Alleguard

Amdeck Pro Design Guide

PROTECTIVE FOAM SOLUTIONS

INNOVATIVE INSULATION CONSTRUCTION SOLUTIONS FOR ENERGY EFFICIENT AND COMFORTABLE BUILDINGS



DESIGN GUIDE

AMDECK PRO

Table of Contents

Introduction	3
Diagram 1 - Single bottom bar with WWM slab reinforcement	4
Diagram 2 - Double bottom bars with WWM slab reinforcement	4
Diagram 3 - Double top/bottom bars with WWM slab reinforcement	5
Diagram 4 - Typical car garage reinforcement	5
Table 1 - Single Span Canadian Minimum Required Bottom Reinforcement	6
Table 2 - Single Span US Minimum Required Bottom Reinforcement	8
Table 3 - Continuous Multiple Span Canadian Minimum Required Top Reinforcement	. 10
Table 3 - Continuous Multiple Span Canadian Minimum Required bottom Reinforcement	. 12
Table 4 - Continuous Multiple Span US Minimum Required Top Reinforcement	. 14
Table 4 - Continuous Multiple Span US Minimum Required bottom Reinforcement	. 16
Table 5 - Two Car Garage Canadian Minimum Required Reinforcement	. 18
Table 6 - Two Car Garage US Minimum Required Reinforcement	. 19
Table 7 - Minimum Required Canadian Shoring	. 20
Table 8 - Minimum Required US Shoring	. 21



.

.

. .

.

.

.

DESIGN GUIDE

AMDECK PRO

Introduction

This document is provided for informational purposes and is only to be used as basic guideline for reinforcement design by a licensed design professional. The design and construction of all work shall conform to the local building code and any additional local regulations and bylaws including occupational health and safety acts. The final specification and application of this design guide shall be determined by a licensed engineer or qualified design professional.

Using this Guide

Select the desired span and thickness of concrete slab. Different version of Amdeck Pro will require different configurations of reinforcement. Once those three items are selected, choose the most accurate live load for the use case (e.g. garage, typical residential, party room). The typical values provided below are for reference only and if in doubt, consult an engineering professional.

- Live load of 40 psf (1.9 kPa) Bedrooms, Living spaces in apartments, hotels, bathrooms,
- Live load of 50 psf (2.4 kPa) Car garages, classrooms,
- Live load of 80 psf (3.8 kPa) Billiard and pool rooms, equipment rooms,
- Live load of 100 psf (4.8 kPa) Assembly areas, non-residential kitchens, retail and storage areas,







Diagram 1 - Single bottom bar with WWM slab reinforcement



Diagram 2 - Double bottom bars with WWM slab reinforcement





Diagram 3 - Double top/bottom bars with WWM slab reinforcement



Diagram 4 - Typical car garage reinforcement



Table 1 - Single Span Canadian Minimum Required Bottom Reinforcement

								Sla	b Thickn	ess in (n	nm)							
		2 (51)		2	2-1/2 (63	3)		3 (76)		3	8-1/2 (89)		4 (102)		4	-1/2 (114	4)
psf								Se	elf Weigh	nt psf (kF	Pa)							
(kPa)		54 (2.58))		58 (2.78)		65 (3.11)		71 (3.40))		77 (3.69))		84 (4.02))
Dead	10	15	15	10	15	15	10	15	15	10	15	15	10	15	15	10	15	15
Load	(0.4)	(0.7)	(0.7)	(0.4)	(0.7)	(0.7)	(0.4)	(0.7)	(0.7)	(0.4)	(0.7)	(0.7)	(0.4)	(0.7)	(0.7)	(0.4)	(0.7)	(0.7)
Live Load	40 (1.9)	80 (3.8)	100 (4.8)															
Span							Mini	mum Re	auired B	ottom R	einforce	ment						
ft (m)	1			1					4							1		
≤9 ≤(2.74)	1-10M	1-10M	1-10M															
10 (3.05)	1-10M	1-15M	1-15M															
11 (3.35)	1-10M	1-15M	1-15M															
12 (3.66)	1-15M	1-15M	1-15M															
13 (3.96)	1-15M	1-15M	1-20M															
14 (4.27)	1-15M	1-20M	1-20M															
15 (4.57)	1-15M	1-20M	1-20M															
16 (4.88)	1-15M	1-20M	2-15M															
17 (5.18)	1-20M	2-15M	2-15M															
18 (5.49)	1-20M	2-15M	2-15M															
19 (5.79)	1-20M	2-15M	2-20M															

¹ Materials used are concrete at 30 MPa and steel at 400 MPa.

² Final reinforcement for deck spans shall be checked against site conditions and project design requirements and shall be the sole responsibility of the engineer of record.

³ Bolded text in table above indicate that shear reinforcement is required. Shear reinforcement shall be 10M bar @ 6" (152mm) where the slab is ≥3.5" (89mm) or 10M bar @ 7" (178mm) where the slab is >3.5" (89mm) in thickness. Shear reinforcement shall be placed within one-third of the span from each support (middle third of the span does not require shear reinforcement).

⁴ Blank values indicate that a total deflection limit of L/480 is exceeded.

⁵ The above tabulated values are for single-span condition only, simply-supported condition only. Additional top reinforcement and wall dowels may be required at supports to limit cracking, as determined by an engineering professional.

⁶ Concrete cover requirements shall comply to CSA Standard A23.3 exposure conditions. The above tabulated reinforcement requirements are for interior exposure.

⁷ Where concentrated loads are present on the floor, the slab and rib strength capacity shall be checked by an engineering professional against such conditions.

⁸ Maximum unshored spans of Amdeck Pro forms shall adhere to the values in Table 7, with continuous 16ga, 10" (254mm) metal channel joists between supports.

⁹ The above tabulated spans shall be calculated based on the clear span spacing of supports, unless otherwise determined and detailed by an engineering professional.

¹⁰ Spacing of bars and concrete cover requirements shall be checked by an engineering professional.

¹¹ Slab reinforcement shall be 4x4-W2.9/W2.9 mesh located in the middle of the slab.

¹² Refer to diagrams 1 and 2.

.

Table 1 - Single Span Canadian Minimum Required Bottom Reinforcement Cont.

								Sla	b Thickn	ess in (n	nm)							
		2 (51)		2	2-1/2 (63	3)		3 (76)		3	8-1/2 (89))		4 (102)		4	-1/2 (114	4)
psf								Se	elf Weigh	nt psf (kF	Pa)							
(kPa)		54 (2.58))		60 (2.87))		66 (3.16)		73 (3.49)		79 (3.78))		85 (4.06))
Dead	10	15	15	10	15	15	10	15	15	10	15	15	10	15	15	10	15	15
Load	(0.4)	(0.7)	(0.7)	(0.4)	(0.7)	(0.7)	(0.4)	(0.7)	(0.7)	(0.4)	(0.7)	(0.7)	(0.4)	(0.7)	(0.7)	(0.4)	(0.7)	(0.7)
Live Load	40 (1.9)	80 (3.8)	100 (4.8)															
Span	I						Mini	mum Bo	auirod P	ottom P	ainfarca	mont	•					
ft (m)	1			1			IVIIII	inum ke	quireu b		ennorce	ment	1					
20 (6.10)	1-20M	2-20M	2-20M															
21 (6.40)	2-15M	2-20M	2-20M															
22 (6.71)	2-15M	2-20M	2-20M															
23 (7.01)	2-15M	2-20M	2-25M															
24 (7.31)	2-20M	2-25M		2-20M	2-25M	2-25M												
25 (7.62)	2-20M			2-20M	2-25M		2-20M	2-25M	2-25M									
26 (7.92)	2-20M			2-20M			2-20M	2-25M		2-20M	2-25M	2-25M	2-20M	2-25M	2-25M	2-20M	2-25M	2-25M
27 (8.23)	2-20M			2-20M			2-20M			2-20M	2-25M		2-20M	2-25M		2-20M	2-25M	2-25M
28 (8.53)	2-20M			2-20M	2-25M													
29 (8.84)							2-25M			2-25M			2-25M			2-25M		
30 (9.14)										2-25M			2-25M			2-25M		

¹ Materials used are concrete at 30 MPa and steel at 400 MPa.

² Final reinforcement for deck spans shall be checked against site conditions and project design requirements and shall be the sole responsibility of the engineer of record.

³ Bolded text in table above indicate that shear reinforcement is required. Shear reinforcement shall be 10M bar @ 6" (152mm) where the slab is ≥3.5" (89mm) or 10M bar @ 7" (178mm) where the slab is >3.5" (89mm) in thickness. Shear reinforcement shall be placed within one-third of the span from each support (middle third of the span does not require shear reinforcement).

