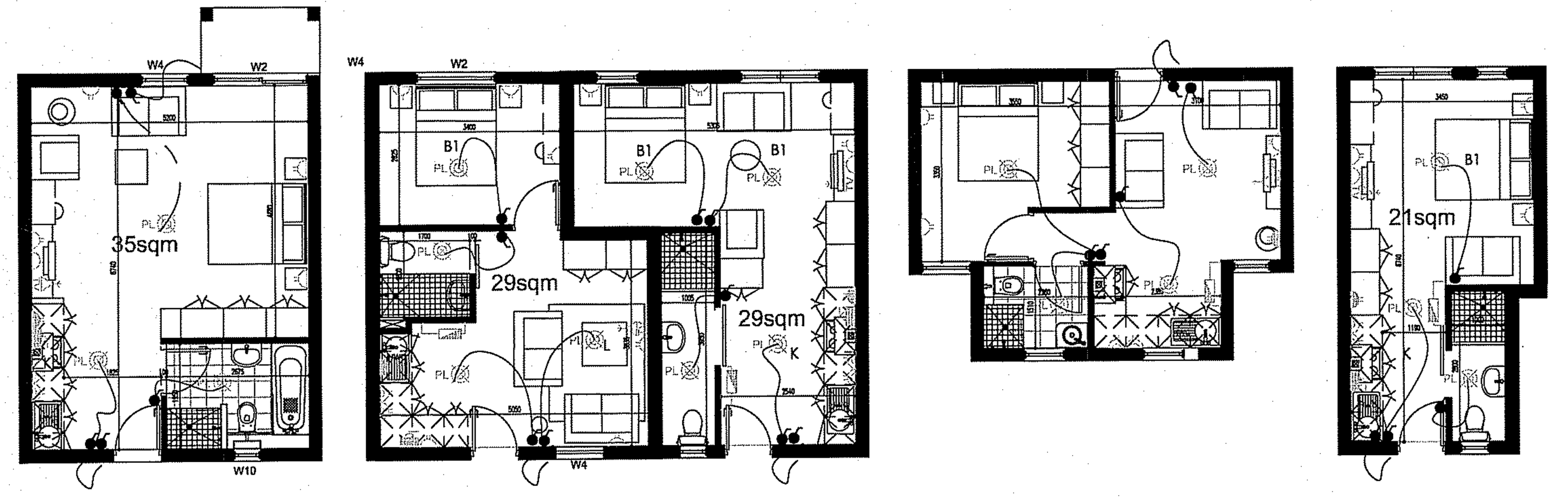
NOTE: RATIONAL DESIGN IN TERMS OF SEWERAGE DISPOSAL TO BE ACCORDANCE WITH SANS 10400, PART Q AND TO READ WITH PREVIOUSLY APPROVED CIVIL DWGS. FOR SEWERAGE DISPOSAL.
AVNA - BB.

Sien aangehegte voorwaardes
See attached conditions
Bona imiqathongo ebekiweyo

MUNISIPALITEIT DRAKENSTEIN MUNICIPALITY
GOEDGEKEUR / APPROVED / IYAMKELEKIWE
BEPLANNINGSDIENSTE / PLANNING SERVICES
INKONZO ZOKU YILA
24/04/2017 — DATUM / DATUM
8342/2017 — PLAN NO



Type 1	Type 2a	Type 2b	Type 3	Type 4
One Bed Room	**One Bed** Room	**One Bed** Room	**One Bed** Room	**Batchelor Bed** Room
Apaprtment :35m²	Apaprtment :29m²	Apaprtment :29m²	Apaprtment :29m²	Apaprtment :21m²
Balconies: 4m²	Balconies: 0m²	Balconies: 0m²	Balconies: 0m²	Balconies: 0m²
Fenestartion = 5m²	Fenestration= 2.9m²	Fenestration= 4.28m²	Fenestration = 3.68m²	Fenestration= 3.38m²
Total Units:111no.	Total Units:51no.	Total Units:51no.	Total Units:6no.	Total Units:50no.

