgated by Government Notice No. R. 1593 of 12 August 1988, ensure that

(d) all temporary electrical installations used by the contractor are inspected at least once a week by a competent person and the inspection findings are recorded in a register kept on the construction site; and

CR 2014 (24)(e) A contractor must, in addition to compliance with the Electrical Installation Regulations, 2009, and the Electrical Machinery Regulations, 1988, promulgated by Government Notice No. R. 1593 of 12 August 1988, ensure that (e) all electrical machinery is inspected by the authorized operator or user on a daily basis using a relevant checklist prior to use and the inspection findings are recorded in a register kept on the construction site.

Department of Public Works's audit question numbers: 620, 621, 622, 623.

## 28. Fire Equipment checklists

All your fire equipment must be inspected monthly and record thereof must be kept. You must also train a sufficient number of persons on site in handling the fire equipment in case of a fire.

Department of Public Works's audit question numbers: 624, 625.

## 29. Construction Welfare Facilities

Department of Public Works requires that the Principal Contractor provide their workers with at least the following facilities:

- one shower for every fifteen workers.
  - ◊ Running hot and cold water.
  - ◊ floors of the showers slipfree and sloped for easy drainage
  - ◊ showers demarcated "Male" and "Female"
  - ◊ adequate ventilation in the showers
- one clean and hygienic toilet for every thirty workers:
  - ◊ a system of supplying the workforce with toilet paper
  - ◊ if toilets are designed to have a seat, it must have a seat
  - ◊ facilities to wash hands at the toilets
  - ◊ facilities to dry hand after being washed
  - ◊ toilet soap or a similar cleansing agent supplied to employees to wash their hands at the toilets
  - ◊ toilets demarcated "Male" and "Female"
  - ◊ toilets separated and private with doors for privacy

The above will also be the standard for mobile toilets. You may attempt to organise to use existing facilities on site to save costs.

CR 2014 (30)(1)(a) A contractor must, in addition to the construction site provisions in the Facilities Regulations, 2004, promulgated by Government Notice No. R. 924 of 3 August 2004, provide at or within reasonable access of every construction site, the following clean, hygienic and maintained facilities:

- (a) Shower facilities after consultation with the employees or employees representatives, or at least one shower facility for every 15 persons;
- (b) at least one sanitary facility for each sex and for every 30 workers;

Facilities Regulation (2)(4)(a) Every employer shall provide showers for the use of his employees, and he shall:

- (a) provide running hot or cold or premixed hot and cold water for washbasins and showers;
- (b) ensure that the floor thereof is slip-free and sloped for effective drainage;

Facilities Regulation (2)(5)(a) In respect of each room in which there are closets, urinals, showers or washbasins, every employer shall:-

- (a) provide a conspicuous sign outside the entrance of such room to indicate the gender for whom the room is intended;
- (b) ventilate such rooms in accordance with the provisions of Part O of the National Building Regulations;
- (c) shall provide the necessary screen walls, partitions or doors in order to provide privacy;

Facilities Regulations (2)(3)(a) Every employer shall:

- (a) make toilet paper available to employees;
- (b) provide every water closet pan designed to have a seat, with a seat;
- (c) supply a towel to every employee for his sole use or disposable paper towels or hot air blowers or clean portions of continuous cloth towels, at the washbasins;
- (d) provide toilet soap or a similar cleansing agent to employees;

Department of Public Works's audit question numbers: 626, 627, 628, 629, 630, 631, 632, 633, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801.

### **30. Construction Vehicles and Mobile Plant Operators**

Every operator must be authorised in writing with an appointment letter, to operate the plant assigned to him. The letter must be properly dated and signed by both the Construction Manager and the operator. You must also prove the operators competency with an accredited certificate of competence. The certificate must be varify-able. This means that we will need a contact number where we can contact the training provider that issued the certificate, to varify the authenticity of the certificate and their accreditation credentials.

Every operator must have a medical certificate declaring him medically fit to operate the assigned plant. All copies of documents must be certified as being a true copy of the original document. To make it easier for the auditor (And we know we must never irretate the audit team) we suggest the following sequence for an operators documents: first the appointment letter, then the proof of competency and lastly the medical certificate.

Every operator must do his own daily start-up inspection on the plant that he is operating and he must use a checklist for that purpose. The results of the checklist must be recorded on a "Construction vehicles and mobile plant inspection register." The checklist must be properly dated and signed by the operator. It is essential that Management must sign off the checklists. If any discrepancies are noted, you must note the action taken by Management to resolve the discrepancy. There must be a clear trace-able chain of action taken. These documents must be kept in the plant of the operator.

**CR 2014 (23)(1)(d)(i) A contractor must ensure that all construction vehicles and mobile plant-**  
**(d) are operated by a person who-**

- (i) has received appropriate training, is certified competent and in possession of proof of competency and is authorised in writing to operate those construction vehicles and mobile plant;**
- (ii) has a medical certificate of fitness to operate those construction vehicles and mobile plant, issued by an occupational health practitioner in the form of Annexure 3;**

**CR 2014 (23)(1)(k) A contractor must ensure that all construction vehicles and mobile plant:**

- (k) are inspected by the authorised operator or driver on a daily basis using a relevant checklist prior to use and that the findings of such inspection are recorded in a register kept in the construction vehicle or mobile plant.**

**Department of Public Works's audit question numbers: 374 to 513 and 626 to 785 This is 298 questions on the site plant.**

### **31. Plant Hire and Labour only Contractor's Mandatory Agreements**

This is a very contravertial subject. Are they contractors or not? This is how we want you to handle the situation. If you hire a TLB from a person or a few tippers from another, and you want to treat them as a plant hire company and not a Contractor, then we require you to enter into a mandatory agreement with them. In the agreement you must clearly state that the operators are under your full management and control. You must also clearly state that the Principal Contractor takes full responsibility for the operators under their Workman's Compensation insurance. Labour only's must be treated in the same manner. It is clearly stated that all plant hire companies cannot be treated this way just to avoid them having a safety file. We're talking one or two plant being hired.

All the pages of the mandatory agreements must be initialed by all parties. It must also be properly signed by all parties.

This document serves as a guideline on how we want you to manage the safety program on site. It is common sense and common knowledge that the OHS Act must be read, and implemented, in liason with this document and all it's requirements. This document is complimentary to the OHS Act and the standards mentioned in this document.

## **32. Flammable Goods**

Small quantities of flammable liquids must be stored in a "Flammable Liquid Store," well ventilated, with the appropriate symbolic signs, and with an inventory of all liquids stored, with quantities. All containers must be tightly closed. Enough and the correct fire extinguishers must be placed in conspicuous places. A bund wall, plastered must be able to contain a spillage if it occurs.

*General Safety Regulation (10) An employer shall cause every flammable liquid store to be --*

*(a) separated by means of fire-resisting material with a fire-resistance of two hours from any room, cabinet or enclosure contemplated in subregulation (2);*

*(b) constructed of fire-resisting material with a fire-resistance of two hours;*

*General Safety Regulation (10) An employer shall cause every flammable liquid store to be:*

*(d) ventilated to the open air in such a manner that vapour cannot accumulate inside the store;*

*CR 2014 (25)(b) A contactor must, in addition to compliance with the provisions for the use and storage of flammable liquids in the General Safety Regulations, 2003, ensure that:*

*(b) no person smokes in any place in which flammable liquid is used or stored, and the contractor must affix a suitable and conspicuous notice at all entrances to any such areas prohibiting such smoking;*

*CR 2014 (25)(c) A contactor must, in addition to compliance with the provisions for the use and storage of flammable liquids in the General Safety Regulations, 2003, ensure that:*

*(c) an adequate amount of efficient fire-fighting equipment is installed in suitable locations around the flammable liquids store with the recognized symbolic signs*

*CR 2014 (25)(e) A contactor must, in addition to compliance with the provisions for the use and storage of flammable liquids in the General Safety Regulations, 2003, ensure that:*

*(e) all containers holding flammable liquids are kept tightly closed when not in actual use and, after their contents have been used up, are removed from the construction site and safely disposed of;*

*Department of Public Works's audit question numbers: 859, 860, 861, 862, 863, 864, 865, 866.*

## **33. Gas Installation**

The works regarding the gas installation must be done and overseen by a registered competent person and a certificate of compliance must be issued after the gas works are completed.

## **34. Personal Protective equipment**

All workers on site must be issued the correct PPE as per your PPE risk assessment.

**This concludes this health and safety specification document. It is impossible to cover and discuss all the mentioned standards in this specifications document. Thus, this document only highlights the priorities and it forms part of the standards.**



**DEPARTMENT OF PUBLIC WORKS**

**STANDARD SPECIFICATION**

**FOR**

**KITCHEN EQUIPMENT**

**(ARCHITECTURAL)**

**SEPTEMBER 1994**

# INDEX

DESCRIPTION	PAGE
<b>ARCHITECTURAL EQUIPMENT</b>	
1. <u>KITCHEN EQUIPMENT (GENERAL CONDITIONS)</u>	1
2. <u>TABLES</u>	3
2.1 STAINLESS STEEL TABLE	3
2.2 MOBILE TABLE	4
2.3 INLET TABLE WITH SCRAPE HOLE AND PRE-RINCE UNIT	4
2.4 OUTLET TABLE	4
2.5 TABLE WITH SCRAPE HOLE AND SPLASH BACK	4
2.6 PURPOSE MADE STAINLESS STEEL TABLE WITH CUPBOARD UNDERNEATH	5
2.7 PURPOSE MADE TABLE AND VEGETABLE CONTAINERS (VEGETABLE PREPARATION AREA)	5
2.8 POTATO SORTING TABLE (SLOPE BOTTOM)	5
2.9 POTATO SORTING TABLE WITH BOWL	5
3. <u>SINKS</u>	5
3.1 SINGLE BOWL SINK	5
3.2 DOUBLE BOWL SINK	6
3.3 SINGLE BOWL SINK WITH SCRAPE HOLE	6
3.4 SINGLE BOWL POT SINK (900 X 650mm)	6
3.5 DOUBLE BOWL POT SINK (2550 X 650mm)	6
3.6 PURPOSE MADE SINGLE BOWL POT SINK	6
3.7 PURPOSE MADE DOUBLE BOWL POT SINK	7
3.8 MOBILE POT SINK	7
3.9 MEAT TROUGH	7
3.10 LEFT-HAND BOWL VEGETABLE PREPARATION SINK	7
3.11 RIGHT-HAND BOWL VEGETABLE PREPARATION SINK	7
4. <u>CUPBOARDS</u>	8
4.1 MOBILE CUPBOARD FOR CHIPS	8
4.2 PURPOSE MADE EQUIPMENT CUPBOARD	8
4.3 CUPBOARD FOR BREAD	8
4.4 PURPOSE MADE LOCKABLE STAINLESS STEEL CUPBOARD FOR BUTCHER SET	8
5. <u>SHELVES</u>	8
5.1 ADJUSTABLE MILD STEEL SHELVES	8
5.2 ADJUSTABLE STAINLESS STEEL SHELVES	9
5.3 ADJUSTABLE STAINLESS STEEL SHELVES FOR BREAD	9
5.4 STAINLESS STEEL SHELF FOR CROCKERY	9
5.5 STAINLESS STEEL SHELVES TO WALL SURFACE	9
5.6 WALL MOUNTED STAINLESS STEEL SLATTED SHELF (POT WASH AREA)	9
5.7 VEGETABLE RACK	9

5.8	POT RACK	9
5.9	MOBILE POT RACK	9
5.10	MOBILE CROCKERY RACK	10
5.11	MOBILE PLATE AND MUG RACK	10
6.	<u>TROLLEYS</u>	10
6.1	TEE TROLLEY WITH PLINT AND DRIP TRAY	10
6.2	PURPOSE MADE KITCHEN EQUIPMENT TROLLEY	10
6.3	LOW BED TROLLEY	10
6.4	WORK TROLLEY	10
6.5	PURPOSE MADE TROLLEY FOR GASTRONORM CONTAINERS	11
6.6	MOBILE DOLLEY AND REFUSE CONTAINER	11
6.7	LOW BED BASKET TROLLEY	11
6.8	TRAY – AND CUTELY TROLLEY	11
6.9	DISH OFF TROLLEY	11
6.10	UNHEATED PASTRY/FOOD TROLLEY	11
6.	<u>GENERAL</u>	12
7.1	TRAY RAIL	12
7.2	MEAT BLOCK	12
7.3	STAINLESS STEEL UNHEATED COUNTER	12
7.4	MOBILE UNHEATED COUNTER	12
7.5	PALLET	12
7.6	POLYPROPELENE CUTTING BOARDS	12
7.7	MANUAL BREAD SLICER	12
7.8	MANUAL POTATO CHIPPER WITH BRIDGE PIECE	12
7.9	FLOOR MOUNTED MEAT RAIL	13
7.10	MOBILE MEAT RAIL	13
7.11	MULTIPOT	13
7.12	PAINT WORK	13
8.	ELECTRIC TILTING FRYING PAN	13

## 1. KITCHEN EQUIPMENT

### **SABS-SPECIFICATION**

All references to South African Bureau of Standards specifications and codes of practice shall be deemed to be references to the latest issues of such specification and codes.

### **CUSTOMS DUES**

Prices shall include prescribed customs dues on imported equipment. The tenderer cannot therefore claim import duty in pursuance of item 326 of the customs tariff with reference to any imported article.

### **INSTRUCTION MANUALS**

A maintenance and operation instruction manual, including spare parts list shall be provided with each mechanical and electrical unit.

### **TRADE NAMES**

Where trade names and model numbers are mentioned, other similar approved equipment complying with the specification may be offered.

### **POWER SUPPLY**

The electrical equipment shall be suitable for connection to 380/220 V 50 Hz three phase 4-wire A C supply.

### **SPARE PARTS**

Spare parts for each mechanical and electrical appliance shall be readily available in the Republic of South Africa, for a minimum period of ten years.

### **STAINLESS STEEL**

Unless otherwise specified, all stainless steel used in the construction of units/equipment shall be of type 304 (18/8 quality) not less than 1,2mm thick. The construction of the units generally is to comply with the Standard Specification for Stainless Steel sinks for Institutional Use, SABS 907. **All exposed surfaces of stainless steel to be satin finished, except where otherwise specified.** The finish shall be of approximately 220 to 240 grit.

The units except where specified as being movable or mobile must be securely fixed to floors either by non-ferrous bolts in the surface bed or by substantial non-ferrous screws into plugs in the floor.

All welding is to be done in the most up-to-date manner and to be cleaned off flush and smooth where exposed.

### **CONNECTIONS**

Prices of all equipment shall allow for connection to power points, including the connection of water- and waste pipes, complete with the necessary couplings, etc.

### **FINISHING**

Prices of all equipment shall, where applicable, allow for baked on powder-coated enamel finishing on all exposed metal surfaces, except stainless steel work.

### **MAIN OFFER AND ALTERNATIVE**

The tenderer's attention is drawn to the fact that his main offer shall be based on the specification in the Bills of Quantities, before an alternative tender may be submitted.

If the tenderer offers alternatives, the following information shall be submitted with his alternative tender, in

respect of each alternative to be supplied:

- (a) The page and item number for which an alternative is offered.
- (b) The name of the alternative make or model offered, including technical pamphlets and/or complete details relating to the information contained in the Bills of Quantities.
- (c) The name of the manufacturer.
- (d) The country of origin.
- (e) The alternative tariff.
- (f) The amount to be omitted or added to the main offer in respect of each alternative.

---

### GUARANTEE

The tenderer shall guarantee the kitchen equipment **for a period of twelve months from the date on which the installation/fixing of all units is satisfactorily completed.**

The contractor shall repair, at his own cost, defects that may become defective during the guarantee period due to inferior materials or workmanship (fair wear and tear excluded). Any part so replaced, shall be guaranteed for a further year from the date of replacement.

All the equipment and installation shall comply in all respects with the requirements of the Machinery and Occupational Safety Act No 6 of 1983.

ITEM

### SAFETY : COMPULSORY SPECIFICATION

Where applicable all electrical equipment shall comply with the "Compulsory Specification for the Safety of Electrical Appliances" as published in the Government Gazette No. 7464, Notice 466 of 1981.

All the electrical equipment shall be provided with a substantial earth terminal to which all metal parts are to be connected.

The tenderer shall submit the following certificates with his tender:

1. Certificate of compliance with the safety requirements of the Compulsory Specification issued by the SABS.
2. Certificate of compliance with the valid requirements as described in the "Limits of Interference to Radio Communications" issued by the Postmaster-General in terms of the Radio Regulations under Section 18(i) (e) of the Radio Act 1952 (Act 3 of 1952).

ITEM

### LAYOUT DIAGRAM AND INSTRUCTION

Provide a layout diagram, size approximately 400 x 450mm showing the layout of the kitchen equipment, the diagram to be framed and the framing to be provided with a glass front. Each item to be numbered and named on the diagram.

The tenderer shall instruct the officer in charge of the kitchen where the kitchen equipment are to be installed, in the use of the equipment.

ITEM

### DAMAGE

The tenderer will be held entirely responsible for any damage which may occur to the kitchen units during the transportation, setting into position and fixing; also any damage done to the building and must make good any such damage at his own risk.

No patching or repairing of damaged units will be allowed unless such damage can be made completely effectively and to the entire satisfaction of the Representative/Agent.

ITEM

## 2. TABLES

### 2 1 **STAINLESS STEEL TABLE**

The table to be of measurements as indicated on the drawing, constructed out of 1,2mm thick type 304-stainless steel top, reinforced with 1,6mm thick mild steel backing plate and with vermin proof

sound deadening material between.

The edges of the top to be turned down all round and lower edge of ("turn down") beaded over. Top supported on mild steel framing with type 304-stainless steel legs, with adjustable non-ferrous feet, complete with similar metal fench to secure unit to floor surface with non-ferrous bolts or screws. Provide unit at wall sides with approximately 150mm high splash backs. Provide unit close to the bottom with solid 1,6mm thick type 430-stainless steel shelf.

## 2.2 **MOBILE TABLE**

The mobile table to be of measurements as indicated on the drawing, constructed out of 1,2mm thick type 304-stainless steel top, reinforced with 1,6mm thick mild steel backing plate and with vermin proof sound deadening material between.

The edges of the top to be turned down all round and lower edge of ("turn down") beaded over. Top supported on mild steel framing with type 304-stainless steel uprights.

Fit unit with two fixed - and two fully swivelling heavy duty firm castors with rubber - or neoprene tyres. The fixed castors to be fitted with brakes.

Provide unit close to the bottom with solid 1,6mm thick type 430-stainless steel shelf.

## 2.3 **INLET TABLE WITH SCRAPE HOLE AND PRE-RINSE UNIT**

The unit to be of measurements as indicated on the drawings, complete with bowls approximately 500 x 450 x 230mm deep. The height and width of unit to suit the dish washing machine.

The top to be constructed out of 1,2mm thick type 304-stainless steel, reinforced with 1,6mm thick galvanised backing plate and with vermin proof sound deadening material between, provided with tuned up edges all round, except the end at the dish washing machine.

The unit to be supported on mild steel framing and type 304-stainless steel legs, with adjustable non-ferrous feet, complete with similar metal fench to secure unit to floor surface with non-ferrous bolts or screws.

Provide unit with a standard size scrape hole with rubber ring.

Provide an integral stainless steel splash back approximately 500 x 600mm wide at back of bowls.

The pre-rinse is to consist of a standard heavy pattern 15mm diameter sink mixer unit with pillar taps and 15mm diameter chromium-plated riser pipe approximately 450mm long, fixed to the wall with a chromium-plated adjustable wall bracket and fitted with a spring-action type high pressure flexible chromium-plated hose, including chromium-plated finger-action jet pre-rinse spray valve with ring.

## 2.4 **OUTLET TABLE**

The outlet table to be of measurements as indicated on the drawing. The height and the width of the table must suit the dish washing machine.

The top to be constructed out of 1,2mm thick type 304-stainless steel, reinforced with 1,6mm thick mild steel backing plate and with vermin proof sound deadening material between, provided with turned up edges all round, except the end at the dish washing machine.

The unit to be supported on mild steel framing with type 304-stainless steel legs, with adjustable non-ferrous feet, complete with similar metal fench to secure unit to floor surface with non-ferrous bolts or screws.

Provide unit close to the bottom with 1,6mm thick type 304-stainless steel tubular shelf.

## 2.5 **TABLE WITH SCRAPE HOLE AND SPLASH BACK**

The unit to be of measurements as indicated on the drawing, constructed out of 1,2mm thick type 304-stainless steel top, reinforced underneath with 1,6mm thick mild steel backing plate and with vermin proof sound deadening material between.

The edges of the top to be turned down all round and lower edge of ("turn down") beaded over. Top supported on mild steel framing with type 304-stainless steel legs, with adjustable non-ferrous feet, complete with similar metal fench to secure unit to floor surface with non-ferrous bolts or screws.

The unit to be provided with scrape hole, but without rubber ring. A type 304-stainless steel shute to be provided underneath scrape hole.

Provide unit at wall sides with approximately 150mm high splash backs.

## 2.6 PURPOSE MADE STAINLESS STEEL TABLE WITH CUPBOARD UNDERNEATH

The unit to be of measurements as indicated on the drawing, constructed out of 1,2mm thick type 304-stainless steel top, reinforced with 1,6mm thick mild steel backing plate and with vermin proof sound deadening material between.

The edges of the top to be turned down all round and lower edge of ("turn down") beaded over. Top supported on mild steel framing and type 304-stainless steel legs, with adjustable non-ferrous feet, complete with similar metal flench to secure unit to floor surface with non-ferrous bolts or screws.

Provide unit at wall sides with approximately 150mm high splash backs.

Provide underneath top a cupboard of measurements as indicated on the drawing, constructed out of type 430-stainless steel body, fitted with similar stainless steel double doors.

Hang each leaf on chromium-plated piano hinge, pop-rivited to door and body. Fit doors with three lever cupboard lock; chromium-plated handles and 76mm long barrel bolts as necessary.

The unit shall be provided with a type 430-stainless steel middle shelf

## 2.7 PURPOSE MADE TABLE AND VEGETABLE CONTAINERS (VEGETABLE PREPARATION AREA)

The unit to be of measurements as indicated on the drawing, constructed out of 1,2mm thick type 304-stainless steel top, reinforced with 1,6mm thick mild steel backing plate and with vermin proof sound deadening material between.

The edges of the top to be turned down all round and lower edge of "turn down" beaded over. Top supported on mild steel framing with type 304-stainless steel legs, with adjustable non-ferrous feet, complete with similar metal flench to secure unit to floor surface with non-ferrous bolts or screws.

Provide unit at wall sides with approximately 150mm high splash backs. Provide unit with two (2) tiers solid 1,6mm thick type 430-stainless steel shelves.

Provide unit with nine (9) heavy duty plastic vegetable containers.

## 2.8 POTATO SORTING TABLE (SLOPE BOTTOM)

The purpose made unit to be of measurements as indicated on the drawing.

Construct top out of 1,2mm thick type 304-stainless steel, reinforced with 1,6mm thick mild steel backing plate and with vermin proof sound deadening material between, having sloped bottom and turned up edges.

The unit to be supported on mild steel framework with type 304-stainless steel legs, complete with adjustable non-ferrous feet, and secured to floor surface with non-ferrous bolts or screws.

The unit to be provided with scrape hole, but without rubber ring. A type 304-stainless steel shute must be provided underneath scrape hole.

## 2.9 POTATO SORTING TABLE WITH BOWL

The purpose made unit to be of measurements as indicated.

Construct the top out of 1,2mm thick type 304-stainless steel, reinforced with 1,6mm thick mild steel backing plate and with vermin proof sound deadening material between, having turned up edges. Provide unit with bowl at one end as indicated, size 700 x 500 x 380mm deep.

The unit to be supported on mild steel framework with type 304-stainless steel legs, with adjustable non-ferrous feet, complete with similar metal flench to secure unit to floor surface with non-ferrous bolts or screws.

The unit to be provided with scrape hole, but without rubber ring. A shute construct out of type 304-stainless steel must be provided underneath scrape hole.

## 3. SINKS

### 3 1 SINGLE BOWL SINK

The single bowl sink to be of measurements as indicated on the drawing, constructed out of 1,2mm thick type 304-stainless steel draining board and bowl, reinforced with 1,6mm thick mild steel backing plate and with vermin proof sound deadening material between.

The edges of the top to be turned down all round and lower edge of ("turn down") beaded over. Top supported on mild steel framing with type 304-stainless steel legs, with adjustable non-ferrous feet, complete with similar metal fench to secure unit to floor surface with non-ferrous bolts or screws.

Provide unit at wall sides with approximately 150mm high splash back.

Provide unit close to the bottom with solid 1,6mm thick type 430-stainless steel shelf.

### 3.2 **DOUBLE BOWL SINK**

The double bowl sink to be of measurements as indicated on the drawing, constructed out of 1,2mm thick type 304-stainless steel draining boards and bowls, reinforced with 1,6mm thick mild steel backing plate and with vermin proof sound deadening material between.

The edges of the top to be turned down all round and lower edge of ("turn down") beaded over. Top supported on mild steel framing with type 304-stainless steel legs, with adjustable non-ferrous feet, complete with similar metal fench to secure unit to floor surface with non-ferrous bolts or screws.

Provide unit at wall sides with approximately 150mm high splash backs.

Provide unit close to the bottom with solid 1,6mm thick type 430-stainless steel shelf.

### 3.3 **SINGLE BOWL SINK WITH SCRAPE HOLE**

The unit to be of measurements as indicated on the drawing, constructed out of 1,2mm thick type 304-stainless steel top and bowl, reinforced underneath with 1,6mm thick mild steel backing plate with vermin proof sound deadening material between.

The edges of the top to be turned down all round and lower edge of ("turn down") beaded over. Top supported on mild steel framing with type 304-stainless steel legs, with adjustable non-ferrous feet, complete with similar metal fench to secure unit to floor surface with non-ferrous bolts or screws.

The unit to be provided with scrape hole, but without rubber ring. A type 304-stainless steel shute to be provided underneath scrape hole.

Provide unit at wall sides with approximately 150mm high splash backs.

### 3.4 **SINGLE BOWL POT SINK**

The unit to be of measurements as indicated on the drawing, constructed out of 1,2mm thick type 304-stainless steel top and bowl, reinforced with 1,6mm thick mild steel backing plate with vermin proof sound deadening material between.

The edges of the top to be turned down all round and lower edge of ("turn down") beaded over. Top supported on mild steel framing with type 304-stainless steel legs, with adjustable non-ferrous feet, complete with similar metal fench to secure unit to floor surface with non-ferrous bolts or screws.

Provide unit with approximately 150mm high splash back.

### 3.5 **DOUBLE BOWL POT SINK**

The double bowl pot sink to be of measurements as indicated on the drawing, constructed out of 1,2mm thick type 304-stainless steel draining boards and bowls, reinforced with 1,6mm thick mild steel backing plate with vermin proof sound deadening material between.

The edges of the top to be turned down all round and lower edge of ("turn down") beaded over. Top supported on mild steel framing with type 304-stainless steel legs, with adjustable non-ferrous feet, complete with similar metal fench to secure unit to floor surface with non-ferrous bolts or screws.

Provide unit with approximately 150mm high splash back.

### 3.6 **PURPOSE MADE SINGLE BOWL POT SINK**

The purpose made unit to be of measurements as indicated on the drawing.

Top to be 1,2mm thick type 304-stainless steel with integral bowl to measurements as indicated on the drawing, reinforced with 1,6mm thick mild steel backing plate and with vermin proof sound deadening material between.

Drainer to be fluted and drained towards bowl and to be turned down and boxed under and provided

with tiling key at the back.  
Unit to fit the size of cupboard.

### 3.7 **PURPOSE MADE DOUBLE BOWL POT SINK**

The purpose made unit to be of measurements as indicated on the drawing.  
Top to be 1,2mm thick type 304-stainless steel with integral centre bowls to size as indicated on the drawing, reinforced with 1,6mm thick mild steel backing plate and with vermin proof sound deadening material between.  
Drainer to be fluted and drained towards bowls and to be turned down and boxed under, and provided with tiling key at the back.  
Unit to fit the size of cupboard.

### 3.8 **MOBILE POT SINK**

The mobile pot sink to be of measurements as indicated on the drawing, constructed out of 1,2mm thick type 304-stainless steel top and bowl, reinforced with 1,6mm thick galvanised backing plate and with vermin proof sound deadening material between.  
The edges of the top to be turned down all round and lower edge of ("turn down") beaded over. Top supported on mild steel framing with stainless steel uprights.  
Fit unit with two fixed - and two fully swivelling heavy duty firm castors with rubber - or neoprene tyres.  
The fixed castors to be fitted with brakes.

### 3.9 **HALFROUND MEAT TROUGH**

The unit shall be of measurements as indicated on the drawings.  
The half-round body to be formed with 1,6mm thick type 304-stainless steel and to be approximately 300mm deep.  
Provide at the wheel end of the unit a 40mm diameter outlet and a brass wheel valve. The framework to be manufactured with type 304-stainless steel. Provide unit at one end with a type 304-stainless steel push handle, firmly welded to the body of the trough.  
Fit the unit at the outlet end with 125mm diameter fixed heavy duty castors with rubber-or neoprene tyres.

### 3.10 **LEFT-HAND BOWL VEGETABLE PREPARATION SINK**

The unit shall be of measurements as indicated on drawings constructed out of 1,2mm thick type 304-stainless steel top, complete with drainer and two bowls, reinforced with 1,6mm thick mild steel backing plate and with vermin proof sound deadening material between.  
The far left-hand side bowl shall measure 500 x 500 x 230mm deep and the remaining bowl shall measure 750 x 500 x 380mm deep.  
The edges of the top to be turned down all round and lower edge of ("turn down") beaded over. Top supported on mild steel framing with type 304-stainless steel legs, with adjustable non-ferrous feet, complete with similar metal flanges to secure unit to floor surface with non-ferrous bolts or screws.  
Provide unit with approximately 150mm high splash back.

### 3.11 **RIGHT-HAND BOWL VEGETABLE PREPARATION SINK**

The unit shall be of measurements as indicated on drawings constructed out of 1,2mm thick type 304-stainless steel top, complete with drainer and two bowls, reinforced with 1,6mm thick mild steel backing plate and with vermin proof sound deadening material between.  
The far right-hand side bowl shall measure 500 x 500 x 230mm deep and the remaining bowl shall measure 750 x 500 x 380mm deep.  
The edges of the top to be turned down all round and lower edge of ("turn down") beaded over. Top supported on mild steel framing with type 304-stainless steel legs, with adjustable non-ferrous feet, complete with similar metal flanges to secure unit to floor surface with non-ferrous bolts or screws.

Provide unit with approximately 150mm high splash back.

#### 4. CUPBOARDS

##### 4.1 **MOBILE CUPBOARD FOR CHIPS**

The unit to be suitable to accommodate three (3) 1:1 gastronorm containers.

The unit to be constructed out of type 304-stainless steel, having stainless steel sliding rails for containers.

Provide unit with three (3) 1:1 x 150mm deep type 304-stainless steel gastronorm containers.

Fit unit with two fixed - and two fully swivelling heavy duty firm castors with rubber - or neoprene tyres.

##### 4.2 **PURPOSE MADE STAINLESS STEEL EQUIPMENT CUPBOARD**

The unit to be of measurements as indicated on the drawing.

The top to be constructed out of 1,2mm thick type 304-stainless steel, reinforced with 1,6mm thick mild steel backing plate with vermin proof sound deadening material between. Edges of the top to be tuned down all round.

The body to be constructed out of 0,9mm thick type 430-stainless steel, supported on mild steel framing or formed together with monocoque construction.

Doors to be formed with similar stainless steel, hung on chromium-plated piano hinge, firmly pop-riveted to body end doors. Fit unit with three-lever cupboard lock and 76mm chromium-plated barrel bolts.

Provide unit with short length type 304-stainless steel legs, with adjustable non-ferrous feet, complete with similar metal flanges to secure unit to floor surface with non-ferrous bolts or screws.

Provide unit at wall sides with splash backs. Fit unit with bottom and middle shelf, formed with solid 1,6mm thick type 430-stainless steel.

##### 4.3 **CUPBOARD FOR BREAD**

The unit to be of measurements as indicated on the drawing, constructed out of 0,9mm thick type 304-stainless steel body and back.

The unit to be jointed together by means of monocoque construction. Provide the body with the necessary ventilation openings.

Fit the unit with type 304-stainless steel louvre door/s.

Hang each door on chromium-plated piano hinges, firmly pop-riveted to door/s and body.

Provide door/s with good quality catches.

##### 4.4 **PURPOSE MADE LOCKABLE STAINLESS STEEL CUPBOARD FOR BUTCHER SET**

The unit for butcher set to be of measurements as indicated on the drawing, constructed out of type 304-stainless steel body and back with similar metal double doors, hung on chromium-plated piano hinges, firmly pop-riveted to body and doors.

Fit on the inner side of one leaf, top - and bottom, 75mm chromium-plated barrel bolt and fit the other leaf with three lever cupboard lock.

Fit unit with two (2) type 304-stainless steel shelves. Firmly fix unit to wall surface.

#### 5. SHELVES

##### 5.1 **ADJUSTABLE MILD STEEL SHELVES**

The adjustable shelves to be of measurements and quantity tiers as indicated on the drawing.

The units to be constructed out of mild steel framed supports and mild steel shelves. The shelves shall be approximately 900mm in length, complete with covered sides and backs.

The units shall be provided complete with braces and fixing pegs for shelves.

The framework and shelves to be finished with baked with powder-coated enamel. The shelves to be as manufactured by "Symo Corporation" or similar.

## 5.2 **ADJUSTABLE STAINLESS STEEL SHELVES**

The adjustable shelves to be of measurements and quantity tiers as indicated on the drawing. The units to be constructed out of type 304-stainless steel framed supports and similar stainless steel shelves. The shelves shall be approximately 900mm in length, complete with covered sides and backs.

The units shall be provided complete with braces and fixing pegs for shelves.

## 5.3 **ADJUSTABLE STAINLESS STEEL SHELVES FOR BREAD**

The adjustable shelves to be of measurements and quantity tiers as indicated on the drawing.

The units to be constructed out of type 304-stainless steel framed supports and similar stainless steel shelves. The shelves shall be approximately 900mm in length, complete with covered sides and backs.

The units shall be provided complete with braces and fixing pegs for shelves.

Shelves to be provided with type 304-stainless steel back.

The shelves to be as manufactured by "Symo Corporation" or similar.

## 5.4 **STAINLESS STEEL SHELF FOR CROCKERY**

The unit to be of measurements as indicated on the drawing, constructed out of solid 1,2mm thick type 304-stainless steel shelf reinforced with 1,6mm thick galvanised backing plate and with vermin proof sound deadening material between, mounted on sturdy non-ferrous brackets, fixed to wall surface with non-ferrous bolts.

## 5.5 **STAINLESS STEEL SHELVES TO WALL SURFACE**

The shelves to be of measurements as indicated on the drawing, constructed out of solid 1,2mm thick type 304-stainless steel, reinforced with 1,6mm thick galvanised backing plate and with vermin proof sound deadening material between.

The unit to be supported on non-ferrous brackets, properly screwed to wall surface.

## 5.6 **WALL MOUNTED STAINLESS STEEL SLATTED SHELF (POT WASH AREA)**

The units to be of measurements as indicated on the drawing, constructed out of type 304-stainless steel slats, fixed to non-ferrous brackets, and brackets properly screwed to wall surface.

## 5.7 **VEGETABLE RACK**

The vegetable rack to be of measurements and quantity tiers as indicated on the drawing, constructed out of 40 x 40 x 3mm thick framed angle iron uprights at approximately 1000mm centres with 40 x 40 x 3mm thick reversed angle iron rails, filled in with expanded metal.

NB:

At coastal areas the metalwork shall be hot dip galvanised.

## 5.8 **POT RACK**

The pot rack to be of measurements as indicated on the drawing and to be fitted with four (4) tiers shelves.

The unit to be constructed out of type 304-stainless steel uprights with type 430-stainless steel rails filled in with galvanised mild steel tubular shelves.

## 5.9 **MOBILE POT RACK**

The mobile pot rack to be of measurements as indicated on the drawing and to be fitted with four (4) tiers shelves.

The unit to be constructed out of type 304-stainless steel uprights and type 430-stainless steel rails, filled in with galvanised mild steel tubular shelves.

Fit unit with two fixed - and two fully swivelling heavy duty firm castors with rubber - or neoprene tyres.

## 5.10 **MOBILE CROCKERY RACK**

The mobile crockery rack to be of measurements as indicated on the drawing.

The unit must be suitable to accommodate mixed, plates, cups, sauces and glasses with a capacity as indicated on the drawing.

The unit to be constructed out of mild steel uprights and framework, reinforced with flat mild steel braces.

Fill the framework in with heavy-duty plastic coated wire racks.

## 5.11 **MOBILE PLATE AND MUG RACK**

The mobile plate and mug rack to be approximate 1180x715x 1600 high. The unit to be constructed out of type 304 stainless steel uprights and frame.

The unit to be suitable fitted with three plate and two mug shelves, manufactured with heavy-duty plastic coated wire shelves.

The unit to be fitted with two 160mm diameter fixed and two fully swivelling heavy-duty casters with rubber or neoprene tyres.

The unit to be of equal manufacture as manufactured by "Vulcan" or other approved.

## 6. **TROLLEYS**

### 6.1 **TEE TROLLEY WITH FLINT AND DRIP TRAY**

The unit to be of measurements as indicated on the drawing, complete with top and two tiers shelves.

The framework to be constructed out of tubular mild steel, filled in with 1,2mm thick type 430-stainless steel top and shelves, reinforced with 1,6mm thick galvanised backing plate with vermin proof sound deadening material between. Each end frame to be served as a push handle.

Provide unit with type 304-stainless steel plint and drip tray.

The unit to be provided with two fixed - and two fully swivelling heavy-duty firm castors with rubber - or neoprene tyres.

### 6.2 **PURPOSE MADE KITCHEN EQUIPMENT TROLLEY**

The purpose made unit to be of measurements as indicated on the drawing, constructed out of type 304-stainless steel top and type 430-stainless steel body, joined together by means of monocoque construction.

The unit to be fitted with three (3) similar stainless steel drawers. Drawers to be provided with rollers or runners for proper working when fully loaded.

Each drawer to be fitted with three-lever drawer lock and chromium-plated or stainless steel handles.

The unit to be fitted with two fixed - and two fully swivelling heavy-duty firm castors with rubber - or neoprene tyres.

### 6.3 **LOW BED TROLLEY**

The low bed trolley to be of measurements as indicated on the drawing. The trolley to be suitable to wheel heavy goods to build store.

Provide unit with mild steel pull rod or push rail. Fit unit with two fixed - and two fully swivelling heavy-duty firm castors with rubber - or neoprene tyres.

### 6.4 **WORK TROLLEY**

The work trolley to be of measurements as indicated on the drawing, constructed out of mild steel framework with uprights, filled in with type 43-stainless steel top and shelf, having turned up edges all round, reinforced with 1,6mm thick galvanised backing plate and with vermin proof sound deadening material between.

Fit unit with two fixed - and two fully swivelling heavy-duty firm castors with rubber - or neoprene tyres.

## 6.5 **PURPOSE MADE TROLLEY FOR GASTRONORM CONTAINERS**

The purpose made trolley shall be suitable to accommodate two (2) 1:1 gastronorm containers, and shall fit underneath table.

Provide the unit on the one end with a push rail at a suitable height, constructed out of type 430-stainless steel.

The unit to be constructed out of type 430-stainless steel framework. The material must be of suitable size and thickness to obtain a firm construction.

Provide the trolley with a solid 1,6mm thick type 43-stainless steel shelf, having turned up edges all round.

Fit unit with two fixed - and two fully swiveling heavy duty firm castors with rubber - or neoprene tyres.

Provide unit with four (4) 1:1 x 150mm deep type 304-stainless steel gastronorm containers.

## 6.6 **MOBILE DOLLEY AND REFUSE CONTAINER**

The plan area of drolley shall be suitable to accommodate a standard refuse container.

The unit to be constructed out of type 304 - stainless steel, having turned up edges.

Fit the unit with three - or four fully swivelling heavy-duty firm castors with rubber - or neoprene tyres.

Provide unit with a standard heavy-duty non-toxic plastic refuse container.

## 6.7 **LOW BED BASKET TROLLEY**

The low bed basket trolley to be of measurements as indicated on the drawing, constructed out of mild steel framework and push on the one end.

The unit shall be accommodated the standard baskets for dish washing machine.

Fit trolley on two fixed - and two fully swivelling heavy-duty firm castors with rubber- or neoprene tyres.

## 6.8 **TRAY - AND CUTLERY TROLLEY**

The unit to be of measurements as indicated on the drawing, constructed out of mild steel framework.

Provide unit with 1,2mm thick type 430-stainless steel shelf to accommodate approximately 100 stacked trays. Fit in top of framework 2 x 4-division heavy-duty plastic cutlery boxes.

The unit shall be mounted on two fixed - and two fully swivelling heavy-duty firm castors with rubber - or neoprene tyres.

## 6.9 **DISH OFF TROLLEY**

The unit to be of measurements as indicated on the drawing, constructed out of mild steel framework and uprights, filled in with three heavy duty plastic of type 304-stainless steel dish containers and one removable type 304-stainless steel trash bin and one removable stainless steel solid shelf.

The unit shall be fitted with two fixed and two fully swivelling heavy-duty firm castors with rubber - or neoprene tyres.

## 6.10 **UNHEATED PASTRY/FOOD TROLLEY**

The unit shall be approximately 670 x 550 x 1850mm high.

The framework shall be constructed out of 38 x 38mm hollow type 304-stainless steel tubing, all neatly welded together.

The sides to be covered with 0,9mm thick type 430-stainless steel corrugated panels, but the front and back shall be open for usage from both sides.

Fit the unit with 20 bun trays, constructed out of 20 gauge type 430-stainless steel.

The unit shall be fitted with two fixed - and two fully swivelling heavy-duty firm castors with pneumatic tyres of 350kg load. The two fixed castors to be fitted with brakes.

Rubber corner bumpers shall be fitted to the base of the trolley.

## 7. GENERAL

### 7.1 **TRAY RAIL**

The tray rail shall be approximately 300mm wide and to length as indicated on the drawing, constructed out of type 304-stainless steel tubes or slats, supported and fixed to non-ferrous brackets and screwed to units with non-ferrous screws.

### 7.2 **MEAT BLOCK**

The meat block to be of measurements as indicated on the drawing, constructed out of laminated hardwood block and legs or provide with mild steel framework and legs.  
The height of the unit shall be approximately 900mm.

### 7.3 **STAINLESS STEEL UNHEATED COUNTER**

The unit to be of measurements as indicated on the drawing. The top and body to be constructed out of 1,2mm thick type 430-stainless steel.  
The body to be jointed together with monocoque construction. The top reinforced with 1,6mm thick galvanised mild steel backing plates and with vermin proof sound deadening material between.  
The unit to be provided with short length type 304-stainless steel legs, complete with adjustable non-ferrous feet, and secured to floor surface with non-ferrous bolts or screws.  
Provide unit with one middle shelf, constructed out of 1,6mm thick type 430-stainless steel.

### 7.4 **MOBILE UNHEATED COUNTER**

The unit to be of measurements as indicated on the drawing, constructed out of type 304-stainless steel top and with type 430-stainless steel body, supported on mild steel framing or fitted together by means of monocoque construction.  
Provide unit with 1,6mm thick type 430-stainless steel shelf.  
Fit unit on two fixed - and two fully swivelling heavy-duty firm castors with rubber - or neoprene tyres.

### 7.5 **PALLET**

The pallet to be of measurements as indicated on the drawing.  
The unit to be firm enough to carry bags of mealy meal.  
The unit to be constructed out of stainless steel or galvanised mild steel tubular framework, filled in with galvanised mild steel tubular slats.  
The unit to be supported on type 304-stainless steel legs.

### 7.6 **POLYPROPELENE CUTTING BOARDS**

The cutting boards to be of measurements as indicated on the drawing, constructed out of polypropelene with arris-rounded edges.

### 7.7 **MANUAL BREAD SLICER**

The unit to be a standard manual type bread slicer of good quality.  
The unit shall be manufactured out of type 304-stainless steel and the blade shall be approximately 280mm diameter.

### 7.8 **MANUAL POTATO CHIPPER WITH BRIDGE PIECE**

The unit to be robustly constructed and especially for the commercial catering trade.  
The unit to have combination of positive double bearing slide and a spring counter-passed operating handle.  
The knives to be type 304-stainless steel, both knife assembly and block to be detachable. Knife and block supplied to cut 12mm square chips.  
Provide unit with type 304-stainless steel bridge piece to fit over sink bowl.

**7.9 FLOOR MOUNTED MEAT RAIL**

The unit to be of measurements as indicated on the drawing, constructed out of tubular galvanised mild steel uprights, fitted with non-ferrous flanges, properly bolted to floor surface with non-ferrous expansion bolts.

Provide to top of uprights a type 304-stainless steel cross bar, having four (4) non-ferrous hooks.

**7.10 MOBILE MEAT RAIL**

The unit to be of measurements as indicated on the drawing, constructed out of 50 x 10mm thick stainless steel flat bar meat rail, supported at either end by an A-frame, constructed out of 45mm diameter type 304-stainless steel tubular uprights on a 2mm thick type 304-stainless steel channel section base no more than 750mm wide to allow access through standard doorways.

The A-frame base shall be interconnected to provide rigidity as well as support to the removable type 304-stainless steel drip tray.

Provide unit with four (4) removable double meat hooks manufactured from non-ferrous round bar.

The unit shall be mounted on two fixed - and two fully swivelling heavy-duty firm castors with rubber - or neoprene tyres.

**7.11 MULTIPOT**

The unit to be of capacity as indicated on the drawing, constructed with inner liner and outer casing of type 304-stainless steel, insulated with glass fibre or mineral wool, having insulating properties such that the drop in temperature of liquid stored at 82 grade Celsius shall not drop more than 12 grade Celsius over a period of two hours.

The unit to be complete with strong metal lifting handles, type 304-stainless steel lid and large bore easy to clean drain-off tap.

All exposed parts, except where stainless steel occurs, are to have chromium-plated finish.

**7.12 PAINTWORK**

All metal work, except stainless steel, shall be finished with baked on powder-coated enamel.

**8. ELECTRIC TILTING FRYING PAN**

The pan shall be rectangular in shape and shall be positioned in between a U-shaped pedestal. The pedestal shall be enclosed with Grade 430 stainless steel, and equipped with adjustable feet.

PAN : 80 Litre capacity : 10mm thick close grained cast iron treated to give a non-porous surface with integrated pouring lip.

LID Grade 304 stainless steel, 1mm thick, with internal drip flange; counterbalanced to hold lid at any angle; side mounted handle.

TILTING MECHANISM : Screwed spindle and bush which is self-locking at any angle when the hand wheel or handle is released; lubricated bearings.

HEATING ELEMENTS : 12kW Thermostatically controlled with power "ON" and heat "ON" indicator lights.

ELECTRICAL SUPPLY : 380V, 3 phase 4 wire, 50Hz. Each circuit shall be protected by a circuit breaker.

DIMENSIONS-EXTERNAL: Approximately 1,4 x 0,9m x 0.9m high.  
PAN ; 0,8m x 0,56 x 0,16m deep.

The following tilting frying pans are acceptable:

VULCAN FOOD SERVICE EQUIPMENT : ALOE MODEL FET80-E  
MARLIN CATERING EQUIPMENT : MODEL TIPE

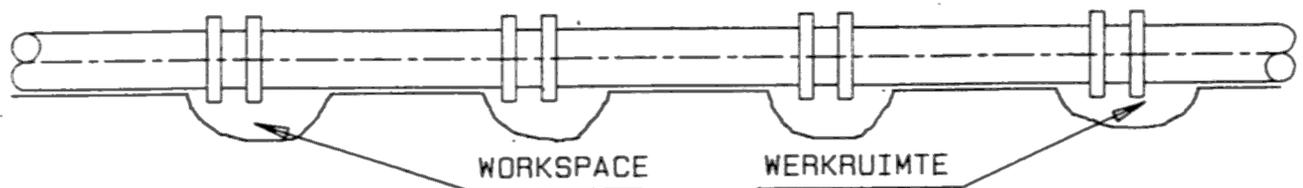


# DEPARTMENT OF PUBLIC WORKS

## DRAINAGE DETAILS

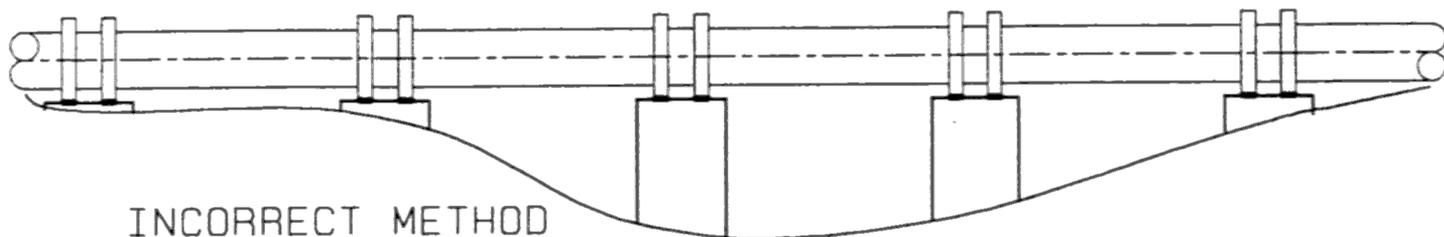
REVISED EDITION  
DECEMBER 1998

A. UNDER NORMAL SOIL CONDITIONS  
 ONDER NORMALE GROND OMSTANDIGHEDDE



CORRECT METHOD  
KORREKTE METODE

BARREL OF PIPE MUST REST-ON RIGID GROUND  
 BODEM VAN PYP MOET OP VASTE GROND RUS



INCORRECT METHOD  
VERKEERDE METODE

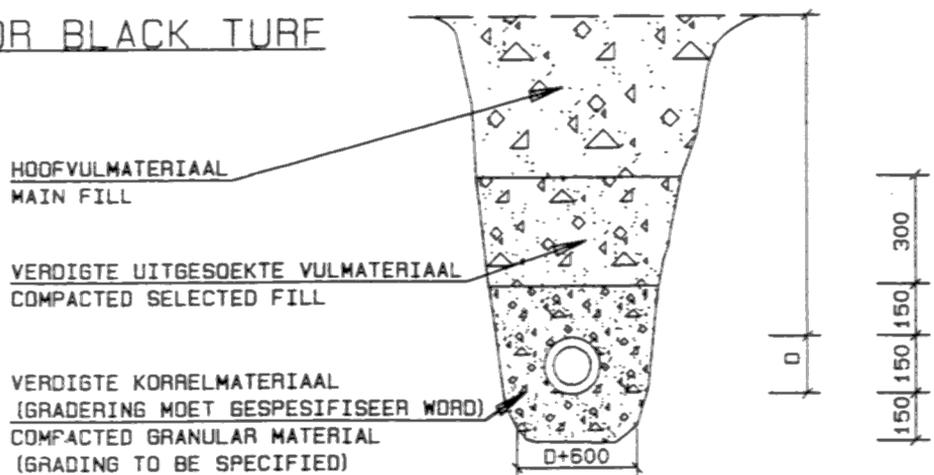
NOTE

EXCAVATIONS TAKEN OUT TOO DEEP MUST BE MADE UP WITH APPROVED FILLING AT CONTRACTORS EXPENSE.  
 EXCAVATIONS IN ROCK MUST BE LEVELLED UP WITH GRANULAR MATERIAL TO ENSURE PIPES HAVING AN EVEN BEARING.

NOTA

UITGRAWINGS WAT TE DIEP UITGEGRANE IS MOET MET GOEDGEKEURDE VULMATERIAAL OPGEVUL WORD OP ONKOSTE VAN DIE KONTRAKTEUR.  
 UITGRAWINGS IN ROTS MOET MET KORRELAGTIGE MATERIAAL OPGEVUL WORD, SODAT PYPE GELYKMATIG GESTEUN WORD.

B. IN KLEI OF SWART TURF  
IN CLAY OR BLACK TURF



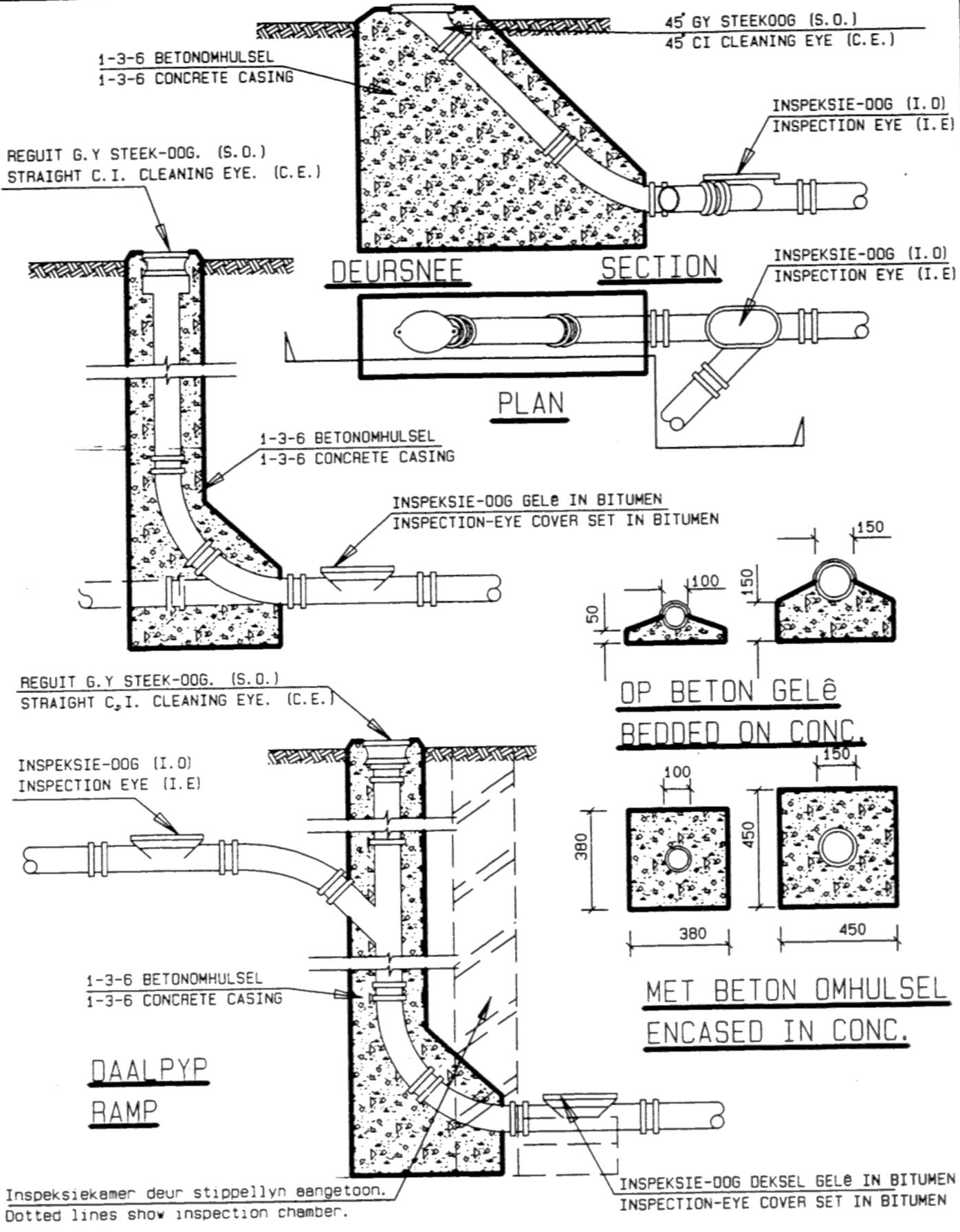
GETEKEN. J. A. C RABE  
 DRAWN.

NAGESIEN.  
 CHECKED.

SKAAL. 1 : 20  
 SCALE.

METODE VIR DIE LE VAN RIOLE.  
 METHOD OF LAYING DRAINS.

D1D



GETEKEN. J.A.C. RABE  
DRAWN.

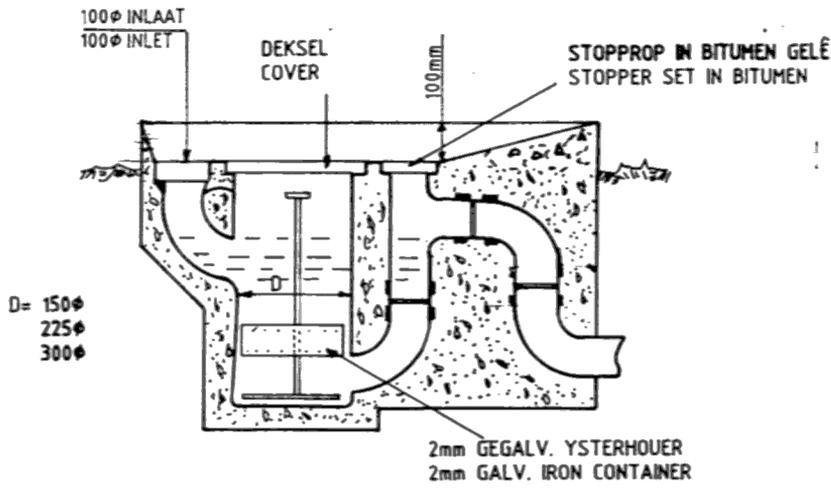
NAGESIEN. *[Signature]*  
CHECKED.

SKAAL. 1 : 20  
SCALE.

