

NEW YORK, NY 10005

HYDRAULIC CALCULATIONS FOR
THREE STORY HOUSE-APP021075

DATE: JUL 12, 2016

-DESIGN DATA-

REMOTE AREA LOCATION: THIRD FLOOR

OCCUPANCY CLASSIFICATION: RESIDENTIAL

COVERAGE PER SPRINKLER: 14x14 sq. ft.

TYPE OF SPRINKLERS CALCULATED: CONCEALED

NUMBER OF SPRINKLERS CALCULATED: TWO

TYPE OF SYSTEM: WET

WATER SUPPLY

Source: HYDRANT FLOW TEST Test Date: 03/25/15 Test By: DEP

Location:

Static: 45 psi Residual: 42 psi Flow: 500 gpm

Calculations performed by HASS under license # 49050780 ,
granted by HRS SYSTEMS, INC.

(Notes continue after pipe calculations results.)

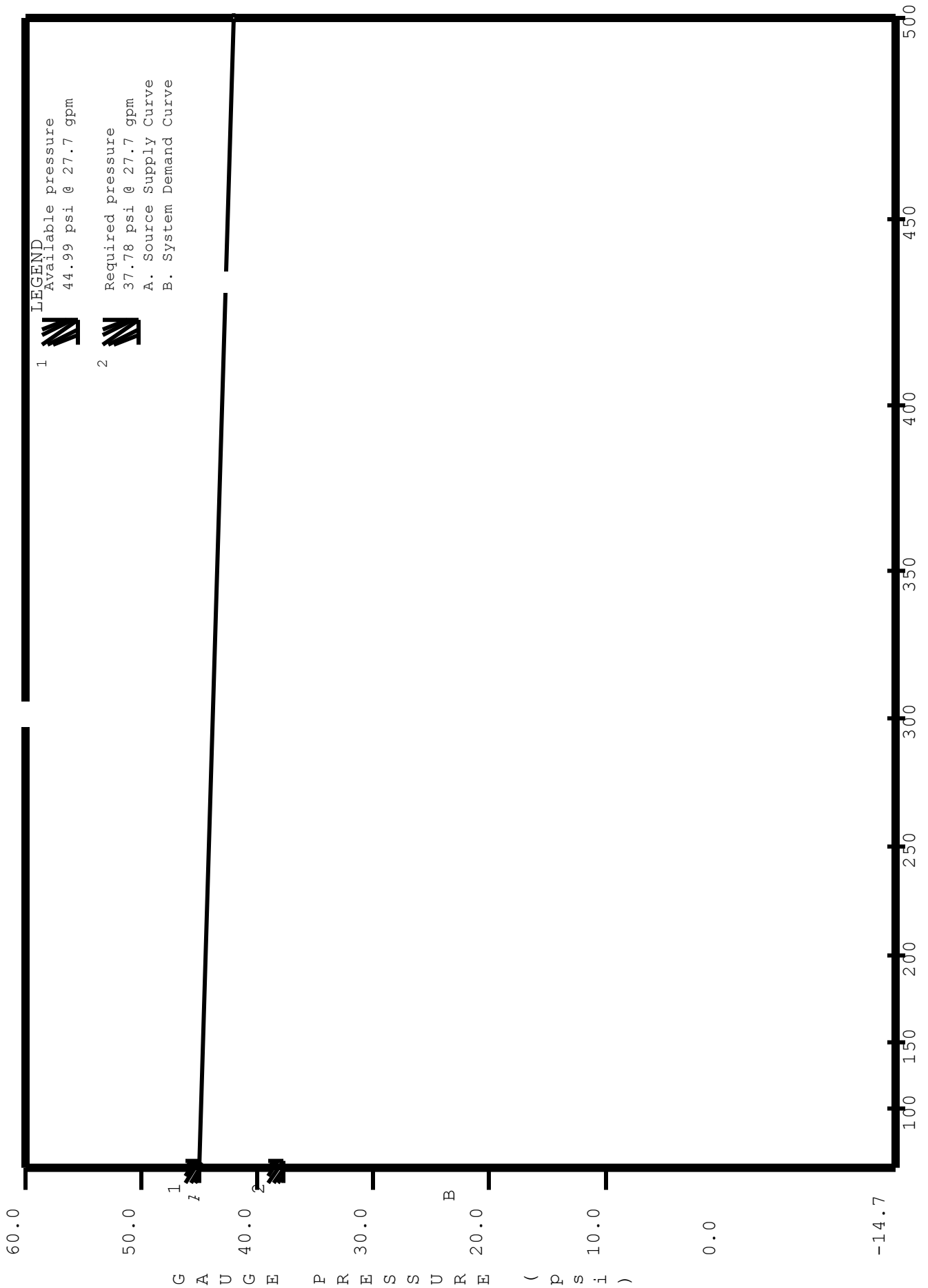
(Notes continue after pipe calculations results.)