⁴ Blank values indicate that a total deflection limit of L/480 is exceeded.

⁵ The above tabulated values are for single-span condition only, simply-supported condition only. Additional top reinforcement and wall dowels may be required at supports to limit cracking, as determined by an engineering professional.

⁶ Concrete cover requirements shall comply to CSA Standard A23.3 exposure conditions. The above tabulated reinforcement requirements are for interior exposure.

⁷ Where concentrated loads are present on the floor, the slab and rib strength capacity shall be checked by an engineering professional against such conditions.

⁸ Maximum unshored spans of Amdeck Pro forms shall adhere to the values in Table 7, with continuous 16ga, 10" (254mm) metal channel joists between supports.

⁹ The above tabulated spans shall be calculated based on the clear span spacing of supports, unless otherwise determined and detailed by an engineering professional.

¹⁰ Spacing of bars and concrete cover requirements shall be checked by an engineering professional.

 $^{\scriptscriptstyle 11}$ Slab reinforcement shall be 4x4-W2.9/W2.9 mesh located in the middle of the slab.

¹² Refer to diagrams 1 and 2.



Table 2 - Single Span US Minimum Required Bottom Reinforcement

								Sla	b Thickn	ess in (n	חm)							
		2 (51)		Ĩ	2-1/2 (63	5)		3 (76)		З	8-1/2 (89)		4 (102)		4	-1/2 (114	1)
psf								Se	elf Weigh	nt psf (kP	'a)							
(kPa)		54 (2.58)	1		58 (2.78))		65 (3.11)		71 (3.40)		77 (3.69)		84 (4.02)	1
Dead Load	10 (0.4)	15 (0.7)	15 (0.7)															
Live Load	40 (1.9)	80 (3.8)	100 (4.8)															
Span ft (m)							Mini	mum Re	quired B	ottom R	einforce	ment						
≤9 ≤(2.74)	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4
10 (3.05)	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4
11 (3.35)	1-#4	1-#5	1-#5	1-#4	1-#5	1-#5	1-#4	1-#5	1-#5	1-#4	1-#5	1-#5	1-#4	1-#5	1-#5	1-#4	1-#5	1-#5
12 (3.66)	1-#4	1-#5	1-#5	1-#4	1-#5	1-#5	1-#4	1-#5	1-#5	1-#4	1-#5	1-#5	1-#4	1-#5	1-#5	1-#4	1-#5	1-#5
13 (3.96)	1-#4	1-#5	1-#6	1-#4	1-#5	1-#6	1-#4	1-#5	1-#6	1-#4	1-#5	1-#6	1-#4	1-#5	1-#6	1-#4	1-#5	1-#6
14 (4.27)	1-#5	1-#6	1-#6	1-#5	1-#6	1-#6	1-#5	1-#6	1-#6	1-#5	1-#6	1-#6	1-#5	1-#6	1-#6	1-#5	1-#6	1-#6
15 (4.57)	1-#5	1-#6	1-#6	1-#5	1-#6	1-#6	1-#5	1-#6	1-#6	1-#5	1-#6	1-#6	1-#5	1-#6	1-#6	1-#5	1-#6	1-#6
16 (4.88)	1-#5	1-#6	2-#5	1-#5	1-#6	2-#5	1-#5	1-#6	2-#5	1-#5	1-#6	2-#5	1-#5	1-#6	2-#5	1-#5	1-#6	2-#5
17 (5.18)	1-#6	2-#5	2-#5	1-#6	2-#5	2-#5	1-#6	2-#5	2-#5	1-#6	2-#5	2-#5	1-#6	2-#5	2-#5	1-#6	2-#5	2-#5
18 (5.49)	1-#6	2-#5	2-#5	1-#6	2-#5	2-#5	1-#6	2-#5	2-#5	1-#6	2-#5	2-#5	1-#6	2-#5	2-#5	1-#6	2-#5	2-#5
19 (5.79)	1-#6	2-#5	2-#6	1-#6	2-#5	2-#6	1-#6	2-#5	2-#6	1-#6	2-#5	2-#6	1-#6	2-#5	2-#6	1-#6	2-#5	2-#6

¹ Materials used are concrete at 4500 psi and steel at 60 ksi.

² Final reinforcement for deck spans shall be checked against site conditions and project design requirements and shall be the sole responsibility of the engineer of record.

³ Bolded text in table above indicate that shear reinforcement is required. Shear reinforcement shall be 10M bar @ 6" (152mm) where the slab is ≥3.5" (89mm) or 10M bar @ 7" (178mm) where the slab is >3.5" (89mm) in thickness. Shear reinforcement shall be placed within one-third of the span from each support (middle third of the span does not require shear reinforcement).

⁴ Blank values indicate that a total deflection limit of L/480 is exceeded.

⁵ The above tabulated values are for single-span condition only, simply-supported condition only. Additional top reinforcement and wall dowels may be required at supports to limit cracking, as determined by an engineering professional.

⁶ Concrete cover requirements shall comply to ACI Standard 318 exposure conditions. The above tabulated reinforcement requirements are for interior exposure.

⁷ Where concentrated loads are present on the floor, the slab and rib strength capacity shall be checked by an engineering professional against such conditions. ⁸ Maximum unshored spans of Amdeck Pro forms shall adhere to the values in Table 8, with continuous 16ga, 10" (254mm) metal channel joists between

supports.

⁹ The above tabulated spans shall be calculated based on the clear span spacing of supports, unless otherwise determined and detailed by an engineering professional.

¹⁰ Spacing of bars and concrete cover requirements shall be checked by an engineering professional.

¹¹ Slab reinforcement shall be 4x4-W2.9/W2.9 mesh located in the middle of the slab.

¹² Refer to diagrams 1 and 2.

Table 2 - Single Span US Minimum Required Bottom Reinforcement Cont.

								Sla	b Thickn	ess in (n	nm)							
		2 (51)		Â	2-1/2 (63)		3 (76)		3	3-1/2 (89)		4 (102)		4	-1/2 (114	4)
psf								Se	elf Weigh	nt psf (kF	Pa)							
(kPa)		54 (2.58))		60 (2.87))		66 (3.16)		73 (3.49))		79 (3.78))		85 (4.06))
Dead Load	10 (0.4)	15 (0.7)	15 (0.7)	10 (0.4)	15 (0.7)	15 (0.7)	10 (0.4)	15 (0.7)	15 (0.7)	10 (0.4)	15 (0.7)	15 (0.7)	10 (0.4)	15 (0.7)	15 (0.7)	10 (0.4)	15 (0.7)	15 (0.7)
Live	40	80 (3.8)	100 (4.8)	40	80 (3.8)	100 (4.8)	40	80 (3.8)	100 (4.8)	40	80 (3.8)	100 (4.8)	40	80 (3.8)	100 (4.8)	40	80 (3.8)	100 (4.8)
Span	(1.0)	(010)	(110)	(1.0)	(0.0)	(110)	Mini	mum Re	quired B	ottom R	einforce	ment	(1.0)	(0.0)	(110)	(1.0)	(010)	(110)
it (iii)																		
20 (6.10)	1-#6	2-#6	2-#6	1-#6	2-#6	2-#6	1-#6	2-#6	2-#6	1-#6	2-#6	2-#6	1-#6	2-#6	2-#6	1-#6	2-#6	2-#6
21 (6.40)	2-#5	2-#6	2-#6	2-#5	2-#6	2-#6	2-#5	2-#6	2-#6	2-#5	2-#6	2-#6	2-#5	2-#6	2-#6	2-#5	2-#6	2-#6
22 (6.71)	2-#5	2-#6	2-#6	2-#5	2-#6	2-#6	2-#5	2-#6	2-#6	2-#5	2-#6	2-#6	2-#5	2-#6	2-#6	2-#5	2-#6	2-#6
23 (7.01)	2-#6	2-#6	2-#8	2-#6	2-#6	2-#8	2-#6	2-#6	2-#8	2-#6	2-#6	2-#8	2-#6	2-#6	2-#8	2-#6	2-#6	2-#8
24 (7.31)	2-#6	2-#8		2-#6	2-#8	2-#8	2-#6	2-#8	2-#8	2-#6	2-#8	2-#8	2-#6	2-#8	2-#8	2-#6	2-#8	2-#8
25 (7.62)	2-#6			2-#6	2-#8		2-#6	2-#8	2-#8	2-#6	2-#8	2-#8	2-#6	2-#8	2-#8	2-#6	2-#8	2-#8
26 (7.92)	2-#6			2-#6			2-#6	2-#8		2-#6	2-#8		2-#6	2-#8	2-#8	2-#6	2-#8	2-#8
27 (8.23)	2-#6			2-#6			2-#6			2-#6	2-#8		2-#6	2-#8		2-#6	2-#8	2-#8
28 (8.53)	2-#6			2-#6			2-#6			2-#6			2-#6			2-#6	2-#8	
29 (8.84)							2-#8			2-#8			2-#8			2-#8		
30 (9.14)										2-#8			2-#8			2-#8		

¹ Materials used are concrete at 4500 psi and steel at 60 ksi.

