UNIFIED APPROACH FOR BRIDGE DECK DESIGN

by

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Abstract

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Current Canadian Highway Bridge Design Code includes design provisions to establish live load demands in (i) reinforced concrete decks over longitudinal girders, (ii) orthotropic deck over longitudinal girders, and (iii) orthotropic deck over transverse beams. However, it only provides an equation for factored applied moment on concrete deck under single point load. Similar equations for orthotropic decks are as yet unavailable. As such, parametric study was conducted to lead to new empirical expressions for moment in bridge decks subjected to truck wheel loading considering each of the three cases of orthotropy: (i) relatively torsionally stiff, flexurally soft decks; (ii) relatively uniformly thick decks; and (iii) relatively torsionally soft, flexurally stiff decks. Using the proposed formulations, bridge deck design can be treated in a unified way across different deck types, accounting for longitudinal-transverse flexural rigidity of decks. Application of these methods can significantly simplify the analysis of decks and allow bridge engineers to make comparisons across different deck design alternatives.

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List of Symbols and Abbreviations

D_x = flexural rigidity in the strong direction (short direction)

D_y = flexural rigidity in the weak direction (long direction)

D_1 = torsional rigidity contribution resultant from both strong and weak direction

D_{xy} = torsional rigidity

H = the sum of torsional rigidity from strong and weak direction (D_1) and torsional rigidity (D_{xy})

$w(x, y)$ = vertical deflection in the Cartesian coordinate system

$q(x, y)$ = vertical applied load in Cartesian coordinates

M_x = moment in x-direction

M_y = moment in y-direction.

E_x = modulus of elasticity in x-direction

E_y = modulus of elasticity in y-direction

L = span length in x-direction

ζ = tire distance from support

u / v = tire dimensions.

v_x = poison's in the x-direction

v_y = poison's in the y-direction

G = Shear modulus

t = plate thickness

α = Torsional rigidity factor

$D = D_x/D_y$

P = 87.5 (kN)

S_e = the effective span between girders web to web (m)

E = the moment distribution width

S = the effective span (m)

1. Background and introduction

Many different types of bridge decks are being deployed and constructed. These types of decks include conventional slab on girder and combination of grid work of steel elements filled with concrete. The diversity of types of bridge decks provides both designers and contractors with a variety of tools to optimize design and construction. While the diversity of bridge decks has many benefits yet the lack of simple unified methodology of analysis is major drawback. Therefore, the urge for a unified methodology of analysis that combines all bridge decks under a single formula is vital. Since the main common property between all types of bridge decks is. their orthotropic properties. This can be the bases of a unified approach.

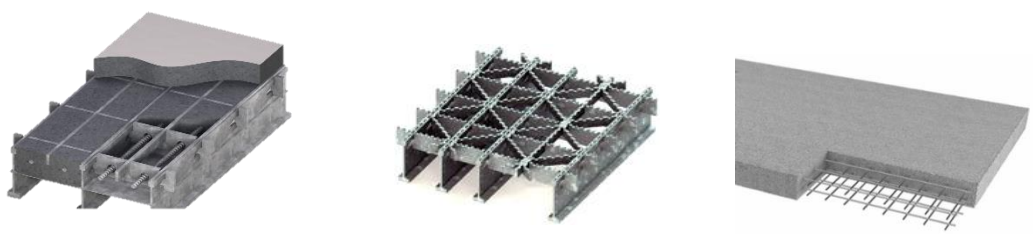


Figure 1 Deck types discussed in the report from the left fully/partially filled decks, open grid decks and typically reinforced decks "thick plate" (source: BGFMA, 2016)

1.1. Orthotropic Plate Theory

Earlier work done by (Timoshenko & Woinowski-Krieger, 1959) proposed the following differential equations to predict the bending moments and twisting moment of thin plate:

$$D_x \frac{\partial^4 w}{\partial x^4} + 2H \frac{\partial^4 w}{\partial x^2 \partial y^4} + D_y \frac{\partial^4 w}{\partial y^4} = q(x, y) \qquad \text{where } H = D_1 + 2D_{xy} \tag{1}$$

$$M_x = -\left(D_x \frac{\partial^2 w}{\partial x^2} + D_1 \frac{\partial^2 w}{\partial y^2} \right) \tag{2}$$

$$M_y = -\left(D_y \frac{\partial^2 w}{\partial y^2} + D_1 \frac{\partial^2 w}{\partial x^2} \right) \tag{3}$$

$$M_x = 2D_{xy} \frac{\partial^2 w}{\partial x \partial y} \tag{4}$$

Where D_x = flexural rigidity in the strong direction (short direction); D_y = flexural rigidity in the weak direction (long direction); D_1 = torsional rigidity contribution resultant from both strong and

weak direction; D_{xy} = torsional rigidity; H = the sum of torsional rigidity from strong and weak direction (D_1) and torsional rigidity (D_{xy}); $w(x, y)$ = vertical deflection in the Cartesian coordinate system; $q(x, y)$ = vertical applied load in Cartesian coordinates; M_x = moment in x-direction; M_y = moment in y-direction.

Depending on the torsional rigidity (Timoshenko & Woinowski-Krieger, 1959) proposed three possible scenarios:

Case1:$H > \sqrt{D_x D_y}$; this case corresponds to relatively stiff torsional rigidity, flexurally soft decks which is consistent with partially and fully filled grid decks.

Case2: $H = \sqrt{D_x D_y}$; this case corresponds to uniformly thick plate or typical reinforced concrete slab. Slab on girders or floor beam are perfect examples for this case.

Case3:$H < \sqrt{D_x D_y}$;this case corresponds to relatively soft torsional rigidity, flexurally stiff decks which is consistent with open grid decks.

As per (Higgins C. , 2003) and (Turan, 2009) simplified equations based on (Timoshenko & Woinowski-Krieger, 1959)original work for isotropic plates, a conservative estimation for bending moment and deflection of an infinitely long plate can be obtained using the following equations:

Case1:

$$M_x\left(y \geq \frac{v}{2}\right) = \frac{2L^2 q}{\pi^3}\sum_{m=1}^{\infty}\frac{1}{m^3}\sin\left(\frac{m\pi\zeta}{L}\right)\sin\left(\frac{m\pi u}{2L}\right)\sin\left(\frac{m\pi x}{L}\right) \times\left[\frac{t_1^2}{t_1^2 - t_2^2}\left(e^{\frac{[-m\pi t_2(2y-v)]}{2L}} - e^{\frac{[-m\pi t_2(2y+v)]}{2L}}\right) - \frac{t_1^2}{t_1^2 - t_2^2}\left(e^{\frac{[-m\pi t_1(2y-v)]}{2L}} - e^{\frac{[-m\pi t_1(2y+v)]}{2L}}\right)\right] \tag{5}$$

$$M_x(y = 0) = \frac{4L^2 q}{\pi^3}\sum_{m=1}^{\infty}\frac{1}{m^3}\sin\left(\frac{m\pi\zeta}{L}\right)\sin\left(\frac{m\pi u}{2L}\right)\sin\left(\frac{m\pi x}{L}\right) \times\left[1 + \frac{t_1^2}{t_1^2 - t_2^2}\left(e^{\frac{[-m\pi t_1 v]}{2L}} -\right) - \frac{t_1^2}{t_1^2 - t_2^2}\left(e^{\frac{[-m\pi t_2 v]}{2L}}\right)\right] \tag{6}$$

$$w_x\left(y \geq \frac{v}{2}\right) = \frac{2L^2 q}{\pi^5 D_x}\sum_{m=1}^{\infty}\frac{1}{m^5}\sin\left(\frac{m\pi\zeta}{L}\right)\sin\left(\frac{m\pi u}{2L}\right)\sin\left(\frac{m\pi x}{L}\right) \times\left[\frac{t_1^2}{t_1^2-t_2^2}\left(e^{\frac{[-m\pi t_2(2y-v)]}{2L}}-e^{\frac{[-m\pi t_2(2y+v)]}{2L}}\right) -\frac{t_1^2}{t_1^2-t_2^2}\left(e^{\frac{[-m\pi t_1(2y-v)]}{2L}}-e^{\frac{[-m\pi t_1(2y+v)]}{2L}}\right)\right] \tag{7}$$

$$w(y=0) = \frac{4L^2 q}{\pi^5 D_x}\sum_{m=1}^{\infty}\frac{1}{m^3}\sin\left(\frac{m\pi\zeta}{L}\right)\sin\left(\frac{m\pi u}{2L}\right)\sin\left(\frac{m\pi x}{L}\right) \times\left[1+\frac{t_1^2}{t_1^2-t_2^2}\left(e^{\frac{[-m\pi t_1 v]}{2L}}-\right)-\frac{t_1^2}{t_1^2-t_2^2}\left(e^{\frac{[-m\pi t_2 v]}{2L}}\right)\right] \tag{8}$$

Where

$$t_1 = \sqrt{\frac{H}{D_y}+\frac{\sqrt{H^2-D_xD_y}}{D_y}} \text{ and } t_2 = \sqrt{\frac{H}{D_y}-\frac{\sqrt{H^2-D_xD_y}}{D_y}}$$