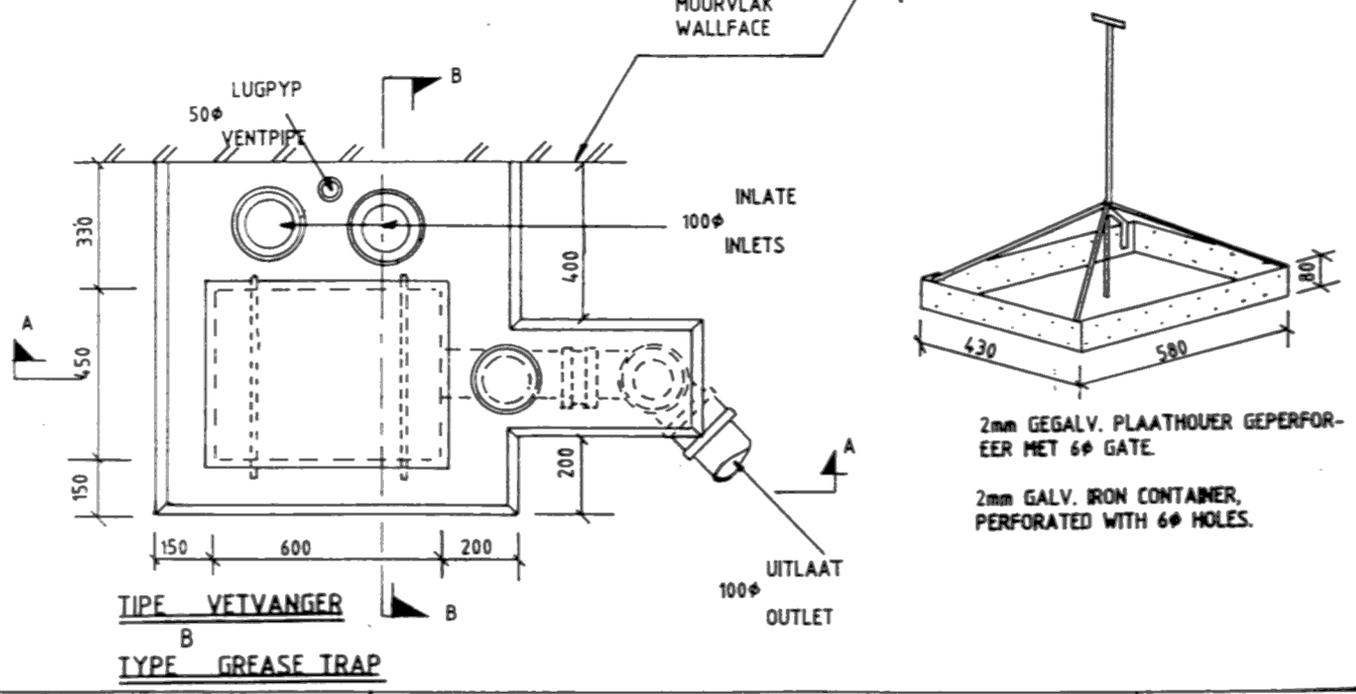
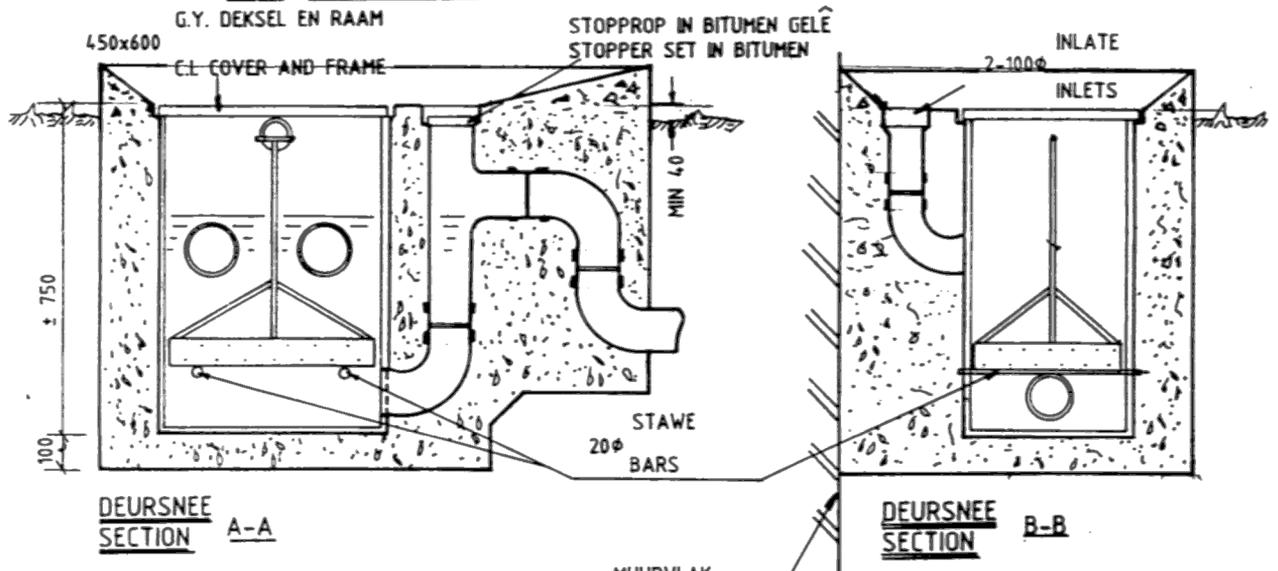
STEEKOë, INSPEKSIEOë, DAALPYP.  
CLEANING EYE, INSPECTION EYE, RAMP.

D20





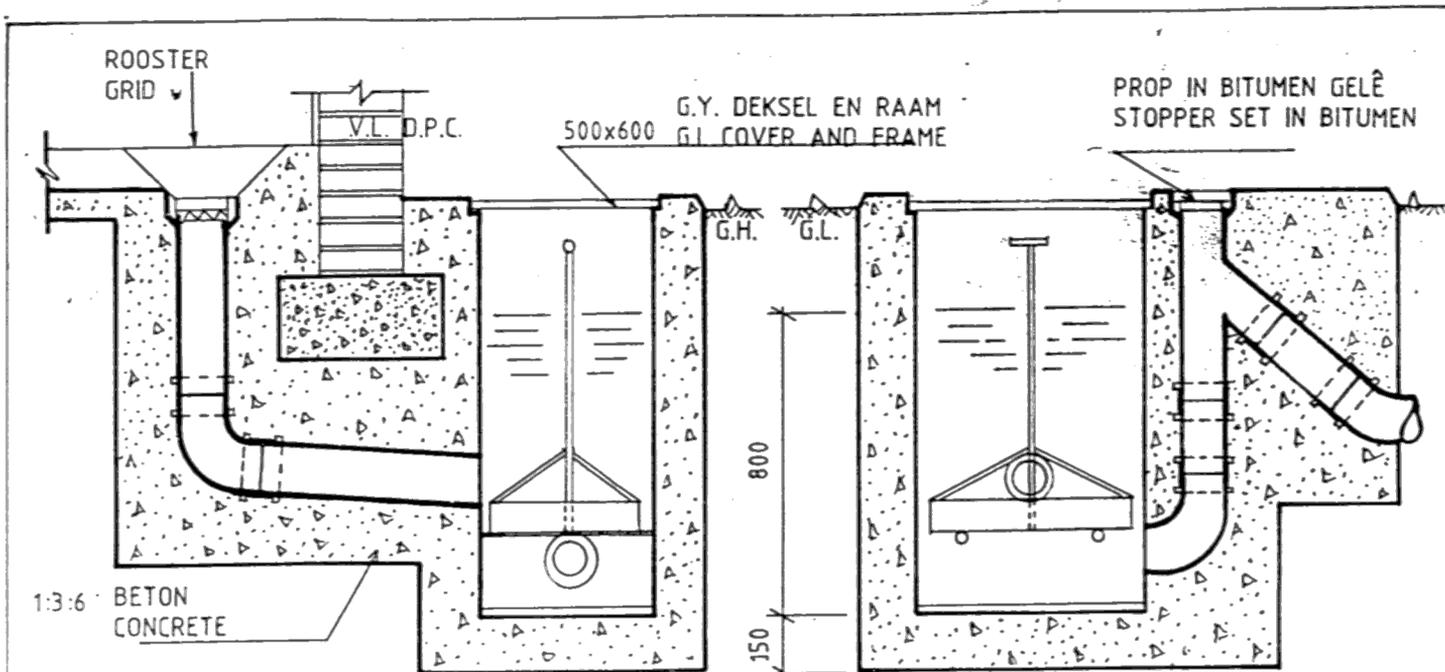
TIPE VETVANGER  
A SABS 559 FIG 27  
TYPE GREASE TRAP



GETEKEN DRAWN	S.P. CILLIERS
NAGESIEN CHECKED	<i>[Signature]</i>
SKAAL SCALE	1:20

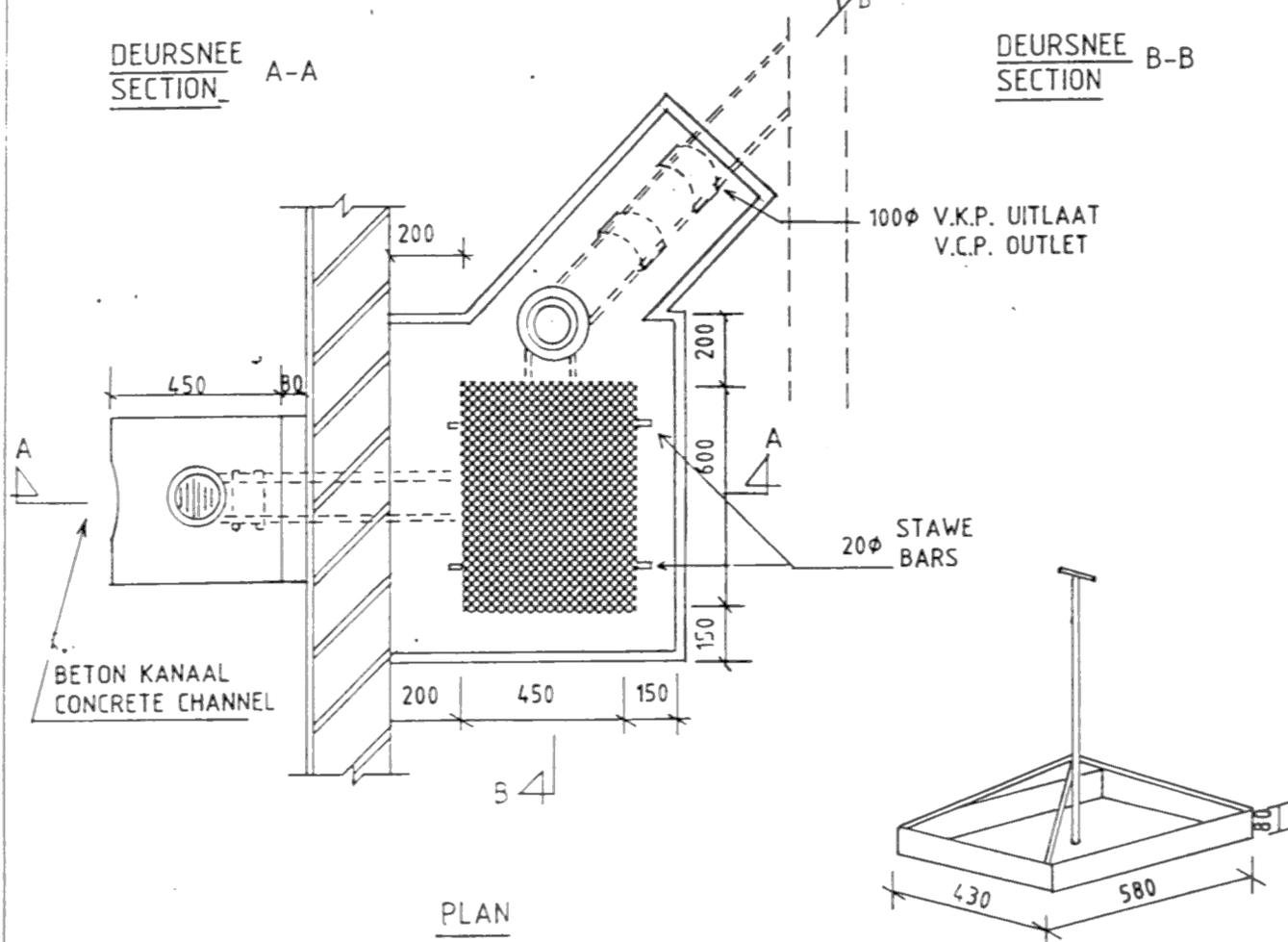
VETVANGER TIPE A EN B GREASE TRAP TYPE A AND B
---

D50
-----



DEURSNEE SECTION A-A

DEURSNEE SECTION B-B



PLAN

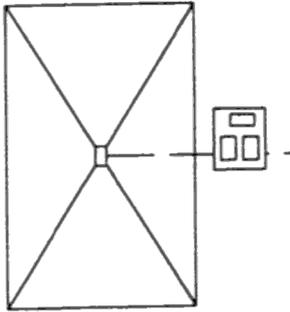
GEGALV. PLAATHOUER, GEPERFOREER MET 6φ GATE.

2 mm

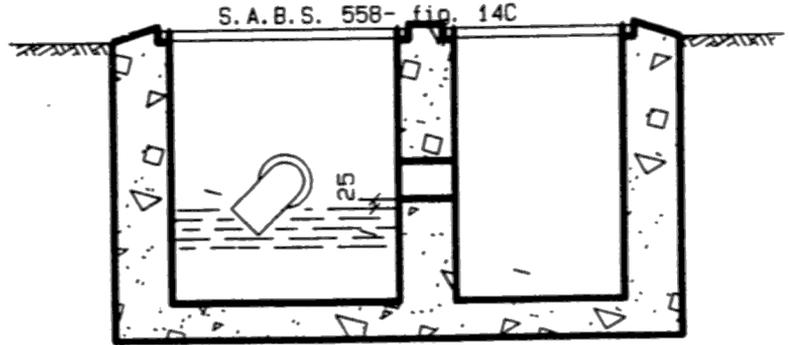
GALV. SHEETIRUN CONTAINER PERFORATED WITH 6φ HOLES.

GETEKEN. DRAWN	R.W.BRAND.	DEPARTEMENT VAN OPENBARE WERKE DEPARTMENT OF PUBLIC WORKS	D6D
NAGESIEN CHECKED	<i>[Signature]</i>	DETRITUSVANGER VIR STALLE DETRITUS INTERCEPTING TRAP FOR STABLES.	
SKAAL SCALE	1:20		

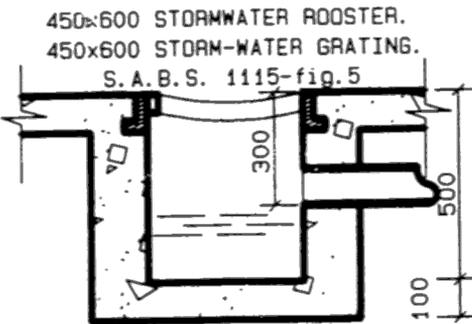
450x600-38 Kg GY MANGATDEKSEL ENKELDIGHTEID EN RAAM.  
 450x600-38 Kg CI SINGLE SEAL MANHOLE COVER AND FRAME.



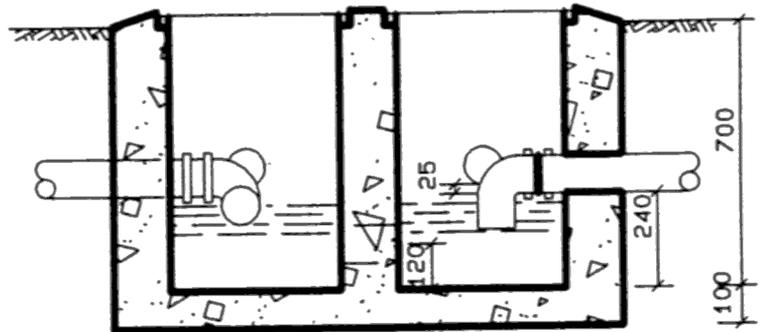
PLAN VAN WASBLAD  
PLAN OF WASH BAY  
1:200



SNIT B-B  
SECTION B-B



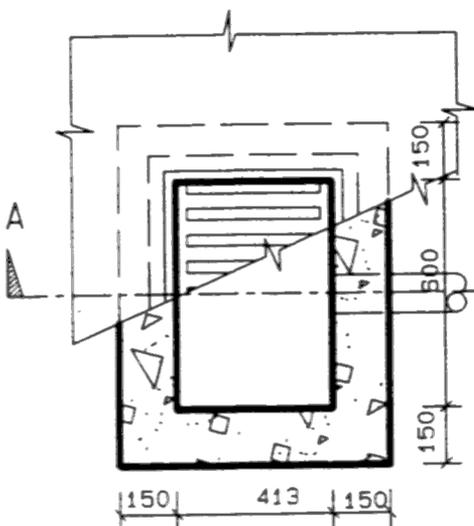
SNIT A-A  
SECTION A-A



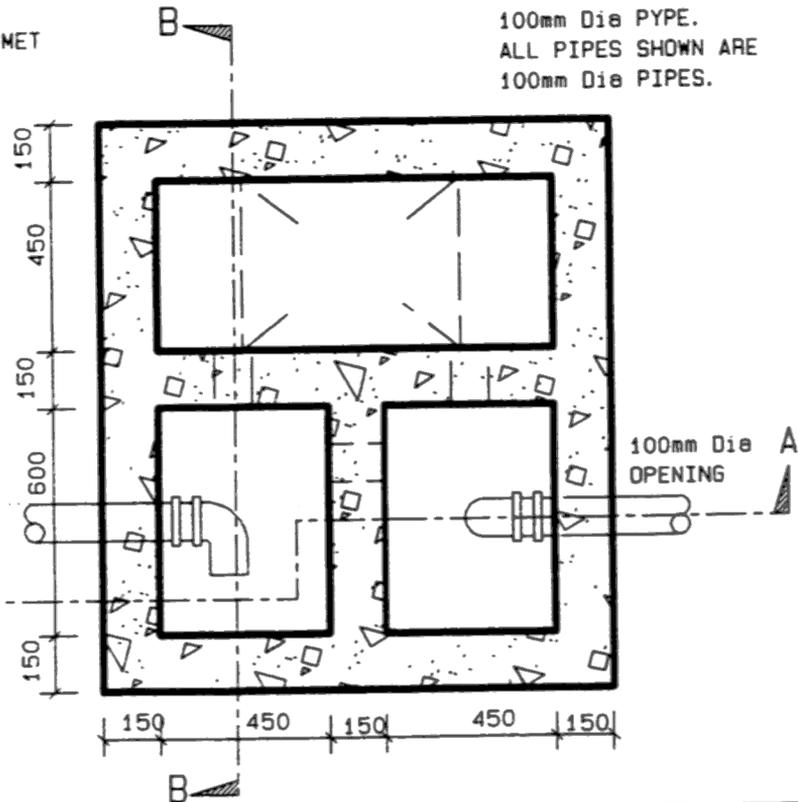
NB. GEEN VERKEER MAG OP DIE DEKSEL TOEGELAAT WORD NIE.  
 NO TRAFFIC WILL BE ALLOWED ON THE COVERS.

NOTA: BINNEMATE VAN KAMERS MOET OOREENSTEM MET  
 DAGMATE VAN RAAM.  
 NOTE: INNER DIMENSIONS OF CHAMBERS MUST BE  
 ACCORDING TO THE DAYLIGHT OPENING  
 OF FRAMES.

ALLE PIPE GETOON IS  
 100mm DIE PIPE.  
 ALL PIPES SHOWN ARE  
 100mm DIE PIPES.



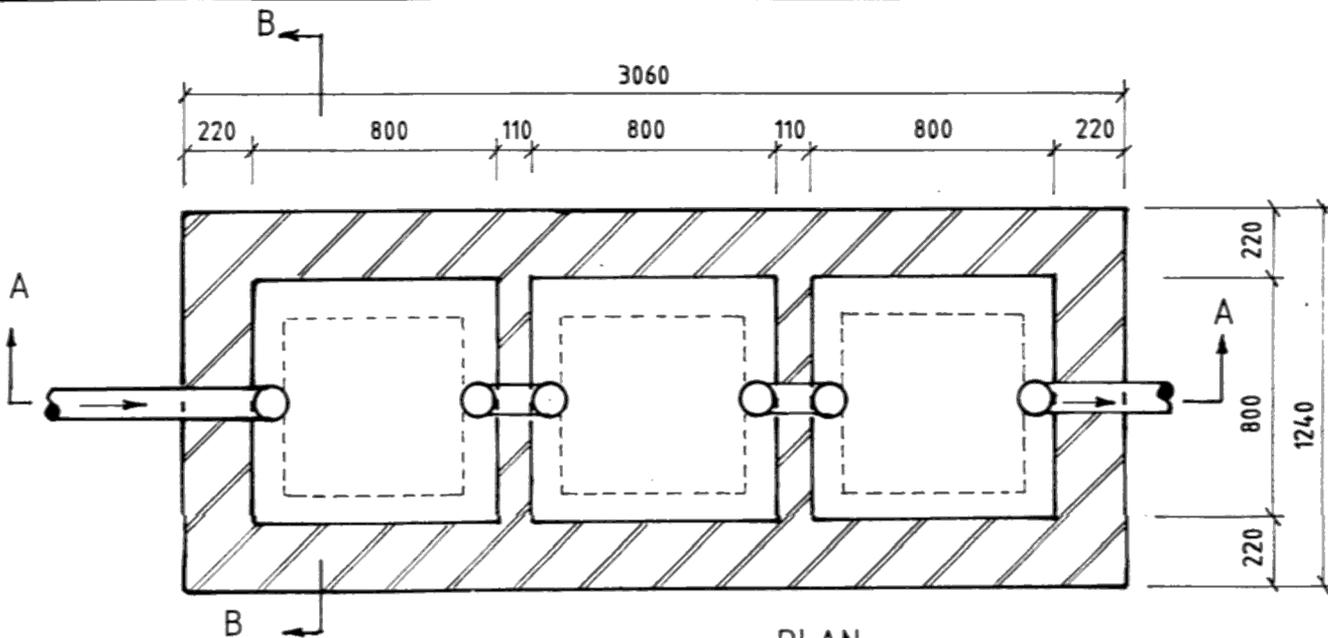
PLAN



GETEKEN. J. A. C. RABE  
 DRAWN.  
 NAGESIEN. *[Signature]*  
 CHECKED.  
 SKAAL. 1 : 20  
 SCALE.

OLIE EN VETVANGER VIR VOERTUIG  
 WASBLAD  
 OIL AND GREASE TRAP FOR VEHICLE  
 WASH BAY

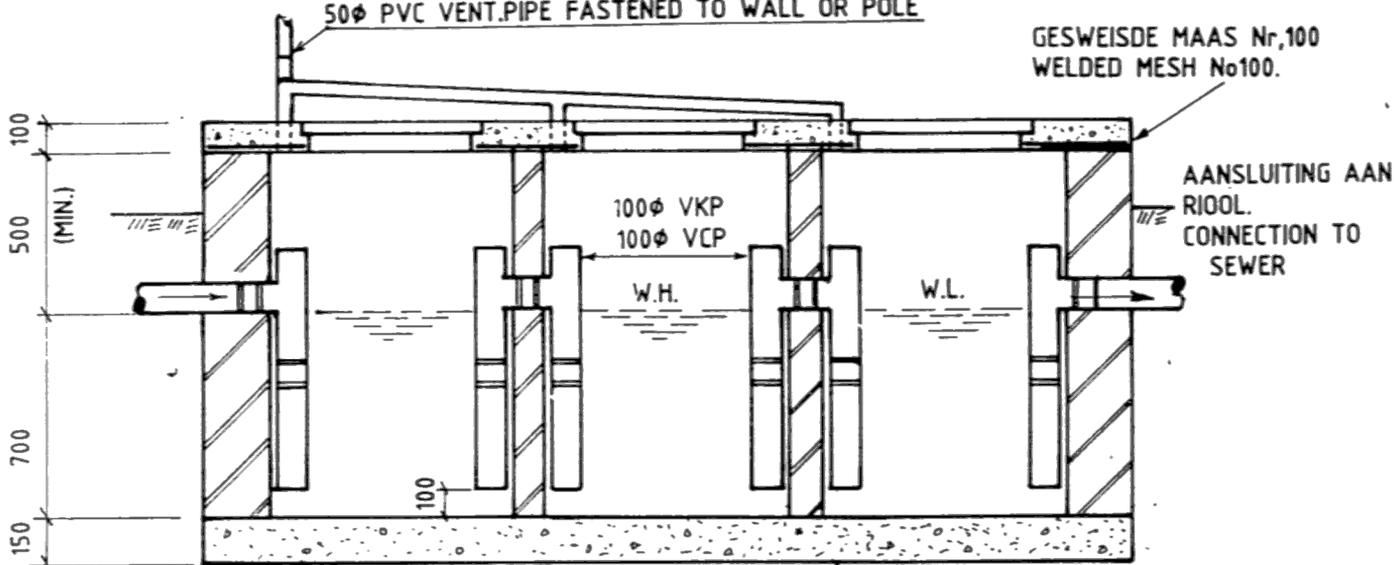
D7D



PLAN

50φ PVC LUGPYP VASGEMAAK AAN MUUR OF PAAL.  
50φ PVC VENT. PIPE FASTENED TO WALL OR POLE.

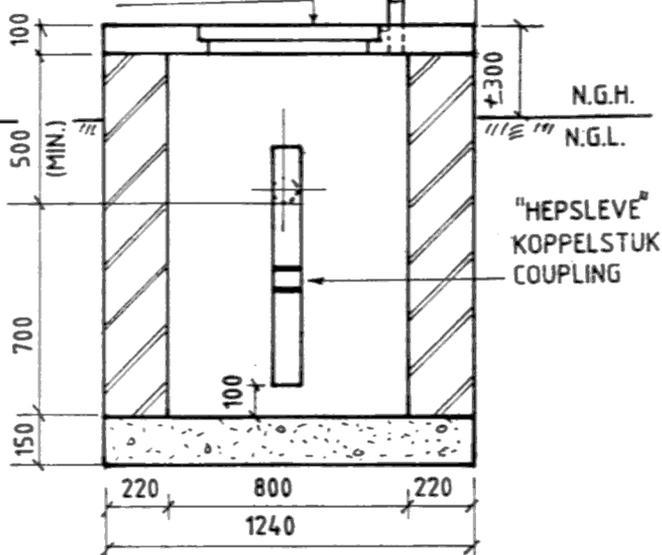
GESWEISDE MAAS Nr. 100  
WELDED MESH No 100.



SNIT A-A  
SECTION A-A

600 x 600 VIERKANTIGE  
DUBBELAFDIGTING  
MANGATDEKSEL VOLGENS  
SABS 558-1973 TIPE 8B.  
600 x 600 SQUARE  
DOUBLE SEAL MANHOLE  
COVER ACCORDING TO  
SABS 558-1973 TYPE 8B.

MANGATDEKSEL  
MANHOLE COVER



SNIT B-B  
SECTION B-B

GETEKEN  
DRAWN WAB.

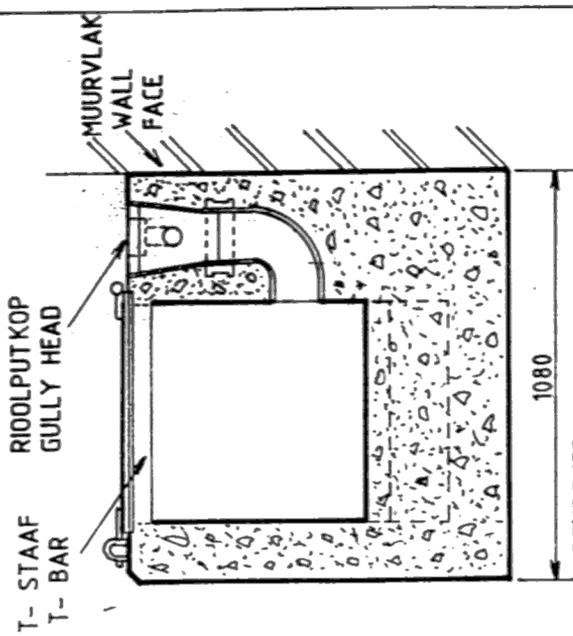
NAGESIEN  
CHECKED *[Signature]*

SKAAL  
SCALE 1 : 25

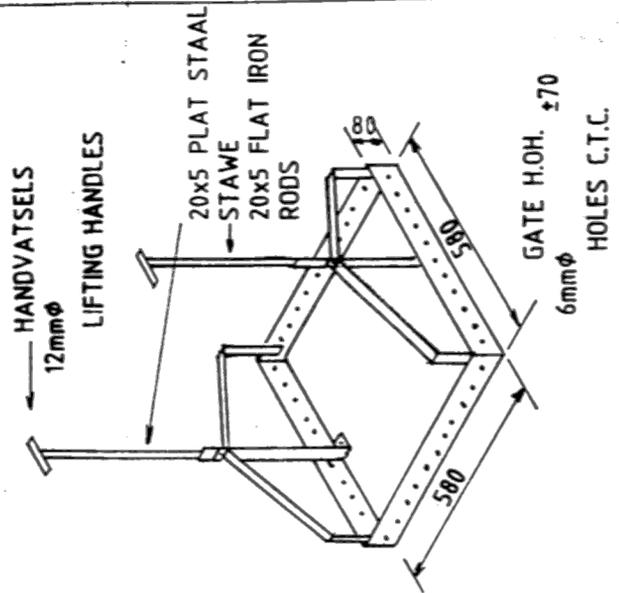
DEPARTEMENT VAN OPENBARE WERKE  
DEPARTMENT OF PUBLIC WORKS

PETROLVANGER  
PETROL INTERCEPTER

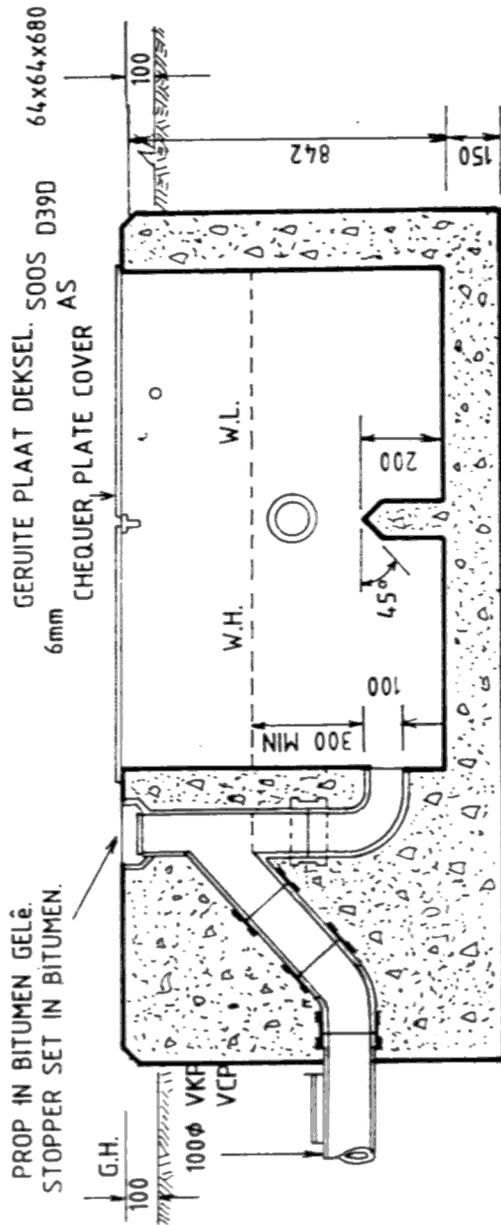
D 7(A)D



DEURSNEE SECTION B-B

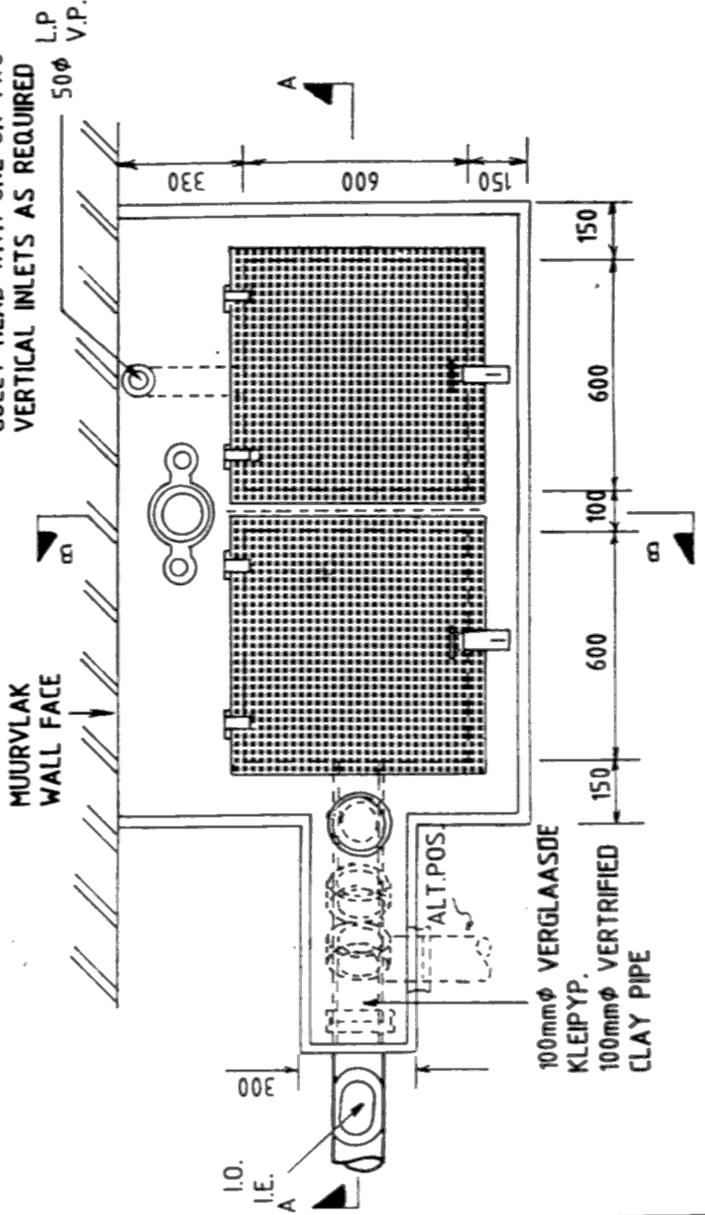


2mm GEGALV. PLAATHOUER  
2mm GALV. IRON CONTAINER



DEURSNEE SECTION A-A

RIJOLPUTKOP MET EEN OF TWEE  
VERTIKALE INLASTE SOOS VERLANG  
GULLY HEAD WITH ONE OR TWO  
VERTICAL INLETS AS REQUIRED



PLAN

GETEKEN. M.J. PAPENHUYZEN.  
DRAWN.

NAGESIEN  
CHECKED.

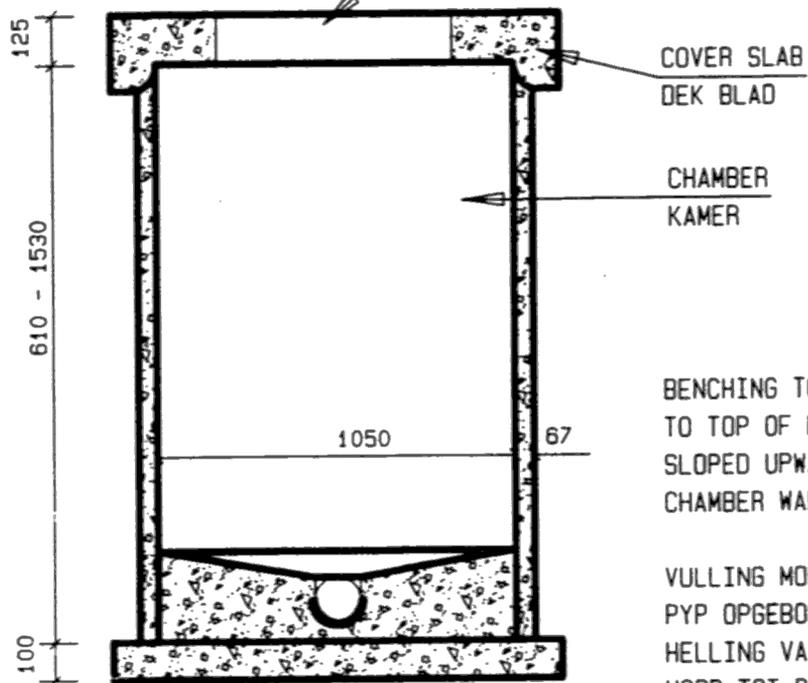
SKAAL 1 : 20  
SCALE

VETVANGER  
GREASE TRAP

TIPE TYPE C

D9D

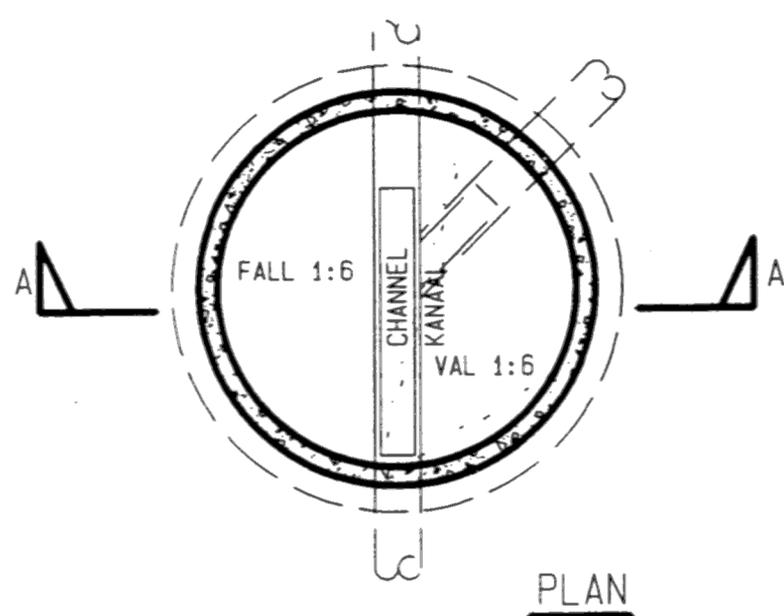
DOUBLE SEAL C. I. COVER AND FRAME TO BE SUPPLIED.  
 DUBBLE SEËL G. Y. DEKSEL EN RAAM MOET VOORSIEN WORD.



BENCHING TO BE BROUGHT UP VERTICALLY TO TOP OF MAIN DRAIN PIPE AND THEN SLOPED UPWARDS AT 1:6 TOWARDS CHAMBER WALLS.

VULLING MOET VERTIKAAL TOT KRUIJN VAN PYP OPGEBOU WORD EN DAN MET HELLING VAN 1:6 SKUINS AFGEWERK WORD TOT BY I. K. MUUR.

SNIT A-A  
SECTION A-A



NOTE  
 CHAMBER CAN BE SUPPLIED WITH SLOTTED CUTOUTS AT THE BASE TO SUIT SEWERS AS REQUIRED.

NOTA  
 KAMER KAN MET UITSNYDINGS OP BASIS VOORSIEN WORD VIR VERSKILLENDE DEURSNEE PYPE SOOS BENODIG.

GETEKEN. J. A. C. RABE  
 DRAWN.  
 NAGESIEN. *[Signature]*  
 CHECKED.  
 SKAAL. 1 : 20  
 SCALE.

INSPECTION CHAMBER (UNDER 1 530 DEEP)  
 INSPEKSIKAMER ( MINDER AS 1 530 DIEP)

D100

G.Y. Raam in beton gele.  
C.I. Frame set in concrete.

450x600 G.Y. Deksel en raam.  
450x600 C.I. Cover and frame.

Vloevulling.  
Benching.

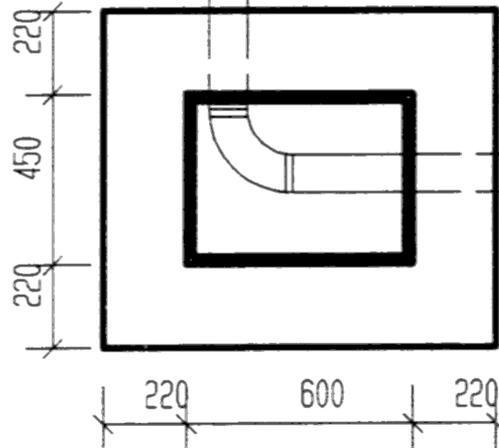
1-3-6 Beton.  
1-3-6 Concrete.

TIPE A  
TYPE A

Kamer minder as 600 diep.  
Chamber under 600 deep.

Vulling moet vertikaal tot bokant van pyp opgebou word en dan met helling 1:6 skuins afgewerk word tot by I.K. muur. Benching to be brought up vertically to top of main drain and then sloped upwards at 1:6 towards chamber walls.

DEURSNEE A-A  
SECTION A-A



V.K.P. Kanaal.  
V.C.P. Chanel.

TIPE B  
TYPE B

Kamers 600 tot 1530 diep.  
Chambers 600 to 1530 deep.

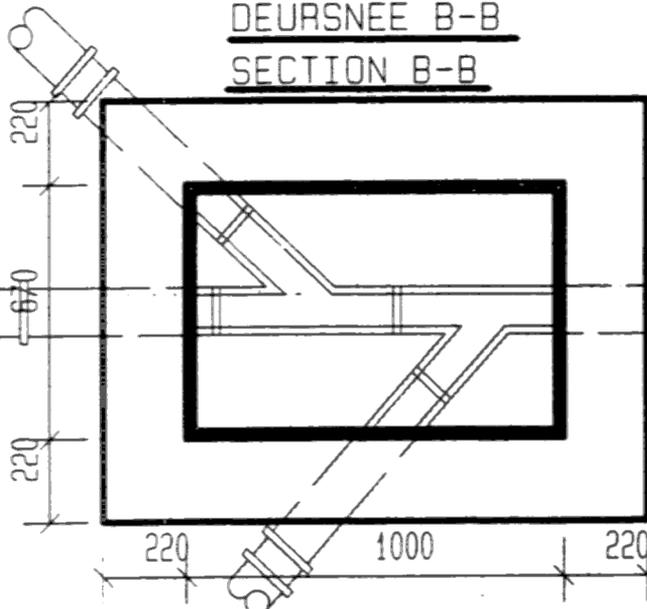
450x600 G.Y. Deksel en raam.  
450x600 C.I. Cover and frame.

G.Y. Raam in beton gele.  
C.I. Frame set in concrete.

Vloevulling.  
Benching.

1-3-6 Beton.  
1-3-6 Concrete.

DEURSNEE B-B  
SECTION B-B



PLAN

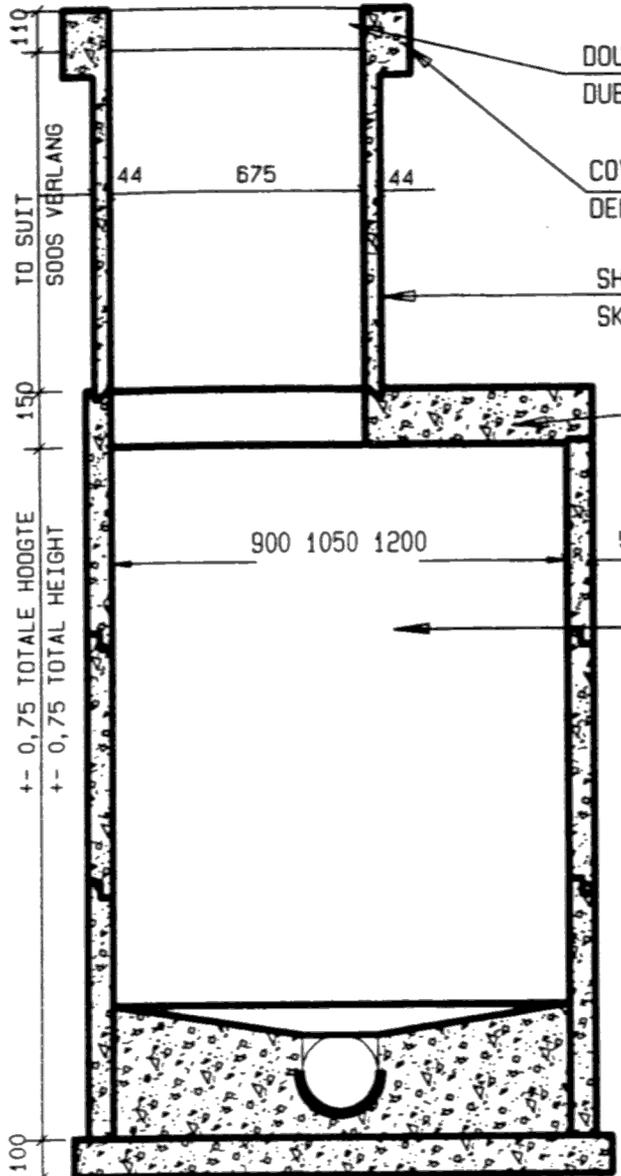
GETEKEN. J.A.C. RABE  
DRAWN.

NAGESIEN.  
CHECKED.

SKAAL. 1 : 20  
SCALE.

INSPEKSIKAMER. (BAKSTEEN  
MET DIEPTE MINDER AS 1530)  
INSPECTION CHAMBER.  
(BRICK WORK LESS THAN 1530)

D10/AD



DOUBLE SEAL C.I. COVER AND FRAME TO BE SUPPLIED.  
DUBBEL SEËL G.Y. DEKSEL EN RAAM MOET VOORSIEN WORD.

COVER SLAB.  
DEK BLAD.

SHAFT  
SKAG

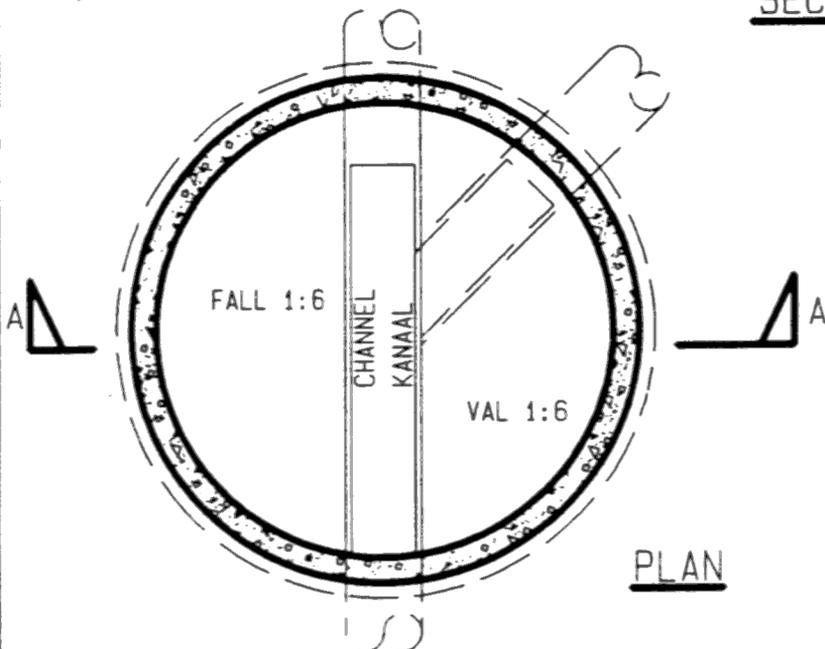
REDUCER SLAB.  
VERLOOP BLAD.

CHAMBER.  
KAMER.

BENCHING TO BE BROUGHT UP VERTICALLY TO TOP OF MAIN DRAIN PIPE AND THEN SLOPED UPWARDS AT 1:6 TOWARDS CHAMBER WALLS.

VULLING MOET VERTIKAAL TOT KRUIJN VAN PYP OPGEBOU WORD EN DAN MET HELLING VAN 1:6 SKUINS AFGEWERK WORD TOT BY I.K. MUUR.

SNIT A-A  
SECTION A-A



NOTE  
CHAMBER CAN BE SUPPLIED WITH SLOTTED CUTOUTS AT THE BASE TO SUIT SEWERS AS REQUIRED.

NOTA  
KAMER KAN MET UITSNYDINGS OP BASIS VOORSIEN WORD VIR VERSKILLENDE DEURSNEE PYPE SOOS BENODIG.

GETEKEN. J. A. C. RABE  
DRAWN.

NAGESIEN.  
CHECKED.

SKAAL. 1 : 20  
SCALE.

MANGATE (DIEPER AS 1 530)  
MANHOLES (OVER 1 530)

D11D

450x600 G.Y. Deksel en raam.  
450x600 C.I. Cover and frame.

Granolitiese afwerking.  
Grano. finish.

Beton gevorm om G.Y. raam te neem.  
Concrete rebated to take C.I. frame.

760x600 Opening.  
760x600 Opening.

$$Y = (3/4) * (X)$$

Vloevulling moet vertikaal tot top van pyp opgebou word en dan met helling van 1:6 skuins afgewerk word tot by I.K. muur.

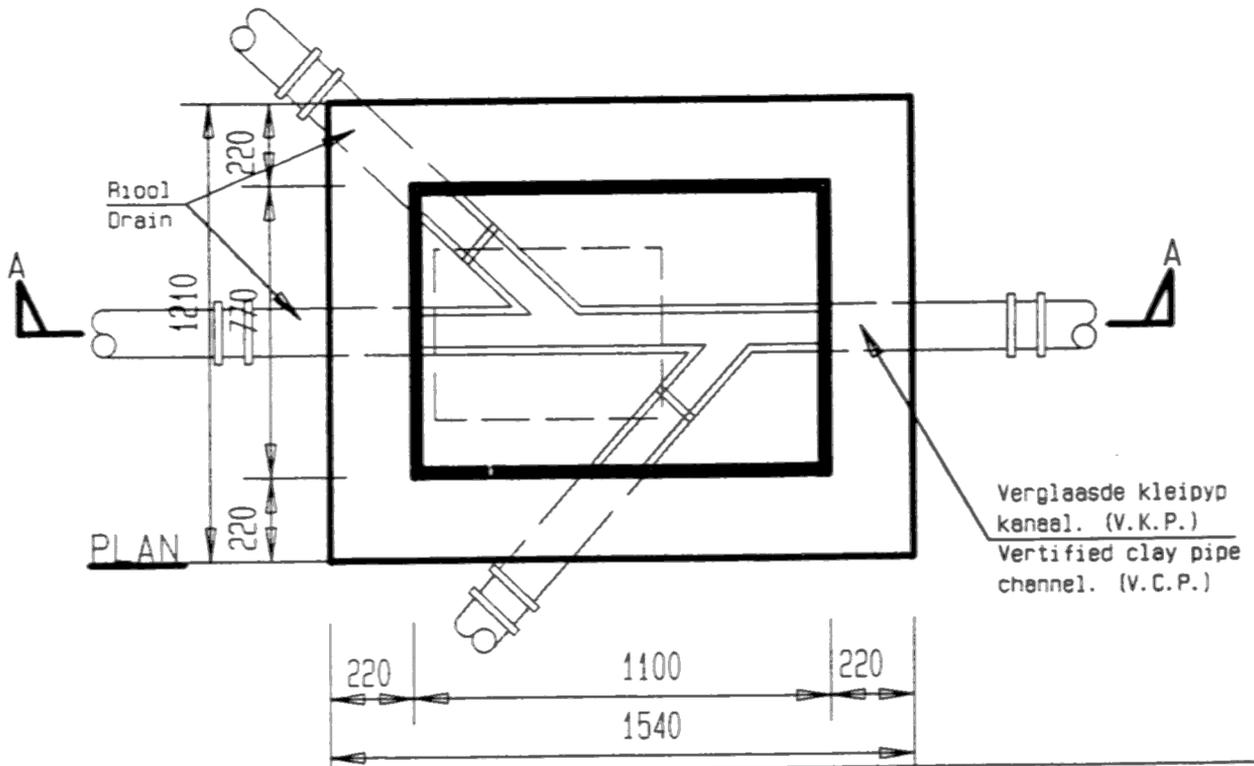
Benching to be brought up vertically to top of main drain pipe and then sloped upwards at 1:6 towards chamber walls.

Hardgebakte stene met smal voë.  
Hard brick with narrow joints.

Riool Drain

150 Beton.  
150 Concrete.

DEURSNEE A-A  
SECTION A-A



Verglaasde kleipyp kanael. (V.K.P.)  
Vertified clay pipe channel. (V.C.P.)

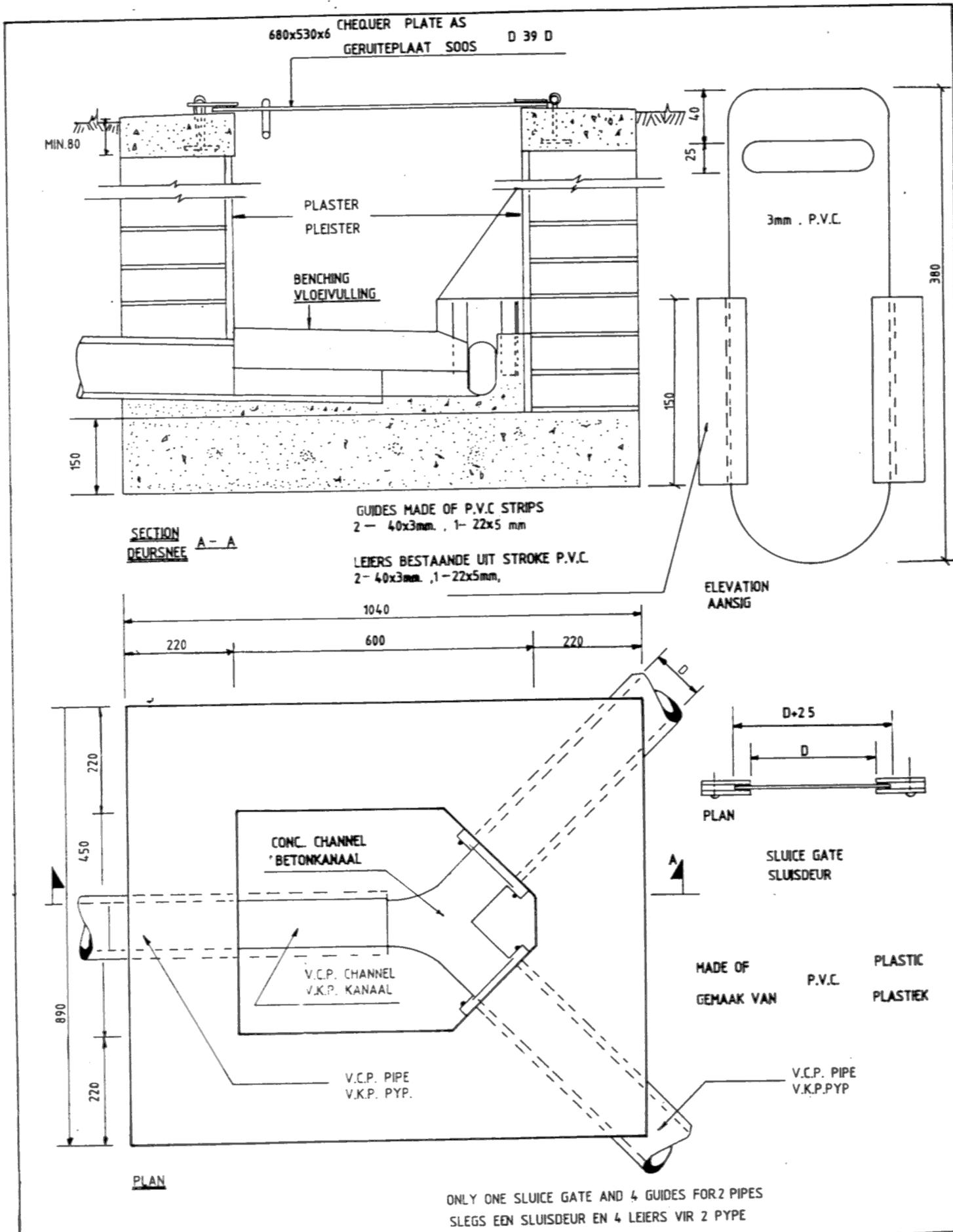
GETEKEN. J.A.C. RABE  
DRAWN.

NAGESIEN.  
CHECKED.

SKAAL. 1 : 20  
SCALE.

MANGATE. (BAKSTEEN DIEPER AS 1530)  
MANHOLES. (BRICK WORK OVER 1530)

D11/AD



GETEKEN, S. CILLIERS  
DRAWN.

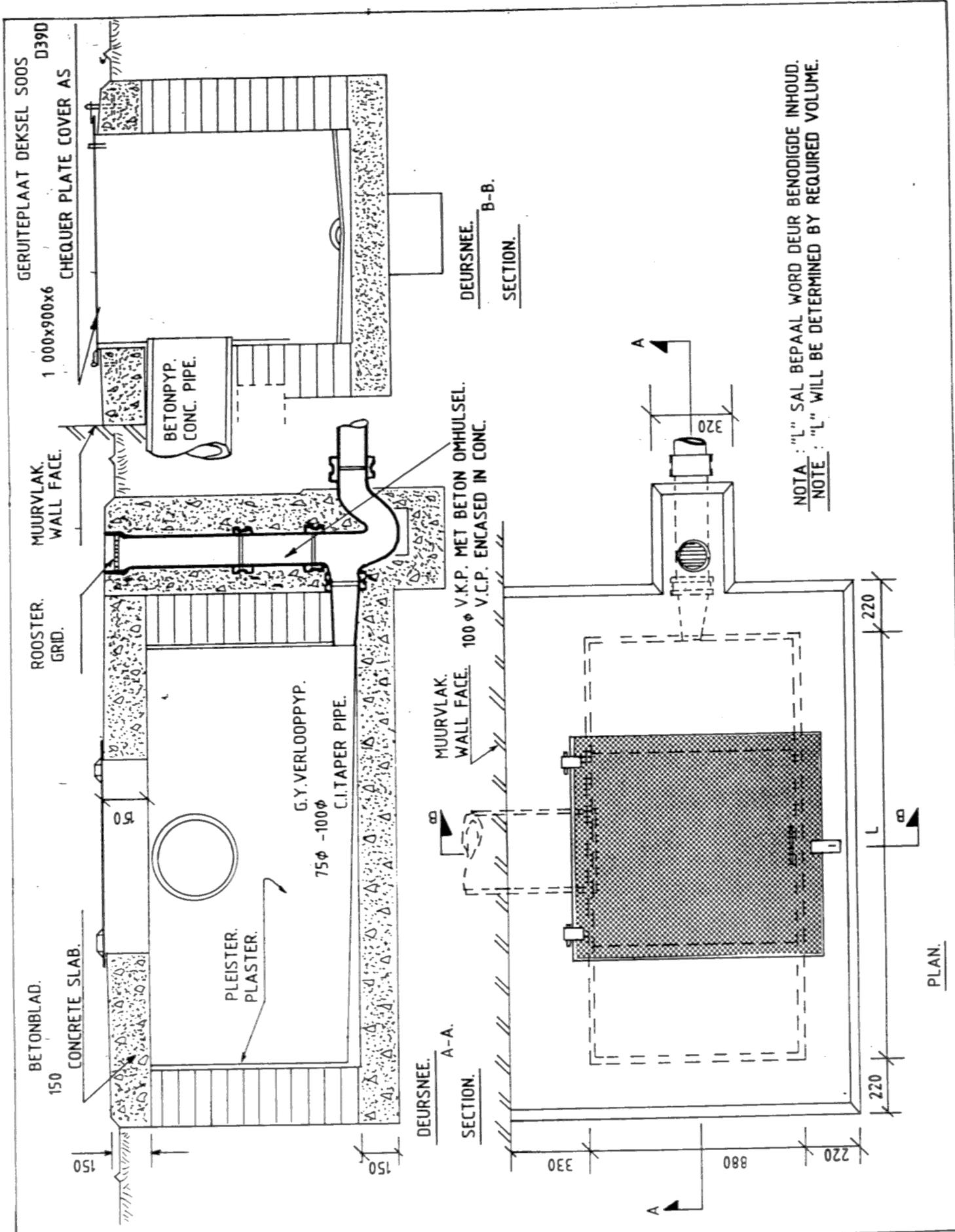
NAGESIEN, *[Signature]*  
CHECKED.

SKAAL, 1:10  
SCALE.

