

DATE : 2018/10/08
PROJECT : Training Centre
ADDRESS : RE/3064 JOHANNESBURG, GAUTENG

FIRE PUMP CONNECTION CALCULATION	
Measured static pressure (Pm) kpa	550
Measured static pressure equates to	55m

TABLE 1

Nominal diameter of pipe mm	Friction factor for service pipes									
	Number of hose reels served by a service pipe					Number of fire hydrants served by a service pipe				
	1	2	3	4	5	6	1	2	3	
25	0.11	0.41	0.66	1.47	2.21	3.11				
32	0.05	0.18	0.38	0.85	0.98	1.38				
40	0.02	0.05	0.10	0.18	0.27	0.37				
50	0.01	0.02	0.04	0.06	0.10	0.13				
75	0	0	0	0	0.01	0.02	0.53	1.81	4.05	
100	0	0	0	0	0	0	0.11	0.39	0.83	
150	0	0	0	0	0	0	0.02	0.05	0.11	

* Not permitted

FURTHEST HOSE REEL CALCULATION HOSE REEL NO. 5 (R5)

Pipe Dia	Length	Friction Factor	Number of hose reels	L x ff
100	25	0	5	0
100	5	0	4	0
100	5	0	3	0
100	5	0	2	0
100	5	0	1	0
80	5.5	0	1	0
25	3	0.11	1	0.33
PL				0.33m

FORMULAE $P_f = P_m - (H_f - H_c) - P_i$

Criteria	Value	Result
Pm	55	
Hf	23	
Hc	0	
Pi	0.33	
Calculation		
$P_f = P_m - (H_f - H_c) - P_i$		31.67
Pf		31.67

$P_f = 31.67$ m, this is greater than 30m and therefore acceptable

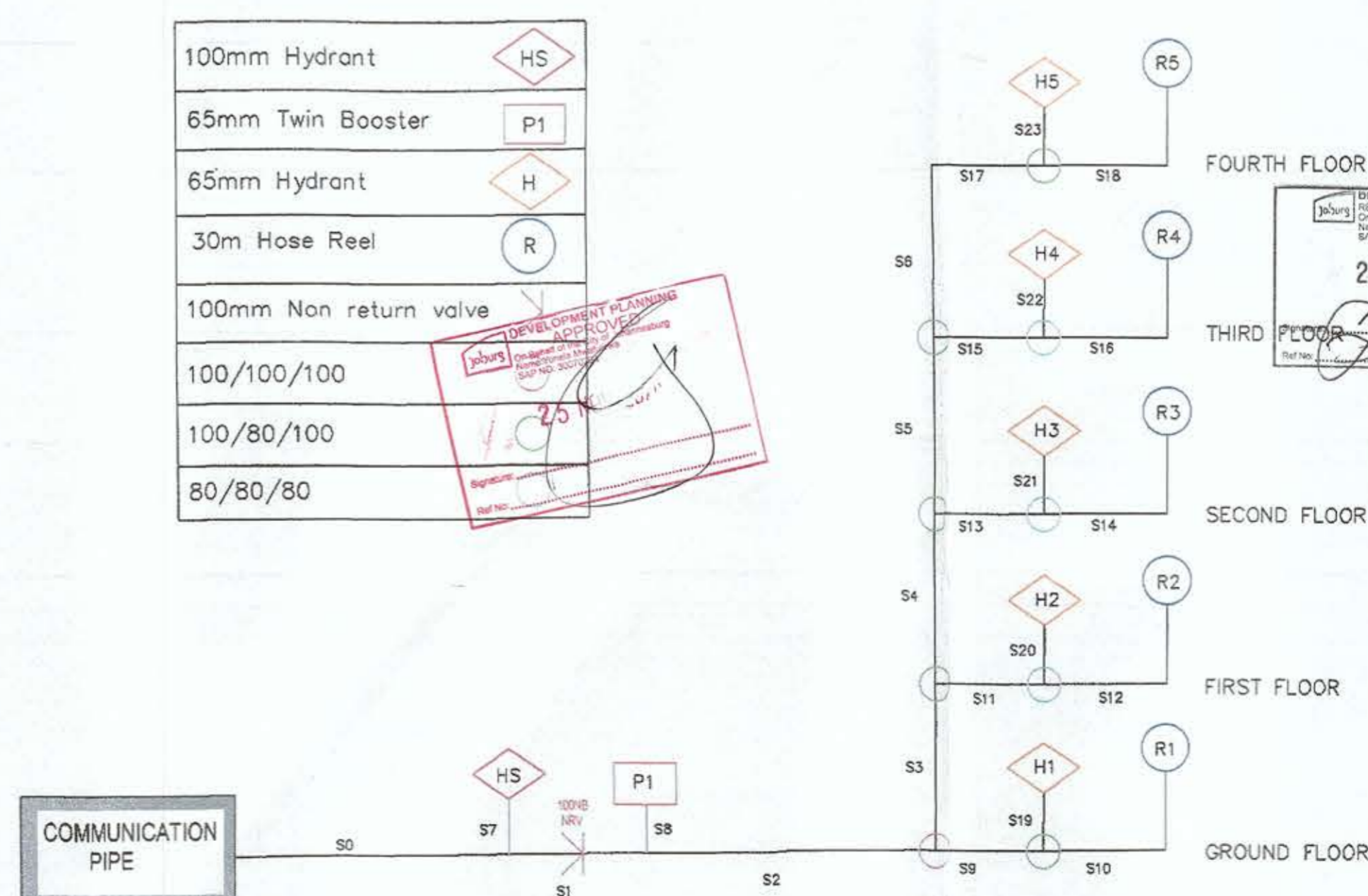
HYDRANT CALCULATION REQUIRED $P_f > P_m - (H_f - H_c) - P_i$