APARTMENT UNIT TYPES 1:50
NEFFENSAAN for COMBINEDDEV

ELECTRICAL LEGEND:

- 1 WAY SWITCH
- LOW LEVEL DOUBLE SOCKET
- HIGH LEVEL DOUBLE SOCKET
- COUNTER LEVEL DOUBLE SOCKET
- TELEVISION/SAT POINT
- PENDANT LIGHT
- WALL LIGHT (E = external)
- COOKER SWITCH
- ESKOM METER + DB TO BE IP54 RATING OR BETTER & COMPLY WITH SANS 10142-1 & SANS 1765
- COLD WATER POINT

SITE AREA : 22 104m²
COVERAGE : 3956m² = 17%
OPEN SPACE : ....m² = ...%
BULK : 9548m² = 0.43
NUMBER OF UNITS : 269
PARKING REQUIRED @ 1.28/UNIT : 344
PARKING PROVIDED : 355
DENSITY 269/2.21ha = 121.7 UNITS/ha

PHASE A:
3 storey
Apartment Floor space per Floor : 522m²
Stair Area per Core : 20m²
Walk Way per Floor : 125m²
Bulk : 1606m²
Total Units:45no

PHASE B:
3 storey
Apartment Floor space per Floor : 514m²
Stair Area per Core : 20m²
Walk Way per Floor : 120m²
Bulk : 1582m²
Total Units:45no.

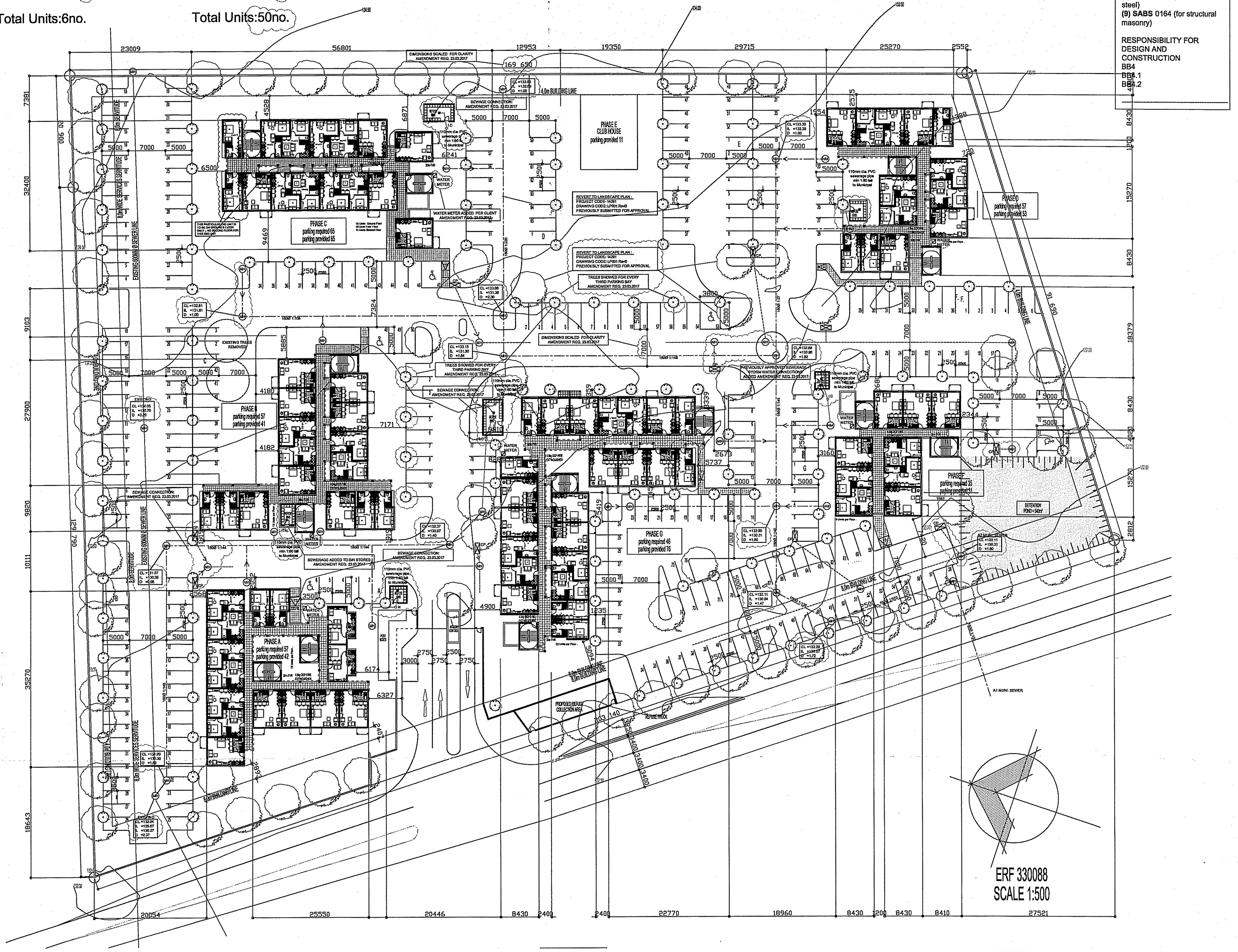
PHASE C:
3 storey *(See Block Plan for two storey porti
Apartment Floor space per Floor : 479m²
Stair Area per Core : 20m²
Walk Way per Floor : 91m²
Bulk : 1477m²
Total Units:44no.