Case2:

$$M_x\left(y \geq \frac{v}{2}\right) = \frac{Lq}{\lambda\pi^2}\sum_{m=1}^{\infty}\frac{1}{m^2}\sin\left(\frac{m\pi\zeta}{L}\right)\sin\left(\frac{m\pi u}{2L}\right)\sin\left(\frac{m\pi x}{L}\right) \times\left[\left(\frac{2L\lambda}{m\pi}+y-\frac{v}{2}\right)e^{\frac{[-m\pi(2y-v)]}{2L\lambda}}-\left(\frac{2L\lambda}{m\pi}+y+\frac{v}{2}\right)e^{\frac{[-m\pi(2y+v)]}{2L\lambda}}\right] \tag{9}$$

$$M_x(y=0) = \frac{4L^2 q}{\pi^3}\sum_{m=1}^{\infty}\frac{1}{m^3}\sin\left(\frac{m\pi\zeta}{L}\right)\sin\left(\frac{m\pi u}{2L}\right)\sin\left(\frac{m\pi x}{L}\right)\times\left[1-\left(1+\frac{m\pi v}{4L\lambda}\right)e^{\frac{-m\pi v}{2L\lambda}}\right] \tag{10}$$

$$w_x\left(y \geq \frac{v}{2}\right) = \frac{L^3 q}{\lambda\pi^4 D_x}\sum_{m=1}^{\infty}\frac{1}{m^4}\sin\left(\frac{m\pi\zeta}{L}\right)\sin\left(\frac{m\pi u}{2L}\right)\sin\left(\frac{m\pi x}{L}\right) \times\left[\left(\frac{2L\lambda}{m\pi}+y-\frac{v}{2}\right)e^{\frac{[-m\pi(2y-v)]}{2L\lambda}}-\left(\frac{2L\lambda}{m\pi}+y+\frac{v}{2}\right)e^{\frac{[-m\pi(2y+v)]}{2L\lambda}}\right] \tag{11}$$

$$w(y=0) = \frac{4L^4 q}{\pi^5 D_x}\sum_{m=1}^{\infty}\frac{1}{m^5}\sin\left(\frac{m\pi\zeta}{L}\right)\sin\left(\frac{m\pi u}{2L}\right)\sin\left(\frac{m\pi x}{L}\right)\times\left[1-\left(1+\frac{m\pi v}{4L\lambda}\right)e^{\frac{-m\pi v}{2L\lambda}}\right] \tag{12}$$

Case3:

$$M_x\left(y \geq \frac{v}{2}\right) = \frac{2L^2 q}{\pi^3}\sum_{m=1}^{\infty}\frac{1}{m^3}\sin\left(\frac{m\pi\zeta}{L}\right)\sin\left(\frac{m\pi u}{2L}\right)\sin\left(\frac{m\pi x}{L}\right) \tag{13}$$

$$\times\left[e^{\frac{[-m\pi t_1(2y-v)]}{2L}}\left(\cos\left(\frac{m\pi t_2\left(y-\frac{v}{2}\right)}{L}\right)+\frac{t_1^2-t_2^2}{2t_1t_2}\sin\left(\frac{m\pi t_2\left(y-\frac{v}{2}\right)}{L}\right)\right)\right.$$

$$\left.-e^{\frac{[-m\pi t_1(2y+v)]}{2L}}\left(\cos\left(\frac{m\pi t_2\left(y+\frac{v}{2}\right)}{L}\right)+\frac{t_1^2-t_2^2}{2t_1t_2}\sin\left(\frac{m\pi t_2\left(y+\frac{v}{2}\right)}{L}\right)\right)\right]$$

$$M_x(y=0) = \frac{4L^2 q}{\pi^3}\sum_{m=1}^{\infty}\frac{1}{m^3}\sin\left(\frac{m\pi\zeta}{L}\right)\sin\left(\frac{m\pi u}{2L}\right)\sin\left(\frac{m\pi x}{L}\right) \tag{14}$$

$$\times\left[e^{\frac{[-m\pi t_1 v]}{2L}}\left(1-\left(\cos\left(\frac{m\pi t_2 v}{L}\right)+\frac{t_1^2-t_2^2}{2t_1t_2}\sin\left(\frac{m\pi t_2 v}{2L}\right)\right)\right)\right]$$

$$w_x\left(y \geq \frac{v}{2}\right) = \frac{2L^4 q}{\pi^5 D_x}\sum_{m=1}^{\infty}\frac{1}{m^5}\sin\left(\frac{m\pi\zeta}{L}\right)\sin\left(\frac{m\pi u}{2L}\right)\sin\left(\frac{m\pi x}{L}\right) \tag{15}$$

$$\times\left[e^{\frac{[-m\pi t_1(2y-v)]}{2L}}\left(\cos\left(\frac{m\pi t_2\left(y-\frac{v}{2}\right)}{L}\right)+\frac{t_1^2-t_2^2}{2t_1t_2}\sin\left(\frac{m\pi t_2\left(y-\frac{v}{2}\right)}{L}\right)\right)\right.$$

$$\left.-e^{\frac{[-m\pi t_1(2y+v)]}{2L}}\left(\cos\left(\frac{m\pi t_2\left(y+\frac{v}{2}\right)}{L}\right)+\frac{t_1^2-t_2^2}{2t_1t_2}\sin\left(\frac{m\pi t_2\left(y+\frac{v}{2}\right)}{L}\right)\right)\right]$$

$$w_x(y=0) = \frac{4L^2 q}{\pi^5 D_x}\sum_{m=1}^{\infty}\frac{1}{m^5}\sin\left(\frac{m\pi\zeta}{L}\right)\sin\left(\frac{m\pi u}{2L}\right)\sin\left(\frac{m\pi x}{L}\right) \tag{16}$$

$$\times\left[e^{\frac{[-m\pi t_1 v]}{2L}}\left(1-\left(\cos\left(\frac{m\pi t_2 v}{L}\right)+\frac{t_1^2-t_2^2}{2t_1t_2}\sin\left(\frac{m\pi t_2 v}{2L}\right)\right)\right)\right]$$

Where

$$t_1 = \sqrt{\frac{H}{D_y}+\frac{\sqrt{H^2-D_xD_y}}{D_y}} \text{ and } t_2 = \sqrt{\frac{H}{D_y}-\frac{\sqrt{H^2-D_xD_y}}{D_y}}$$

Where E_x = modulus of elasticity in x-direction; E_y = modulus of elasticity in y-direction; D_x = flexural rigidity in the strong direction (short direction); D_y = flexural rigidity in the weak direction (long direction); D_1 = torsional rigidity contribution resultant from both strong and weak direction; D_{xy} = torsional rigidity; H = the sum of torsional rigidity from strong and weak direction (D_1) and torsional rigidity (D_{xy}); w_x = vertical deflection in x-direction; M_x = moment in x-

direction; q = vertical applied pressure; L = span length in x-direction; ζ = tire distance from support; u and v = tire dimensions.

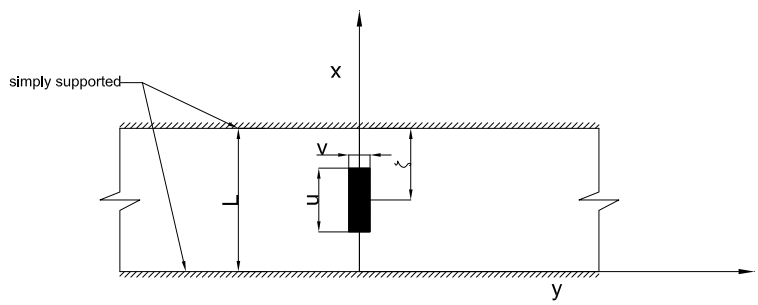


Figure 2 Single Patch load

$$D_x = \frac{E_x t^3}{12(1 - v_x v_y)} \tag{17}$$

$$D_y = \frac{E_y t^3}{12(1 - v_x v_y)} \tag{18}$$

$$D_{xy} = \frac{G t^3}{12} \tag{19}$$

$$D_1 = D_x v_y \tag{20}$$

Where D_x = flexural rigidity in the strong direction (short direction); D_y = flexural rigidity in the weak direction (long direction); D_{xy} = torsional rigidity; D_1 = torsional rigidity contribution resultant from both strong and weak direction; v_x = poison's in the x-direction; v_y = poison's in the y-direction; G = Shear modulus; t = plate thickness.

Assumptions

In all cases discussed poison's ratio was assumed to be zero as per (Higgins, Turan, Connor, & Liu, 2011), which sets equation 20 to zero. As reported in (Mangelsdorf, Baker, & Swanson, 2002) while concrete in grid cells are experiencing poison's ration in biaxial behavior, they might be restricted to exhibit that behaviour due to the confinement of the grid, restricting the expansion of concrete laterally, leading to a practical assumption of poisons ration equal to zero. While (Baker, 1991) mentioned that comparing D_x and D_y, the effect of $D_1$is very small Based on these assumptions D_x and D_y would be reduced $E_x I_x$ and $E_y I_y$ respectively. To demonstrate the effect of H on the deck performance for cases1, 2 and 3; H can be presented as $H = \alpha\sqrt{D_x D_y}$.