² Final reinforcement for deck spans shall be checked against site conditions and project design requirements and shall be the sole responsibility of the engineer of record.

³ Bolded text in table above indicate that shear reinforcement is required. Shear reinforcement shall be 10M bar @ 6" (152mm) where the slab is ≤3.5" (89mm) or 10M bar @ 7" (178mm) where the slab is >3.5" (89mm) in thickness. Shear reinforcement shall be placed within one-third of the span from each support (middle third of the span does not require shear reinforcement).

⁴ Blank values indicate that a total deflection limit of L/480 is exceeded.

⁵ The above tabulated values are for single-span condition only, simply-supported condition only. Additional top reinforcement and wall dowels may be required at supports to limit cracking, as determined by an engineering professional.

⁶ Concrete cover requirements shall comply to ACI Standard 318 exposure conditions. The above tabulated reinforcement requirements are for interior exposure.

⁷ Where concentrated loads are present on the floor, the slab and rib strength capacity shall be checked by an engineering professional against such conditions.

⁸ Maximum unshored spans of Amdeck Pro forms shall adhere to the values in Table 8, with continuous 16ga, 10" (254mm) metal channel joists between supports.

⁹ The above tabulated spans shall be calculated based on the clear span spacing of supports, unless otherwise determined and detailed by an engineering professional.

¹⁰ Spacing of bars and concrete cover requirements shall be checked by an engineering professional.

 $^{\scriptscriptstyle 11}$ Slab reinforcement shall be 4x4-W2.9/W2.9 mesh located in the middle of the slab.

¹² Refer to diagrams 1 and 2.



Table 3 - Continuous Multiple Span Canadian Minimum Required Top Reinforcement

								Sla	b Thickn	ess in (n	nm)							
		2 (51)		2	2-1/2 (63	;)		3 (76)		3	8-1/2 (89)		4 (102)		4	-1/2 (114	4)
psf								Se	elf Weigh	nt psf (kP	'a)							
(kPa)		54 (2.58))		58 (2.78)		65 (3.11)		71 (3.40)		77 (3.69)		84 (4.02)
Dead Load	10 (0.4)	15 (0.7)	15 (0.7)															
Live	40	80 (3.8)	100															
Span	(1.5)	(5.6)	(4.0)	(1.5)	(5.6)	(4.0)	(1.5)	(3.0)	(4.0)		(5.0)	(4.0)	(1.5)	(5.6)	(4.0)	(1.5)	(5.6)	(4.0)
ft (m)	1			1			IVII	mmumr	vequireu		morcem	ent						
≤9 ≤(2.74)	1-10M																	
10 (3.05)	1-10M	1-10M	1-15M	1-10M	1-15M	1-15M	1-10M	1-10M	1-15M									
11 (3.35)	1-10M	1-15M	1-15M															
12 (3.66)	1-15M																	
13 (3.96)	1-15M	1-15M	1-20M															
14 (4.27)	1-15M	1-20M	1-20M															
15 (4.57)	1-15M	1-20M	1-20M															
16 (4.88)	1-15M	1-20M	2-15M															
17 (5.18)	1-20M	2-15M	2-15M															
18 (5.49)	1-20M	2-15M	2-20M															
19 (5.79)	1-20M	2-20M	2-20M															

¹ Materials used are concrete at 30 MPa and steel at 400 MPa.

² Final reinforcement for deck spans shall be checked against site conditions and project design requirements and shall be the sole responsibility of the engineer of record.

³ Bolded text in table above indicate that shear reinforcement is required. Shear reinforcement shall be 10M bar @ 6" (152mm) where the slab is ≥3.5" (89mm) or 10M bar @ 7" (178mm) where the slab is >3.5" (89mm) in thickness. Shear reinforcement shall be placed within one-third of the span from each support (middle third of the span does not require shear reinforcement).

⁴ Blank values indicate that a total deflection limit of L/480 is exceeded.

⁵ The above tabulated values are for multi-span supported condition only, where the variation between the spans does not exceed 20%. Additional top reinforcement and wall dowels may be required at supports to limit cracking, as determined by an engineering professional.

⁶ Concrete cover requirements shall comply to CSA Standard A23.3 exposure conditions. The above tabulated reinforcement requirements are for interior exposure.

⁷ Where concentrated loads are present on the floor, the slab and rib strength capacity shall be checked by an engineering professional against such conditions.

⁸ Maximum unshored spans of Amdeck Pro forms shall adhere to the values in Table 7, with continuous 16ga, 10" (254mm) metal channel joists between supports.

⁹ The above tabulated spans shall be calculated based on the clear span spacing of supports, unless otherwise determined and detailed by an engineering professional.

¹⁰ Spacing of bars and concrete cover requirements shall be checked by an engineering professional.

 $^{\rm 11}$ Slab reinforcement shall be 4x4-W2.9/W2.9 mesh located in the middle of the slab.

¹² Refer to diagrams 1 and 3.

Table 3 - Continuous Multiple Span Canadian Minimum Required Top Reinforcement Cont.

								Sla	b Thickn	ess in (n	ım)							
		2 (51)		2	2-1/2 (63	;)		3 (76)		Э	8-1/2 (89)		4 (102)		4	-1/2 (114	1)
psf								Se	lf Weigh	nt psf (kP	'a)							
(kPa)		54 (2.58))		60 (2.87)		66 (3.16)		73 (3.49)		79 (3.78))		85 (4.06)	
Dead	10	15	15	10	15	15	10	15	15	10	15	15	10	15	15	10	15	15
Luad	(0.4)	(0.7)	(0.7)	(0.4)	(0.7)	(0.7)	(0.4)	(0.7)	(0.7)	(0.4)	(0.7)	(0.7)	(0.4)	(0.7)	(0.7)	(0.4)	(0.7)	(0.7)
Load	(1.9)	(3.8)	(4.8)	(1.9)	(3.8)	(4.8)	(1.9)	(3.8)	(4.8)	(1.9)	(3.8)	(4.8)	(1.9)	(3.8)	(4.8)	(1.9)	(3.8)	(4.8)
Span				I		'	Mi	nimum F	Poquirod	Ton Rei	nforcom	ont						
ft (m)				I			I		lequireu		morcem	ent						
20 (6.10)	1-20M	2-20M	2-20M	1-20M	2-20M	2-20M	1-20M	2-20M	2-20M	1-20M	2-20M	2-20M	1-20M	2-20M	2-20M	1-20M	2-20M	2-20M
21 (6.40)	2-15M	2-20M	2-20M	2-15M	2-20M	2-20M	2-15M	2-20M	2-20M	2-15M	2-20M	2-20M	2-15M	2-20M	2-20M	2-15M	2-20M	2-20M
22 (6.71)	2-15M	2-20M	2-25M	2-15M	2-20M	2-25M	2-15M	2-20M	2-25M	2-15M	2-20M	2-25M	2-15M	2-20M	2-25M	2-15M	2-20M	2-25M
23 (7.01)	2-15M	2-25M	2-25M	2-15M	2-25M	2-25M	2-15M	2-25M	2-25M	2-15M	2-25M	2-25M	2-15M	2-25M	2-25M	2-15M	2-25M	2-25M
24 (7.31)	2-20M	2-25M	2-25M	2-20M	2-25M	2-25M	2-20M	2-25M	2-25M	2-20M	2-25M	2-25M	2-20M	2-25M	2-25M	2-20M	2-25M	2-25M
25 (7.62)	2-20M	2-25M	2-25M	2-20M	2-25M	2-25M	2-20M	2-25M	2-25M	2-20M	2-25M	2-25M	2-20M	2-25M	2-25M	2-20M	2-25M	2-25M
26 (7.92)	2-20M	2-25M		2-20M	2-25M	3-25M	2-20M	2-25M	3-25M	2-20M	2-25M	3-25M	2-20M	2-25M	3-25M	2-20M	2-25M	3-25M
27 (8.23)	2-20M	2-25M		2-20M	2-25M		2-20M	2-25M	3-25M	2-20M	2-25M	3-25M	2-20M	2-25M	3-25M	2-20M	2-25M	3-25M
28 (8.53)	2-25M			2-25M			2-25M	3-25M		2-25M	3-25M	3-25M	2-25M	3-25M	3-25M	2-25M	3-25M	3-25M
29 (8.84)	2-25M			2-25M			2-25M			2-25M	3-25M		2-25M	3-25M	3-25M	2-25M	3-25M	3-25M
30 (9.14)	2-25M			2-25M			2-25M			2-25M			2-25M	3-25M		2-25M	3-25M	

¹ Materials used are concrete at 30 MPa and steel at 400 MPa.