PHASE D:
3 storey
Apartment Floor space per Floor : 435m²
Stair Area per Core : 20m²
Walk Way per Floor : 100m²
Bulk : 1345m²
Total Units:39no.

PHASE E:
NOT SHWOWN
POSSBILE CLUB HOUSE

PHASE F:
3 storey
Apartment Floor space per Floor : 338m²
Stair Area per Core : 20m²
Walk Way per Floor : 54m²
Bulk : 1054m²
Total Units:27no.

PHASE G:
3 storey
Apartment Floor space per Floor : 788m²
Stair Area per Core : 20m²
Walk Way per Floor : 150m²
Bulk : 2484m²
Total Units: 69no.



ERF 330088
SCALE 1:500

-Rain water downpipes *(To be positioned close to corners or recesses of the rearest return wall)*
-Sewerage and waste pipes *(May not be visible on external elevations of the second or higher storeys, ground floor comprises the 1st storey)*
-Air conditioning units *(May not be placed on the outside of the building or on the roof unless screened from the street)*
-Television antennae or satellite dishes *(May not be placed on the outside façade of the building facing the street or on the roof)*
-TV ducting *(Applicant should at minimum provide ducting to accommodate television cabling for each dwelling unit, from within the unit to the roof space of the development, of which that unit forms a part)*

NOTES :

SANS 10400-A:2010
Part A: General principles and requirements

A11 Pointing out of Boundary Beacons
A12 Street Levels
A18 Control of Plumbers and Plumbing Work
A23 Temporary Buildings

SANS 10400-F:2010
Part F: Site operations

F4 Preparation of Site
F10 Builder's Sheds
F6 Control of Unreasonable Levels of Dust and Noise

SANS 10400-1990
PART H: FOUNDATIONS
HH1

SANS 10400-K:2011
PART K: WALLS
4.2 Masonry walls

SANS 10400-T:2011
Part B: Structural Design

STRUCTURAL DESIGN
BB2
structural system of any building shall be carried out in accordance with **SABS** 0160 (for loads) and but not limited to:
(a) **SABS 0100** (for structural concrete)
(d) **SABS** 0161 (for foundations)
(e) **SABS** 0162 (for structural steel)
(9) **SABS** 0164 (for structural masonry)

RESPONSIBILITY FOR DESIGN AND CONSTRUCTION
BB4
BB4.1
BB4.2

MASTER CONSTRUCTION NOTES
Only applicable where deemed necessary to the material and construction detail. All discrepancies to be verified in writing to the architect / designer prior to the commencement with works.