1.2. AASHTO Provisions

The current American Association of State Highway and Transportation Officials (AASHTO) specification covers a design procedure and formulation based on the orthotropic plate theory proposed by (Timoshenko & Woinowski-Krieger, 1959), and further developed by (Higgins C. , 2003). Section 4.6.2.1.8 presents two different sets of equations where main reinforcement are transverse and parallel to traffic direction. These procedures can be summarized as follows:

For bending:

$L \leq 120$ in (3050 mm)

$$M_{transverse} = 1.28D^{0.197}L^{0.459}C \ \ (\text{kip.in/in}) \tag{21}$$

$$M_{parallel} = 0.73D^{0.123}L^{0.64}C \ \ (\text{kip.in/in}) \tag{22}$$

$L > 120$ in (3050 mm)

$$M_{transverse} = \frac{D^{0.183}(3.7L^{1.35} - 956.3)}{L}C \ \ (\text{kip.in/in}) \tag{23}$$

$$M_{parallel} = \frac{D^{0.138}(3.1L^{1.429} - 1088.5)}{L}C \ \ (\text{kip.in/in}) \tag{24}$$

For deflection

$$\Delta_{transverse} = \frac{0.0052D^{0.19}L^3}{D_x} \ \ (\text{in}) \tag{25}$$

$$\Delta_{parallel} = \frac{0.0072D^{0.11}L^3}{D_x} \ \ (\text{in}) \tag{26}$$

where, L is the span length from center-center of supports, C is continuity factor (1) for simply supported (0.8) for continuous spans, D is D_x/D_y, D_x is the flexural rigidity of deck in main bar direction and D_y is flexural rigidity of deck perpendicular to main bar directions. (AASHTO LRFD Bridge Design Specifications, 2014)

1.3. Canadian Code Provisions

The current provisions in the Canadian Highway Bridge Design Code "CHBDC"(2014), does not include a comprehensive method of analysis for bridge decks under live load except for section 5.7.1.7 which discusses the simplified elastic method for concrete deck slabs supported on longitudinal girders and still grid decks. These provisions can be summarized as follows:

For concrete slab decks on girders:

$$\text{Moment (kNm/m)} = \frac{(S_{e+} + 0.6)P}{10} \tag{27}$$

Where P = 87.5 kN and $S_e$is the effective span between girders web to web; for continuous span the value for bending moment should be reduced by 80%.

For steel grid decks:

$$E = 1.22 + 0.06S \leq 2.1 \text{ m} \tag{28}$$

$$\text{Moment (kNm)} = 0.1 \text{ PS} \quad \text{for simple spans} \tag{29}$$

$$\text{Moment (kNm)} = 0.08 \text{ PS} \quad \text{for continuous spans} \tag{30}$$

Where E is the moment distribution width, P = 87.5 kN and S is the effective span.

As demonstrated, the current CHBDC provisions does not provided a detailed comprehensive design approach for bridge decks with different flexural rigidities or torsional rigidities.
For other bridge deck analysis that does not fall under the limitations set in the CHBDC, the code refers to refined methods of analysis that includes "Orthotropic Plate theory".
The lack of a comprehensive method of analysis in the Canadian code could be challenging for designer especially without clear guidelines on the assumptions of the refined methods being used.

2. Finite Element Analysis

For the purposes of this report the following analyses will be examining cases 1, 2 and 3 of orthotropic plate analyses and will be investigated using Canadian truck (CL-625). The following sections will discuss in detail the steps, procedures and analyses performed to validate the orthotropic plate theory procedure and compare it with Finite Element Analysis "FEA" using SAP2000.

2.1. Sensitivity Analysis

In order to ensure the accuracy of the FEA and the precision of the results a preliminary analysis was conducted to optimize the element size and shape. Therefore, different models were developed with different element sizes to check the precision of the results of each model compared to the orthotropic plate analysis. After different trials of different elements sizes, it was determined that the optimal element size would be 50 mmx 50 mm.

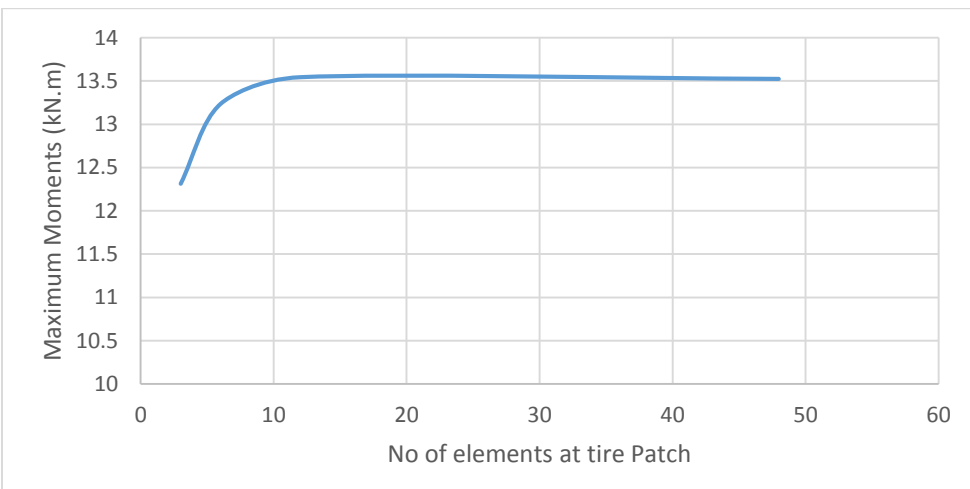


Figure 3 Comparison of maximum bending moment at different element sizes

Also another sensitivity analysis was conducted to check the response of the FEA with respect to the assumptions of the orthotropic plate theory in terms of material properties and rigidity values. The following tables summaries the material properties that will be used through the FEA along with a comparison of the corresponding results from orthotropic plate theory.

Table 1 Material properties for case 2

D	E_x	E_y	v	D_x	D_y	D_{xy}	G
0.25	24648000	98592000	0	16432	65728	16432	24648000
0.5	24648000	49296000	0	16432	32864	11619	17428768
0.75	24648000	32864000	0	16432	21909	9487	14230529
1	24648000	24648000	0	16432	16432	8216	12324000
2	24648000	12324000	0	16432	8216	5810	8714384
4	24648000	6162000	0	16432	4108	4108	6162000
6	24648000	4108000	0	16432	2739	3354	5031252
8	24648000	3081000	0	16432	2054	2905	4357192
10	24648000	2464800	0	16432	1643	2598	3897191

Table 2 Comparison between Orthotropic formulation and FEA for case 2

Orthotropic Formulation		**FEA**		**%error**	
Moment	Deflection	Moment	Deflection	Moment	Deflection
8.423	5.17E-05	8.453	5.18E-05	0.35%	0.24%
9.978	6.12E-05	10.026	6.14E-05	0.48%	0.36%
11.010	6.75E-05	11.073	6.78E-05	0.57%	0.46%
11.802	7.24E-05	11.879	7.28E-05	0.65%	0.55%
13.931	8.54E-05	14.055	8.60E-05	0.89%	0.78%
16.398	1.00E-04	16.598	1.02E-04	1.21%	1.06%
18.010	1.10E-04	18.273	1.12E-04	1.44%	1.38%
19.232	1.18E-04	19.551	1.20E-04	1.63%	1.49%
20.225	1.24E-04	20.479	1.25E-04	1.24%	1.13%

Since most of the results agree with orthotropic plate analysis with a variation in percent error varying between 0.24% - 1.13%, these material properties will be used through the analysis. Similarly, material properties were obtained for cases 1 and 3.

2.2. Finite Element Modeling

To study the effect of torsional rigidity and bending rigidity on bridge decks and to validate the proposed orthotropic plate theory, three main variables were studied thoroughly; D which is the ratio between D_x (rigidity in short direction) and D_y (rigidity in the long direction), L which is the span length center-center from supports and α which represents the torsional rigidity of the deck. These three variables will be studied for two main bridges configuration, where main bars are transverse to traffic (i.e. slab on girders/stingers) and main reinforcement are parallel to traffic (i.e. slab on floor beams).

The Canadian truck specified in CHBDC (CL-625) specified in section 3.8.3.2 will be used in these analysis, where loading cases will be divided as shown in Appendix A.1.

2.2.1. Main Bars transverse to Traffic

Effect of Span Length "L"

As discussed earlier, the relationship between the change in span length and the corresponding moment has to be studied and analyzed for better understanding of the effect of span length on the maximum moments produced due to different types of axle loadings. The following graphical illustrations demonstrate the effect of span length on the maximum moment for each loading case considered in this study. The following Figure 4 through Figure 6 determine the corresponding maximum moment for case 2. It can be observed that as the span length increases from 1m to 4m the corresponding maximum bending moment increases, regardless of the rigidity ratio value" D". Furthermore, appendix B.1.2 covers cases 1, 2 and 3 which also exhibits the same behaviour where bending moment increase as the span length increases regardless of the α and D values.