² Final reinforcement for deck spans shall be checked against site conditions and project design requirements and shall be the sole responsibility of the engineer of record.

³ Bolded text in table above indicate that shear reinforcement is required. Shear reinforcement shall be 10M bar @ 6" (152mm) where the slab is ≥3.5" (89mm) or 10M bar @ 7" (178mm) where the slab is >3.5" (89mm) in thickness. Shear reinforcement shall be placed within one-third of the span from each support (middle third of the span does not require shear reinforcement).

⁴ Blank values indicate that a total deflection limit of L/480 is exceeded.

⁵ The above tabulated values are for multi-span supported condition only, where the variation between the spans does not exceed 20%. Additional top reinforcement and wall dowels may be required at supports to limit cracking, as determined by an engineering professional.

⁶ Concrete cover requirements shall comply to CSA Standard A23.3 exposure conditions. The above tabulated reinforcement requirements are for interior exposure.

⁷ Where concentrated loads are present on the floor, the slab and rib strength capacity shall be checked by an engineering professional against such conditions.

⁸ Maximum unshored spans of Amdeck Pro forms shall adhere to the values in Table 7, with continuous 16ga, 10" (254mm) metal channel joists between supports.

⁹ The above tabulated spans shall be calculated based on the clear span spacing of supports, unless otherwise determined and detailed by an engineering professional.

¹⁰ Spacing of bars and concrete cover requirements shall be checked by an engineering professional.

 $^{\scriptscriptstyle 11}$ Slab reinforcement shall be 4x4-W2.9/W2.9 mesh located in the middle of the slab.

¹² Refer to diagrams 1 and 3.



Table 3 - Continuous Multiple Span Canadian Minimum Required Bottom Reinforcement

								Sla	b Thickn	ess in (n	nm)							
		2 (51)		2	2-1/2 (63	;)		3 (76)		3	8-1/2 (89)		4 (102)		4	-1/2 (114	4)
psf								Se	elf Weigh	nt psf (kP	a)							
(kPa)		54 (2.58))		58 (2.78)		65 (3.11)		71 (3.40)		77 (3.69))		84 (4.02))
Dead	10	15	15	10	15	15	10	15	15	10	15	15	10	15	15	10	15	15
Load	(0.4)	(0.7)	(0.7)	(0.4)	(0.7)	(0.7)	(0.4)	(0.7)	(0.7)	(0.4)	(0.7)	(0.7)	(0.4)	(0.7)	(0.7)	(0.4)	(0.7)	(0.7)
Live	40 (1.9)	80 (3.8)	(4.8)	40 (1.9)	80 (3.8)	(4.8)	40 (1.9)	80 (3.8)	(4.8)	40 (1.9)	80 (3.8)	(4.8)	40 (1.9)	80 (3.8)	(4.8)	40 (1.9)	80 (3.8)	(4.8)
Span	I			1			Mini		auirod B	ottom P	ainfarca	mont				1		
ft (m)	I						I VIIIII	mumike	quireu b		ennorce	ment						
≤9 ≤(2.74)	1-10M	1-10M	1-10M	1-10M	1-10M	1-10M	1-10M	1-10M	1-10M	1-10M	1-10M	1-10M	1-10M	1-10M	1-10M	1-10M	1-10M	1-10M
10 (3.05)	1-10M	1-10M	1-10M	1-10M	1-10M	1-10M	1-10M	1-10M	1-10M	1-10M	1-10M	1-10M	1-10M	1-10M	1-10M	1-10M	1-10M	1-10M
11 (3.35)	1-10M	1-10M	1-10M	1-10M	1-10M	1-10M	1-10M	1-10M	1-10M	1-10M	1-10M	1-10M	1-10M	1-10M	1-10M	1-10M	1-10M	1-10M
12 (3.66)	1-10M	1-10M	1-10M	1-10M	1-10M	1-10M	1-10M	1-10M	1-10M	1-10M	1-10M	1-10M	1-10M	1-10M	1-10M	1-10M	1-10M	1-10M
13 (3.96)	1-10M	1-10M	1-10M	1-10M	1-10M	1-10M	1-10M	1-10M	1-10M	1-10M	1-10M	1-10M	1-10M	1-10M	1-10M	1-10M	1-10M	1-10M
14 (4.27)	1-10M	1-10M	1-15M	1-10M	1-10M	1-15M	1-10M	1-10M	1-15M	1-10M	1-10M	1-15M	1-10M	1-10M	1-15M	1-10M	1-10M	1-15M
15 (4.57)	1-10M	1-15M	1-15M	1-10M	1-15M	1-15M	1-10M	1-15M	1-15M	1-10M	1-15M	1-15M	1-10M	1-15M	1-15M	1-10M	1-15M	1-15M
16 (4.88)	1-10M	1-15M	1-15M	1-10M	1-15M	1-15M	1-10M	1-15M	1-15M	1-10M	1-15M	1-15M	1-10M	1-15M	1-15M	1-10M	1-15M	1-15M
17 (5.18)	1-10M	1-15M	1-15M	1-10M	1-15M	1-15M	1-10M	1-15M	1-15M	1-10M	1-15M	1-20M	1-10M	1-15M	1-20M	1-10M	1-15M	1-20M
18 (5.49)	1-15M	1-15M	1-20M	1-15M	1-15M	1-20M	1-15M	1-15M	1-20M	1-15M	1-15M	1-20M	1-15M	1-15M	1-20M	1-15M	1-15M	1-20M
19 (5.79)	1-15M	1-20M	1-20M	1-15M	1-20M	1-20M	1-15M	1-20M	1-20M	1-15M	1-20M	1-20M	1-15M	1-20M	1-20M	1-15M	1-20M	1-20M

¹ Materials used are concrete at 30 MPa and steel at 400 MPa.

² Final reinforcement for deck spans shall be checked against site conditions and project design requirements and shall be the sole responsibility of the engineer of record.

³ Bolded text in table above indicate that shear reinforcement is required. Shear reinforcement shall be 10M bar @ 6" (152mm) where the slab is ≤3.5" (89mm) or 10M bar @ 7" (178mm) where the slab is >3.5" (89mm) in thickness. Shear reinforcement shall be placed within one-third of the span from each support (middle third of the span does not require shear reinforcement).

⁴ Blank values indicate that a total deflection limit of L/480 is exceeded.

⁵ The above tabulated values are for multi-span supported condition only, where the variation between the spans does not exceed 20%. Additional top reinforcement and wall dowels may be required at supports to limit cracking, as determined by an engineering professional.

⁶ Concrete cover requirements shall comply to CSA Standard A23.3 exposure conditions. The above tabulated reinforcement requirements are for interior exposure.

⁷ Where concentrated loads are present on the floor, the slab and rib strength capacity shall be checked by an engineering professional against such conditions.

⁸ Maximum unshored spans of Amdeck Pro forms shall adhere to the values in Table 7, with continuous 16ga, 10" (254mm) metal channel joists between supports.

⁹ The above tabulated spans shall be calculated based on the clear span spacing of supports, unless otherwise determined and detailed by an engineering professional.

¹⁰ Spacing of bars and concrete cover requirements shall be checked by an engineering professional.

 $^{\rm 11}$ Slab reinforcement shall be 4x4-W2.9/W2.9 mesh located in the middle of the slab.

¹² Refer to diagrams 1 and 3.

Table 3 - Continuous Multiple Span Canadian Minimum Required Bottom Reinforcement Cont.