AUTHORITIES
Main and Sub Contractors to ensure that all work is done in strict accordance with the latest regulations and requirements of related authorities including:
(a) National Building Regulations (NBR)
(b) South African National Standards (SANS)
(c) Local Municipal Authority (By-laws)
(d) CSIR - "Technical Guide to a Good House Construction"
(e) National House Building Registration Council (NHBRC)
(f) All other relevant Authorities

GENERAL
Quality of materials and workmanship to comply with the latest relevant Codes & Specifications of SANS, BSS and the minimum standards of Standard Preliminaries (JBCC) and the Model Preambles for Trades (ASAQS 1992) and where applicable Project Specifications and/or Bill of Quantities.
This drawing to be read in conjunction with other Project Drawings, Construction Documents and Principal Building Contract.
Contractors must view the site and works to allow for everything necessary to complete the works.
Contractor/s to check the details on this drawing for compliance with standards of good building practice with particular reference as per Clause "Authorities" and report any discrepancies in writing to the Architect/ Designer.
No setting out is to commence before the site boundary pegs position are verified and pointed out by the Employer / Land Surveyor.
The Contractor to ensure that the correct setting out including that from the boundary and building lines is done prior to commencement of work.
The Contractor to verify all Council, Eskom and Telkom services and existing work/s which is the responsibility of the Contractor.
The Contractor to verify all levels, heights and dimensions on site and check the same against drawings before putting any work in hand.
Any errors, discrepancies or omissions to be immediately reported to the Architect/ Designer for clarification before any work is put in hand.
All paint, varnish, sealants and other finishes to be SANS approved and applied in strict accordance to manufacturers specification.
All existing trees on the site to be retained, unless otherwise instructed by the Architect, and protected for the duration of building operations.

DRAWING STATUS
The Contractor to ensure that the latest drawings is used on site prior to the commencement of work. Only the latest construction drawings issued by the Architect/ Designer as "Construction Drawings" with a Date may be used for construction of the Works (JBCC).
All superseded and other drawings must be removed from the site. One set of the Local Authority Approved Drawings to be kept on site all times.
One set of the latest construction drawings to be kept on site all times, and available for the Architect/ Designer and other Authorities.

HEALTH & SAFETY
The Client to ensure that the Contractor in terms of the Occupational Health and Safety Act 85 of 1993, with specific reference to the Construction Regulation to comply to the minimum requirements.

GROUND WORKS
Protect all existing trees to be retained with a suitable enclosure, 1.5x1.5m in size, before any work is done or demolition commences.
1.8m high Fencing with fabric to be erected on site boundary to mitigate dust problems during demolition.
On windy days the areas worked on to be sprinkled with water periodically to control dust generation.
Remove all building rubble after Demolitions is completed. Remove excess fill (from others), assume average of 200mm and remove from site.
Remove ±50mm natural vegetation and compact to 95% AASHTO. Excavate for foundations, depth ±600mm below NGL.
Concrete to foundations to be 20Mpa after 28 days and sized as follows; 750(w)x250(h)mm for 250mm walls; 600(w)x250(h)mm for 210mm walls;600(w)x200(h)mm for 110mm walls. All to be verified by and executed to the satisfaction of the structural engineer.
All foundation walls to be concrete filled with brick-force every course.

DAMP PROOFING
Build in a 375 micron SABS approved Damp Proof Coarse (DPC), lapped and taped over the entire length of the external walls.
All joints to be sealed and product to be installed in accordance with manufacturers instructions and details.
Provide 375 micron SABS approved Damp Proof Coarse (DPC) above, below & around all external doors & windows.

SURFACE BED
Surface bed to be 100mm thick, 20 Mpa concrete surface bed on 250 micron SABS approved Damp Proof Membrane (DPM) underlay, laid on ± 50mm clean sand and compacted to 100% AASHTO. (to be verified by engineer)
Underlay (DPM) to be overlapped and taped to stepped Damp proof coarse (DPC) in cavity perimeter walls and where it connects to internal DPC's.
Excavated fill to be compacted in 150mm layers to 90% AASHTO and treated with termite poisoning. Proof of compaction must be provided.
Floor finishes as indicated on plan applied to minimum 40mm thick screed. Screed to be cast in 3.5 x 3.5m blocks with open joints at such intervals, correlating with construction joints in surface beds. SABS approved jointing strips to be used in surface bed joints accordance with the manufactures spec. and detail. Floor finish to be level throughout inside of building and to line up with construction and screed joints. The total thickness of screed plus floor finish to be 50mm.