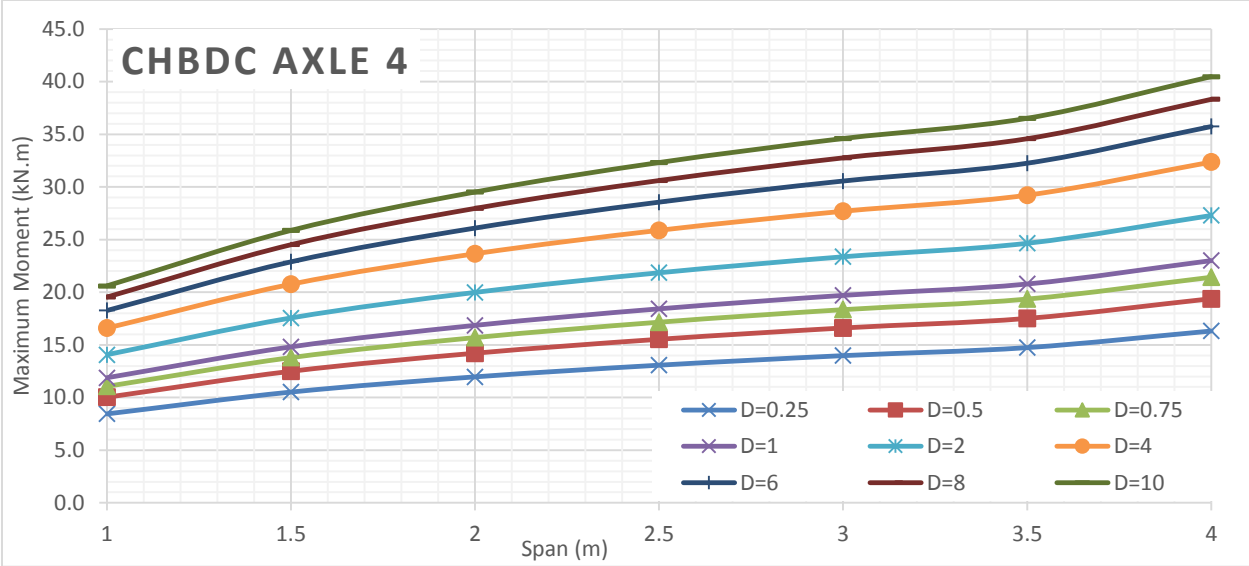


Figure 4 Maximum moment of deck slabs subjected to CHBDC axle 4 for different D values of case 2

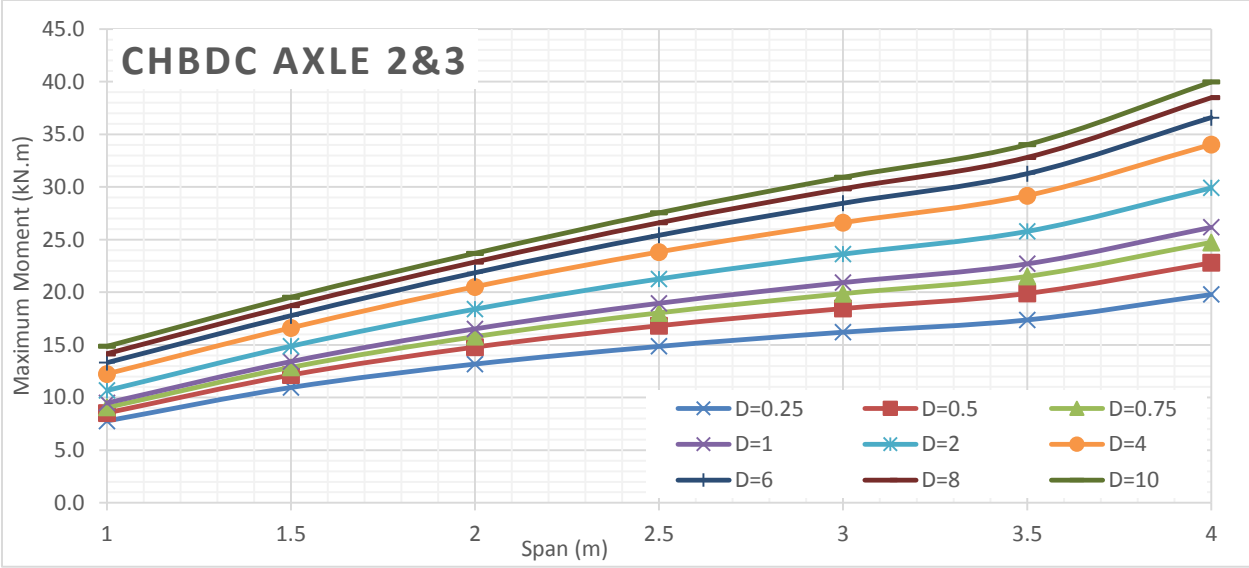


Figure 5 Maximum moment of deck slabs subjected to CHBDC axles 2 & 3 for different D values of case 2

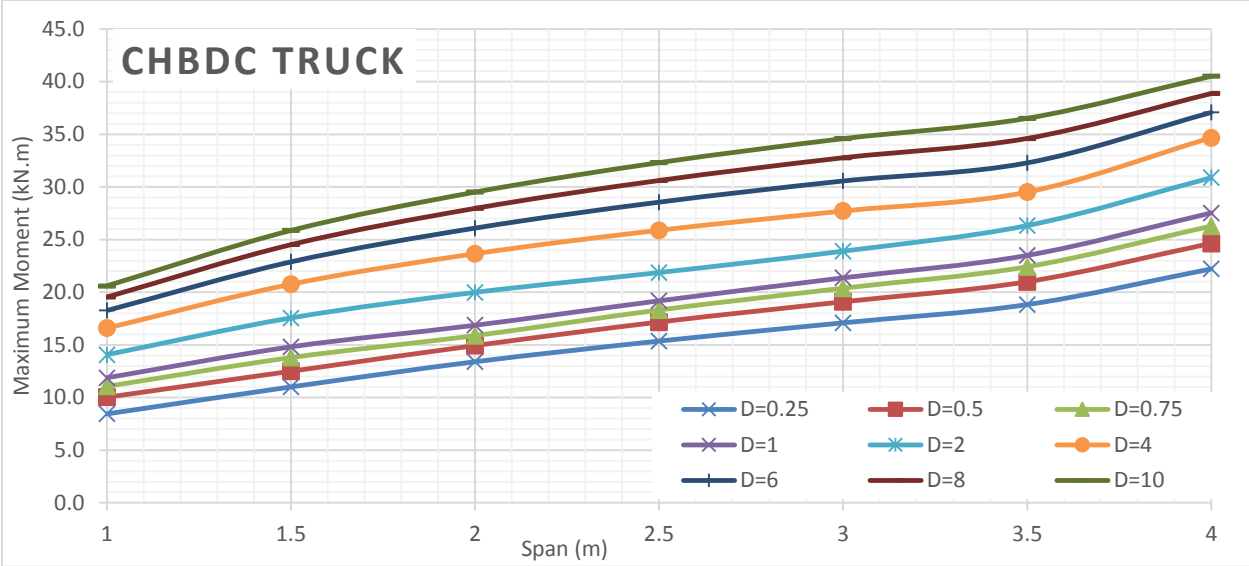


Figure 6 Maximum moment of deck slabs subjected to CHBDC truck for different D values of case 2

While previous figures, generally show a consistent relation between different rigidities, it is necessary to compare the results obtained from FEA with orthotropic plate formulations to ensure the validity of the results. Therefore, a comparison was established between the results of both analyses. Figure 7,Figure 8 and Figure 9 show that all results from both analyses, FEA and orthotropic plate theory, matches within a certain acceptable error percentage less than five percent. It is expected that there is an arithmetic error in the orthotropic plate analysis as the number of axles increase since the orthotropic plate formulation evaluates the bending moment due to a single tire patch. More comparisons for cases 1, 2 and 3 are included in appendix D.1.2.

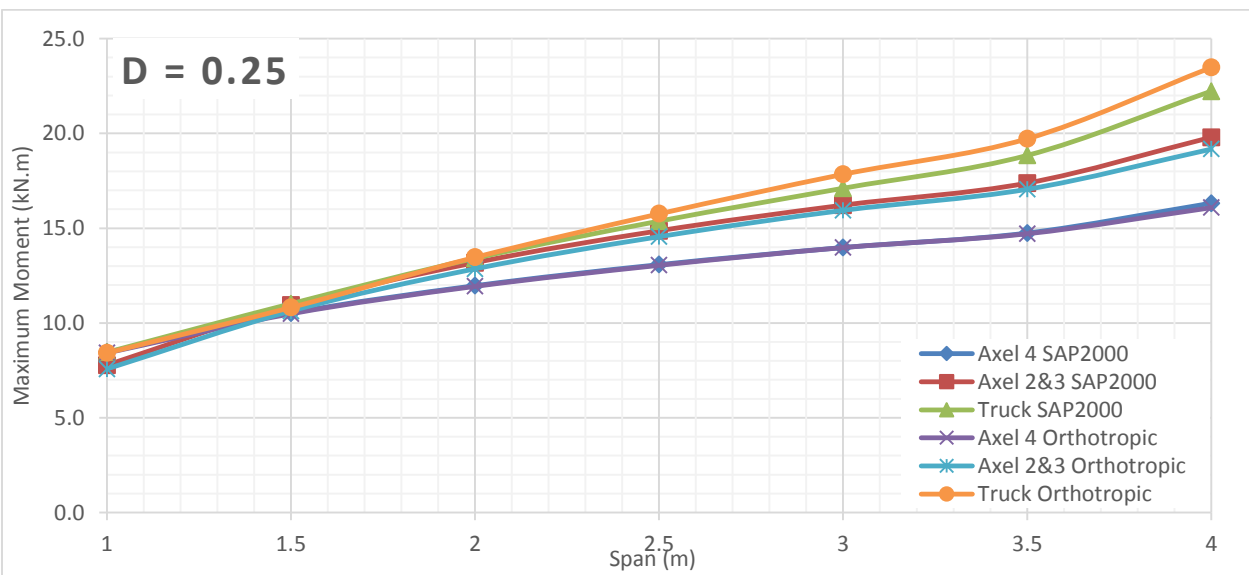


Figure 7 Comparison between FEA and Orthotropic Plate Theory for D = 0.25 of case 2