DATE: 7/12/2016-CAD\WO12\APP-021075\01-MODELS\SP\DATA\021075 HYD CALC.SDF

JOB TITLE:

WATER SUPPLY ANALYSIS

Static: 45.00 psi Resid: 42.00 psi Flow: 500.0 gpm



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JOB TITLE:

NFPA WATER SUPPLY DATA

SOURCE NODE TAG	STATIC PRESS. (PSI)	RESID. PRESS. (PSI)	FLOW @ (GPM)	AVAIL. PRESS. (PSI)	TOTAL @ DEMAND (GPM)	REQ'D PRESS. (PSI)
13	45.0	42.0	500.0	45.0	27.7	37.8

AGGREGATE FLOW ANALYSIS:

TOTAL FLOW AT SOURCE	27.7 GPM
TOTAL HOSE STREAM ALLOWANCE AT SOURCE	0.0 GPM
OTHER HOSE STREAM ALLOWANCES	1.5 GPM
TOTAL DISCHARGE FROM ACTIVE SPRINKLERS	26.2 GPM

NODE ANALYSIS DATA

NODE TAG	ELEVATION (FT)	NODE TYPE	PRESSURE (PSI)	DISCHARGE (GPM)	NOTES
1	45.5	K= 4.90	7.0	13.0	
2	45.5	K= 4.90	7.0	13.0	
3	45.5	- - - -	7.9	- - -	
4	26.0	- - - -	17.3	- - -	
5	24.0	HOSE STREAM	18.5	1.5	
6	23.0	- - - -	19.1	- - -	
7	23.0	- - - -	19.3	- - -	
8	23.0	- - - -	24.3	- - -	
9	22.0	- - - -	24.8	- - -	
10	22.0	- - - -	25.3	- - -	
11	-4.0	- - - -	36.9	- - -	
12	-4.0	- - - -	37.2	- - -	
13	-4.0	SOURCE	37.8	27.7	

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JOB TITLE:

NFPA PIPE DATA

Pipe Tag	K-fac	Add Fl	Add Fl To	Fit:	L	C	(Pt)		
Frm Node	El (ft)	PT	(q)	Node/	Nom ID	Eq.Ln.	F	(Pe)	Notes
To Node	El (ft)	PT	Tot.(Q)	Disch	Act ID	(ft.)	T	Pf/ft.	(Pf)
Pipe: 1		4.90	13.0	Disch			8.00	120	0.9
3	45.5	7.9	0.0		1.000	E: 2.0	7.00		0.0
1	45.5	7.0	13.0		1.049	T: 5.0	15.00	0.059	0.9
Pipe: 2		4.90	13.0	Disch			8.00	120	0.9
3	45.5	7.9	0.0		1.000	E: 2.0	7.00		0.0
2	45.5	7.0	13.0		1.049	T: 5.0	15.00	0.059	0.9
Pipe: 3		0.0	0.0				70.00	120	9.3
4	26.0	17.3	26.0		2.000	9E:45.0	45.00		-8.4
3	45.5	7.9	26.0		2.067		115.00	0.008	0.9
Pipe: 4		0.0	0.0				15.00	120	1.3
5	24.0	18.5	26.0	3	2.000	7E:35.0	35.00		-0.9
4	26.0	17.3	26.0		2.067		50.00	0.008	0.4
Pipe: 5		H.S.	1.5	Disch			3.00	120	0.5
6	23.0	19.1	26.0	4	2.000	T:10.0	10.00		-0.4
5	24.0	18.5	27.5		2.067		13.00	0.009	0.1
Pipe: 6		0.0	0.0				6.00	120	0.2
7	23.0	19.3	27.5	5	2.000	3E:15.0	16.00		0.0
6	23.0	19.1	27.5		2.067	G: 1.0	22.00	0.009	0.2
Pipe: 7			0.0		Fixed Pressure Loss Device				
8	23.0	24.3	27.5	6	5.0 psi,			27.5 gpm	
7	23.0	19.3	27.5						
Pipe: 8		0.0	0.0				2.00	120	0.5
9	22.0	24.8	27.5	7	2.000	2E:10.0	10.00		-0.4
8	23.0	24.3	27.5		2.067		12.00	0.009	0.1
Pipe: 9			0.0		Fixed Pressure Loss Device				
10	22.0	25.3	27.5	8	0.5 psi,			27.5 gpm	
9	22.0	24.8	27.5						
Pipe: 10		0.0	0.0				26.00	120	11.6
11	-4.0	36.9	27.5	9	2.000	3E:15.0	15.00		-11.3
10	22.0	25.3	27.5		2.067		41.00	0.009	0.4
Pipe: 11		0.0	0.0				20.00	120	0.3
12	-4.0	37.2	27.5	10	2.000	2E:10.0	10.00		0.0
11	-4.0	36.9	27.5		2.067		30.00	0.009	0.3
Pipe: 12		Source	27.5	11			20.00	120	0.6
13	-4.0	37.8	0.2		1.500	G: 1.0	1.00		0.0
12	-4.0	37.2	27.7		1.610		21.00	0.029	0.6

Notes