

**PROVISIONAL BILLS OF QUANTITIES**

**FOR**

**REFURBISHMENTS AND UPGRADES TO GROSVENOR TRAIN  
STATION- PLATFORM & SITEWORKS**

**AT**

**SOWETO, JOHANNESBURG**

**March-23**

## **SECTION NO.1 : PRELIMINARIES**

Item No	Quantity	Rate	Amount R
<p><b><u>SECTION NO. 1</u></b></p> <p><b><u>PRELIMINARIES AND GENERAL</u></b></p> <p><b><u>BILL NO. 1</u></b></p> <p><b><u>BUILDING AGREEMENT AND PRELIMINARIES</u></b></p> <p>The <b>JBCC</b> Principal Building Agreement (Edition 6.2 - May 2018) prepared by the Joint Building Contracts Committee shall be the applicable building agreement, amended as hereinafter described</p> <p>The <b>JBCC</b> Principal Building Agreement <b>contract data</b> form an integral part of this <b>agreement</b></p> <p>The <b>JBCC</b> General Preliminaries (May 2018) published by the Joint Building Contracts Committee for use with the <b>JBCC</b> Principal Building Agreement (Edition 6.2 - May 2018) shall be deemed to be incorporated in these <b>bills of quantities</b>, amended as hereinafter described</p> <p>The <b>contractor</b> is deemed to have referred to the abovementioned documents for the full intent and meaning of each clause</p> <p>The clauses in the abovementioned documents are hereinafter referred to by clause number and heading only</p> <p>Where any item is not relevant to this <b>agreement</b> such item is marked N/A signifying "not applicable"</p> <p>Where standard clauses or alternatives are not entirely applicable to this <b>agreement</b> such amendments, modifications, corrections or supplements as will apply are given under each relevant clause heading and such amendments, modifications, corrections or supplements shall take precedence notwithstanding anything to the contrary contained in the abovementioned documents</p>			
<p><b>Carried to Collection</b></p>			R
<p>Section No. 1 Preliminaries Contract Part C2: Pricing Data</p>			

**SECTION A: PRINCIPAL BUILDING AGREEMENT**

1  
2 Clause 2.0 - **Law**, regulations and **notices**

Item

3 Clause 3.0 - Offer and acceptance

F:..... V:.....  
T:.....

Item

4 Clause 4.0 - Cession and assignment

F:..... V:.....  
T:.....

Item

5 Clause 5.0 - Documents

F:..... V:.....  
T:.....

6 Clause 6.0 - **Employer's agents**

F:..... V:.....  
T:.....

7 Clause 7.0 - Design responsibility

F:..... V:.....  
T:.....

Item

**Insurances and securities (A8-A11)**

8 Clause 8.0 - **Works** risk

F:..... V:.....  
T:.....

Item

**Carried to Collection**

R

Section No. 1  
Preliminaries  
Contract  
Part C2: Pricing Data

9	<p>Clause 9.0 - Indemnities</p> <p>F:..... V:..... T:.....</p>	Item		
10	<p>Clause 10.0 - Insurances</p> <p>F:..... V:..... T:.....</p>	Item		
11	<p>Clause 11.0 - <b>Securities</b></p> <p><b><u>Execution (A12 - A17)</u></b></p>			
12	<p>Clause 12.0 - Obligations of the <b>parties</b></p> <p>F:..... V:..... T:.....</p>	Item		
13	<p>Clause 13.0 - Setting out</p> <p>F:..... V:..... T:.....</p>	Item		
14	<p>Clause 14.0 - Nominated <b>subcontractors</b></p> <p>F:..... V:..... T:.....</p>	Item		
15	<p>Clause 15.0 - Selected <b>subcontractors</b></p> <p>F:..... V:..... T:.....</p>	Item		
16	<p>Clause 16.0 - <b>Direct contractors</b></p> <p><b>Attendance on direct contractors</b></p> <p>In respect of <b>direct contractors</b> the <b>contractor</b> shall:</p>			
<p><b>Carried to Collection</b></p>			R	
<p>Section No. 1 Preliminaries Contract Part C2: Pricing Data</p>				

	<ol style="list-style-type: none"> <li>1. Designate an area for the <b>direct contractor</b> to establish a temporary office and workshop and storage of equipment and materials</li> <li>2. Allow the use of personnel welfare facilities, where provided</li> <li>3. Provide water, lighting and single phase electric power to a position within 50m of the place where the direct contract work is to be carried out, other than fuel or power for commissioning of any installation</li> <li>4. Permit the <b>direct contractor</b> to use erected scaffolding, hoisting facilities, etc provided by the <b>contractor</b>, in common with others having the like right, while it remains erected on the <b>site</b> [16.1]</li> </ol> <p>F:..... V:..... T:.....</p>		
17	<p>Clause 17.0 - <b>Contract instructions</b></p> <p><b>Site instructions</b></p> <p>Instructions issued on <b>site</b> are to be recorded in a site instruction book which is to be supplied and maintained on <b>site</b> by the <b>contractor</b></p> <p>F:..... V:..... T:.....</p> <p><b><u>Completion (A18 - A24)</u></b></p>	Item	
18	Clause 18.0 - Interim completion	N/A	
19	<p>Clause 19.0 - <b>Practical completion</b></p> <p>F:..... V:..... T:.....</p>	Item	
20	Clause 20.0 - Completion in <b>sections</b>		
21	Clause 21.0 - <b>Defects</b> liability period and <b>final completion</b>		
	<b>Carried to Collection</b>		R
	<p>Section No. 1</p> <p>Preliminaries</p> <p>Contract</p> <p>Part C2: Pricing Data</p>		

Refurbishments and Upgrades to Grosvenor Train Station  
Prasa South Gauteng Region Corridor 3  
Siteworks - Platform and external works

22 Clause 22.0 - **Latent defects** liability period

F:..... V:.....  
T:.....

Item

23 Clause 23.0 - Revision of the date for **practical completion**

**Substitution of materials and goods**

The removal or substitution of any **materials and goods** which do not conform to the specification or the **contract drawings** shall not constitute grounds for the extension of the **construction period** nor for the adjustment of the **contract value** [17.1.8; 23.1 & 2]

F:..... V:.....  
T:.....

Item

24 Clause 24.0 - **Penalty** for late or non-completion

F:..... V:.....  
T:.....

Item

**Payment (A25 - A27)**

25 Clause 25.0 - Payment

**Prices submitted**

Where prices are submitted by the **contractor** or **subcontractor** during the progress of the **works** in respect of **contract instructions** or in regard to a claim under the terms of this **agreement** and notwithstanding the fact that such prices may be used in an interim **payment certificate**, there is to be no presumption of acceptance. Should the **principal agent** wish to accept any such prices prior to the issue of the **certificate of final completion**, it shall be in writing

F:..... V:.....  
T:.....

Item

26 Clause 26.0 - Adjustment of the **contract value** and **final account**

**Carried to Collection**

R

Section No. 1  
Preliminaries  
Contract  
Part C2: Pricing Data

**Fluctuations in costs**

All fluctuations in costs, with the exception of fluctuations in the rate of Value Added Tax, shall be for the account of the **contractor** [26.9.5]

27 Clause 27.0 - Recovery of expense and/or loss

F:..... V:.....  
T:.....

Item

**Suspension and termination (A28 - A29)**

28 Clause 28.0 - Suspension by the **contractor**

F:..... V:.....  
T:.....

Item

29 Clause 29.0 - Termination

F:..... V:.....  
T:.....

Item

**Dispute resolution (A30)**

30 Clause 30.0 - Dispute resolution

F:..... V:.....  
T:.....

Item

31 **Agreement**

The required information of the **parties** and the amount of the **contract sum** shall be inserted in the **agreement** for signature of the **agreement** by the **parties**

F:..... V:.....  
T:.....

Item

32 **Contract data**

F:..... V:.....  
T:.....

Item

**SECTION B: GENERAL PRELIMINARIES**

**Carried to Collection**

R

Section No. 1  
Preliminaries  
Contract  
Part C2: Pricing Data



<b><u>Definitions and interpretation (B1)</u></b>				
33	Clause 1.1 - Definitions  F:..... V:..... T:.....	Item		
34	Clause 1.2 - Interpretation  F:..... V:..... T:.....	Item		
<b><u>Documents (B2)</u></b>				
35	Clause 2.1 - Checking of documents  F:..... V:..... T:.....	Item		
36	Clause 2.2 - Provisional <b>bills of quantities</b>  F:..... V:..... T:.....	Item		
37	Clause 2.3 - Availability of <b>construction information</b>  F:..... V:..... T:.....	Item		
38	Clause 2.4 - Ordering of <b>materials and goods</b>  F:..... V:..... T:.....	Item		
<b><u>Previous work and adjoining properties (B3)</u></b>				
39	Clause 3.1 - Previous work - dimensional accuracy  F:..... V:..... T:.....	Item		
40	Clause 3.2 - Previous work - <b>defects</b>  F:..... V:..... T:.....	Item		
<b>Carried to Collection</b>			R	
Section No. 1 Preliminaries Contract Part C2: Pricing Data				

**Refurbishments and Upgrades to Grosvenor Train Station**  
**Prasa South Gauteng Region Corridor 3**  
**Siteworks - Platform and external works**

41	<p>Clause 3.3 - Inspection of adjoining properties</p> <p>F:..... V:..... T:.....</p> <p><b><u>The site (B4)</u></b></p>	Item		
42	<p>Clause 4.1 - Handover of <b>site</b> in stages</p> <p>F:..... V:..... T:.....</p>	Item		
43	<p>Clause 4.2 - Enclosure of the <b>works</b></p>	Item		
44	<p>Clause 4.3 - Geotechnical and other investigations</p> <p>F:..... V:..... T:.....</p>	Item		
45	<p>Clause 4.4 - Encroachments</p> <p>F:..... V:..... T:.....</p>	Item		
46	<p>Clause 4.5 - Existing premises occupied</p> <p>F:..... V:..... T:.....</p>	Item		
47	<p>Clause 4.6 - Services - known</p> <p>F:..... V:..... T:.....</p> <p><b><u>Management of contract (B5)</u></b></p>	Item		
48	<p>Clause 5.1 - Management of the <b>works</b></p> <p>F:..... V:..... T:.....</p>	Item		
49	<p>Clause 5.2 - Progress meetings</p> <p>F:..... V:..... T:.....</p>	Item		
<p style="text-align: right;"><b>Carried to Collection</b></p> <p>Section No. 1 Preliminaries Contract Part C2: Pricing Data</p>			R	

**Refurbishments and Upgrades to Grosvenor Train Station**  
**Prasa South Gauteng Region Corridor 3**  
**Siteworks - Platform and external works**

50	<p>Clause 5.3 - Technical meetings</p> <p>F:..... V:..... T:.....</p> <p><b><u>Samples, shop drawings and manufacturer's instructions (B6)</u></b></p>	Item		
51	<p>Clause 6.1 - Samples of materials</p> <p>F:..... V:..... T:.....</p>	Item		
52	<p>Clause 6.2 - Workmanship samples</p> <p>F:..... V:..... T:.....</p>	Item		
53	<p>Clause 6.3 - Shop drawings</p> <p>F:..... V:..... T:.....</p>	Item		
54	<p>Clause 6.4 - Compliance with manufacturer's instructions</p> <p>F:..... V:..... T:.....</p> <p><b><u>Deposits and fees (B7)</u></b></p>	Item		
55	<p>Clause 7.1 - Deposits and fees</p> <p>F:..... V:..... T:.....</p> <p><b><u>Temporary services (B8)</u></b></p>	Item		
56	<p>Clause 8.1 - Water</p> <p>F:..... V:..... T:.....</p>	Item		
57	<p>Clause 8.2 - Electricity</p> <p>F:..... V:..... T:.....</p>	Item		
<b>Carried to Collection</b>			R	
<p>Section No. 1  Preliminaries  Contract  Part C2: Pricing Data</p>				

**Refurbishments and Upgrades to Grosvenor Train Station**  
**Prasa South Gauteng Region Corridor 3**  
**Siteworks - Platform and external works**

58 Clause 8.3 - Ablution and welfare facilities  
 F:..... V:.....  
 T:.....

Item

59 Clause 8.4 - Communication facilities  
 F:..... V:.....  
 T:.....

Item

**Prime cost amounts (B9)**

60 Clause 9.1 - Responsibility for **prime cost amounts**

**Attendance on subcontractors (B10)**

61 Clause 10.1 - General attendance

**User note**

*General attendance is defined as being the duties of the contractor in terms of clause 12.2 of the JBCC n/s subcontract agreement*

F:..... V:.....  
 T:.....

Item

62 Clause 10.2 - Special attendance

63 Clause 11.1 - Protection of the **works**

F:..... V:.....  
 T:.....

Item

64 Clause 11.2 - Protection/isolation of existing **works** and **works** occupied in **sections**

F:..... V:.....  
 T:.....

Item

65 Clause 11.3 - Security of the **works**

F:..... V:.....  
 T:.....

Item

**Carried to Collection**

R

Section No. 1  
 Preliminaries  
 Contract  
 Part C2: Pricing Data

**Refurbishments and Upgrades to Grosvenor Train Station**  
**Prasa South Gauteng Region Corridor 3**  
**Siteworks - Platform and external works**

66 Clause 11.4 - Notice before covering work  
 F:..... V:.....  
 T:.....

Item

67 Clause 11.5 - Disturbance

68 Clause 11.6 - Environmental disturbance

69 Clause 11.7 - **Works** cleaning and clearing

F:..... V:.....  
 T:.....

Item

70 Clause 11.8 - Vermin

F:..... V:.....  
 T:.....

Item

71 Clause 11.9 - Overhand work

F:..... V:.....  
 T:.....

Item

72 Clause 11.10 - Tenant installations

F:..... V:.....  
 T:.....

Item

73 Clause 11.11 - Advertising

F:..... V:.....  
 T:.....

Item

**SECTION C: SPECIFIC PRELIMINARIES**

74 **Site instructions**

**Contract Instructions** issued on **site** are to be recorded in triplicate in a **site** instruction book which is to be maintained on site by the **contractor**

F:..... V:..... T:.....

Item

**Carried to Collection**

R

Section No. 1  
 Preliminaries  
 Contract  
 Part C2: Pricing Data

75 **Warranties for material and workmanship**

Where warranties for materials and/or workmanship are called for, the **contractor** shall obtain a written warranty, addressed to the **employer**, from the firm supplying the materials and/or doing the work and shall deliver same to the **principal agent** on the **final completion** of the **contract**. The warranty shall state that workmanship, materials and installation are warranted for a specified period from the date of **final completion** and that any **defects** that may arise during the specified period shall be made good at the expense of the firm supplying the materials and/or doing the work, upon written notice to do so. The warranty will not be enforced if the work is damaged by **defects** in the construction of the building in which case the responsibility for replacement shall rest entirely with the **contractor**

F:.....V:.....T:.....

Item

76 **Co-operation of contractor for cost management**

It is specifically agreed that the **contractor** accepts the obligation of assisting the **principal agent** in implementing proper cost management. The **contractor** will be advised by the **principal agent** of all cost management procedures which will be implemented to ensure that the final building cost does not exceed the budget. The **principal agent** undertakes to make available to the **contractor** all **budgetary allowances** and cost assessments/reports to enable the proper procedure to be implemented and the **contractor** shall attend all cost plan review and cost management meetings. The **contractor** undertakes to extend these procedures, as necessary, to all subcontractors

F:.....V:.....T:.....

Item

**Carried to Collection**

R

Section No. 1  
Preliminaries  
Contract  
Part C2: Pricing Data

77 **Propping of floors below**

The **contractor** is advised that propping of floors below may be required if he wishes to use any areas of completed suspended reinforced concrete slabs for vehicle access, storage of **materials and goods** and location of plant, scaffolding, etc. The location of these areas and any necessary propping shall be approved by the **principal agent** and the cost thereof shall be borne by the **contractor**

F:..... V:..... T:.....

Item

78 **Testing of windows for watertightness**

Each window shall be tested for watertightness with water sprayed on using adequate pressure. If in the opinion of the **principal agent**, the pressure proves to be inadequate, then the pressure shall be boosted by means of compressed air or other approved means

F:..... V:..... T:.....

Item

79 **Testing of flat roof waterproofing for watertightness**

Flat roof waterproof areas shall be prepared with small sand dykes around them of a size and enclosing an area approved by the **principal agent**, flooded with water and kept "ponded" for at least 36 hours as a test to ensure the watertightness of the waterproofing and before any further construction work is carried out above the waterproofing

F:..... V:..... T:.....

Item

**Carried to Collection**

R

Section No. 1  
Preliminaries  
Contract  
Part C2: Pricing Data

### **HIV/AIDS AWARENESS**

It is required of the Contractor to thoroughly study the HIV/AIDS Specification (C3.5) together with and is deemed to be incorporated under this Section of the Bills of Quantities. Provision for pricing of HIV/AIDS awareness is made under items hereafter and it is explicitly pointed out that all requirements of the aforementioned specification are deemed to be priced hereunder, as the said items represent the only method of measurement and no additional items or extras to the contract in this regard shall be entertained.

The **Contractor** must take note that compliance with the HIV/AIDS Specification is compulsory. In the event of partial or total non-compliance, the **Principal Agent**, notwithstanding the provisions of Clause A 31 of "Section 1: Preliminaries (Section A)" or any other clauses to the contrary, reserve the right to delay issuing any progress **payment certificate** until the **Contractor** provides satisfactory proof of compliance. The **Contractor** shall not be entitled to any compensation of whatsoever nature, including interest, due to such delay of payment.

80 **AWARENESS CHAMPION**

Selection, appointment, briefing and making available of an Awareness Champion including provision of all relevant services, all in accordance with the HIV/AIDS Specification.

F:..... V:..... T:.....