DEPARTEMENT VAN OPENBARE WERKE  
DEPARTMENT OF PUBLIC WORKS

CONTROL CHAMBER  
KONTROLEKAMER

D 12 D



GETEKEN. M.J.PAPENHUYZEN.  
DRAWN.

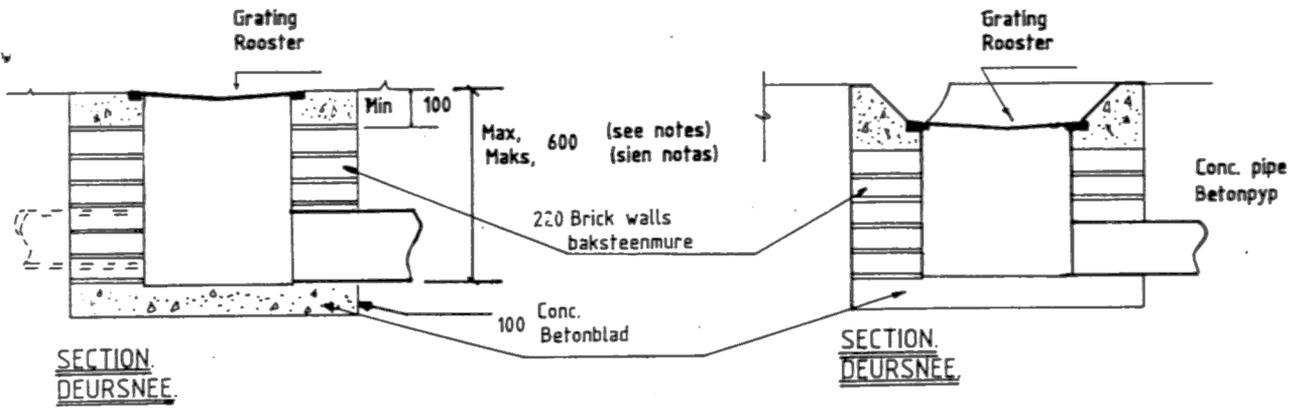
NAGESIEN  
CHECKED

SKAAL  
SCALE 1: 20

DEPARTEMENT VAN OPENBARE WERKE  
DEPARTMENT OF PUBLIC WORKS

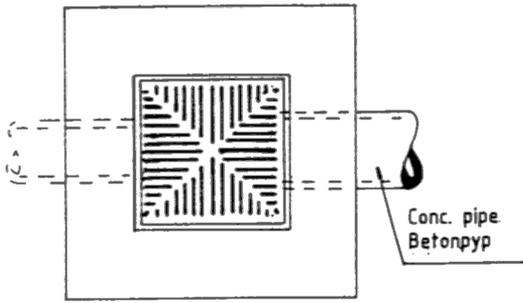
EWENAARSTENK VIR WASHUIS.  
BALANCING TANK FOR LAUNDRY BLOCK.

D 13 D



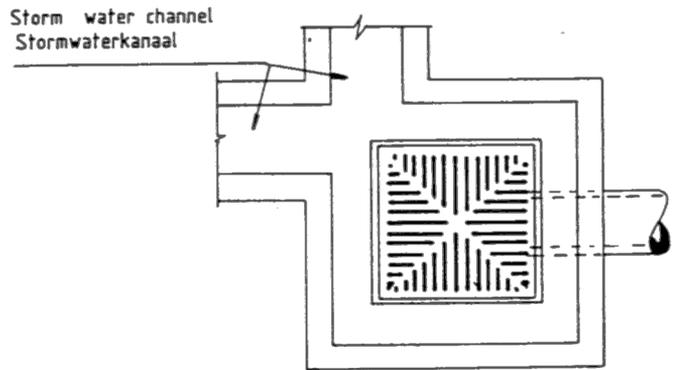
SECTION DEURSNEE

SECTION DEURSNEE



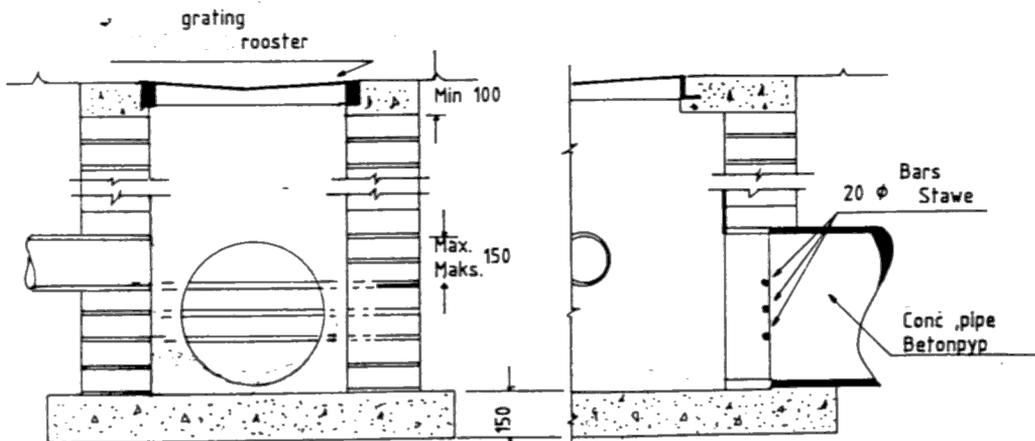
PLAN

TYPE A



PLAN

TYPE B



SECTION OF CATCHPITS WITH SECURITY BARS IN PRISON YARDS, FOR CONC. PIPES 380 φ AND LARGER.  
DEURSNEE VAN VANGPUTTE MET VEILIGHEIDSSTAWE IN GEVANGENISBINNEPLASE, VIR BETONPYPE 380φ EN GROTER.

GRATING SIZES.  
ROOSTERMATES.

- 300x300
- 350x350
- 380x380
- 400x400
- 450x450
- 500x500
- 600x600

NOTES:

Catchpits under 600φ deep:  
Inside dimensions of finished wall is equal to daylight sizes of C.I. frame.  
Catchpits 610 - 1 530 deep : (as D 10 D)  
Grating sizes to suit framework.  
Catchpits over 1 530 deep (as D11D)  
Grating sizes to suit framework.

NOTAS:

Vangputte minder as 600 diep:  
Binnemate van afgewerkte mure is gelyk aan dagmate van G.Y. raam.  
Vangputte 610/1 530 diep (soos D 10 D)  
Roosterwerk moet by raamwerk pas.  
Vangputte dieper as 1 530: (soos D 11 D).  
Roostermate moet by raamwerk pas.

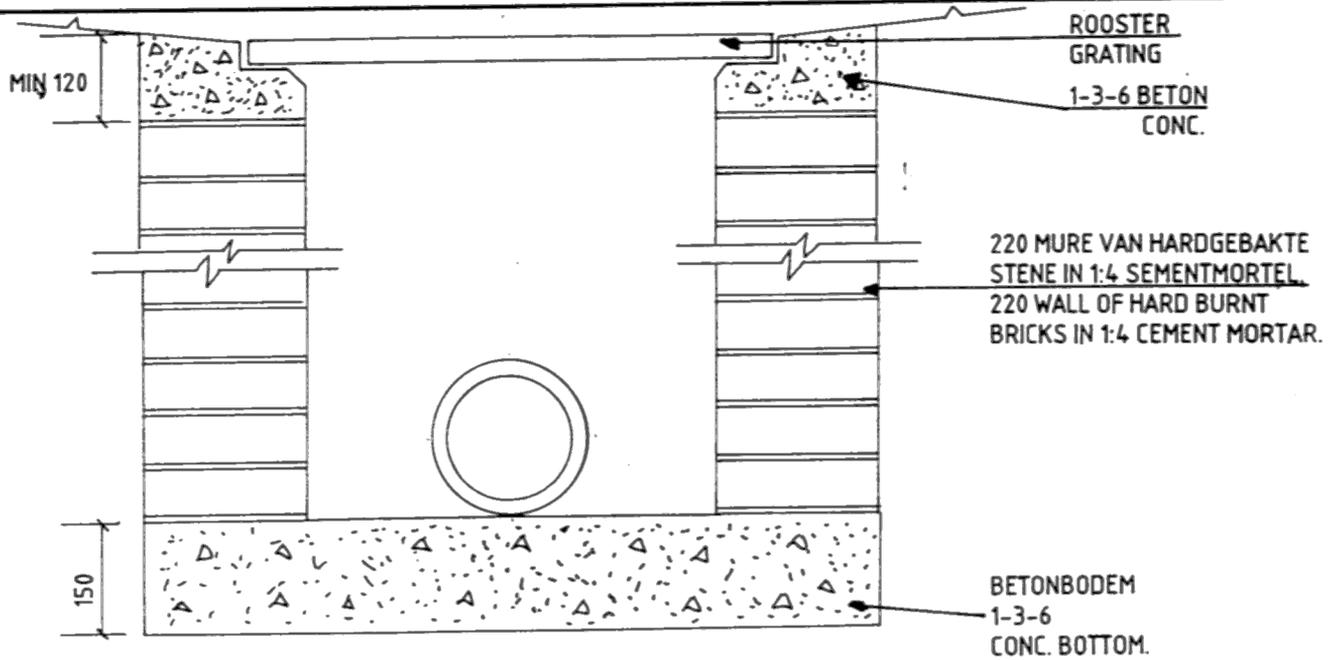
GETEKEN.  
DRAWN. S. CILLIERS.

NAGESIEN.  
CHECKED.

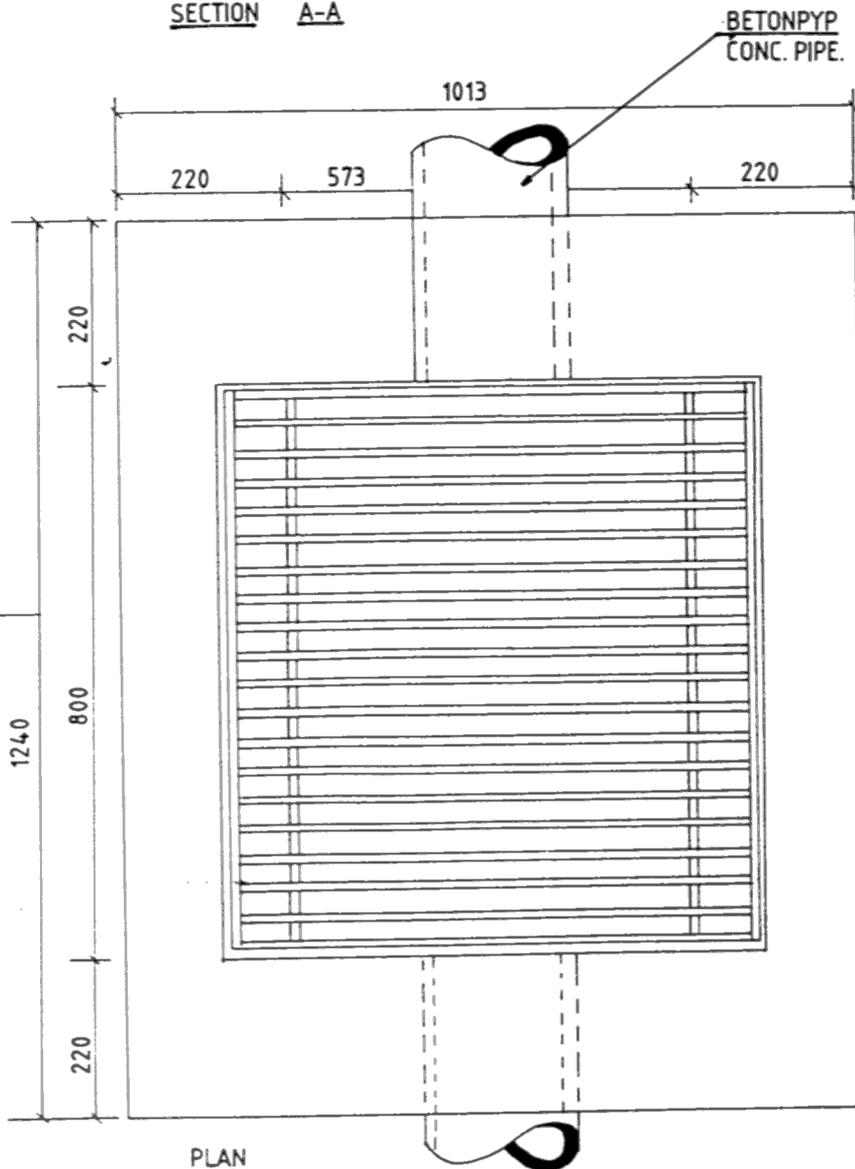
SKAAL.  
SCALE. 1:25

CATCHPITS. → TYPE A AND B

VANGPUTTE → TIPE A EN B.



DEURSNEE A-A  
SECTION A-A



PLAN

**ROOSTER.**  
 BUITEMATE 772x690  
 20 YSTERSTAWE 40x12 H.O.H. 40  
 GESWEIS AAN 2-40x12 STAWE.  
**GRATING.**  
 OVERALL SIZE 772x690  
 20 IRON BARS 40x12 C.T.C 40  
 WELDED TO 2-40x12 BARS.

GETEKEN.  
 DRAWN. J.A.C. RABE  
 NAGESIEN.  
 CHECKED. *[Signature]*  
 SKAAL.  
 SCALE. 1:10

VANGPUT TIPE C.  
 CATCHPIT TYPE C.

D150

STONE OR CONC. SLAB OVER CAVITY  
KLIP OF BETONBLAD OOR HOLTE

FILLING  
VULLING

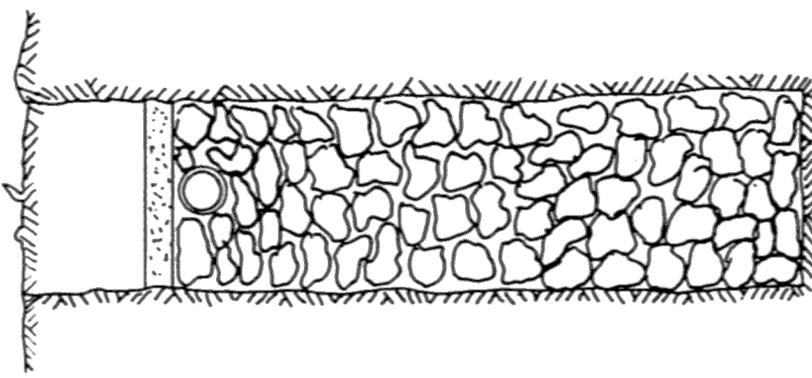
INLET PIPE  
INLAATPYP

THE DEPTH WILL DEPEND UPON  
THE NATURE AND ABSORPTIVE  
CAPACITY OF THE SOIL.

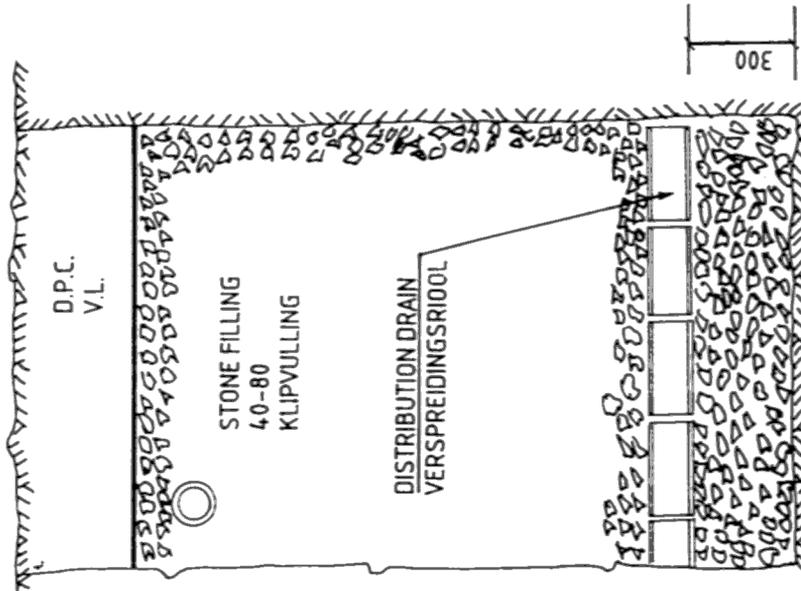
DEIPE HANG AF VAN DIE TIEPE  
EN ABSORBEERVERMOE VAN DIE  
GROND.

FORM CAVITY WITH ROUGH STONES,  
DRY PACKED.

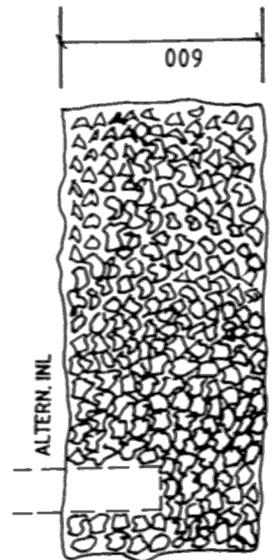
VORM HOLTE MET GROUWE KLIPPE,  
DROOG GEPAK.



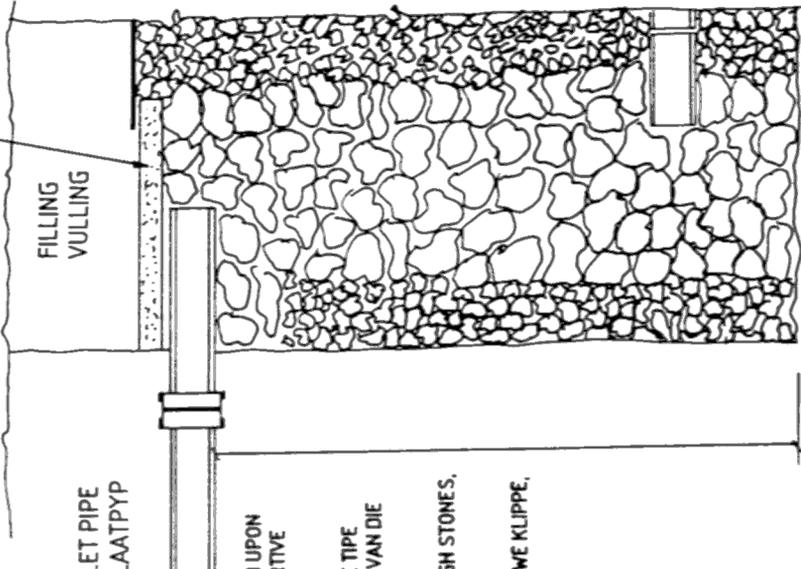
CROSS SECTION  
DWARSDURSNEE



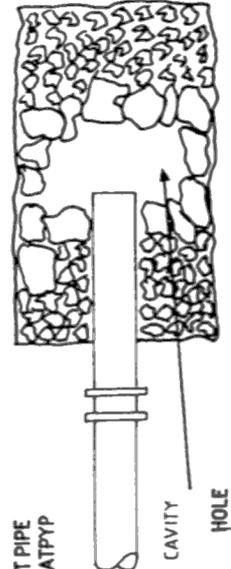
AGRICULTURAL PIPES WITH OPEN JOINTS.  
SUGRIOOLPYPE MET OOP VOER



ALTERN. INL.



LONGITUDINAL SECTION  
LANGDURSNEE.



PLAN

GETEKEN.  
DRAWN.

J.A.C. RABE

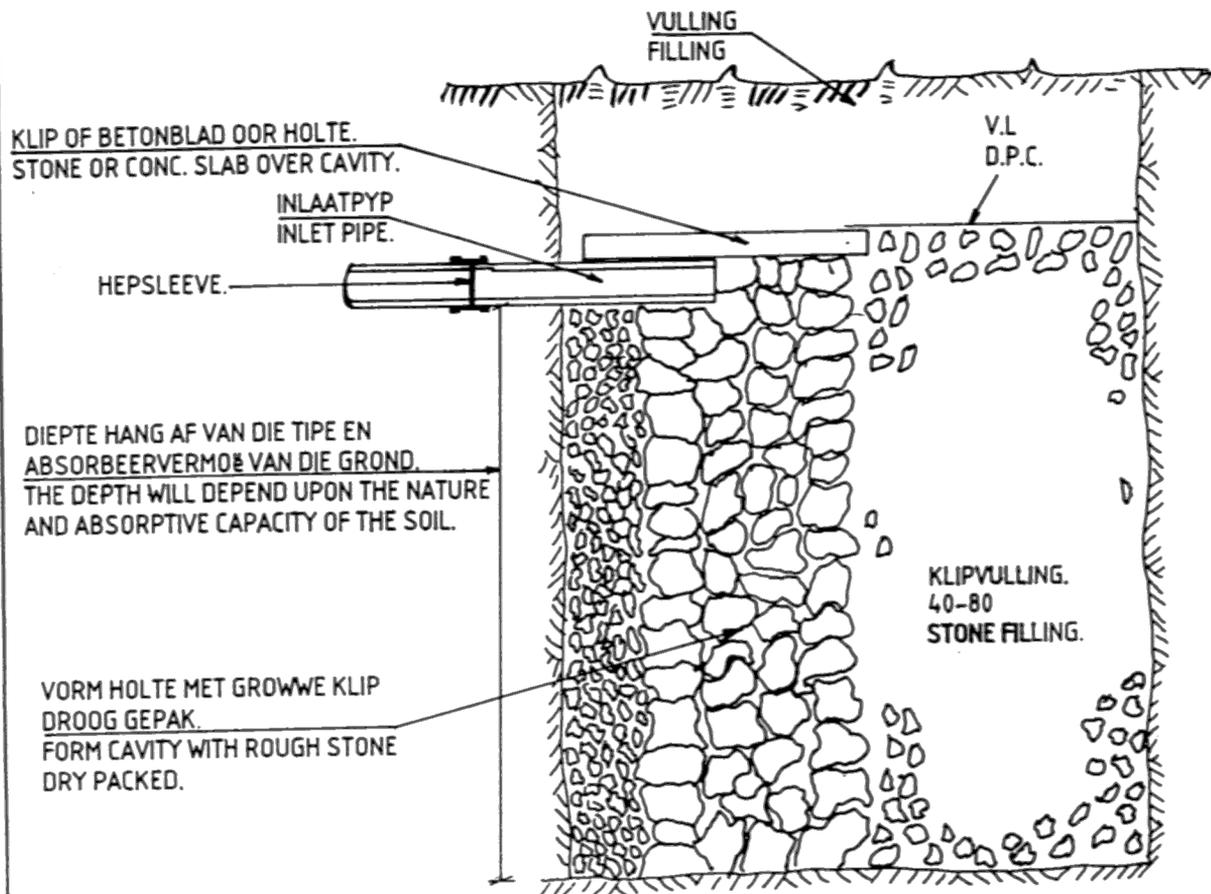
NAGESIEN.  
CHECKED.

SKAAL.  
SCALE.

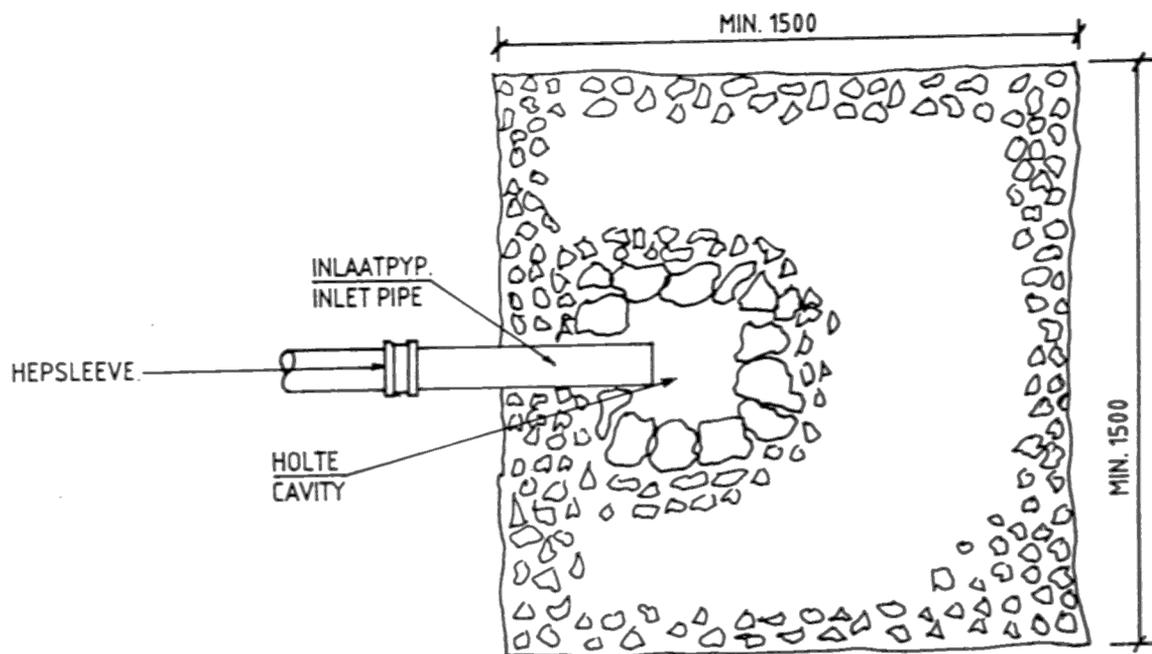
1:20

STAFEL RIOOL  
FRENCH DRAIN

D160



DEURSNEE SECTION

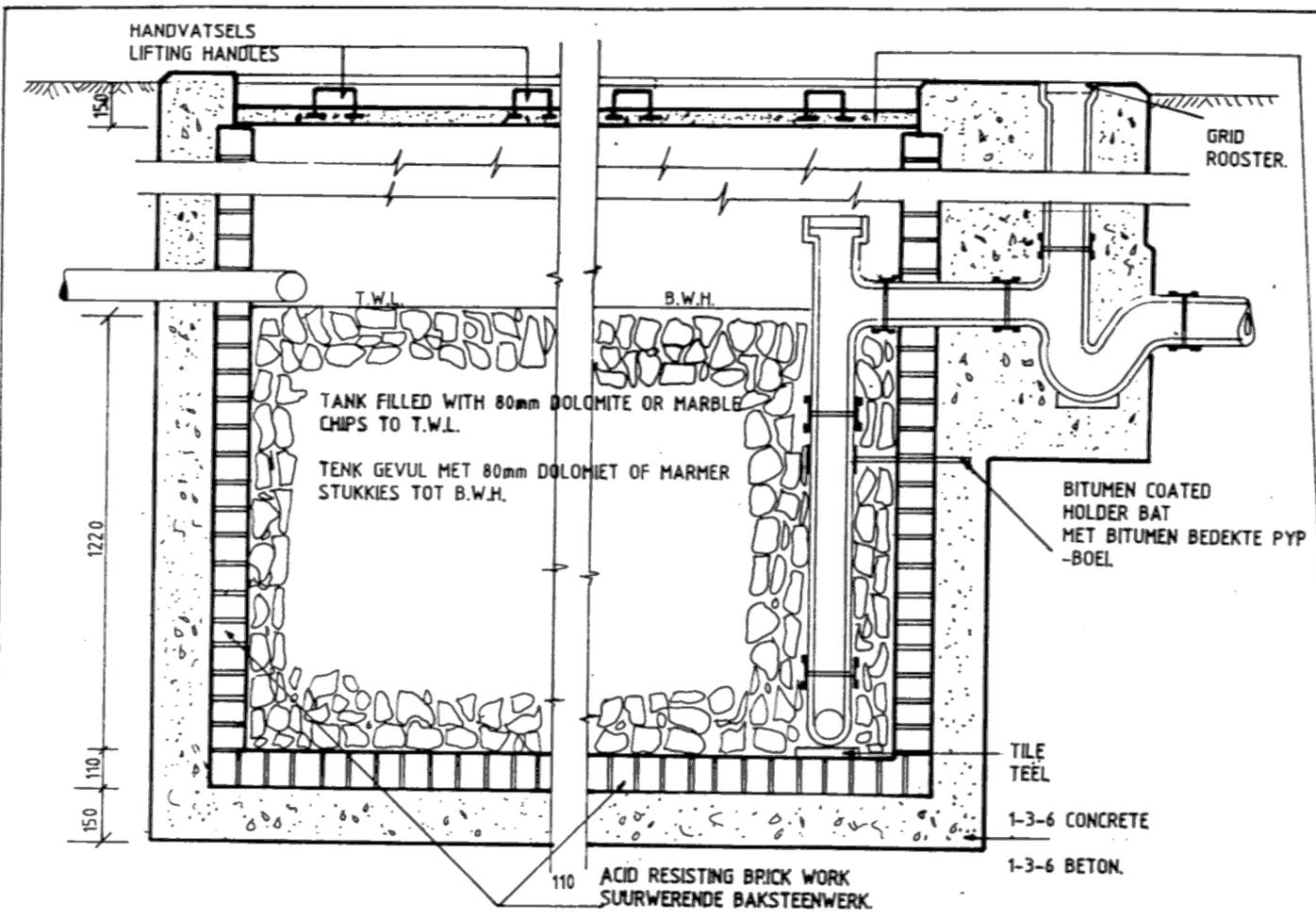


PLAN

GETEKEN.  
 DRAWN. J.A.C. RABE  
 NAGESIEN.  
 CHECKED. *[Signature]*  
 SKAAL. 1:20  
 SCALE.

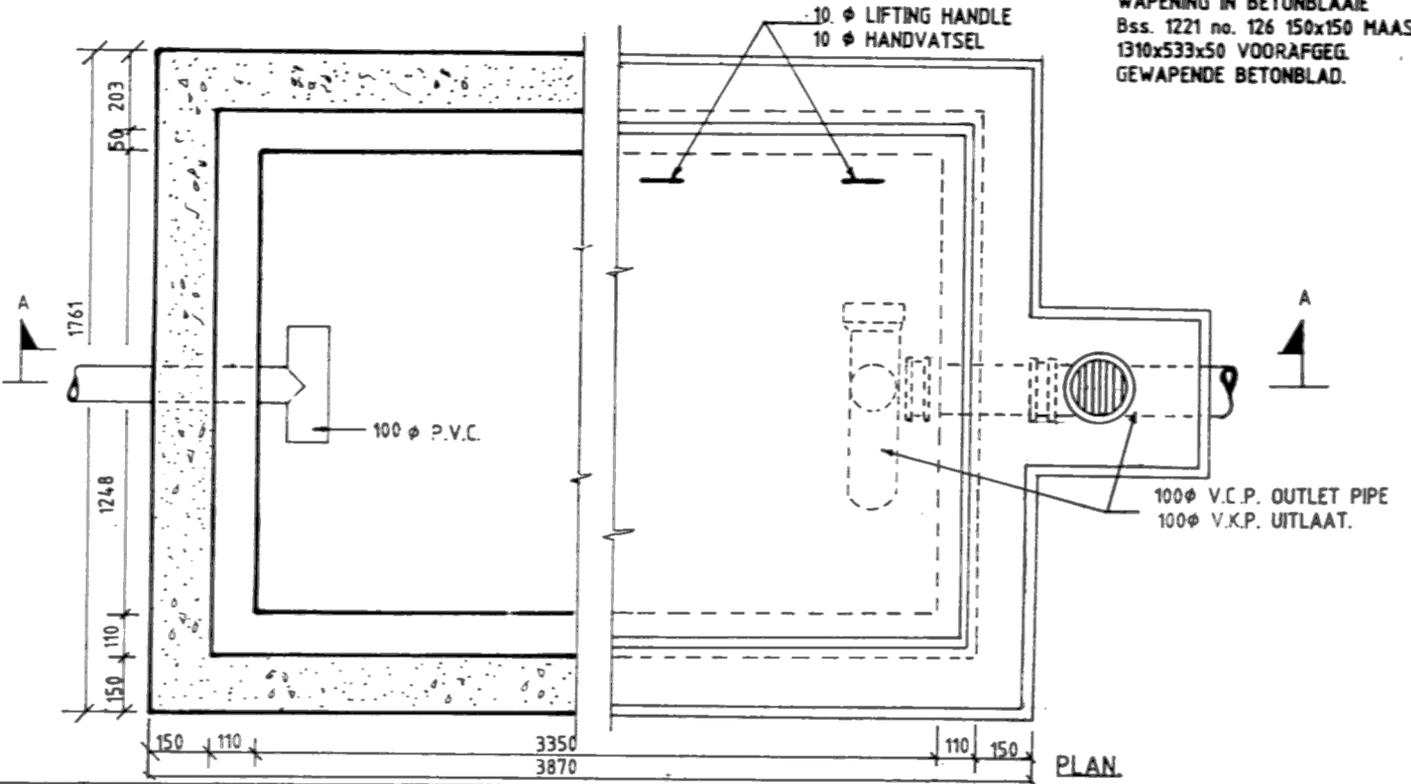
SYFERPUT  
 SOAKAGE PIT

D17D



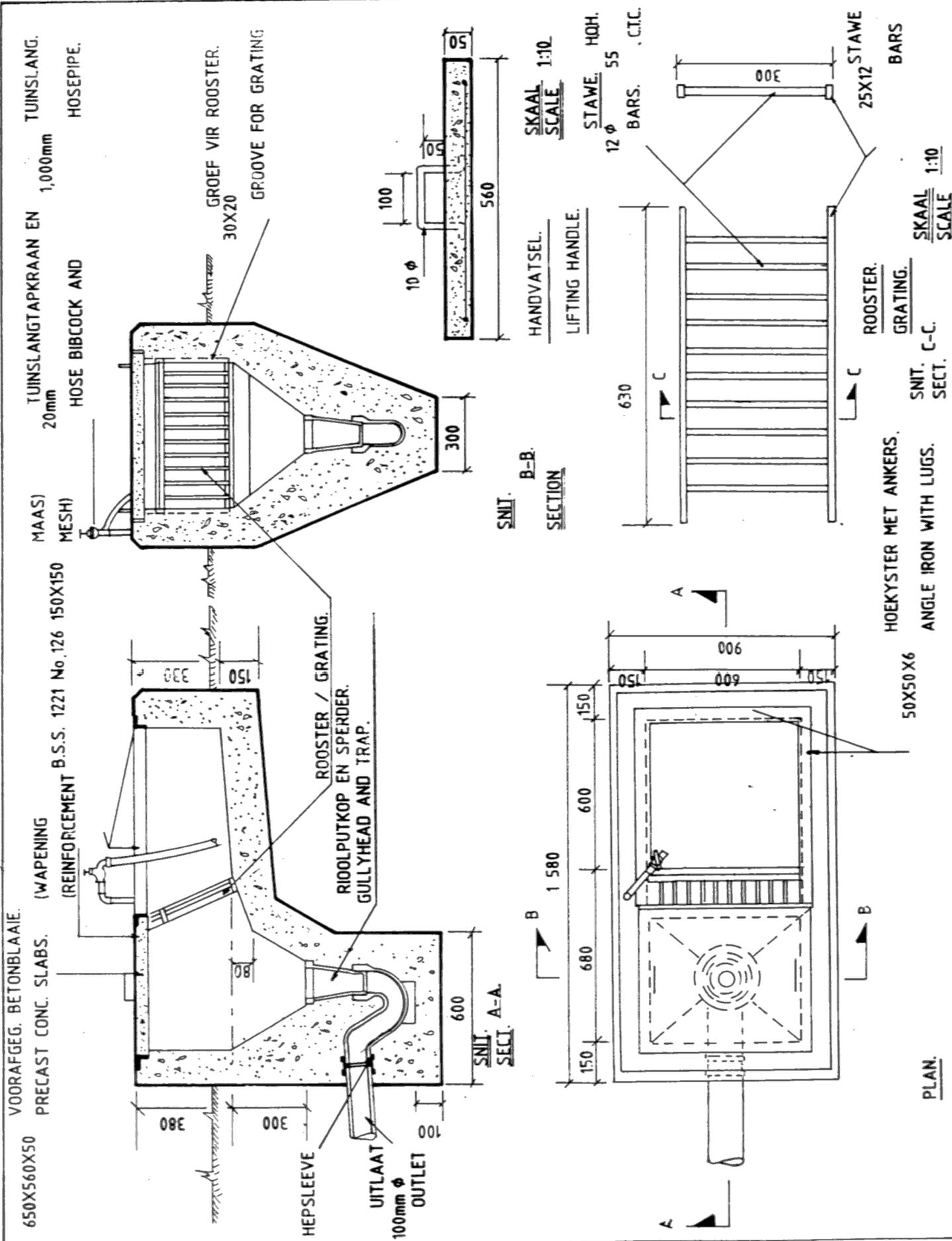
SECTION A-A  
DEURSNEE A-A

REINFORCEMENT IN CONC. SLABS  
Bss. 1221 NO. 126 150x150 MESH.  
1310x533x50 PRECAST REINFORCED  
CONC. SLAB  
WAPENING IN BETONBLAAIE  
Bss. 1221 no. 126 150x150 MAAS.  
1310x533x50 VOORAFGEG.  
GEWAPENDE BETONBLAD.



PLAN.

GETEKEN. DRAWN. S.P. CILLIERS.	DEPARTEMENT VAN OPENBARE WERKE DEPARTMENT OF PUBLIC WORKS	
NAGESIEN. CHECKED. <i>[Signature]</i>	ACID NEUTRALIZING TANK. SUUR NEUTRALISERINGSTENK.	D18D
SKAAL. SCALE. 1:20		



GETEKEN. DRAWN S.P. CILLIERS

NAGESIEN CHECKED *[Signature]*

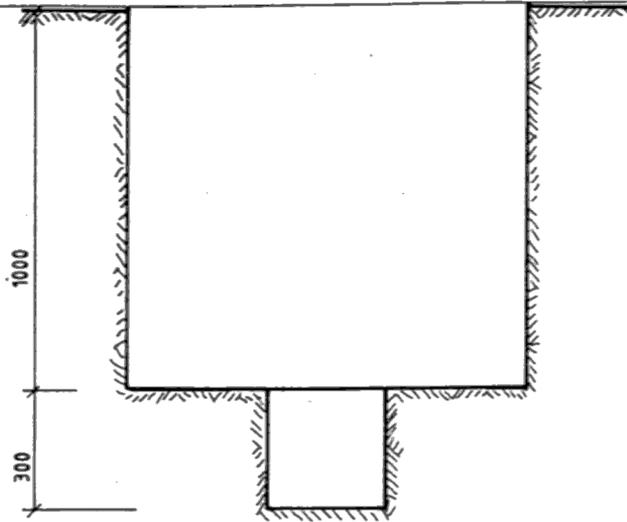
SKAAL SCALE 1:20

DEPARTEMENT VAN OPENBARE WERKE  
DEPARTMENT OF PUBLIC WORKS

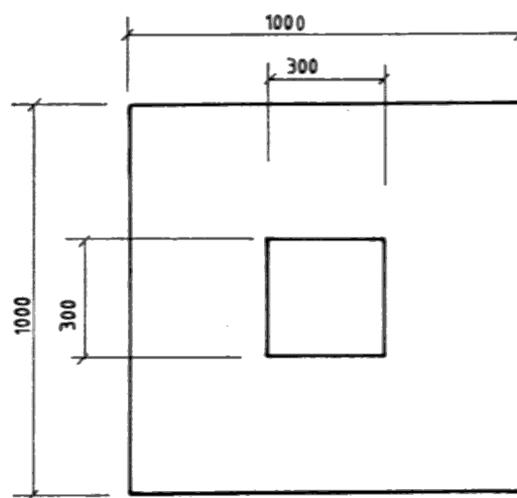
STORTINGSPUT.  
DUMPING PIT.

D 19 D

THE 300x300mm TEST HOLE IS TO BE THOROUGHLY SOAKED BY FILLING IT WITH WATER TO A DEPTH OF 300mm. THIS WATER LEVEL MUST BE MAINTAINED FOR AT LEAST 4 HOURS BY CONSTANTLY ADDING WATER. IMMEDIATELY AFTER THIS INITIAL SOAKING AND WITH THE WATER LEVEL STILL AT THE REQUIRED DEPTH, (NO FURTHER WATER IS TO BE ADDED AFTER THIS) THE DROP IN THE WATER SURFACE MUST BE OBSERVED FOR A PERIOD OF 30 MINUTES, THEN MEASURED. FROM THESE OBSERVATIONS THE AVERAGE TIME FOR THE WATER TO DROP 25mm CAN BE CALCULATED AND THE LENGTH OF THE FRENCH DRAIN DETERMINED FROM THE TABLE BELOW.



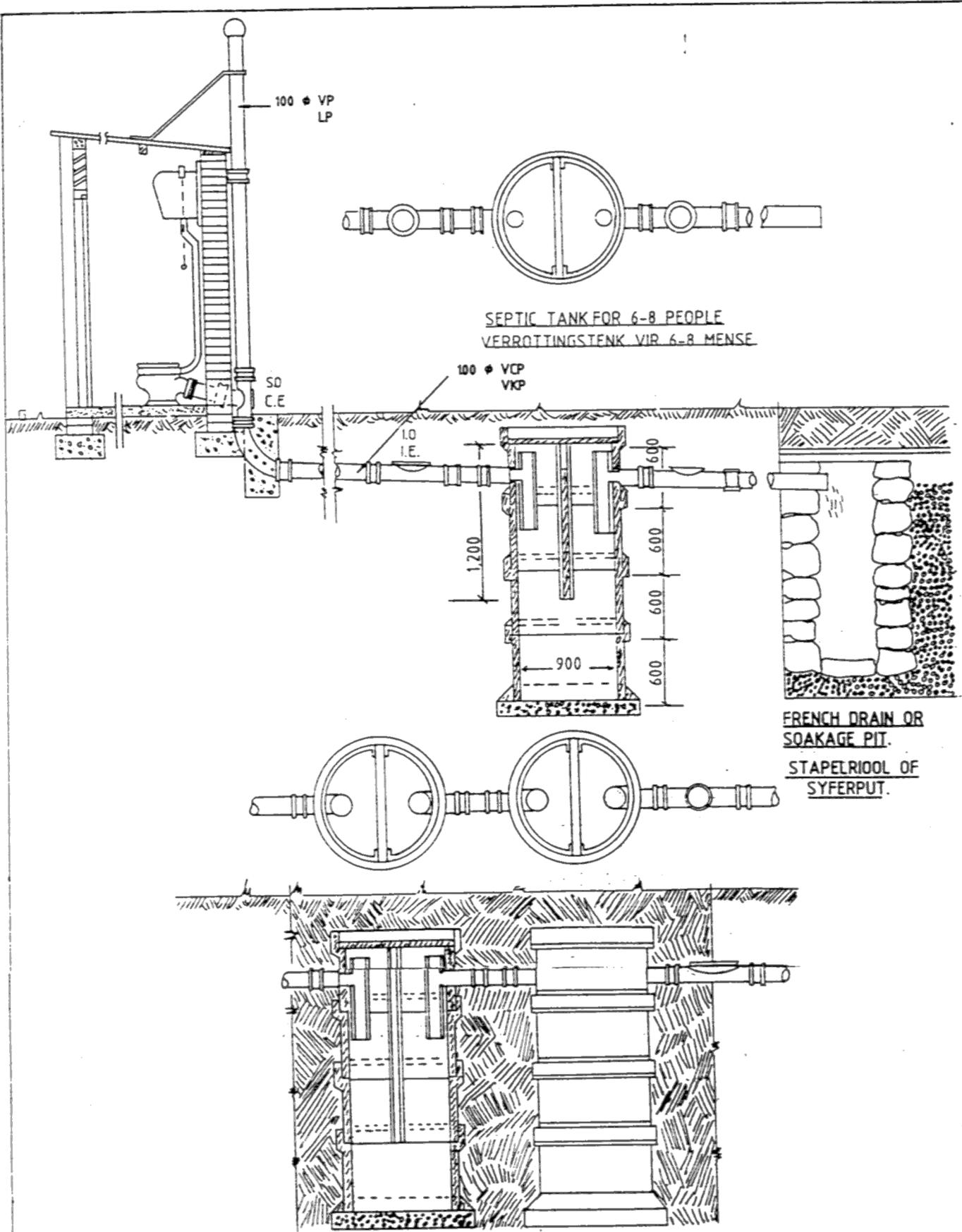
**SECTION.**



**PLAN.**

AVERAGE TIME TAKEN FOR WATER TO DROP 25mm IN 300x300x300 HOLE.	COMMENTS.	LENGTH OF FRENCH DRAIN PER PERSON. DEPTH 1,5 m BELOW INVERT OF INLET PIPE. ( DOMESTIC SEWAGE EFFLUENT INCLUDING WASTE WATER.)
15 SECONDS OR LESS.	EXCELLENT.	300 mm
30 SECONDS OR LESS.	VERY GOOD	450 mm
1 MINUTE	GOOD	600 mm
2 MINUTE	GOOD	750 mm
3 MINUTE	GOOD	1,1 m
4 MINUTE	GOOD	1,4 m
5 MINUTE	GOOD	1,55 m
10 MINUTE	FAIR	1,8 m
15 MINUTE	FAIR	2,3 m
30 MINUTE	TIGHT	3 m
60 MINUTE	BAD	4,5 m

GETEKEN. DRAWN S.P. CILLIERS.	DEPARTEMENT VAN OPENBARE WERKE DEPARTMENT OF PUBLIC WORKS	D200
NAGESIEN CHECKED <i>[Signature]</i>	ABSORPTION TEST HOLE.	
SKAAL SCALE 1:25	WEGSYFER TOETSGAT .	



SEPTIC TANK FOR 6-8 PEOPLE      VERROTINGSTENK VIR 6-8 MENSE

SEPTIC TANK FOR 10-14 PERSONS      VERROTINGSTENK VIR 10-14 MENSE

GETEKEN. DRAWN. S.P. OLLIERS	DEPARTEMENT VAN OPENBARE WERKE DEPARTMENT OF PUBLIC WORKS	
NAGESIEN. CHECKED. <i>[Signature]</i>	PREFABRICATED CIRCULAR SEPTIC TANKS.	D21D
SKAAL. SCALE 1:20	VOORAFVERVAARDIGE RONDE VERROTINGSTENK.	

WIRE BALLOON  
BOL ROOSTER.

NOTA

ALLE VUIL WATER SPERDERS MOET  
N SEËL VAN 'N MINIMUM DIEPTE VAN  
65mm HÊ.

NOTE

ALL WASTE WATER TRAPS TO HAVE  
A MINIMUM SEAL OF 65mm.

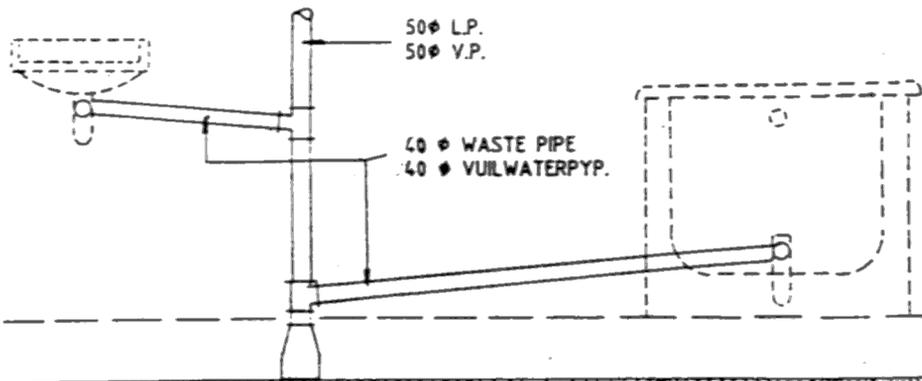
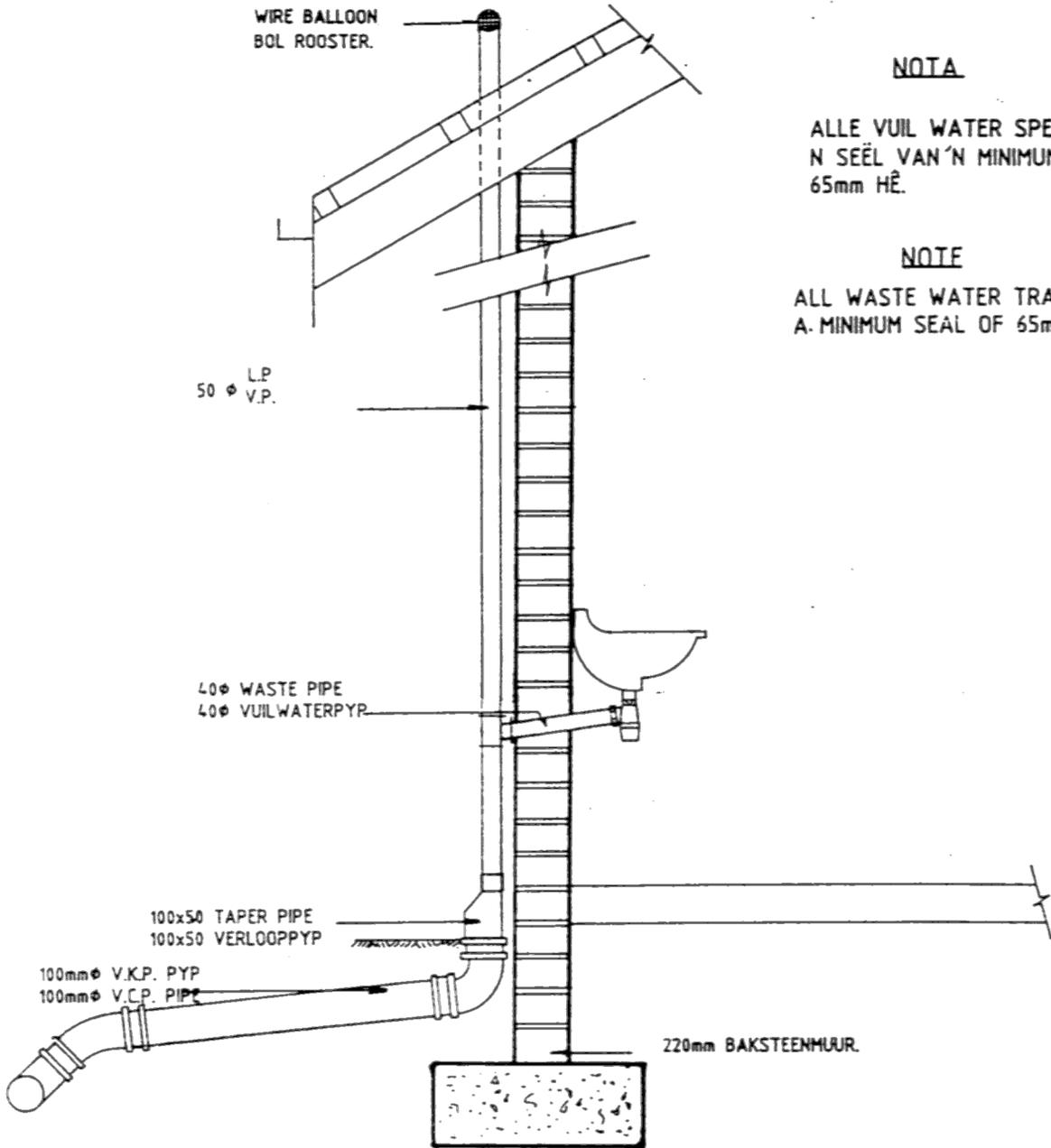
50  $\phi$  L.P.  
V.P.

40  $\phi$  WASTE PIPE  
40  $\phi$  VUILWATERPYP

100x50 TAPER PIPE  
100x50 VERLOOPPYP

100mm  $\phi$  V.K.P. PYP  
100mm  $\phi$  V.C.P. PYP

220mm BAKSTEENMUUR.



GETEKEN.  
DRAWN. S.P. CILLIERS.

DEPARTEMENT VAN OPENBARE WERKE  
DEPARTMENT OF PUBLIC WORKS

NAGESIEN  
CHECKED *[Signature]*

TIPIESE VUILWATERPYP AANSLUITING MET  
RIOOL.

D22(A)D

SKAAL.  
SCALE. N.V.S.

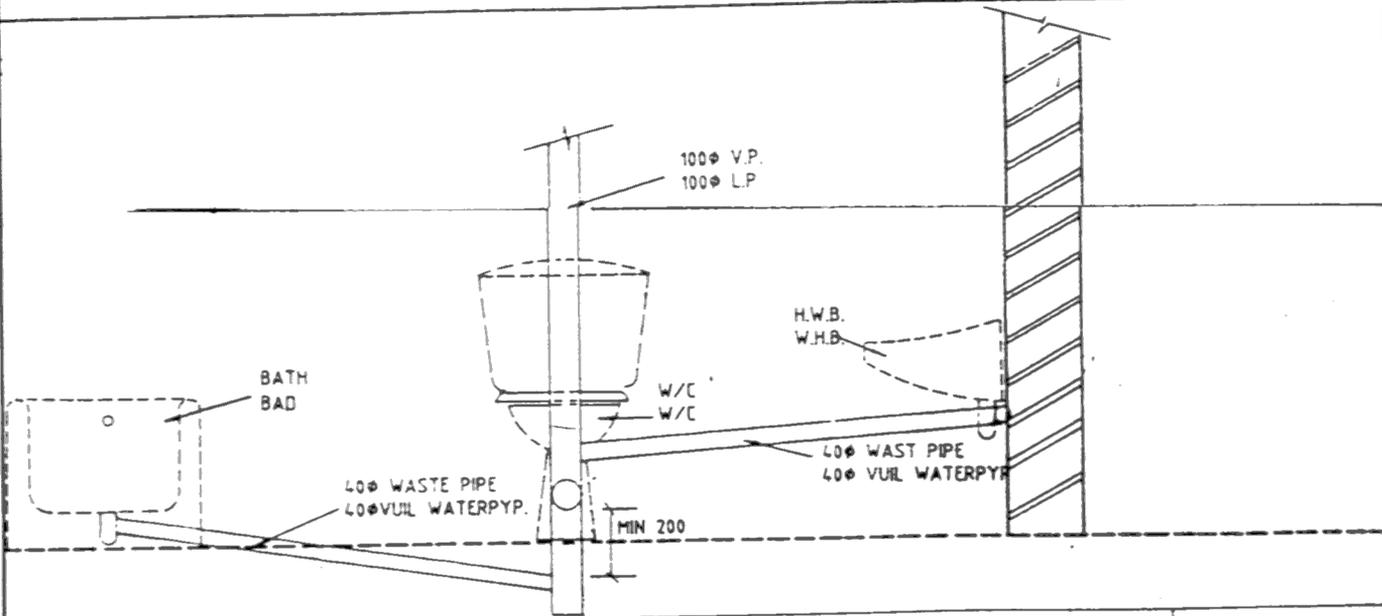
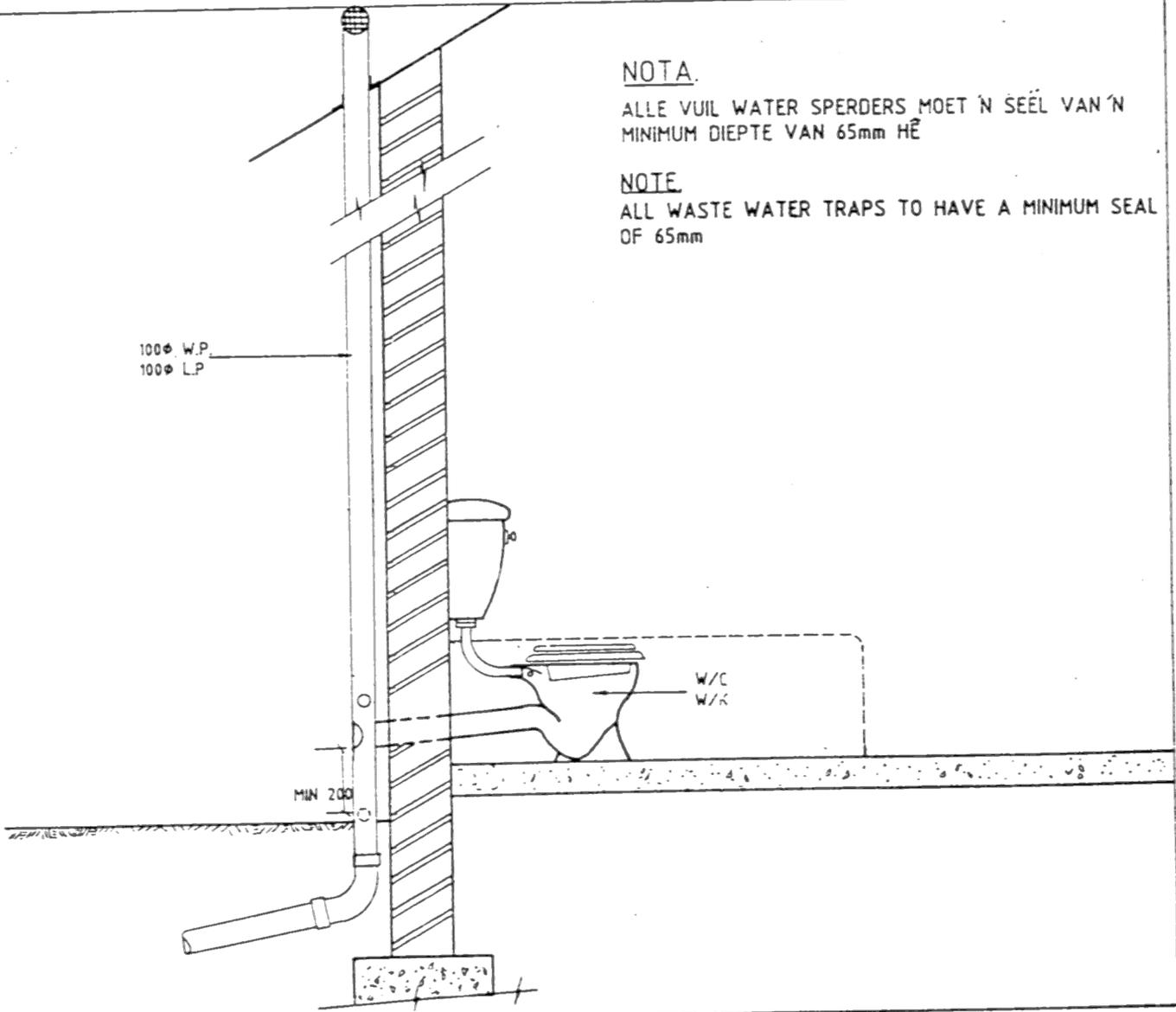
TYPICAL WASTE PIPE CONNECTION TO DRAIN.

NOTA.

ALLE VUIL WATER SPERDERS MOET 'N SEËL VAN 'N MINIMUM DIEPTE VAN 65mm HË

NOTE.

