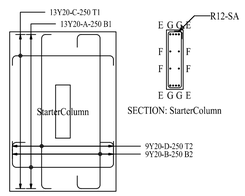
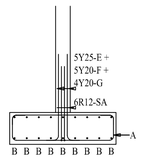
MEMBER	No OF	BARS PER MEMB	DIA	LENGTH	TOTAL NUM-BER	MARK	S C	BENDING A	B	C	D	E/r
Foundations	3	13	Y20	3150	39	A	55	240	470	1900	470	(240)
		9	Y20	4050	27	B	55	240	430	2900	430	(240)
		9	Y20	3200	27	D	35	2900				
		13	Y20	2200	39	C	55	1900				
		5	Y25	2200	15	E	34	2000				
		5	Y20	2150	15	F	34	2000				
		4	Y20	2150	12	G	34	2000				
		6	R12	2450	18	SA	60	940	220			



PLAN

SECTION: StarterColumn



Cover:
Bot:75 mm
Sides:50 mm
Top:50 mm
Cols:30 mm

SECTION

	8	10	12	16	20	25	32	40	TOT		
R			39						39	Date	2017/11/27
Y					1140	127			1268	Det by	Koketso Moyaba
TOT			39		1140	127			1307	Ref Dwg	PHG-STR-106
										Job No	BioPark Phase 1C

GENERAL NOTES

- FIGURED DIMENSIONS ONLY TO BE USED.
- COORDINATES BASED ON WGS84
- LEVELS BASED ON MSL DATUM
- DISCREPANCIES, ERRORS AND OMISSIONS ARE TO BE REPORTED TO ENGINEER IMMEDIATELY THEY BECOME EVIDENT.
- SHOP DRAWINGS TO BE SUBMITTED FOR APPROVAL PRIOR TO MANUFACTURE OR INSTALLATION.
- COPYRIGHT AND RIGHT OF REPRODUCTION OF THIS DRAWINGS OR ANY PORTION THEREOF IS RESERVED.

Legend

Roof Line	
Section cut	
Proposed Walls	
Concrete Work	
Fittings on Proposed uPVC Water Pipeline (Class 16)	
Fittings on Proposed Sewer Line	SM16
Overland Stormwater Drainage	

NOTES

1. Excavations for foundations and all reinforcing must be approved by the engineer before any concrete is cast.
2. All bases are symmetrical about the center lines unless otherwise shown.
3. Specifications:
   - Reinforced concrete work — SABS 1200g
   - Structural steel work — SABS 1200h
   - Paintwork on steel — SABS 1200h
4. Concrete work: all brickwork are load bearing and must be completed before commencing with the construction of the concrete slab
5. Minimum concrete cover:
   - Bases — 75mm
   - Columns — 40mm
   - Beams — 25mm
   - Slabs — 12mm or dia
6. Concrete: all ready mixed concrete will only be approved if a mix design and cement grading by SABS is submitted to the engineer.
7. Test cubes minimum must be tested by an independent soil laboratory.
8. All imported cement approved by the SABS must be approved by the engineer on the basis of:
   All cement must be bought in one batch and treated to SABS 1200g.
   A mix design must be submitted.
   4 sets of 3 test cubes must be submitted with age of testing as follows:
   - 3 cubes @ 7 days
   - 3 cubes @ 14 days
   - 3 cubes @ 21 days
   - 3 cubes @ 28 days
9. Concrete cube strength at 28 days:
   - Blinding — 15 MPa
   - Reinforced Foundations — 30 MPa
   - Columns — 40 MPa
   - Beams — 30 MPa
   - Slabs and Staircases — 30 MPa

Rev	Date	Issued for	Approved
		Preliminary	
		Information	
00	26/11/2017	Tender Contract	
		Measurement	
		Construction	
		Approval	

Client: THE INNOVATION HUB — Incubator Catalyst for Gauteng City Region — A subsidiary of the Gauteng Growth and Development Agency; BIO PARK Gauteng; Gautrain; Gauteng City Region Observatory

Discipline	Signature	Pr Number	Date
Architecture			
Civil/Structural			

Phunga Consulting Engineers — Quality Driven Solutions

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Project Title:
Construciton of BioPark Phase 1C
Extension to Phase with a Second Floor and Lift

Drawing Title: Foundations Reinforcing Layouts and Bending Schedule PHG-STR-105

Designed by: Koketso Moyaba; Civil & Structural Engineer

Date November 2017

Drawn by: Koketso Moyaba; Civil & Structural Engineer

Scale NTS

Checked by: TS Wanakwanyi; PrEng

Scale on reduced Drawing

100mm on Original Drawing