Item

**Carried to Collection**

R

Section No. 1  
Preliminaries  
Contract  
Part C2: Pricing Data



81 **AWARENESS WORKSHOPS**

Selection and appointment of a competent Service Provider approved by the **principal agent**, provision of a Service Provider Workshop Plan and a suitable venue, conducting of awareness workshops by means of traditional and/or modern multimedia techniques, including follow-up courses, making available all tuition material and performing assessment procedures, all in accordance with the HIV/AIDS Specification.

F:..... V:..... T:.....

Item

82 **POSTERS, BOOKLETS, VIDEOS, ETC.**

Provision, displaying, maintaining and replacing when necessary of four plastic laminated posters, booklets and educational videos, etc. for the duration of the **construction period**, all in accordance with the HIV/AIDS Specification.

F:..... V:..... T:.....

Item

83 **ACCESS TO CONDOMS**

Provision and maintenance of condom dispensers fixed in position, including male and female condoms, replenishing male and female condoms on a daily basis as required for the duration of the **construction period**, all in accordance with the HIV/AIDS Specification.

F:..... V:..... T:.....

Item

**Carried to Collection**

R

Section No. 1  
Preliminaries  
Contract  
Part C2: Pricing Data

84	<p><b>MONITORING</b></p> <p>Monitoring HIV/AIDS awareness of workers, providing the <b>principal agent</b> with access to information including making available all reports, thoroughly completed and reflecting the correct information, for the duration of the construction period and close out, all in accordance with the HIV/AIDS Specification.</p> <p>F:..... V:..... T:.....</p> <p><b><u>SOCIO-ECONOMIC DELIVERABLES</u></b></p>	Item		
85	<p>It is required that the contractor shall adhere to all Socio-Economic Deliverables.</p> <p>F:..... V:..... T:.....</p> <p><b><u>EMPLOYMENT OF SMME SUB-CONTRACTORS AS A CONDITION OF TENDER</u></b></p>	Item		
86	<p>It is required that the contractor shall sub-contract 30% of the contract value (Excluding VAT, Escalation, Contingencies, HT equipment provisions and Socio-Economic provisions) of the contract including labour and material to EME's and QSE's. N/A.</p> <p>F:..... V:..... T:.....</p>	Item		
<b>Carried to Collection</b>			R	
<p>Section No. 1 Preliminaries Contract Part C2: Pricing Data</p>				

**OCCUPATIONAL HEALTH AND SAFETY ACT**

87 The contractor shall comply with all the requirements set out in the Construction Regulations, 2014 issued under the Occupational Health and Safety Act, 1993 (Act no.85 Of 1993)

It is required of the contractor to thoroughly study the Health and Safety Specification.

The contractor must take note that compliance with the Occupational Health and Safety Act, Construction Regulations and Health and Safety Specification is compulsory. In the event of partial or total non-compliance, the principal agent, notwithstanding the provisions of clause A31.0 of Section A or any other clause to the contrary, reserves the right to delay issuing any progress payment certificate until the contractor provides satisfactory proof of compliance. The contractor shall not be entitled to any compensation of whatsoever nature, including interest, due to such delay of payment.

Provision for pricing of the Occupational Health and Safety Act, Construction Regulations and Health and safety Specification is made under this clause and it is explicitly pointed out that all requirements of the aforementioned are deemed to be priced hereunder and no additional claims in this regard shall be entertained.

F:..... V:..... T:.....

Item

**Carried to Collection**

R

Section No. 1  
Preliminaries  
Contract  
Part C2: Pricing Data

**ENVIRONMENTAL HEALTH AND SAFETY**

88 The contractor shall comply with all the requirements set out in the Environmental Health and Safety Specification

The contractor must take note that compliance with the Environmental Health and Safety is compulsory.

Provision for pricing of the Environmental Health and Safety is made under this clause and it is explicitly pointed out that all requirements of the aforementioned are deemed to be priced hereunder and no additional claims in this regard shall be entertained.

F:..... V:..... T:.....

Item

**Carried to Collection**

R

Section No. 1  
Preliminaries  
Contract  
Part C2: Pricing Data

## SUMMARY OF CATEGORIES

Category: Fixed R

Category: Value	R
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Category: Time R

**Carried to Collection**

R

Section No. 1  
Preliminaries  
Contract  
Part C2: Pricing Data

**Refurbishments and Upgrades to Grosvenor Train Station**  
**Prasa South Gauteng Region Corridor 3**  
**Siteworks - Platform and external works**

Section No. 1			
Preliminaries			
Bill No. 1			
Preliminaries			
<b><u>COLLECTION PAGE</u></b>			
	<b>Page No</b>	<b>Amount R</b>	
Total Brought Forward from Page No.	1		
Total Brought Forward from Page No.	2		
Total Brought Forward from Page No.	3		
Total Brought Forward from Page No.	4		
Total Brought Forward from Page No.	5		
Total Brought Forward from Page No.	6		
Total Brought Forward from Page No.	7		
Total Brought Forward from Page No.	8		
Total Brought Forward from Page No.	9		
Total Brought Forward from Page No.	10		
Total Brought Forward from Page No.	11		
Total Brought Forward from Page No.	12		
Total Brought Forward from Page No.	13		
Total Brought Forward from Page No.	14		
Total Brought Forward from Page No.	15		
Total Brought Forward from Page No.	16		
Total Brought Forward from Page No.	17		
Total Brought Forward from Page No.	18		
<b>Carried Forward</b>		R	
Section No. 1			
Preliminaries			
Contract			
Part C2: Pricing Data			

**Refurbishments and Upgrades to Grosvenor Train Station  
Prasa South Gauteng Region Corridor 3  
Siteworks - Platform and external works**

[illegible]

## **SECTION NO.2 : BUILDING WORK**



Item No	Quantity	Rate	Amount R
<b><u>SECTION NO. 2</u></b>			
<b><u>BILL NO. 1</u></b>			
<b><u>EARTHWORKS</u></b>			
<b><u>PREAMBLES</u></b>			
Tenderers are advised to study the GP ASC (General Specifications of materials and methods to be used for building contracts) before pricing this bill of quantities			
<b><u>SUPPLEMENTARY PREAMBLES</u></b>			
<b><u>Nature of ground</u></b>			
The nature of the ground is assumed to be loose sandy material, therefore "earth", but possibly interspersed with "hard rock" or "soft rock".			
The nature of the ground is assumed to be gravel, therefore "earth", but possibly interspersed with "soft rock".			
The nature of the ground is assumed to be silty clay with loose river boulders varying in size up to approximately 450mm diameter, therefore "earth", but possibly interspersed with "hard rock".			
Trial holes indicate that the nature of the ground is silty clay to a depth of approximately 500mm with fine to medium loose sandy material below, therefore "earth". The trial holes also indicate that the water table is at a maximum depth of approximately 1000mm.			
A soils investigation has been carried out on site by the engineer and the report is annexed to these bills of quantities. Descriptions of excavations shall be deemed to include all ground conditions classifiable as "earth" described in the above report and where conditions of a more difficult character are indicated these are separately measured			
<b>Carried to Collection</b>			R
Section No. 2 Earthworks Contract Part C2: Pricing Data			

**Carting away of excavated material**

Descriptions of carting away of excavated material shall be deemed to include loading excavated material onto trucks directly from the excavations or, alternatively, from stock piles situated on the building site

**Filling**

Notwithstanding the reference to prescribed multiple handling in clause 1 page 6 of the Standard System of Measuring Building Work, prices for filling and backfilling shall include for all selection and any multiple handling of material

**Testing**

*Prices for filling are to include for all necessary density tests in accordance with SANS 1200D*

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**Carried to Collection**

R

Section No. 2  
Earthworks  
Contract  
Part C2: Pricing Data

Refurbishments and Upgrades to Grosvenor Train Station  
 Prasa South Gauteng Region Corridor 3  
 Siteworks - Platform and external works

**DEMOLITIONS ETC**

**Taking down and removing from site**

1	Concrete palisade fence 2.4m high complete	m	600			
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**Carried to Collection**

R

Section No. 2  
 Earthworks  
 Contract  
 Part C2: Pricing Data

**Refurbishments and Upgrades to Grosvenor Train Station  
Prasa South Gauteng Region Corridor 3  
Siteworks - Platform and external works**

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Item No		Quantity	Rate	Amount R
	<p><b><u>SECTION NO. 2</u></b></p> <p><b><u>BILL NO. 2</u></b></p> <p><b><u>ROOF COVERINGS ETC</u></b></p> <p><b><u>PREAMBLES</u></b></p> <p>Tenderers are advised to study the GP ASC (General Specifications of materials and methods to be used for building contracts) before pricing this bill of quantities</p> <p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p> <p><b><u>Straight cutting</u></b></p> <p>Descriptions of all roof coverings are deemed to include for all straight cutting</p> <p>-----</p> <p><b><u>PROFILED METAL SHEETING AND ACCESSORIES</u></b></p> <p><b><u>0.58mm spelter galvanised ribbed sheet steel with chromadek finish on one side in single lengths and accessories, fixed to steel purlins using SL 700 approved clips and fasteners all in accordance with manufacturer's recommendations and specifications.</u></b></p>			
2	Roof covering with pitch not exceeding 25 degrees	m²	500	
	<p><b>Carried Forward to Summary of Section No. 2</b></p> <p>Section No. 2</p> <p>Roof Coverings</p> <p>Contract</p> <p>Part C2: Pricing Data</p>			<p>R</p>

Item No	Quantity	Rate	Amount R
<b><u>SECTION NO. 2</u></b>			
<b><u>BILL NO. 3</u></b>			
<b><u>METALWORK</u></b>			
<b><u>PREAMBLES</u></b>			
Tenderers are advised to study the GP ASC (General Specifications of materials and methods to be used for building contracts) before pricing this bill of quantities			
<b><u>SUPPLEMENTARY PREAMBLES</u></b>			
<b><u>Descriptions</u></b>			
Descriptions of bolts shall be deemed to include nuts and washers			
Descriptions of expansion anchors and bolts and chemical anchors and bolts shall be deemed to include nuts, washers and mortices in brickwork or concrete			
Metalwork described as "holed for bolt(s)" shall be deemed to exclude the bolts unless otherwise described			
-----			
<b><u>STEEL ROLLER SHUTTERS ETC</u></b>			
<b><u>Approved galvanised steel powder coated roller shutters fixed to brickwork or concrete</u></b>			
3	Manual roll-up slatted roller shutter for 2200 x 2100mm high opening	No	5
4	Manual roll-up slatted roller shutter for 2000 x 2100mm high opening	No	2
<b>Carried to Collection</b>			R
Section No. 2 Metalwork Contract Part C2: Pricing Data			

Refurbishments and Upgrades to Grosvenor Train Station  
Prasa South Gauteng Region Corridor 3  
Siteworks - Platform and external works

5	Manual roll-up slatted roller shutter for 4000 x 2100mm high opening	No	1		
Carried to Collection					R
Section No. 2 Metalwork Contract Part C2: Pricing Data					

Refurbishments and Upgrades to Grosvenor Train Station  
Prasa South Gauteng Region Corridor 3  
Siteworks - Platform and external works

Section No. 2

Building Work

Bill No. 3

Metalwork

**COLLECTION PAGE**

Total Brought Forward from Page No.

Total Brought Forward from Page No.

**Page  
No**

27

28

**Amount  
R**

**Carried Forward to Summary of Section No. 2**

R

Section No. 2

Metalwork

Contract

Part C2: Pricing Data



Item No	Quantity	Rate	Amount R
<b><u>SECTION NO. 2</u></b>			
<b><u>BILL NO. 4</u></b>			
<b><u>STRUCTURAL STEELWORK</u></b>			
<b><u>PREAMBLES</u></b>			
Tenderers are advised to study the GP ASC (General Specifications of materials and methods to be used for building contracts) before pricing this bill of quantities			
<b><u>SUPPLEMENTARY PREAMBLES</u></b>			
Descriptions of bolts shall be deemed to include nuts and washers			
Descriptions of L-shaped and U-shaped anchor bolts shall be deemed to include bending, threading, nuts and washers and embedding in concrete			
Descriptions of expansion anchors and bolts and chemical anchors and bolts shall be deemed to include nuts, washers and mortices in brickwork or concrete			
All structural steel sections are to be protected against rust as per SANS specification then painted as per architect's specification			
All dimensions to be confirmed on site before shop drawings are issued to the structural engineer.			
A complete set of shop drawings shall be submitted to the Engineer for approval before fabrication commences.			
All welds to SANS 10044 Steel to GR. 350W			
<b>Carried to Collection</b>			R
Section No. 2 Structural Steel Contract Part C2: Pricing Data			

**THE FOLLOWING IN MILD STEEL ROOF,  
COLUMNS AND BEAMS**

**Welded roof structure of angle rafters, tie beams,  
rails, struts, braces, cleats, etc and flat bearer,  
gusset and connection plates, bolted to steel  
(Platform shelters)**

- 6 Mono pitched roof structure including columns, beams, rafters, permanent bracing, purlins e.t.c all in accordance to the Structural Engineer's Drawing No. GRS230/01-02/05 (Platform Shelters installed on existing plinths).

No 4

**GUTTERS AND RAINWATER PIPES**

**2mm Thick Galvanised steel gutters**

- 7 220 x 187mm galvanised box gutter

m 82

**2mm Galvanised steel rainwater pipes including  
accessories, holderbats, brackets, etc**

- 8 100mm diameter downpipes

m 48

Carried to Collection

R

Section No. 2  
Structural Steel  
Contract  
Part C2: Pricing Data

Refurbishments and Upgrades to Grosvenor Train Station  
Prasa South Gauteng Region Corridor 3  
Siteworks - Platform and external works

Section No. 2

Building Work

Bill No. 4

Structural Steel

**COLLECTION PAGE**

Total Brought Forward from Page No.

Total Brought Forward from Page No.

**Page  
No**

30

31

**Amount  
R**

**Carried Forward to Summary of Section No. 2**

R

Section No. 2

Structural Steel

Contract

Part C2: Pricing Data

Item No	Quantity	Rate	Amount R
<p><b><u>SECTION NO. 2</u></b></p> <p><b><u>BILL NO. 5</u></b></p> <p><b><u>PAINTWORK</u></b></p> <p><b><u>PREAMBLES</u></b></p> <p>Tenderers are advised to study the GP ASC (General Specifications of materials and methods to be used for building contracts) before pricing this bill of quantities</p> <p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p> <p><b><u>DESCRIPTIONS</u></b></p> <p>Descriptions of paintwork shall be deemed to include for all cutting in</p> <p><b><u>PREPARATORY WORK TO EXISTING WORK</u></b></p> <p>Previously painted plastered surfacesSurfaces shall be thoroughly washed down and allowed to dry completely before any paint is applied. Blistered or peeling paint shall be completely removed and cracks shall be opened, filled with a suitable filler and finished smooth</p> <p>Previously painted metal surfacesSurfaces shall be thoroughly rubbed and cleaned down. Blistered or peeling paint shall be completely removed down to bare metal</p> <p>Previously painted wood surfacesSurfaces shall be thoroughly cleaned down. Blistered or peeling paint shall be completely removed and cracks and crevices shall be primed, filled with suitable filler and finished smooth</p> <p>-----</p>			
<p><b>Carried to Collection</b></p>			R
<p>Section No. 2 Painting Contract Part C2: Pricing Data</p>			

**PAINTWORK, ETC TO NEW WORK ON**

**STEEL SURFACES WITH**

**Spot priming defects in pre-primed surfaces with zinc phosphate metal primer, one coat universal undercoat and two coats super universal high gloss enamel paint on steel**

9	On steel sections	m <sup>2</sup>	233		
10	On steel sections not exceeding 300mm	m	177		

**Carried to Collection**

R

Section No. 2  
Painting  
Contract  
Part C2: Pricing Data

**Refurbishments and Upgrades to Grosvenor Train Station**  
**Prasa South Gauteng Region Corridor 3**  
**Siteworks - Platform and external works**

Section No. 2

Building Work

Bill No. 5

Painting

**COLLECTION PAGE**

Total Brought Forward from Page No.

Total Brought Forward from Page No.