								Sla	b Thickn	ess in (m	ım)							
		2 (51)		2	2-1/2 (63	;)		3 (76)		3	8-1/2 (89	9)		4 (102)		4	-1/2 (114	4)
psf								Se	elf Weigh	it psf (kP	a)							
(kPa)		54 (2.58))		60 (2.87))		66 (3.16)		73 (3.49)		79 (3.78))		85 (4.06))
Dead Load	10 (0.4)	15 (0.7)	15 (0.7)															
Live Load	40 (1.9)	80 (3.8)	100 (4.8)															
Span ft (m)							Minii	mum Re	quired B	ottom R	einforce	ment						
20 (6.10)	1-15M	1-20M	2-15M															
21 (6.40)	1-15M	1-20M	2-15M	1-15M	1-20M	2-15M	1-15M	1-20M	2-15M	1-15M	2-15M	2-15M	1-15M	2-15M	2-15M	1-15M	2-15M	2-15M
22 (6.71)	1-15M	2-15M	2-20M															
23 (7.01)	1-20M	2-15M	2-20M															
24 (7.31)	1-20M	2-20M	2-20M															
25 (7.62)	1-20M	2-20M	2-20M															
26 (7.92)	1-20M	2-20M		1-20M	2-20M	2-25M	1-20M	2-20M	2-25M	2-15M	2-20M	2-25M	2-15M	2-20M	2-25M	2-15M	2-20M	2-25M
27 (8.23)	2-15M	2-20M		2-15M	2-20M		2-15M	2-20M	2-25M									
28 (8.53)	2-15M			2-15M			2-15M	2-25M		2-15M	2-25M	2-25M	2-15M	2-25M	2-25M	2-15M	2-25M	2-25M
29 (8.84)	2-15M			2-15M			2-15M			2-20M	2-25M		2-20M	2-25M	2-25M	2-20M	2-25M	2-25M
30 (9.14)	2-20M			2-20M			2-20M			2-20M			2-20M	2-25M		2-20M	2-25M	

¹ Materials used are concrete at 30 MPa and steel at 400 MPa.

² Final reinforcement for deck spans shall be checked against site conditions and project design requirements and shall be the sole responsibility of the engineer of record.

³ Bolded text in table above indicate that shear reinforcement is required. Shear reinforcement shall be 10M bar @ 6" (152mm) where the slab is ≥3.5" (89mm) or 10M bar @ 7" (178mm) where the slab is >3.5" (89mm) in thickness. Shear reinforcement shall be placed within one-third of the span from each support (middle third of the span does not require shear reinforcement).

⁴ Blank values indicate that a total deflection limit of L/480 is exceeded.

⁵ The above tabulated values are for multi-span supported condition only, where the variation between the spans does not exceed 20%. Additional top reinforcement and wall dowels may be required at supports to limit cracking, as determined by an engineering professional.

⁶ Concrete cover requirements shall comply to CSA Standard A23.3 exposure conditions. The above tabulated reinforcement requirements are for interior exposure.

⁷ Where concentrated loads are present on the floor, the slab and rib strength capacity shall be checked by an engineering professional against such conditions.

⁸ Maximum unshored spans of Amdeck Pro forms shall adhere to the values in Table 7, with continuous 16ga, 10" (254mm) metal channel joists between supports.

⁹ The above tabulated spans shall be calculated based on the clear span spacing of supports, unless otherwise determined and detailed by an engineering professional.

¹⁰ Spacing of bars and concrete cover requirements shall be checked by an engineering professional.

 $^{\rm 11}$ Slab reinforcement shall be 4x4-W2.9/W2.9 mesh located in the middle of the slab.

¹² Refer to diagrams 1 and 3.



Table 4 - Continuous Multiple Span US Minimum Required Top Reinforcement

								Sla	b Thickn	ess in (n	nm)							
		2 (51)		Ĩ	2-1/2 (63	3)		3 (76)		3	3-1/2 (89)		4 (102)		4	-1/2 (114	4)
psf								Se	elf Weigh	nt psf (kF	Pa)							
(kPa)		54 (2.58)			58 (2.78))		65 (3.11)		71 (3.40))		77 (3.69)		84 (4.02))
Dead Load	10 (0.4)	15 (0.7)	15 (0.7)															
Live Load	40 (1.9)	80 (3.8)	100 (4.8)															
Span ft (m)	1			1			Mi	nimum F	Required	Top Rei	nforcem	ent	1			1		
≤9 ≤(2.74)	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4
10 (3.05)	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4
11 (3.35)	1-#4	1-#4	1-#5	1-#4	1-#4	1-#5	1-#4	1-#4	1-#5	1-#4	1-#4	1-#5	1-#4	1-#4	1-#5	1-#4	1-#4	1-#5
12 (3.66)	1-#4	1-#5	1-#5	1-#4	1-#5	1-#5	1-#4	1-#5	1-#5	1-#4	1-#5	1-#5	1-#4	1-#5	1-#5	1-#4	1-#5	1-#5
13 (3.96)	1-#4	1-#5	1-#6	1-#4	1-#5	1-#6	1-#4	1-#5	1-#6	1-#4	1-#5	1-#6	1-#4	1-#5	1-#6	1-#4	1-#5	1-#6
14 (4.27)	1-#5	1-#6	1-#6	1-#5	1-#6	1-#6	1-#5	1-#6	1-#6	1-#5	1-#6	1-#6	1-#5	1-#6	1-#6	1-#5	1-#6	1-#6
15 (4.57)	1-#5	1-#6	1-#6	1-#5	1-#6	1-#6	1-#5	1-#6	1-#6	1-#5	1-#6	1-#6	1-#5	1-#6	1-#6	1-#5	1-#6	1-#6
16 (4.88)	1-#5	1-#6	2-#5	1-#5	1-#6	2-#5	1-#5	1-#6	2-#5	1-#5	1-#6	2-#5	1-#5	1-#6	2-#5	1-#5	1-#6	2-#5
17 (5.18)	1-#6	2-#5	2-#5	1-#6	2-#5	2-#5	1-#6	2-#5	2-#5	1-#6	2-#5	2-#5	1-#6	2-#5	2-#5	1-#6	2-#5	2-#5
18 (5.49)	1-#6	2-#5	2-#6	1-#6	2-#5	2-#6	1-#6	2-#5	2-#6	1-#6	2-#5	2-#6	1-#6	2-#5	2-#6	1-#6	2-#5	2-#6
19 (5.79)	1-#6	2-#6	2-#6	1-#6	2-#6	2-#6	1-#6	2-#6	2-#6	1-#6	2-#6	2-#6	1-#6	2-#6	2-#6	1-#6	2-#6	2-#6

¹ Materials used are concrete at 4500 psi and steel at 60 ksi.

² Final reinforcement for deck spans shall be checked against site conditions and project design requirements and shall be the sole responsibility of the engineer of record.

³ Bolded text in table above indicate that shear reinforcement is required. Shear reinforcement shall be 10M bar @ 6" (152mm) where the slab is ≥3.5" (89mm) or 10M bar @ 7" (178mm) where the slab is >3.5" (89mm) in thickness. Shear reinforcement shall be placed within one-third of the span from each support (middle third of the span does not require shear reinforcement).

⁴ Blank values indicate that a total deflection limit of L/480 is exceeded.

⁵ The above tabulated values are for multi-span supported condition only, where the variation between the spans does not exceed 20%. Additional top reinforcement and wall dowels may be required at supports to limit cracking, as determined by an engineering professional.

⁶ Concrete cover requirements shall comply to ACI Standard 318 exposure conditions. The above tabulated reinforcement requirements are for interior exposure.

⁷ Where concentrated loads are present on the floor, the slab and rib strength capacity shall be checked by an engineering professional against such conditions.

⁸ Maximum unshored spans of Amdeck Pro forms shall adhere to the values in Table 8, with continuous 16ga, 10" (254mm) metal channel joists between supports.

⁹ The above tabulated spans shall be calculated based on the clear span spacing of supports, unless otherwise determined and detailed by an engineering professional.

¹⁰ Spacing of bars and concrete cover requirements shall be checked by an engineering professional.

¹¹ Slab reinforcement shall be 4x4-W2.9/W2.9 mesh located in the middle of the slab.

¹² Refer to diagrams 1 and 3.

Table 4 - Continuous Multiple Span US Minimum Required Top Reinforcement Cont.

