	VALUE ENTERED BY USER
	CALCULATED VALUE OR MESSAGE
	KEY DESIGN INFORMATION

Project :	
Location:	

IMPORTANT TO READ THE FOLLOWING NOTE:

This worksheet allows for the design of ELJEN GSF Systems using rectangular dispersal beds. The worksheet helps in determining the area and dimensions of the dispersal bed, the number of rows and the number of ELJEN modules required. The designer has a lot more flexibility in the design which is not covered in this worksheet but detailed in the Ontario Design and Installatin Manual. For example, modules in a row can be placed end to end, spaced one another or can form smaller groups of even number of modules. ELJEN GSF Systems can also be designed using irregular shape dispersal beds, multiples beds. ELJEN GSF design also allows for uneven distribution of the modules over the dispersal bed when it is required to comply with minimum clearances as per article 8.2.1.6 of the OBC.

For any design not covered by this worksheet, please refer to the ELJEN GSF Ontario Design and Installation Manual or contact Enviro-STEP Technologies Technical Support at 877-925-7496 or support@enviro-step.ca

ESTABLISHING DAILY DESIGN FLOW

Number of Bedrooms:	Enter value	3	bedrooms	
Flow Rate for bedroom between 1 and 5		1600		*352,4 gpd*
Additional flow rate for bedroom over 5		0	L/d	*0,0 gpd*
Total number of fixture units	Enter value	26	Total fixture units	
Additional flow as per fixture units		300	L/d	*66,1 gpd*
Floor space	Enter value	185	m² floor space	
Additional flow as per floor space		0	L/d	*0,0 gpd*
Total daily design flow		**1900**	**L/d**	*418,5 gpd*
Safety factor (at designer's discretion)	Enter value	0	L/d	*0,0 gpd*
Total daily design flow		**1900**	**L/d**	*418,5 gpd*

SOIL PERCOLATION, VERTICAL SEPARATION AND SIZE OF DISPERSAL AREA

Percolation time of native soil (T)	Enter value	49	min/cm		
Required vertical separation (VS)		450	mm		*18 inch*
Depth of limiting layer (enter 0 if T ≥ 50)	Enter value	450	mm	**REF. ON SKETCH**	*18 inch*
Does native soil provides enough vertical separation ?		YES			
Imported material for VS (Specified sand or 6≤ T ≤10)		0	mm	**"D"**	*0 inch*
Slope of natural ground	Enter value	0	%		
Validation of slope (must be <25%)		OK			
Minimal Dispersal Area required (QT/400)		232,8	m²		*2505 ft²*

NUMBER OF ELJEN MODULES

Minimal number of ELJEN GSF A42 Modules	20	Modules	(Based on 95 L/mod)
Selected number of ELJEN GSF A42 modules	21	Modules	ed on the nb of rows selected)

SYSTEM LAYOUT (CAN BE ADAPTED BY THE DESIGNER IF NEEDED)					
Raised system required		NO			
Type of distribution	Select	GRAVITY			
Distribution feeding point	Select	EXTREMITY	of rows		
Max length of distribution pipe criteria		**18**	m MAX		*59,1 ft*
Length of System	Enter value	18	m		*59,1 ft*
Length of distribution pipe (max 18 or 30m)		8,54	m		
Length of distribution pipe criteria verification		**OK**			
Minimum required width of System		13	m		*42,7 ft*
Selected Width of System	Enter value	13,2	m		*43,3 ft*
Dispersal Area provided		**237,6**	m²		*2557 ft²*
Validation of area		**OK**			
Number of ELJEN GSF rows	Enter value	3	Rows		
Number of groups per row	Enter value	1	Groups/row		
Number of modules per group		7	Mod/group	**REF. ON SKETCH**	
Total number of modules per row		7	Mod/row		
Spacing between rows (side to side of module)		3,8	m	**"R"**	*149,6 in*
Spacing at end of rows (end of module to end of sand)		4,73	m	**"E"**	*186,2 in*
Lateral spacing (side of module to lateral edge of sand)		1,9	m	**"S"**	*74,8 in*
Spacing between groups of modules		9,46	m	**"M"**	*372,4 in*
Total length of dispersal area		**18,0**	**m**	**"L"**	*59,1 ft*
Total width of dispersal area		**13,2**	**m**	**"W"**	*43,3 ft*
Heigth of backfill over modules (min 300mm)	Enter value	300	mm		*12,0 in*

NOTE FOR RAISED OR PARTIALLY RAISED SYSTEMS		
Is the system partially or fully raised ?	PARTIALLY RAISED	
Height above natural ground (uphill side)	625	mm
Height above natural ground (downhill side)	625	mm (based on slope)
Slope of side berms	1V : 3H	m