ALL WASTE WATER TRAPS TO HAVE A MINIMUM SEAL OF 65mm



GETEKEN  
DRAWN S.P. CILLIERS

NAGESIEN  
CHECKED *[Signature]*

SKAAL  
SCALE 1:20

DEPARTEMENT VAN OPENBARE WERKE  
DEPARTMENT OF PUBLIC WORKS

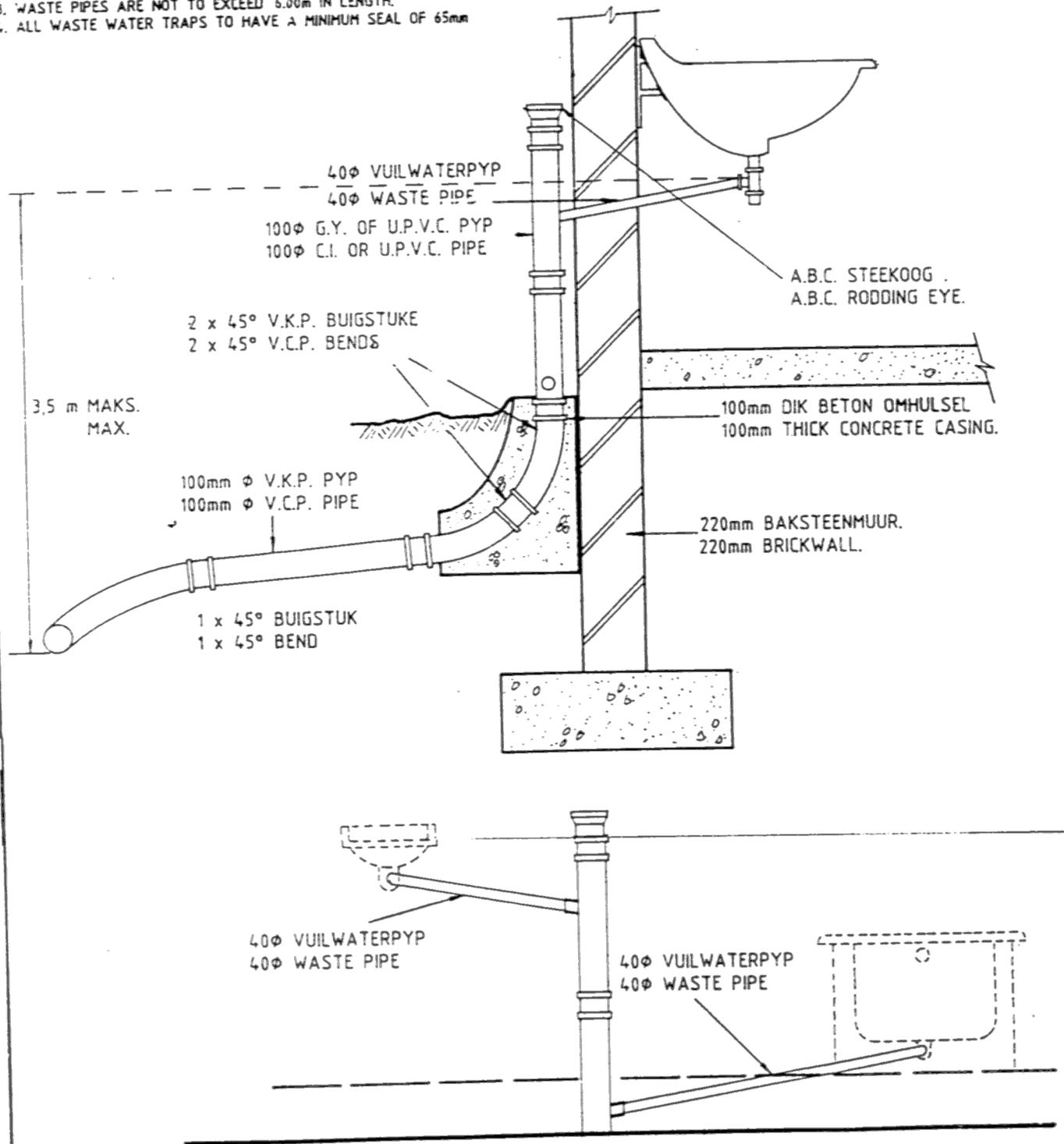
TIPIESE AANSLUITING MET RIOOL.  
TYPICAL CONNECTION TO DRAIN.

D22(B)D

**NOTAS : NOTES.**

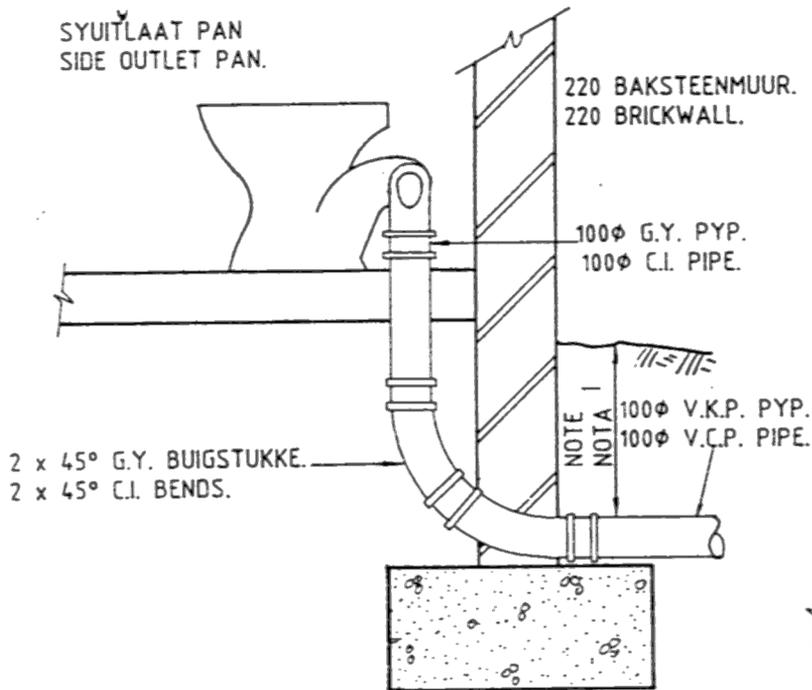
1. ALLE VUILWATERPYPE MOET 40φ WEES EN TEEN N' HELLING VAN 1 : 25 GELê WORD.
2. INDIEN DIE AFSTAND TUSSEN DIE BOONSTE AANSLUITING EN DIE INLOOP VLAK VAN DIE TAK RIOOL 3.5m DOORSKRY MOET DAAR TERUGGEKEER WORD NA TEKENING D22(A)D
3. VUILWATERPYPE MOET NIE 6.00m IN LENGTE DOORSKRY NIE.
4. ALLE VUILWATER SPERDERS MOET N' SEEL VAN N' MINIMUM DIEPTE VAN 65mm Hê.

1. ALL WASTE PIPES TO BE 40φ LAID AT A GRADIENT OF 1 : 25.
2. IF THE DISTANCE OF THE UPPERMOST CONNECTION AND THE INVERT LEVEL OF THE BRANCH DRAIN EXCEEDS 3.5m THEN REVERT TO TYPE DRAWING D22(A)D.
3. WASTE PIPES ARE NOT TO EXCEED 6.00m IN LENGTH.
4. ALL WASTE WATER TRAPS TO HAVE A MINIMUM SEAL OF 65mm



GETEKEN DRAWN M.C. BOTHA.	DEPARTEMENT VAN OPENBARE WERKE DEPARTMENT OF PUBLIC WORKS	<b>D22(C)D</b>
VAGESIEN CHECKED <i>[Signature]</i>	<b>TIPIESE VUILWATERPYPE AANSLUITING MET RIOOL</b>	
SKAAL SCALE 1 : 20	<b>TYPICAL WASTE PIPE CONNECTION TO DRAIN.</b>	

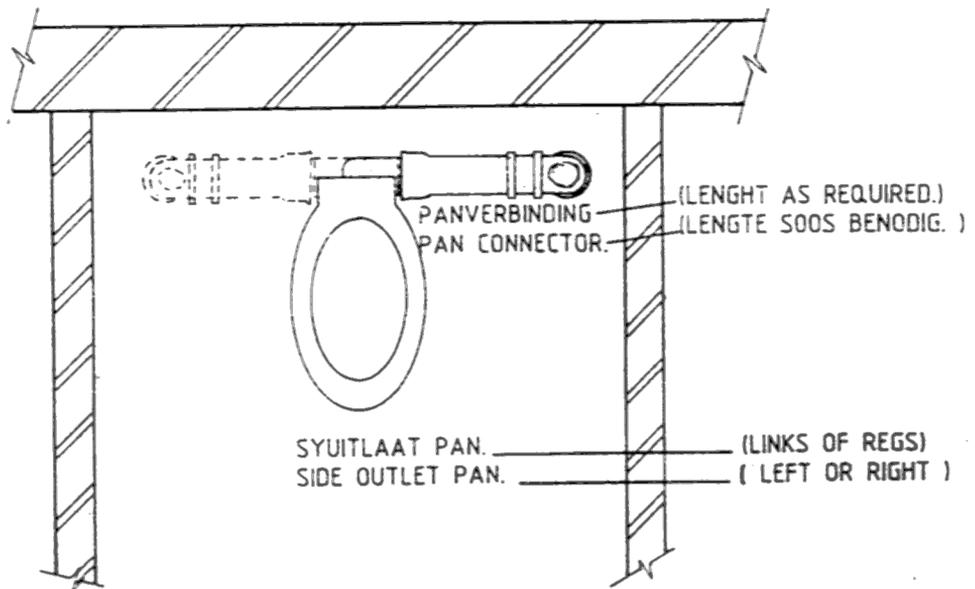
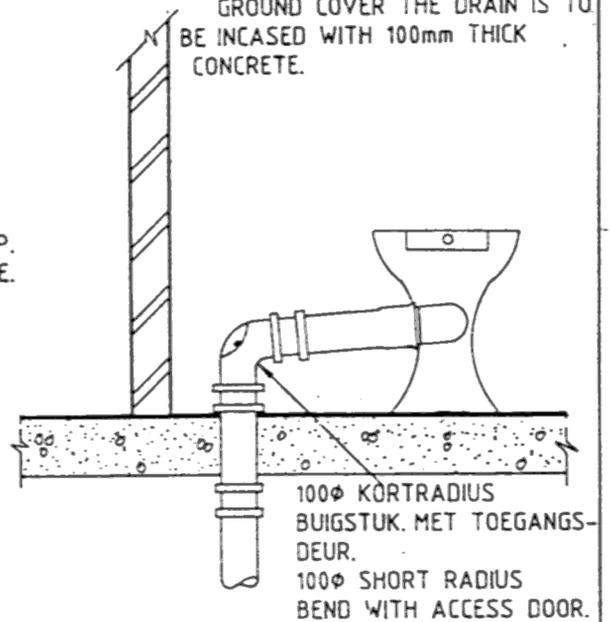
SYUITLAAT PAN  
SIDE OUTLET PAN.



NOTAS - NOTES.

I. INDIEN MINDER AS 300mm GROND DEKKING MOET RIOOLPYP OMHUL WORD MET 100mm DIK BETON.

I. IF THERE IS LESS THAN 300mm GROUND COVER THE DRAIN IS TO BE INCASED WITH 100mm THICK CONCRETE.



THIS TYPE OF CONNECTION MUST BE USED IN LIEU OF AN "S" TRAP WHICH IS NOT PERMITTED.  
HIERDIE TIPE AANSLUITING MOET GEBRUIK WORD IN PLEK VAN N' "S" SPERDER WAT NIE TOEGELAAT WORD NIE.

GETEKEN  
DRAWN M.C. BOTHA.

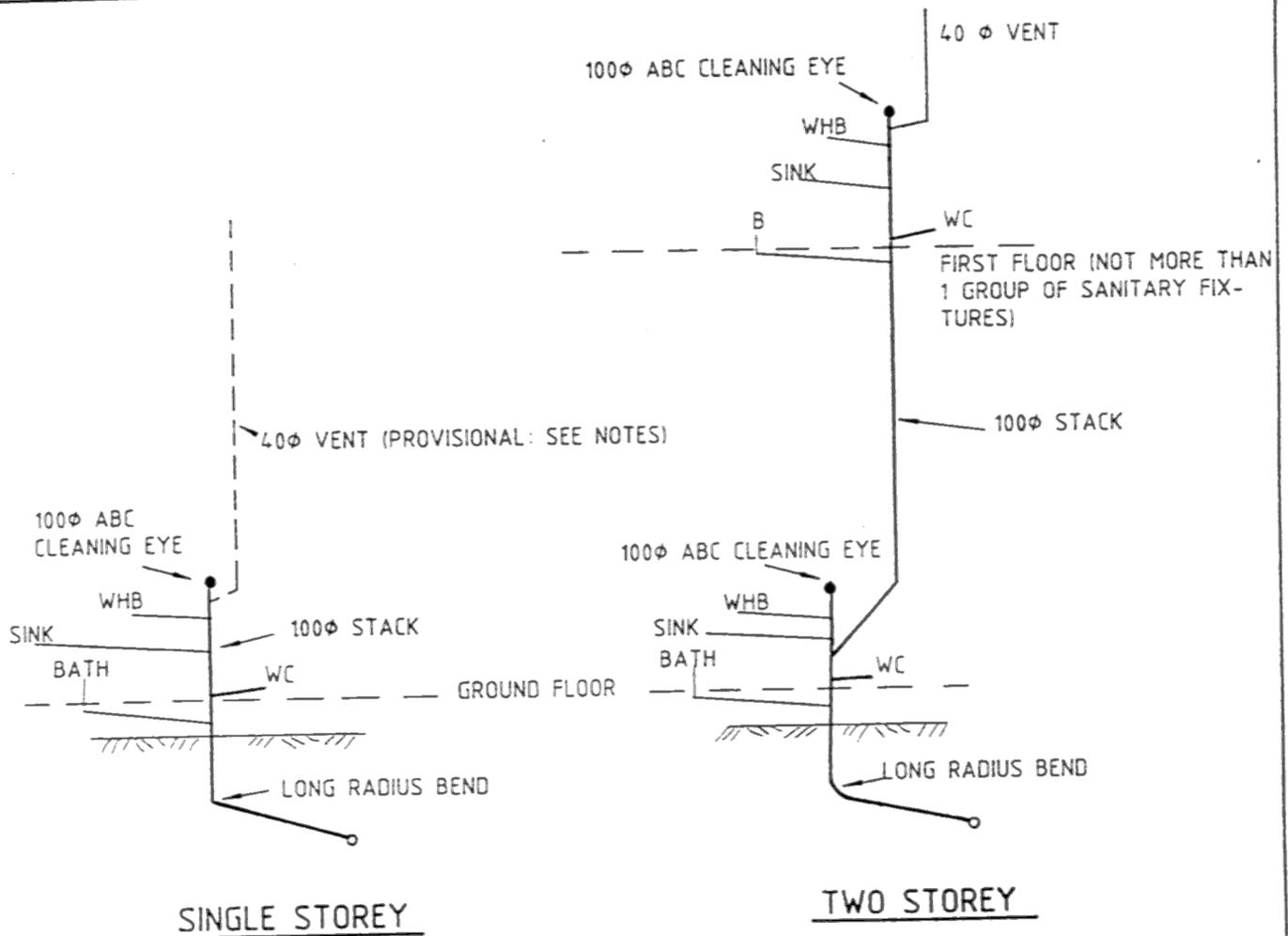
NAGESIEN  
CHECKED *[Signature]*

SKAAL  
SCALE 1 : 20

DEPARTEMENT VAN OPENBARE WERKE  
DEPARTMENT OF PUBLIC WORKS

TIPIESE W.K. AANSLUITING.  
TYPICAL W.C. CONNECTION.

022(D)D



NOTES.

1. ALL WASTE PIPES TO BE 40 $\phi$  LAID AT A GRADIENT OF 1:25
2. THE CROWN OF THE W.C. TRAP MAY NOT BE MORE THAN 1,5 m ABOVE THE DRAIN INVERT.
3. THE HIGHEST WASTE PIPE CONNECTION TO THE STUB STACK MAY NOT BE MORE THAN 2m ABOVE THE DRAIN INVERT.
4. NOT MORE THAN ONE GROUP OF SANITARY FIXTURES ON GROUND FLOOR.
5. SHOULD ANY OF THE REQUIREMENTS IN 2 TO 4 BE EXCEEDED THEN A 40 $\phi$  VENTILATION PIPE MUST BE PROVIDED.
6. WASTE PIPES MAY NOT EXCEED 5m IN LENGTH.
7. NO CONNECTION TO THE STACK MAY BE MADE BETWEEN THE CENTRE LINE OF THE W.C. CONNECTION AND 200mm BELOW.
8. EACH FITTING MUST BE SEPARATELY CONNECTED TO THE STUBSTACK.
9. ALL WASTE FITTINGS ARE TO BE FITTED WITH DEEP SEAL TRAPS (75mm)
10. W.C. AND FLOOR OUTLETS MUST BE WITHIN 3m OF THE STUBSTACK. BATHS, BASINS, SINKS, SHOWERS, URINALS AND WASH TROUGHS MUST BE WITHIN 5m.

GETEKEN DRAWN	J.C. MINNIE	DEPARTEMENT VAN OPENBARE WERKE DEPARTMENT OF PUBLIC WORKS	D22(E)D
NAGESIEN CHECKED	<i>[Signature]</i>	STUB STACK SYSTEM	
SKAAL SCALE		(TWO STOREY MAXIMUM)	

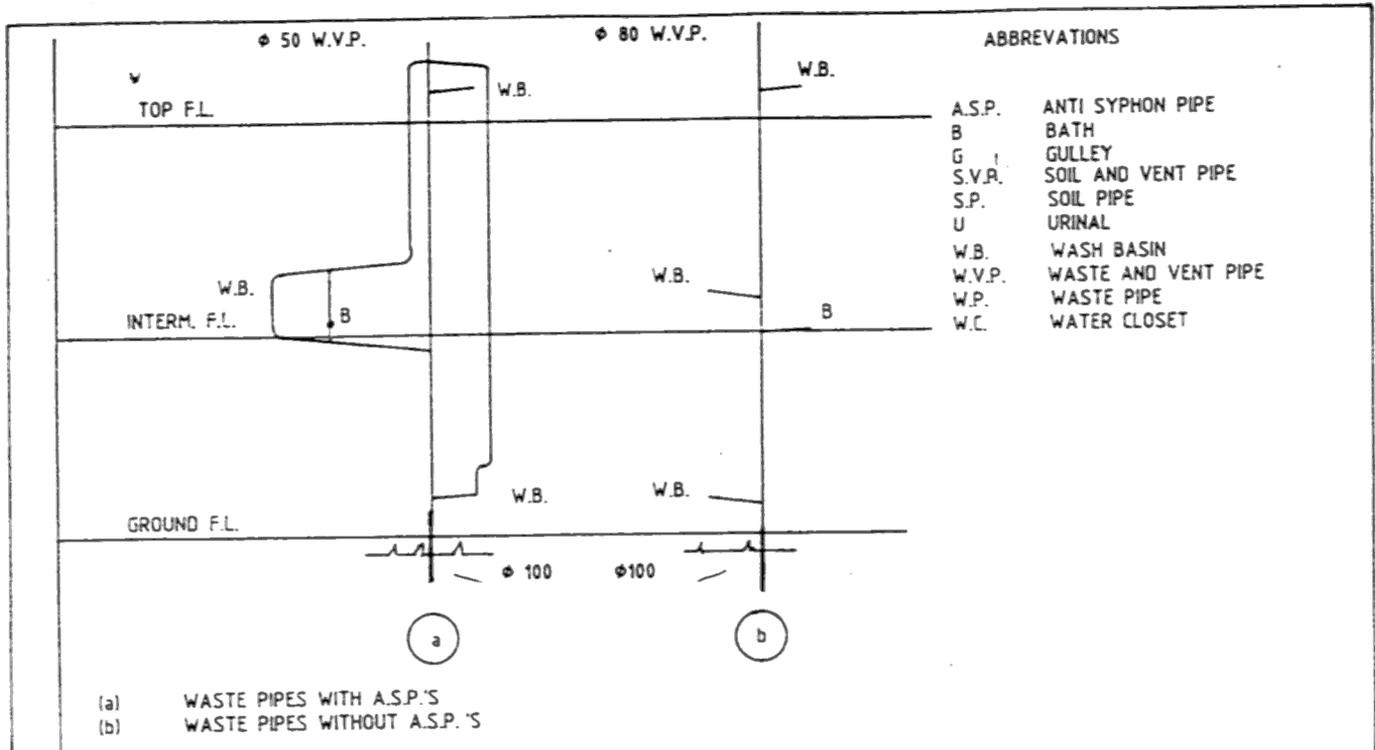
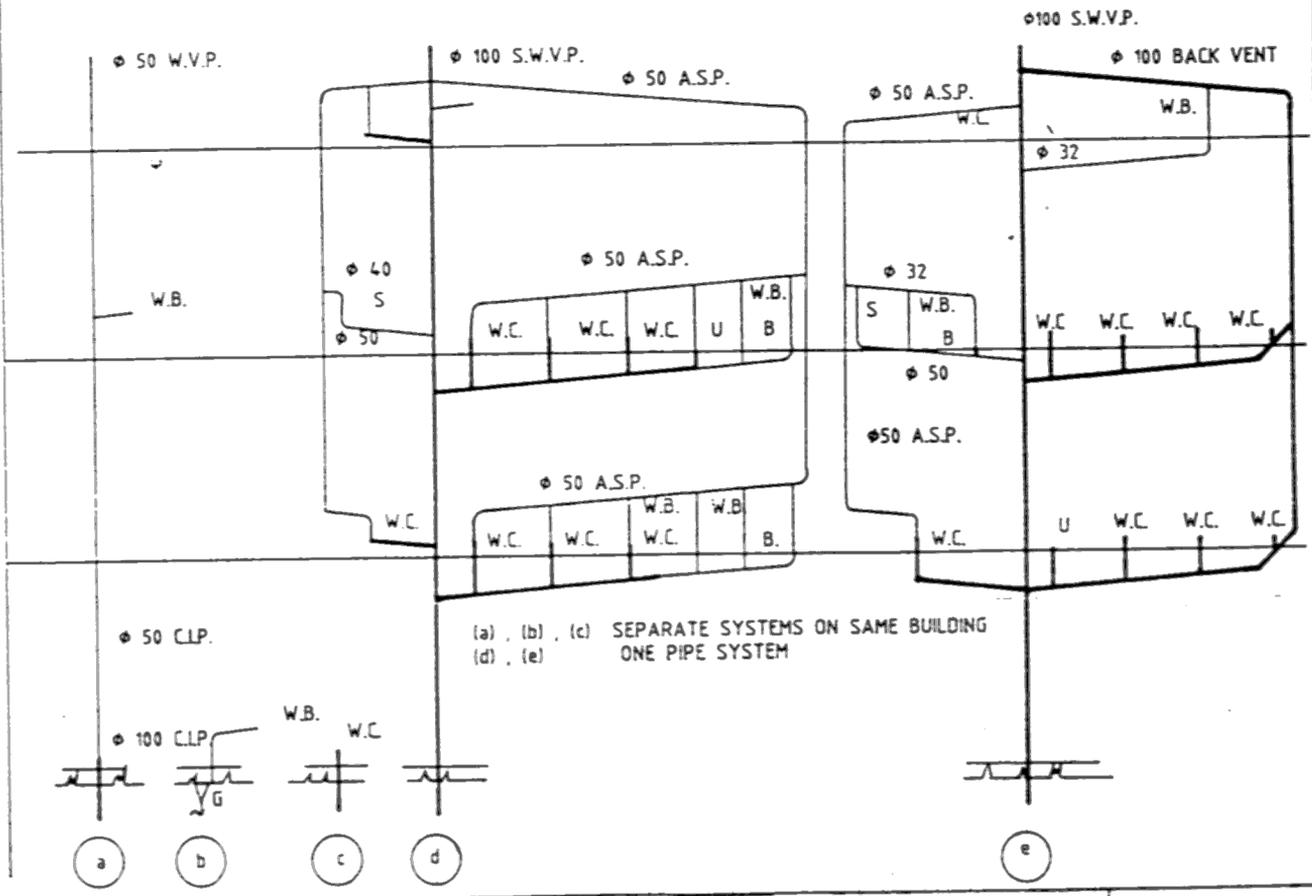
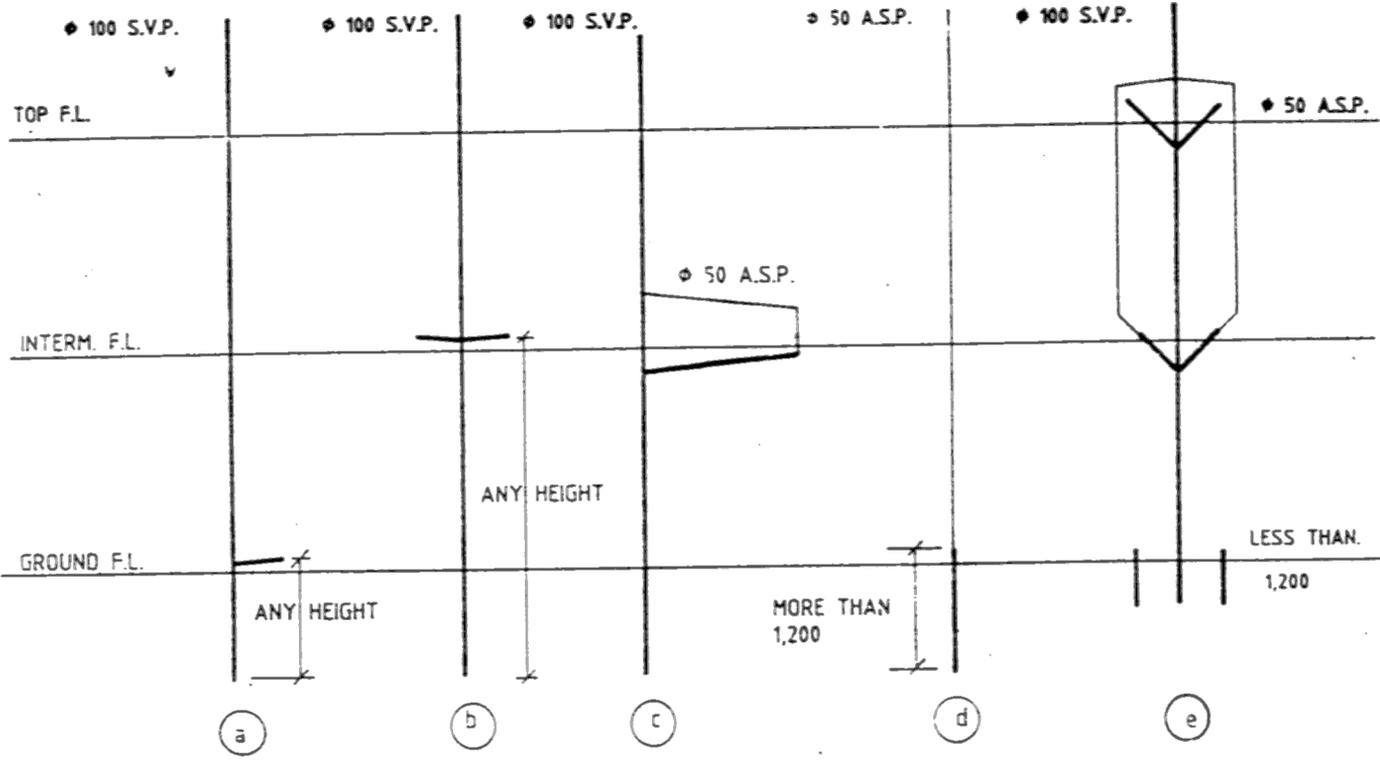


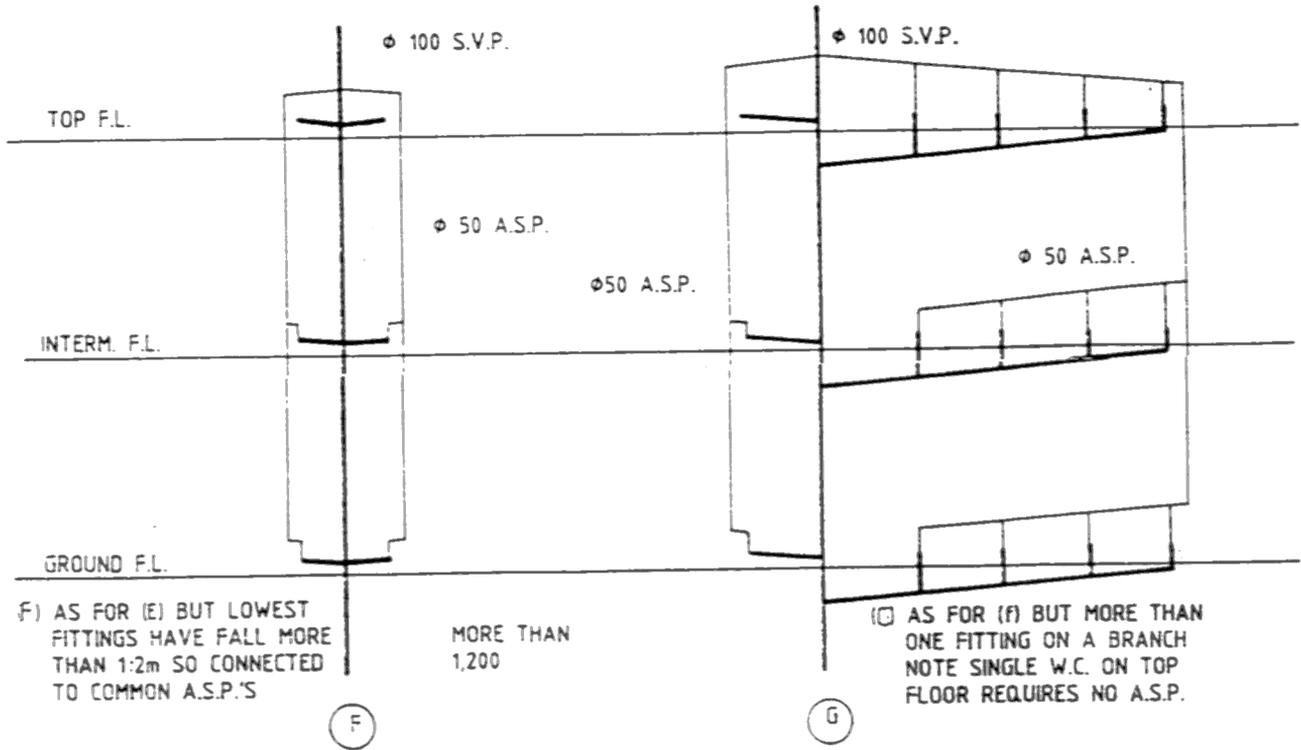
FIG. 5A VENTING OF WASTE PIPES



GETEKEN DRAWN S.P. CILLIERS	DEPARTEMENT VAN OPENBARE WERKE DEPARTMENT OF PUBLIC WORKS	D23(A)D
NAGESIEN CHECKED <i>[Signature]</i>	THE ONE PIPE SYSTEM EENPYPSTELSEL.	
SKAAL SCALE NOT TO SCALE		

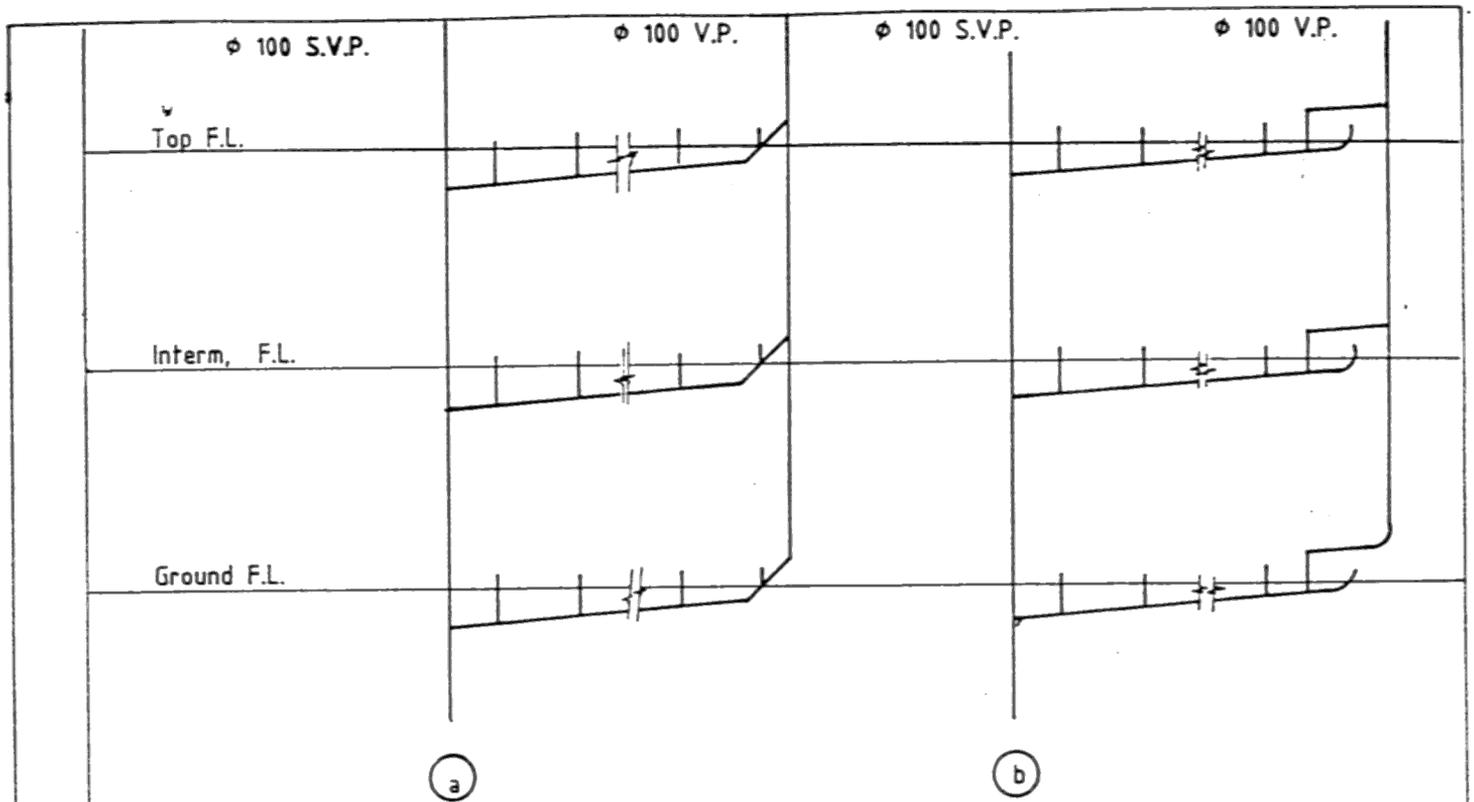


- (a)-(b) SOIL FITTINGS LESS THAN 6m FROM V.P. — NO A.S.P. REQUIRED
- (c) SOIL FITTING TRAP IS MORE THAN 6m FROM V.P. — A.S.P. REQUIRED
- (d) SOIL FITTING HAS DROP MORE THAN 1,2m — A.S.P. REQUIRED
- (e) GROUND FLOOR SOIL FITTINGS HAVE FALL LESS THAN 1,2m, SO CONNECT DIRECT TO SEWER — TOP FLOOR FITTINGS HAVE NO A.S.P. (AS FOR INTERM. HAVE A.S.P. BECAUSE OF FITTINGS ABOVE)

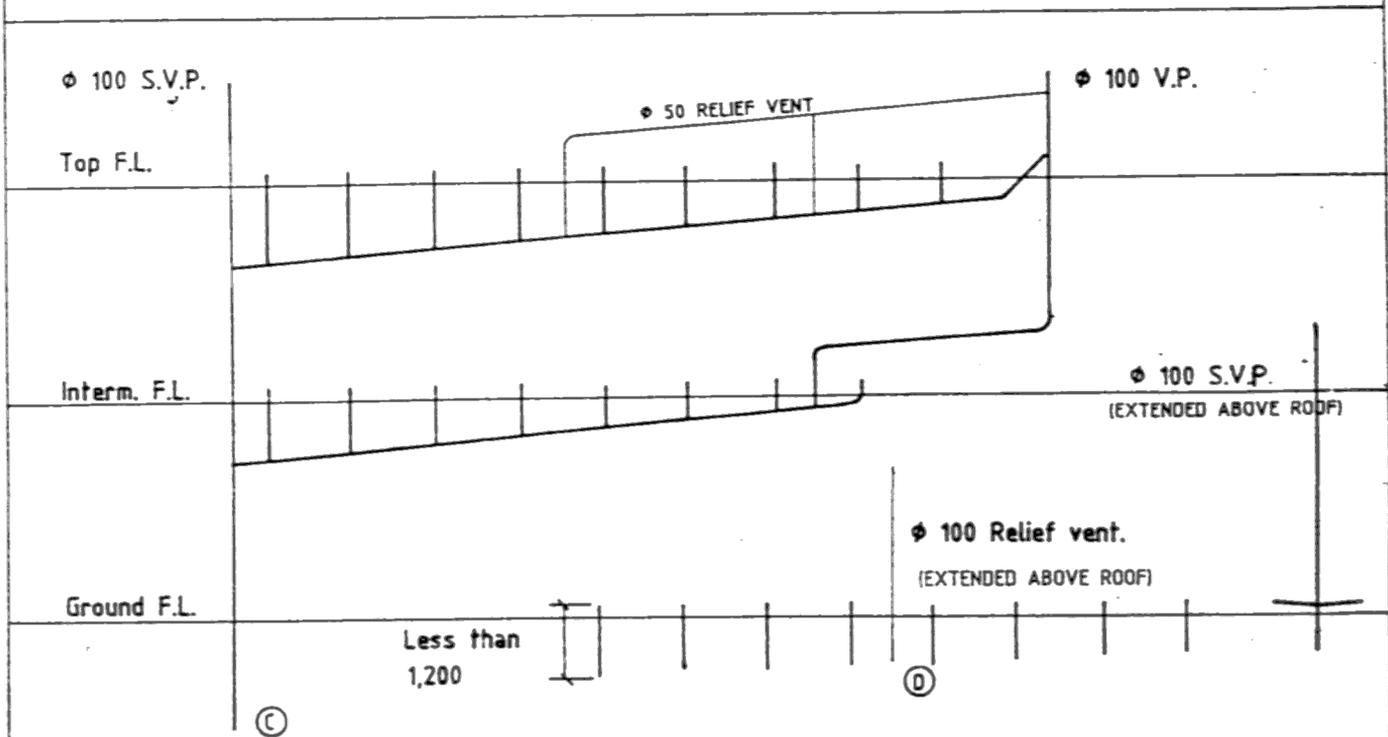


- (F) AS FOR (E) BUT LOWEST FITTINGS HAVE FALL MORE THAN 1:2m SO CONNECTED TO COMMON A.S.P.'S
- (G) AS FOR (F) BUT MORE THAN ONE FITTING ON A BRANCH NOTE SINGLE W.C. ON TOP FLOOR REQUIRES NO A.S.P.

GETEKEN DRAWN C.J. PRITCHARD	DEPARTEMENT VAN OPENBARE WERKE DEPARTMENT OF PUBLIC WORKS	023(B)D
NAGESIEN CHECKED <i>[Signature]</i>	USE OF ANTI-SIPHON PIPES ON SOILFITTINGS IN THE TWO PIPE SYSTEM GEBUIK VAN SLUKPYP OP GREKWATERTOEBEHORE IN TWEEPYPSTELSEL.	
SKAAL SCALE NOT TO SCALE		



- ( a ) Back venting - Up to 7 soil fittings per branch.  
 ( b ) Alternative means of back venting - Up to 8 soil fittings per branch.



- (c) On top floor back venting with relief vents where more than 8 fittings per branch  
 On intermediate floor back venting for 8 soil fittings per branch.  
 (d) Recommended relief vents where more than 8 fittings, next to each other, run directly into the drain.

GETEKEN.  
 DRAWN. S.P. Cilliers.

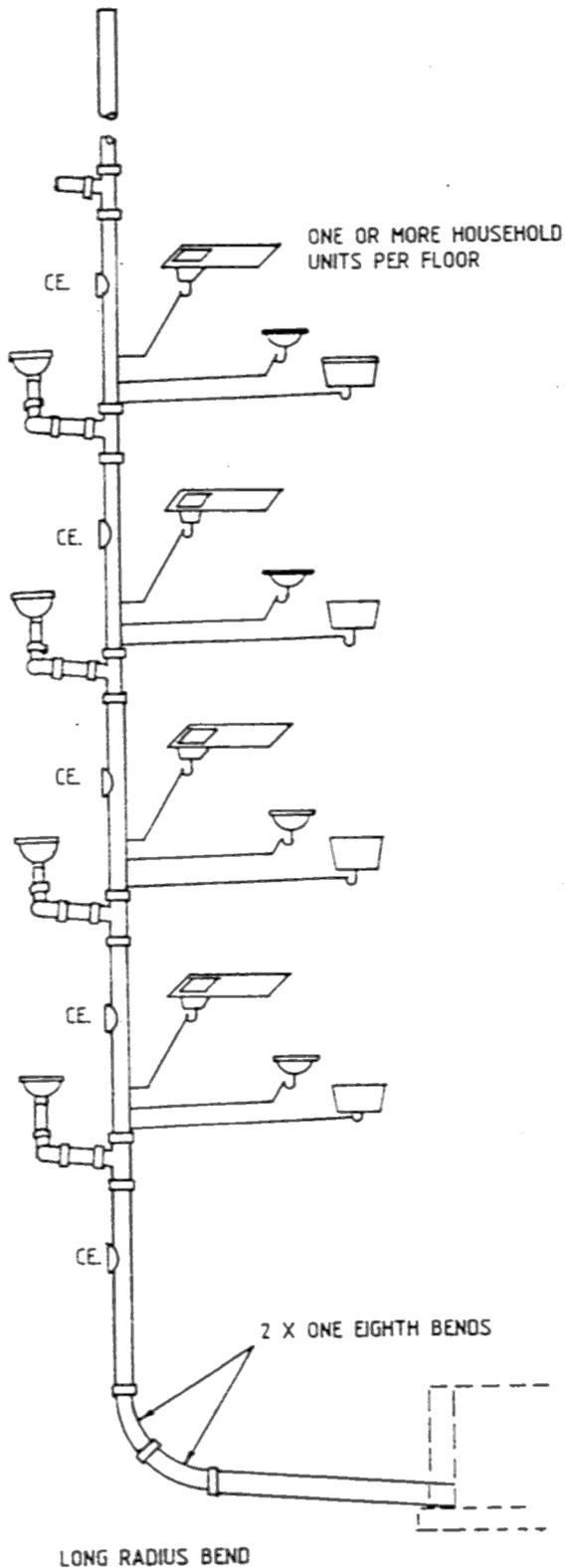
NAGESIEN.  
 CHECKED. *[Signature]*

SKAAL. NOT TO SCALE  
 SCALE.

DEPARTEMENT VAN OPENBARE WERKE  
 DEPARTMENT OF PUBLIC WORKS

USE OF RELIEF AND BACK VENTS IN THE TWO PIPE SYSTEM  
 VENTILASIEPIPE IN DIE TWEETYPSTELSEL.

D23(C)D

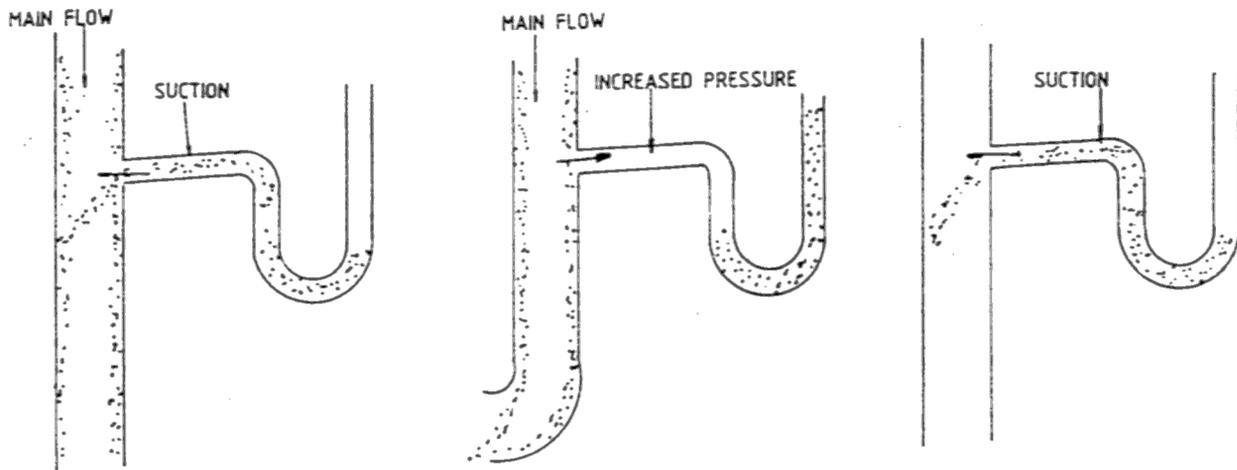


**IMPORTANT**

- 1) EACH FITTING MUST BE TAKEN SEPARATELY TO THE SINGLE STACK.
- 2) EACH PIPELINE MUST HAVE FACILITIES TO CLEAN THE PIPE.
- 3) A CLEANING EYE MUST BE PROVIDED FOR THE STACK ON EACH FLOOR.
- 4) THE GROUND FLOOR MUST BE DRAINED INDEPENDENTLY WHERE MORE THAN TWO FLOORS ARE INVOLVED.
- 5) W.C.'S MUST BE WITHIN 3 METERS OF THE STACK, BATHS, BASINS, SINKS AND SHOWERS, WITHIN 5 METERS.
- 6) ALL WASTE PIPES MUST BE A MIN. OF 40mm DIA. AND FITTED WITH UNSYPHONABLE TRAPS WITH A SEAL OF AT LEAST 75mm.
- 7) THE STACK MUST BE PROVIDED WITH A LONG RADIUS BEND AT GROUND LEVEL LEADING TO A MANHOLE e.a. TWO ONE-EIGHTH BENDS.

FIGURE 7

GETEKEN DRAWN S.P. CILLIERS	DEPARTEMENT VAN OPENBARE WERKE DEPARTMENT OF PUBLIC WORKS	D23(D)D
NAGESIEN CHECKED <i>[Signature]</i>	SINGLE STACK SYSTEM ENKELSTAMSTELSEL.	
SKAAL SCALE NOT TO SCALE		



(1) INDUCED SIPHONAGE

(2) BACK PRESSURE

(3) SELF-SIPHONAGE

FIGURE 6

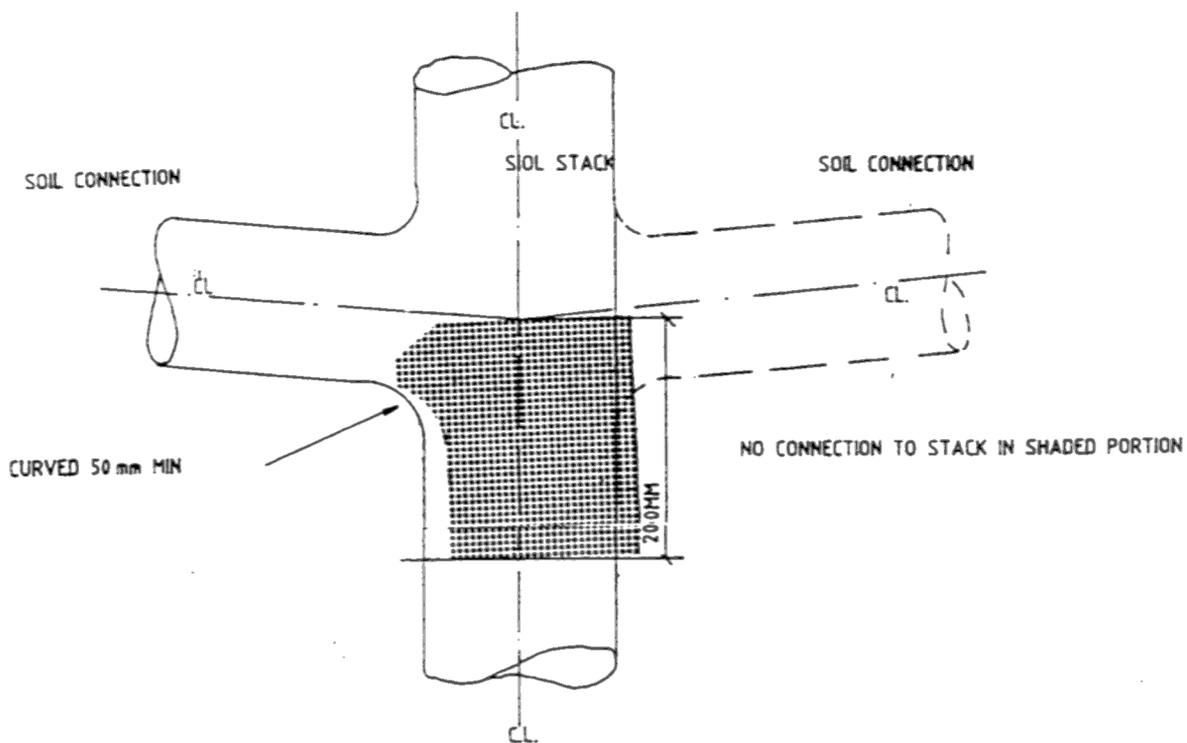


FIGURE 8.

GETEKEN.  
DRAWN S. CILLIERS.

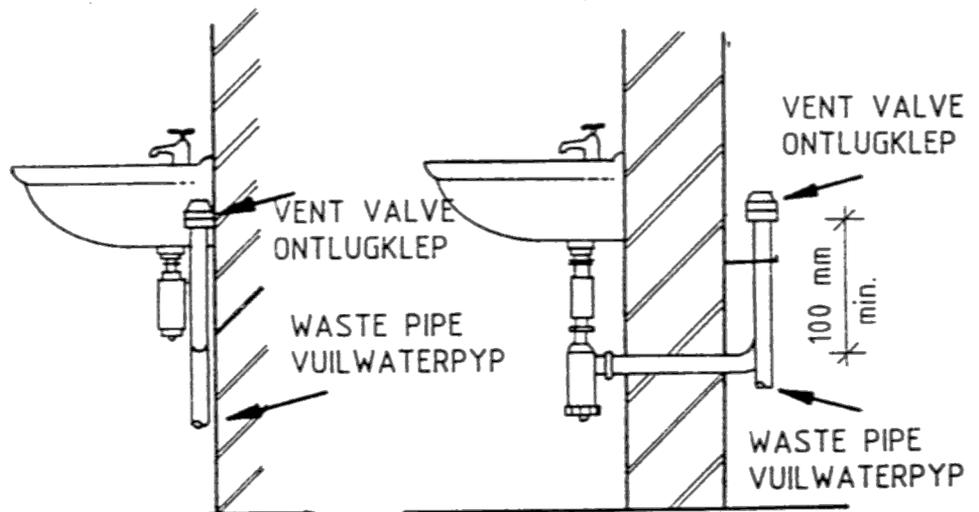
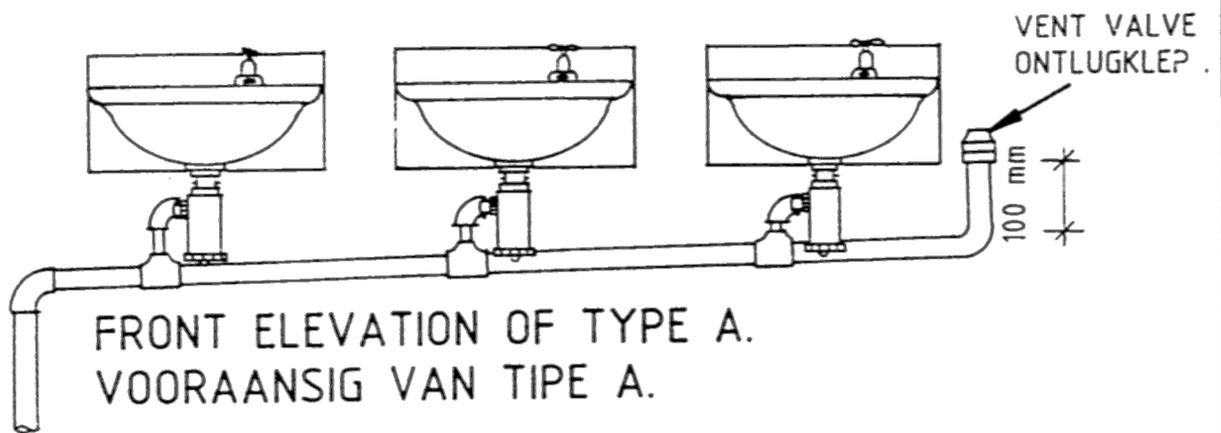
NAGESIEN  
CHECKED *[Signature]*

SKAAL  
SCALE NIE VOLGENS SKAAL

DEPARTEMENT VAN OPENBARE WERKE  
DEPARTMENT OF PUBLIC WORKS

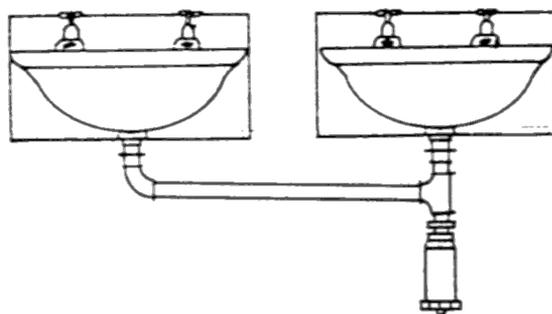
SINGLE STACK SYSTEM.  
ENKELSTAMSTELSEL

D23(E)D



SECTION THROUGH TYPE A.  
SNIT DEUR TIPE A.

SECTION THROUGH TYPE B.  
SNIT DEUR TIPE B.



GETEKEN  
DRAWN T.C. MYNHARDT.

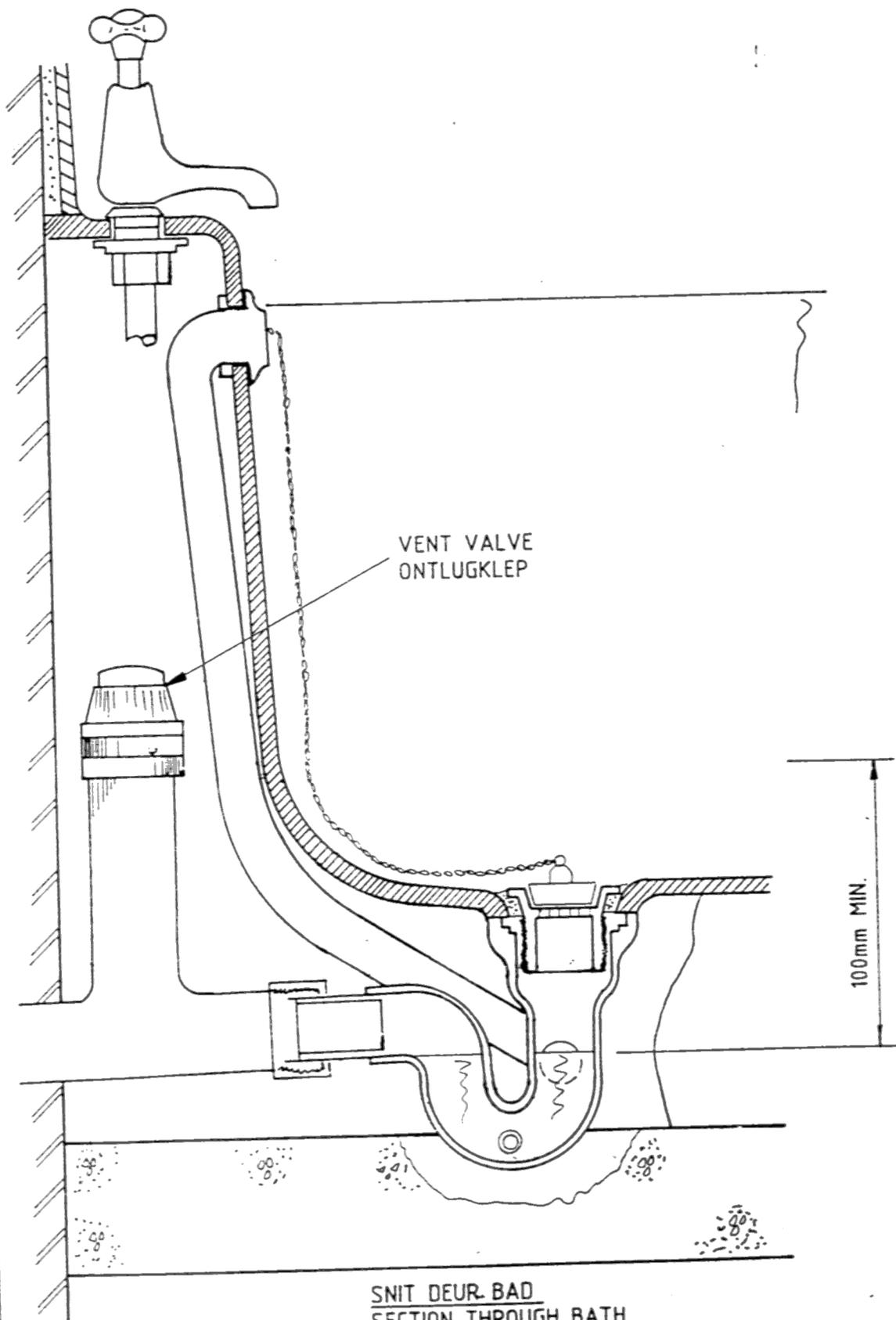
NAGESIEN  
CHECKED *[Signature]*

SKAAL  
SCALE

DEPARTEMENT VAN OPENBARE WERKE  
DEPARTMENT OF PUBLIC WORKS

TYPICAL DETAIL OF VENT VALVE  
(ANTI-SYPHON) FOR WASTE FITTINGS.  
TIPIESE DETAIL VAN ONTLUGKLEP  
(ONTLUGTER) VIR VUILWATER TOEBEHORE.

D 24 (B) D



SNIT DEUR BAD  
SECTION THROUGH BATH

GETEKEN  
DRAWN M.J.PAPENHUYZEN

NAGESIEN  
CHECKED *[Signature]*

SKAAL  
SCALE N.V.S./N.T.S.