**Page  
No**

33

34

**Amount  
R**

**Carried Forward to Summary of Section No. 2**

R

Section No. 2

Painting

Contract

Part C2: Pricing Data

**Refurbishments and Upgrades to Grosvenor Train Station**  
**Prasa South Gauteng Region Corridor 3**  
**Siteworks - Platform and external works**

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**Refurbishments and Upgrades to Grosvenor Train Station  
Prasa South Gauteng Region Corridor 3  
Siteworks - Platform and external works**

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## **SECTION NO.3 : CIVIL WORK**

Refurbishments and Upgrades to Grosvenor Train Station  
Prasa South Gauteng Region Corridor 3  
Siteworks - Platform and external works

Item No			Quantity	Rate	Amount R
	<b><u>SECTION NO. 3</u></b>				
	<b><u>BILL NO. 1</u></b>				
	<b><u>PLATFORM RESURFACING</u></b>				
	<b><u>PAINTING</u></b>				
	<b><u>Prepare and paint one coat colour reflective road marking paint on paving</u></b>				
1	Single-headed directional arrow 400mm wide x 1400mm long	No	10		
2	Paraplegic sign painted on road surface	No	3		
	<b><u>PAVING ETC</u></b>				
	<b><u>300 x 300mm Tac-Pave in-situ system, yellow colour, applied to existing surfaces all in accordance to manufacturer's instructions.</u></b>				
3	Paving to platform surfaces	m²	658		
	<b>Carried Forward to Summary of Section No. 3</b>				R
	Section No. 3				
	Platforms				
	Contract				
	Part C2: Pricing Data				

**Refurbishments and Upgrades to Grosvenor Train Station**  
**Prasa South Gauteng Region Corridor 3**  
**Siteworks - Platform and external works**

Item No		Quantity	Rate	Amount R
	<b><u>SECTION NO. 3</u></b>			
	<b><u>BILL NO 2</u></b>			
	<b><u>STREET FURNITURE</u></b>			
	<b><u>Galvanised steel furniture</u></b>			
4	Perforated galvanised steel platform seat 1800mm long with arms and mounted to 500 x 500 x 500mm 25 Mpa concrete base including excavation, carting away and concrete. Benches to be finished with polyurethane paint as per Architectural detail.	No	16	
5	Perforated galvanised steel litter bin 400mm Diameter x 750mm high/72-litre capacity with steel ashtray, mounted to 500 x 500 x 500mm 25 Mpa concrete base including excavation, carting away and concrete. Bin to painted with polyurethane paint. All in accordance with the Architectural detail	No	14	
<b>Carried Forward to Summary of Section No. 3</b>				R
Section No. 3				
Street Furniture				
Contract				
Part C2: Pricing Data				

Item No	Quantity	Rate	Amount R
<p><b><u>SECTION NO. 3</u></b></p> <p><b><u>BILL NO. 3</u></b></p> <p><b><u>PARKING AND KERBING</u></b></p> <p>Unless otherwise described, the preambles and full descriptions of the items in the preceeding Bills are to apply equally to this Bill</p> <p><b><u>PREAMBLES</u></b></p> <p>Tenderers are advised to study the GP ASC (General Specifications of materials and methods to be used for building contracts) before pricing this bill of quantities</p> <p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p> <p><b><u>Descriptions and Preambles</u></b></p> <p>Wherever possible abridged descriptions have been used for those items in the bill which appear under the main trade headings in previous bills. The full descriptions of these items and the Model Preambles are to, and do, apply equally to this section.</p> <p><b><u>Testing of material and filling</u></b></p> <p>Descriptions of earth filling, compaction, etc shall be deemed to include for all necessary testing required in accordance with the SABS 1200 series</p> <p><b><u>Precast concrete block road surfacing</u></b></p> <p>Paving shall be laid in accordance with SABS 1200 MJ, SANS 1058 and the Concrete Masonry Association's specifications</p> <p>Paving shall be laid to herringbone pattern on 20mm thick (thickness after final compaction) clean river sand (preparation of ground or filling elsewhere)</p>			
<p><b>Carried to Collection</b></p>			R
<p>Section No. 3 Roads and Paving Contract Part C2: Pricing Data</p>			

**Refurbishments and Upgrades to Grosvenor Train Station**  
**Prasa South Gauteng Region Corridor 3**  
**Siteworks - Platform and external works**

Clean sand shall be swept into joints between roadstones at completion

**EARTHWORKS (BULK EXCAVATION, FILLING ETC)**

**Excavation not exceeding 2m deep**

- |   |   |    |     |
|---|---|----|-----|
| 6 | In roads and parking to reduce levels for layerworks and depositing excavated material in prescribed stock piles including carting away | m³ | 277 |
|---|---|----|-----|

**Extra over excavations for carting away**

- |   |   |    |     |
|---|---|----|-----|
| 7 | Surplus material from stock piles on site to a dumping site to be located by the contractor | m³ | 277 |
|---|---|----|-----|

**Keeping excavations free of water**

- |   |                                   |  |      |
|---|-----------------------------------|--|------|
| 8 | Keeping excavations free of water |  | Item |
|---|-----------------------------------|--|------|

**Earth filling supplied by the contractor under pavings and roads or in soil mattress, etc as drawings**

- |   |  |    |     |
|---|--|----|-----|
| 9 | Subbase course under roads and parking compacted to 93% Mod AASHTO density (G6 material) | m³ | 277 |
|---|--|----|-----|

**Compaction of surfaces**

- |    |  |    |     |
|----|--|----|-----|
| 10 | Compaction of ground surface under roads and parking, etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 90% of Mod AASHTO density | m² | 615 |
|----|--|----|-----|

**Prescribed density tests on filling:**

- |    |  |    |    |
|----|--|----|----|
| 11 | Allow for compaction tests by an approved laboratory to determine density of filling material. | No | 10 |
|----|--|----|----|

**Carried to Collection**

R

Section No. 3  
Roads and Paving  
Contract  
Part C2: Pricing Data

Refurbishments and Upgrades to Grosvenor Train Station  
Prasa South Gauteng Region Corridor 3  
Siteworks - Platform and external works

	<u>Approved weedkiller mixed in the proportion and applied as specified by the manufacturer</u>				
12	Under block paving, etc	m <sup>2</sup>	615		
	<u>60mm standard grey double zig zag interlocking paving on 25mm thick cement/riversand bed with sand and cement mixture swept into joints and hosed down</u>				
13	Paving to Yards	m <sup>2</sup>	615		
	<u>Precast concrete finished smooth on exposed surfaces including bedding, jointing and pointing</u>				
14	Kerb (SABS 927 fig 11) 75mm wide x 150mm high with 150mm x 150mm x 300mm unreinforced concrete haunching at back of each joint including excavation, backfilling, etc	m	101		
Carried to Collection					R
Section No. 3 Roads and Paving Contract Part C2: Pricing Data					

**Refurbishments and Upgrades to Grosvenor Train Station**  
**Prasa South Gauteng Region Corridor 3**  
**Siteworks - Platform and external works**

Section No. 3

Civil Work

Bill No. 3

Roads and Paving

**COLLECTION PAGE**

Total Brought Forward from Page No.

Total Brought Forward from Page No.

Total Brought Forward from Page No.

**Page  
No**

**Amount  
R**

40

41

42

**Carried Forward to Summary of Section No. 3**

R

Section No. 3  
Roads and Paving  
Contract  
Part C2: Pricing Data

Refurbishments and Upgrades to Grosvenor Train Station  
Prasa South Gauteng Region Corridor 3  
Siteworks - Platform and external works

Item No		Quantity	Rate	Amount R
	<b><u>SECTION NO. 3</u></b>			
	<b><u>BILL NO. 4</u></b>			
	<b><u>BOUNDARY WALL</u></b>			
	Unless otherwise described, the preambles and full descriptions of the items in the preceeding Bills are to apply equally to this Bill			
	<b><u>Excavation in earth not exceeding 2m deep</u></b>			
15	Trenches	m <sup>3</sup> 98		
	<b><u>Extra over trench and hole excavations in earth for excavation in:</u></b>			
16	Soft rock.	m <sup>3</sup> 10		
17	Hard rock.	m <sup>3</sup> 5		
	<b><u>Extra over all excavations for carting away:</u></b>			
18	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor.	m <sup>3</sup> 49		
	<b><u>Risk of collapse of excavations</u></b>			
19	Sides of trench and hole excavations not exceeding 1,5m deep	m <sup>2</sup> 344		
	<b><u>Earth filling obtained from the excavations and/or prescribed stock piles on site compacted to 93% Mod AASHTO density</u></b>			
20	Backfilling to trenches, holes, etc.	m <sup>3</sup> 148		
21	Compaction of ground surface under floors etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 93% Mod AASHTO density.	m <sup>2</sup> 61		
	<b>Carried to Collection</b>		R	
	Section No. 3			
	Boundary walls			
	Contract			
	Part C2: Pricing Data			



**Refurbishments and Upgrades to Grosvenor Train Station**  
**Prasa South Gauteng Region Corridor 3**  
**Siteworks - Platform and external works**

<b><u>Prescribed density tests on filling:</u></b>					
22	Allow for compaction tests by an approved laboratory to determine density of filling material.	No	5		
<b><u>Soil insecticide</u></b>					
23	To bottoms and sides of trenches, etc	m <sup>2</sup>	271		
<b><u>25 MPa/20mm reinforced concrete</u></b>					
24	Strip footings	m <sup>3</sup>	23		
25	Concrete infill	m <sup>3</sup>	6		
<b><u>Mild and high tensile steel reinforcement to structural concrete work</u></b>					
26	All diameter bars	t	3.00		
<b><u>Test blocks</u></b>					
27	Making and testing 150 x 150 x 150mm concrete strength test cube	No	5		
<b><u>BRICKWORK</u></b>					
<b><u>FOUNDATIONS</u></b>					
<b><u>Brickwork of NFX bricks (14 MPa nominal compressive strength) in class 1 mortar</u></b>					
28	One brick walls	m <sup>2</sup>	118		
29	Cavity walls	m <sup>2</sup>	128		
30	Brick Piers	m <sup>3</sup>	2		
31	Mass brickwork	m <sup>3</sup>	7		
<b>Carried to Collection</b>				R	
Section No. 3					
Boundary walls					
Contract					
Part C2: Pricing Data					

Refurbishments and Upgrades to Grosvenor Train Station  
Prasa South Gauteng Region Corridor 3  
Siteworks - Platform and external works

<b><u>SUPERSTRUCTURE</u></b>					
<b><u>Brickwork of NFX bricks (14 MPa nominal compressive strength) in Class I mortar:</u></b>					
32	One brick walls	m <sup>2</sup>	172		
33	Brick Piers	m <sup>3</sup>	7		
<b><u>BRICKWORK SUNDRIES</u></b>					
<b><u>Brickwork reinforcement:</u></b>					
34	150mm Wide reinforcement built in horizontally.	m	1 153		
35	75mm Wide reinforcement built in horizontally.	m	1 000		
<b><u>Joint forming material in movement joints</u></b>					
36	10mm Bitumen impregnated soft board built in vertically between brickwalls	m <sup>2</sup>	18		
37	10 x 10mm In vertical isolation joints	m	10		
<b><u>FACE BRICKWORK</u></b>					
<b><u>External facings in approved face bricks (FBX) with a PC amount of R10,500.00 per thousand bricks delivered to site (excluding VAT) pointed with flush horizontal and vertical joints</u></b>					
38	Extra over brickwork for face brickwork	m <sup>2</sup>	326		
39	Extra over brickwork for face brickwork in foundations	m <sup>2</sup>	320		
<b><u>Brick-on-edge header course copings, sills, etc of approved face bricks (FBX) with a PC Amount of R10,500.00 per thousand bricks delivered to site (excluding VAT) pointed with flush horizontal and vertical joints on all exposed faces</u></b>					
40	220mm Copings on top of one brick walls	m	142		
<b><u>DRAINAGE</u></b>					
<b>Carried to Collection</b>				R	
Section No. 3					
Boundary walls					
Contract					
Part C2: Pricing Data					

<b><u>Prescribed density tests on filling</u></b>			
41	Weep holes formed of 50mm diameter pvc pipe	No	52
<b>Carried to Collection</b>			
Section No. 3 Boundary walls Contract Part C2: Pricing Data			
			R

**Refurbishments and Upgrades to Grosvenor Train Station  
Prasa South Gauteng Region Corridor 3  
Siteworks - Platform and external works**

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Item No		Quantity	Rate	Amount R
	<b><u>SECTION NO. 3</u></b>			
	<b><u>BILL NO. 5</u></b>			
	<b><u>FENCING</u></b>			
	<b><u>Pressed high density line galvanised mesh panel fence, reinforced with 4 x 50mm "V" formation horizontal recessed bands and 2 x 75mm 70 degree flanges along sides, with 150mm post, gates, etc including galvanised steel bolts, etc, site clearance and preparation of ground</u></b>			
42	Fence 1400m high complete with and including galvanised posts and topped with galvanised "castle type" spike rails all in accordance with the architect specifications	m	170	
43	Fence 2600m high complete with and including galvanised posts and topped with galvanised "castle type" spike rails all in accordance with the architect specifications	m	600	
	<b><u>GALVANISED STEEL GATES</u></b>			
	<b><u>Gates</u></b>			
44	Vehicle sliding gate 4,50 x 2,6m high made with galvanised square tubing elements, galvanised mesh or similar approved with galvanised wheels all as per structural engineer's specifications	No	1	
45	Vehicle sliding gate 4,00 x 2,6m high made with galvanised square tubing elements, galvanised mesh or similar approved with galvanised wheels all as per structural engineer's specifications	No	2	
46	Pedestrian gate 0,915 x 2,6m high made with galvanised square tubing elements, galvanised mesh or similar approved with galvanised wheels all as per structural engineer's specifications	No	3	
	<b>Carried Forward to Summary of Section No. 3</b>		R	
	Section No. 3			
	Fencing			
	Contract			
	Part C2: Pricing Data			

Refurbishments and Upgrades to Grosvenor Train Station  
Prasa South Gauteng Region Corridor 3  
Siteworks - Platform and external works

Item No			Quantity	Rate	Amount R
	<b><u>SECTION NO. 3</u></b>				
	<b><u>BILL NO. 6</u></b>				
	<b><u>TUNNEL ENTRANCES</u></b>				
	<b><u>MASONRY</u></b>				
	<b><u>Brickwork of NFP bricks in class II mortar</u></b>				
47	One brick walls	m <sup>2</sup>	37		
	<b><u>Brickwork reinforcement</u></b>				
48	150mm Wide reinforcement built in horizontally	m	145		
	<b><u>External facings in approved face bricks (FBX) with a PC amount of R10,500.00 per thousand bricks delivered to site (excluding VAT) pointed with flush horizontal and vertical joints</u></b>				
49	Extra over brickwork for face brickwork	m <sup>2</sup>	37		
	<b><u>PLASTERING</u></b>				
	<b><u>Cement plaster on brickwork</u></b>				
50	On walls	m <sup>2</sup>	37		
51	On narrow widths	m <sup>2</sup>	1		
	<b><u>PAINTWORK, ETC TO NEW WORK ON</u></b>				
	<b><u>FLOATED PLASTER SURFACES WITH</u></b>				
	<b><u>One coat alkali resistant plaster primer and two coats PVA acrylic emulsion paint on</u></b>				
52	Internal walls	m <sup>2</sup>	38		
	<b>Carried to Collection</b>				
	Section No. 3 Tunnel Entrance and Stairs Contract Part C2: Pricing Data				R

**Refurbishments and Upgrades to Grosvenor Train Station**  
**Prasa South Gauteng Region Corridor 3**  
**Siteworks - Platform and external works**

**TUNNEL CANOPIES**

**Tunnel steel roof structure, roof covering and mesh panel enclosure all in accordance with the Architect's Drawings No.CN001-903.1 -903.3.**

53	Tunnel 2 Canopy - Exit 1 Overall area on plan 46m2	No	1
54	Tunnel 2 Canopy - Exit 2&3 Overall area on plan 37m2	No	2
55	Tunnel 1 Canopy - Exit 1 Overall area on plan 26m2	No	1
56	Tunnel 1 Canopy - Exit 2&3 Overall area on plan 23m2	No	2
57	Tunnel 3 Canopy - Overall area on plan 63m2	No	1
58	Tunnel 1, 2 &3 Canopies - Exit 4 Overall area on plan 9m2	No	3

**Carried to Collection**

R

Section No. 3  
Tunnel Entrance and Stairs  
Contract  
Part C2: Pricing Data

**Refurbishments and Upgrades to Grosvenor Train Station**  
**Prasa South Gauteng Region Corridor 3**  
**Siteworks - Platform and external works**

Section No. 3

Civil Work

Bill No. 6

Tunnel Entrance and Stairs

**COLLECTION PAGE**

Total Brought Forward from Page No.

Total Brought Forward from Page No.

**Page  
No**

50

51

**Amount  
R**

**Carried Forward to Summary of Section No. 3**

R

Section No. 3

Tunnel Entrance and Stairs

Contract

Part C2: Pricing Data



Item No	Quantity	Rate	Amount R
<p><b><u>SECTION NO. 2</u></b></p> <p><b><u>BILL NO. 7</u></b></p> <p><b><u>STATION SIGNAGE</u></b></p> <p><b><u>PREAMBLES</u></b></p> <p>Tenderers are advised to study the GP ASC (General Specifications of materials and methods to be used for building contracts) before pricing this bill of quantities</p> <p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p> <p><b><u>DESCRIPTIONS</u></b></p> <p>Descriptions of paintwork shall be deemed to include for all cutting in</p> <p><b><u>SIGN PANEL SIZES</u></b></p> <p>All sizes must be as per PRASA Signage Guidelines and specifications, Version 9 document.</p> <p>Chromadek signs with vinyl digital print must fit within the sizes given and typographic layout indicated</p> <p><b><u>STANDARD WARRANTY:</u></b></p> <p>All signage surfaces to have a minimum of five (5) years warranty against fading. The necessary documents to be presented.</p> <p>A five (5) year warranty with an IP67 (International protection rating) for all LED light fitting installation is required.</p> <p>The necessary documents to be presented. The supply base companies to be SANS certified and the necessary documents to be presented. ISO certification to be presented on materials and products.</p>			
<p><b>Carried to Collection</b></p>			R
<p>Section No. 3            Station Signage            Contract            Part C2: Pricing Data</p>			

Hot dipped galvanising on all mild steel frameworks in coastal areas.

Powder coating to be with coastal quality undercoat

**FINISHES TO IRONMONGERY:**

Where applicable finishes to ironmongery are indicated by suffixes in accordance with the following list:

- BS Satin bronze lacquered
- CH Chromium plated
- SC Satin chromium plated
- SE Silver enamelled
- GE Grey enamelled
- AN Anodised natural
- AS Anodised silver
- AB Anodised bronze
- AG Anodised gold
- ABL Anodised black
- PB Polished brass
- PL Polished and lacquered
- PT Epoxy coated
- SD Sanded
- SS Stainless Steel

-----

**Carried to Collection**

Section No. 3  
 Station Signage  
 Contract  
 Part C2: Pricing Data

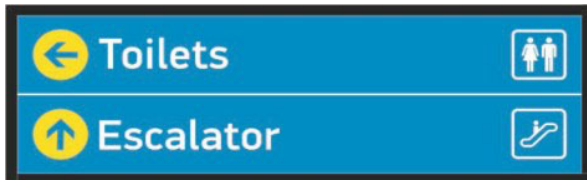
R

## **PRASA DIRECTIONAL SIGNAGE**

The contractor is to ensure that all external illuminated signage boxes are to be completely weatherproof, fixed firmly to the floor, LED lighting to have a minimum of 24 months guarantee/ warranty and should it be damaged/ not working within the this time period, the contractor is to replace the lighting at their cost. The contractor is to also to ensure they make sufficient allowance for all scaffolding/ trolley lifts/ scissor lifts/ etc. to carry out the works

- 59 Supply and installation of non-illuminated signage box, fixed to wall/ concrete column/ Steel Column, consisting mounting brackets fixed to wall/ concrete column/ Steel Column, frames to be powder coated black, two 1500 x 90 x 500mm high non-illuminated signage box fixed onto wall/ concrete column/ Steel Column, with 30 letters on signage box, letters to be viewed on either side of the signage box, signage box to have Prasa logo, letters to be a minimum of 150mm high and a 40mm gap between letter and top/ bottom of signage box, including all chemical anchor bolts, end caps, washers, nuts, hoisting into position, making good existing finishes, etc. complete all as per Prasa's specification and to the architects approval (B1.3).