								Sla	b Thickn	ess in (n	nm)							
		2 (51)		2	2-1/2 (63	;)		3 (76)		3	3-1/2 (89)		4 (102)		4	-1/2 (114	4)
psf								Se	elf Weigh	nt psf (kF	Pa)							
(kPa)		54 (2.58))		60 (2.87))		66 (3.16)		73 (3.49))		79 (3.78)		85 (4.06))
Dead	10	15	15	10	15	15	10	15	15	10	15	15	10	15	15	10	15	15
Load	(0.4)	(0.7)	(0.7)	(0.4)	(0.7)	(0.7)	(0.4)	(0.7)	(0.7)	(0.4)	(0.7)	(0.7)	(0.4)	(0.7)	(0.7)	(0.4)	(0.7)	(0.7)
Live Load	40 (1.9)	80 (3.8)	100 (4.8)															
Span							Mi	nimum F	Required	Top Rei	nforcem	ent						
ft (m)	1						1			1						1		
20 (6.10)	1-#6	2-#6	2-#6	1-#6	2-#6	2-#6	1-#6	2-#6	2-#6	1-#6	2-#6	2-#6	1-#6	2-#6	2-#6	1-#6	2-#6	2-#6
21	2-#5	2-#6	2-#6	2-#5	2-#6	2-#6	2-#5	2-#6	2-#6	2-#5	2-#6	2-#6	2-#5	2-#6	2-#6	2-#5	2-#6	2-#6
(6.40)																		
22 (6.71)	2-#5	2-#6	2-#8	2-#5	2-#6	2-#8	2-#5	2-#6	2-#8	2-#5	2-#6	2-#8	2-#5	2-#6	2-#8	2-#5	2-#6	2-#8
23	2-#5	2-#8	2-#8	2-#5	2-#8	2-#8	2-#5	2-#8	2-#8	2-#5	2-#8	2-#8	2-#5	2-#8	2-#8	2-#5	2-#8	2-#8
(7.01)																		
24 (7.31)	2-#6	2-#8	2-#8	2-#6	2-#8	2-#8	2-#6	2-#8	2-#8	2-#6	2-#8	2-#8	2-#6	2-#8	2-#8	2-#6	2-#8	2-#8
25																		
(7.62)	2-#6	2-#8	2-#8	2-#6	2-#8	2-#8	2-#6	2-#8	2-#8	2-#6	2-#8	2-#8	2-#6	2-#8	2-#8	2-#6	2-#8	2-#8
26 (7.92)	2-#6	2-#8		2-#6	2-#8	3-#8	2-#6	2-#8	3-#8	2-#6	2-#8	3-#8	2-#6	2-#8	3-#8	2-#6	2-#8	3-#8
27																		
(8.23)	2-#6	2-#8		2-#6	2-#8		2-#6	2-#8	3-#8	2-#6	2-#8	3-#8	2-#6	2-#8	3-#8	2-#6	2-#8	3-#8
28	2_#9			2_#9			2_#9	2_#9		2,#9	2_#9	2.#9	2_#9	2_#9	2_#9	2_#9	2.#9	2.#9
(8.53)	2-#0			2-#0			2-#0	3-#0		2-#0	3-#0	3-#0	2-#0	3-#0	3-#0	2-#0	3-#0	3-#0
29 (8.84)	2-#8			2-#8			2-#8			2-#8	3-#8		2-#8	3-#8	3-#8	2-#8	3-#8	3-#8
30 (9.14)	2-#8			2-#8			2-#8			2-#8			2-#8	3-#8		2-#8	3-#8	

¹ Materials used are concrete at 4500 psi and steel at 60 ksi.

² Final reinforcement for deck spans shall be checked against site conditions and project design requirements and shall be the sole responsibility of the engineer of record.

³ Bolded text in table above indicate that shear reinforcement is required. Shear reinforcement shall be 10M bar @ 6" (152mm) where the slab is ≤3.5" (89mm) or 10M bar @ 7" (178mm) where the slab is >3.5" (89mm) in thickness. Shear reinforcement shall be placed within one-third of the span from each support (middle third of the span does not require shear reinforcement).

⁴ Blank values indicate that a total deflection limit of L/480 is exceeded.

⁵ The above tabulated values are for multi-span supported condition only, where the variation between the spans does not exceed 20%. Additional top reinforcement and wall dowels may be required at supports to limit cracking, as determined by an engineering professional.

⁶ Concrete cover requirements shall comply to ACI Standard 318 exposure conditions. The above tabulated reinforcement requirements are for interior exposure.

⁷ Where concentrated loads are present on the floor, the slab and rib strength capacity shall be checked by an engineering professional against such conditions.

⁸ Maximum unshored spans of Amdeck Pro forms shall adhere to the values in Table 8, with continuous 16ga, 10" (254mm) metal channel joists between supports.

⁹ The above tabulated spans shall be calculated based on the clear span spacing of supports, unless otherwise determined and detailed by an engineering professional.

¹⁰ Spacing of bars and concrete cover requirements shall be checked by an engineering professional.

 $^{\rm 11}$ Slab reinforcement shall be 4x4-W2.9/W2.9 mesh located in the middle of the slab.

¹² Refer to diagrams 1 and 3.



Table 4 - Continuous Multiple Span US Minimum Required Bottom Reinforcement

								Sla	b Thickn	ess in (n	וm)							
		2 (51)		â	2-1/2 (63	5)		3 (76)		3	8-1/2 (89)		4 (102)		4	-1/2 (114	1)
psf								Se	elf Weigh	nt psf (kP	'a)							
(kPa)		54 (2.58)	1		58 (2.78))		65 (3.11)		71 (3.40))		77 (3.69)		84 (4.02)	1
Dead Load	10 (0.4)	15 (0.7)	15 (0.7)															
Live Load	40 (1.9)	80 (3.8)	100 (4.8)															
Span ft (m)	I			I			Mini	mum Re	quired B	ottom R	einforce	ment	I			I		
≤9 ≤(2.74)	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4
10 (3.05)	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4
11 (3.35)	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4
12 (3.66)	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4
13 (3.96)	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4
14 (4.27)	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4	1-#4
15 (4.57)	1-#4	1-#4	1-#5	1-#4	1-#4	1-#5	1-#4	1-#4	1-#5	1-#4	1-#4	1-#5	1-#4	1-#4	1-#5	1-#4	1-#4	1-#5
16 (4.88)	1-#4	1-#5	1-#5	1-#4	1-#5	1-#5	1-#4	1-#5	1-#5	1-#4	1-#5	1-#5	1-#4	1-#5	1-#5	1-#4	1-#5	1-#5
17 (5.18)	1-#4	1-#5	1-#6	1-#4	1-#5	1-#6	1-#4	1-#5	1-#6	1-#4	1-#5	1-#6	1-#4	1-#5	1-#6	1-#4	1-#5	1-#6
18 (5.49)	1-#4	1-#6	1-#6	1-#4	1-#6	1-#6	1-#4	1-#6	1-#6	1-#4	1-#6	1-#6	1-#4	1-#6	1-#6	1-#4	1-#6	1-#6
19 (5.79)	1-#5	1-#6	1-#6	1-#5	1-#6	1-#6	1-#5	1-#6	1-#6	1-#5	1-#6	1-#6	1-#5	1-#6	1-#6	1-#5	1-#6	1-#6

¹ Materials used are concrete at 4500 psi and steel at 60 ksi.

² Final reinforcement for deck spans shall be checked against site conditions and project design requirements and shall be the sole responsibility of the engineer of record.

³ Bolded text in table above indicate that shear reinforcement is required. Shear reinforcement shall be 10M bar @ 6" (152mm) where the slab is ≥3.5" (89mm) or 10M bar @ 7" (178mm) where the slab is >3.5" (89mm) in thickness. Shear reinforcement shall be placed within one-third of the span from each support (middle third of the span does not require shear reinforcement).

⁴ Blank values indicate that a total deflection limit of L/480 is exceeded.

⁵ The above tabulated values are for multi-span supported condition only, where the variation between the spans does not exceed 20%. Additional top reinforcement and wall dowels may be required at supports to limit cracking, as determined by an engineering professional.

⁶ Concrete cover requirements shall comply to ACI Standard 318 exposure conditions. The above tabulated reinforcement requirements are for interior exposure.

⁷ Where concentrated loads are present on the floor, the slab and rib strength capacity shall be checked by an engineering professional against such conditions.

⁸ Maximum unshored spans of Amdeck Pro forms shall adhere to the values in Table 8, with continuous 16ga, 10" (254mm) metal channel joists between supports.

⁹ The above tabulated spans shall be calculated based on the clear span spacing of supports, unless otherwise determined and detailed by an engineering professional.

¹⁰ Spacing of bars and concrete cover requirements shall be checked by an engineering professional.

¹¹ Slab reinforcement shall be 4x4-W2.9/W2.9 mesh located in the middle of the slab.