DEPARTEMENT VAN OPENBARE WERKE  
DEPARTMENT OF PUBLIC WORKS

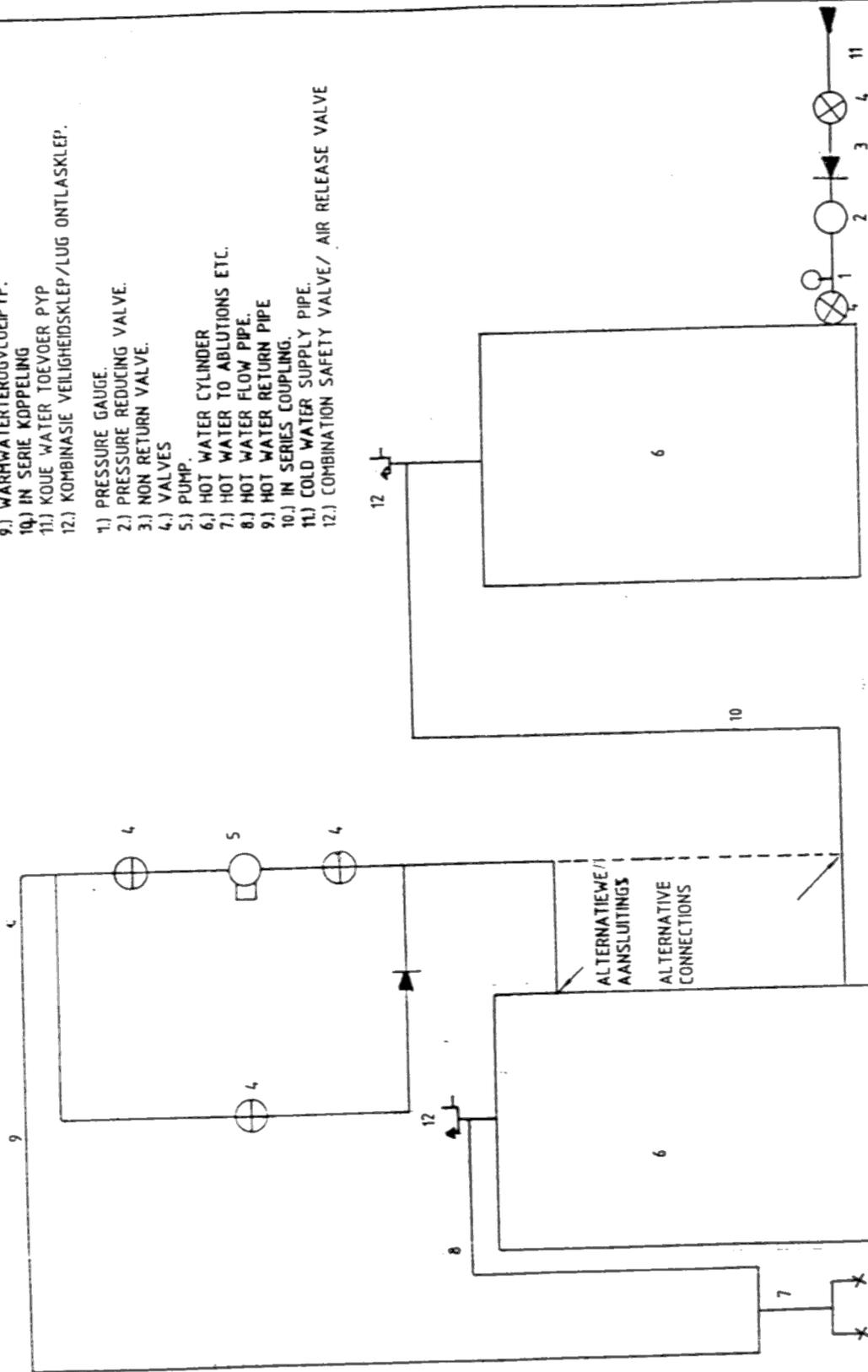
TYPICAL DETAIL OF VENT VALVE  
(ANTI-SYPHON) FOR BATHS.  
TIPIESE DETAIL VAN ONTLUGKLEP  
(ONTLUGTER) VIR BADDENS.

D 24 (C) D

**SERIE.  
SERIES.**

HIERDIE TIEPE SISTEEM WORD  
AANBEVEEL.  
THIS TYPE OF SYSTEM IS  
RECOMMENDED.

- 1.) DRUKMETER
- 2.) DRUK VERMINDERINGSKLEP.
- 3.) TERUGSLACKLEP.
- 4.) KLEPPE
- 5.) POMP
- 6.) WARMWATER SILINDER
- 7.) WARMWATER NA ABLUSIE ENS.
- 8.) WARMWATERVLOEIPYP
- 9.) WARMWATERTERUGVLOEIPYP.
- 10.) IN SERIE KOPPELING
- 11.) KOUE WATER TOEVOER PYP
- 12.) KOMBINASIE VEILIGHEIDSKLEP/LUG ONTLASKLEP.
- 1.) PRESSURE GAUGE
- 2.) PRESSURE REDUCING VALVE
- 3.) NON RETURN VALVE
- 4.) VALVES
- 5.) PUMP
- 6.) HOT WATER CYLINDER
- 7.) HOT WATER TO ABLUTIONS ETC.
- 8.) HOT WATER FLOW PIPE
- 9.) HOT WATER RETURN PIPE
- 10.) IN SERIES COUPLING
- 11.) COLD WATER SUPPLY PIPE
- 12.) COMBINATION SAFETY VALVE/ AIR RELEASE VALVE



GETEKEN.  
DRAWN. S.P. CILLIERS

NAGESIEN.  
CHECKED. *[Signature]*

SKAAL. NIE VOLGENS SKAAL  
SCALE.

DEPARTEMENT VAN OPENBARE WERKE  
DEPARTMENT OF PUBLIC WORKS

TIPIESE WARMWATER SISTEEM (IN SERIE)  
TYPICAL HOT WATER SYSTEM (IN SERIES).

D25(A)D

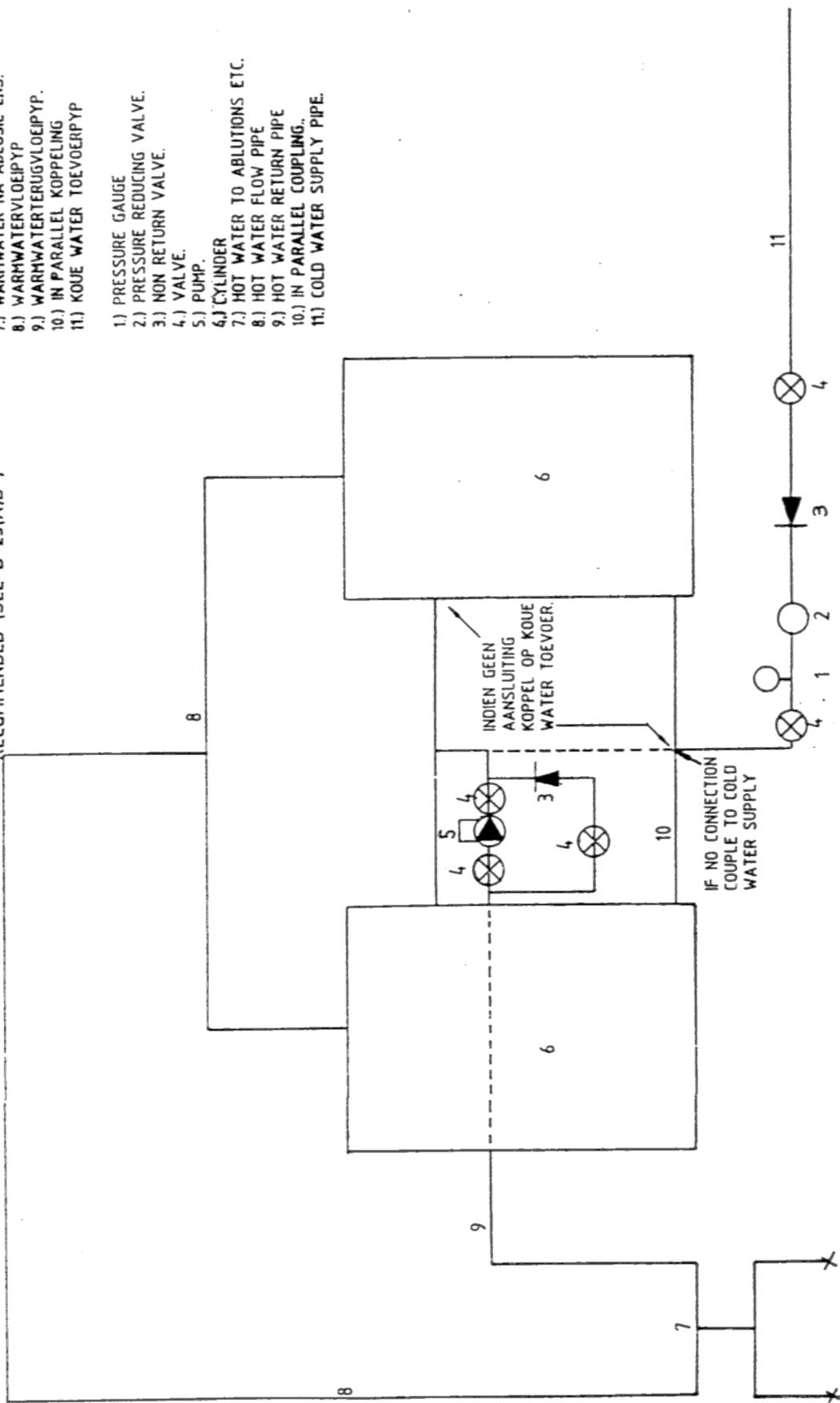
**PARALLEL  
PARALLEL**

HIERDIE TPE SISTEEM IS TO NIE  
AANBEVEEL NIE (SIEN O 25(A)D 1),

THIS TYPE OF SYSTEM IS NOT  
RECOMMENDED (SEE O 25(A)D 1)

- 1.) DRUKMETER.
- 2.) DRUK VERMINDERINGS KLEP.
- 3.) TERUGSLAGKLEP.
- 4.) KLEPPE
- 5.) POMP
- 6.) WARMWATER SILINDER.
- 7.) WARMWATER NA ABLUSIE ENS.
- 8.) WARMWATERVLOEIPYP
- 9.) WARMWATERTERUGVLOEIPYP.
- 10.) IN PARALLEL KOPPELING
- 11.) KOUE WATER TOEVOERPYP

- 1.) PRESSURE GAUGE
- 2.) PRESSURE REDUCING VALVE.
- 3.) NON RETURN VALVE.
- 4.) VALVE.
- 5.) PUMP.
- 6.) CYLINDER
- 7.) HOT WATER TO ABLUTIONS ETC.
- 8.) HOT WATER FLOW PIPE
- 9.) HOT WATER RETURN PIPE
- 10.) IN PARALLEL COUPLING..
- 11.) COLD WATER SUPPLY PIPE.



GETEKEN.  
DRAWN S.P. CILLIERS.

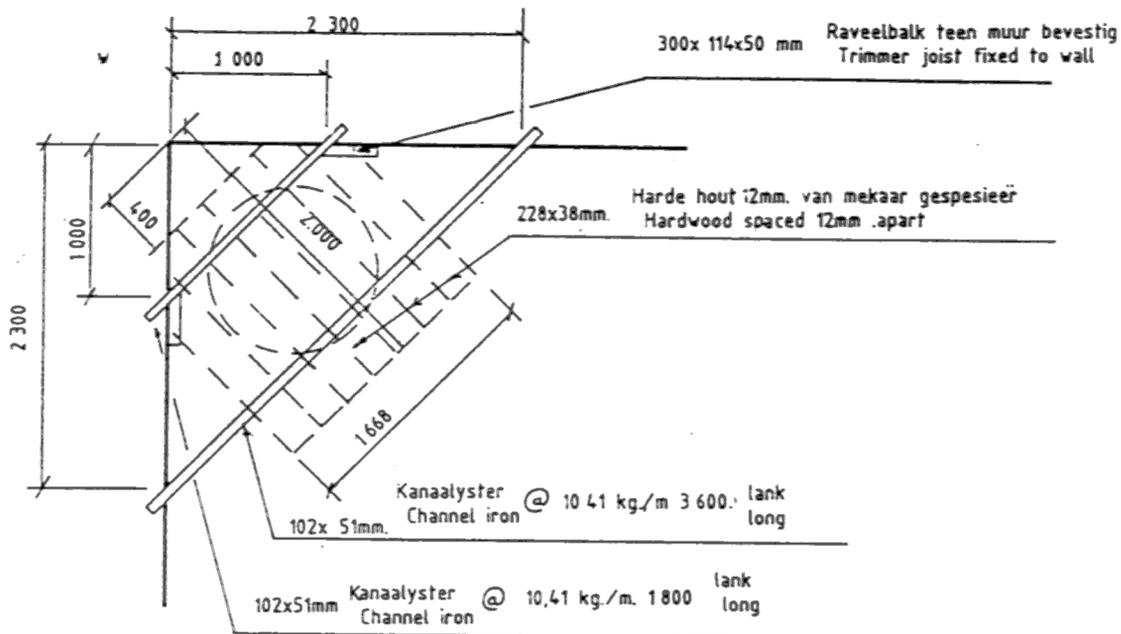
NAGESIEN  
CHECKED. *[Signature]*

SKAAL.  
SCALE. NIE VOLGENS SKAAL.

DEPARTEMENT VAN OPENBARE WERKE  
DEPARTMENT OF PUBLIC WORKS

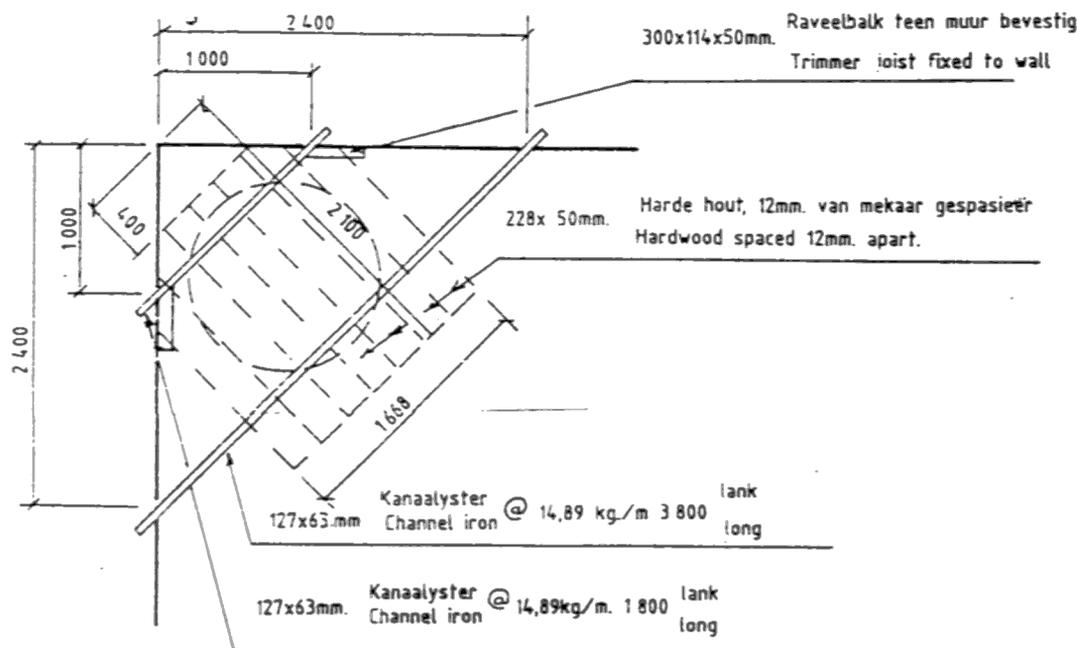
TIPIESE WARMWATER SISTEEM (IN PARALLEL).  
TYPICAL HOT WATER SYSTEM (IN PARALLEL).

D25(B)D



VIR 1 400 LITER TENK

FOR 1 400 LITRE TANK



VIR 2 300 LITER TENK

FOR 2 300 LITRE TANK

GETEKEN.  
DRAWN. S.P. CILLIERS.

NAGESIEN.  
CHECKED. *[Signature]*

SKAAL.  
SCALE 1:50

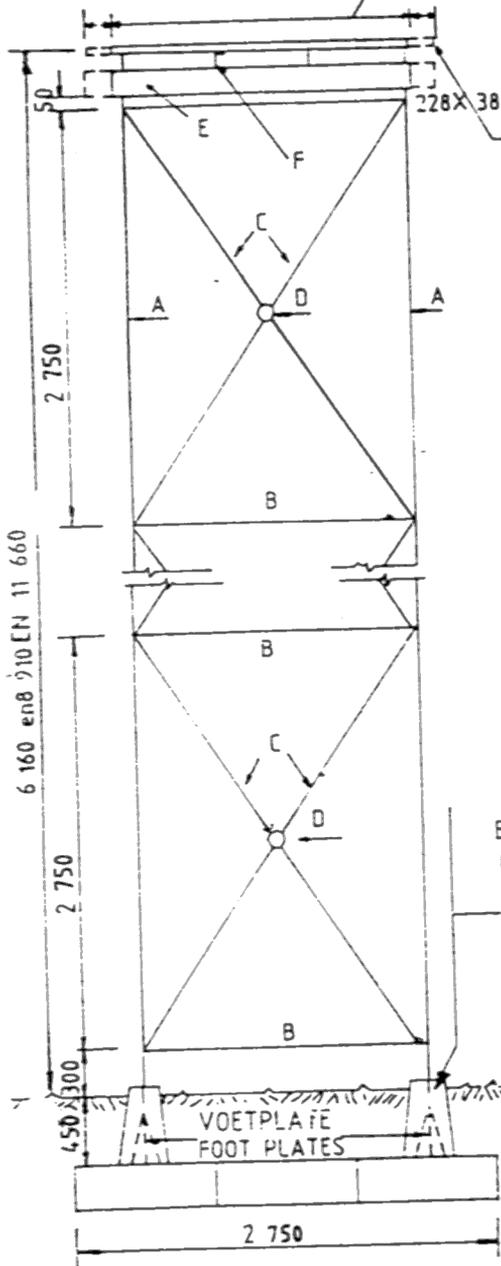
DEPARTEMENT VAN OPENBARE WERKE  
DEPARTMENT OF PUBLIC WORKS

HOEKSTEEN VIR WATERTENK.  
CORNER SUPPORT FOR WATER TANK.

D33D

1900 FOR 4546L TANK/TENK

VIR 9092L TANK  
FOR 2250 FOR TANK



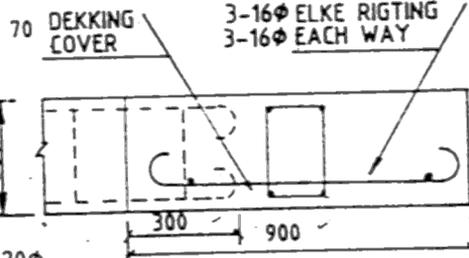
AANSIG  
ELEVATION

6φ BEVELS STIRRUPS @ 300 h/h c/c

PLANKE PLANKS

DEKKING COVER 30

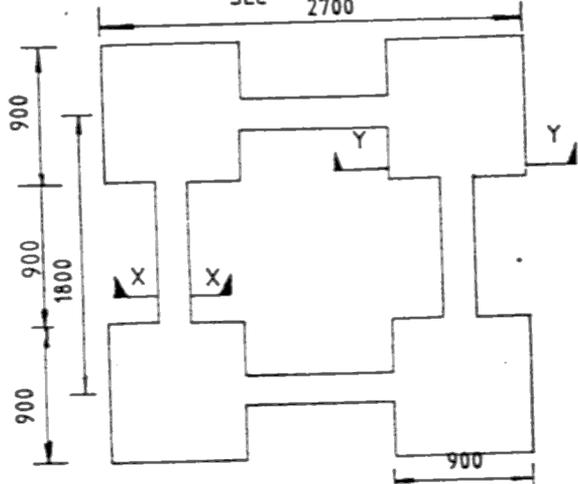
SNIT. SEC. X-X



SNIT

SEC. Y-Y

SKAAL 1:20  
SCALE 1:20



PLAN VAN VOETSTUK  
PLAN OF FOOTING

BETON BLOK  
CONC. BLOCK  
220 x 220 TO 300 x 300  
220x220 NA 300x300

- A: 80 x 4,85mm N.B. PYP
- B: 32 x 2,65 N.D. PYP
- C: 16φ S. S. STAAF
- D: 110 x 8 S. S. RING
- E: 152 x 76 x 18 kg/m KANAAL
- F: 127 x 64 x 15 kg/m KANAAL

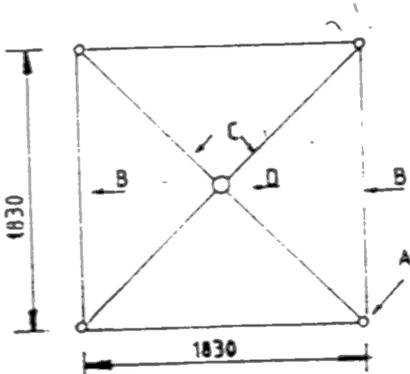
- A: 80 x 4,85mm N.B. PIPE
- B: 32 x 2,65 N.B. PIPE
- C: 16φ M.S. ROD
- D: 110 x 8 M.S. RING
- E: 152 x 76 x 18 kg/m CHANNEL
- F: 127 x 64 x 15 kg/m CHANNEL

VERBINDINGS

B en C tot A: 1-16 φ bout  
A tot E: 2-12 φ boule  
E tot F: 2-12 φ boule

CONNECTIONS

B and C to A: 1-16 φ bolts  
A. to E: 2-12 φ bolts  
E to F: 2-12 φ bolts



PLAN

NOTA. VIR KATLEER SIEN D37D  
VIR DETAILS EN VERBINDINGS  
SIEN TEK. D38 D

NOTE FOR CATLADDER SEE D 37 D  
FOR DETAILS AND CONNECTIONS  
SEE DRWG D 38 D

TOELAATBARE GRONDDRUK 100 kPa  
ALLOWABLE GROUND PRESSURE

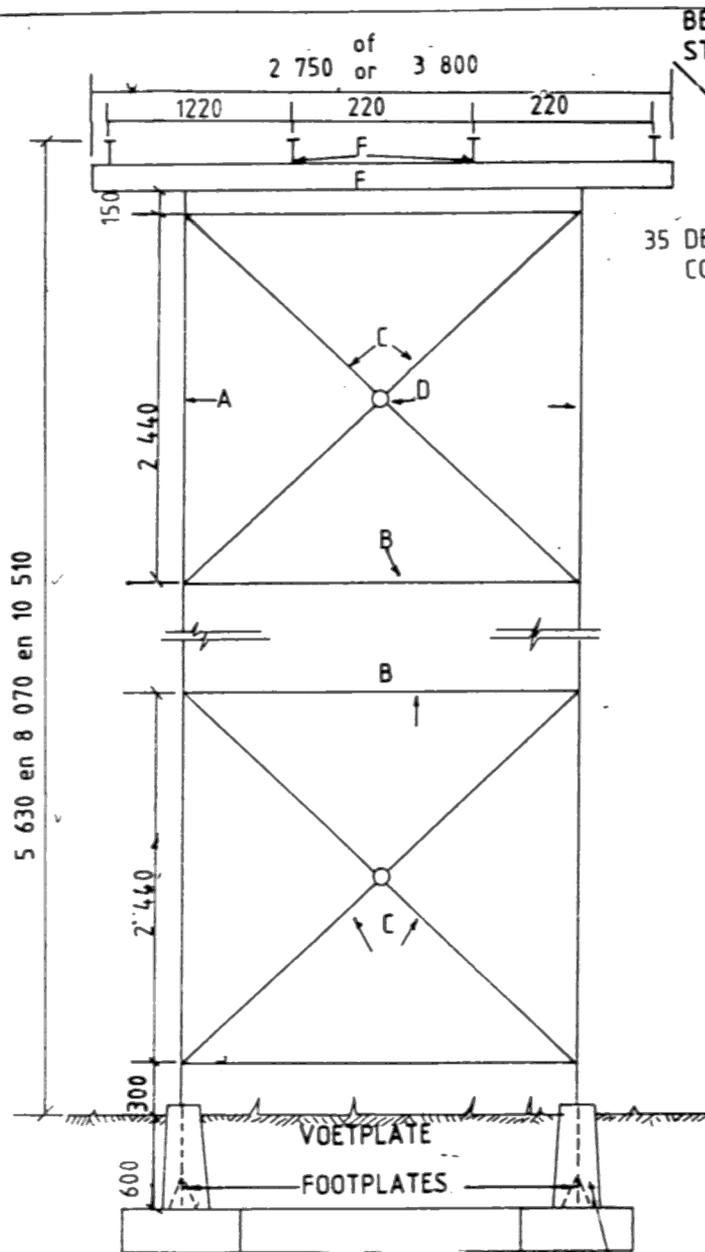
GETEKEN.  
DRAWN. S.P. CILLERS

NAGESIEN.  
CHECKED. *[Signature]*  
84-05-04

DEPARTEMENT VAN OPENBARE WERKE  
DEPARTMENT OF PUBLIC WORKS

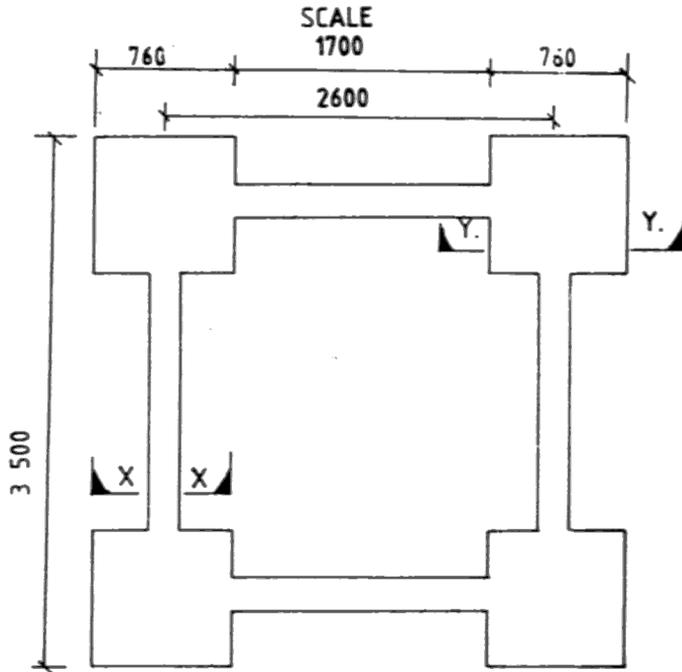
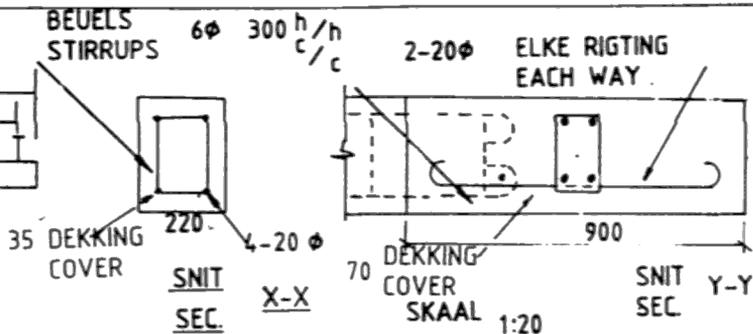
STAANDER 4546 EN 9092 LITER TENK  
STAND FOR 4546 AND 9092 LITRE TANK

D 34 D



AANSIG ELEVATION

220x220 BETONBLOK  
na - to  
300x300 CONC. BLOCK



PLAN VAN VOETSTUK  
PLAN OF FOOTING

- |                             |                           |
|-----------------------------|---------------------------|
| A: 65 N.D. x 4,5mm. PYP     | A: 65 N.B. x 4,5mm PIPE.  |
| B: 32 " x 2,65mm. "         | B: 32 " x 2,65mm "        |
| C: 16 φ S.S. STAAF          | C: 16 φ M.S. ROD.         |
| D: 110 x 8 φ S.S. RING.     | D: 110 x 8 φ M.S. ROD.    |
| E: 152x89x17 kg/m I-PROFIEL | E: 152x89x17 kg/m } PRO-  |
| F: 152x89x17 kg/m I-PROFIEL | F: 152x89x17 kg/m } FILE. |

VERBINDINGS:

- B en C na A: 1-16 φ BOUT.  
A na E: 2-12 φ BOUTE.  
E na F: 2-12 φ "

CONNECTIONS:

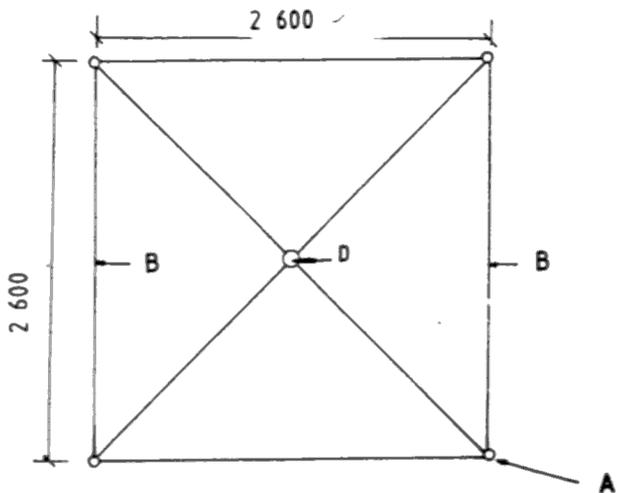
- B and C to A: 1-16 φ bolt.  
A to E: 2-12 φ BOLTS.  
E to F: 2-12 φ "

NOTAS

TENKINHOUDE: 5455 en 10910 en 16365 liter.  
Sien D37D vir platvorm en katleer  
en D38D vir verbindings en voetplaat.

NOTES

TANK CAPACITIES: 5455 and 10910 and 16365 litre  
See D37D for platform and cat-  
ladder and D38D for connection  
and foot plate,



TOELAATBARE GRONDDRUK  
ALLOWABLE GROUND PRESSURE

100 kPa

GETEKEN DRAWN S.P. CILLIERS

DEPARTEMENT VAN OPENBARE WERKE  
DEPARTMENT OF PUBLIC WORKS

NAGESIEN CHECKED *[Signature]*

STAANDER VIR

HOË PERSSTAALTENKE

D35D

SKAAL SCALE 1:50

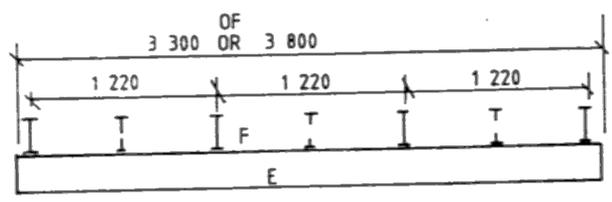
STAND FOR

1 220

HIGH PRESSED STEEL TANKS.

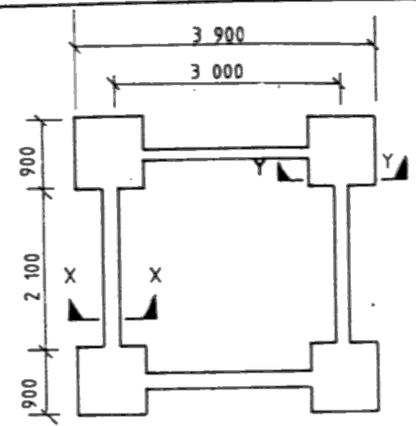
TOELAATBARE GRONDDRUK  
ALLOWABLE GROUND PRESSURE

125 kPa

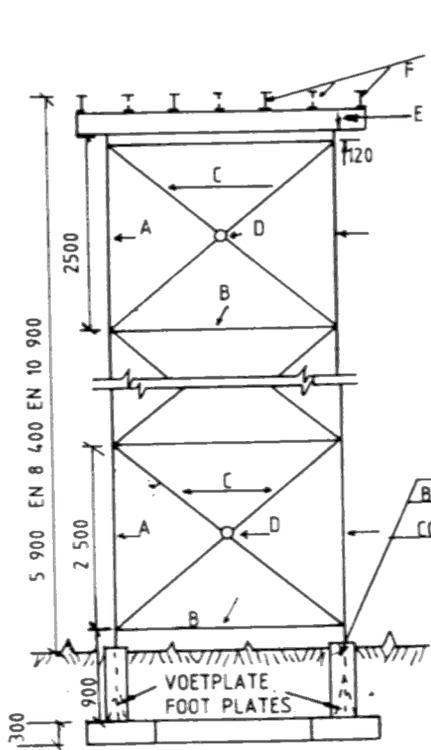


DETAIL VAN KOP OF HEAD

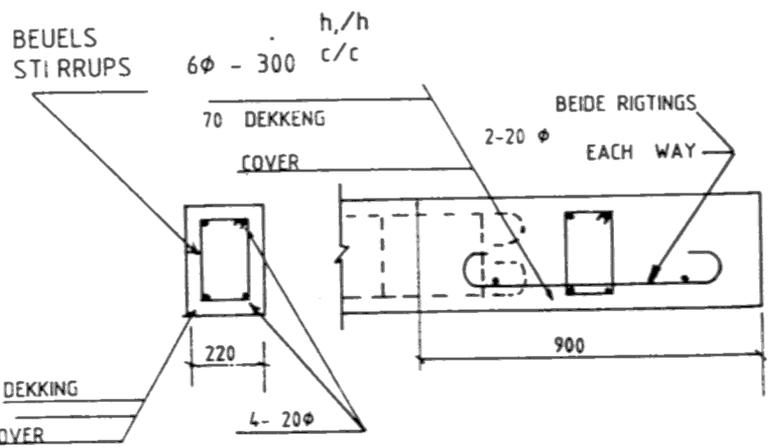
SKAAL 1:50  
SCALE



PLAN VAN VOETSTUK  
PLAN OF FOOTING



AANSIG ELEVATION



35 DEKKING COVER

BEUELS STIRRUPS 6φ - 300 c/c

70 DEKKING COVER

BEIDE RIGTINGS 2-20 φ EACH WAY

BETONBLOK 300x 300  
CONC BLOCK  
SNIT X-X  
SEC

SNIT Y-Y  
SEC  
SKAAL: 1:20  
SCALE:

- A: 90N.D.x4,85mm PYP.
- B: 32 ND x2,65 mm PYP
- C: 16 φ S.S. STAAF
- D: 110N.D.x 8 RING
- E: 254x146x37 kg/m I-PROFIEL
- F: 203x133x25 kg/m I-PROFIEL

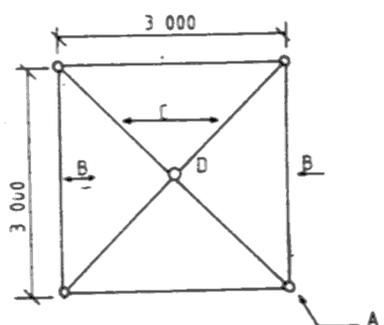
- A: 90N.B. x4,85mm PIPE
- B: 32 NB x2,65mm PIPE
- C: 16φ M.S. ROD
- D: 110 N.B. x8 RING
- F: 254x146x37 kg/m I-PROFILE
- F: 203x133x25 kg/m I-PROFILE

VERBINDINGS

Ben C na A: 1-16φ BOUT  
A en E: 2-12φ BOUTE  
E na F: 2-12φ BOUTE

CONNECTIONS

B and C to A: 1-16φ bolt  
A to E: 2-12φ bolt  
E to F: 2-12φ bolts



PLAN

NOTAS

TENKINHOUDE: 21820 EN 32730 LITER  
SIEN D 37 D VIR PLATFORMS EN KATLEER  
EN D38D VIR VERBINDINGS EN VOETPLAAT

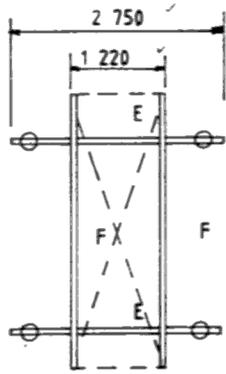
NOTES

TANK CAPACITIES: 21820 AND 32730 LITRE  
SEE D 37 D FOR PLATFORMS AND CAT LADDER  
AND D 38 D FOR CONNECTIONS AND FOOT PLATE

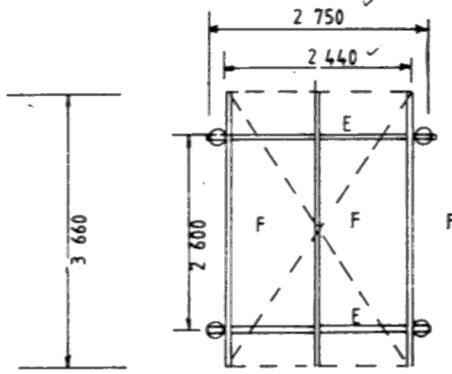
GETEKEN. DRAWN. S.P. CILLIERS  
NAGESIEN. CHECKED. *[Signature]*  
SKAAL. SCALE. 1:100

DEPARTEMENT VAN OPENBARE WERKE  
DEPARTMENT OF PUBLIC WORKS  
STAANDER VIR HOË PERSSTAALTENKE  
2440  
STAND FOR HIGH PRESSED STEEL TANK

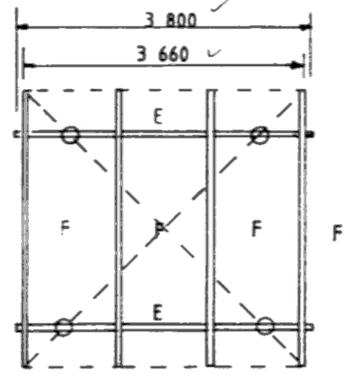
D36D



TENKE TANKS 3 660x1 220-5455 L



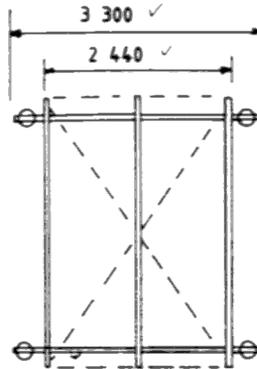
3 660x2 440-10910L



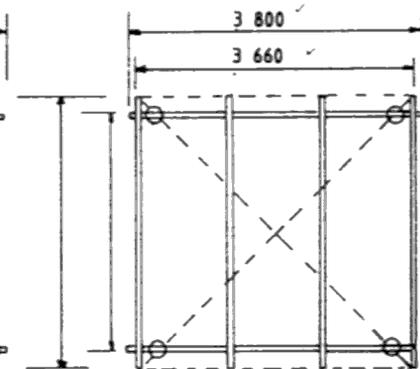
3 660 x3 660- 16365L

PLATFORMS VIR TENKE FOR TANKS 1 220 HOOG HIGH

SKAAL: 1: 100 SCALE:



TENKE TANKS 3 660x2 440- 21820 L

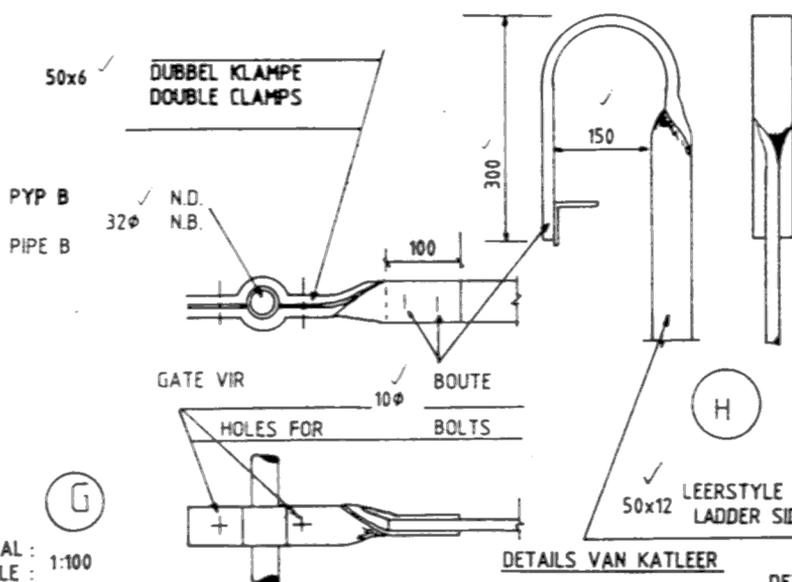
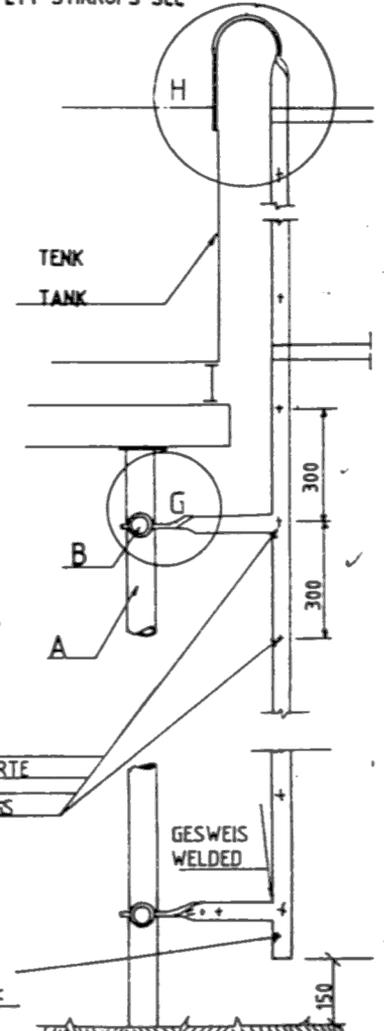


3 660x3 660-32730 L

PLATFORMS VIR TENKE FOR TANKS 2 440 HOOG HIGH

SKAAL: SCALE: 1:100

VEILIGHEIDSBUELS SIEN SAFETY STIRRUPS SEE



SKAAL: SCALE: 1:100

DETAILS VAN KATLEER

DETAILS OF CAT LADDER

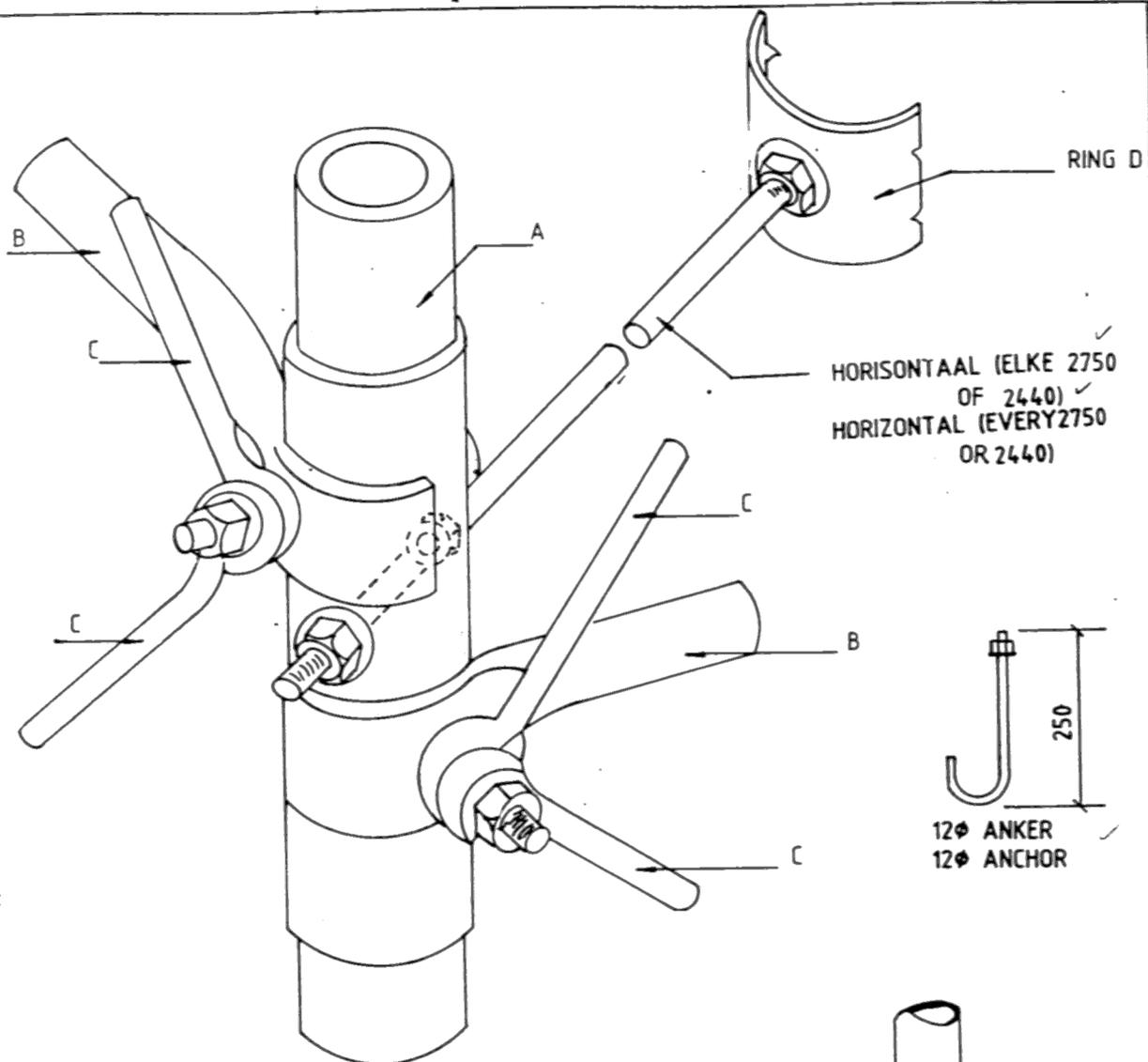
GETEKEN. DRAWN. S. EILLIERS

DEPARTEMENT VAN OPENBARE WERKE DEPARTMENT OF PUBLIC WORKS

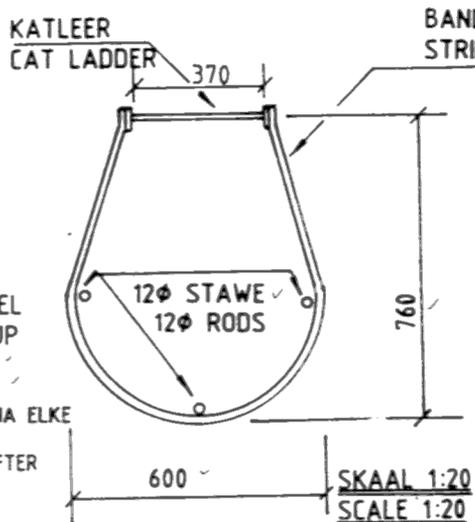
NAGESIEN. CHECKED. *[Signature]*  
SKAAL. SCALE. 1:20

PLATFORMS EN KATLEER AND CAT LADDER

D 37 D

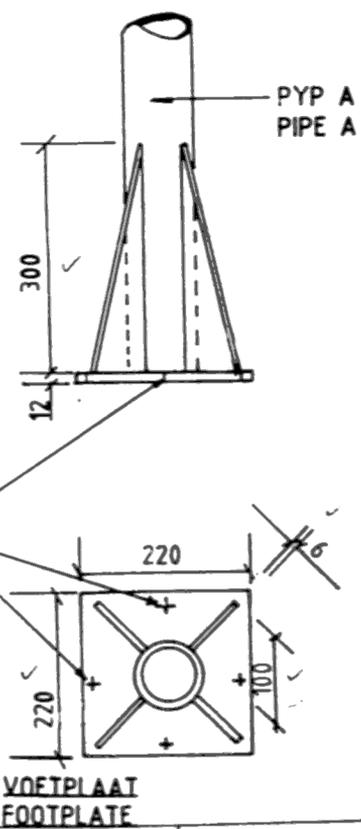


VERBINDINGS:  
CONNECTIONS:  
NIE OP SKAAL  
NOT TO SCALE.



VEILIGHEIDSBUEEL  
SAFETY STIRRUP  
1 ste BEUEL 3000  
1ste STIRRUP 3000  
BOKANT G.H. DAARNA ELKE  
1200  
ABOVE G.L. THEREAFTER  
EVERY 1200

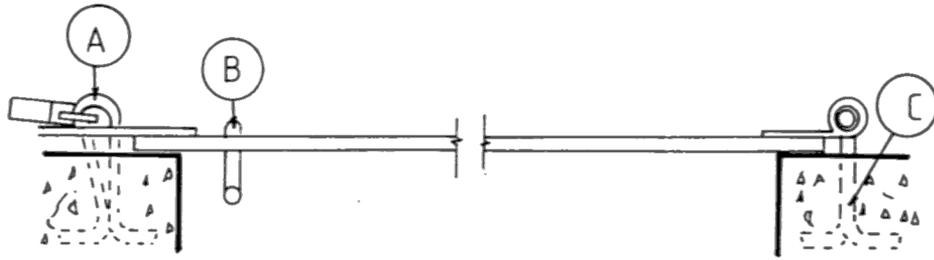
GATE VIR 12φ  
ANKERS  
HOLES FOR 12φ ANCHORS  
DRIEHOEK AAN PYP A EN  
VOETPLAAT GESWEIS.  
TRIANGLES WELDED TO PIPE  
A AND FOOT PLATE.



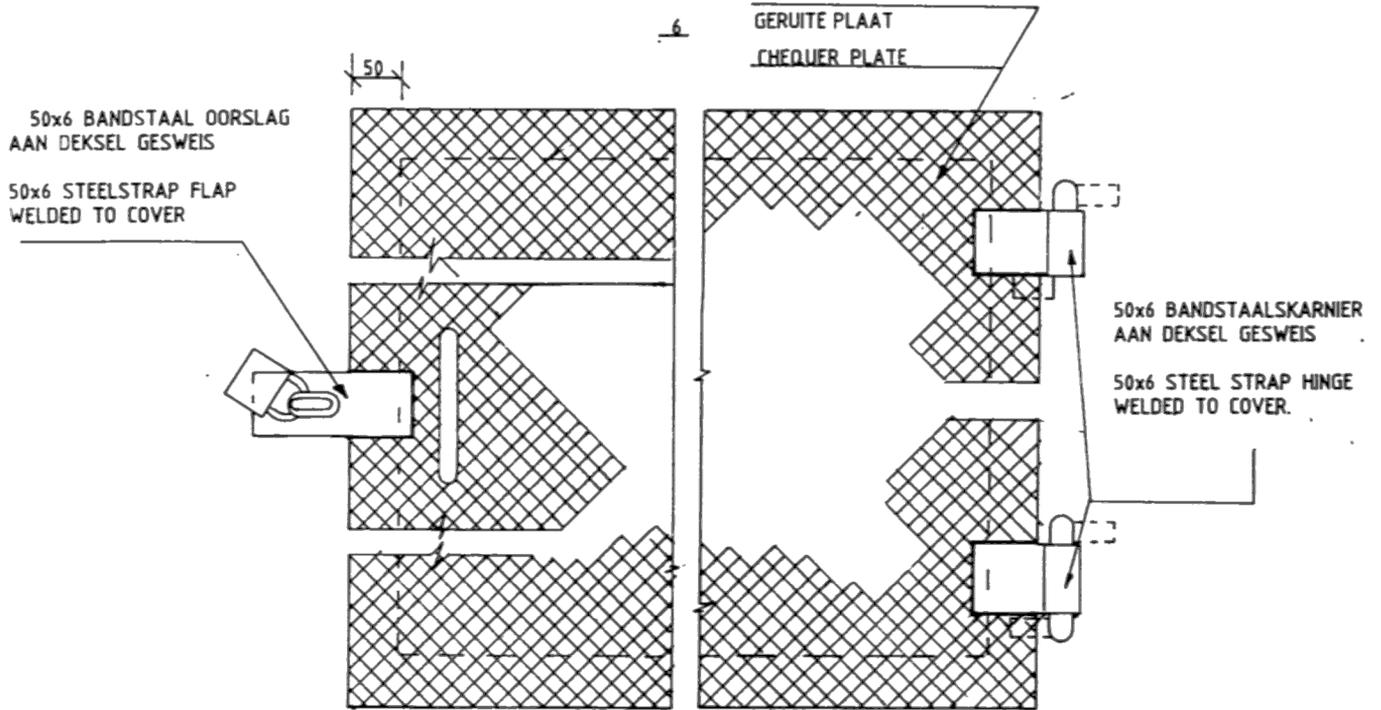
GETEKEN  
DRAWN S.P. CILLIERS.  
NAGESIEN  
CHECKED. *[Signature]*  
34-05-04.  
SKAAL  
SCALE 1:10

DEPARTEMENT VAN OPENBARE WERKE  
DEPARTMENT OF PUBLIC WORKS  
VERBINDINGS EN VOETPLAAT  
CONNECTIONS AND FOOTPLATE

D 38 D

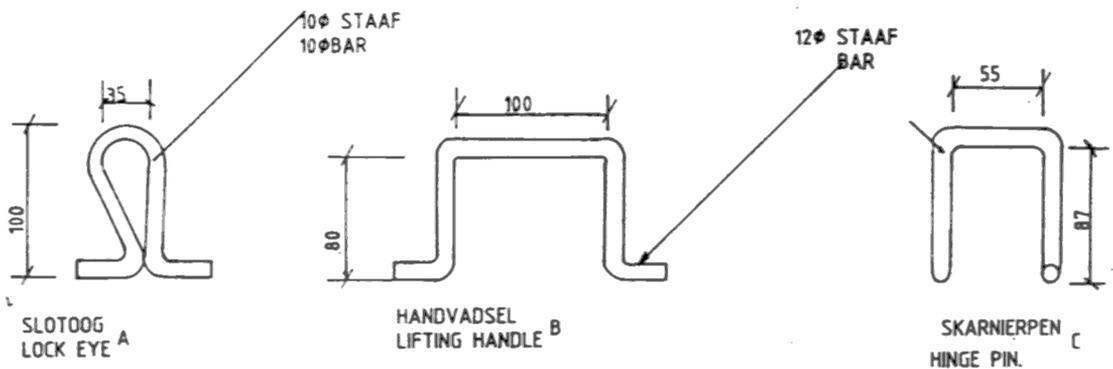


DEURSNEE SECTION



PLAN.

NIE OP SKAAL.  
NOT TO SCALE



SLOTOOG  
LOCK EYE A

HANDVAESEL  
LIFTING HANDLE B

SKARNIERPEN  
HINGE PIN. C

GETEKEN.  
DRAWN. S.CILLIERS.

NAGESIEN.  
CHECKED.

SKAAL. 1:5  
SCALE.

DEPARTEMENT VAN OPENBARE WERKE  
DEPARTMENT OF PUBLIC WORKS

GERUTEPLAATDEKSEL.  
CHEQUER PLATE COVER

D 39 D

ENTDOP  
END CAP

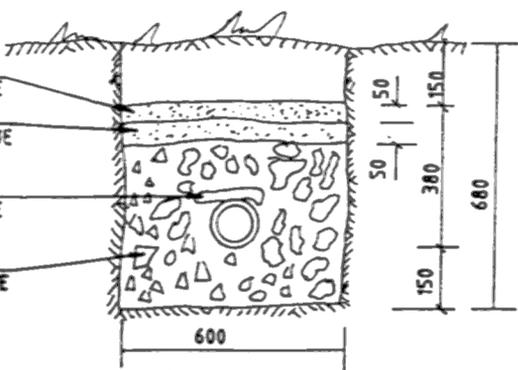
100ϕ LANBOUPTYPE MET 10 mm OOP VDE  
100ϕ AGRICULTURAL PIPES WITH 10 mm. OPEN JOINTS

2 000 Min.

600

GRONDVULLING  
GROUND FILLING.

6mm KLIP  
6mm STONE  
25mm KLIP  
25mm STONE  
PLAT KLIP  
FLAT STONE  
75mm KLIP  
75mm STONE



SNIT A-A  
SECTION A-A

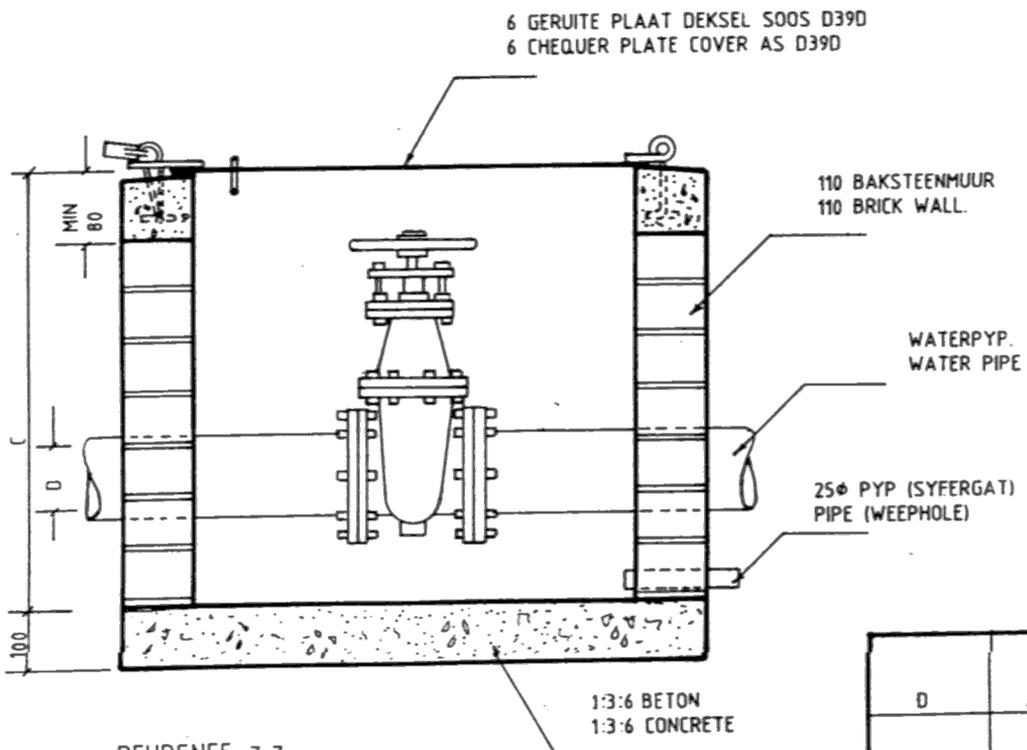
100ϕ VKP  
100ϕ VCP

NOTA  
PLAAS PLAT KLIP OOR  
PYPLASSE OM SAND  
UIT TE HOU.  
NOTE  
PLACE FLAT STONES  
OVER PIPE JOINTS TO  
STOP SAND FILTERING  
IN.