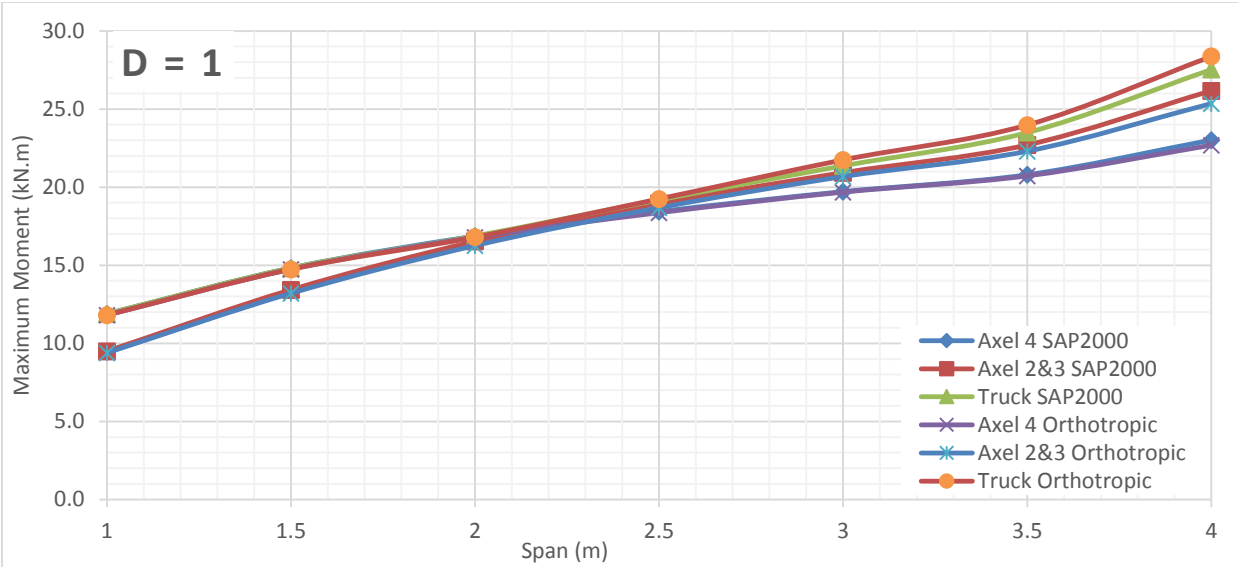


Figure 8 Comparison between FEA and Orthotropic Plate Theory for D = 1 of case 2

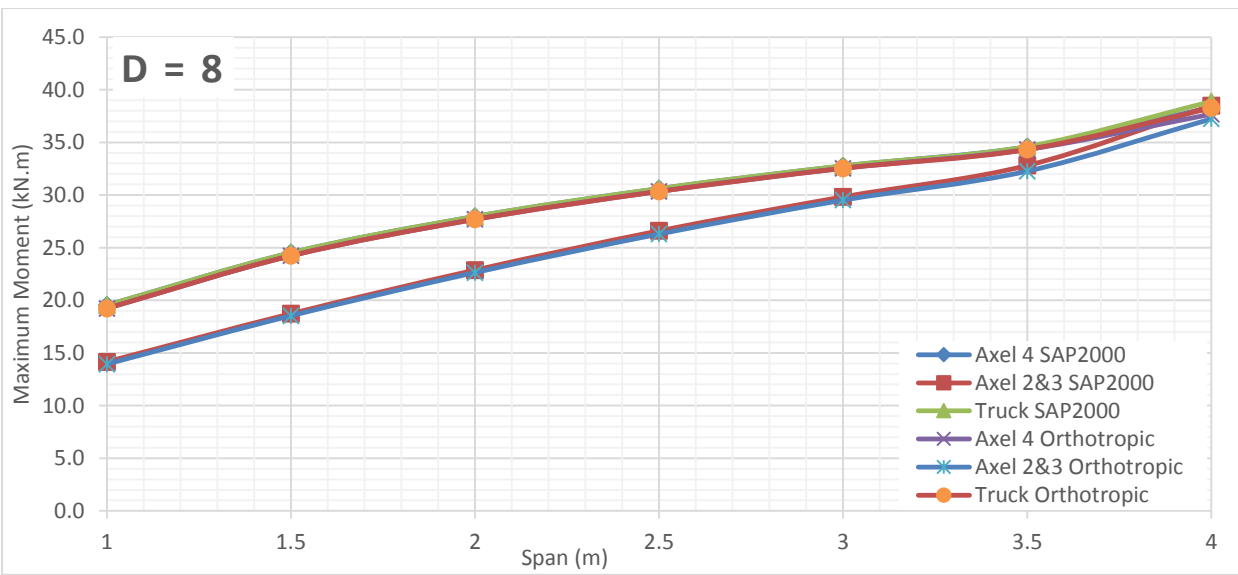


Figure 9 Comparison between FEA and Orthotropic Plate Theory for D = 8 of case 2

Effect of Flexural Bending Rigidity "D"

Similarly, the response of the bending moments for decks were evaluated with respect to the change in flexural rigidity ratio "D". Since flexural rigidity "D" is a ratio between the rigidity in the short direction "D_x" and the long direction "D_y", for all "D" ratios "D_x" was kept constant while "D_y" varied to produce different rigidity ratios varying from 0.25 to 10. As demonstrated in Figure 10 through Figure 12 as the D value increases, the short direction stiffens, the bending moment

significantly increases for all span length. Further representations are included in appendix B.1.3 which covers cases 1, 2 and 3.

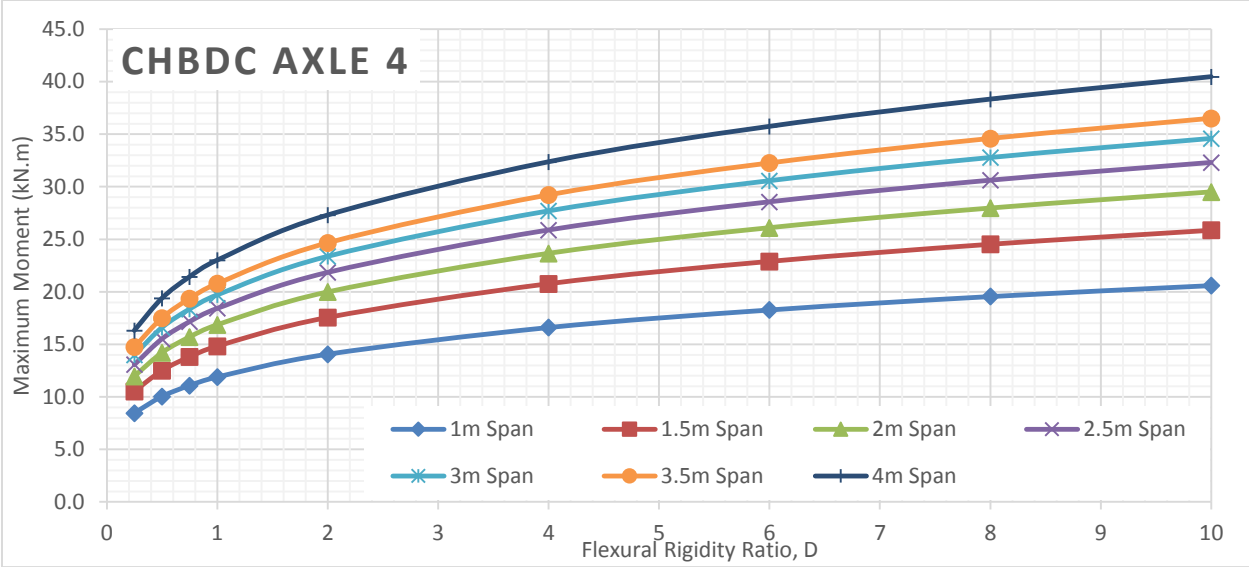


Figure 10 Maximum moment of deck slabs subjected to CHBDC axle 4 for different span values of case 2

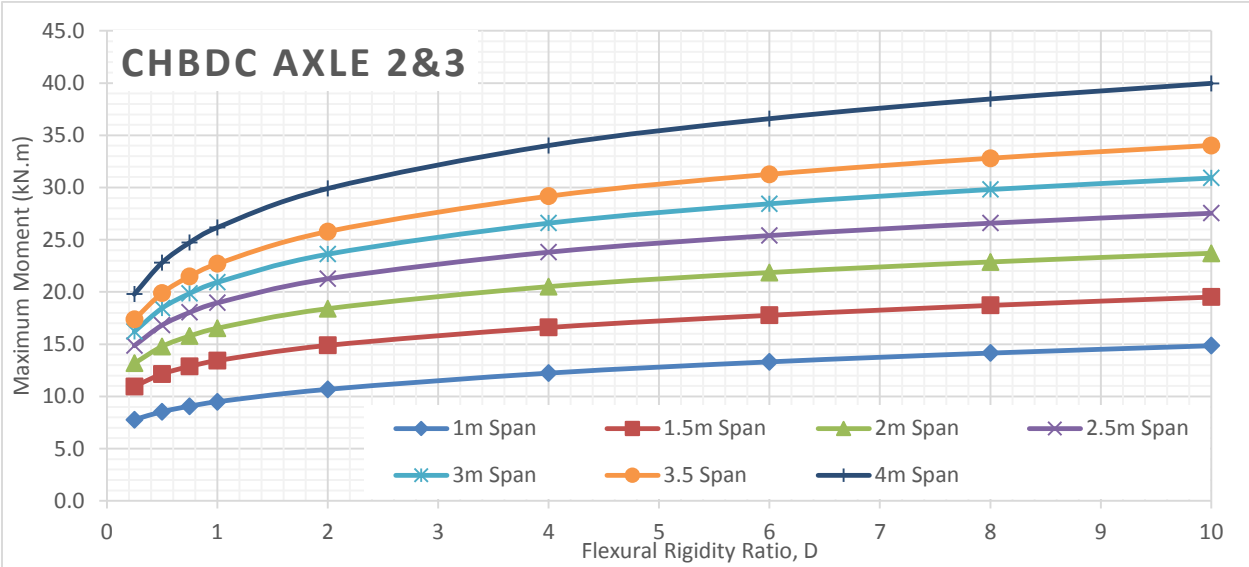


Figure 11 Maximum moment of deck slabs subjected to CHBDC axle 2 & 3 for different span values of case 2

