



FENTON ENGINEERING, INC.
CIVIL/STRUCTURAL ENGINEERING
2831 CARIE HILL CIRCLE NW, MASSILLON, OHIO 44646
(330) 837-0717 cell (330) 933-4642

NOTE: GRATE EVALUATED FOR STRENGTH AND DEFLECTION WHEN SUPPORTED ON 2x8 MINIMUM JOISTS SPACED AT 16" CENTER TO CENTER.

STATE OF OHIO REGISTERED PROFESSIONAL ENGINEER JOHN W. FENTON E-034742

GEORGIA REGISTERED PROFESSIONAL ENGINEER ROBERT DAVID OATES

CALCULATED PROPERTIES FOR 18" WIDTH:
MOMENT OF INERTIA, I = 0.535 in⁴
SECTION MODULUS, S = 0.59 in³

CAPACITY (with Safety Factor = 5) AND DEFLECTION:
PC/ABS, $f_y = 7830 \text{ psi}$, $E = 3.48 \times 10^5 \text{ psi}$
TOTAL SAFE LOAD = 260 psf
DEFLECTION WITH 60 psf LIVE LOAD < 1/32"

ABS, $f_y = 3510 \text{ psi}$, $E = 3.19 \times 10^5 \text{ psi}$
TOTAL SAFE LOAD = 185 psf
DEFLECTION WITH 60 psf LIVE LOAD < 1/32"

NOTE: SAFE LOAD ON GRATE CAN NOT EXCEED SAFE LOAD OF STRUCTURE SUPPORTING IT.

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UNLESS OTHERWISE SPECIFIED		NAME	DATE	SILCA SYSTEM LLC	
DESIGNED	INCHES	UNMAN	1/27/2012	TITLE:	
CHECKED	TELEPHONE				
APPROVED	ANGULAR DIMS				
	TWO PLACE DECIMAL				
	THREE PLACE DECIMAL				
	ENG APPR.				
	MECH APPR.				
	QA				
	COMMENTS				
NEXT ASSY	USED ON				
APPLICATION					
				SIZE DWG. NO.	REV
				D 070330R2	
				SCALE: 1/4" = 1"	SHEET 1 OF 1