GETEKEN.  
DRAWN. J.A.C. RABE  
NAGESIEN.  
CHECKED. *[Signature]*  
SKAAL.  
SCALE. 1:20

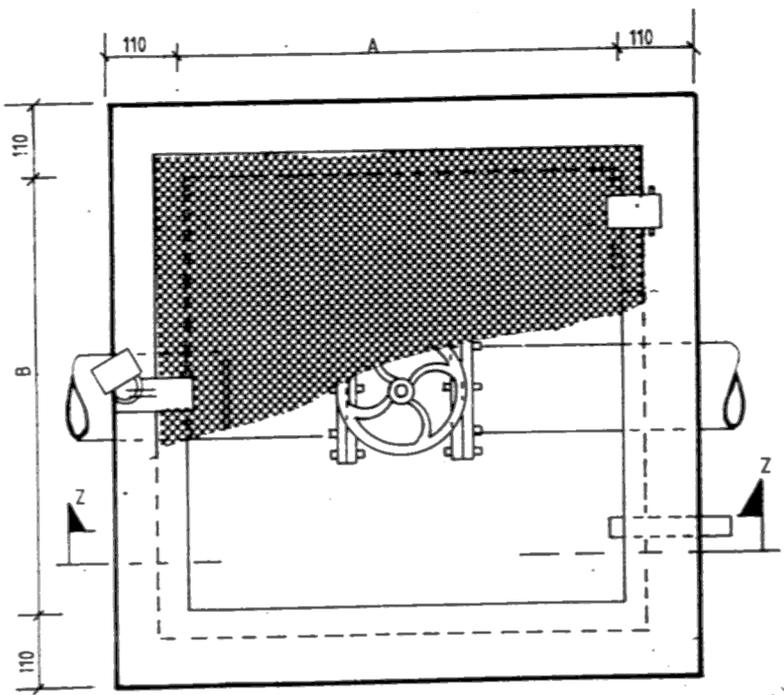
SUGRIOOL  
AGRICULTURAL DRAIN

D4.1D



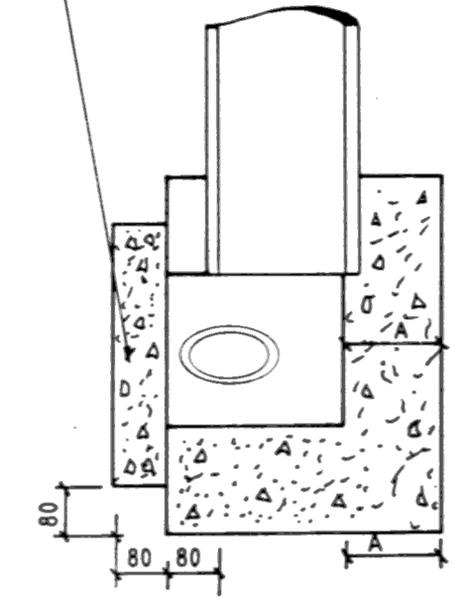
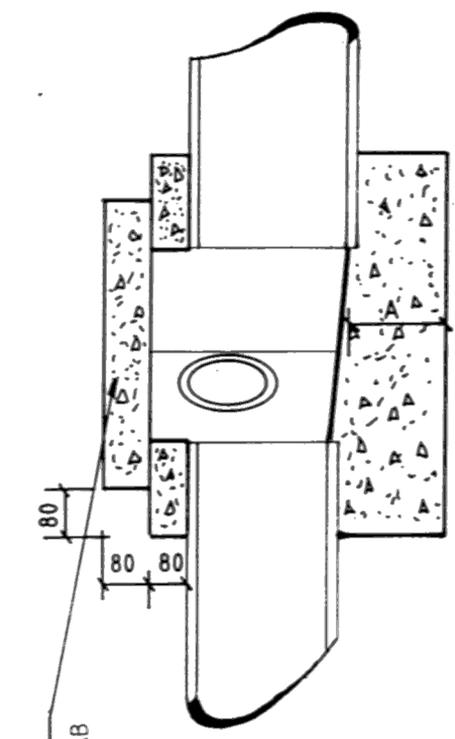
DEURSNEE Z-Z  
SECTION Z-Z

D	A	B	C
50	570	570	600
80	680	680	675
100	680	680	675
125	680	800	750
150	680	800	830
180	680	800	900
200	800	900	980
225	800	900	1050
250	800	900	1120
300	800	1020	1280

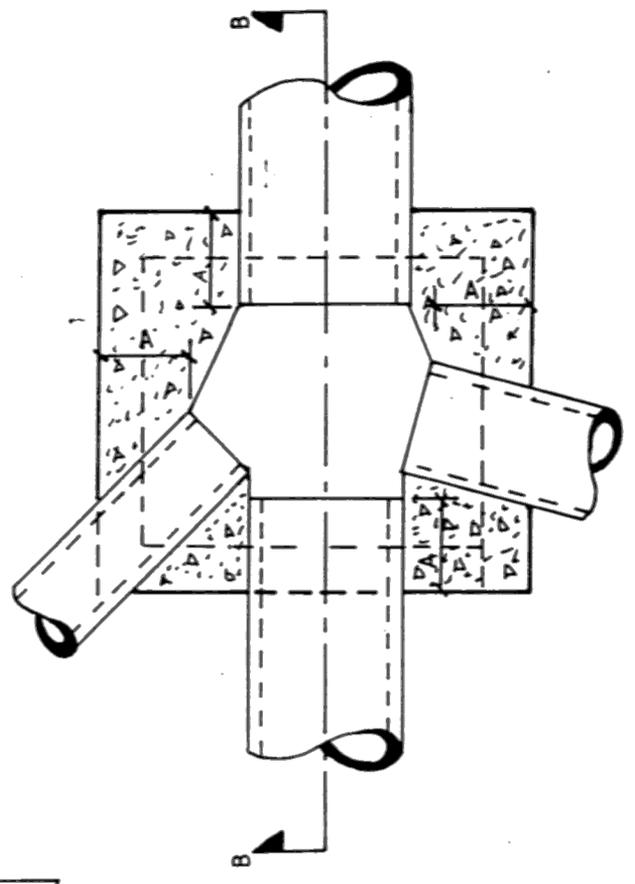


PLAN

GETEKEN. DRAWN. S.P. CILLIERS.	DEPARTEMENT VAN OPENBARE WERKE DEPARTMENT OF PUBLIC WORKS	D42D
NAGESIEN. CHECKED. <i>[Signature]</i>	KLEPKAMER. VALVE CHAMBER.	
SKAAL. SCALE. NIE VOLGENS SKAAL		

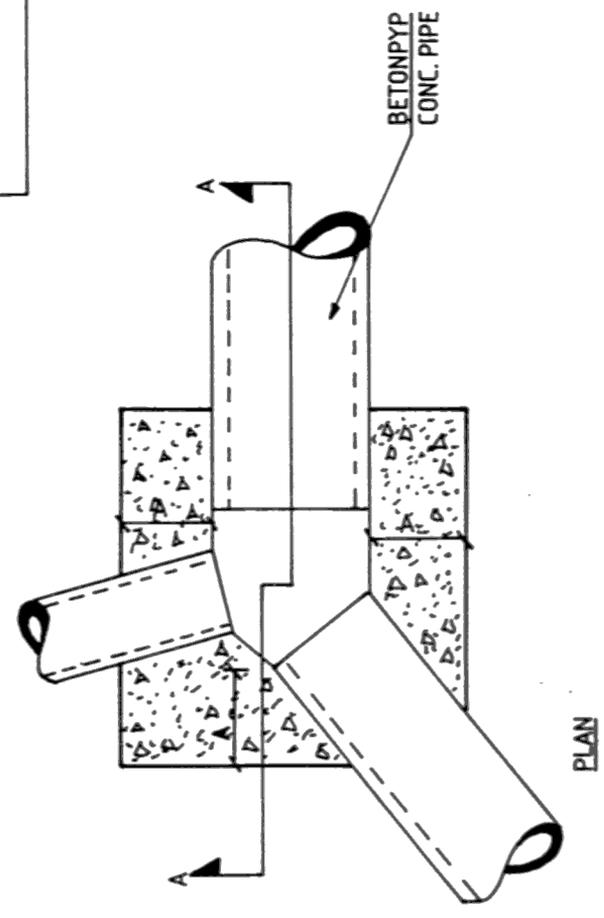


DEURSNEE B-B  
SECTION B-B



A = MIN 150

DEURSNEE A-A  
SECTION A-A



GETEKEN. DRAWN.	J.A.C. RABE
NAGESIEN. CHECKED.	<i>[Signature]</i>
SKAAL. SCALE.	1:20

AANSLUITING VIR STORMWATERPYPE  
JUNCTION BOX FOR STORMWATER PIPES

D44D



**public works**

Department:  
Public Works  
REPUBLIC OF SOUTH AFRICA

**SAMPLE SPECIFICATION**

**FOR THE**

**ELECTRICAL INSTALLATION**

**OF A**

**COMPREHENSIVE SERVICE**

**MARCH 2018**

SAMPLE SPECIFICATION FOR THE ELECTRICAL INSTALLATION  
OF A COMPREHENSIVE SERVICE

-----  
AT  
-----

**CONSISTING OF:**

**SECTION C3..... : ELECTRICAL INSTALLATION WORK**

**In part C3 see separate documents for:**

Building work  
Mechanical work  
Fire detection work  
Generator  
Lift  
Etc.

**INDEX**

**PAGE NO.**

SPECIFICATION FOR ELECTRICAL WORK .....1  
PART 1 - GENERAL.....2  
PART 2: INSTALLATION DETAILS.....10  
PART 3: SPECIFICATION FOR MATERIALS AND EQUIPMENT OF ELECTRICAL INSTALLATIONS .....19  
PART 4: BILLS OF QUANTITIES.....22  
PART 5: ELECTRICAL WORK MATERIAL SCHEDULE.....23  
PART 6: DRAWINGS .....24

# SPECIFICATION FOR ELECTRICAL WORK

## PART 1 - GENERAL

### CONTENTS

1	TESTS .....	2
2	MAINTENANCE OF INSTALLATIONS .....	2
3	REGULATIONS .....	2
4	NOTICES AND FEES.....	2
5	SCHEDULE OF FITTINGS.....	2
6	QUALITY OF MATERIALS.....	2
7	CONDUIT AND ACCESSORIES.....	2
8	CONDUIT IN ROOF SPACES.....	3
9	SURFACE MOUNTED CONDUIT.....	4
10	CONDUIT IN CONCRETE SLABS.....	4
11	FLEXIBLE CONNECTIONS FOR CONNECTING UP OF STOVES, MACHINES, ETC.....	5
12	WIRING: .....	5
13	SWITCHES AND SOCKET OUTLETS .....	5
14	SWITCHGEAR .....	6
15	SWITCHBOARDS .....	6
16	WORKMANSHIP AND STAFF.....	6
17	CERTIFICATE OF COMPLIANCE .....	6
18	EARTHING OF INSTALLATION .....	6
19	MOUNTING AND POSITIONING OF LUMINAIRES .....	8

## **PART 1 - GENERAL**

### **1 TESTS**

After completion of the works and before practical completion is achieved, a full test will be carried out on the installation for a period of sufficient duration to determine the satisfactory working thereof. During this period the installations will be inspected and the Contractor shall make good, to the satisfaction of the Principle Agent/Electrical Engineer or the employer, any defects which may arise.

The Contractor shall provide all instruments and equipment required for testing and any water, power and fuel required for the commissioning and testing of the installations at completion.

### **2 MAINTENANCE OF INSTALLATIONS**

With effect from the date of the Practical completion Certificate the Contractor shall at his own expense undertake the regular servicing of the installation during the maintenance period and shall make all adjustments necessary for the correct operation thereof.

If during the said period the installations is not in working order for any reason for which the Contractor is responsible, or if the installations develops defects, he shall immediately upon being notified thereof take steps to remedy the defects and make any necessary adjustments.

Should such stoppages however be so frequent as to become troublesome, or should the installations otherwise prove unsatisfactory during the said period the Contractor shall, if called upon by the Principle Agent/Electrical Engineer or the Employer, at his own expense replace the whole of the installations or such parts thereof as the Principal Agent/Electrical Engineer or the Employer may deem necessary with apparatus specified by the Principal Agent/Electrical Engineer or the Employer.

### **3 REGULATIONS**

The installation shall be erected and tested in accordance with the Acts and Regulations as indicated in the scope of works

### **4 NOTICES AND FEES**

The Contractor shall give all notices required by and pay all necessary fees, including any inspection fees, which may be due to the local Supply Authority.

On production of the official account, only the net amount of the fee charged by the Supply Authority for connection of the installation to the supply mains, will be refunded to the Contractor by the Employer.

### **5 SCHEDULE OF FITTINGS**

In all instances where schedule of light, socket outlet and power points are attached to or included on the drawings, these schedules are to be regarded as forming part of the specification.

### **6 QUALITY OF MATERIALS**

Only materials of first class quality shall be used and all materials shall be subject to the approval of the Employer. Departmental specifications for various materials to be used on this Contract are attached to and form part of this specification.

Wherever applicable the material is to comply with the relevant South African Bureau of Standards, specifications, or to IEC Specifications, where no SANS Specifications exist.

Materials wherever possible, must be of South African manufacture.

### **7 CONDUIT AND ACCESSORIES**

The type of conduit and accessories required for the service, i.e. whether the conduit and accessories shall be of the screwed type, plain-end type or of the non-metallic type and whether metallic conduit shall be

black enamelled or galvanised, is specified in Part 2 of this specification.

Unless other methods of installation are specified for certain circuits, the installation shall be in conduit throughout. No open wiring in roof spaces or elsewhere will be permitted.

The conduit and conduit accessories shall comply fully with the applicable SANS specifications as set out below and the conduit shall bear the mark of approval of the South African Bureau of Standards.

- a) Screwed metallic conduit and accessories: SANS 61386-1 and 21.
- b) Plain-end metallic conduit and accessories: SANS 61386-1 and 21.
- c) Non-metallic conduit and accessories: SANS 61386-1 and 21.

All conduit fittings except couplings, shall be of the inspection type. Where cast metal conduit accessories are used, these shall be of malleable iron. Zinc base fittings will not be allowed.

Bushes used for metallic conduit shall be brass and shall be provided in addition to locknuts at all points where the conduit terminates at switchboards, switch-boxes, draw-boxes, etc.

Draw-boxes are to be provided in accordance with the "Wiring Code" and wherever necessary to facilitate easy wiring.

For light and socket outlet circuits, the conduit used shall have an external diameter of 20mm. In all other instances the sizes of conduit shall be in accordance with the "Wiring Code" for the specified number and size of conductors, unless otherwise directed in part 2 of this specification or indicated on the drawings.

Only one manufactured type of conduit and conduit accessories will be permitted throughout the installation.

Running joints in screwed conduit are to be avoided as far as possible and all conduit systems shall be set or bent to the required angles. The use of normal bends must be kept to a minimum with exception of larger diameter conduits where the use of such bends is essential.

All metallic conduit shall be manufactured of mild steel with a minimum thickness of 1,2mm for plain-end conduit and 1,6mm in respect of screwed conduit.

Under no circumstances will conduit having a wall thickness of less than 1,6mm be allowed in screed laid on top of concrete slabs.

Bending and setting of conduit must be done with special bending apparatus manufactured for the purpose and which are obtainable from the manufacturers of the conduit systems. Damage to conduit resulting from the use of incorrect bending apparatus or methods applied must on indication by the Department's inspectorate staff, be completely removed and rectified and any wiring already drawn into such damaged conduits must be completely renewed at the Contractor's expense.

Conduit and conduit accessories used for flame-proof or explosion proof installations and for the suspension of luminaires as well as all load bearing conduit shall in all instances be of the metallic screwed type.

All conduit and accessories used in areas within 50 km of the coast shall be galvanised to SANS 32 and SANS 121.

Tenderers must ensure that general approval of the proposed conduit system to be used is obtained from the local electricity supply authority prior to the submission of their tender. Under no circumstances will consideration be given by the Department to any claim submitted by the Contractor, which may result from a lack of knowledge in regard to the supply authority's requirements.

## **8 CONDUIT IN ROOF SPACES**

Conduit in roof spaces shall be installed parallel or at right angles to the roof members and shall be secured at intervals not exceeding 1,5m by means of saddles screwed to the roof timbers.

Nail or crampets will not be allowed.

Where non-metallic conduit has been specified for a particular service, the conduit shall be supported and fixed with saddles with a maximum spacing of 450 mm. The Contractor shall supply and install all additional supporting timbers in the roof space as required.

Under flat roofs, in false ceilings or where there is less than 0,9m of clearance, or should the ceilings be insulated with glass wool or other insulating material, the conduit shall be installed in such a manner as to allow for all wiring to be executed from below the ceilings.

Conduit runs from distribution boards shall, where possible terminate in fabricated sheet steel draw-boxes installed directly above or in close proximity to the boards.

## **9 SURFACE MOUNTED CONDUIT**

Wherever possible, the conduit installation is to be concealed in the building work; however, where unavoidable or otherwise specified under Part 2 of the specification, conduit installed on the surface must be plumbed or levelled and only straight lengths shall be used.

The use of inspection bends is to be avoided and instead the conduit shall be set uniformly and inspection coupling used where necessary.

No threads will be permitted to show when the conduit installation is complete, except where running couplings have been employed.

Running couplings are only to be used where unavoidable, and shall be fitted with a sliced couplings as a lock nut.

Conduit is to be run on approved spaced saddles rigidly secured to the walls.

Alternatively, fittings, tees, boxes, couplings etc., are to be cut into the surface to allow the conduit to fit flush against the surface. Conduit is to be bedded into any wall irregularities to avoid gaps between the surface and the conduit.

Crossing of conduits is to be avoided, however, should it be necessary purpose-made metal boxes are to be provided at the junction. The finish of the boxes and positioning shall be in keeping with the general layout.

Where several conduits are installed side by side, they shall be evenly spaced and grouped under one purpose-made saddle.

Distribution boards, draw-boxes, industrial switches and socket outlets etc., shall be neatly recessed into the surface to avoid double sets.

In situations where there are no ceilings the conduits are to be run along the wall plates and the beams.

Painting of surface conduit shall match the colour of the adjacent wall finishes.

Only approved plugging materials such as aluminium inserts, fibre plugs, plastic plugs, etc., and round-head screws shall be used for fixing saddles, switches, socket outlets, etc., to walls, wood plugs and the plugging in joints in brick walls are not acceptable.

## **10 CONDUIT IN CONCRETE SLABS**

In order not to delay building operations the Contractor must ensure that all conduits and other electrical equipment which are to be cast in the concrete columns and slabs are installed in good time.

The Contractor shall have a representative in attendance at all times when the casting of concrete takes place.

Draw-boxes, expansion joint boxes and round conduit boxes are to be provided where necessary. Sharp

bends of any nature will not be allowed in concrete slabs.

Draw and/or inspection boxes shall be grouped under one common cover plate, and must preferably be installed in passages or male toilets.

All boxes, etc., are to be securely fixed to the shuttering to prevent displacement when concrete is cast. The conduit shall be supported and secured at regular intervals and installed as close as possible to the neutral axis of concrete slabs and/or beams.

Before any concrete slabs are cast, all conduit droppers to switchboards shall be neatly spaced and rigidly fixed.

## **11 FLEXIBLE CONNECTIONS FOR CONNECTING UP OF STOVES, MACHINES, ETC.**

Flexible tubing connections shall be of galvanised steel construction, and in damp situations of the plastic sheathed galvanised steel type. Other types may only be used subject to the prior approval of the Department's site electrical representative.

Connectors for coupling onto the flexible tubing shall be of the gland or screw-in types, manufactured of either brass or cadmium or zinc plated mild steel, and the connectors after having been fixed onto the tubing, shall be durable and mechanically sound.

Aluminium and zinc alloy connectors will not be acceptable.

## **12 WIRING:**

Except where otherwise specified in Part 2 of this specification, wiring shall be carried out in conduit throughout. Only one circuit per conduit will be permitted.

No wiring shall be drawn into conduit until the conduit installation has been completed and all conduit ends provided with bushes. All conduits to be clear of moisture and debris before wiring is commenced.

Unless otherwise specified in Part 2 of this specification or indicated on the service drawings, the wiring of the installation shall be carried out in accordance with the "Wiring Code". Further to the requirements concerning the installation of earth conductors to certain light points as set out in the "Wiring Code", it is a specific requirement of this document that where plain-end metallic conduit or non-metallic conduit has been used, earth conductors must be provided and drawn into the conduit with the main conductors to all points, including all luminaires and switches throughout the installation.

Wiring for lighting circuits is to be carried out with 1,5mm<sup>2</sup> conductors and a 1,5mm<sup>2</sup>-earth conductor. For socket outlet circuits the wiring shall comprise 4mm<sup>2</sup> conductors and a 2,5mm<sup>2</sup>-earth conductor. In certain instances, as will be directed in Part 2 of this specification, the sizes of the aforementioned conductors may be increased for specified circuits. Sizes of conductors to be drawn into conduit in all other instances, such as feeders to distribution boards, power points etc., shall be as specified elsewhere in this specification or indicated on the drawings. Sizes of conductors not specified must be determined in accordance with the "Wiring Code".

The loop-in system shall be followed throughout, and no joints of any description will be permitted.

The wiring shall be done in PVC insulated 600/1000 V grade cable to SANS 1507.

Where cable ends connect onto switches, luminaires etc., the end strands must be neatly and tightly twisted together and firmly secured. Cutting away of wire strands of any cable will not be allowed.

## **13 SWITCHES AND SOCKET OUTLETS**

All switches and switch-socket outlet combination units shall conform to the Department Quality Specifications, which form part of this specification.

No other than 16 A 3 pin sockets are to be used, unless other special purpose types are distinctly specified or shown on the drawings.

All light switches shall be installed at 1,4m above finished floor level and all socket outlets as directed in the Schedule of Fittings which forms part of this specification or alternatively the height of socket outlets may be indicated on the drawings.

#### **14 SWITCHGEAR**

Switchgear, which includes circuit breakers, iron-clad switches, interlocked switch-socket outlet units, contactors, time switches, etc., is to be in accordance with the Departmental Quality Specifications which form part of this specification and shall be equal and similar in quality to such brands as may be specified.

For uniform appearance of switchboards, only one approved make of each of the different classes of switchgear mentioned in the Quality Specifications shall be used throughout the installations.

#### **15 SWITCHBOARDS**

All boards shall be in accordance with the types as specified, be constructed according to the detail or type drawings and must be approved by the Employer before installation.

In all instances where provision is to be made on boards for the supply authority's main switch and/or metering equipment the contractor must ensure that all requirements of the authorities concerned in this respect are met.

Any construction or standard type aboard proposed, as an alternative to that specified must have the prior approval of the Employer.

All busbars, wiring, terminals, etc., are to be adequately insulated and all wiring is to enter the switchgear from the back of the board. The switchgear shall be mounted within the boards to give a flush front panel. Cable and boxes and other ancillary equipment must be provided where required.

Clearly engraved labels are to be mounted on or below every switch. The working of the labels in English, is to be according to the lay-out drawings or as directed by the Electrical Engineer and must be confirmed on site. Flush mounted boards to be installed with the top of the board 2,0m above the finished floor level.

#### **16 WORKMANSHIP AND STAFF**

Except in the case of electrical installations supplied by a single-phase electricity supply at the point of supply, an accredited person shall exercise general control over all electrical installation work being carried out.

The workmanship shall be of the highest grade and to the satisfaction of the Employer.

All inferior work shall, on indication by the Employer's inspecting officers, immediately be removed and rectified by and at the expense of the Contractor.

#### **17 VERIFICATION AND CERTIFICATION OF ELECTRICAL INSTALLATION (CERTIFICATE OF COMPLIANCE AND TEST REPORT**

On completion of the service, a certificate of compliance must be issued to the Principal Agent/Electrical Engineer or Employer in terms of the Occupational Health and Safety Act, 1993 (Act 85 of 1993) in the format as set out in SANS 10142-1 & 2.

#### **18 EARTHING OF INSTALLATION**

##### **Main earthing**

The type of main earthing must be as required by the supply authority if other than the Employer, and in any event as directed by the Principal Agent/Electrical Engineer, who may require additional earthing to meet test standards.

Where required an earth mat shall be provided, the minimum size, unless otherwise specified, being 1,0m

x 1,0m and consisting of 4mm diameter hard-drawn bare copper wires at 250mm centres, brazed at all intersections.

Alternatively or additionally earth rods or trench earths may be required as specified or directed by the Electrical Engineer.

Installations shall be effectively earthed in accordance with the "Wiring Code" and to the requirements of the supply authority. All earth conductors shall be stranded copper with or without green PVC installation.

Connection from the main earth bar on the main board must be made to the cold water main, the incoming service earth conductor, if any and the earth mat or other local electrode by means of 12mm x 1,60 mm solid copper strapping or 16 mm<sup>2</sup> stranded (not solid) bare copper wire or such conductor as the Department's representative may direct. Main earth copper strapping where installed below 3m from ground level, must be run in 20 mm diameter conduit securely fixed to the walls.

All other hot and cold water pipes shall be connected with 12mm x 0,8mm perforated for solid copper strapping (not conductors) to the nearest switchboard. The strapping shall be fixed to the pipework with brass nuts and bolts and against walls with brass screws at 150-mm centres. In all cases where metal water pipes, down pipes, flues, etc., are positioned within 1,6m of switchboards an earth connection consisting of copper strapping shall be installed between the pipework and the board. In vertical building ducts accommodating both metal water pipes and electrical cables, all the pipes shall be earthed at each distribution board.

### **Roofs, gutters and down pipes**

Where service connections consist of overhead conductors, all metal parts of roofs, gutters and down pipes shall be earthed. One bare 10mm<sup>2</sup> copper conductor shall be installed over the full length of the ceiling void, fixed to the top purlin and connected to the main earth conductor and each switchboard. The roof and gutters shall be connected at 15m intervals to this conductor by means of 12mm X 0,8mm copper strapping (not conductors) and galvanised bolts and nuts. Self-tapping screws are not acceptable. Where service connections consist of underground supplies, the above requirements are not applicable.

### **Sub-distribution boards**

A separate earth connection shall be supplied between the earth busbar in each sub-distribution board and the earth busbar in the Main Switchboard. These connections shall consist of a bare or insulated stranded copper conductors installed along the same routes as the supply cables or in the same conduit as the supply conductors. Alternatively armoured cables with earth continuity conductors included in the armouring may be utilised where specified or approved.

### **Sub-circuits**

The earth conductors of fall sub-circuits shall be connected to the earth busbar in the supply board in accordance with SANS 10142.

### **Ring Mains**

Common earth conductors may be used where various circuits are installed in the same wire way in accordance with SANS 10142. In such instances the sizes of earth conductors shall be equivalent to that of the largest current carrying conductor installed in the wire way, alternatively the size of the conductor shall be as directed by the Engineer. Earth conductors for individual circuits branching from the ring main shall be connected to the common earth conductor with T-ferrules or soldered. The common earth shall not be broken.

### **Non-metallic Conduit**

Where non-metallic conduit is specified or allowed, the installation shall comply with the Department's standard quality specification for "conduit and conduit accessories".

Standard copper earth conductors shall be installed in the conduits and fixed securely to all metal appliances and equipment, including metal switch boxes, socket-outlet boxes, draw-boxes, switchboards,

luminaires, etc. The securing of earth conductors by means of self-threading screws will not be permitted.

### **Flexible Conduit**

An earth conductor shall be installed in all non-metal flexible conduit. This earth conductor shall not be installed externally to the flexible conduit but within the conduit with the other conductors. The earth conductor shall be connected to the earth terminals at both ends of the circuit.

### **Connection**

Under no circumstances shall any connection points, bolts, screws, etc., used for earthing be utilised for any other purpose. It will be the responsibility of the Contractor to supply and fit earth terminals or clamps on equipment and materials that must be earthed where these are not provided.

Unless earth conductors are connected to proper terminals, the end shall be tinned and lugged.

## **19 MOUNTING AND POSITIONING OF LUMINAIRES**

The Contractor is to note that in the case of board and acoustic tile ceilings, i.e. as opposed to concrete slabs, close co-operation with the building contractor is necessary to ensure that as far as possible the luminaires are symmetrically positioned with regard to the ceiling pattern.

The layout of the luminaires as indicated on the drawings must be adhered to as far as possible and must be confirmed with the Department's representative.

Fluorescent luminaires installed against concrete ceilings shall be screwed to the outlet boxes and in addition 2 x 6mm expansion or other approved type fixing bolts are to be provided. The bolts are to be  $\frac{3}{4}$  of the length of the luminaires apart.

Fluorescent luminaires to be mounted on board ceilings shall be secured by means of two 40mm x No. 10 round head screws and washers. The luminaires shall also be bonded to the circuit conduit by means of locknuts and brass bushes. The fixing screws are to be placed  $\frac{3}{4}$  of the length of the fitting apart.

Earth conductors must be drawn in with the circuit wiring and connected to the earthing terminal of all fluorescent luminaires as well as other luminaires exposed to the weather in accordance with the "Wiring Code".

Incandescent luminaires are to be screwed directly to outlet boxes in concrete slabs. Against board ceilings the luminaires shall be secured to the bracing or joists by means of two 40mm x No. 8 round head screws.

**PART 2: INSTALLATION DETAILS**

**[Omit which is not applicable. Clauses 1 to 10 of Part 2 are standard clauses (which should not be altered) and must be inserted in the document in the order as set out.**

**CONTENTS**

1	CABLE SLEEVE PIPES .....	10
2	NOTICES.....	10
3	ELECTRICAL EQUIPMENT .....	10
4	DRAWINGS.....	10
5	BALANCING OF LOAD .....	10
6	SERVICE CONDITIONS .....	10
7	SWITCHES AND SOCKET OUTLETS .....	10
8	LIGHT FITTINGS AND LAMPS.....	10
9	EARTHING AND BONDING .....	10
10	MAINTENANCE OF ELECTRICAL SUPPLY .....	11
11	EXTENT OF WORK.....	11
12	SUPPLY AND CONNECTION .....	11
13	CONDUIT AND WIRING.....	11
14	POWER POINTS .....	12
15	CABLES .....	12
16.	DISTRIBUTION BOARDS .....	15
17.	SUBSTATION .....	16
18.	SCHEDULE OF LIGHT FITINGS.....	16
19.	SCHEDULE OF POWER POINTS .....	16
20.	SCHEDULE OF CABLES, CONDUIT AND WIRING.....	17
21.	SCHEDULE OF DISTRIBUTION BOARDS.....	17
22.	SUMMARY OF SWITCHGEAR AND CIRCUITS .....	17

## **PART 2: INSTALLATION DETAILS**

### **1 CABLE SLEEVE PIPES**

Where cables cross under roadways, other services and where cables enter buildings, the cables shall be installed in earthenware or high-density polyethylene pipes.

The ends of all sleeves shall be sealed with a non-hardening watertight compound after the installation of cables. All sleeves intended for future use shall likewise be sealed.

### **2 NOTICES**

The Contractor shall issue all notices and make the necessary arrangements with Supply Authorities, the Postmaster-General, and S.A. Transport Services, Provincial or National Road Authorities and other authorities as may be required with respect to the installation.

### **3 ELECTRICAL EQUIPMENT**

All equipment and fittings supplied must be in accordance with the attached quality specification (Part 3 of this document), suitable for the relevant supply voltage, and frequency and must be approved by the Employers Electrical Engineer.

### **4 DRAWINGS**

The drawings generally show the scope and extent of the proposed work and shall not be held as showing every minute detail of the work to be executed.

The position of power points, switches and light points that may be influenced by built-in furniture must be established on site, prior to these items being built in.

### **5 BALANCING OF LOAD**

The Contractor is required to balance the load as equally as possible over the multiphase supply.

### **6 SERVICE CONDITIONS**

All plant shall be designed for the climatic conditions appertaining to the service.

### **7 SWITCHES AND SOCKET OUTLETS**

The installation of switches and socket outlets must conform to clause 13 of Part 1 of this specification.

### **8 LIGHT FITTINGS AND LAMPS**

The installation and mounting of luminaires must conform to clause 19 of Part 1 of this specification.

All fittings to be supplied by the Contractor shall have the approval of the Employer.

The light fittings must be of the type specified in the Schedule of Light Fittings.

### **9 EARTHING AND BONDING**

The Contractor will be responsible for all earthing and bonding of the building and installation. The earthing and bonding is to be carried out strictly as described in clause 18 of Part 1 of this specification and to the satisfaction of the Employer/s Electrical Engineer.

## 10 MAINTENANCE OF ELECTRICAL SUPPLY

All interruptions of the electrical supply that may be necessary for the execution of the work, will be subject to prior arrangement between the Contractor and the Client and the Employer's Electrical Engineer.

## 11 EXTENT OF WORK

The work covered by this contract comprises the complete electrical installation, in working order, as shown on the drawings and as per this specification, including the supply and installation of all fittings and also the installation of such equipment supplied by the Employer.

## 12 SUPPLY AND CONNECTION

***[The supply voltage, responsibility of the Supply Authority and the contractor must be specified]***

### **EXAMPLE:**

The supply will be at 400/230 Volt 50Hz.

The Contractor must arrange in good time with the local Municipality for the installation of the 500kVA transformer and low-tension meter point and submit the account to the Employer's Regional Office for payment.

The Contractor will be responsible for the supply and installation of the supply cable from the meter box to the main low-tension distribution board (MDB). The size and length of the cable is listed in the Schedule of Cables and measured in the Bills of Quantities.

### **Standby Plant**

The 10kVA standby plant complete with automatic changeover control panel (Distribution Board – X) be supplied, installed and commissioned by others.

The Contractor will only be responsible for the supply and installation of the cable connections between the Main Distribution Board and the Charge- over Control Panel (Distribution Board - X).

The supply cables are listed in the Schedule of Cables and measured in the Bills of Quantities.

## 13 CONDUIT AND WIRING

**Conduit and conduit accessories shall be black enameled/galvanized screwed conduit or black enameled/galvanized plain end conduit in accordance with SANS 61386.**

All conduits, regardless of the system employed, shall be installed strictly as described in the applicable paragraphs of clauses 4 to 8 of Part 1 of the specification. Wiring of the installation shall be carried out as directed in clause 9 part 1 of this specification.

Where plain end conduit is offered all switches and light fittings must be supplied with a permanent earth terminal for the connection of the earth wire.

Lugs held by switch fixing screws or self tapping screws will not be acceptable.

### 13.1 Telephone Installation

The Contractor shall allow for the complete installation of all conduits, outlet boxes, the communication service provider Distribution boards, sleeve pipes, etc., required for the telephone system as shown on the drawings.

The sizes of all telephone conduits are indicated on the drawings and must be installed in the floor slab. Galvanized steel draw-wires shall be installed in all conduits.

End boxes must consist of a 50mm x 100 mm x 100mm outlet box fitted with suitable blank cover plates, flush mounted 0,4m above floor level.

The communication service provider Distribution Board must consist of a 150mm x 600mm x 600mm metal box and hinged door with a 20mm thick wooden backboard. The board must be flush mounted, 1,37m above the floor.

### **13.2 Intercom Installation**

The supply and installation of the intercom system is not included in this Contract.

The Contractor shall allow for the complete supply and installation of all conduits and outlet boxes required for the intercom installation as shown on the drawings.

The size of all conduits, boxes and mounting heights of the end boxes are indicated on the drawings. Galvanized steel draw-wires shall be installed in all conduits and the boxes fitted with suitable blank cover plates.

### **13.3 Power Trunking**

The Contractor shall be responsible for the supply and installation of all power trunking complete with corner pieces, end pieces, junction pieces, supply conduits, cover plates and power outlets as specified and indicated on the drawings.

The power trunking must comply with SANS 61084. The Contractor must ensure that the power trunking is installed to satisfaction of the Employer's Electrical Engineer before commencing with the wiring of the power trunking.

**[The method of installing and wiring of the power trunking must be specified in detail.]**

## **14 POWER POINTS**

**Allow for the installation of power points and equipment as listed in the schedule, indicated on the drawings and described below:**

- 14.1 ELECTRIC STOVE
- 14.2 ELECTRIC COOKING TOP
- 14.3 WATER HEATERS, ETC.

[The power points required for the service must be specified in detail with reference to supplier of the equipment, method of installation and final connection. The size of the conduit/the conductors and cable must be listed in the Schedule of Power Points.]

Example: Water Heaters

The Contractor must electrically connect all water heaters as specified and listed in the Schedule of Power Points.

NOTE: The hot water installation must be approved by the Employers Electrical Engineer. Detail with regard to the size and type of water heaters that must be provided must be obtained from the Architect.

## **15 CABLES**

The Contractor shall supply and completely install all distribution cables as indicated on the drawings, and listed in the Schedule of Cables.

The storage, transportation, handling and laying of the cables shall be according to first class practice, and the contractor shall have adequate and suitable equipment and labour to ensure that no damage is done to cables during such operations.

The cable-trenches shall be excavated to a depth of 0,9m deep below ground level and shall be 450mm wide for one to three cables, and the width shall be increased where more than three cables are laid together so that the cables may be placed at least two cable diameters apart throughout the run. The bottom of the trench shall be level and clean and the bottom and sites free from rocks or stones liable to cause damage to the cable.

The Contractor must take all necessary precautions to prevent the trenching work being in any way a hazard to the personnel and public and to safeguard all structures, roads, sewage works or other property on the site from any risk of subsidence and damage.

In the trenches the cables shall be laid on a 75mm thick bed of earth and be covered with a 150-mm layer of earth before the trench is filled in.

All joints in underground cables and terminations shall be made either by means of compound filled boxes according to the best established practice by competent cable jointers using first class materials or by means of approved epoxy-resin pressure type jointing kits. Epoxy-resin joints must be made entirely in accordance with the manufacturer's instructions and with materials stipulated in such instructions. Low tension PVCA cables are to be made off with sealing glands and materials designed for this purpose which must be of an approved make. Where cables are cut and not immediately made off, the ends are to be sealed without delay.

The laying of cables shall not be commenced until the trenches have been inspected and approved. The cable shall be removed from the drum in such a way that no twisting, tension or mechanical damage is caused and must be adequately supported at intervals during the whole operation. Particular care must be exercised where it is necessary to draw cables through pipes and ducts to avoid abrasion, elongation or distortion of any kind. The ends of such pipes and ducts shall be sealed to approval after drawing in of the cables.

Backfilling (after bedding) of the trenches is to be carried out with a proper grading of the material to ensure settling without voids, and the material is to be tamped down after the addition of every 150mm. The surface is to be made good as required.

On each completed section of the laid and jointed cable, the insulation resistance shall be tested to approval with an approved "Megger" type instrument of not less than 500 V for low tension cables.

Earth continuity conductors are to be run with all underground cables constituting part of a low tension distribution system. Such continuity conductors are to be stranded bare copper of a cross-sectional area equal to at least half that of one live conductor of the cable, but shall not be less than 4mm<sup>2</sup> or more than 70mm<sup>2</sup>. A single earth wire may be used as earth continuity conductor for two or more cables run together, branch earth wires being brazed on where required.

#### 15.1 LAYING, JOINTING AND MAKING OFF OF ELECTRICAL CABLES

**[The requirements specified hereafter, are aimed essentially at high tension cable but are also valid for low tension cable, where applicable.]**

1. The use of the term "Inspector", includes the engineer or inspector of the Department or an empowered person of the concerned supervising consulting engineer's firm.
2. No cable is to be laid before the cable trench is approved and the soil qualification of the excavation is agreed upon by the Contractor and inspector.
3. After the cable has been laid and before the cable trench is back-filled the inspector must ensure that the cable is properly bedded and that there is no undesirable material included in the bedding layer.
4. All cable jointing and the making off of the cables must only be carried out by qualified experienced cable jointers. Helpers of the jointers may not saw, strip, cut, solder, etc. The cable and other work undertaken by them must be carried out under the strict and constant supervision of the jointer.
5. Before the Contractor allows the jointer to commence with the jointing work or making off of the

cable (making off is recognized as half a joint) he must take care and ensure:

- 5.1 That he has adequate and suitable material available to complete the joint properly and efficiently. Special attention must be given to ensure the cable ferrules and cable lugs are of tinned copper and of sufficient size. The length of the jointing lugs must be at least six times the diameter of the conductor,
- 5.2 That the joint pit is dry and that all loose stones and material are removed,
- 5.3 That the walls and banks of the joint pit are reasonable firm and free from loose material which can fall into the pit,
- 5.4 That the necessary coffer-dams or retaining walls are made to stop the flow of water into the joint pit,
- 5.5 That the joint pit is provided with suitable groundsheets so that the jointing work is carried out in clean conditions,
- 5.6 That the necessary tents or sails are installed over the joint pit to effectively avert unexpected rainfall and that sufficient light or lighting is provided,
- 5.7 That the necessary means are available to efficiently seal the jointing or cable end when an unexpected storm or cloudburst occurs, regardless of how far the work has progressed,
- 5.8 That the cables and other materials are dry, undamaged and in all respects are suitable for the joint work or making off,
- 5.9 That the heating of cable oil, cable compound, plumbers metal and solder is arranged that they are at the correct temperature when required so that the cable is not unnecessarily exposed to the atmosphere and consequently the ingress of moisture (care must be taken of overheating)

Flow temperatures of cable oil and compound must be determined with suitable thermometers. Cable oil and compound must not be heated to exceed the temperatures given on the containers and precaution must be taken to ensure that the tin is not overheated in one position. The whole mass must be evenly and proportionally heated.

(Temperatures of solder and plumbers metal may be tested with brown paper (testing time: 3 seconds). The paper must colour slightly - not black or burnt).

6. Before the paper-insulated cables are joined, they must be tested for the presence of moisture by the cable jointers test. This consists of the insertion of a piece of unhandled insulated impregnated paper tape in warm cable oil heated to a temperature of  $130 \pm 5^{\circ}\text{C}$ .

Froth on the surface of the oil is an indication that moisture is present in the impregnated insulation and the amount of the froth gives an indication of the moisture present.

7. If the cable contains moisture or is found to be otherwise unsuitable for jointing or making of the inspector is to be notified immediately and he will issue the necessary instruction to cope with the situation.
8. The joint or making off of paper insulated cables must not be commenced during rainy weather.
9. Once a joint is in progress the jointer must proceed with the joint until it is complete and before he leaves the site.
10. The jointer must ensure that the material and his tools are dry at all times, reasonably clean and absolutely free from soil.
11. Relating to the jointing of the cable the following requirements apply:
  - 11.1 All jointing must be carried out in accordance with recognized and tried techniques and comply

strictly with the instructions given by the supplier of the jointing kit.

- 11.2 The cables must be twisted by hand so that the cores can be joined according to the core numbers. If necessary the cable is to be exposed for a short distance to accomplish this. Under no circumstances may the cores in a joint be crossed so as to enable cores to be joined according to the core numbers. If it is not possible to twist the cables so that the preceding requirements can be met, then cores are to be joined in the normal way without any consideration of the core numbers.
- 11.3 Normally the cables will have profile conductors. The conductors shall be pinched with gas pliers to form a circular section, bound with binding wire so that they do not spread, and then tinned before jointing.
- 11.4 Jointing ferrules, the length of which are at least 6 times the diameter of the conductors, must be slid over the conductor ends to be joined and pinched tightly. Then they are soldered by means of the ladle process whilst being pinched further closed.

Use resin only as a flux. The slot opening in the ferrule must be completely filled, including all depressions.

Remove all superfluous metal with a cloth dipped in tallow. Work during the soldering process must be from top to bottom. Rub the ferrule smooth and clean with aluminium oxide tape after it has cooled down to ensure that there are not any sharp points or edges.

**NB:** The spaces between the conductor strands must be completely filled by soldering process and must be carried out quick enough to prevent the paper insulation from burning or drying out unnecessarily.

- 11.5 After the ferrules have been rubbed smooth and clean, they and the exposed cores must be treated with hot cable oil (110°C) to remove all dust and moisture. These parts are to be thoroughly basted with the oil.
- 11.6 The jointer must take care that his hands are dry and clean before the joint is insulated. Also the insulating tape which is to be used must first be immersed in warm cable oil (110°C) for a sufficient period to ensure that no moisture is present.
- 11.7 After the individual cores have been installed they must be well basted with hot cable oil and again after the applicable separator and/or belt insulation tape is applied before the lead joint sleeve is placed in position.
- 11.8 The lead joint sleeve must be thoroughly cleaned and prepared before it is placed on the cable and must be kept clean during the whole jointing process. Seal the filling apertures of the sleeve with tape until the sleeve is ready for compound filling.
- 11.9 The plumbing joints employed to solder the joint sleeve to the cable sheath, must be cooled off with tallow and the joint sleeve is to be filled with compound while it is still warm. Top up continuously until the joint is completely filled to compensate for the compound shrinkage.
- 11.10 The outer joint box must be clean and free from corrosion. After it has been placed in position it must be slightly heated before being filled with compound. Top up until completely full.
- 12. As far as cable end boxes are concerned the requirements as set out above are valid where applicable.

## 16. DISTRIBUTION BOARDS

In addition to clause 14 and clause 15 of Part 1 of this specification the following shall also be applicable to switchboards required for this service.

The Contractor shall supply and install the distribution boards as indicated on the drawings and listed in the

distribution Board Schedule. All distribution boards shall comply with the quality specification in Part 3 of this specification, and be approved by the Employer's Electrical Engineer.

The following types of distribution boards are required for the service:

***[All buildings and the types of boards required for the service must be listed.***

***The latest Departmental Quality Specification Section for Distribution Boards must be included in Part 3 of the specification.]***

## **17. SUBSTATION**

- 17.1 GENERAL SUB-STATION WORK
- 17.2 SUB-STATION EARTHING
- 17.3 CONTRACTOR'S RESPONSIBILITY

## **18. SCHEDULE OF LIGHT FITINGS**

**The Departmental Quality Specification for the relevant luminaires must be included in Part 3 of the specification.**

The light fittings and accessories are to be according to the quality specifications in Part 3 and shall be approved by the Employer.

Type A: Industrial 40W LED surface mounted channel luminaire with mid-power LED strip complete with diffuser colour 4000K with SANS approved mark.

Type B: Industrial 2 x 40W LED surface mounted channel luminaire with mid-power LED strips complete with diffuser colour 4000K with SANS approved mark.

Type C: Decorative 2 x 40W LED office luminaire with mid-power LED strips and low brightness double parabolic diffuser colour 4000K with SANS approved mark.

Type D: 53W wall/pole/stirrup mounted LED bulkhead luminaire with corrosion resistant aluminium housing and high impact UV resistant polycarbonate protector for LED's, IP66 with optimal photometric performance and flexible combinations of LED arrays, colour 4000K.

## **19. SCHEDULE OF POWER POINTS**

<b>BOARD</b>	<b>OWER POINT</b>	<b>TYPE</b>	<b>SIZE OF CABLES, CONDUIT AND WIRING</b>	<b>LOAD WATTS</b>
MDB	PP1	150 liter	20mm dia. conduit with 2 x 4mm <sup>2</sup> conductors and 2,5mm <sup>2</sup> earth wire	3000
	PP2	4 plate electric stove	25 mm dia. conduit with 2 x 10mm <sup>2</sup> conductors and 6mm <sup>2</sup> earth wire	9000
DB-A	PP3	350 liter water heater	25 mm dia. conduit with 4 x 4mm <sup>2</sup> conductors and 2,5mm earth wire	3 x 3000
DB-C	PP1	Petrol pump	4mm <sup>2</sup> 2-core PVCA cable with 4mm <sup>2</sup> earth wire	1000

## 20. SCHEDULE OF CABLES, CONDUIT AND WIRING

Supply, install and connect the following cable, conduit and wiring:

FROM	TO	SIZE AND TYPE	LOAD (kVA)
Meter box Normal Power	MDB	70mm <sup>2</sup> 4-core PVCA cable and 35mm <sup>2</sup> earth wire	114
MDB Normal Power	DB-A	25mm <sup>2</sup> 4-core PVCA cable and 16mm <sup>2</sup> earth wire	50
MDB Normal Power	DB-B	16mm <sup>2</sup> 4-core PVCA cable and 10mm <sup>2</sup> earth wire	36
MDB Normal Power	DB-X	25mm dia. conduit with 4 x 6mm <sup>2</sup> conductors and 4mm <sup>2</sup> earth wire	10
DB-X Standby Power	MDB	25mm dia. conduit with 4 x 6mm <sup>2</sup> conductors and 4mm <sup>2</sup> earth wire	-
MDB Standby Power	DB-C	4mm <sup>2</sup> 4-core PVCA cable and 4mm <sup>2</sup> earth wire	7
DB-C Standby Power	PP1	4mm <sup>2</sup> 4-core PVCA cable and 4mm <sup>2</sup> earth wire	1

## 21. SCHEDULE OF DISTRIBUTION BOARDS

The front panels of normal supply, standby power and no-break supply sections shall be painted in distinctive colours as follows:

Normal supply : Light Orange, colour B26 of SANS 1091.  
 Standby power : Signal Red, colour A11 of SANS 1091.  
 No-break supply: Dark Violet, colour F06 or Olive Green,  
 Colour H05 of SANS 1091.

Indicated is the probable fault level rating (kA) of the busbars. Refer to the Summary of Switchgear and Circuits for the minimum fault level rating of specified equipment.

BOARD	TYPE	PANEL	FAULT LEVEL	LOAD kVA
MDB	Floor standing, without door	Normal power	10	114
		Standby power	2,5	10
DB-A	Surface, with door	Normal power	5	50
DB-B	Flush, without door	Normal power	2,5	36
DB-C	Weather-proof	Standby power	2,5	8

## 22. SUMMARY OF SWITCHGEAR AND CIRCUITS

The indicated fault current rating (kA) is the minimum value that the switchgear must comply with for connecting to the busbars of the respective panels-distribution boards.

**MAIN DISTRIBUTION BOARD : MDB**

**PANEL - 1 : NORMAL POWER**

Main switch : 200A three pole 10kA circuit breaker.  
 Distribution board – A : 100A three pole 10kA circuit breaker.  
 Distribution board – B : 60A three pole 10kA circuit breaker.  
 10kVA Standby plant : 30A three pole 10kA circuit breaker.

**PANEL-2 : NORMAL POWER**

Local main switch: 60A three pole isolator  
 Lighting circuits 1-3: 3 x 10A one pole 5kA circuit breakers.  
 Socket outlets : 3 x 60A two pole 30mA single-phase earth leakage relays, and 10 x 20A Single pole 5kA circuit breakers.

Circuits P1 to P10

Water heater PP1 20A two pole 5kA circuit breaker.

4 Plate stove PP2 40A single pole 5kA circuit breaker.

**PANEL – 3 : STANDBY POWER**

Local main switch 30A three pole 5kA circuit breaker.  
 Distribution Board-C : 20A three pole 5kA circuit breaker.  
 Lighting circuits x 4 & x 5 : 2 x 10A single pole 5kA circuit breakers.  
 Socket outlets Circuit x P11 : 40A two pole 30mA single phase earth leakage relay, and 1 x 20A single pole 5kA circuit breaker.

***[Socket outlets circuits (P) must be controlled by 60A two pole 30mA single phase earth leakage relay and 20A single pole 5kA circuit breakers. With a maximum of 5 circuits (10 plugs) per earth leakage relay.]***

**MDB: PANEL-2: POWER**

CIRCUIT NO.	FITTING NO.	TYPE OF FITTING	QTY	LOAD EACH (W)	LOAD TOTAL (W)	MOUNTING
1	1-4	Type B	4	130	520	Ceiling
	5-8	Type A	4	100	400	Ceiling
2	1,3	Type D	2	8	16	Wall 2,8m above floor level
	2,4,6	Type D	3	65	195	Tie beam
	5,7	Type D	2	300	600	Ceiling
	8	Type C	2	130	260	Ceiling
3	1,2,5,6	Type D	4	65	260	Tie beam
	3,4,7,8	Type B	4	130	520	Ceiling
P1-P4	1,2	Socket outlets	8	500	4 000	Wall, 0,4m above floor
P5-P7	1,2	Socket outlets	6	500	3 000	Wall, 1,4m above floor
P8-P10	1,2	Socket outlets	6	500	3 000	Power skirting 1,2m above floor
PP1	1	150 l Water heater	1	3 000	3 000	See power points
PP2	1	4 Plate stove	1	9 000	9 000	See power points

**MDB: PANEL 3: STANDBY POWER**

CIRCUIT NO.	FITTING NO.	TYPE OF FITTING	QTY	LOAD EACH (W)	LOAD TOTAL (W)	MOUNTING
X4	1-8	Type A	8	100	800	Ceiling
X5	1-8	Type D	8	100	800	Wall 2,8m above floor level
XP1-XP4	1,2	Socket outlets	2	500	1 000	Wall, 0,4m above floor

**PART 3: QUALITY SPECIFICATION FOR MATERIALS AND EQUIPMENT OF ELECTRICAL INSTALLATIONS**

*“Part 3: Quality specification for materials and equipment” manual of the Department of Public Works is applicable for this Contract and the manual can be obtained from the Department of Public Works.*

*[ONLY ITEMS OF MATERIAL applicable to the Contract must be included in Part 3]*

**CONTENTS**

<u>CLAUSE</u>	<u>DESCRIPTION</u>	<u>PAGE</u>
1.		
1.1		
1.2		
1.3		
1.4		
1.5		
1.6		
1.7		
2.		
2.1		
2.2		
2.3		
2.4		

**ADDITIONAL REQUIREMENTS OR SPECIFICATIONS NOT COVERED IN QUALITY SPECIFICATIONS ABOVE**

**LED LIGHTS**

All Light fittings installed for this project is to be of the LED type, unless otherwise stated.

The following international standard specifications and South-African Bureau of Standards shall apply to the LED luminaire specification:

SANS 475	Luminaires for interior lighting, street lighting and floodlighting – Performance and requirements
SANS 10114-1	Interior lighting part 1: Artificial lighting of interiors
SANS 10114-2	Interior lighting part 2: Emergency lighting
SANS 60598-1	Luminaires part 1: General requirements and tests
SANS 60598-2.1	Luminaires part 2: Particular requirements section 1 – Fixed general purpose luminaires.
SANS 60598-2.2	Luminaires part 2: Particular requirements section 2 – Recessed luminaires.
SANS 60598-2.3	Luminaires part 2: Particular requirements section 3 – Luminaires for road and street lighting.
SANS 60598-2.5	Luminaires part 2: Particular requirements section 5 – Flood lighting.
SANS 61347-1 to 13	Lamp control gear
SANS 62031	LED modules for general lighting – Safety specifications

SANS 62384	DC or AC supplied electronic control gear for LED modules – Performance requirements.
SANS 62560	Self-ballasted LED lamps for general lighting services with supply voltages > 50V – Safety specification.
SANS 62612	Self-ballasted LED lamps for general lighting services with supply voltages > 50V – Performance requirements
EN 55015	Limits and methods of measurement of radio disturbance of electrical lighting or equipment.
EN 61000-3.2	Electromagnetic compatibility (EMC) limits for harmonic current emissions.
EN 61000-3.3	Electromagnetic compatibility (EMC) limits – Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems.
EN 61547	Equipment for general lighting purposes: EMC immunity requirements.
IEC-EN 62471	Photo biological safety of lamps and lamp systems for LEDs
IES LM-79-08	Approved method: Electrical and photometric measurement of solid-state lighting products.
IES LM-80	Approved method: Measuring lumen maintenance of LED light sources.

#### General requirements:

The luminaire shall be suitable for operation with mid-power LEDs. **Note that no LED tubes are allowed to be used.**

The luminaire shall be suitable for operation on a 230V single phase 50Hz mains supply.

Power factor capacitors shall be supplied to correct the power factor to at least 0.95 or higher.

The luminaire shall be marked with identification labels stating the brand name and model and shall bear the SANS approval mark.

The driver shall comply with IEC 61347-1 and IEC 61347-2B as applicable and shall be suitable for operation on 230V +/-10%, 50Hz single phase system and it must be insured that harmonics filter is provided as per SANS 61000-3-2. The drivers and LED circuitry shall be protected against lighting and power surges. Suitable surge arrestors with a 10kA rating shall be provided for indoor installations and 20kA for outdoor installations.

Colour rendering (Ra) shall be not less than 80 and lumen depreciation of not more than 30% L70 at 50 000 hours @ Tq 25°C. Colour temperature of the LED lamp shall be 4000K, unless otherwise stated.

#### Thermal requirements:

The luminaire must be able to withstand an ambient temperature of 35°C. Storage temperature of this luminaire should be able to handle -40°C < T < 60°C.

To this end internal electrical and mechanical components shall not be allowed to exceed their maximum temperature ratings of 75°C. Test reports from an independent authorised testing facility proving this requirement shall be made available on request.

Noise requirements:

The noise level emitted from the luminaire shall be kept as low as possible. Drivers/electronic components shall therefore fully comply with the latest edition of SANS 55015.

**= END OF SPECIFICATION =**

#### **PART 4: BILLS OF QUANTITIES**

**Electrical, mechanical and/or any other engineering work must be measured by the quantity surveyor and must be prepared in accordance with the latest edition of the Standard System of Measuring Building Work.**

**No additional provision for Preliminaries may be included in the engineering sections of the bills of quantities.**

**Bills of Quantities are included in part C2.2 of the tender document.**

**PART 5: ELECTRICAL WORK MATERIAL SCHEDULE**

The Contractor shall complete the following schedules and submit them to the Electrical Engineer within 21 days of the date of the acceptance of the tender.

The schedules will be scrutinised by the Electrical Engineer and should any material offered not comply with the requirements contained in the specification, the Contractor will be required to supply material in accordance with the contract at no additional cost.

**NB: Only one manufacturer's name to be inserted for each item.**

Item	Material	Make or trade name	Country of origin
1.	Distribution boards		
2.	Circuit breakers 1P, 2P, 3P		
3.	On load isolators without trips		
4.	Contactors 1P, 2P, 3P		
5.	Earth leakage relays 1 & 3 phase		
6.	H.R.C. fuse switches		
7.	Kilowatt hour meter		
8.	Current transformers		
9.	Voltmeter		
10.	Maximum demand ammeter		
11.	Daylight sensitive switch		
12.	Time switch		
13.	Conduit		
14.	Conduit boxes		
15.	Power skirting		
16.	Surface switches		
17.	Watertight switches		
18.	16A flush socket outlets		
19.	16A surface socket outlets		
20.	16A watertight socket outlets		
21.	Fluorescent luminaires		
22.	Type A		
	Type B		
	Type C		
	Type D		
	Etc.		
23.	Bulkhead fittings: Type F		
24.	Spherical fittings: Type G		
25.	4 plate stove		
26.	Convection heater		
27.	Fan heater		
28.	Fans		
29.	Clocks		
30.	PVCA cable		
31.	Cable trays		

## **PARTICULARS OF ELECTRICAL CONTRACTOR**

Note to consultants

Please ensure that DPW -22(EC) Particulars of electrical contractor is inserted in main tender document.