Below is an example of the non-illuminated signage box specification



No

2

**Carried to Collection**

R

Section No. 3  
Station Signage  
Contract  
Part C2: Pricing Data

60 Supply and installation of non-illuminated signage stand, fixed to asphalt/ paved surface, consisting of base plate on either post bolted in floor structure, grout between base plate and floor finish, 75 x 75 x 3 square tubing legs 2.6m high on either side with end caps added to the top of the legs painted black, one 3000 x 90 x 500mm high non-illuminated signage box fixed onto steel legs, with 30 letters on signage box, letters to be viewed on either side of the signage box, signage box to have Prasa logo, letters to be a minimum of 150mm high and a 40mm gap between letter and top/ bottom of signage box, including all chemical anchor bolts, end caps, washers, nuts, hoisting into position, etc. complete all as per Prasa's specification and to the architects approval (E2.1).

Below is an example of the illuminated signage box specifications:



No

4

Carried to Collection

R

Section No. 3  
 Station Signage  
 Contract  
 Part C2: Pricing Data

61 Supply and installation of non-illuminated signage stand, fixed to asphalt/ paved surface, consisting of base plate on either post bolted in floor structure, grout between base plate and floor finish, 75 x 75 x 3 square tubing legs 2.6m high on either side with end caps added to the top of the legs painted black, one 2400 x 90 x 1500mm high non-illuminated signage box fixed onto steel legs, with 30 letters on signage box, letters to be viewed on either side of the signage box, signage box to have Prasa logo, letters to be a minimum of 150mm high and a 40mm gap between letter and top/ bottom of signage box, including all chemical anchor bolts, end caps, washers, nuts, hoisting into position, etc. complete all as per Prasa's specification and to the architects approval (E1.1).

Below is an example of the illuminated signage box specifications:



No

1

Carried to Collection

R

Section No. 3  
 Station Signage  
 Contract  
 Part C2: Pricing Data

- 62 Supply and installation of non-illuminated signage stand, fixed to asphalt/ paved surface, consisting of base plate on either post bolted in floor structure, grout between base plate and floor finish, 75 x 75 x 3 square tubing legs 2.6m high on either side with end caps added to the top of the legs painted black, one 500 x 90 x 3000mm high non-illuminated signage box fixed onto steel legs, with 30 letters on signage box, letters to be viewed on either side of the signage box, signage box to have Prasa logo, letters to be a minimum of 150mm high and a 40mm gap between letter and top/ bottom of signage box, including all chemical anchor bolts, end caps, washers, nuts, cables, hoisting into position, etc. complete all as per Prasa's specification and to the architects approval (D1.3).

Below is an example of the illuminated signage box specifications:



No

1

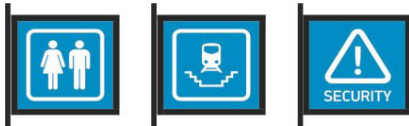
Carried to Collection

R

Section No. 3  
Station Signage  
Contract  
Part C2: Pricing Data

**Refurbishments and Upgrades to Grosvenor Train Station**  
**Prasa South Gauteng Region Corridor 3**  
**Siteworks - Platform and external works**

- 63 Supply and installation of non-illuminated signage box, fixed to wall/ concrete column/ Steel Column, consisting mounting brackets fixed to wall/ concrete column/ Steel Column, frames to be powder coated black, two 500 x 90 x 500mm high non-illuminated signage box fixed onto wall/ concrete column/ Steel Column, images on signage box, images to be viewed on either side of the signage box, including all chemical anchor bolts, end caps, washers, nuts, hoisting into position, making good existing finishes, etc. complete all as per Prasa's specification and to the architects approval (C2.1). See example below:



No

7

- 64 Supply and installation of non-illuminated signage box (F2.1), fixed to wall/ concrete column/ Steel Column, consisting mounting brackets fixed to wall/ concrete column/ Steel Column, frames to be powder coated black, 100mm wide non-illuminated signage box fixed onto wall/ concrete column/ Steel Column, images on signage box, including all chemical anchor bolts, end caps, washers, nuts, hoisting into position, making good existing finishes, etc. complete all as per Prasa's specification and to the architects approval. See example below:



No

2

**Carried to Collection**

R

Section No. 3  
Station Signage  
Contract  
Part C2: Pricing Data

65 Supply and installation of non-illuminated signage box (J1.1), fixed to wall, consisting mounting brackets fixed to wall, frames to be powder coated black, 300mm x 800mm high non-illuminated signage box fixed onto wall, images on signage box, including all chemical anchor bolts, end caps, washers, nuts, hoisting into position, making good existing finishes, etc. complete all as per Prasa's specification and to the architects approval. See example below:



No

1

Carried to Collection

R

Section No. 3  
Station Signage  
Contract  
Part C2: Pricing Data



**Refurbishments and Upgrades to Grosvenor Train Station  
Prasa South Gauteng Region Corridor 3  
Siteworks - Platform and external works**

[illegible]

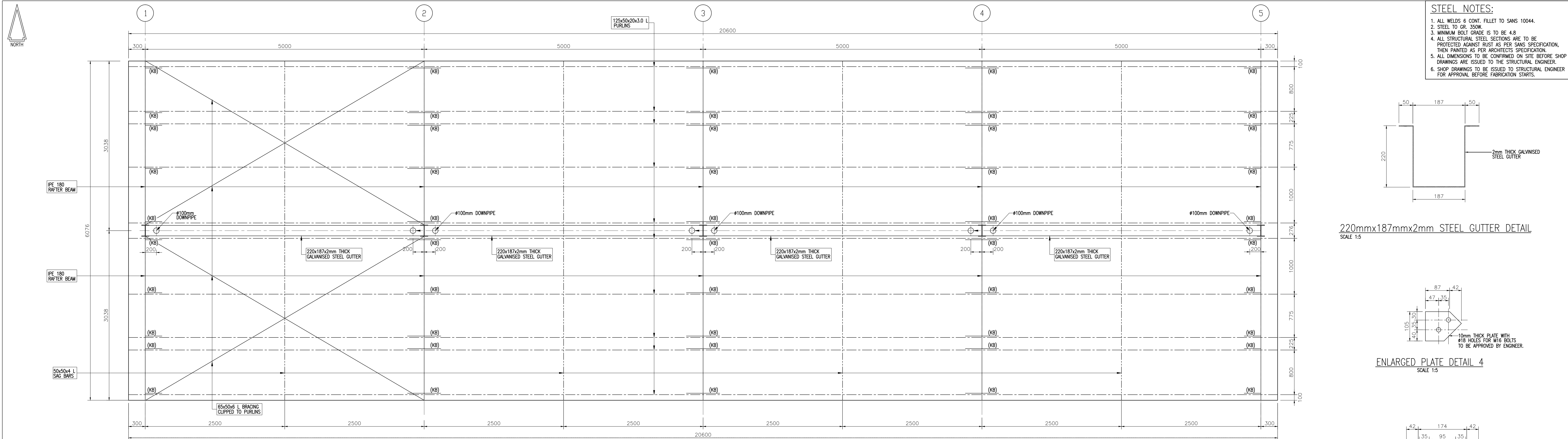
**Refurbishments and Upgrades to Grosvenor Train Station  
Prasa South Gauteng Region Corridor 3  
Siteworks - Platform and external works**

[illegible]

**Refurbishments and Upgrades to Grosvenor Train Station**  
**Prasa South Gauteng Region Corridor 3**  
**Siteworks - Platform and external works**

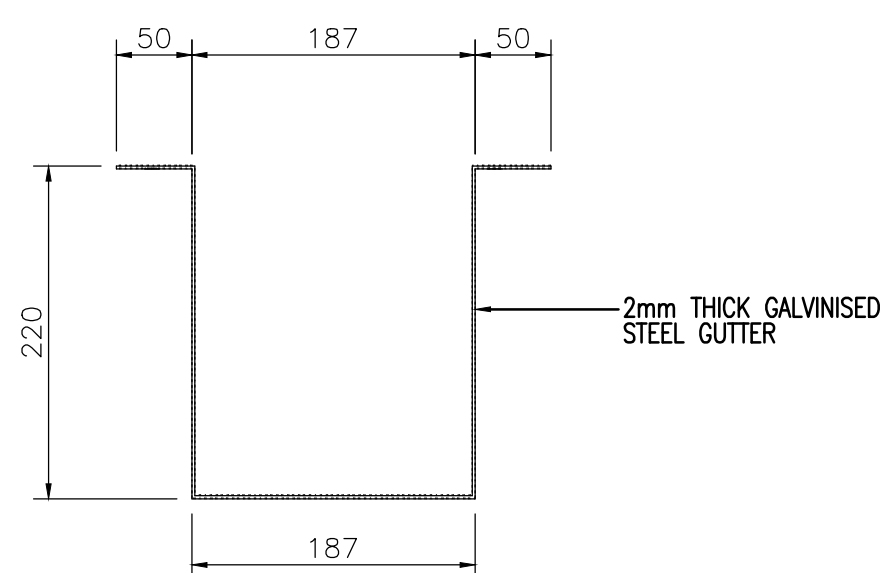
Section No	<u>SUMMARY OF SECTION NO. 2: BUILDING WORK</u>	Page No	Amount R
1	Preliminaries	21	
2	Building Work	37	
3	Civil Work	62	
	Sub Total		R
	ADD: Contingency at 10%		R
	Sub Total		R
	ADD: Value Added Tax		R
	<b>TOTAL CARRIED TO FORM OF TENDER</b>		R
	Contract Part C2: Pricing Data		

# **DRAWINGS**

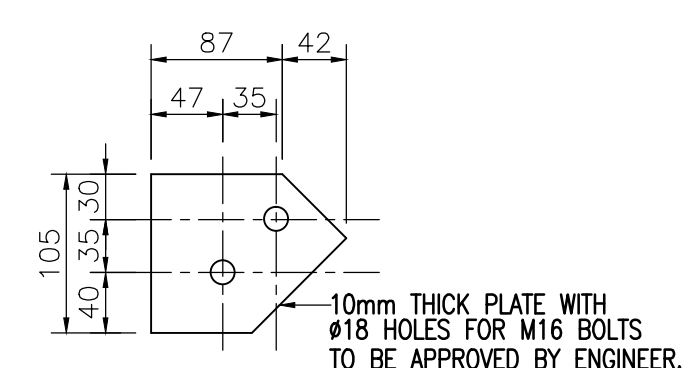


**STEEL NOTES:**

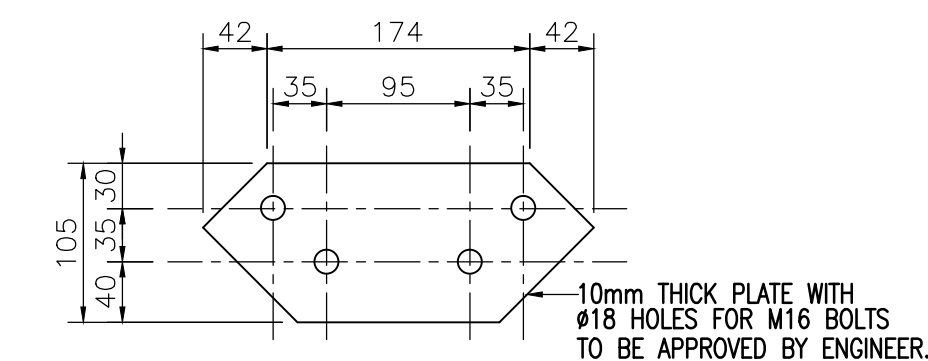
1. ALL WELDS 6 CONT. FILLET TO SANS 10044.
2. STEEL TO GR. 350W.
3. MINIMUM BOLT GRADE IS TO BE 4.8
4. ALL STRUCTURAL STEEL SECTIONS ARE TO BE PROTECTED AGAINST RUST AS PER SANS SPECIFICATION, THEN PAINTED AS PER ARCHITECTS SPECIFICATION.
5. ALL DIMENSIONS TO BE CONFIRMED ON SITE BEFORE SHOP DRAWINGS ARE ISSUED TO THE STRUCTURAL ENGINEER.
6. SHOP DRAWINGS TO BE ISSUED TO STRUCTURAL ENGINEER FOR APPROVAL BEFORE FABRICATION STARTS.



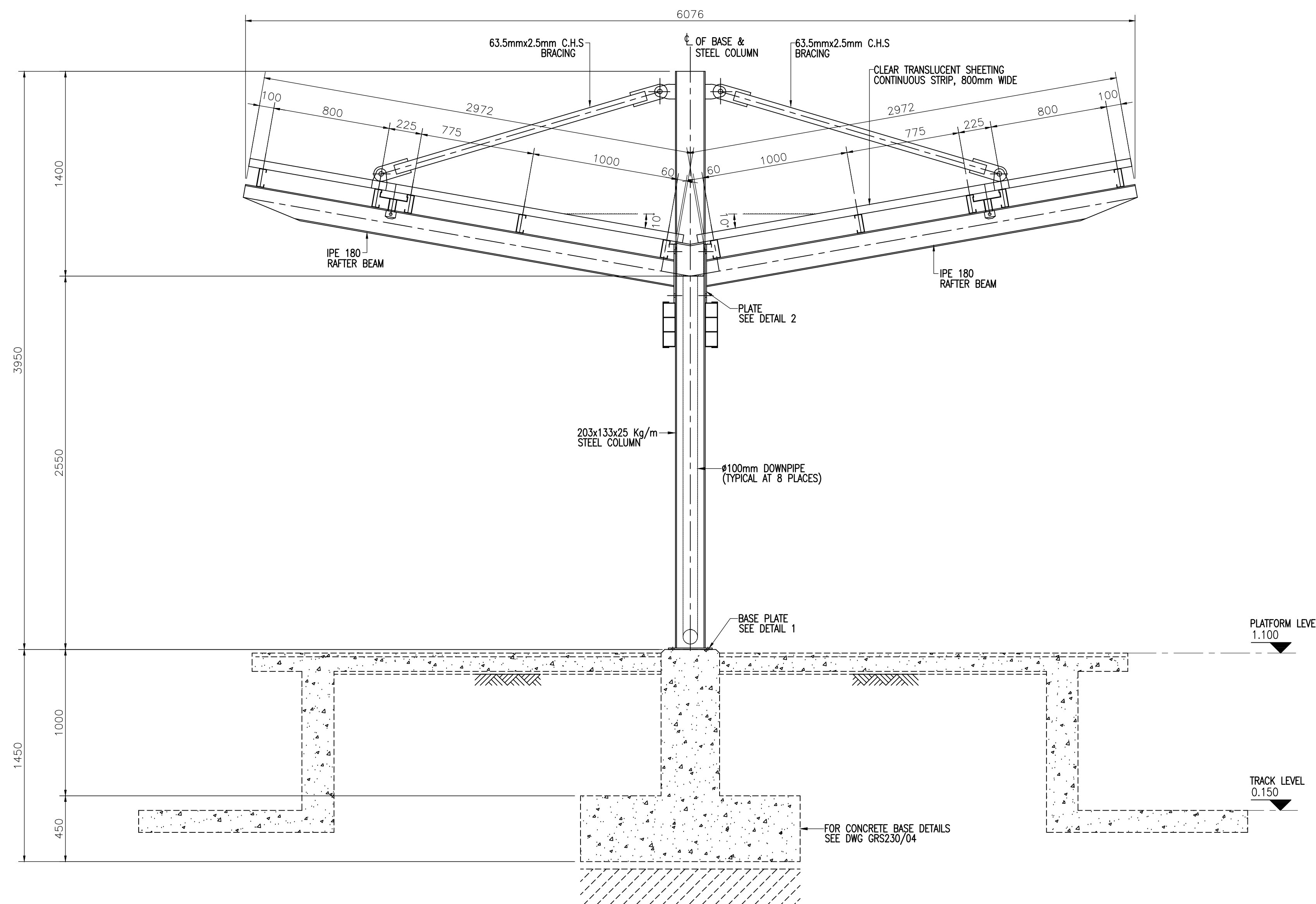
220mmx187mmx2mm STEEL GUTTER DETAIL  
SCALE 1:5