ENGINEERING & STRUCTURAL WORKS
All structural and concrete works to be designed by a structural engineer appointed by the Client. The engineer to specify all foundation, retaining walls, masonry/ bricks, columns, piers, concrete slabs, eye brows, beams, and steel works (Structural).
All foundations specified on drawings to be verified with engineer. Provision to be made for steel where the soil conditions require stability.

MASONRY BRICKS
Cement Maxi bricks to have a minimum 7MPA compressive strength. (to be verified by engineer)
Bricks to be laid in stretcher bond in class 2 mortar, with 2,5No. galvanised brick wall ties per 1m² of wall surface, with brick force built in every fourth coarse.
Approved precast concrete lintels to be built in over all door and window openings with a 300mm bearing length at each end. Brick-force to be built in at every coarse, for four coarses above lintel.
A continuous 150mm wide, 250 micron thick damp proof coarse to be built into the cavity closure, lintel and cill detail to the perimeter of all window and door openings. Brick-force on parapets and gables or balustrade walls to be used every 3 brick courses.

SUSPENDED CONCRETE FLOOR SLABS
Precast pretensioned hollow core concrete floor slabs by specialist to be used for all suspended concrete slabs. Installation to be strictly in accordance with the manufacturer's (TOP FLOOR) details and to be accompanied by structural engineers details and specification. Planks to receive a 40mm steel mesh reinforced screed topping throughout. (All to be to be verified by structural engineer).
Floor finishes as indicated on plan applied to minimum 40mm thick screed with tile joints aligning with control joints. Screed to be cast continuously over mesh, with grinder cut control joints, 10mm deep, cut on a 3.5 x 3.5m max grid or intervals to all screeded areas.
Floor finish to be level throughout inside of building and at consistent falls as indicated on plan on walkways and as elsewhere.
The total thickness of screed plus floor finish to be 50mm.
Covered walkways to be constructed in a similar fashion with screed laid to a 2% gradient away from the building towards the edge, with a minimum thickness of 50mm at the edge. Walkway slab and adjacent wall to be waterproofed with SIKA Cemflex and membrane applied below the screed for half a meter on slab and up the face of the cavity wall for 150mm before screening and plastering commences.

JOINTS
Provide a bitumen impregnated two ply felt, horizontal joint, under all concrete slabs, and provide a polystyrene vertical joint between wall and slab.
Provide a construction joint along all such joints between slab and masonry, internal and external and seal with polyurethane sealant.
Provide 5 mm plastered V-joints between concrete and masonry works.

FLAT ROOF WATERPROOFING
5mm thick UV stable polyester, polymer modified, bitumen waterproofing torch on membrane. Membrane torch-fused and fully sealed to primed surface, on a 50mm min. thick screed laid with fall to fused outlet spouts, all in accordance with manufacturer's specification.
114 x 38 mm wall-plate to be anchored down by 30 x 1.6mm thick gms hoop irons. Hoop iron to be tied back into walls with a minimum depth of 600 mm. Hoop irons to be folded up and over the wall plate and rafter, and to be nailed down to timbers at both ends. G.m.s brackets / hangers to be used to fix rafter to parapet wall ends and support beams in accordance with the manufacturers recommendations. All fixing details to be verified by structural engineer

TIMBER TREATMENT
All timber used in the erection of the building to be treated against termite and wood borer attack and fungal decay in accordance with SANS 10005.