## **PART 6: DRAWINGS**

### **NOTE TO CONSULTANTS**

**List all drawings**

## **Part C4: Site Information**

# **C4 Site Information**

## PG-03.1 (EC) SITE INFORMATION – GCC (2010) 2<sup>nd</sup> Edition 2010

Project title:	<b>PHALABORWA 524: UPGRADING OF KITCHEN AND INSTALLATION OF KITCHEN EQUIPMENT</b>			
Tender no:	PLK23/01	WCS no:		Reference no: 6017/0612

### C4 Site Information

*The Site Location is*

**Phalaborwa 524 Signal Military Base, approximately 9 km West of Phalaborwa Town along R71**

**GPS CORDINATES 23°54'6.36"S, 31°6'41.56"E**

**Average Temperatures are the area vary from 25 to 30°C - Due care should be taken for staff working outside to be well hydrated with sufficient sun protective items that do not interfere with the general safety and protective ware**

**The Site is a Military base therefore access to the site is scheduled with the Client onsite**

**Moderate Traffic can be expected as R71 is a main Highway for Phalaborwa residence and those accessing the Krugar National Park.**

**Site Facilities available are as follows;**

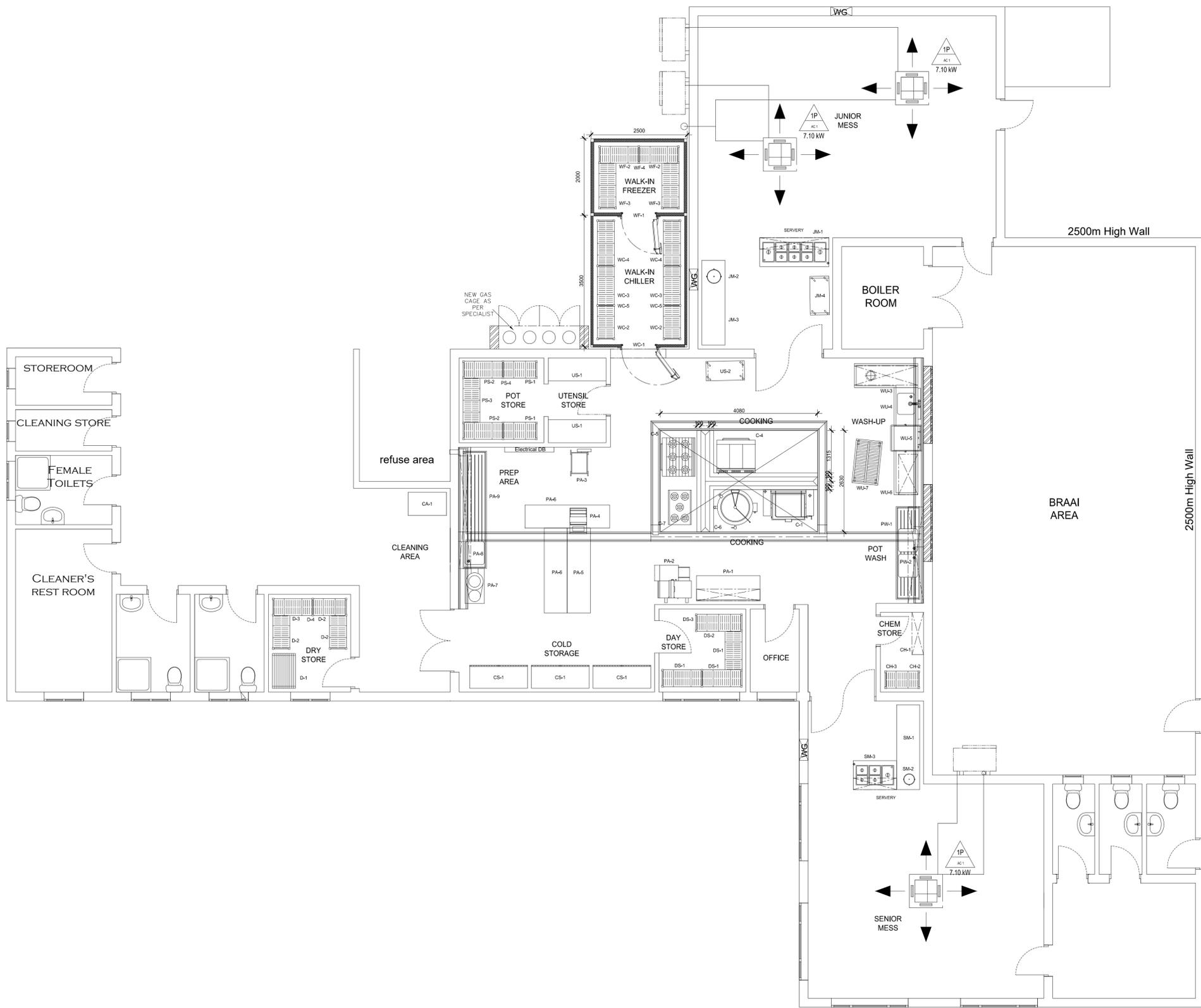
**Water, Electricity and Ablution Facilities.**

**There is no area or office that can provided as a "Site office" for the contractor therefore provision will have to be made for Site Office Establishment.**

**The Site also has very LIMITED storage for large items and therefore provision should be made for storage, ideally new equipment to be installed should arrive on a "just in time" basis to reduce the risk of damage, vandalism or theft prior to installation.**

**There will also be no accommodation on site; therefore, provision should be made for offsite accommodation. Due to the secure nature of the area, it is the contractor's responsibility that staff member enters and exit the site as a team unless extenuating circumstances arise that require staff member to leave site individually. This can be discussed with the client on site**

## **C5 Site Drawing(s)**



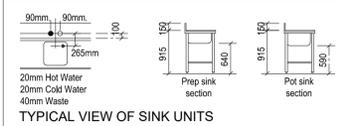
**GENERAL NOTES:**

- ANY ELECTRICAL, PLUMBING OR GAS CONNECTIONS.
- ALLOW MINIMUM 1200mm WIDE DOOR ACCESS FROM OUTSIDE FOR EQUIPMENT AND OTHER DOORS TO BE 860mm MIN CLEAR.
- ALL WORK TO BE CARRIED OUT IN ACCORDANCE WITH LOCAL AUTHORITIES' REQUIREMENTS BY LAWS, NATIONAL BUILDING REGULATIONS, AND RELEVANT S.A.B.S. OR OTHER STANDARDS.
- ALL DIMENSIONS SHOWN ARE FROM FINISHED LEVELS.
- NO DIMENSIONS ARE TO BE SCALED, SEE FIGURE DIMENSIONS.
- 20mm HOT AND COLD WATER TO ALL SINKS 1150mm AFFL.
- 40mm WASTE FROM ALL SINKS.
- NO WASTE FITTINGS OR PLUGS ARE SUPPLIED AS OUR STANDARD PRACTICE.
- ANY QUERIES OR DISCREPANCIES IN DIMENSIONS OR DETAILS ARE TO BE REPORTED TO VULCAN FOR CLARIFICATION.
- 15AMP TO EACH PLUG 1370mm AFFL SHOWN ALLOW A SEPARATE CIRCUIT BREAKER TO EACH PLUG.
- ALL 400V POINTS TO BE 3-PHASE PLUS NEUTRAL WITH EARTH.
- ISOLATORS AND STARTERS SUPPLIED AND POSITIONED BY ELECTRICAL CONTRACTOR.
- SERVICE POINTS SHOWN ARE RECOMMENDED POSITIONS.
- GAS REGULATORS SUPPLIED AND FITTED BY GAS CONTRACTOR.
- ALL UNITS ARE 915mm HIGH TO WORK SURFACE.
- THE MINIMUM RECOMMEND SILL HEIGHT IS 1500mm A.F.F.L.
- SPLASHBACKS TO BE 150mm HIGH WHERE SHOWN.

- COLDROOM & FREEZER**
- ALLOW ELECTRICAL CONNECTIONS AS SPECIFIED.
  - PROVIDE A SUITABLE WELL VENTILATED REMOTE AREA FOR COMPRESSOR UNITS. COMPRESSOR HOUSING TO BE NATURALLY OR MECHANICALLY VENTILATED OR ENSURE AMBIENT TEMPERATURE NOT EXCEEDING 32 DEGREES C.
  - COMPRESSOR HEAT OUTPUT .....BTU/HR.
  - ALLOW 100mm SLEEVES FOR GAS PIPES THROUGH WALLS.
  - ALLOW FOR ELECTRICAL CONNECTION AS SPECIFIED, TO CENTRAL DISTRIBUTION BOARD.

- EXTRACTION CANOPY**
- ALLOW 3PH 400V CONNECTION IN ROOF AND STARTER WITH SAFETY OVERRIDE SWITCH IN KITCHEN.
  - STARTER AND BULKHEAD LIGHTS TO BE PROVIDED BY ELECTRICIAN.
  - BUILDER TO SEAL DUCTING THROUGH CEILING, ROOF AND WALLS, AND TO SUPPLY AND INSTALL ALL FLASHING.

	SINGLE PHASE CONNECTION
	TWO PHASE CONNECTION
	THREE PHASE CONNECTION
	GAS CONNECTION
	HOT WATER CONNECTION
	COLD WATER CONNECTION
	DRAIN



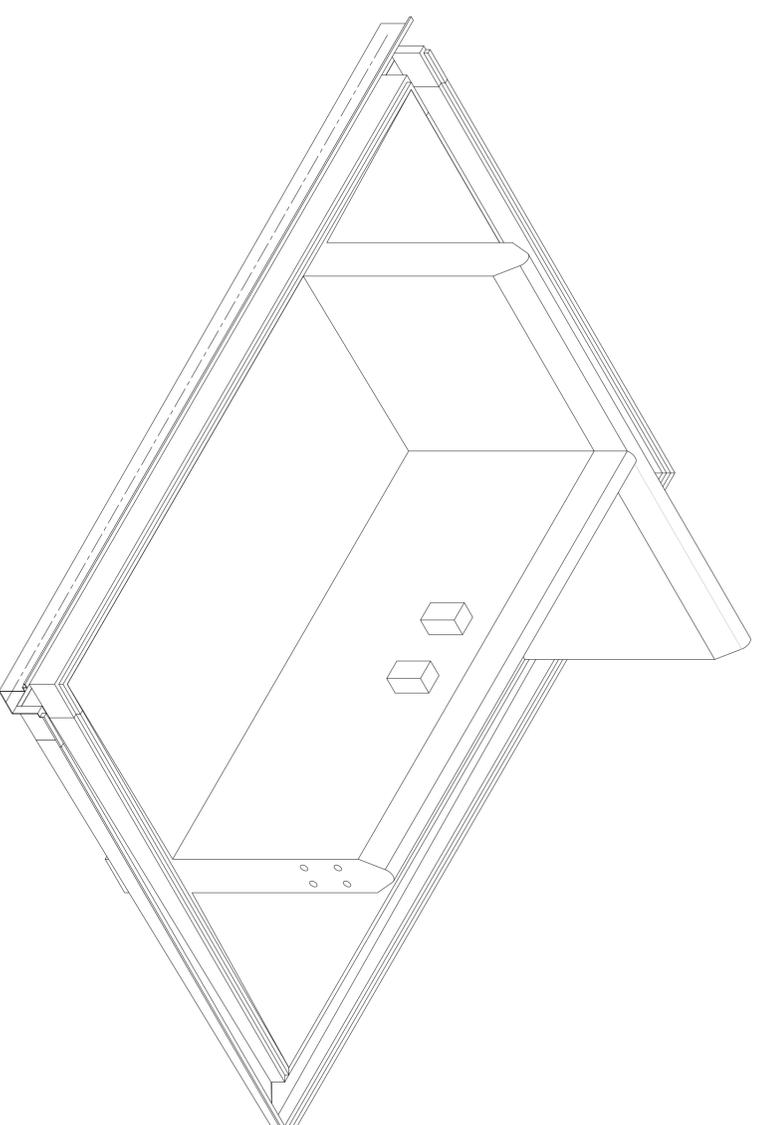
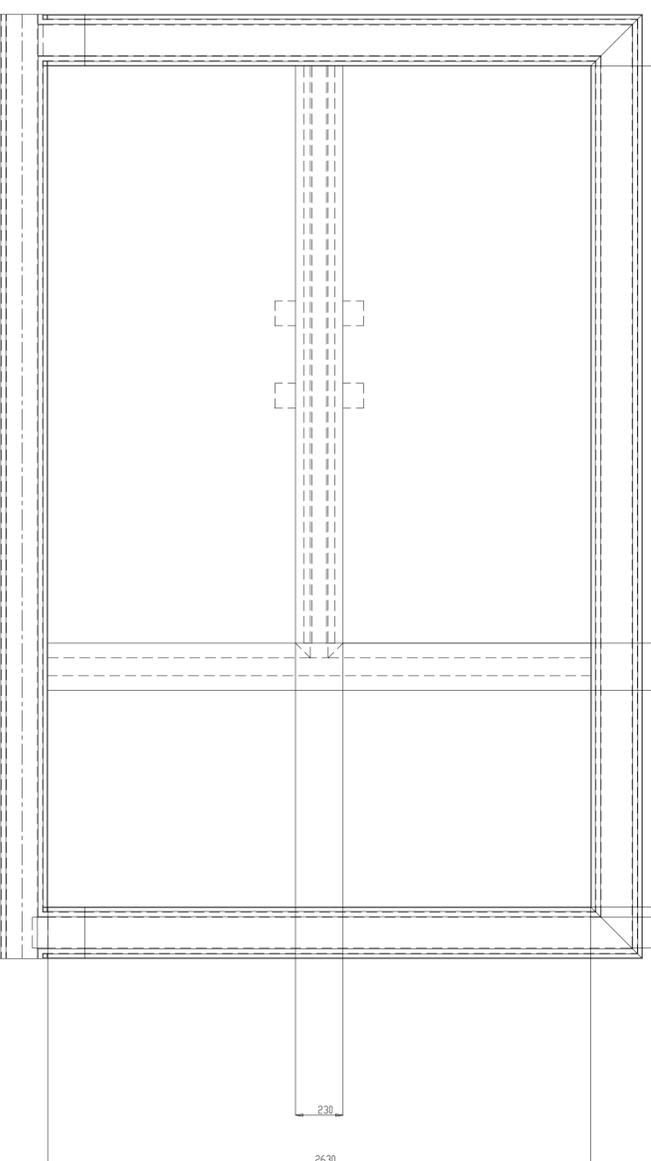
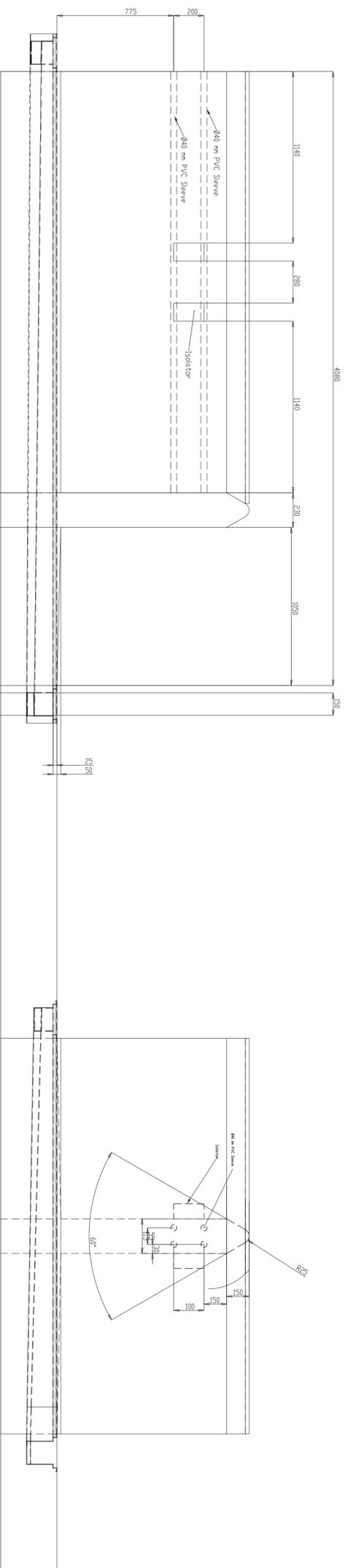
DESIGN STAGE	TRADE	TYPE OF DOCUMENT
DESIGN	KITCHEN	DRAWING

PROJECT  
**PHALABORWA 524 KITCHEN**

DRAWING  
**KITCHEN LAYOUT**

REV	DATE	DESCRIPTION OF NO. (DRAWING) REVISION	ISSUED FOR:
G			DISCUSSION <input checked="" type="checkbox"/>
F			QUOTATION <input checked="" type="checkbox"/>
E			REQUOTE <input checked="" type="checkbox"/>
D			DIMENSIONS <input checked="" type="checkbox"/>
C			SERVICES <input checked="" type="checkbox"/>
B			PRODUCTION <input checked="" type="checkbox"/>
A			PERSPECTIVE <input checked="" type="checkbox"/>

DOC NO:	-	DRAWN:	TM
SCALE:	1:50	CHECKED:	LM
PATH/FILE NAME:		TYPE:	EQUIPMENT
PAGE:	1 OF 1	DRAWING NO.:	
CLIENTS SIGNATURE:		REV:	C



No.	DATE	AMENDMENT	BY/IN

Completed under the  
Department of Water Affairs

Project Name: \_\_\_\_\_

Client Name: \_\_\_\_\_

Project Address: \_\_\_\_\_

Project Start Date: \_\_\_\_\_

Project End Date: \_\_\_\_\_

Project Manager: \_\_\_\_\_

Project Engineer: \_\_\_\_\_

Project Designer: \_\_\_\_\_

Project Drafter: \_\_\_\_\_

Project Checker: \_\_\_\_\_

Project Approver: \_\_\_\_\_

Project Name: \_\_\_\_\_

Client Name: \_\_\_\_\_

Project Address: \_\_\_\_\_

Project Start Date: \_\_\_\_\_

Project End Date: \_\_\_\_\_

Project Manager: \_\_\_\_\_

Project Engineer: \_\_\_\_\_

Project Designer: \_\_\_\_\_

Project Drafter: \_\_\_\_\_

Project Checker: \_\_\_\_\_

Project Approver: \_\_\_\_\_

**public works**

Department of Water Affairs  
Public Works SA (PWA/PSA)

**public works**

Department of Water Affairs  
Public Works SA (PWA/PSA)

**AEES consulting**

MECHANICAL ENGINEERING

PHALABORWA, 574. UPGRADE  
OF KITCHEN AND INSTALLATION  
OF KITCHEN EQUIPMENT

WC# number: 053691M

Project No: \_\_\_\_\_

Project Name: \_\_\_\_\_

Project Address: \_\_\_\_\_

Project Start Date: \_\_\_\_\_

Project End Date: \_\_\_\_\_

Project Manager: \_\_\_\_\_

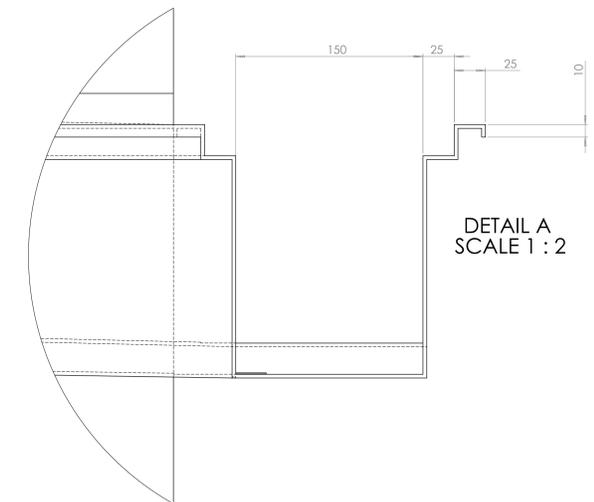
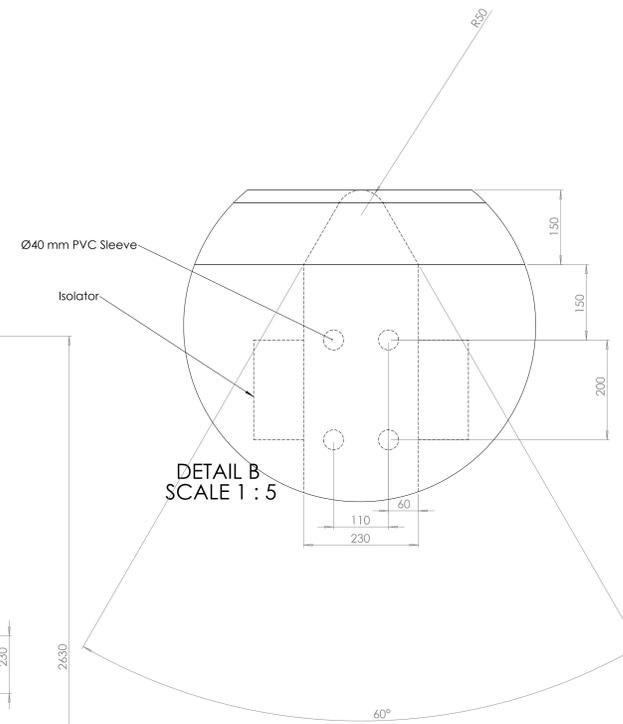
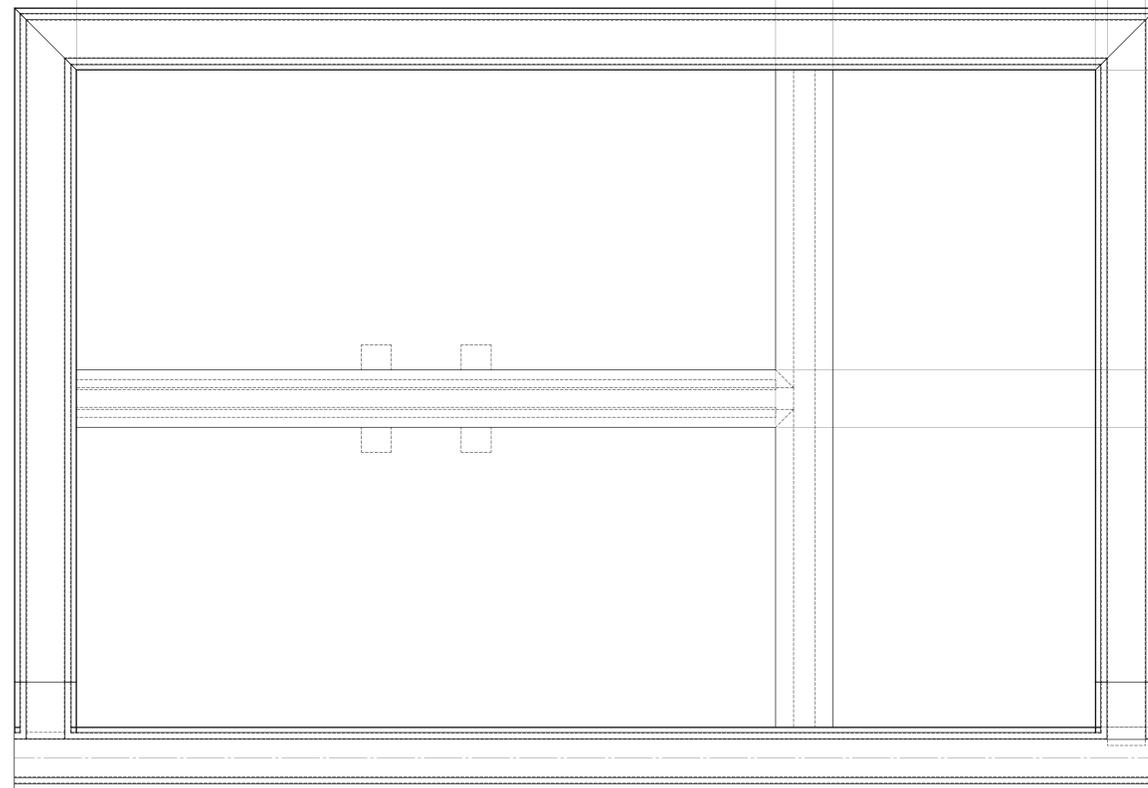
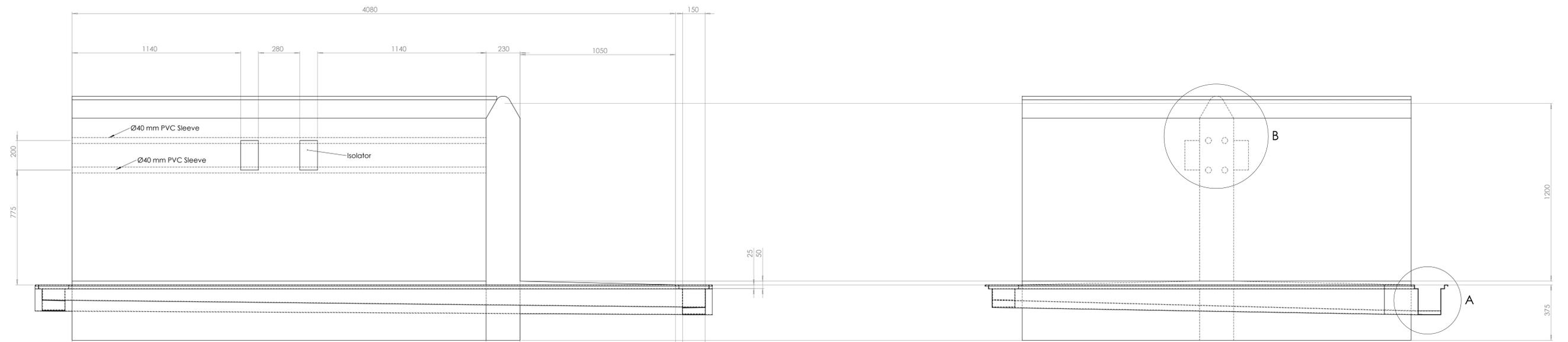
Project Engineer: \_\_\_\_\_

Project Designer: \_\_\_\_\_

Project Drafter: \_\_\_\_\_

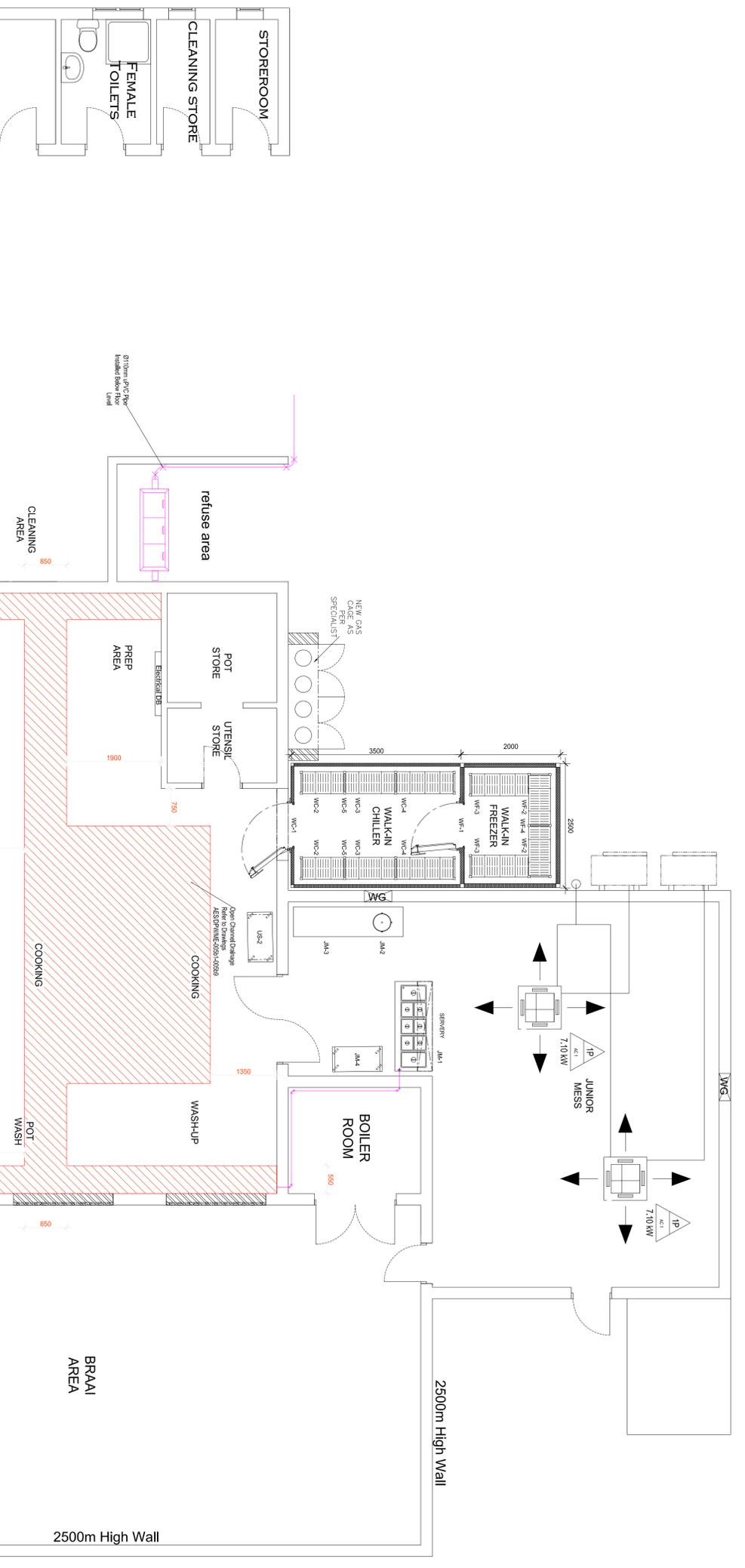
Project Checker: \_\_\_\_\_

Project Approver: \_\_\_\_\_

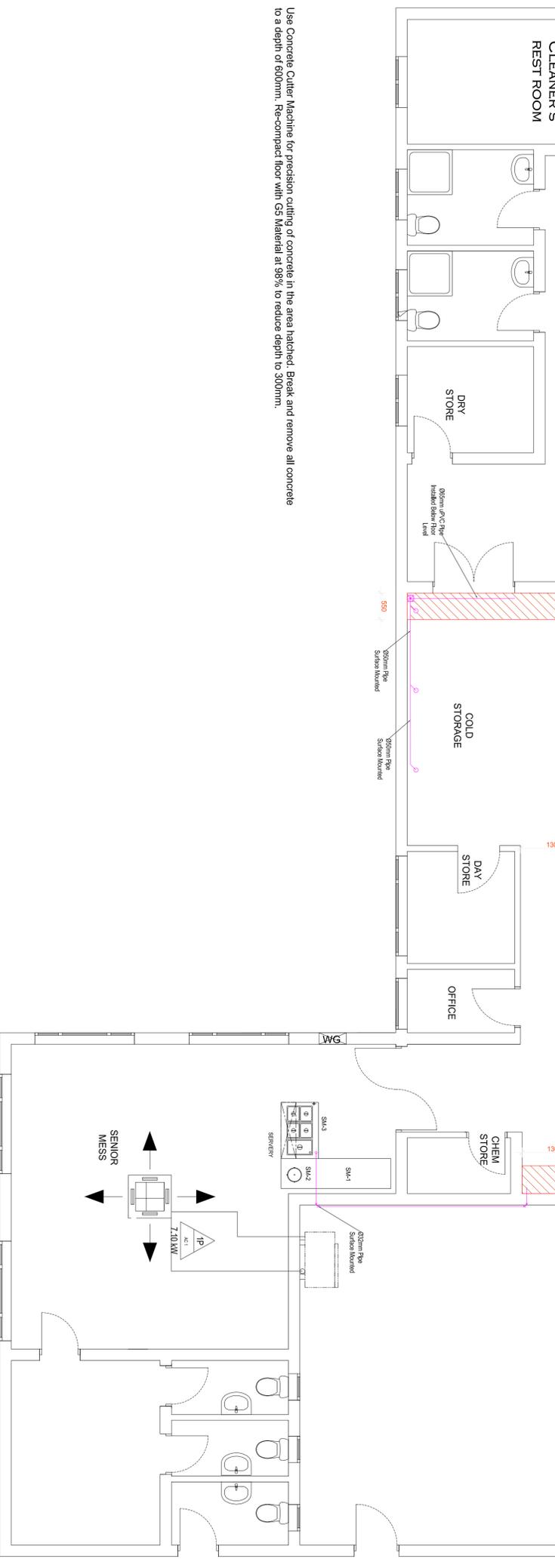


SCALE DIMENSIONS SPECIES		UNIT	SCALE AND	DO NOT SCALE DRAWING	REVISION
DIMENSIONS ARE IN MILLIMETRES			SCALE GROUP		
SURFACE FINISH					
MATERIAL					
NAME	SIGNATURE	DATE			FILE
DESIGN					
CHECK					
APPROVE					
MFC					
QA					
	MATERIAL				
	WEIGHT				

No.	DATE	AMENDMENT	BY/NO.



Use Concrete Cutter Machine for precision cutting of concrete in the area hatched. Break and remove all concrete to a depth of 600mm. Re-compact floor with G5 Material at 98% to reduce depth to 300mm.



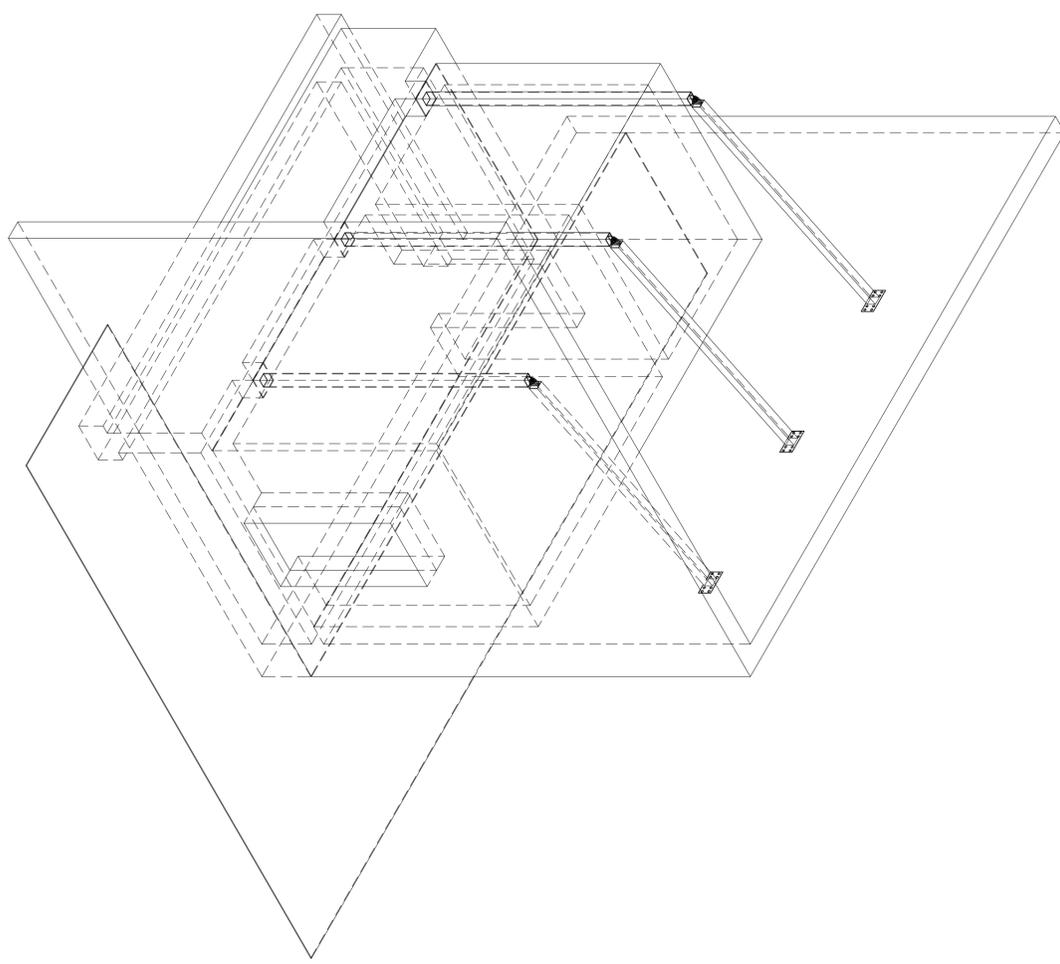
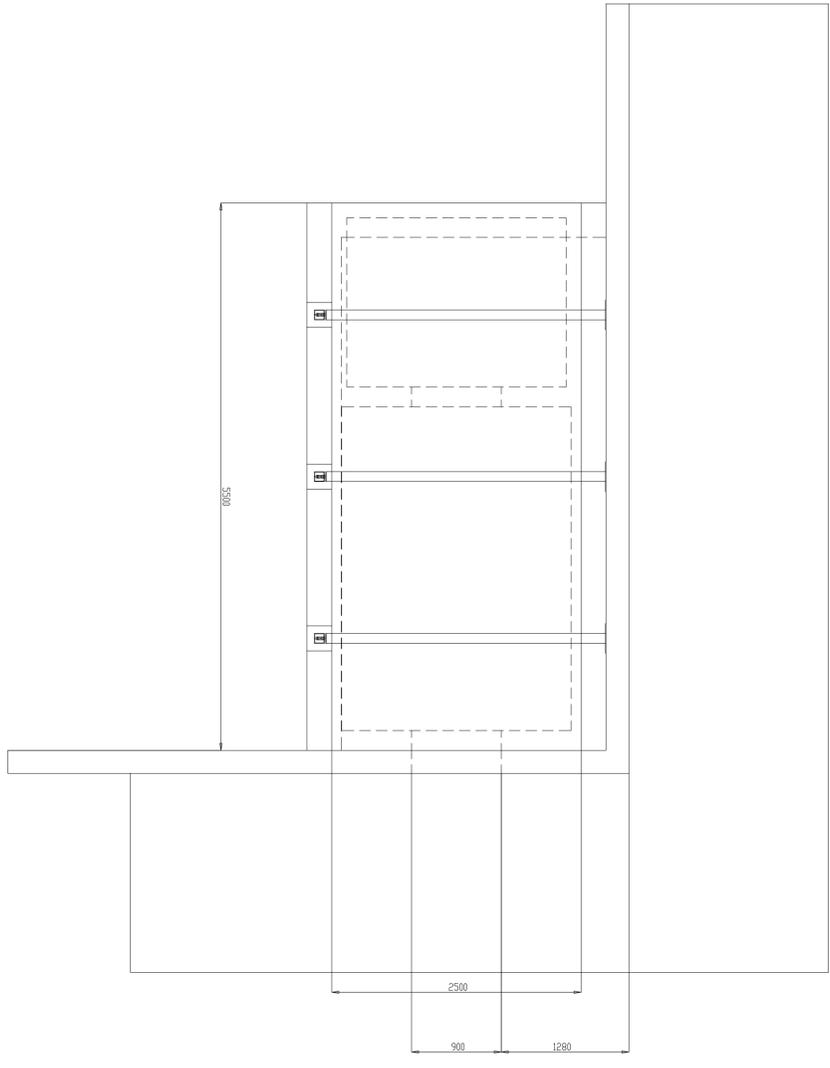
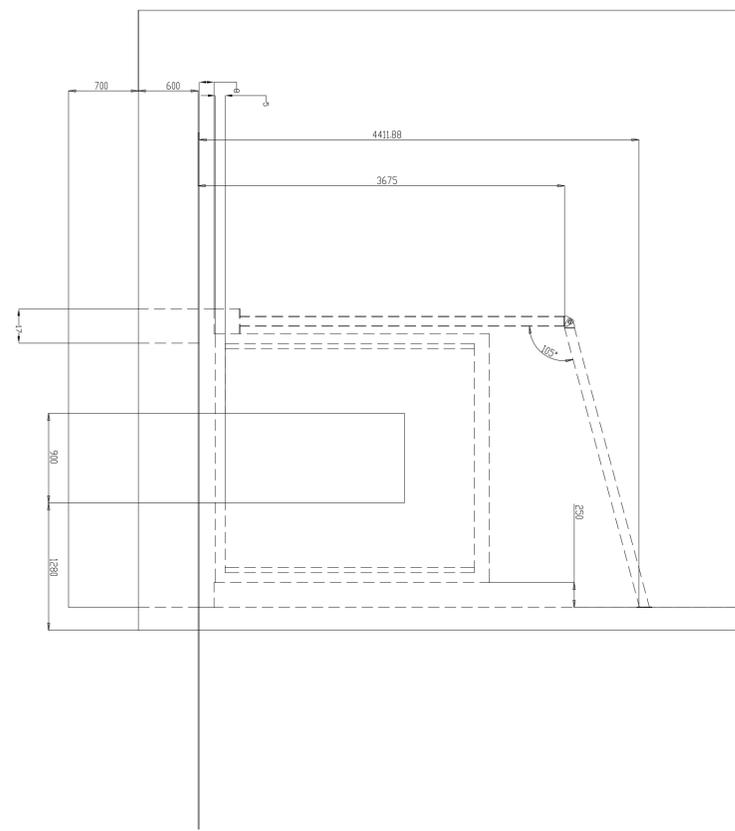
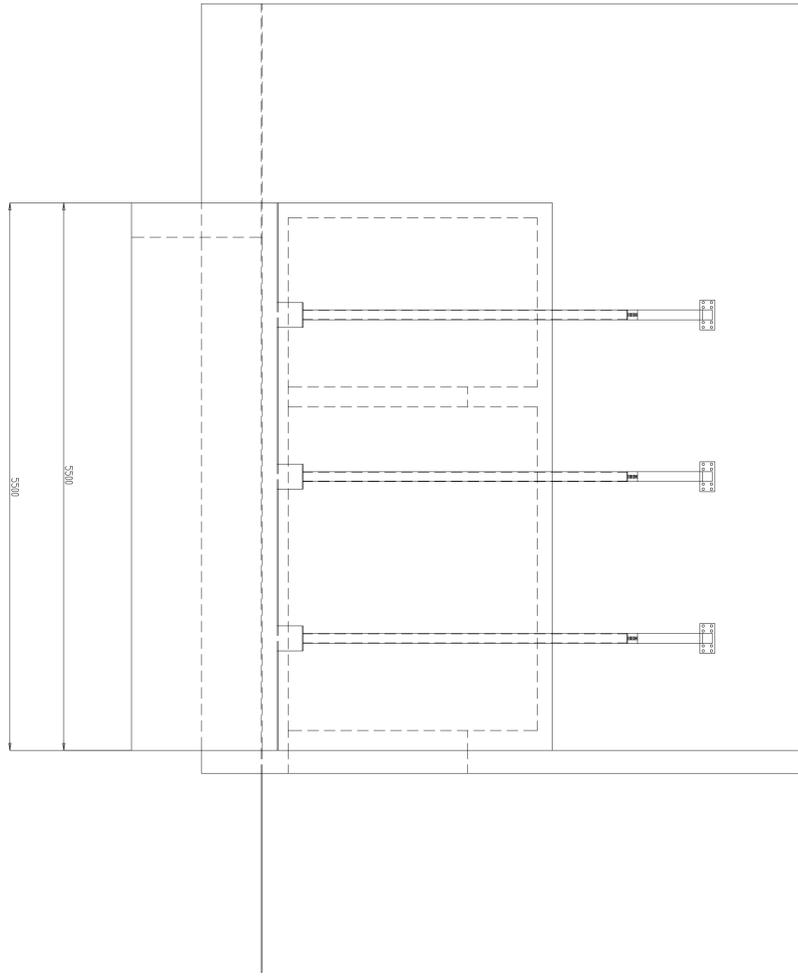
 <p><b>public works</b> Department of Defense Republic of South Africa</p>		<p>Contract No. <b>MEC/D/W/P-524 ME-0018 A 1</b></p>	
<p>Contract Title: <b>CONCRETE CUTTING</b></p>		<p>Contract Reference: <b>MEC/D/W/P-524 ME-0018 A 1</b></p>	
<p>Contract Value: <b>R 100 000 000</b></p>		<p>Contract Date: <b>15-Aug-2018</b></p>	
<p>Contract Status: <b>Completed</b></p>		<p>Contract Reference: <b>ECOSA 20100089</b></p>	
<p>Contract Reference: <b>ECOSA 20100089</b></p>		<p>Contract Reference: <b>ECOSA 20100089</b></p>	
<p>Contract Reference: <b>ECOSA 20100089</b></p>		<p>Contract Reference: <b>ECOSA 20100089</b></p>	

**AEES consulting**  
MECHANICAL ENGINEERING  
PHALABORWA 524: UPGRADING OF KITCHEN AND INSTALLATION OF KITCHEN EQUIPMENT

**CONCRETE CUTTING**  
WCS number: 053691M  
Contract No. 053691M

Author: J.C. MAREE  
Date: 30/07/2018  
Drawn: L.S. MAREE  
Checked: L.M.C. HARTZ  
Project Number: 053691M

NO.	DATE	AMENDMENT	D.P.M.

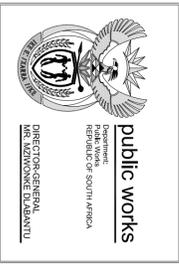


Copyright vests in the  
Department of Public Works

Scale drawings

certified mechanical drawings as per Council/Drawing Office  
Architectural/Structural/MECHANICAL REQUIREMENTS  
name: MAOCHANZI, P.G. E.T.19  
date: 15-AUG-2018  
professional registration no: ECSA\_201100089

sheet No: AES-DPW-r524 WE-003 page No: A | 1



consultant  
**AEES consulting**  
division: MECHANICAL ENGINEERING  
project: PHALABORWA 524: UPGRADE OF KITCHEN AND INSTALLATION OF KITCHEN EQUIPMENT

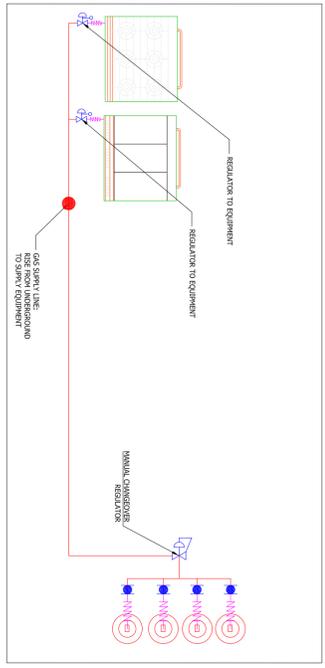
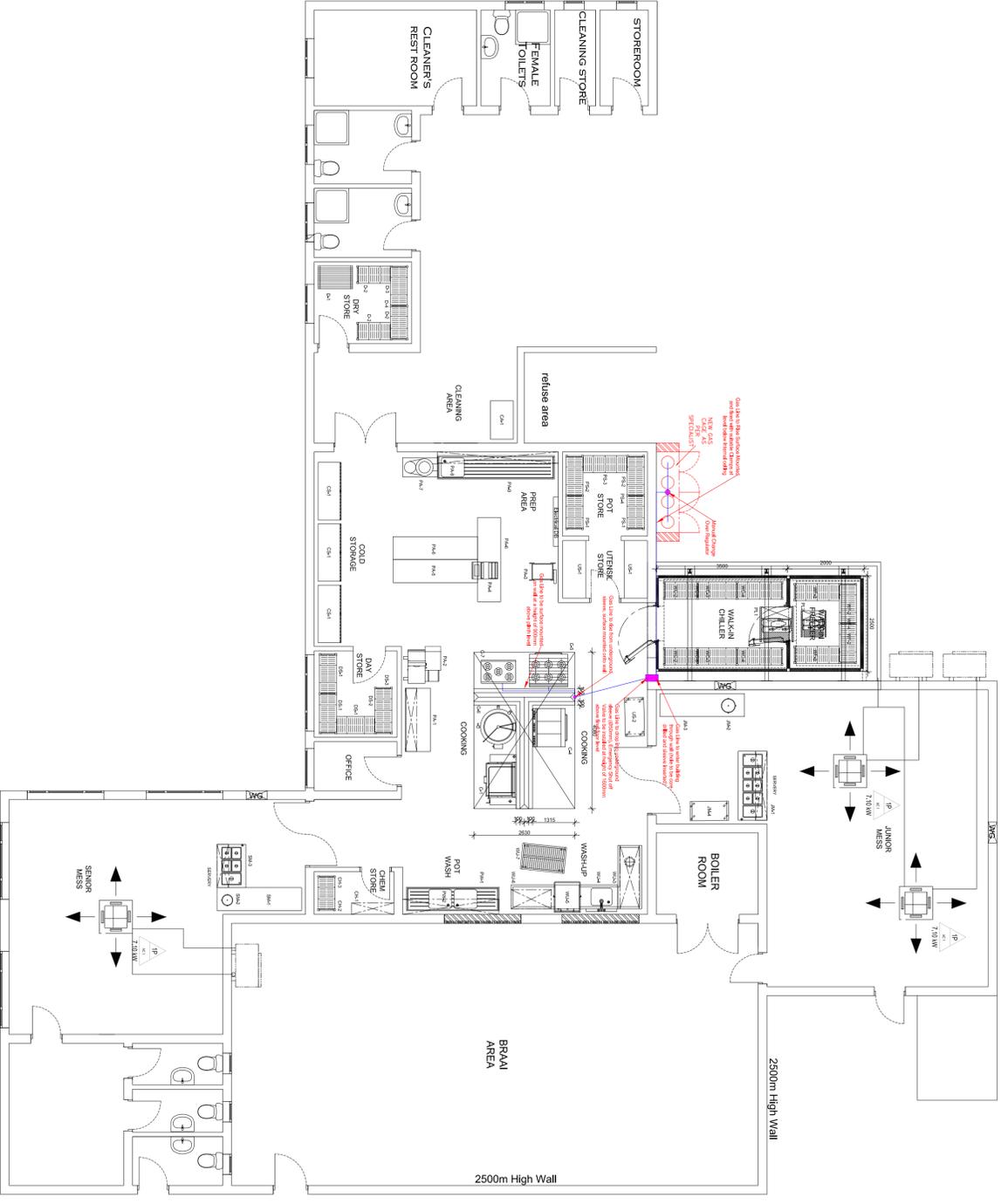
WCS number: 0536911M  
drawing No: REFRIGERATION ROOM  
date: 30/07/2018  
designed: T.C. VAN TO  
drawn: T.C. VAN TO  
checked: L.M. CHANZI  
DWG Drawing number:

No.	DATE	AMENDMENT	BY/IN

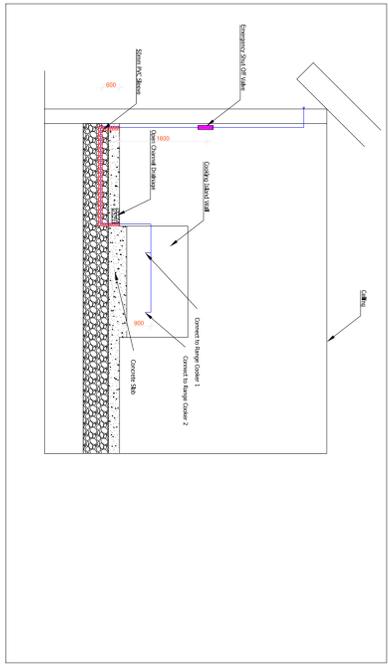
Complete name of the Department of Water Affairs  
 Project name:  
 Verified as being compliant with Confidentiality and  
 Access As-Surety to Damages Regulations  
 name: **L. MACHANZI, P. Eng**  
 date: **15-Aug-2018**  
 professional registration no: **ECOSA 20100089**  
 job title: **MECHANICAL ENGINEER**  
 A/C/S/D/W/P/P-524 ME-008 A 1

**public works**  
 Department of Public Works  
 REPUBLIC OF SOUTH AFRICA  
 PHEKISO JOHANNESBURG  
 MR. EDWINOCE EDWARDS  
 consultant  
**AEES consulting**  
 MECHANICAL ENGINEERING  
 PHALABORWA 524: UPGRADING OF KITCHEN AND INSTALLATION OF KITCHEN EQUIPMENT

WDS number: **053691M**  
 drawing title: **RK08UPPLAN PLAN**  
 scale: **1:50**  
 date: **30/07/2018**  
 designed: **I.C. MARGO**  
 drawn: **T.S. MARGO**  
 checked: **L.MACHANZI**  
 project manager:



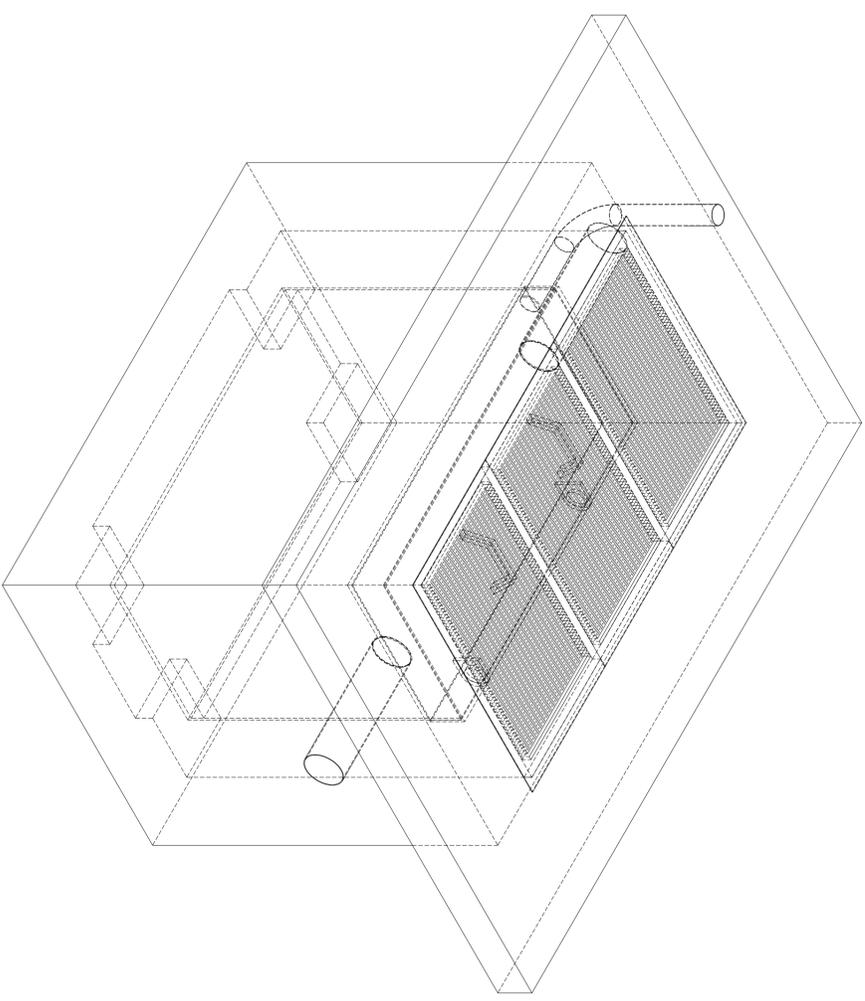
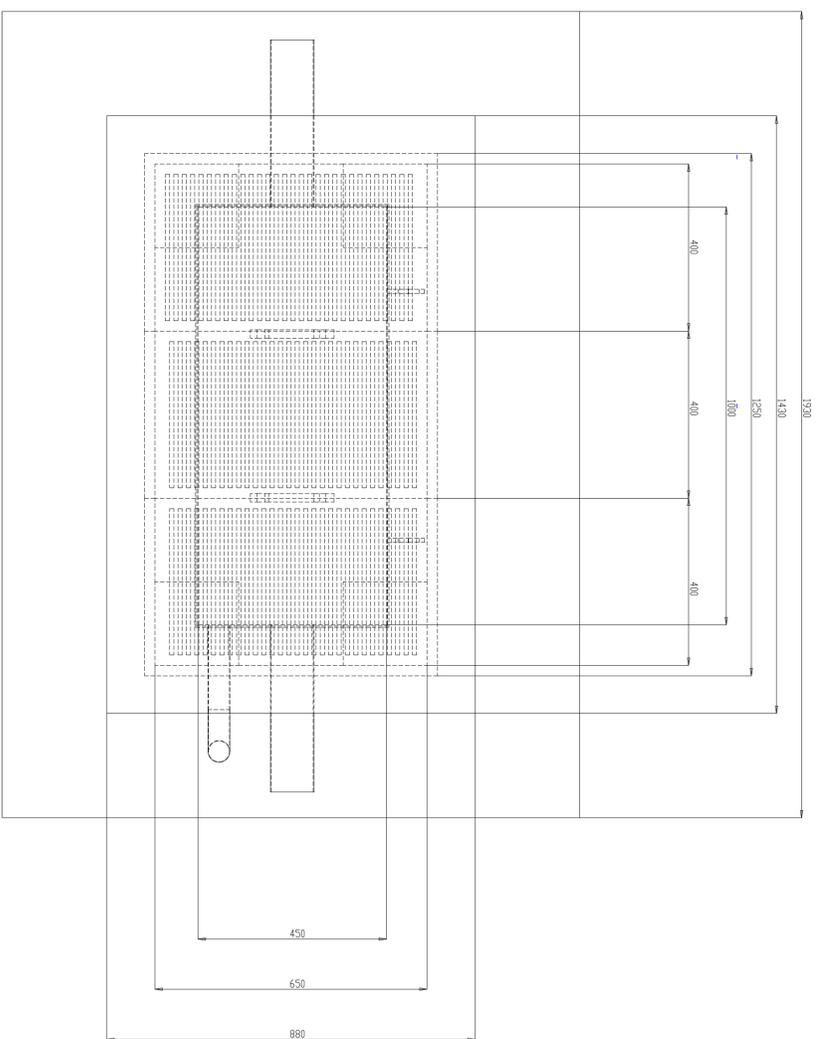
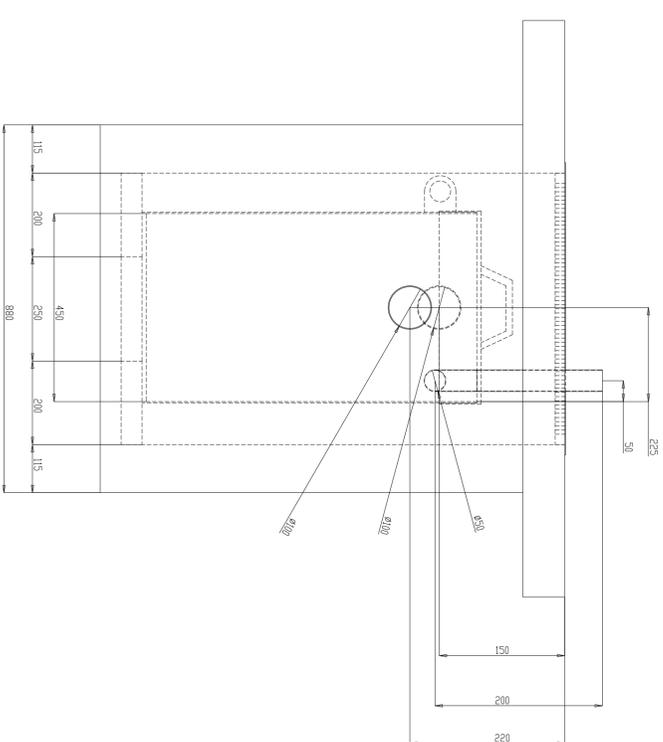
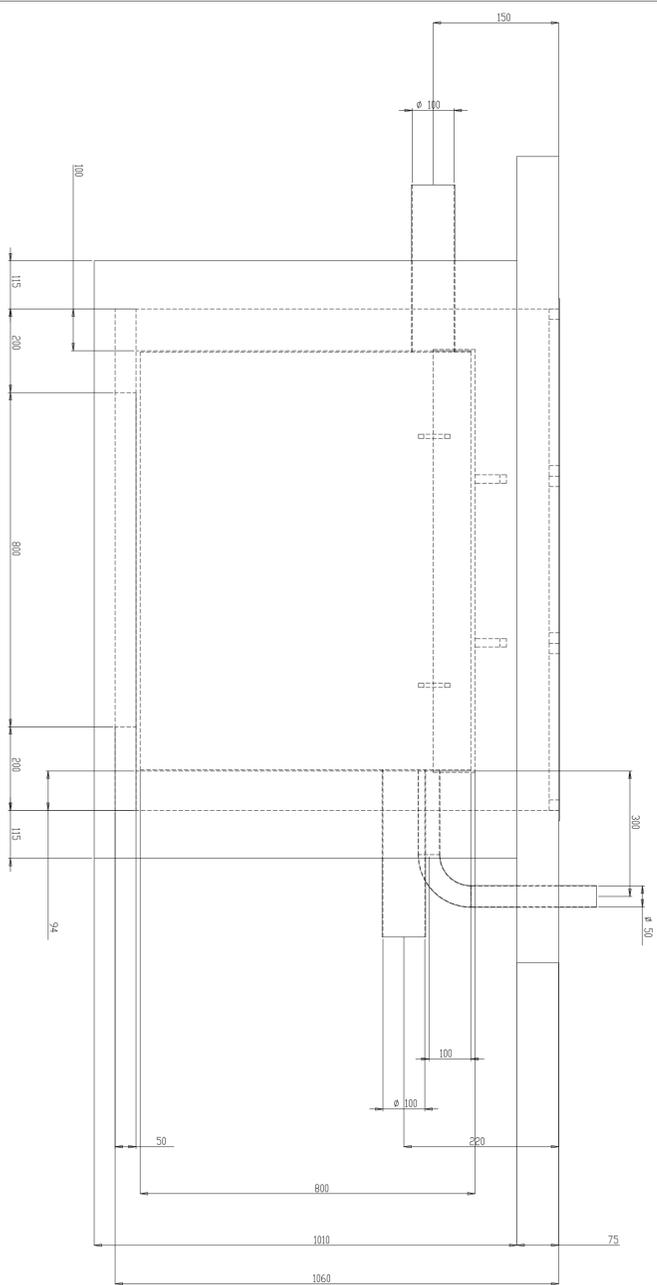
Detail 1: P and ID Diagram



Detail 2: Section







№. DATE AMENDMENT DRAW

Согласовано в ин. Департамент Мин. Вых.