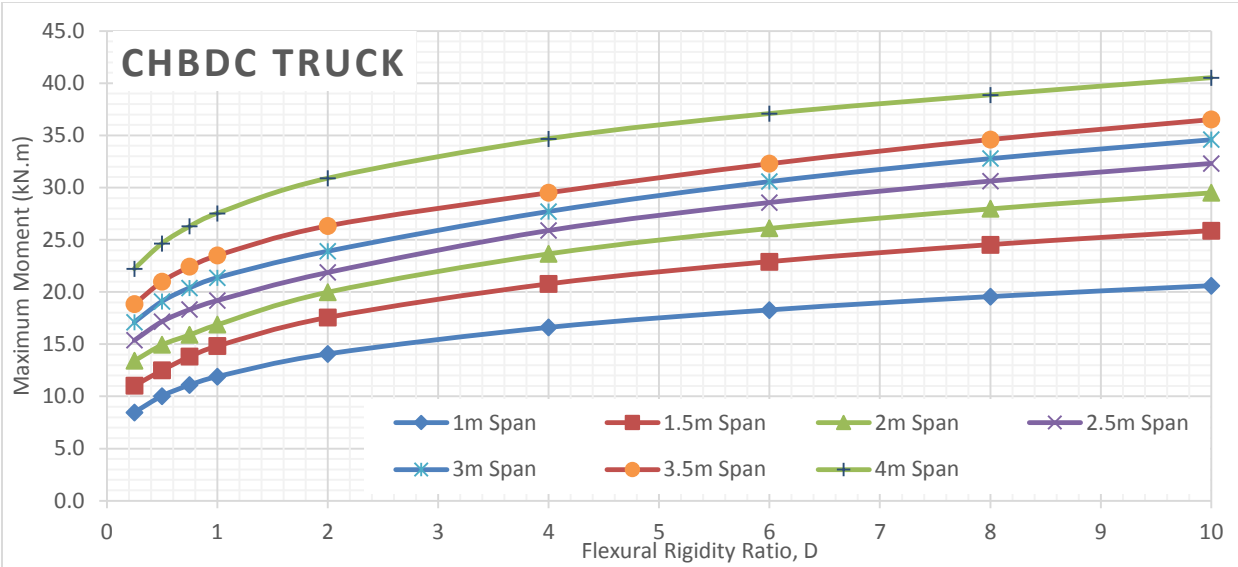


Figure 12 Maximum moment of deck slabs subjected to CHBDC truck for different span values of case 2

To validate the results obtained from the finite element analysis a comparison was established to compare the finite element analysis with the orthotropic plate formulation. The following Figure 25 through Figure 27 illustrates the close proximity between both analysis, which entails the validity of the analysis performed. Small marginal error can be see in these illustration as expected due to the arithmetic error in the orthotropic formulation as discussed earlier. Further comparisons are included in appendix D.1.3

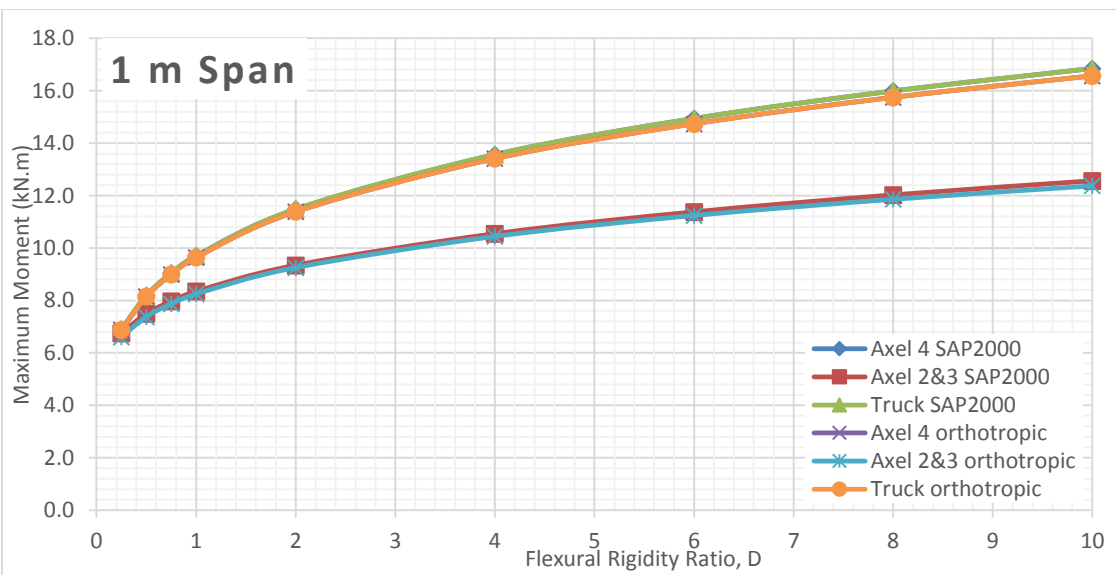


Figure 13 Comparison between FEA and Orthotropic Plate Theory for 1 m span of case 2

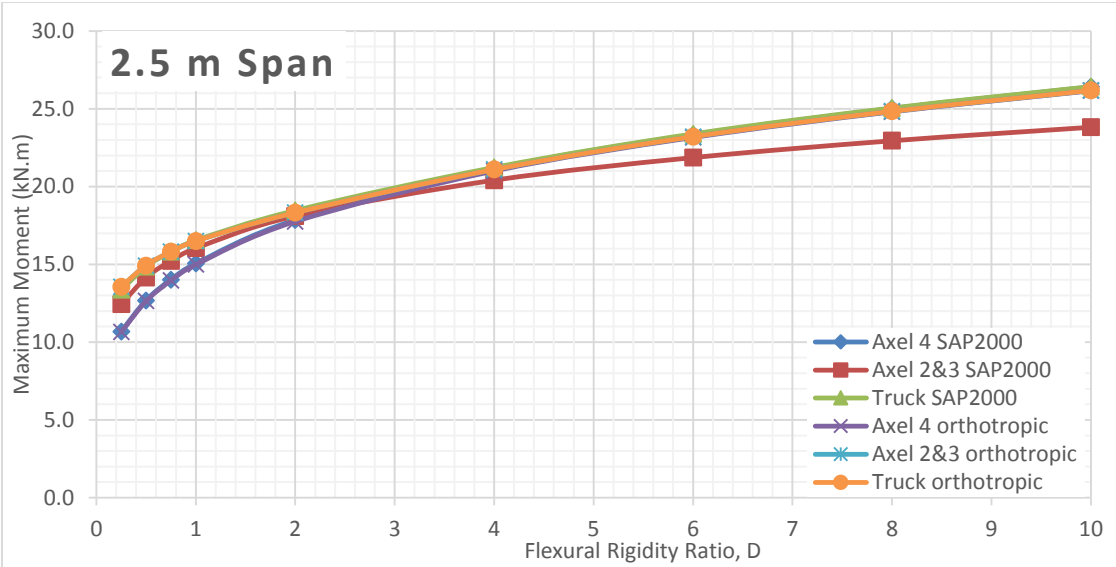


Figure 14 Comparison between FEA and Orthotropic Plate Theory for 2.5 m span of case 2

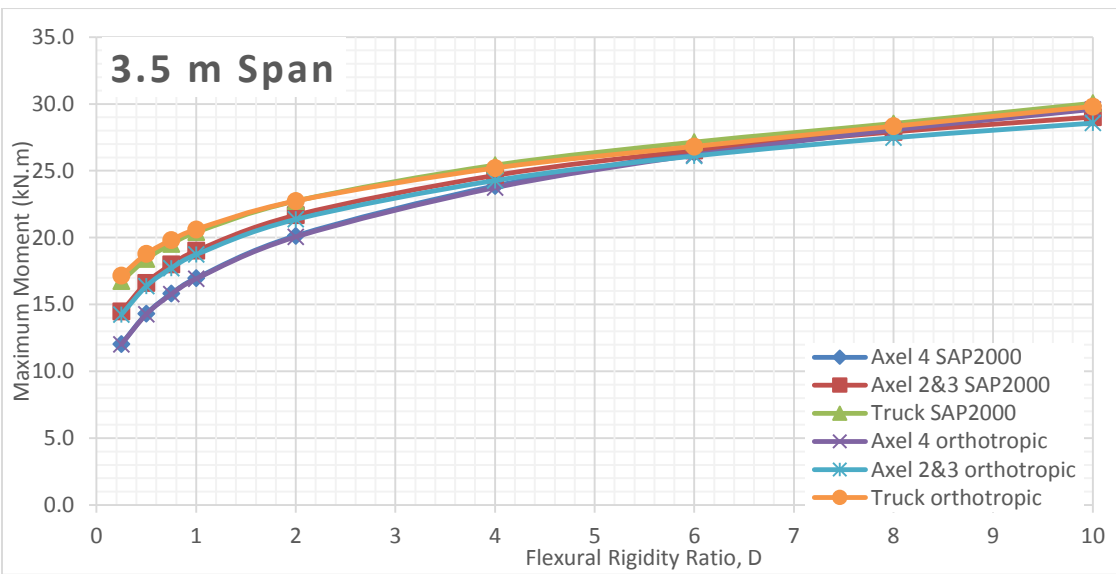


Figure 15 Comparison between FEA and Orthotropic Plate Theory for 3.5 m span of case 2