WALL-PLATE & ANCHORING
ROOF STRUCTURES
0,5mm thick Concealed fixed metal roof sheeting, produced from COLORBOND™ sheet metal. Roof slope 3,5deg., fixed in accordance with the manufacturer's recommendations to 75 x 50mm treated SA pine purlins @ 900mm centers, fixed to 152 x 50mm treated SA pine (grade 7) rafters @ 1000mm centers, fixed to a 220 x 44mm PAR treated SA pine beam (grade 7), parapet walls and walkway beams supports. Splicing connections of rafters to structural engineers design. PAR beam of be fixed to support walls with G.m.s brackets / hangers as described above. Structural engineer to verify design and specifications. Apartment separating walls to be extended to under roof sheeting and corked with cement plaster to maintain fire barrier.
All timber roof structure to stop against separating walls, no bridging of continuous timber over walls allowed.
All flashings, poly-closers and fixings included in roof installation. Flashing material and colour to match roof sheeting.

ROOF INSULATION (HABITABLE SPACES ONLY)
Aluminium foil faced radiant barrier insulation installed over purlin with aluminium side facing the top.
130mm thick, Non-combustible, light weight fibre glass wool thermal ceiling insulation, 12kg/m³, closely fitted with ends butted firmly between rafters and laid loose on brandering between roof timbers, all in accordance with manufacturer's recommendations. Minimum total R-value to be: 3,38m² K/W.

PERGOLA CONSTRUCTION:
Hot dipped galvanised 75 x 75mm Cold formed square tubing column on 300x300x200mm concrete foundation as described above, bolted to hot dipped galvanised extruded 80 x 40mm square tubbing frame to form pergola edges. Steel slats (or cleats for timber slats) welded to frame and all holes etc machined in steel before galvanising. The detail and specification of galvanised mild steel fixing plates and fixings to be confirmed by structural engineer.

CEILINGS:
6,4mm thick Flush plastered plasterboard ceiling under timber roofs only. Boards fixed print side up, with 25mm plasterboard screws, at 150mm centres, to 38x38mm brandering at 400mm centres in one direction. All joints to be covered with plasterboard tape, fixed over joints (double over butt joints) and then plastered with 3mm to 6mm thick skim plaster, all applied and fixed in accordance with the manufacturers recommendations.
Soffit to precast concrete slabs to act as ceiling in other spaces. Precast concrete slab soffit finished by filling any holes and smoothing down surface before painting. All conduits to run in screed above slab with neat holes for lights etc drilled through slab to no more then conduit diameter. Otherwise to be corked to leave no big openings in slabs.

WALL FINISHES:
All walls are to be finished off with smooth 10mm thick single coat cement plaster, with 1 cement to 4 sand mix. All plastered walls, except where tiled to be finished with a primer and two coats of high quality paint. Colour scheme to Client choice and satisfaction. Paint to be suitable for internal or external application and for substrate applied to. Paint to be applied according to manufacturers specifications.

SHOWER, BATH SURROUND AND SPLASH-BACK WATERPROOFING
Apply SIKA Cemflex Acrylic based Emulsion Waterproofing and bonding agent with Membrane, in accordance with the manufacturer's instructions, to clean brickwork and plaster joints, to whole splash back or shower area to be tiled or painted. Smooth plastering to follow once membrane and emulsion has cured according to manufacturers requirements. Take care not to damage waterproofing layer during plastering or other building activities.

LIGHT AND VENTILATION
All spaces are designed to have a min. 10% of the floor area as glazed fenestration of that 50% to be openable for natural ventilation.

ALUMINIUM WINDOWS AND DOORS
Standard Wispeco aluminium windows, sliding doors and frames with natural anodised finish. Refer to schedule. All glazing and framework to comply with SANS 0137, 1263, SANS 10400 Part N & Part XA, as well as AAAMSA requirements. Frame stiffness, airtightness to be SANS 613 certified.
Aluminium frame profiles to be protected against damage when installing. All dimensions and opening sizes to be checked on site.
Refer to adjoining specification for Deemed to Satisfy Fenestration Energy Calculations and glazing specifications.