¹² Refer to diagrams 1 and 3.

Table 4 - Continuous Multiple Span US Minimum Required Bottom Reinforcement Cont.

	Slab Thickness in (mm)																	
	2 (51)		2-1/2 (63)		3 (76)		3-1/2 (89)		4 (102)		4-1/2 (114)		4)					
psf								Se	elf Weigh	nt psf (kF	'a)							
(kPa)		54 (2.58))	60 (2.87)		66 (3.16)		73 (3.49)		79 (3.78)		85 (4.06)						
Dead Load	10 (0.4)	15 (0.7)	15 (0.7)	10 (0.4)	15 (0.7)	15 (0.7)	10 (0.4)	15 (0.7)	15 (0.7)	10 (0.4)	15 (0.7)	15 (0.7)	10 (0.4)	15 (0.7)	15 (0.7)	10 (0.4)	15 (0.7)	15 (0.7)
Live	40	80 (3.8)	100 (4.8)	40	80 (3.8)	100 (4.8)	40	80 (3.8)	100 (4.8)	40	80 (3.8)	100 (4.8)	40	80 (3.8)	100 (4.8)	40	80 (3.8)	100 (4.8)
Span ft (m)	()	()	()	(,	()	()	Mi	nimum F	Required	Top Rei	nforcem	ent	()	()	()	()	()	()
20 (6.10)	1-#5	1-#6	2-#5	1-#5	1-#6	2-#5	1-#5	1-#6	2-#5	1-#5	1-#6	2-#5	1-#5	1-#6	2-#5	1-#5	1-#6	2-#5
21 (6.40)	1-#5	2-#5	2-#5	1-#5	2-#5	2-#5	1-#5	2-#5	2-#5	1-#5	2-#5	2-#5	1-#5	2-#5	2-#5	1-#5	2-#5	2-#5
22 (6.71)	1-#5	2-#5	2-#6	1-#5	2-#5	2-#6	1-#5	2-#5	2-#6	1-#5	2-#5	2-#6	1-#5	2-#5	2-#6	1-#5	2-#5	2-#6
23 (7.01)	1-#6	2-#5	2-#6	1-#6	2-#5	2-#6	1-#6	2-#5	2-#6	1-#6	2-#5	2-#6	1-#6	2-#5	2-#6	1-#6	2-#5	2-#6
24 (7.31)	1-#6	2-#6	2-#6	1-#6	2-#6	2-#6	1-#6	2-#6	2-#6	1-#6	2-#6	2-#6	1-#6	2-#6	2-#6	1-#6	2-#6	2-#6
25 (7.62)	1-#6	2-#6	2-#6	1-#6	2-#6	2-#6	1-#6	2-#6	2-#6	1-#6	2-#6	2-#6	1-#6	2-#6	2-#6	1-#6	2-#6	2-#6
26 (7.92)	2-#5	2-#6		2-#5	2-#6	2-#8	2-#5	2-#6	2-#8	2-#5	2-#6	2-#8	2-#5	2-#6	2-#8	2-#5	2-#6	2-#8
27 (8.23)	2-#5	2-#6		2-#5	2-#6		2-#5	2-#6	2-#8	2-#5	2-#6	2-#8	2-#5	2-#6	2-#8	2-#5	2-#6	2-#8
28 (8.53)	2-#5			2-#5			2-#5	2-#8		2-#5	2-#8	2-#8	2-#5	2-#8	2-#8	2-#5	2-#8	2-#8
29 (8.84)	2-#6			2-#6			2-#6			2-#6	2-#8		2-#6	2-#8	2-#8	2-#6	2-#8	2-#8
30 (9.14)	2-#6			2-#6			2-#6			2-#6			2-#6	2-#8		2-#6	2-#8	

¹ Materials used are concrete at 4500 psi and steel at 60 ksi.

² Final reinforcement for deck spans shall be checked against site conditions and project design requirements and shall be the sole responsibility of the engineer of record.

³ Bolded text in table above indicate that shear reinforcement is required. Shear reinforcement shall be 10M bar @ 6" (152mm) where the slab is ≤3.5" (89mm) or 10M bar @ 7" (178mm) where the slab is >3.5" (89mm) in thickness. Shear reinforcement shall be placed within one-third of the span from each support (middle third of the span does not require shear reinforcement).

⁴ Blank values indicate that a total deflection limit of L/480 is exceeded.

⁵ The above tabulated values are for multi-span supported condition only, where the variation between the spans does not exceed 20%. Additional top reinforcement and wall dowels may be required at supports to limit cracking, as determined by an engineering professional.

⁶ Concrete cover requirements shall comply to ACI Standard 318 exposure conditions. The above tabulated reinforcement requirements are for interior exposure.

⁷ Where concentrated loads are present on the floor, the slab and rib strength capacity shall be checked by an engineering professional against such conditions.

⁸ Maximum unshored spans of Amdeck Pro forms shall adhere to the values in Table 8, with continuous 16ga, 10" (254mm) metal channel joists between supports.

⁹ The above tabulated spans shall be calculated based on the clear span spacing of supports, unless otherwise determined and detailed by an engineering professional.

¹⁰ Spacing of bars and concrete cover requirements shall be checked by an engineering professional.

 $^{\rm 11}$ Slab reinforcement shall be 4x4-W2.9/W2.9 mesh located in the middle of the slab.

¹² Refer to diagrams 1 and 3.



Table 5 - Two Car Garage Canadian Minimum Required Reinforcement

				Minimum Required Bottom Reinforcement										
Slab Thick- ness	Self Weight	Super- imposed Loads ³						Single	Span ft (m) e Span Con) dition				
in (mm)	psf (kPa)	psf (kPa)		20 (6.10)	21 (6.40)	22 (6.71)	23 (7.01)	24 (7.31)	25 (7.62)	26 (3.66)	27 (8.23)	28 (8.53)	29 (8.84)	30 (9.14)
4 (102)	77 (3.7)	D10 (0.4)	L50 (2.4)	2-20M	2-20M	2-20M	2-20M	2-25M	2-25M	2-25M	2-25M	2-25M	2-25M	2-25M
4-1/2 (114)	84 (4.0)	D10 (0.4)	L50 (2.4)	2-20M	2-20M	2-20M	2-20M	2-25M	2-25M	2-25M	2-25M	2-25M	2-25M	2-25M

¹ Materials used are concrete at 30 MPa and steel at 400 MPa.

² Spacing of bars and concrete cover requirements shall be checked by an engineering professional.

³ Includes: (i) a concentrated load of 4000lb (1814kg) considered to be acting anywhere on the floor; or (ii) a 2000lb (907kg) wheel load per tire.

⁴ Final reinforcement for deck spans shall be checked against site conditions and project design requirements, and shall be the sole responsibility of the engineer of record.

⁵ Shear reinforcement shall be 10M stirrups @ 7" (178mm). Shear reinforcement shall be placed throughout the whole span unless otherwise determined by a professional engineer.

⁶ The above tabulated values are for single-span, simply-supported condition only. Additional top reinforcement and wall dowels may be required at supports to limit cracking, as determined by an engineering professional.

⁷ Concrete cover requirements shall comply to CSA Standard A23.3 exposure conditions. The above tabulated reinforcement requirements are for interior exposure.

⁸ Where concentrated loads are present on the floor, the slab and rib strength capacity shall be checked by an engineering professional against such conditions.
⁹ Maximum unshored spans of Amdeck Pro forms shall adhere to the values in Table 7, with continuous 16ga, 10" (254mm) metal channel joists between supports.

¹⁰ The above tabulated spans shall be calculated based on the clear span spacing of supports, unless otherwise determined and detailed by an engineering professional.

¹¹ Slab reinforcement shall be 10M @ 8" (203mm) in transverse and 10M @ 16" (406mm) in longitudinal in the middle of the slab.

¹² Refer to diagram 4.



Table 6 - Two Car Garage US Minimum Required Reinforcement

				Minimum Required Bottom Reinforcement												
Slab Thick- ness	Sulf imp Weight Lo		oer- osed Ids ³		Span ft (m) Single Span Condition											
in (mm)	psf (kPa)	p (kl	sf Pa)	20 (6.10)	21 (6.40)	22 (6.71)	23 (7.01)	24 (7.31)	25 (7.62)	26 (3.66)	27 (8.23)	28 (8.53)	29 (8.84)	30 (9.14)		
4 (102)	77 (3.7)	D10 (0.4)	L50 (2.4)	2-#6	2-#6	2-#6	2-#6	2-#8	2-#8	2-#8	2-#8	2-#8	2-#8	2-#8		
4-1/2 (114)	84 (4.0)	D10 (0.4)	L50 (2.4)	2-#6	2-#6	2-#6	2-#6	2-#8	2-#8	2-#8	2-#8	2-#8	2-#8	2-#8		

¹ Materials used are concrete at 4500 psi and steel at 60 ksi.