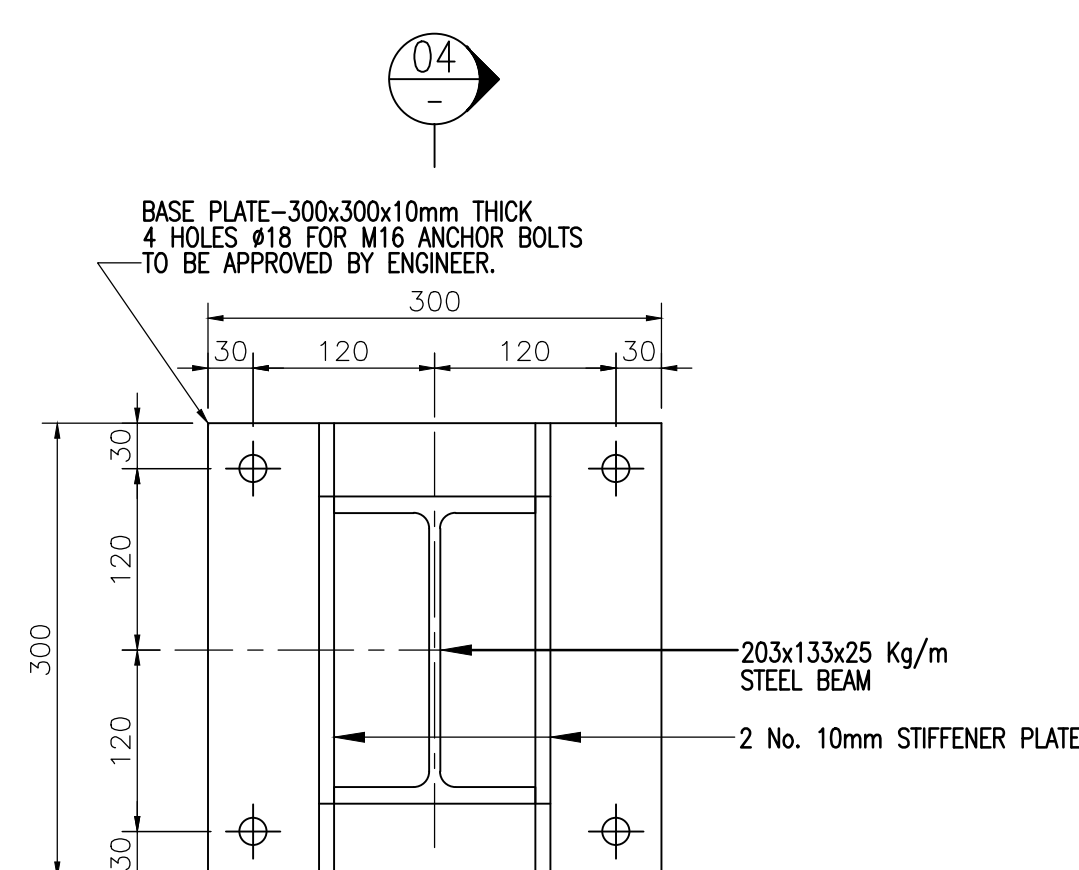
ENLARGED PLATE DETAIL 4  
SCALE 1:5



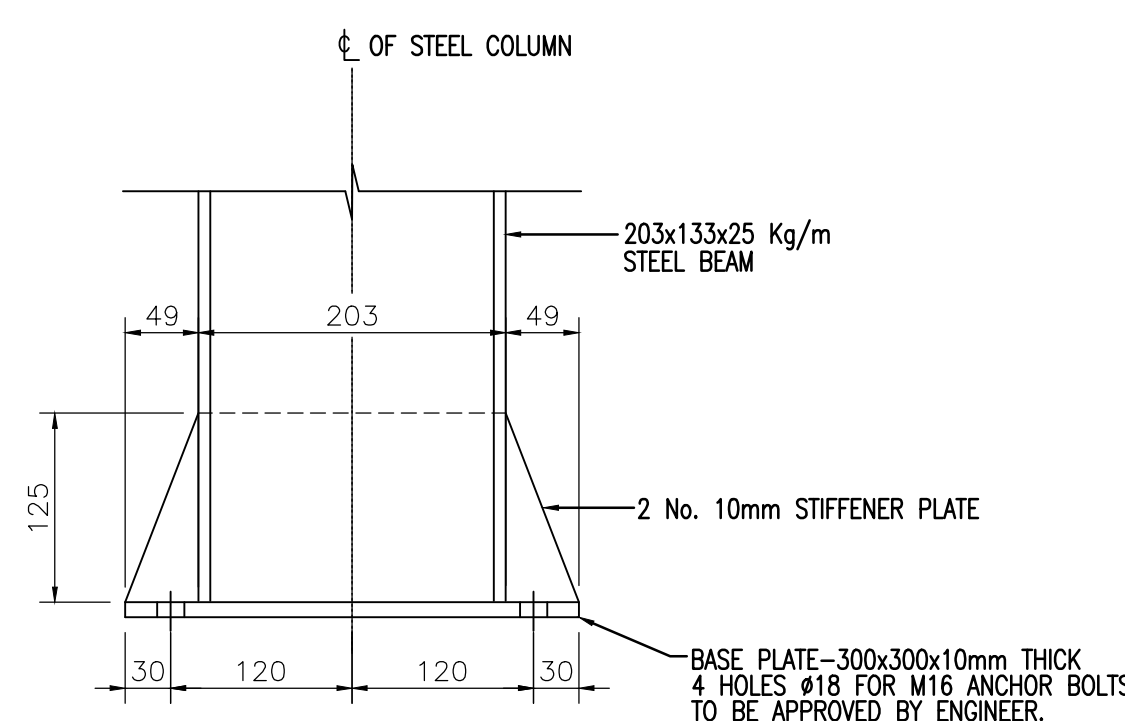
ENLARGED PLATE DETAIL 3  
SCALE 1:5



TYPICAL SECTION THROUGH PLATFORM AND CANOPY  
SCALE: 1:20



BASE PLATE DETAIL 1  
SCALE 1:5  
(TYPICAL AT 20 PLACES)



SECTION 04  
SCALE 1:5

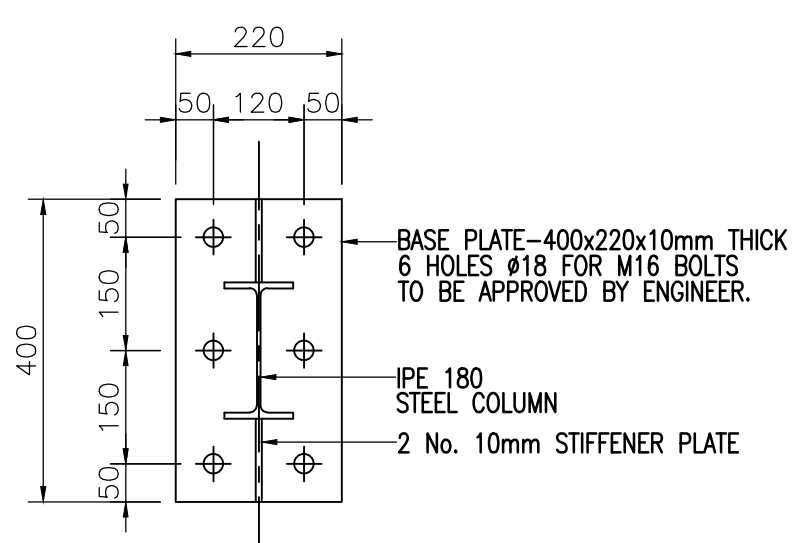
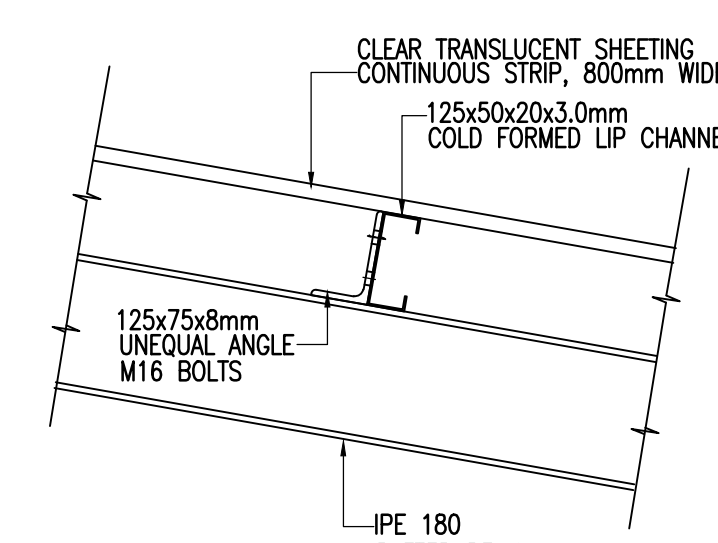
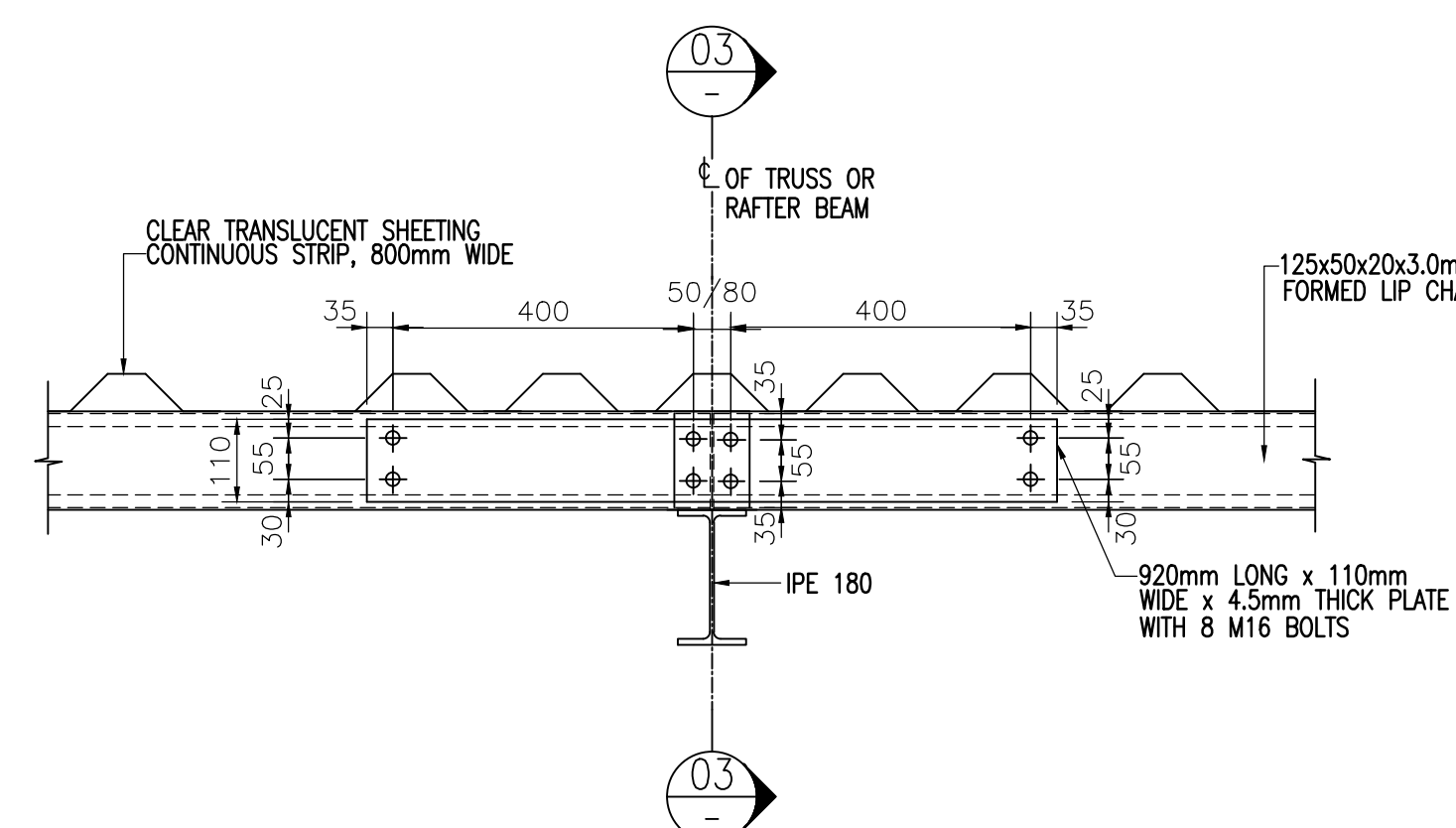


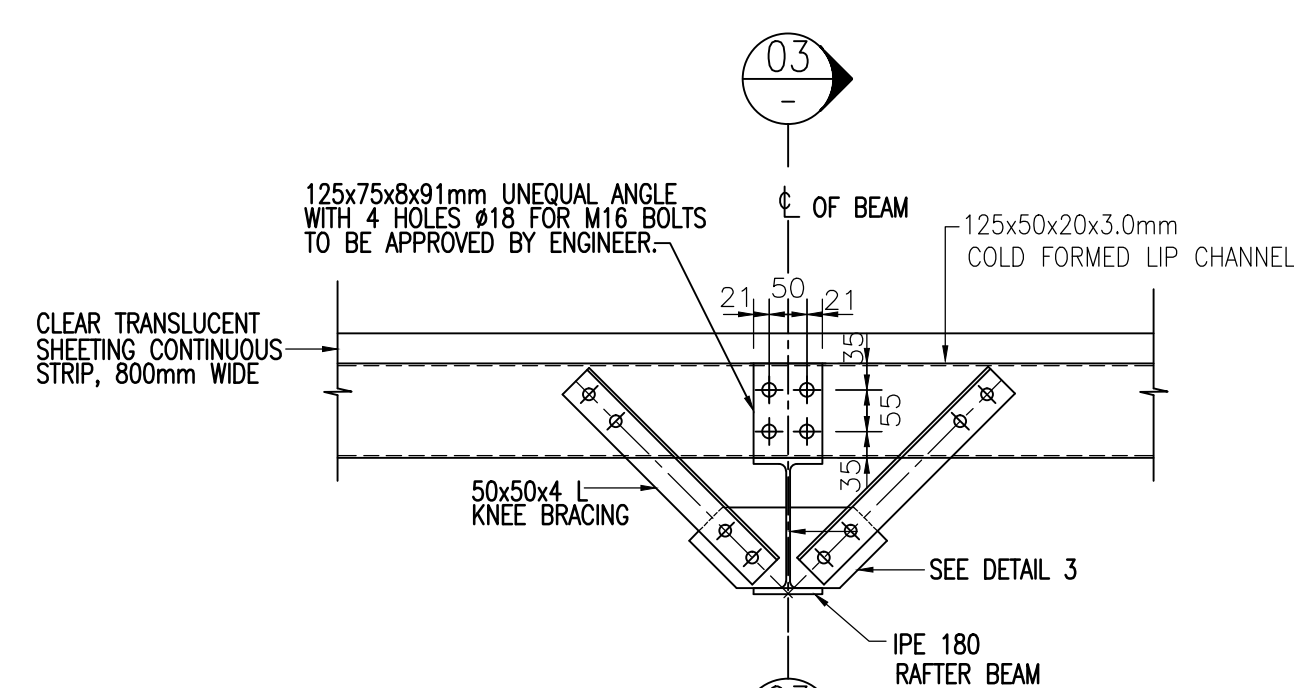
PLATE DETAIL 2  
SCALE 1:10  
(40 No OFF)



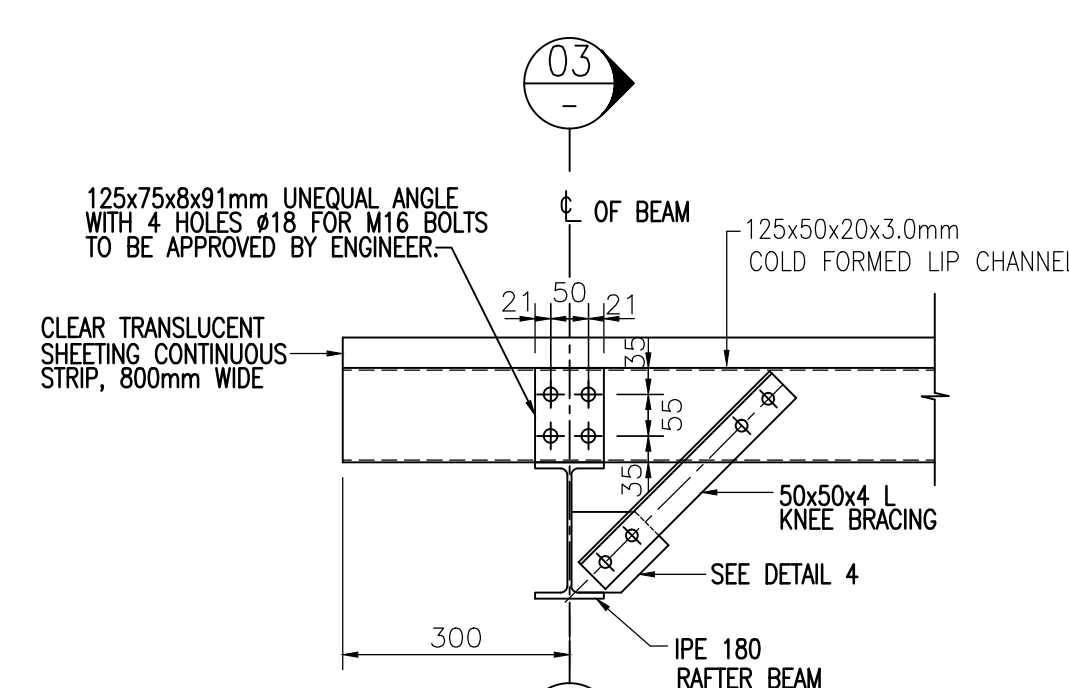
SECTION 03  
SCALE 1:10



SPlicing DETAIL FOR PURLINS  
SCALE 1:10



KNEE BRACE DETAIL FOR PURLINS TYPE 1  
SCALE 1:10  
(TYPICAL AT 30 PLACES)



KNEE BRACE DETAIL FOR PURLINS TYPE 2  
SCALE 1:10  
(TYPICAL AT 20 PLACES)

REFERENCES

BAP/01-01-02/01	SITE LAYOUT
BAP/01-01-02/02	CONCRETE PLINTH SUPPORTING STEEL CONTAINERS - PLAN, SECTIONS, DETAILS AND REINFORCEMENT
BAP/01-01-02/03	BOUNDARY WALL WITH FOUNDATIONS - PLAN, SECTIONS, DETAILS AND REINFORCEMENT
BAP/01-01-02/04	FOUNDATION LAYOUT FOR STEEL SHELTER - PLAN, SECTIONS, DETAILS
BAP/01-01-02/06	TUNNEL 1 CONCRETE ROOF SLAB LAYOUT - PLAN, SECTIONS, DETAILS AND REINFORCEMENT
BAP/01-01-02/07	TUNNEL 2 CONCRETE ROOF SLAB LAYOUT - PLAN, SECTIONS, DETAILS AND REINFORCEMENT
BAP/01-01-02/08	TUNNEL 3 CONCRETE ROOF SLAB LAYOUT - PLAN, SECTIONS, DETAILS AND REINFORCEMENT
BAP/01-01-02/09	STRUCTURAL STEEL FRAME TO CARRY CONTAINER - PLAN, SECTIONS, DETAILS
BAP/01-01-02/10	STEEL STAIRCASE LAYOUT - PLAN, SECTIONS, DETAILS

REV	ISSUED FOR APPROVAL	DATE	ISSUED FOR CONSTRUCTION
A	126/07/22	126/07/22	0

KGATO YA POTOKO TRADING (PTY)Ltd

ADDRESS: PO BOX 2023  
RIETVALLERAND, 0153  
TEL: (011) 391 3859  
FAX: (086) 540 0501

DESIGNED: TK  
CHECKED:

PRASA CRES  
PRASA CORRIDOR 3, GROSVENOR STATION

STEEL CANOPY LAYOUT  
PLAN, SECTIONS, AND DETAILS

DATE: 20/07/22

SCALE: AS SHOWN  
DRAWN: P.M.

