

Item No	SANS Pay Ref	Description	Unit	Quantity	Rate	Amount	
		<u>SECTION NO. 16</u>					
		<u>BILL NO. 1</u>					
		<u>PREAMBLES</u>					
		<u>AMENDMENTS TO STANDARDISED SPECIFICATION FOR EARTHWORKS (SANS 1200D - 1989)</u>					
	PSD-1	<u>General</u>					
	PSD-1.1	This specification contains amendments to the Standardised Specification for Earthworks, SANS 1200D and shall be read in conjunction with SANS 1200D Standardised Specification Earthworks for the full intent and meaning of the specification. The reference standard is SANS 1200-1982.					
		The specification covers the general requirements for all types of earthworks relating to site works, terracing, excavations for foundations to buildings and general structures. It also covers the requirements for safety, classification of materials, excavation, filling, compaction and finishing.					
	PSD-2	<u>Interpretation</u>					
	PSD-2.3	<u>Definitions</u>					
		<u>Restricted excavation:</u>					
		This Clause is amended to include: "This definition is to be replaced with "An excavation so restricted in area or width such that efficient removal of material can only be achieved with a backhoe / loader or by hand".					
		Carried to Collection				R	
		Section No. 16 Civil Works Bill No. 1 Preambles					

Item No	SANS Pay Ref	Description	Unit	Quantity	Rate	Amount	
		Specified density This Clause is amended to include: "Specified densities shall be as stated in the project specification or shown on the Drawings".					
	PSD-3	<u>Materials</u>					
	PSD-3.1	<u>Classification For Excavation Purposes</u> This Clause is deleted and the following classifications of material shall apply: Class "A" This shall be all material that, in the opinion of the Engineer, can be removed by any means other than explosives and plant up to and including the capability of a CAT D9 with a single tine. This material shall also include dump rock and boulders not exceeding 0,5 cubic metres in volume. "Class "B" This material shall be rock occurring in bulk or in bands or in ledges, the excavation of which, in the opinion of the Engineer will necessitate the use of explosives or removal by plant exceeding a capability of a CAT D9 with a single tine. In addition boulders exceeding 0,5 cubic metres in volume shall be included in this classification whether or not blasting is required for their removal.					
		Carried to Collection				R	
		Section No. 16 Civil Works Bill No. 1 Preambles					

3.

Item No	SANS Pay Ref	Description	Unit	Quantity	Rate	Amount	
		<u>SECTION NO. 16</u>					
		<u>BILL NO. 2</u>					
	SANS 1200	<u>ROADS AND PAVING</u>					
		<u>ROADS</u>					
1	8.3.2	Preparation and Stripping to the 300mm depth, stockpiling and maintaining	m3	350			
2	SANS1200DB 8.3.2	Excavate 200mm in all materials for trenches, backfill, compact and dispose of surplus material for road reserve	m3	230			
3	8.3.3	Treatment to Roadbed : Insitu rip and recompact 150mm deep to 100% Mod AASHTO (sand)	m3	200			
4		125mm thk G5 compacted to 93% Mod AASHTO	m3	110			
5		125mm thk G5 compacted to 95% Mod AASHTO	m3	110			
6	SANS1200MF 5.4.42 (b)	125mm thk C4 (G5 engineered fill) compacted to 97% Mod AASHTO	m3	110			
7		Allow 5% by volume of C4 layer for Ordinary Portland Cement required	m3	10			
	SANS1200MK	<u>Kerbing and Channeling</u>					
8	8.2.1	Fig 8c: Precast Concrete Kerbing	m	294			
9	8.2.1	Fig 14: Precast Concrete Kerbing	m	160			
	SANS 1200	<u>80mm THICK BLOCK PAVING</u>					
10		35 mm Bedding Sand	m3	90			
11		80mm interlocking Class 35 blocks	m2	2 545			
		Carried to Collection				R	
		Section No. 16 Civil Works Bill No. 2 Roads and Paving					

Item No	SANS Pay Ref	Description	Unit	Quantity	Rate	Amount
	SABS1200D	Road Traffic Signs and Markings				
12	8.3.12	Road Markings	m	150		
		PAVING				
13	8.3.2	Preparation and Stripping to 300mm depth, stockpiling and maintaining	m3	20		
14	8.3.3	Treatment to Roadbed : Insitu rip and recompact 150mm deep to 100% Mod AASHTO (sand)	m3	270		
15		125mm thk G5 compacted to 95% Mod AASHTO	m3	270		
16	SANS1200MF 5.4.42 (b)	125mm thk C4 (G5 engineered fill) compacted to 97% Mod AASHTO	m3	270		
17		Allow 5% by volume of C4 layer for Ordinary Portland Cement required	m3	15		
18		35 mm Bedding Sand	m3	80		
19		50mm interlocking Class 35 blocks	m2	1 700		
	SANS1200MK	Kerbing and Channeling				
20	8.2.1	Fig 8c: Precast Concrete Kerbing	m	20		
Carried to Collection					R	
Section No. 16 Civil Works Bill No. 2 Roads and Paving						

6.