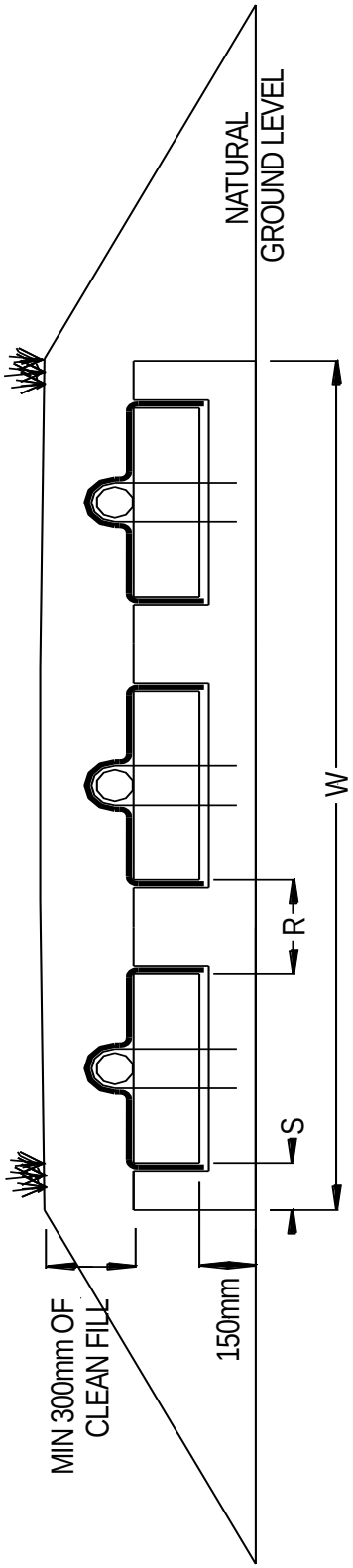
MINIMUM ASTM C33 SPECIFIED SAND (IMPORTANT READ NOTE)

ELJEN GSF modules need a minimum of 150 mm of ASTM C33 Specified Sand on each sides and under the modules. The remaining of the contact area to a height of 330mm from the base of the contact area can be filled using **either** ASTM C33 Specified Sand or Imported Sand having a T time between 6 and 10 min/cm and not more than 5% fines. If required, imported material to meet vertical separation can also be ASTM C33 Specified Sand or Imported Sand. Use a clean and breathable material for berms or backfill.

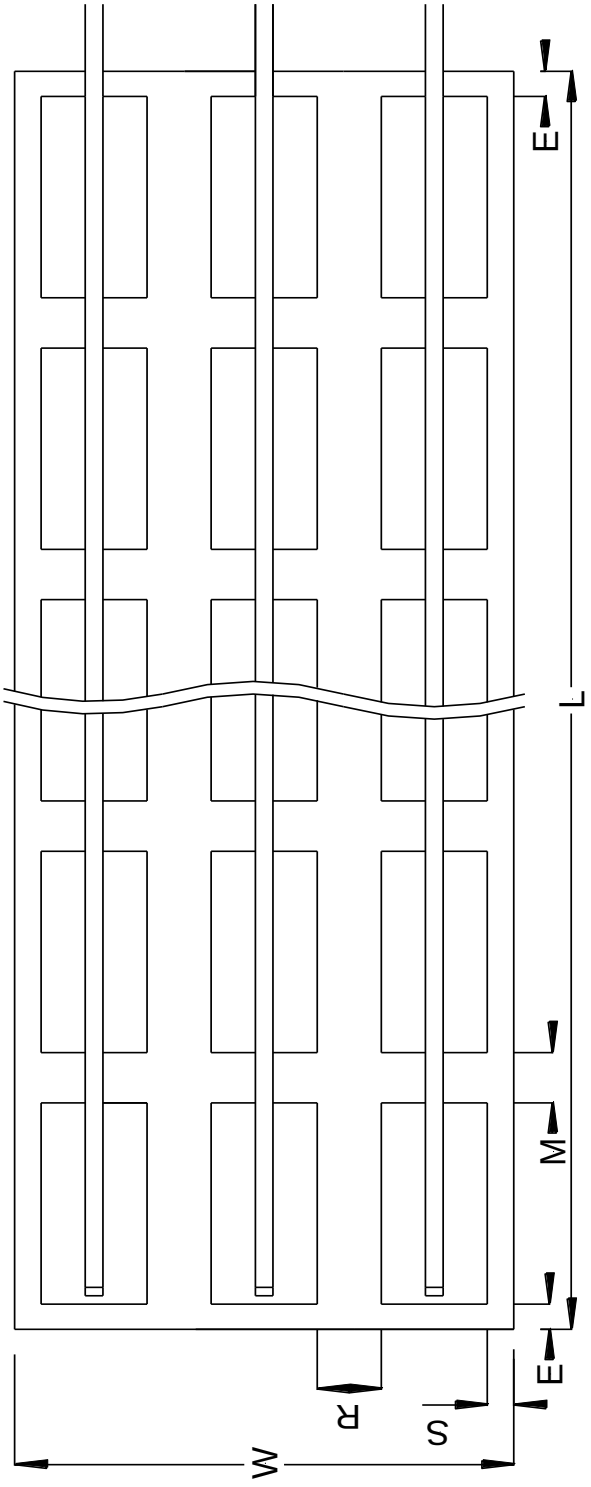
Minimal volume of Specified sand (ASTM C33)	8,9	m³	+/-	*15,1 tons*

DISCLAIMER :

This worksheet is a design tool to help configuring ELJEN GSF Systems. The designer is responsible for adapting the design with the characteristics of the site and to any regulation in place as well as complying with Eljen BMEC Authorization and Design and Installation Manual. Volume of granular material are estimations only and should be considered minimal volume.



CROSS SECTION VIEW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