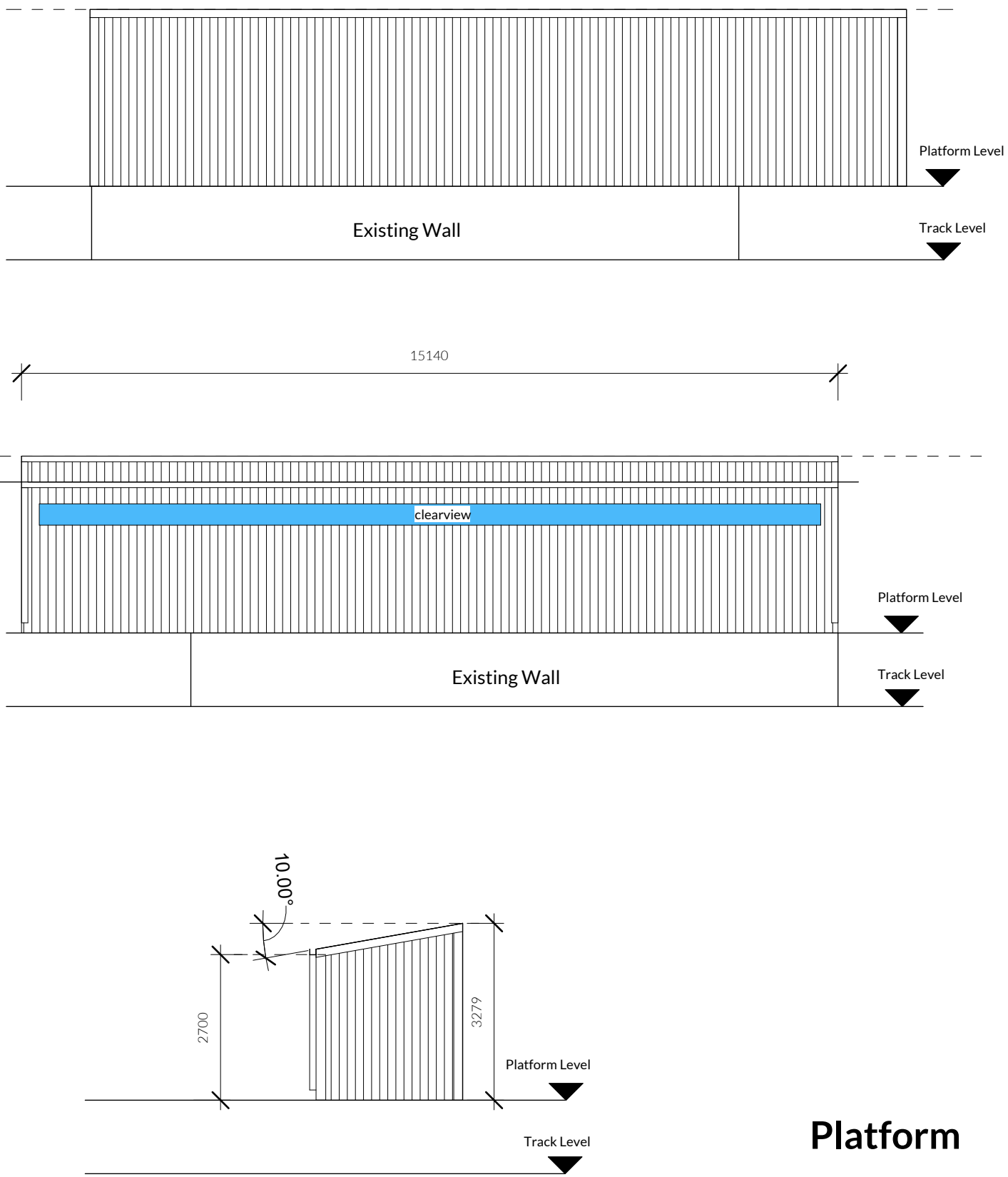
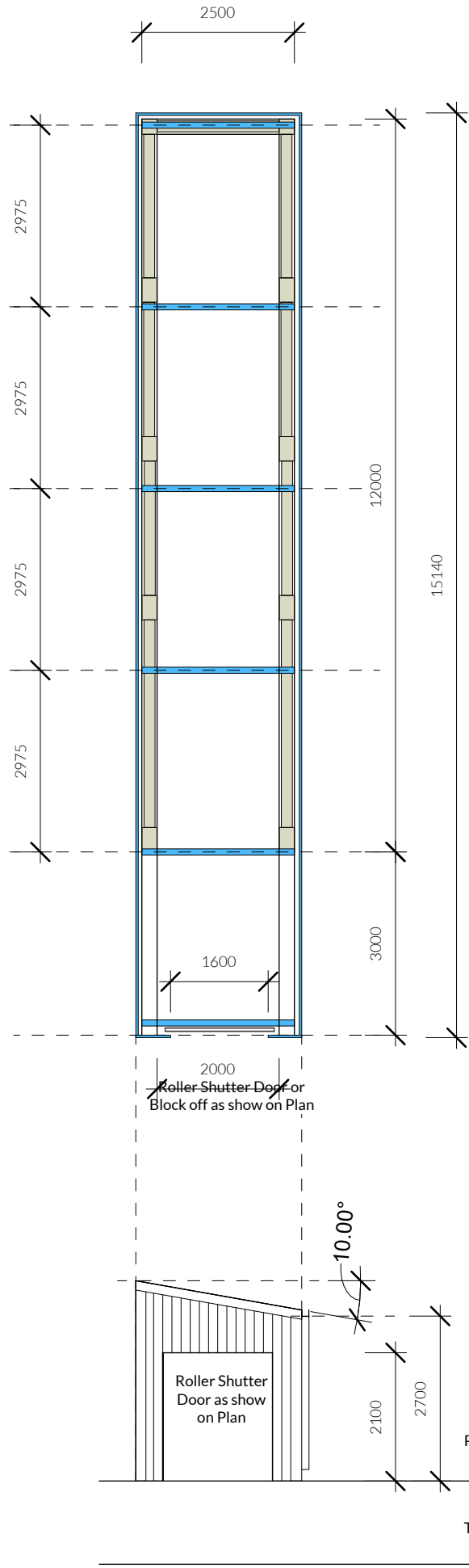
CAD REF: BAP230

DRAWING NO.

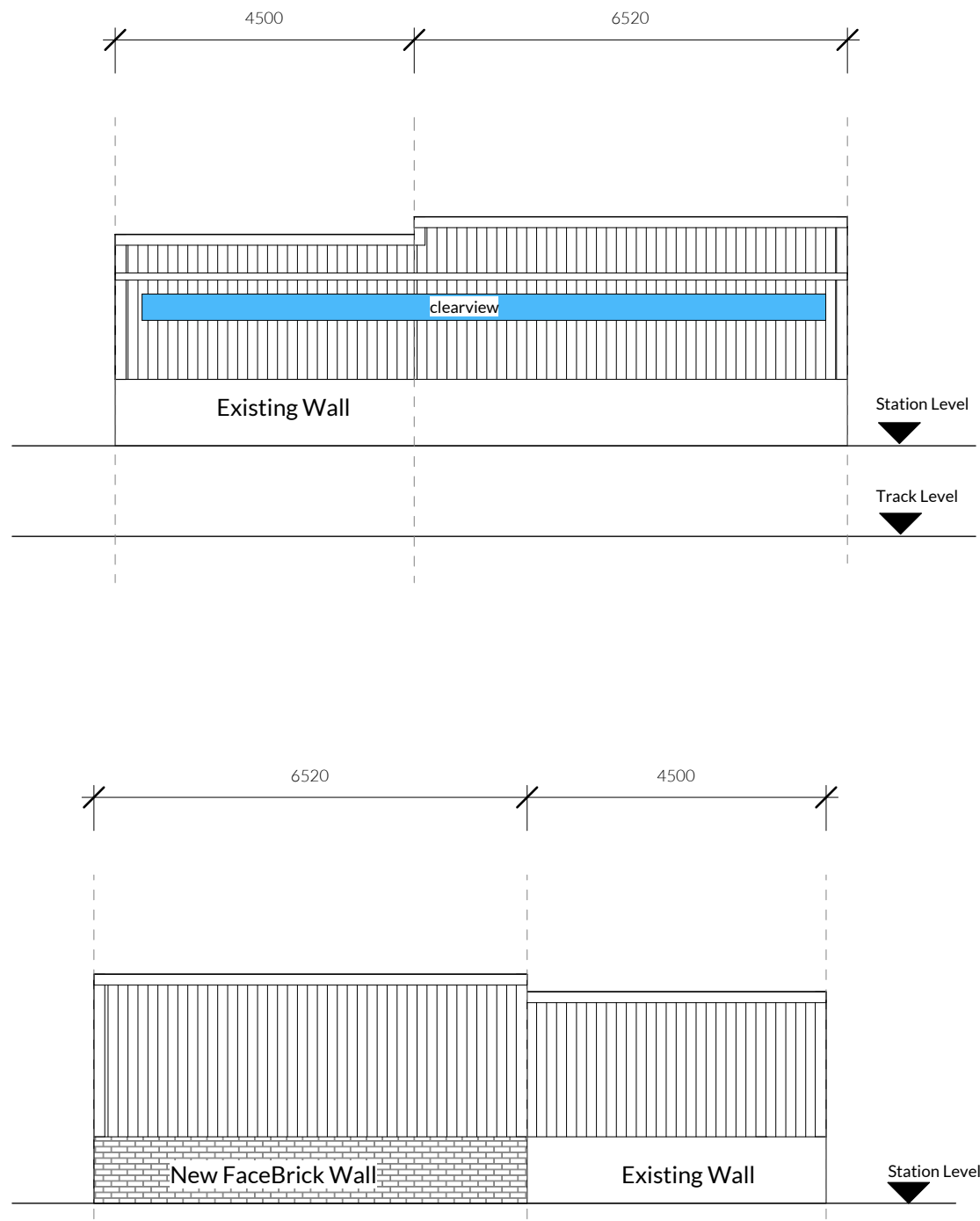
GRS230/01-02/05

A0





Platform



Station

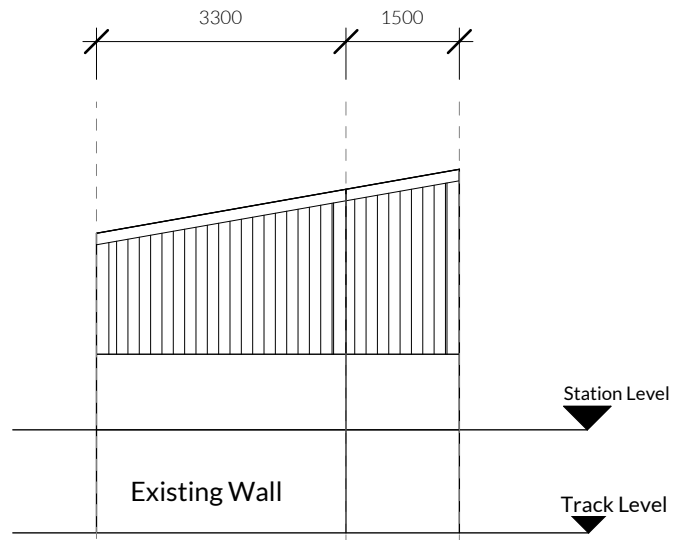
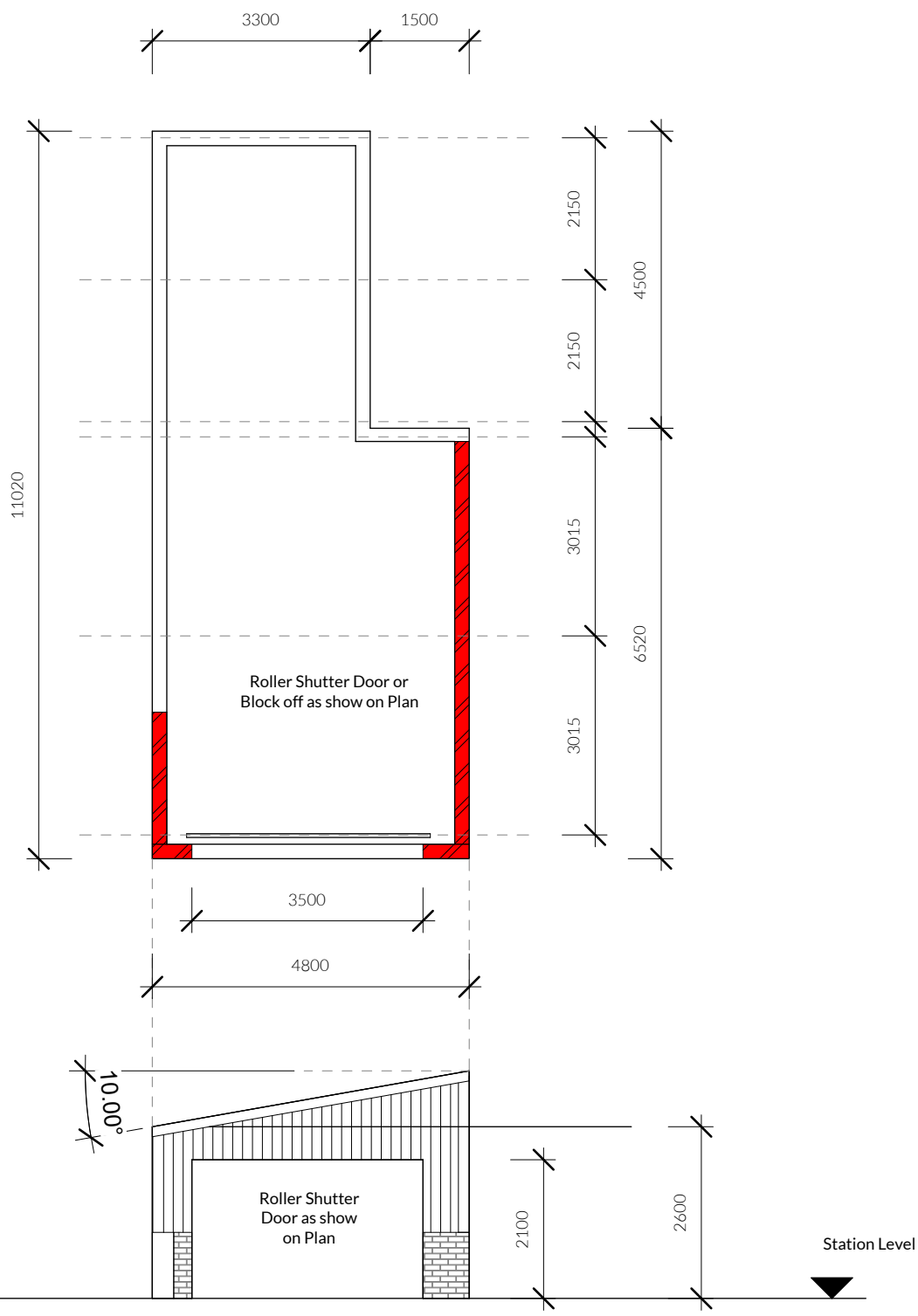
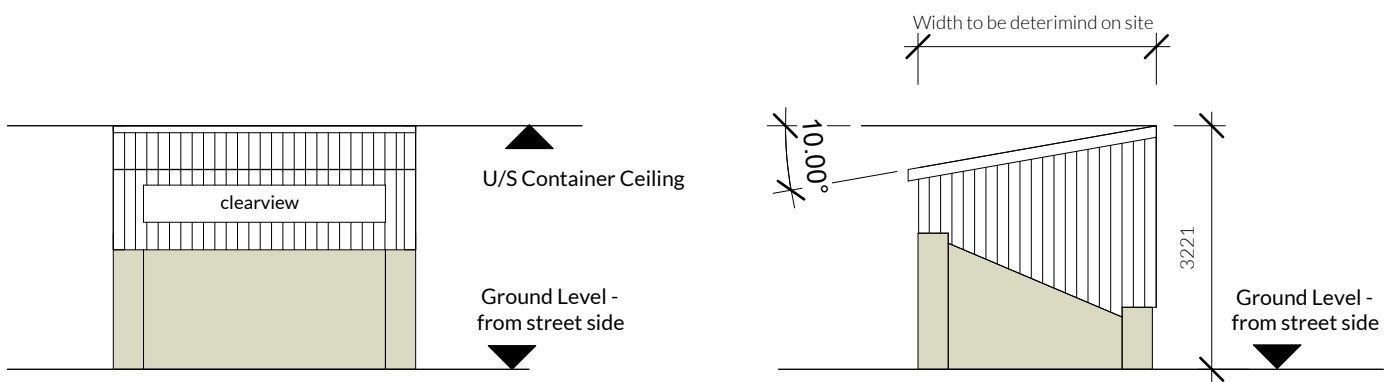
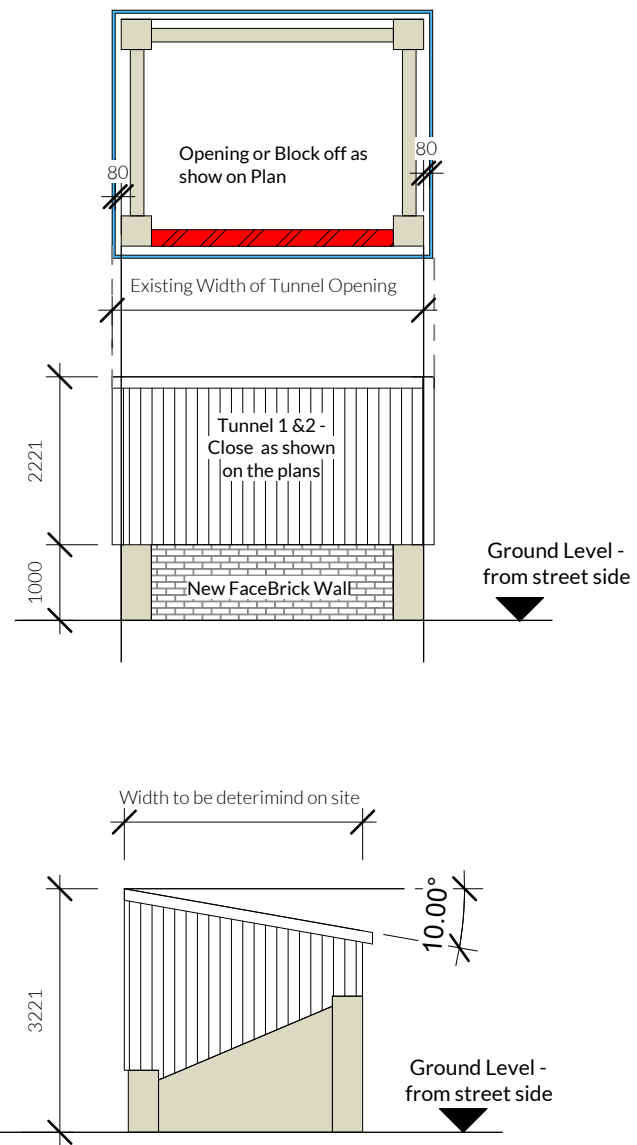