Item No	SANS Pay Ref	Description	Unit	Quantity	Rate	Amount	
		<u>SECTION NO. 16</u>					
		<u>BILL NO. 3</u>					
		<u>BURIED SERVICES</u>					
		<u>STORMWATER CHANNELS</u>					
		<u>V-Drain Channels : Earthworks</u>					
1	8.3.3	Treatment to Roadbed : Insitu rip and recompact 150mm deep to 93% Mod AASHTO	m3	50			
		<u>V-Drains Channels: Concrete</u>					
		The costs of making, storing and testing of concrete test cubes as required under clause 7 "Tests" of SABS 1200 G shall include the cost of providing cube moulds necessary for the purpose, for testing costs and for submitting reports on the tests for					
		<u>Concrete cast against formwork :</u>					
2		1000mm wide V-drain Channel: 25 MPa/19mm Grade Concrete	m3	20			
3		600mm wide V-drain Channel: 25 MPa/19mm Grade Concrete	m3	3			
		<u>TEST CUBES</u>					
4		Making and testing 150 x 150 x 150mm concrete strength test cube (Provisional)	No	18			
		<u>Finishing top surfaces of concrete smooth with a wood float</u>					
5		V-drains to falls	m2	185			
		Carried to Collection				R	
		Section No. 16 Civil Works Bill No. 3 Buried Services					

Item No	SANS Pay Ref	Description	Unit	Quantity	Rate	Amount	
6		<u>ROUGH FORMWORK (DEGREE OF ACCURACY II)</u> <u>Rough formwork to sides</u> Edges, risers, ends and reveals not exceeding 300mm high or wide	m	155			
7		<u>Expansion joints with between vertical concrete surfaces, including necessary formwork</u> 3x35mm Saw-cut joints in top of concrete including 8xream and 10mm backing cord with 8 x 13mm sealant (exposed slabs)	m	80			
8		<u>MOVEMENT JOINTS ETC</u> <u>Expansion joints with 10mm softboard and sealant between vertical concrete and brick surfaces</u> Not exceeding 300mm high to edges of surface beds	m	80			
9		<u>REINFORCEMENT</u> <u>High tensilesteel reinforcement to structural concrete work</u> Fabric reinforcement: Type 193 fabric reinforcement	m2	145			
10		<u>Cast-in Pipes</u> 110mm pvc pipe laid to min falls 1:60. Pipes beneath slab to be encased in concrete	m	35			
11	SANS1200DB 8.3.2	<u>Excavate in all materials for trenches, backfill, compact and dispose of surplus material</u> Ø50 and Ø75 pipe 1m to 2m depth	m3	350			
12		Ø110 and Ø50 pipe 1m to 2m depth	m3	380			
Carried to Collection						R	
Section No. 16 Civil Works Bill No. 3 Buried Services							

9.

Item No	SANS Pay Ref	Description	Unit	Quantity	Rate	Amount	
	SANS1200DB 8.3.4	<u>Particular items.</u>					
24	8.3.4.a	Shore trench opposite structure or service	m	30			
	8.3.4.b	<u>Temporary works: Control water inflow at invert level below 1.5m elevation.</u>					
25	1	Provide equipment			SUM		
26	2	Operate and maintain (measured in number of days)	No	15			
27	3	Remove equipment			SUM		
	SANS1200LB 8.2.1	<u>Provision of fill blanket and bedding from trench excavation</u>					
28	8.2.1.b	Selected fill material	m3	90			
		<u>From commercial sources for bedding</u>					
29	8.2.2.3.a	Selected granular material	m3	90			
		<u>Provision of bedding from trench excavation and local stockpiling.</u>					
30	8.2.1.b	Selected fill material	m3	450			
	SANS1200LE 8.2.1	<u>Supply and lay different classes of pipe.</u>					
31		Supply and lay Class 25D Ø450 concrete pipe on a class B bedding (spigot and socket joints)	m	310			
	SANS1200LE 8.2.8	<u>Supply and install manholes, catchpits and the like. See Drawing No. DBSA-MBO-S1-CIV-DWG-004</u>					
32		TYPE A and TYPE B Brick manholes deeper than 1.190m with 800x800 BLITZ-BETON Type Grid Inlest Grating and Frame	No	14			
		Carried to Collection			R		
		Section No. 16 Civil Works Bill No. 3 Buried Services					

11.

Item No	SANS Pay Ref	Description	Unit	Quantity	Rate	Amount	
43	8.2.4	Supply and install meters complete with couplings	No	1			
44	8.2.5	Site testing of meter	No	1			
		<u>SEWERAGE</u>					
	SANS1200DB 8.3.2	<u>Excavate in all materials for trenches, backfill, compact and dispose of surplus material</u>					
45		Ø110 UPVC pipe 1m to 2m depth	m3	400			
	SANS1200DB 8.3.4	<u>Particular items.</u>					
46	8.3.4.a	Shore trench opposite structure or service	m	30			
	8.3.4.b	<u>Temporary works: Control water inflow at invert level below 1.5m elevation.</u>					
47	1	Provide equipment			SUM		
48	2	Operate and maintain (measured in number of days)	No	15			
49	3	Remove equipment			SUM		
	SANS1200LB 8.2.1	<u>Provision of fill blanket from trench excavation</u>					
50	8.2.1.b	Selected fill material	m3	40			
		<u>From commercial sources for bedding</u>					
51	8.2.2.3.a	Selected granular material	m3	25			
	SANS1200LD	<u>Supply, lay, joint, bed on flexible bedding type and test pipeline</u>					
52	8.2.1	Supply and lay Class 25 Ø110 UPVC pipe on a flexible bedding.	m	200			
		Carried to Collection			R		
		Section No. 16 Civil Works Bill No. 3 Buried Services					

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