Effect of Torsional Rigidity "α"

While previous sections discussed the relationship between different maximum moment with respect to change in span length "L" and flexural rigidity "D", it is important to examine the behaviour of maximum moment with respect to the change in α. This will provide further insight at the bending moment behaviour for different deck types and covering cases 1, 2 and 3.Figure 16 through Figure 18 illustrates the change in bending moment as the α value increases from 0.25 to 10, where α less than 1 presents case 3 "torsionally soft", α equal to 1 represents case 2 "uniformly

reinforced" and α greater than 1 represents case 1 "torsionally stiff". It can be seen that as the torsional stiffness of decks increases the bending moment in the short direction of the deck slab decreases due to the increase in the carrying capacity of the deck torsionally. More detailed illustration and representations are included in appendix B.1.4

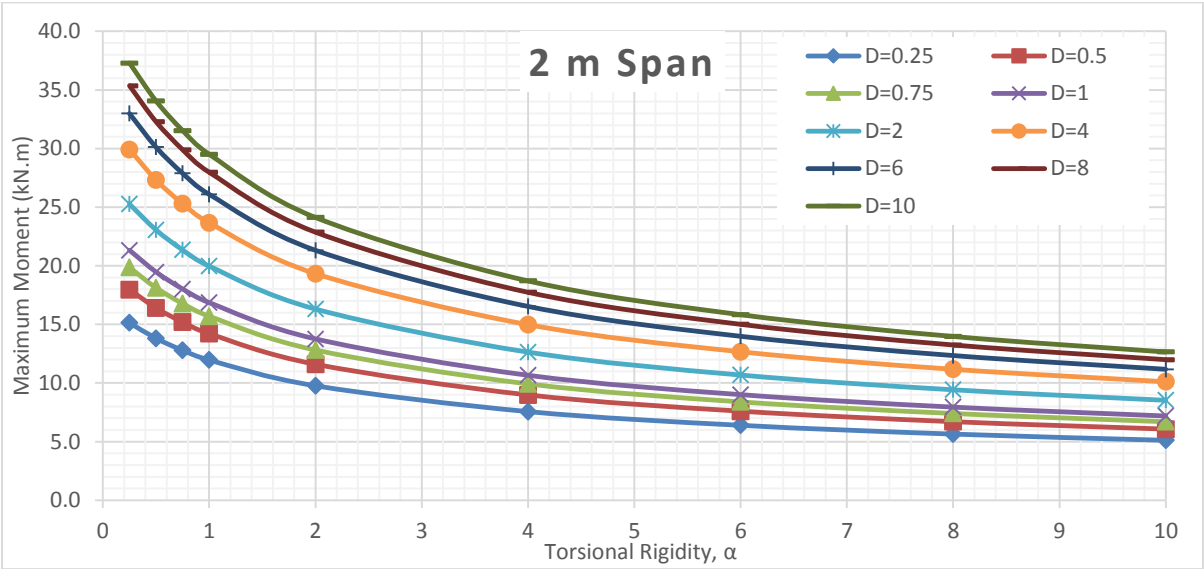


Figure 16 Maximum moment of 2-m span slab subjected to CHBDC axle 4 for different D values of case 2

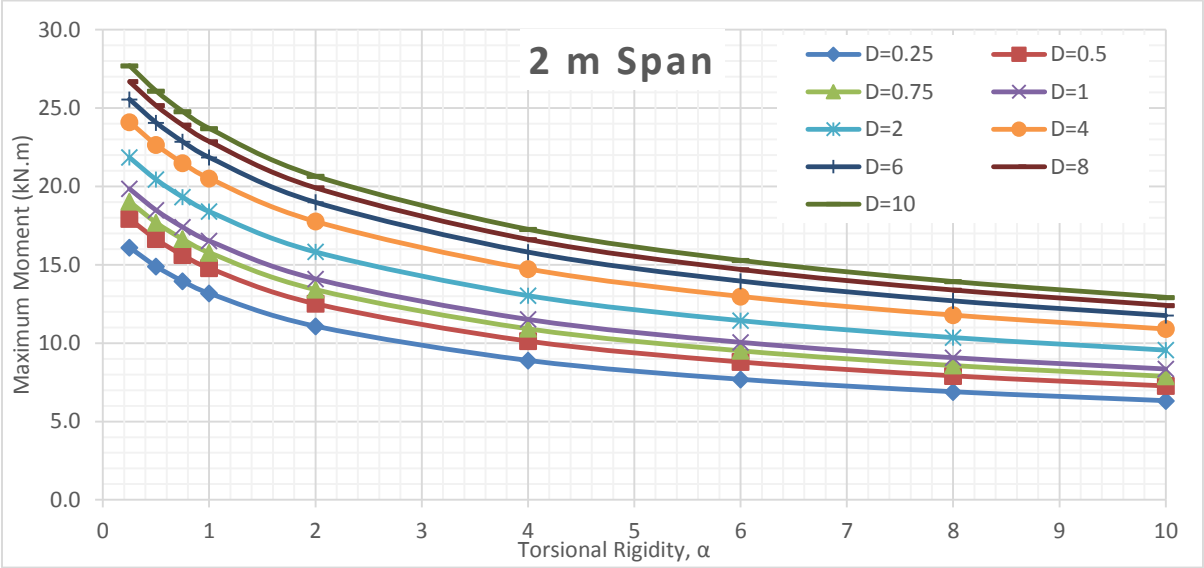


Figure 17 Maximum moment of 2-m span slab subjected to CHBDC axle 2 & 3 for different D values of case 2

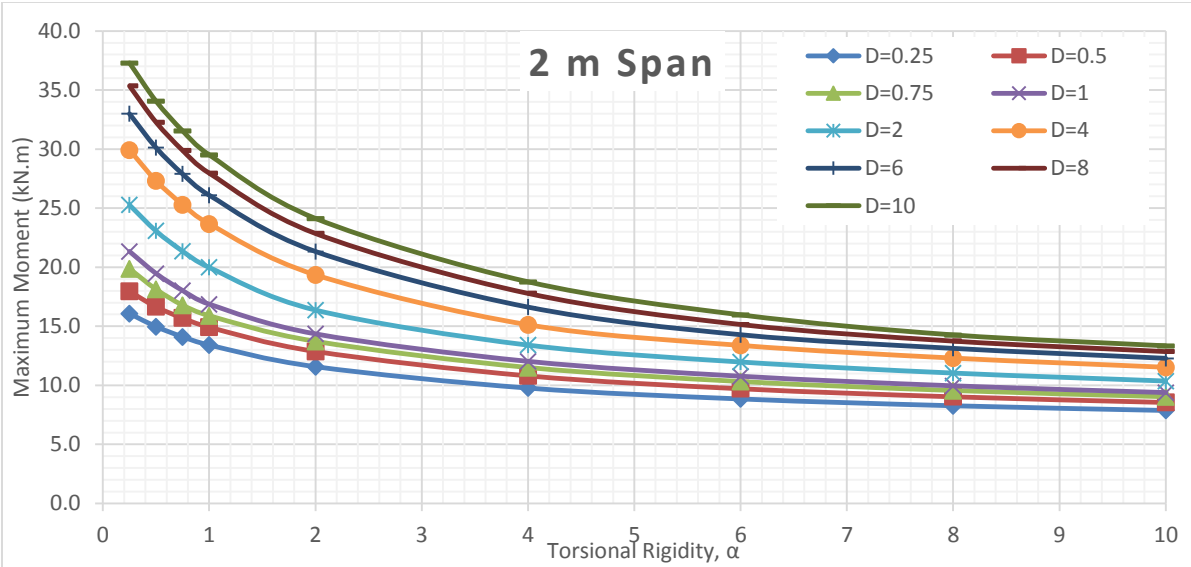


Figure 18 Maximum moment of 2-m span slab subjected to CHBDC truck for different D values of case 2

2.2.2. Main Bars Parallel to Traffic

Similar to section 2.2.1, same analysis was performed on cases where the main reinforcement in decks is parallel to traffic. Figure 19 and Figure 20 illustrates the results obtained for the loading cases analyzed. The relation remains consistent between maximum bending moment and span length where the bending moment increases as the span length increases. On the other hand, Figure 21 and Figure 22 demonstrate that as the rigidity increases in the short direction bending moment increases respectively. Furthermore, Figure 23 and Figure 24 illustrates the change in bending moment with respect to the change in α value. It can be seen that as the torsional stiffness increases; the bending moment in the short direction decreases due to the increase in the carrying capacity of the deck torsionally. Further illustrations are included in appendix B.1.1 to B.1.4