Diagram Section

Street Side



**SITE INSTRUCTION:**

Structure to Engineers specification

Roofing steel IBR sheet

Side pannel sheeting will be a combination of polcarbonate and steel IBR sheet

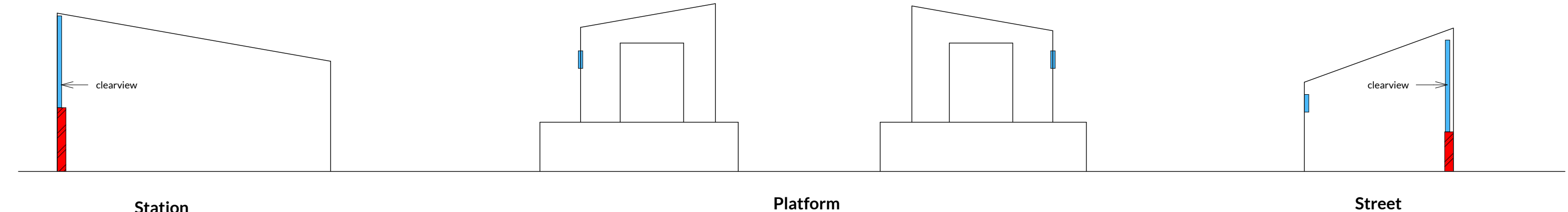
**PAINT:**

Structure : Prasa Mid Grey

Sheeting : Prasa Dark Gery Blue

**SHOP DRAWINGS:**

Shop drawings to be prepared for all tunnel opening for architects and structural engineers approval



## Tunnel - Spec Detail Copy2

1 : 100

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### General Specification

- The contractor / sub-contractor shall check and verify all dimensions and report any discrepancies in writing to the architect before proceeding with work. Do not scale off drawings, if in doubt, ask!
- Electronic data / drawings are issued as "read only" and should not be interrogated for measurement. All dimensions and levels should be read, only from those values stated in text, on the drawing.
- All Contractors shall ensure that, before any work is put in hand, they comply with all the necessary Acts of Parliament of the Republic of South Africa.

- In terms of the National Building Regulations and Standards Act (Act 103 1977) the construction of the works on these drawings can only commence once approval in writing from the Local Authority is obtained.
  - All materials used in the construction of the works indicated on these drawings shall either be SABS approved or have an Agreement South Africa certificate.
  - No deviations from the approved building plans shall be allowed.
  - The Contractor shall adhere to all National Acts, Regulations, Standards, Ordinances and Bye Laws during construction.
- Application of the National Building Regulations & the Occupational Health & Safety Act**
- The Contractor shall purchase a copy of the below mentioned documents and familiarise himself / herself with the contents thereof. The recommendations and requirements of these specified standards will be considered the minimum standard for the works; any works not complying with these specified standards will be rejected and any alterations or substitutions rendered necessary through the non compliance of these specified standards shall be at the contractor's cost.

- Occupational Health and Safety Act**  
All demolition, alteration and new work shall be carried out in accordance with the Construction Regulations 2014 as issued in terms of The Occupational Health and Safety Act. All other relevant sections of this Act form part of this specification.
- National Building Regulations and Building Standards Act**  
The following form part of this specification:
  - Regulation E1, E2, E3 and E4 of PART E Demolition Work
  - Regulation U1, U2 and U3 of PART U Refuse Disposal
- SANS10400 and application of the National Building Regulations**  
Relevant parts of the SANS10400 Series of Standards form part of this specification and shall be strictly adhered to;

- |                         |  |
|-------------------------|--|
| Part A: General         | Part N: Glazing                          |
| Part B: Structural      | Part O: Lighting and Ventilation         |
| Part C: Dimensions      | Part P: Drainage                         |
| Part D: Public Safety   | Part Q: Non-waterborne sanitary disposal |
| Part E: Site Operations | Part R: Stormwater Disposal              |
| Part G: Excavations     | Part S: Accessible Buildings             |
| Part H: Foundations     | Part T: Fire Protection                  |
| Part J: Floors          | Part V: Space Heating                    |
| Part K: Walls           | Part W: Fire Installation                |
| Part L: Roofs           | Part XA: Energy Usage                    |
| Part M: Stairways       |  |

- SANS 2001 Construction Works**  
Relevant parts of the SANS2001 Series of Standards form part of this specification and shall be strictly adhered to;
  - BE1: Earthworks (General)
  - BS1: Site Clearance
  - CC1: Concrete Works (Str)
  - CC2: Concrete Works (Minor)
  - CG1: Installation Glazing
  - CM1: Masonry Walling
  - CM2: Strip Footings for Msrny
  - CS1: Structural Steelwork
  - CT1: Structural Timber (Flooring)
  - CT2: Structural Timberwork (Roofing)
  - DP1: Earthworks for Buried Pipelines
  - DP2: Medium Pressure Pipelines
  - DP3: Cable ducts
  - DP4: Sewers
  - DPS: Stormwater Drainage
  - DP6: Below Gnd Water Installations
  - EM1: Cement Plaster
- Geyser Installation**
  - Regulation XA2 of the National Building Regulations
  - Solar shall comply with SANS1307, SANS10106, SANS10254
  - Heat Pumps shall comply with ISO5149 and SANS1352
- Water Reticulation**
  - Water reticulation installations shall comply with SANS10252-1
- Electrical Installation**
  - Electrical low voltage installations & wiring shall comply with SANS10142

rev	date	by	description
1	2022.11.07	NRSK	For Information

scale	date	drawn	rev
1 : 100 @ A1	2022.11.07	NRSK	1

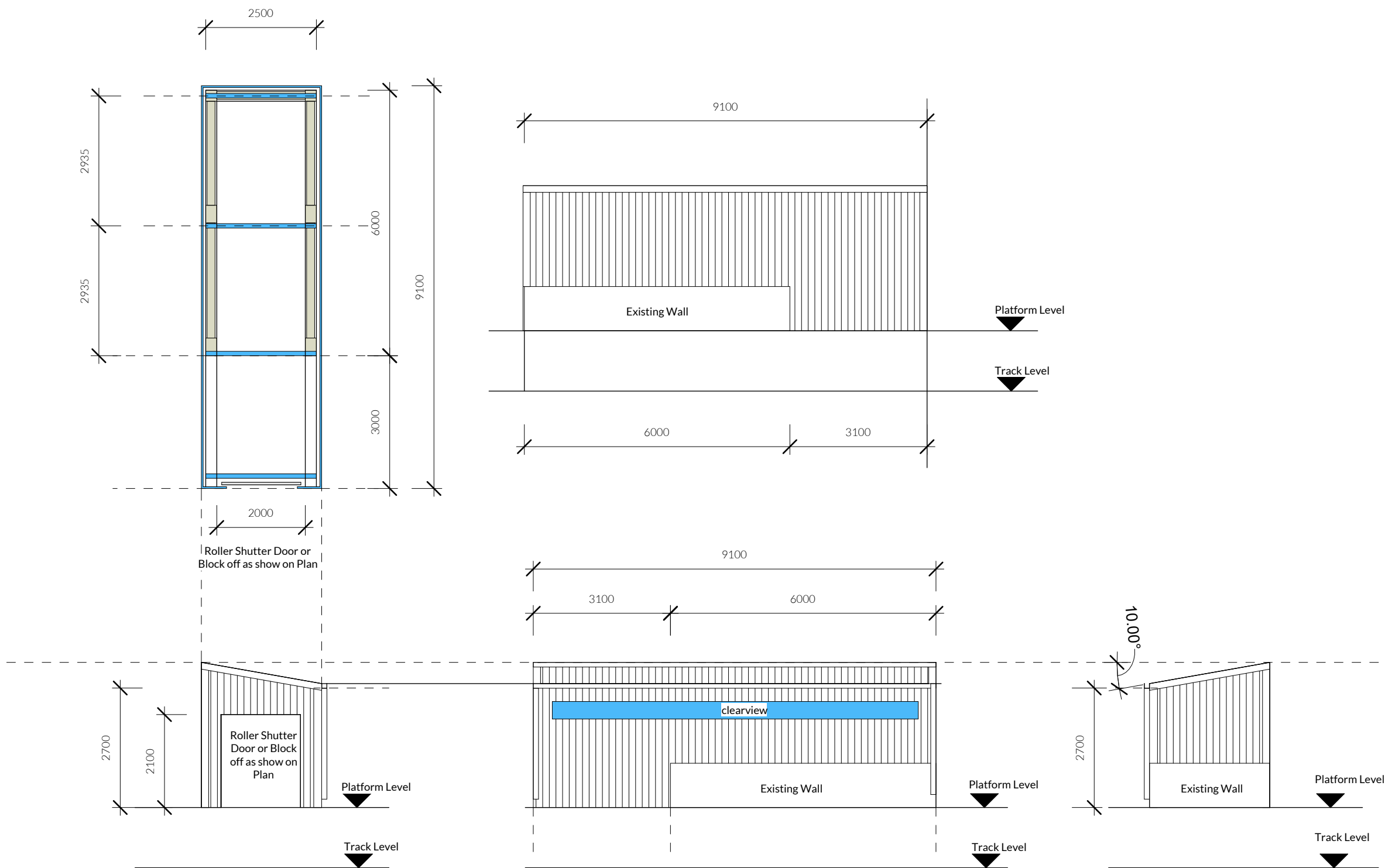
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Construction	NRSK

drawing no. **CN001 - 903.1**

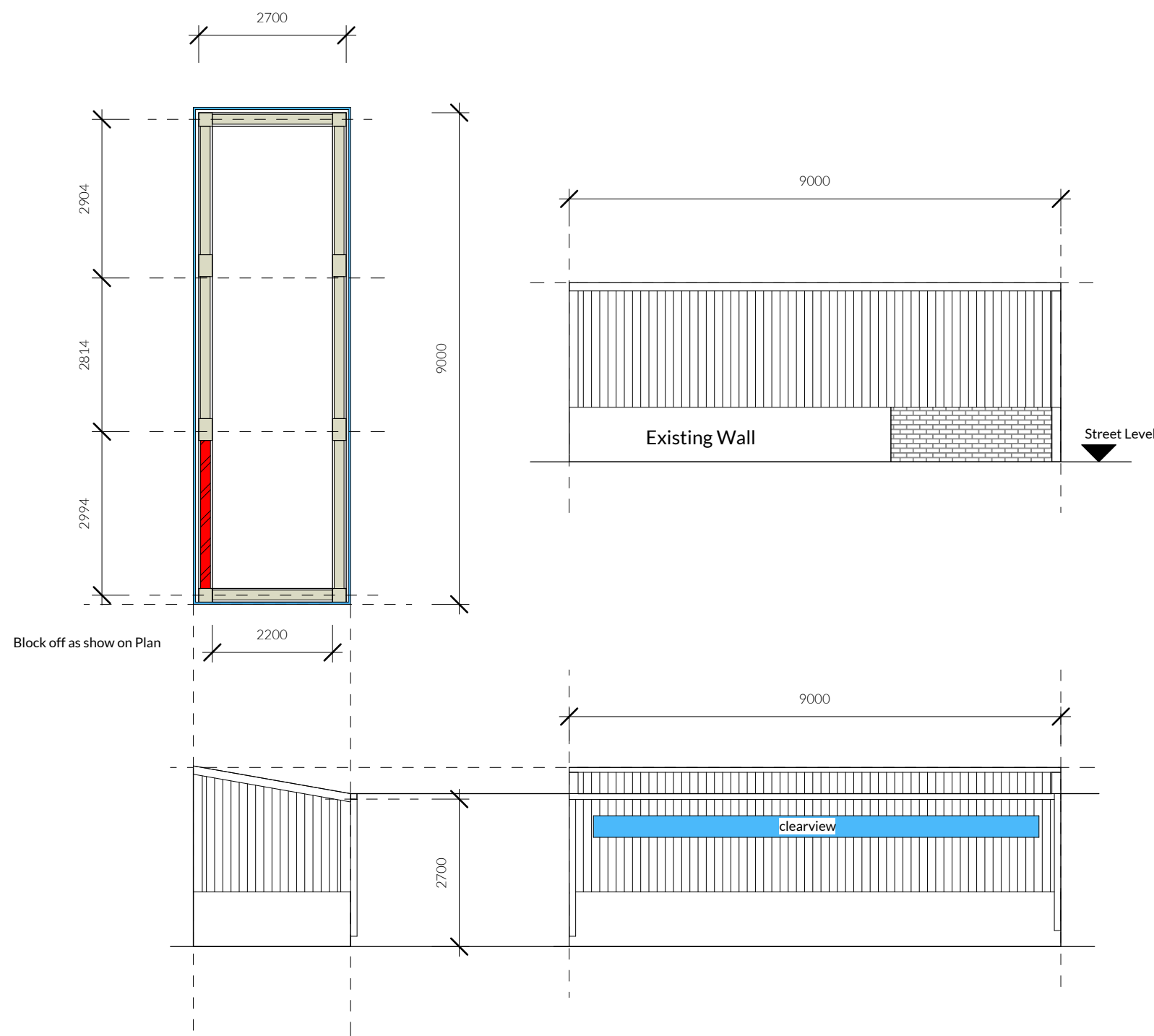




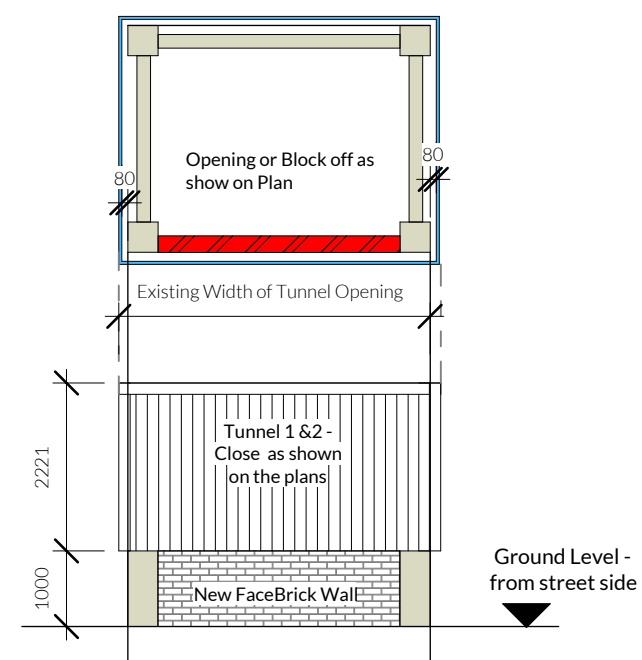
40 Apiesdoring Drive Humevaloor, Centurion, Gauteng 0157  
t +27 81 349 2177 | info@arekeystudios.space  
Are Key Studios (Pty) Ltd | reg no. 2020739448/07, www.akeystudios.space  
A listed architectural practice with SACAP (PA10220704)  
Director : NRS Kekana (PrArch44840036)