TIMBER DOORS
Purpose made timber doors and frames frames by specialist manufacturer. All glazing and framework to comply with SANS 0137, 1263, SANS 10400 Part N & Part XA. Frame stiffness, airtightness to be SANS 613 certified.
Paint to components be suitable for external application and for substrate applied to. Paint to be applied according to manufacturers specifications.
All dimensions and opening sizes to be checked on site.
Refer to adjoining specification for Deemed to Satisfy Fenestration Energy Calculations and glazing specifications.

STORMWATER DRAINAGE:
Rainwater reticulation design from down pipe spout to where it leaves site according to civil engineers design.
Rainwater to surface drain on parking areas to permeable paving and retention ponds as per civil engineers designs.
Civil engineer to specify kerbs and inlets accordingly.
All pipe sizes, gradients and materials for the stormwater reticulation system as per SANS 10400 design and specifications.
All stormwater drainage work to be carried out in accordance with local authority's drainage by-laws & regulations.

DRAINAGE
Closed system to conform to National Building Regulations. First R.E. to be min. 450mmm below ground level with a min. fall of 1:60 and a max. fall of 1:40. Single stack system design proposed, covering three apartments per stack over three levels, with accessible rodding eye in top apartment and oneway air intake valve in roof void.

WATER HEATING
A Central hot water system with insulated tanks and Heat pumps to be installed on flat roofs in position indicated, to comply with SANS 10400- XA, SANS 1307, SANS 10106, SANS 10254 and SANS 10252-1. Requirements for water installations in buildings shall be in accordance with SANS 10252-1 and SANS 10254. All hot water service pipes shall be clad with insulation with a minimum R-value in accordance with table 1 of SANS 10400- XA.

ELECTRICITY
All electrical wires in walls, floors, concrete soffits and ceilings to run in SABS approved conduits.

REFUSE ROOM
The refuse room is constructed to be rodent proof in accordance with the Government Rodentproof Regulations. The area should further be rendered rodent free by the use of rodent traps, etc in accordance with the above mentioned regulations.

REVISIONS

Rev	Date	Description	Done by	Checked
02	28.03.17	Generally AMENDED PER LDA. REQUESTS 23.03.17		
01	30.01.17	Generally showing Areas + 8units Incuded to suit 269 Initial Units		

Contractors and sub-contractors to verify all levels, heights and dimensions on site, and to check same against the drawings, before commencing any work.
Quality of all materials and workmanship to comply with the relevant SABS and NBR specifications.
The contractor is responsible for correct setting out of the specified works.

Contractors are to ensure that all details shown on this drawing are in complete compliance with local authority by-laws and regulations.
Contractors are to locate and identify existing services on site, and are to protect these from damage throughout the duration of work.
Contractors shall be responsible for ensuring the structural stability of all components of their work and ascertaining that the main structure is capable of supporting all loads applied thereto.

Contractors are to ensure that their work, on site, is adequately protected at all times, during construction, and the responsibility for any damages incurred lies with the contractor until final hand-over of the site.
Contractors and sub-contractors are to ensure that all components,glazing panels and shop-fitted items fit through all doorways, stairwells and lifts.
This drawing is not to be scaled. Figured dimensions are to be used at all times.
Any queries or variations arising from any of the above, must be reported to Albertyn Viljoen Nortjé Architects for clarification, prior to the commencement of any works.

DRAWING STATUS:	ISSUE DATE:
FOR INFORMATION	
FOR APPROVAL	19.05.16
FOR CONSENT	
FOR COSTING	
FOR CONSTRUCTION	
AS BUILT	
OTHER	

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GREEN BUILDING COUNCIL SA
MEMBER ORGANISATION

avna architects

Project:
RESIDENTIAL DEVELOPMENT
Erf 33008, PAARL
NEFFENSAAN DEVELOPMENT

Drawing:
SITE PLAN & TYPICAL APARTMENT UNITS

Date: March 2016	Print Date: 2016/15/03
Drawn: B.BROWN	Checked:
Architect: Francois Nortje	Date:
Client:	Date:
Scale: 1:100/500@ A1	

Project no.
Drawing no. 1101
Revision. 02