² Spacing of bars and concrete cover requirements shall be checked by an engineering professional.

³ Includes: (i) a concentrated load of 4000lb (1814kg) considered to be acting anywhere on the floor; or (ii) a 2000lb (907kg) wheel load per tire.

⁴ Final reinforcement for deck spans shall be checked against site conditions and project design requirements, and shall be the sole responsibility of the engineer of record.

⁵ Shear reinforcement shall be #3 stirrups @ 7" (178mm). Shear reinforcement shall be placed throughout the whole span unless otherwise determined by a professional engineer.

⁶ The above tabulated values are for single-span, simply-supported condition only. Additional top reinforcement and wall dowels may be required at supports to limit cracking, as determined by an engineering professional.

⁷ Concrete cover requirements shall comply to ACI Standard 318 exposure conditions. The above tabulated reinforcement requirements are for interior exposure.

⁸ Where concentrated loads are present on the floor, the slab and rib strength capacity shall be checked by an engineering professional against such conditions.

⁹ Maximum unshored spans of Amdeck Pro forms shall adhere to the values in Table 8, with continuous 16ga, 10" (254mm) metal channel joists between supports.

¹⁰ The above tabulated spans shall be calculated based on the clear span spacing of supports, unless otherwise determined and detailed by an engineering professional.

¹¹ Slab reinforcement shall be #4 @ 8" (203mm) in transverse and #4 @ 16" (406mm) in longitudinal in the middle of the slab.

¹² Refer to diagram 4.



Table 7 - Minimum Required Canadian Shoring

			Spacing of Shoring								
			D	eflection Limit: L/36	50	D	eflection Limit: L/4	80			
Slab Thickness	Self Weight	Construction Load		Joist Member:		Joist Member:					
in (mm)	psf (kPa)	(psf) kPa	1000S162-54 (16ga)	1000S162-68 (14ga)	1000S162-97 (12ga)	1000S162-54 (16ga)	1000S162-68 (14ga)	1000S162-97 (12ga)			
2 (51)	54 (2.58)	L50 (2.39)	14.5' (4.42m)	15.5' (4.72m)	17.5' (5.33m)	13' (3.96m)	14' (4.27m)	15.5' (4.72m)			
2-1/2 (63)	58 (2.78)	L50 (2.39)	14' (4.27m)	15' (4.57m)	17' (5.18m)	12.5' (3.81m)	14' (4.27m)	15.5' (4.72m)			
3 (76)	65 (3.11)	L50 (2.39)	13.5' (4.11m)	15' (5.57m)	17' (5.18m)	12.5' (3.81m)	13.5' (4.11m)	15' (4.57m)			
3-1/2 (89)	71 (3.40)	L50 (2.39)	13.5' (4.11m)	14.5' (4.42m)	16.5' (5.03m)	12' (3.66m)	13.5' (4.11m)	15' (4.57m)			
4 (102)	77 (3.69)	L50 (2.39)	13.5' (4.11m)	14.5' (4.42m)	16.5' (5.03m)	12' (3.66m)	13' (3.96m)	14.5' (4.42m)			
4-1/2 (114)	84 (4.02)	L50 (2.39)	13' (3.96m)	14' (4.27m)	16' (4.88m)	12' (3.66m)	13' (3.96m)	14.5' (4.42m)			

¹ Material used is 350 MPa yield steel

² Construction of shoring shall conform to the requirements of CSA Standard S269.1.

³ Shoring shall be provided in intervals not exceed the values shown above for continuous steel joists, positioned below and in direct contact with each steel joist.

⁴ Shoring shall be provided within 12" (305mm) of each free end or discontinuity (each side) of every steel joist.

⁵ Shoring shall not be removed earlier than 28 days or until the concrete has reached 100% of its design strength, as shown by concrete cylinder tests, unless determined otherwise by the structural engineer of record.

⁶ Shoring of upper story floors shall be carried down to a competent slab-on-grade floor, unless determined otherwise by the shoring the shoring engineer.

⁷ All shoring shall be supported on a competent stratum, as determined by an engineering professional.

⁸ Shoring erection, design, and application of the above table is the sole responsibility of the contractor or contractor's shoring engineer.



Table 8 - Minimum Required US Shoring

	Spacing of Shoring									
			D	eflection Limit: L/3	50	Deflection Limit: L/480				
Slab Thickness	Self Weight	Construction Load		Joist Member:		Joist Member:				
in (mm)	psf (kPa)	(psf) kPa	1000S162-54 (16ga)	1000S162-68 (14ga)	1000S162-97 (12ga)	1000S162-54 (16ga)	1000S162-68 (14ga)	1000S162-97 (12ga)		
2 (51)	54 (2.58)	L50 (2.39)	14.5' (4.42m)	15.5' (4.72m)	17.5' (5.33m)	13' (3.96m)	14' (4.27m)	15.5' (4.72m)		
2-1/2 (63)	58 (2.78)	L50 (2.39)	14' (4.27m)	15' (4.57m)	17' (5.18m)	12.5' (3.81m)	14' (4.27m)	15.5' (4.72m)		
3 (76)	65 (3.11)	L50 (2.39)	13.5' (4.11m)	15' (5.57m)	17' (5.18m)	12.5' (3.81m)	13.5' (4.11m)	15' (4.57m)		
3-1/2 (89)	71 (3.40)	L50 (2.39)	13.5' (4.11m)	14.5' (4.42m)	16.5' (5.03m)	12' (3.66m)	13.5' (4.11m)	15' (4.57m)		
4 (102)	77 (3.69)	L50 (2.39)	13.5' (4.11m)	14.5' (4.42m)	16.5' (5.03m)	12' (3.66m)	13' (3.96m)	14.5' (4.42m)		
4-1/2 (114)	84 (4.02)	L50 (2.39)	13' (3.96m)	14' (4.27m)	16' (4.88m)	12' (3.66m)	13' (3.96m)	14.5' (4.42m)		

¹ Material used is 50 ksi yield steel

² Construction of shoring shall conform to the requirements of ACI Standard 347.

³ Shoring shall be provided in intervals not exceed the values shown above for continuous steel joists, positioned below and in direct contact with each steel joist.

⁴ Shoring shall be provided within 12" (305mm) of each free end or discontinuity (each side) of every steel joist.

⁵ Shoring shall not be removed earlier than 28 days or until the concrete has reached 100% of its design strength, as shown by concrete cylinder tests, unless determined otherwise by the structural engineer of record.

⁶ Shoring of upper story floors shall be carried down to a competent slab-on-grade floor, unless determined otherwise by the shoring the shoring engineer.

⁷ All shoring shall be supported on a competent stratum, as determined by an engineering professional.

⁸ Shoring erection, design, and application of the above table is the sole responsibility of the contractor or contractor's shoring engineer.



Alleguard's Amdeck Pro is a high quality, innovative floor and roof system designed for commercial and residential applications. Competitive pricing, extensive product distribution and excellent technical support are combined to provide our clients with a simplified approach to a superior finished product.

Disclaimer

Information contained in this document is provided as a guideline only, without any warranty of any kind, either expressed or implied, including, but not limited to, the implied warranties of merchantability, fitness for a particular purpose, and freedom of infringement.

This document provides basic reinforcement design for Amdeck Pro and is intended to serve as a guideline only and should not be used for construction unless reviewed and approved by an engineering professional. Amdeck Pro is sold throughout several geographical areas with varying building code requirements. Local building codes are subject to periodic changes and interpretations. In all cases, any installation of Amdeck Pro must be done in accordance with the applicable building codes.

Technical Support

The information contained in this document could include technical or typographical errors, omissions or other inaccuracies. Alleguard reserves the right to make changes, corrections and/or improvements without notice. Alleguard assumes no liability for the accuracy or completeness of the information contained in the document. For any inquiries pertaining to information included in this guide or for technical assistance we can be reached by:

Phone 1 (877) 470-9991 (toll free)

Email amvic.technical@alleguard.com

The Alleguard website is updated regularly with the most current product information, including testing, technical bulletins and evaluation reports. Visit Alleguard's website to download the latest version of this manual at **www.alleguard.com**



www.alleguard.com
PROTECTIVE FOAM SOLUTIONS