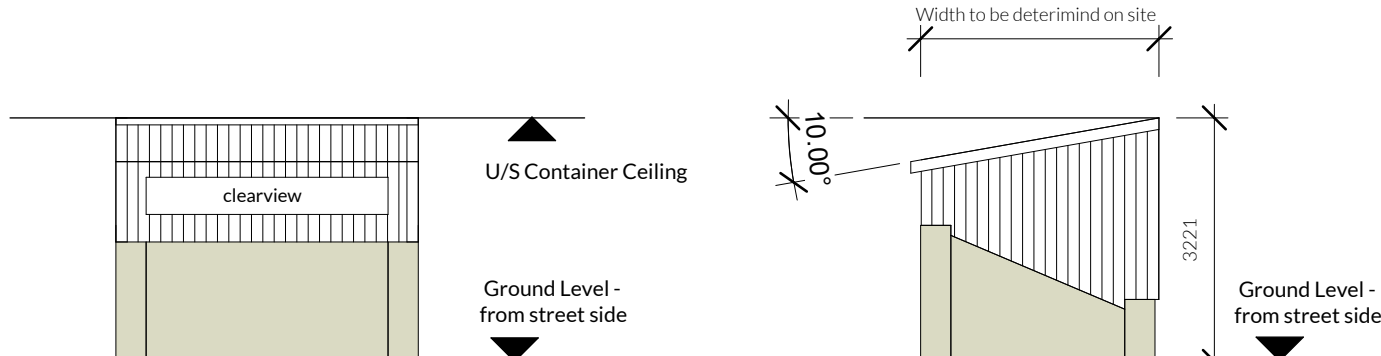
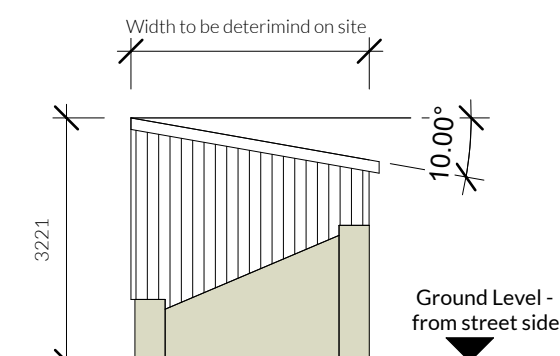
Platform



Station



Street Side



SITE INSTRUCTION:

Structure to Engineers specification

Roofing steel IBR sheet

Side pannel sheeting will be a combination of polcarbonate and steel IBR sheet

PAINT:

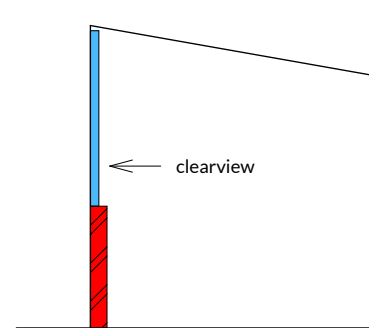
Structure : Prasa Mid Grey

Sheeting : Prasa Dark Gery Blue

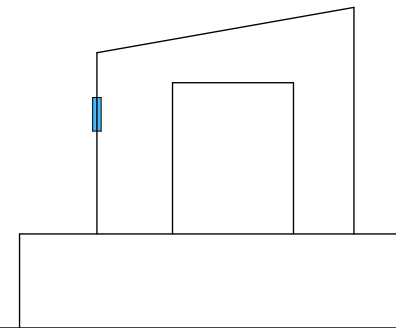
SHOP DRAWINGS:

Shop drawings to be prepared for all tunnel oppening for architecturs and structural engineers approval

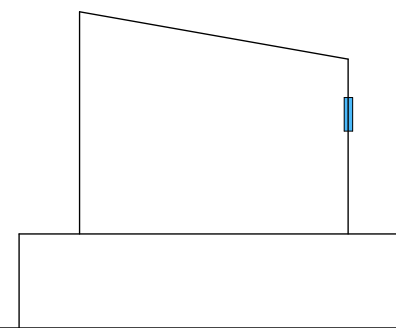
Diagram Section



Station



Platform



Street

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General Specification

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- The Contractor shall adhere to all National Acts, Regulations, Standards, Ordinances and Bye Laws during construction.

Application of the National Building Regulations & the Occupational Health & Safety Act

The Contractor shall purchase a copy of the below mentioned documents and familiarise himself / herself with the contents thereof. The recommendations and requirements of these specified standards will be considered the minimum standard for the works; any works not complying with these specified standards will be rejected and any alterations or substitutions rendered necessary through the non compliance of these specified standards shall be at the contractor's cost.

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The following form part of this specification:
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  - Regulation U1, U2 and U3 of PART U Refuse Disposal
- SANS10400 and application of the National Building Regulations**  
Relevant parts of the SANS10400 Series of Standards form part of this specification and shall be strictly adhered to;

- |                         |  |
|-------------------------|--|
| Part A: General         | Part N: Glazing                          |
| Part B: Structural      | Part O: Lighting and Ventilation         |
| Part C: Dimensions      | Part P: Drainage                         |
| Part D: Public Safety   | Part Q: Non-waterborne sanitary disposal |
| Part E: Site Operations | Part R: Stormwater Disposal              |
| Part G: Excavations     | Part S: Accessible Buildings             |
| Part H: Foundations     | Part T: Fire Protection                  |
| Part J: Floors          | Part V: Space Heating                    |
| Part K: Walls           | Part W: Fire Installation                |
| Part L: Roofs           | Part XA: Energy Usage                    |
| Part M: Stairways       |  |

4. SANS 2001 Construction Works

Relevant parts of the SANS2001 Series of Standards form part of this specification and shall be strictly adhered to;

- |                                   |                                      |
|-----------------------------------|--------------------------------------|
| BE1: Earthworks (General)         | CT2: Structural Timberwork (Roofing) |
| BS1: Site Clearance               | DP1: Earthworks for Buried Pipelines |
| CC1: Concrete Works (Str)         | DP2: Medium Pressure Pipelines       |
| CC2: Concrete Works (Minor)       | DP3: Cable ducts                     |
| CG1: Installation Glazing         | DP4: Sewers                          |
| CM1: Masonry Walling              | DP5: Stormwater Drainage             |
| CM2: Strip Footings for Msrny     | DP6: Below Gnd Water Installations   |
| CS1: Structural Steelwork         | EM1: Cement Plaster                  |
| CT1: Structural Timber (Flooring) |                                      |

5. Geyser Installation

- Regulation XA2 of the National Building Regulations
- Solar shall comply with SANS1307, SANS10106, SANS10254
- Heat Pumps shall comply with ISO5149 and SANS1352

6. Water Reticulation

- Water reticulation installations shall comply with SANS10252-1

7. Electrical Installation

- Electrical low voltage installations & wiring shall comply with SANS10142

rev	date	by	description
1	2022.11.07	NRSK	For Information

client

PRASA CRES

project

Prasa Corridor 3

address

Grosvenor Station

drawing

Site Instruction 003.2

scale	date	drawn	rev
1 : 100 @ A1	2022.11.07	NRSK	1
status	checked	checked	checked
Construction	NRSK		

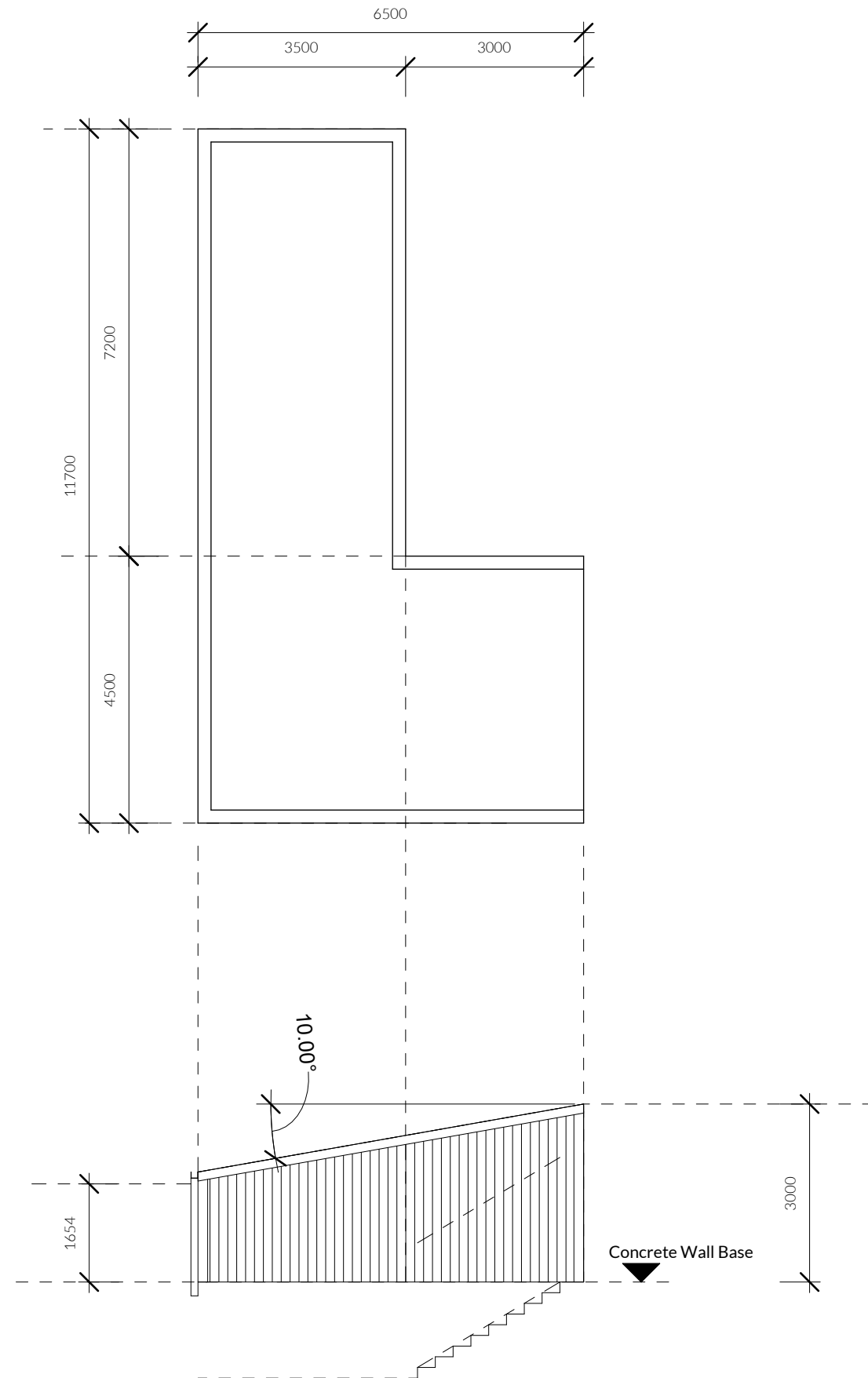
drawing no.

CN001 - 903.2



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Director : NRS Kekana (PrArch44840036)





Platform

Station

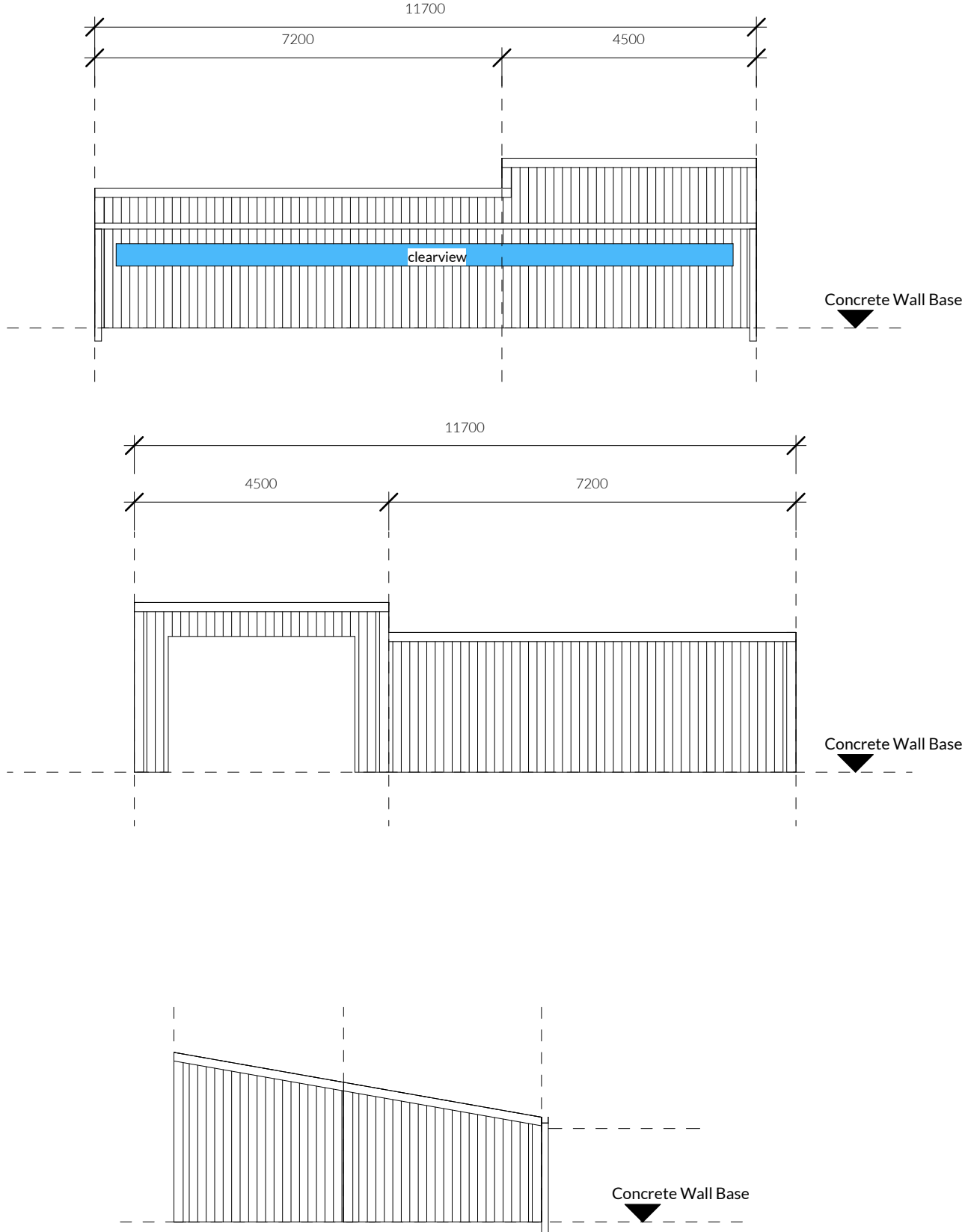


Diagram Section

**SITE INSTRUCTION:**

Structure to Engineers specification  
Roofing steel IBR sheet  
Side pannel sheeting will be a combination of polcarbonate and steel IBR sheet

**PAINT:**  
Structure : Prasa Mid Grey  
Sheeting : Prasa Dark Gery Blue

**SHOP DRAWINGS:**  
Shop drawings to be prepared for all tunnel opening for architecturs and structural engineers approval



Street Side

← clearview

clearview →

Station

Street

**FOR INFORMATION ONLY**

**FOR INFORMATION ONLY**

**FOR INFORMATION ONLY**

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**General Specification**

- The contractor / sub-contractor shall check and verify all dimensions and report any discrepancies in writing to the architect before proceeding with work. Do not scale off drawings, if in doubt, ask!
- Electronic data / drawings are issued as "read only" and should not be interrogated for measurement. All dimensions and levels should be read, only from those values stated in text, on the drawing.
- All Contractors shall ensure that, before any work is put in hand, they comply with all the necessary Acts of Parliament of the Republic of South Africa.

- In terms of the National Building Regulations and Standards Act (Act 103 1977) the construction of the works on these drawings can only commence once approval in writing from the Local Authority is obtained.
- All materials used in the construction of the works indicated on these drawings shall either be SABS approved or have an Agreement South Africa certificate.
- No deviations from the approved building plans shall be allowed.
- The Contractor shall adhere to all National Acts, Regulations, Standards, Ordinances and Bye Laws during construction.

**Application of the National Building Regulations & the Occupational Health & Safety Act**

The Contractor shall purchase a copy of the below mentioned documents and familiarise himself / herself with the contents thereof. The recommendations and requirements of these specified standards will be considered the minimum standard for the works; any works not complying with these specified standards will be rejected and any alterations or substitutions rendered necessary through the non compliance of these specified standards shall be at the contractor's cost.

- 1. Occupational Health and Safety Act**  
All demolition, alteration and new work shall be carried out in accordance with the Construction Regulations 2014 as issued in terms of The Occupational Health and Safety Act. All other relevant sections of this Act form part of this specification.
- 2. National Building Regulations and Building Standards Act**  
The following form part of this specification;
  - Regulation E1, E2, E3 and E4 of PART E Demolition Work
  - Regulation U1, U2 and U3 of PART U Refuse Disposal
- 3. SANS10400 and application of the National Building Regulations**  
Relevant parts of the SANS10400 Series of Standards form part of this specification and shall be strictly adhered to;

Part A: General	Part N: Glazing
Part B: Structural	Part O: Lighting and Ventilation
Part C: Dimensions	Part P: Drainage
Part D: Public Safety	Part Q: Non-waterborne sanitary disposal
Part E: Site Operations	Part R: Stormwater Disposal
Part G: Excavations	Part S: Accessible Buildings
Part H: Foundations	Part T: Fire Protection
Part J: Floors	Part V: Space Heating
Part K: Walls	Part W: Fire Installation
Part L: Roofs	Part XA: Energy Usage
Part M: Stairways	

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CG1: Installation Glazing	DP4: Sewers
CM1: Masonry Walling	DPS: Stormwater Drainage
CM2: Strip Footings for Msrny	DP6: Below Gnd Water Installations
CS1: Structural Steelwork	EM1: Cement Plaster
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client	PRASA CRES
project	Prasa Corridor 3
address	Grosvenor Station
drawing	
drawing no.	Site Instruction 003.3

scale	date	drawn	rev
1 : 100 @ A1	2022.11.07	NRSK	1
status		checked	
Construction		NRSK	
drawing no.			

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