Fire Pump Connection			
No of Fire Hydrants served	2		
Pipe Dia	Length	Friction Factor	L x ff
100	9	0.05	36.45
100	0	0	0
80	0	0	0
PL			36.45m

FORMULAE $P_f = P_m - (H_f - H_c) - P_i$

Criteria	Value	Result
Pm	55	
Hf	2	
Hc	0	
Pi	36.45	
Calculation		
$P_f = P_m - (H_f - H_c) - P_i$		16.55
Pf		16.55m

$P_f = 16.55$ m, this is greater than 5m and therefore acceptable



General Notes:
1. This drawing is to be read in conjunction with drawings issued by the consultants of various disciplines, in particular, structural, electrical, mechanical and wet services engineers.
2. Any discrepancies between drawings layouts, are to be brought to the attention of the architect prior to any work being put in hand.
3. Figure dimensions are to be taken in preference to scaled measurements and large scale details drawings will supersede small scale general layout drawings.
4. Contractors and subcontractors to check all dimensions and levels on site prior to any work being put in hand.
5. All work on site is to conform to good building practice and all relevant national codes and standards.
6. The master held at 1 World Consultants bears the original signature of approval.

No.	Date	Revisions	Drawn
A	08/10/2018	ISSUED FOR COUNCIL	AS
B	15/02/2019	ISSUED FOR TENDER	AM
C	04/04/2019	UPDATED TO NEW LAYOUTS	AM

Dwg No.	Description
1841-0000-REV01	Section and Elevations

Project Name:
TRAINING CENTER
REF: RE/3064 JOHANNESBURG

Project Description:
FIRE INSTALLATION

Project Service:
MECHANICAL

Client:



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Consultants:



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Drawing Issued:
FOR COUNCIL APPROVAL

Consultant Approval:	Sign:
MS BAKSH
Reg No:	Date:

Drawing Details:
ELEVATIONS AND PART W CALCULATION

Drawing Number: 1841-FIRE-LYT-01-04	Rev No.: C
Date: 04/04/2019	Drawn: MSB
Scale: 1:100	Checked: MSB