Исполнитель

Удостоверенный специалист  
 L. MACHANZI, P. Eng.  
 № 15-Авг-2018  
 FCSA 20100082

№ документа  
 АС/ДР/П/Р-524 МС-004 А.1



PHLABORWA 524: UPGRADING  
 OF KITCHEN AND INSTALLATION  
 OF KITCHEN EQUIPMENT

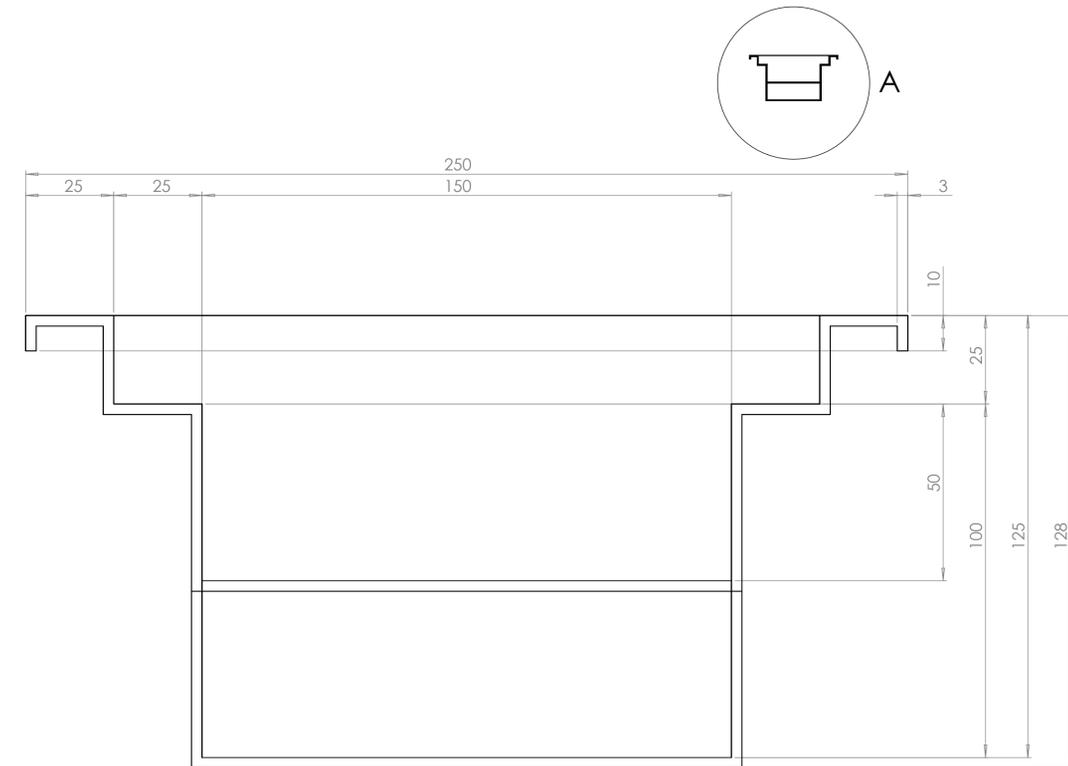
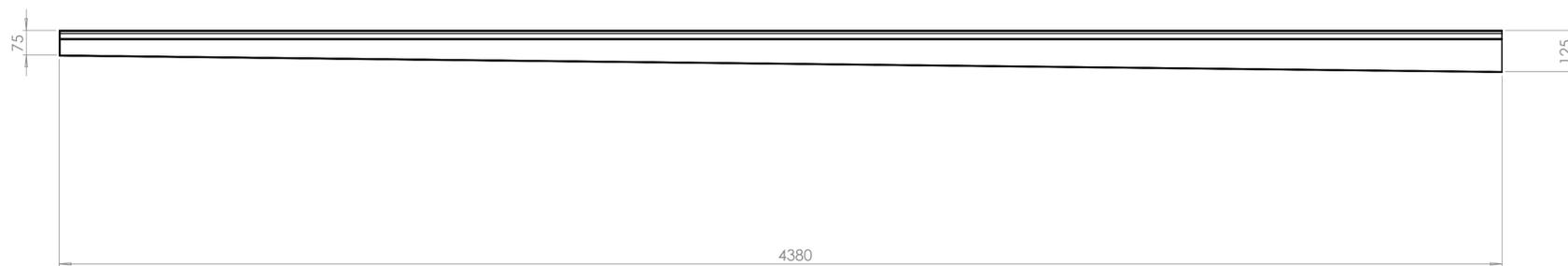
№ документа  
 053691M

ОБЪЕКТ  
 GREASE TRAP

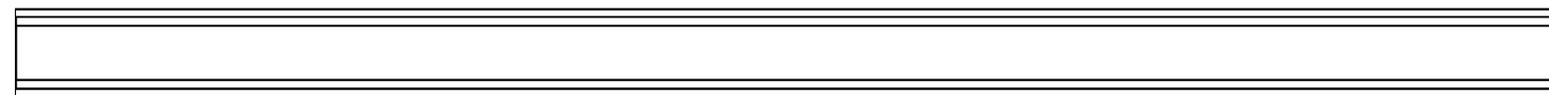
Исполнитель  
 L. MACHANZI  
 № 15-Авг-2018  
 FCSA 20100082



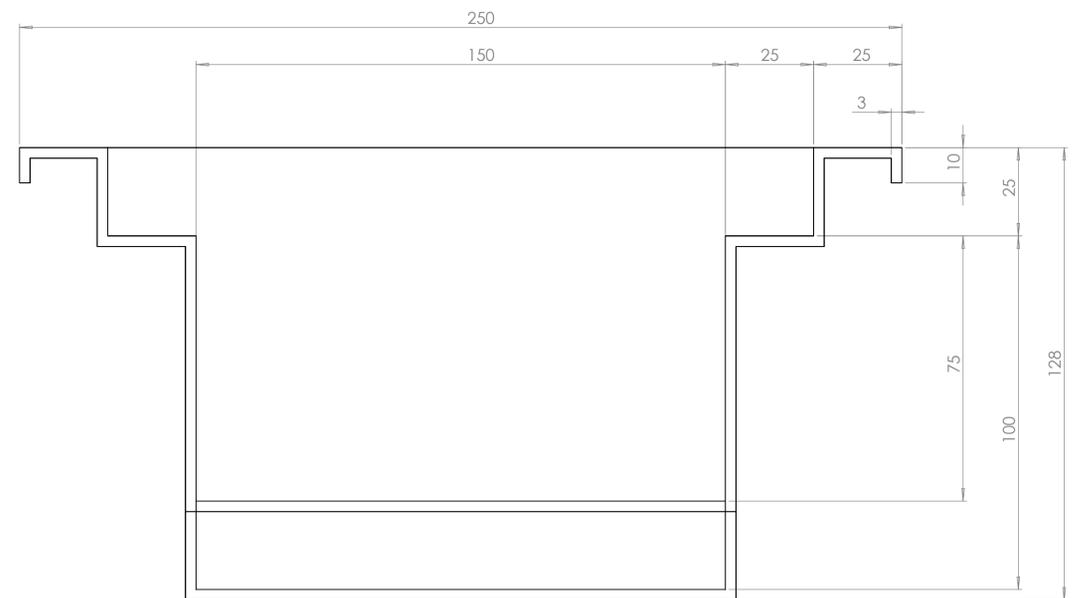
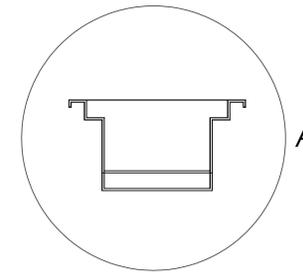




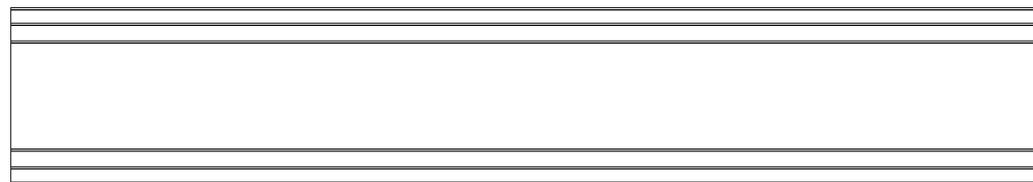
DETAIL A  
SCALE 1 : 1



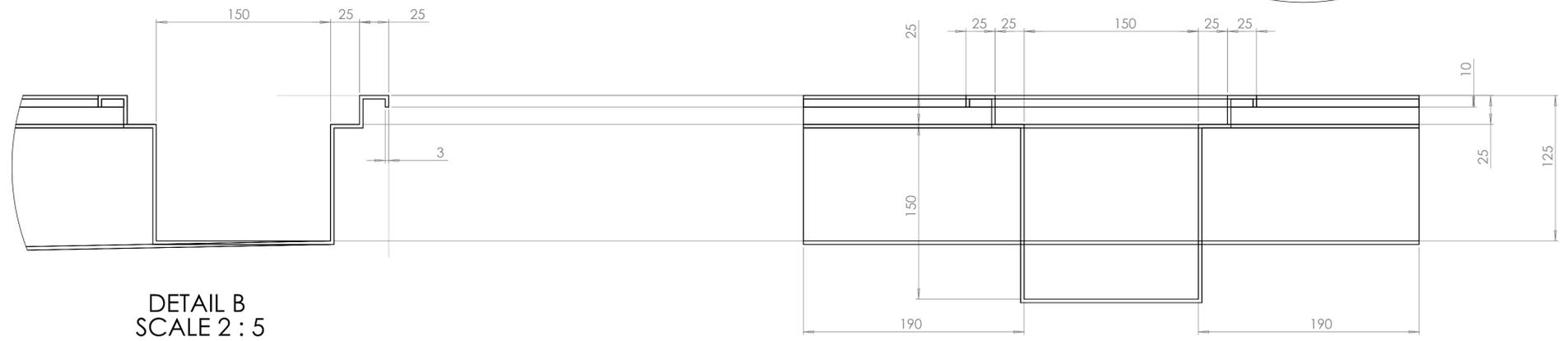
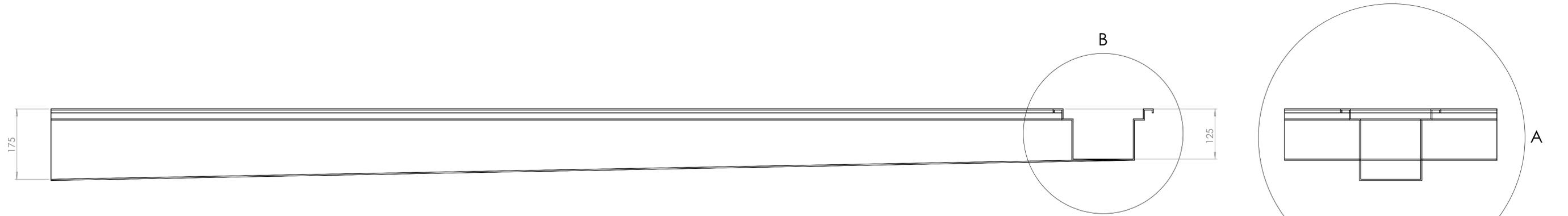
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS SURFACE FINISH: TOLERANCES: LINEAR: ANGULAR:		FINISH:	DEBUR AND BREAK SHARP EDGES		DO NOT SCALE DRAWING	REVISION
DRAWN:	NAME:	SIGNATURE:	DATE:		TITLE:	
CHK'D:						
APP'VD:						
MFG:						
Q.A:					DWG NO. Channel A	A1
				MATERIAL:		
				WEIGHT:	SCALE: 1:20	SHEET 1 OF 1



DETAIL A  
SCALE 1 : 1

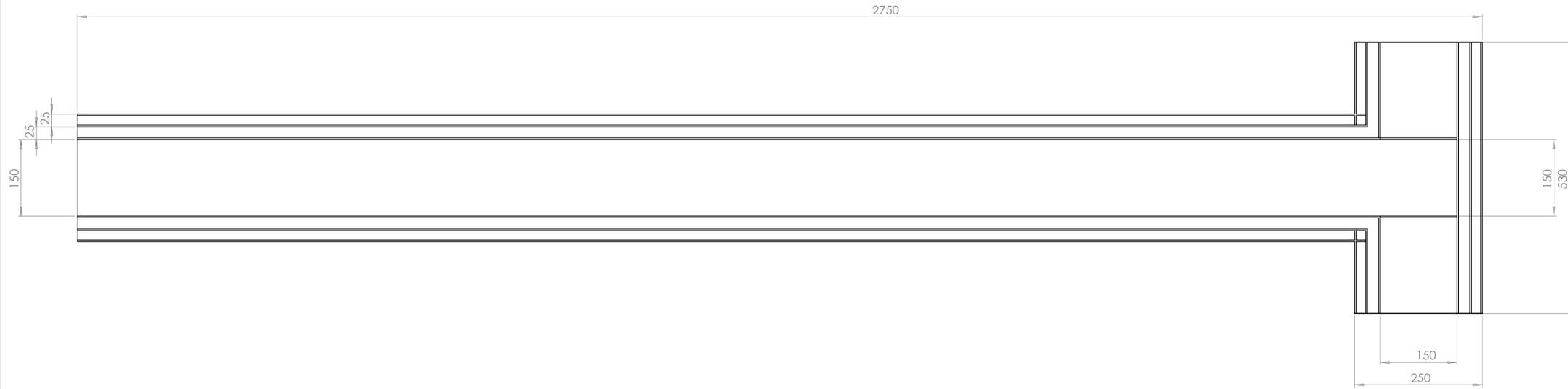


UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS SURFACE FINISH: TOLERANCES: LINEAR: ANGULAR:			FINISH:	DEBUR AND BREAK SHARP EDGES	DO NOT SCALE DRAWING	REVISION
DRAWN:	NAME:	SIGNATURE:	DATE:		TITLE:	
CHK'D:						
APP'VD:						
MFG:						
Q.A:				MATERIAL:	DWG NO. Channel B	A1
				WEIGHT:	SCALE: 1:5	SHEET 1 OF 1

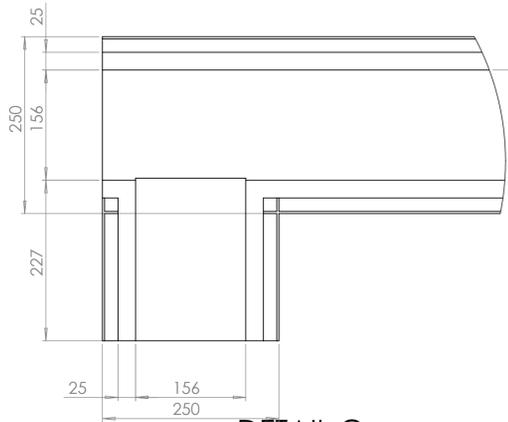
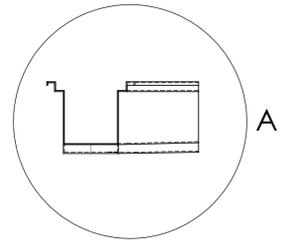


DETAIL B  
SCALE 2 : 5

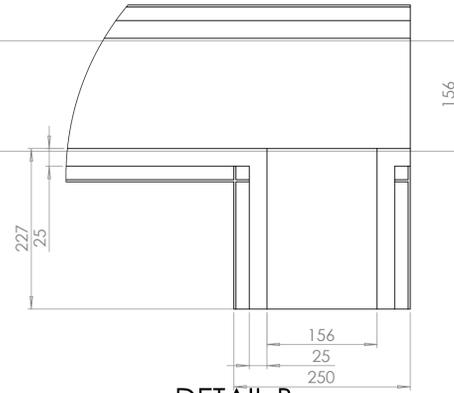
DETAIL A  
SCALE 2 : 5



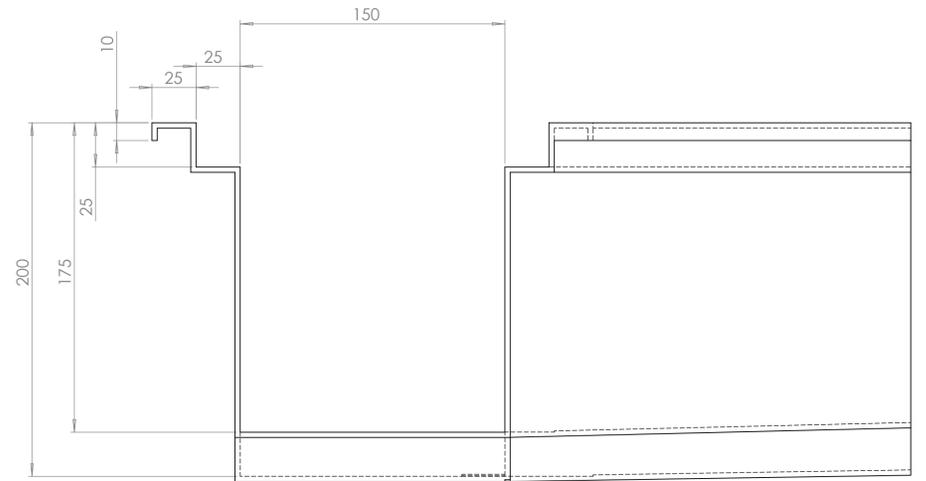
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS		FINISH:	DEBUR AND BREAK SHARP EDGES		DO NOT SCALE DRAWING	REVISION
SURFACE FINISH:						
TOLERANCES:						
LINEAR:						
ANGULAR:						
DRAWN:	NAME	SIGNATURE	DATE			TITLE:
CHK'D:						
APP'VD:						
MFG:						
Q.A:				MATERIAL:	DWG NO.	Channel C A1
				WEIGHT:	SCALE: 1:1	SHEET 1 OF 1



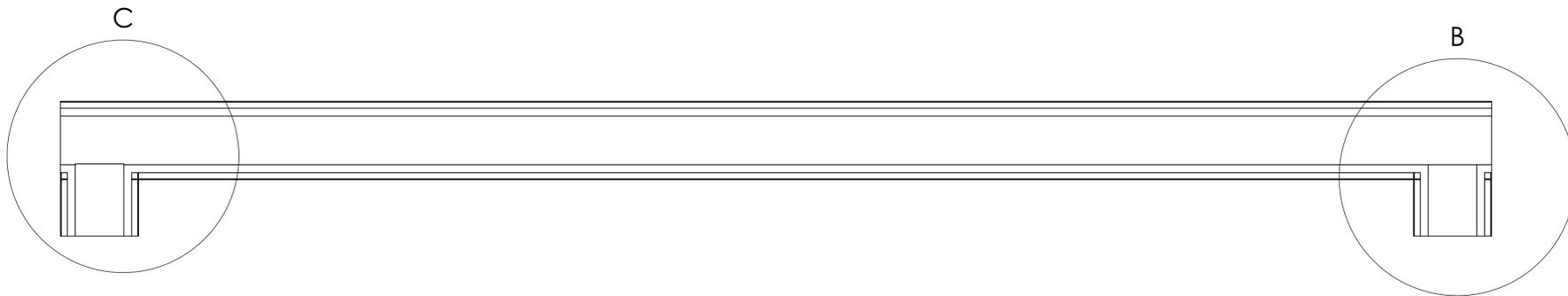
DETAIL C  
SCALE 1 : 5



DETAIL B  
SCALE 1 : 5

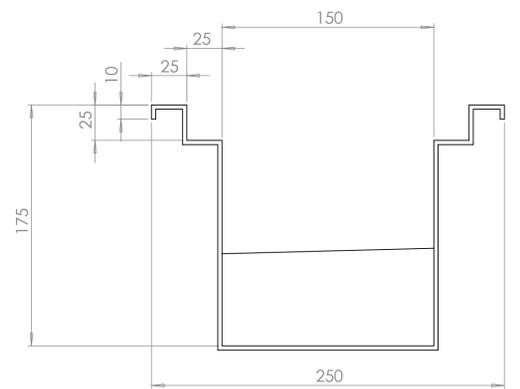
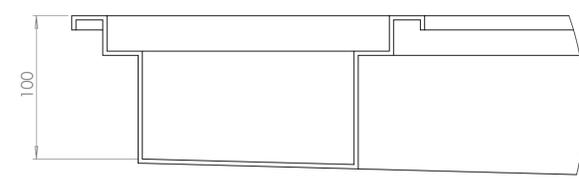
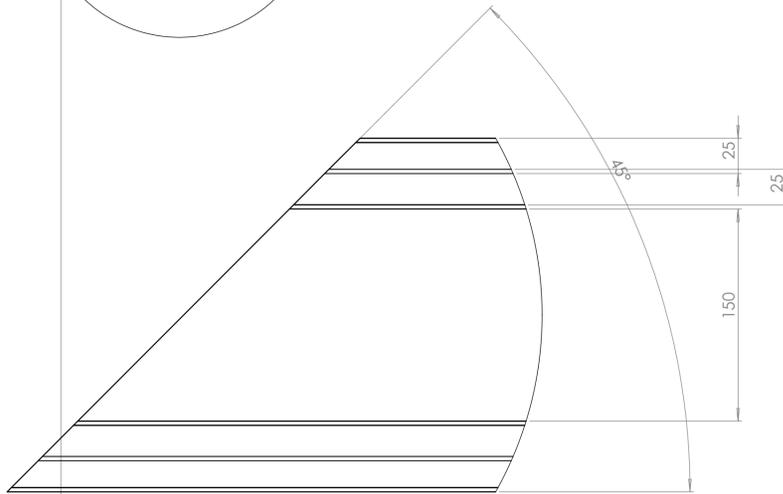
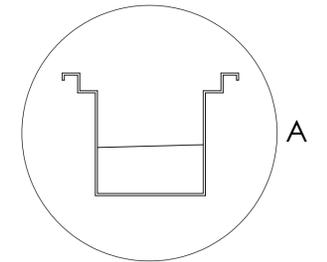
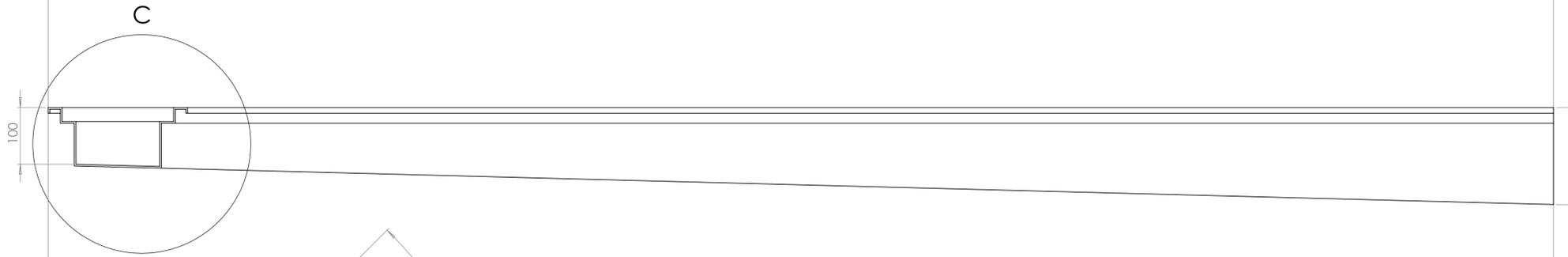


DETAIL A  
SCALE 1 : 2



UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS				FINISH:	DEBUR AND BREAK SHARP EDGES	DO NOT SCALE DRAWING	REVISION
SURFACE FINISH:							
TOLERANCES:							
LINEAR:							
ANGULAR:							
DRAWN	NAME	SIGNATURE	DATE			TITLE:	
CHK'D							
APP'VD							
MFG							
Q.A.				MATERIAL:		DWG NO.	Channel D
				WEIGHT:		SCALE: 1:20	A1
						SHEET 1 OF 1	

2700



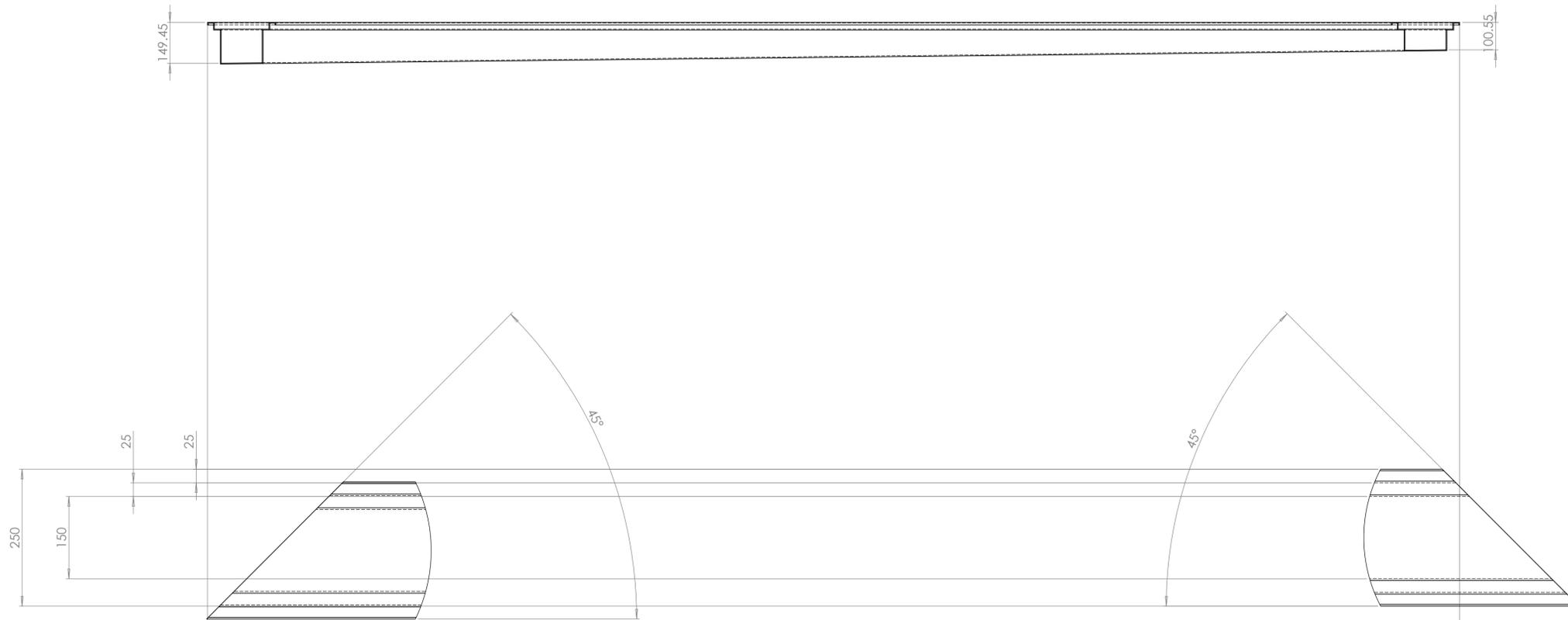
DETAIL C  
SCALE 2 : 5

DETAIL A  
SCALE 2 : 5

DETAIL B  
SCALE 2 : 5

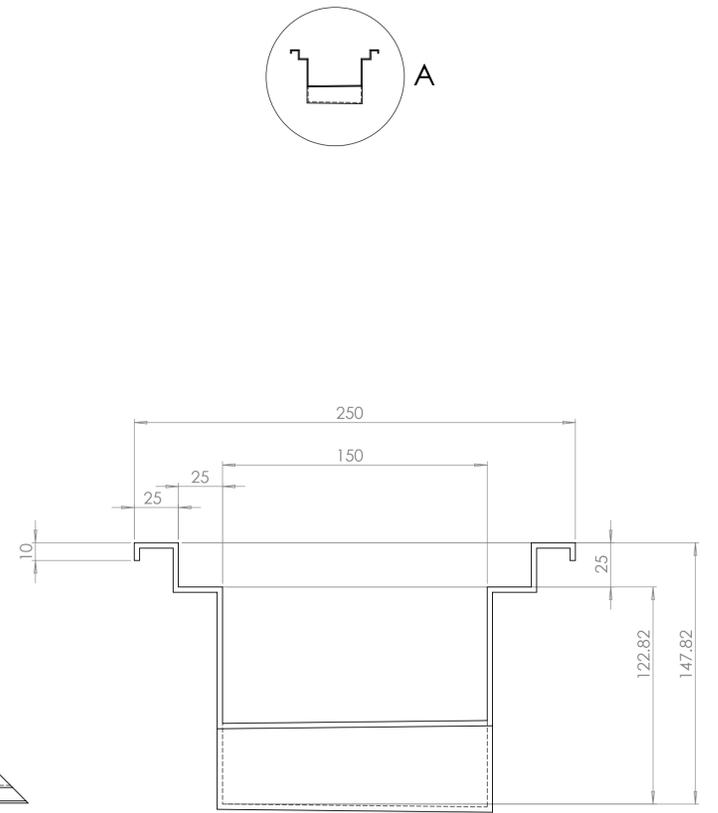


UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS		FINISH:		DEBUR AND BREAK SHARP EDGES		DO NOT SCALE DRAWING		REVISION	
SURFACE FINISH:									
TOLERANCES:									
LINEAR:									
ANGULAR:									
DRAWN	NAME	SIGNATURE	DATE			TITLE:			
CHK'D									
APP'VD									
MFG									
Q.A						MATERIAL:	DWG NO.	Channel E	
						WEIGHT:	SCALE:1:10	SHEET 1 OF 1	

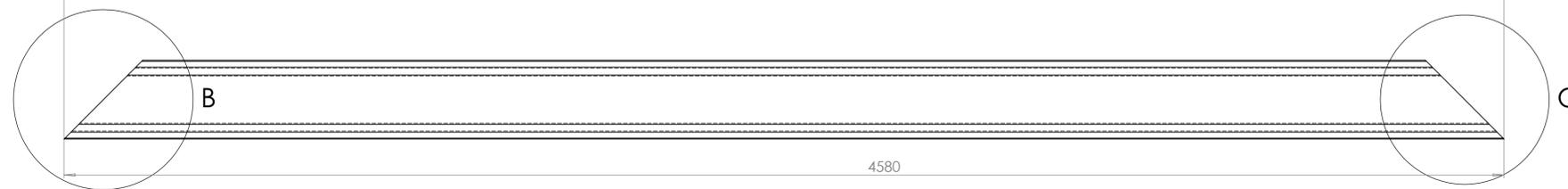


DETAIL B  
SCALE 1 : 5

DETAIL C  
SCALE 1 : 5

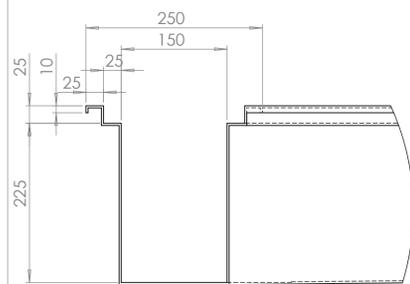
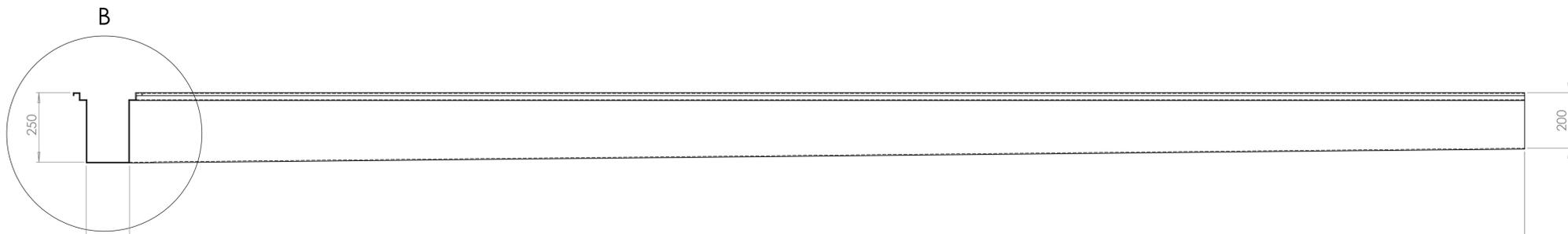


DETAIL A  
SCALE 1 : 2

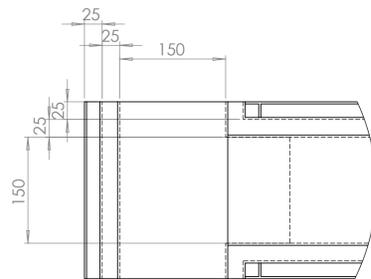


UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS SURFACE FINISH: TOLERANCES: LINEAR: ANGULAR:				FINISH:	DEBUR AND BREAK SHARP EDGES	DO NOT SCALE DRAWING	REVISION
DRAWN	NAME	SIGNATURE	DATE			TITLE:	
CHK'D							
APP'VD							
MFG							
Q.A							
				MATERIAL:		DWG NO.	
				WEIGHT:		Channel F	A1
						SCALE: 1:20	SHEET 1 OF 1

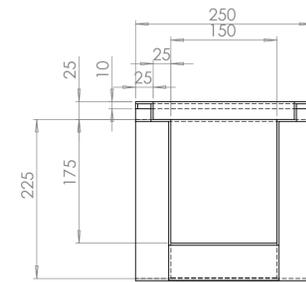




DETAIL B  
SCALE 1 : 5



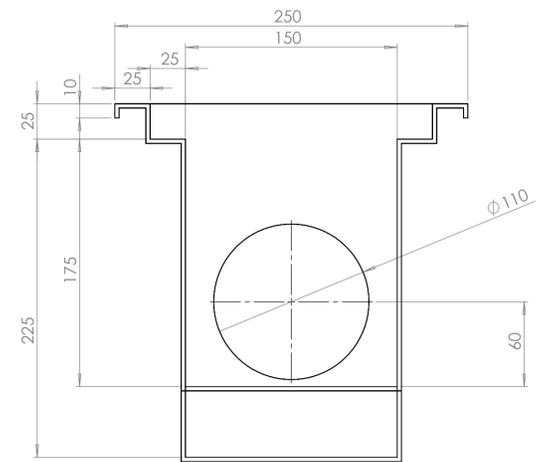
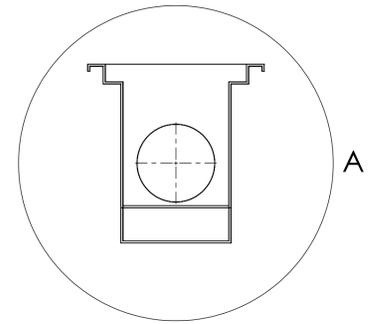
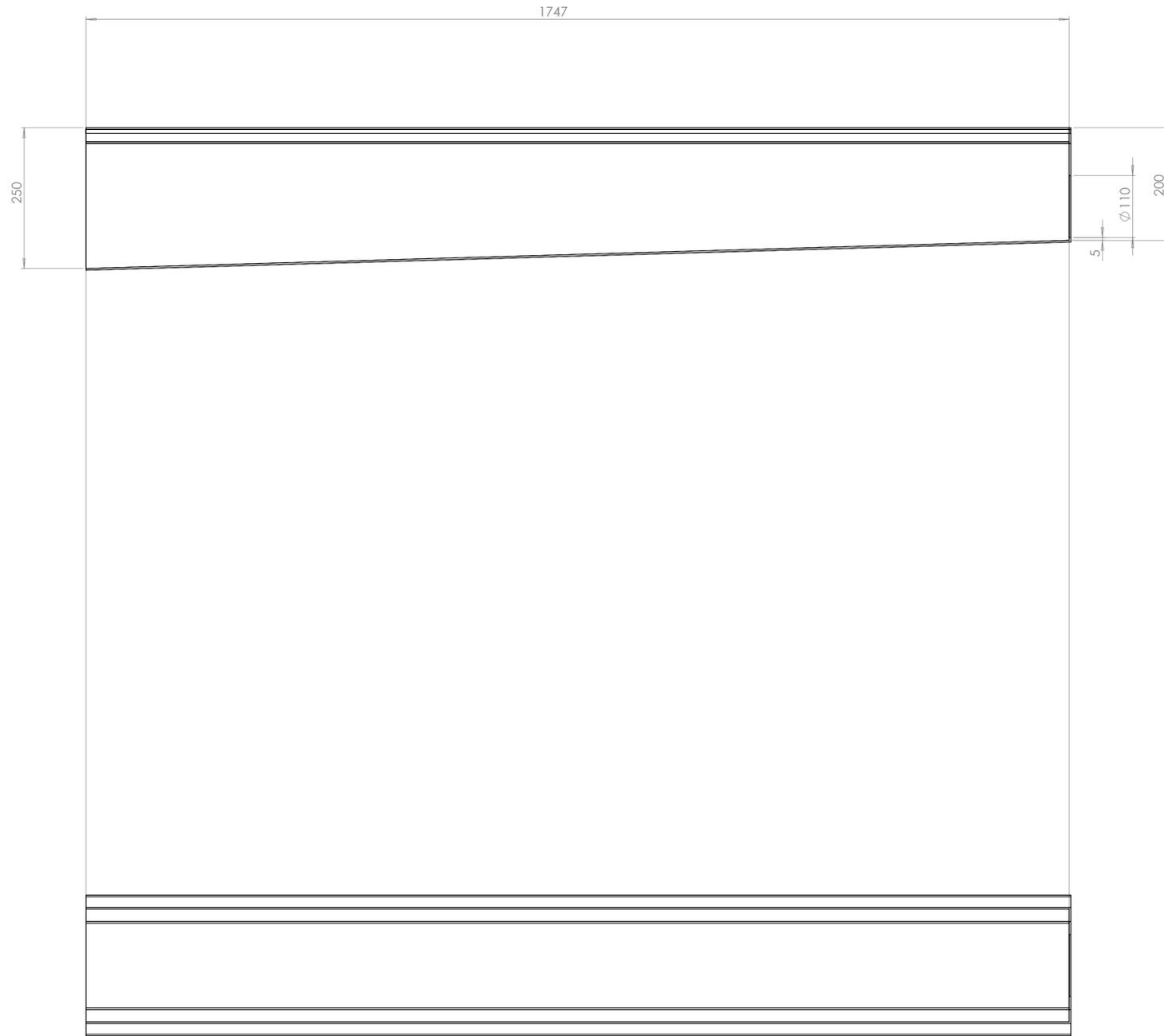
DETAIL C  
SCALE 1 : 5



DETAIL A  
SCALE 1 : 5



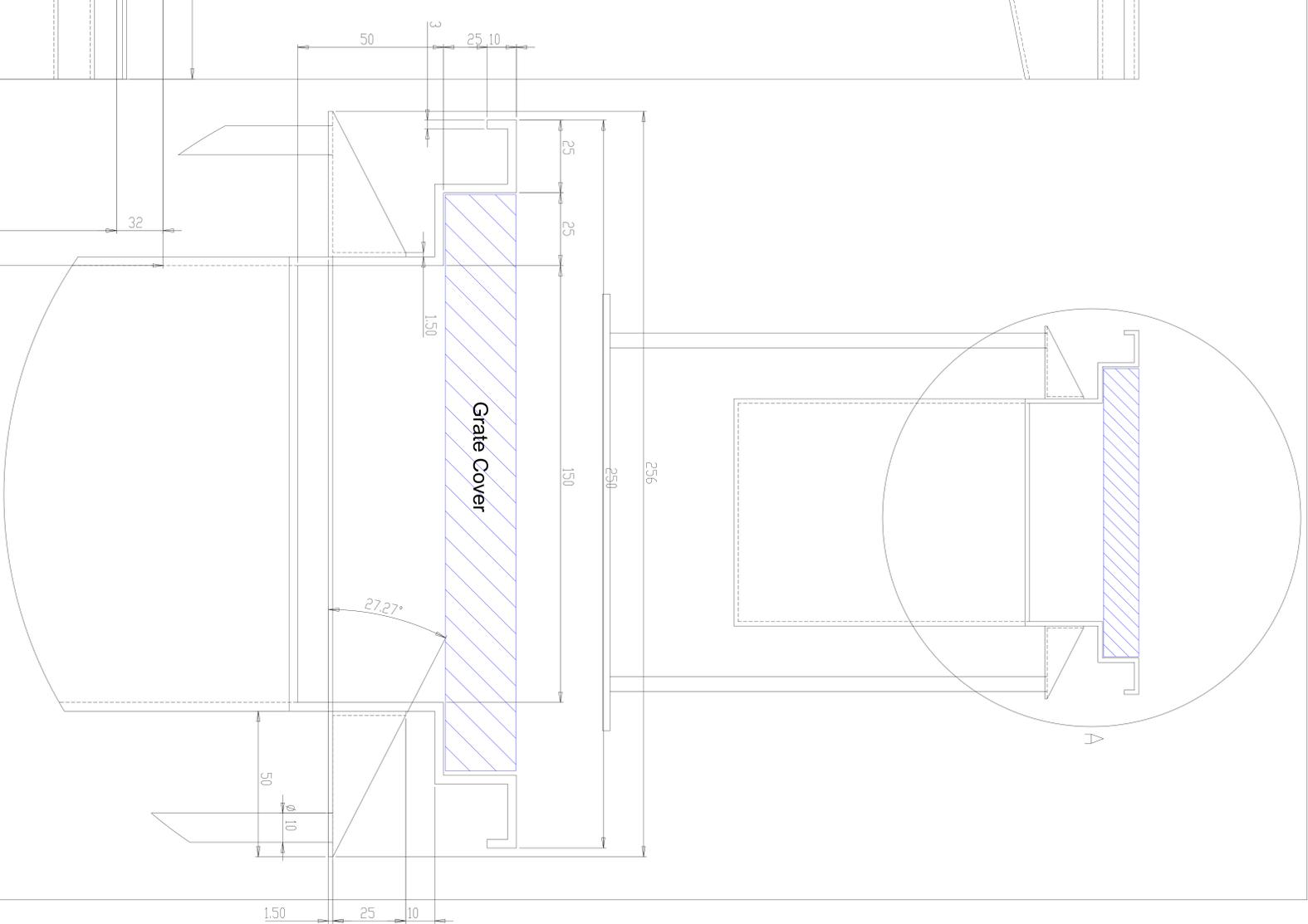
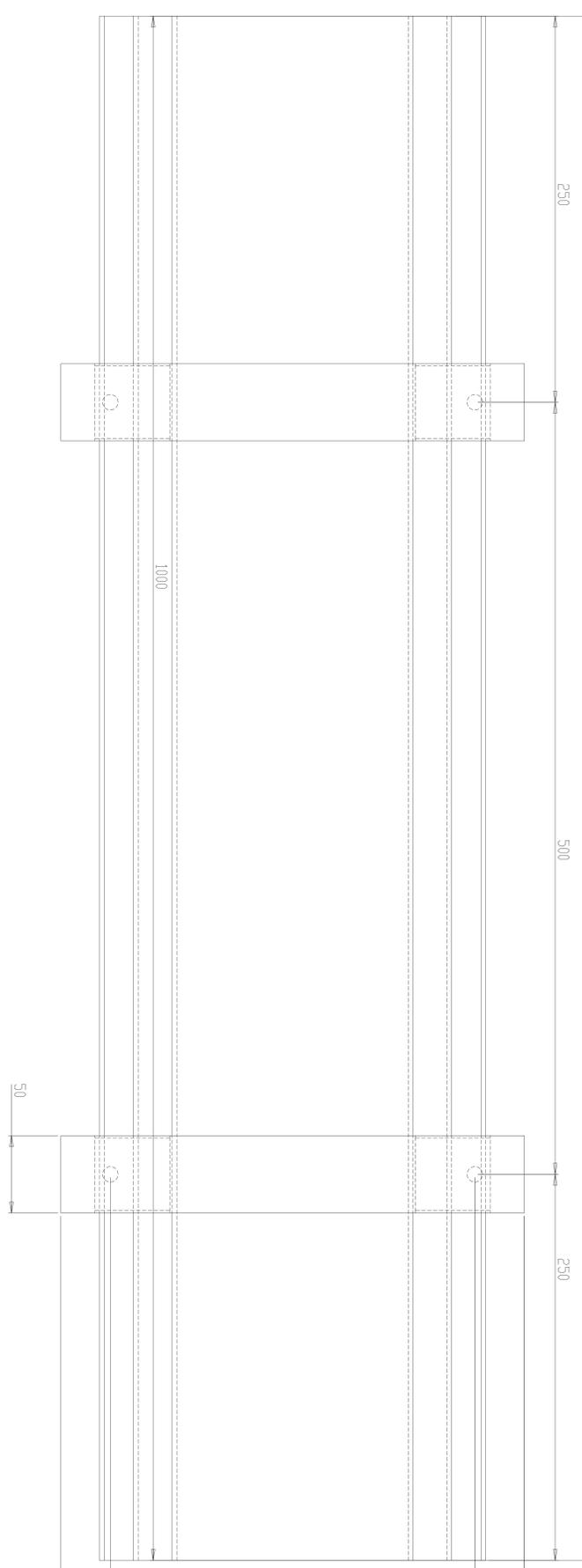
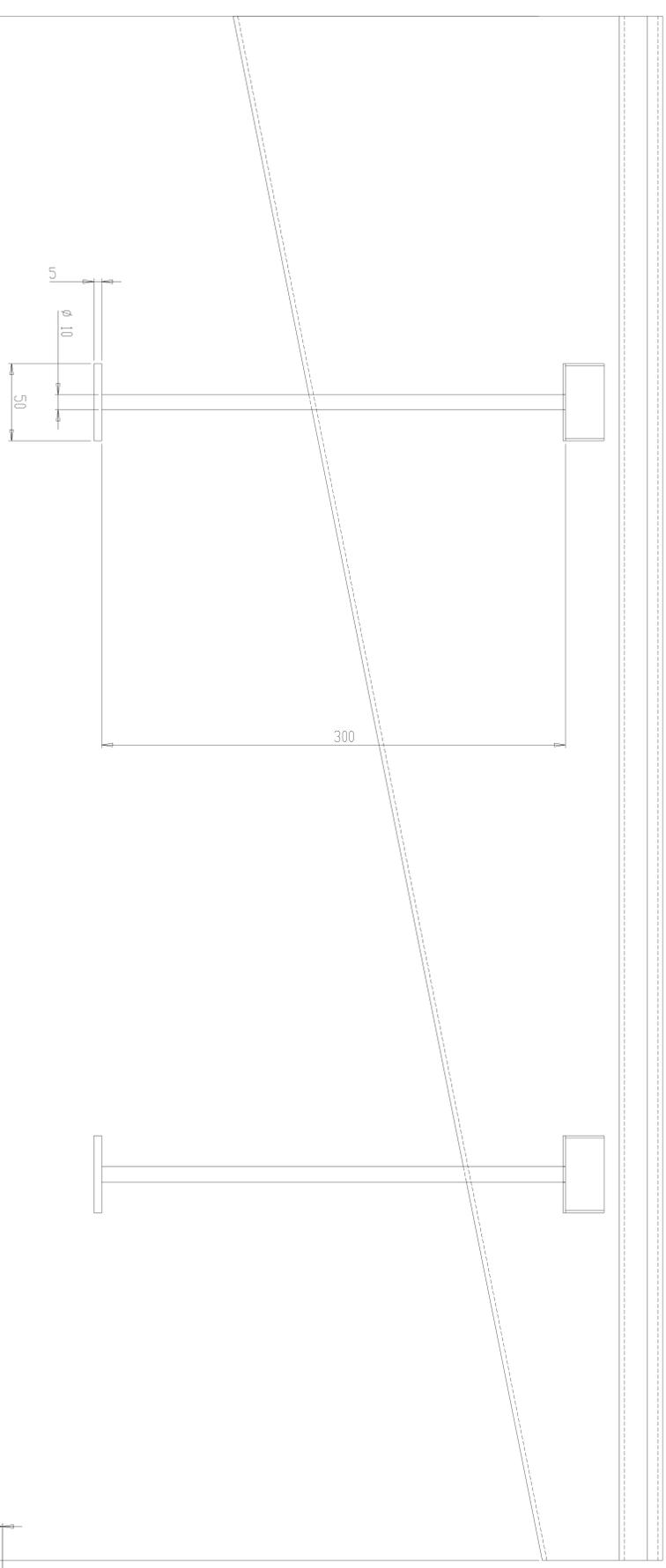
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS		FINISH:		DEBUR AND BREAK SHARP EDGES		DO NOT SCALE DRAWING		REVISION	
SURFACE FINISH:									
TOLERANCES:									
LINEAR:									
ANGULAR:									
DRAWN	NAME	SIGNATURE	DATE			TITLE:			
CHK'D									
APP'VD									
MPG									
Q.A.						MATERIAL:	DWG NO.	Channel H	A1
						WEIGHT:	SCALE: 1:20	SHEET 1 OF 1	



DETAIL A  
SCALE 2 : 5

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS SURFACE FINISH: TOLERANCES: LINEAR: ANGULAR:		FINISH:	DEBUR AND BREAK SHARP EDGES	DO NOT SCALE DRAWING	REVISION
DRAWN	NAME	SIGNATURE	DATE	TITLE:	
CHK'D					
APP'VD					
MFG					
Q.A				MATERIAL:	DWG NO. Channel I A1
				WEIGHT:	SCALE: 1:5 SHEET 1 OF 1





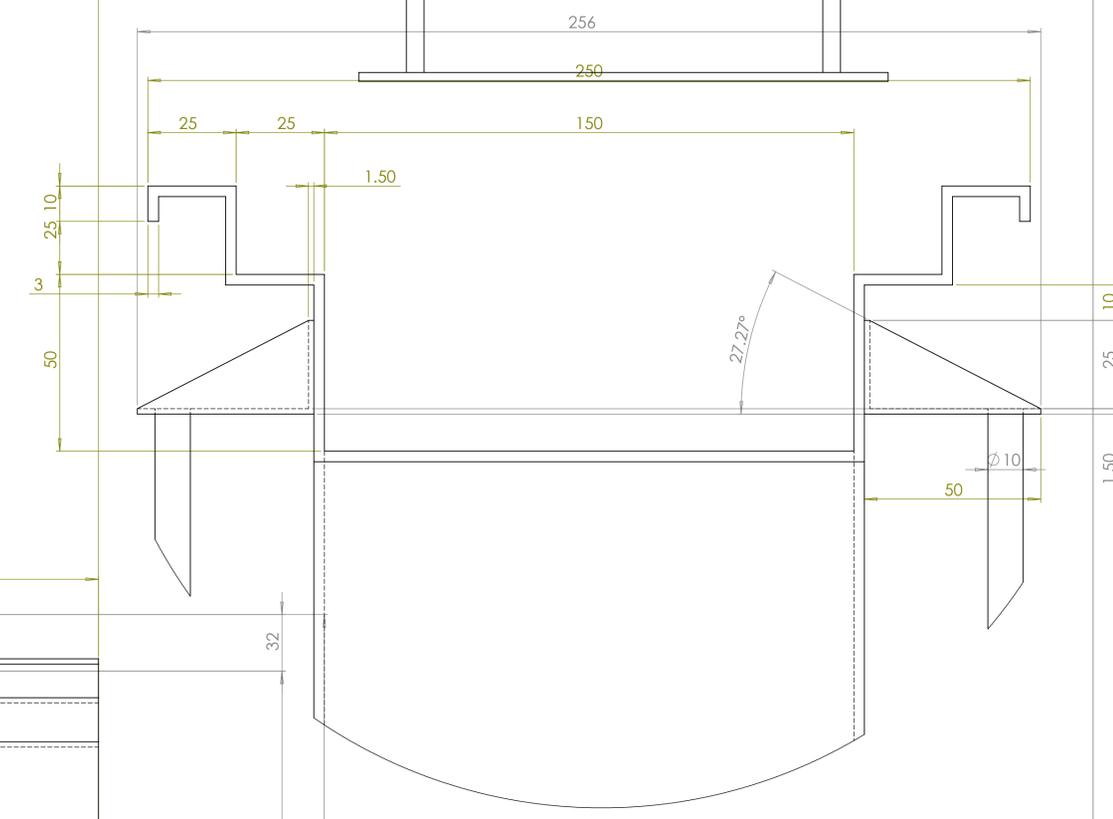
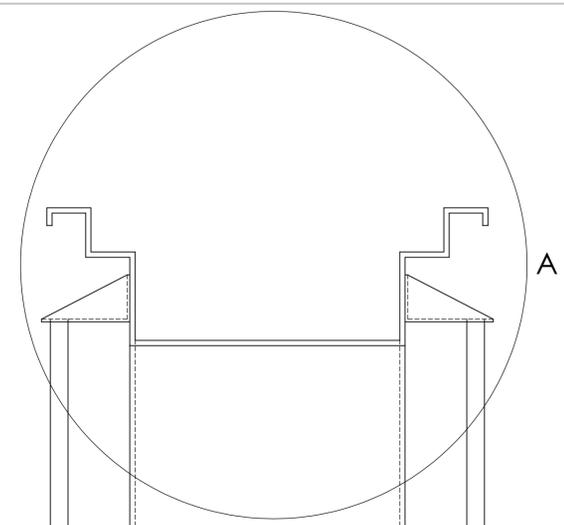
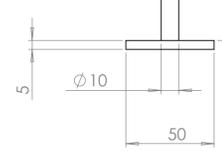
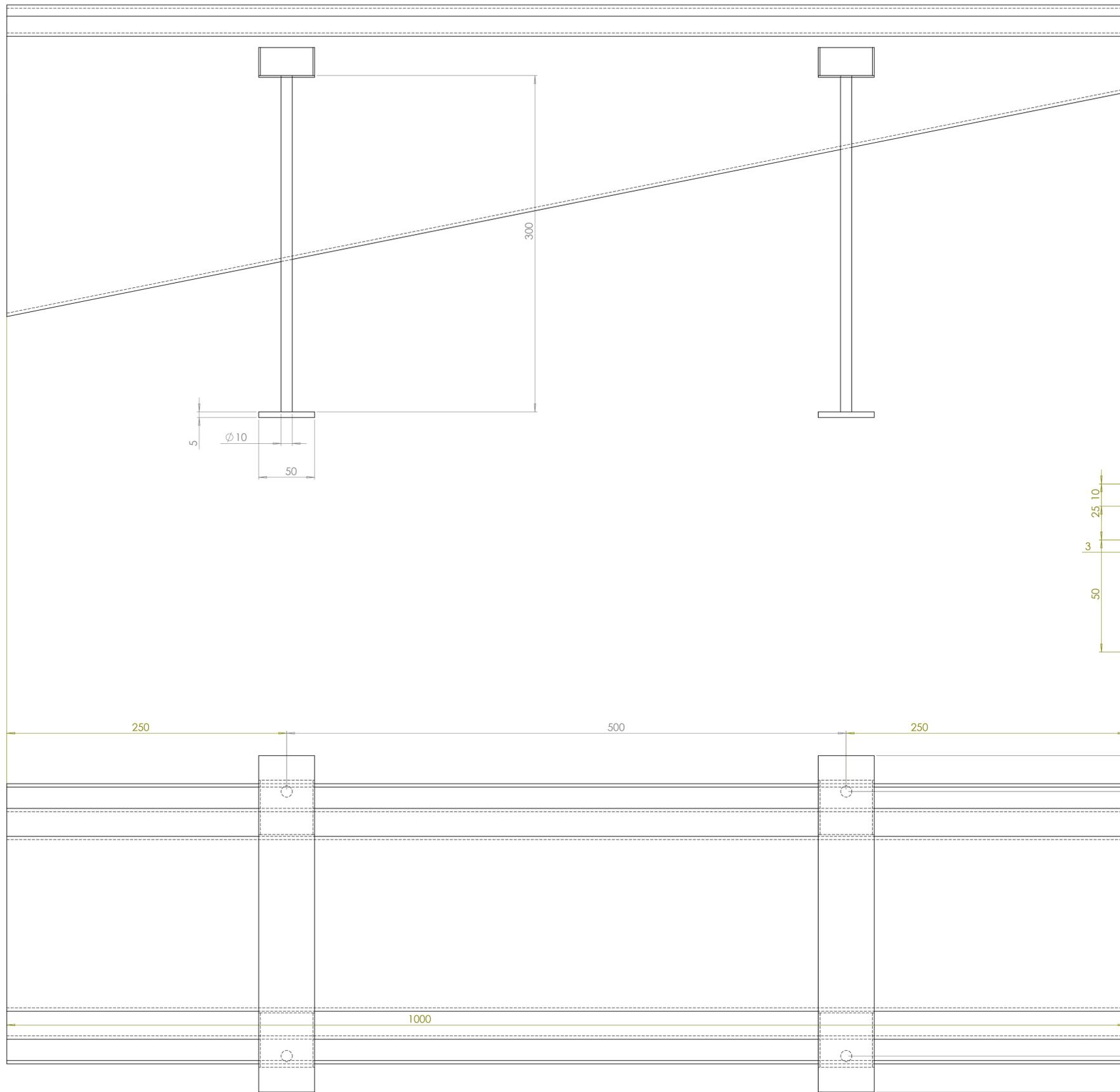
DETAIL A  
SCALE 1 : 1

MATERIALS		FINISH		TOLERANCES		FITTING AND		IN THE CASE OF		REVISION	
NO.	DESCRIPTION	NO.	DESCRIPTION	NO.	DESCRIPTION	NO.	DESCRIPTION	NO.	DESCRIPTION	NO.	DESCRIPTION
1	CHANNEL										
2	GRATE COVER										
3	MOUNTING BRACKET										
4	SCREW										
5	NUT										
6	WASHER										
7	DRILL BIT										
8	WRENCH										
9	SCREWDRIVER										
10	SAFETY GLASSES										

Channel with Mounting

SCALE: 1 : 1

SHEET 1 OF 1



DETAIL A  
SCALE 1 : 1

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS SURFACE FINISH: TOLERANCES: LINEAR: ANGULAR:				FINISH:	DEBUR AND BREAK SHARP EDGES	DO NOT SCALE DRAWING	REVISION
DRAWN:	NAME:	SIGNATURE:	DATE:			TITLE:	
CHK'D:							
APP'VD:							
MPG:							
Q.A.							
				MATERIAL:		DWG NO:	
				WEIGHT:		Channel With Mounting	
						SCALE: 1:1	SHEET 1 OF 1