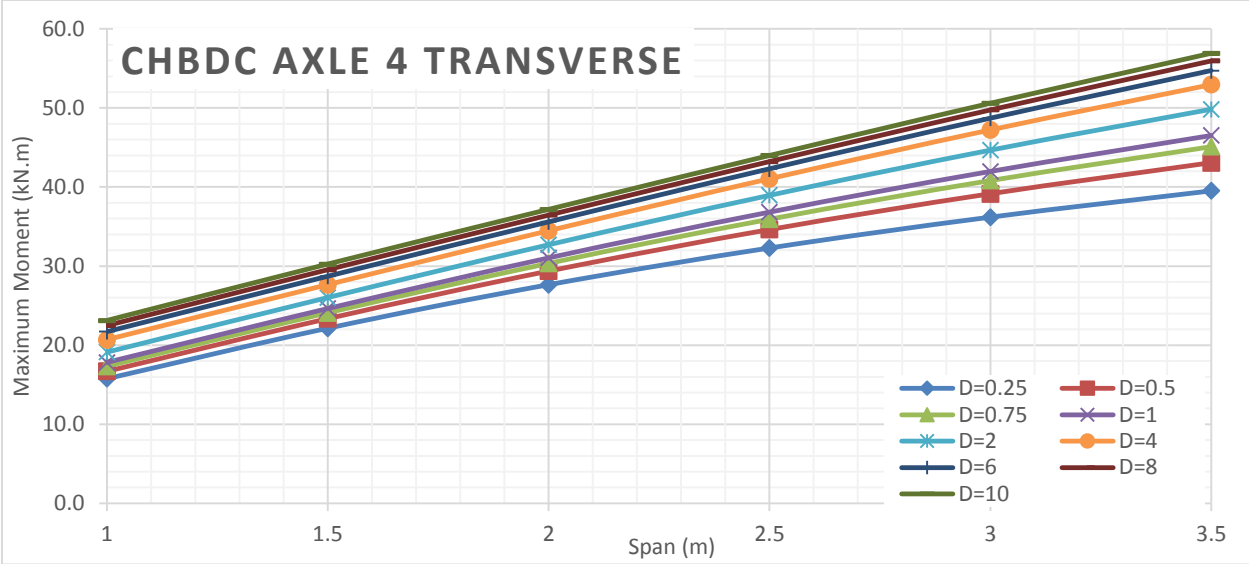


Figure 19 Maximum moment of deck slabs subjected to CHBDC axle 4 for different D values of case 2 main bars parallel to traffic

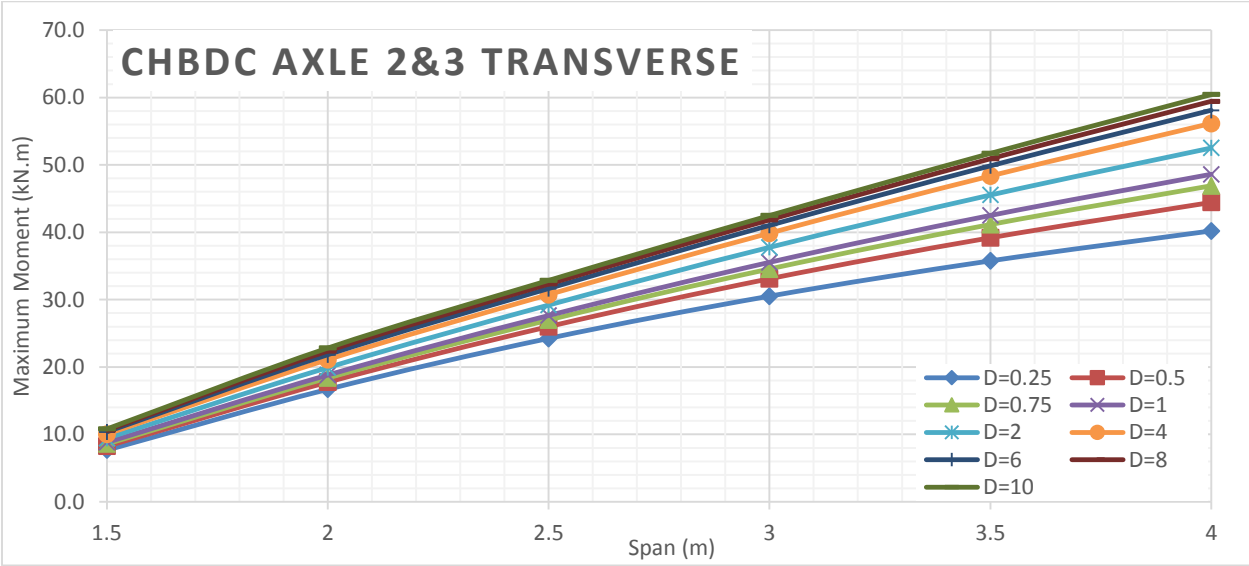


Figure 20 Maximum moment of deck slabs subjected to CHBDC axle 2 & 3 for different D values of case 2 main bars parallel to traffic

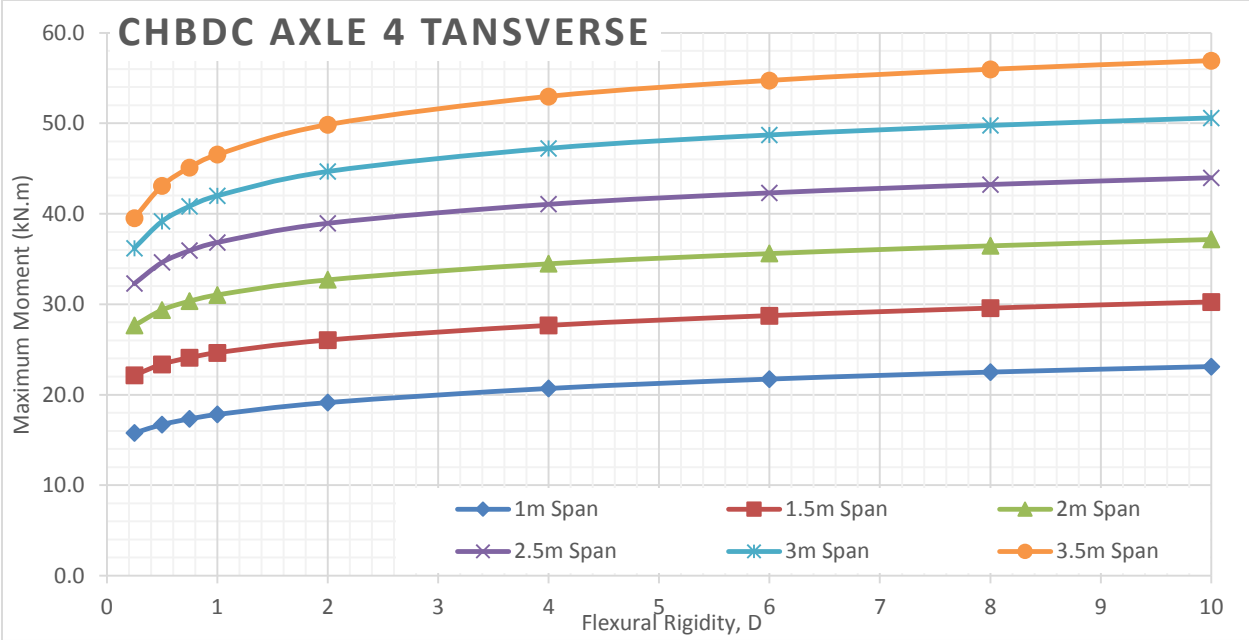


Figure 21 Maximum moment of deck slabs subjected to CHBDC axle 4 for different span values of case 2 main bars parallel to traffic

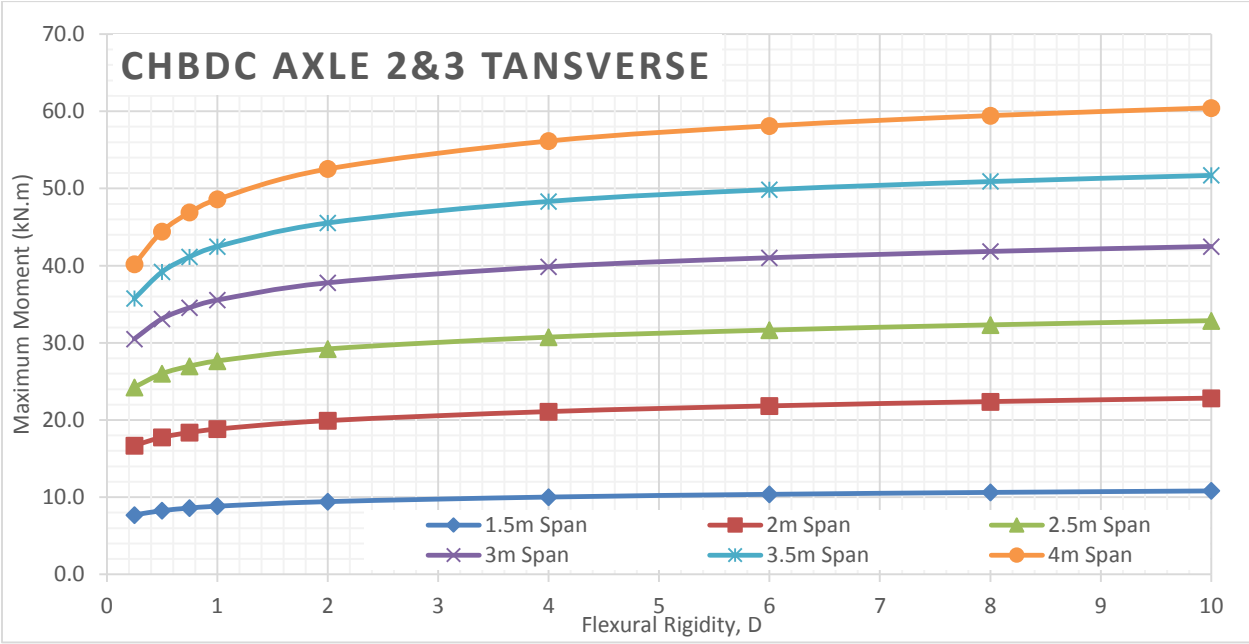


Figure 22 Maximum moment of deck slabs subjected to CHBDC axle 2 & 3 for different span values of case 2 main bars parallel to traffic

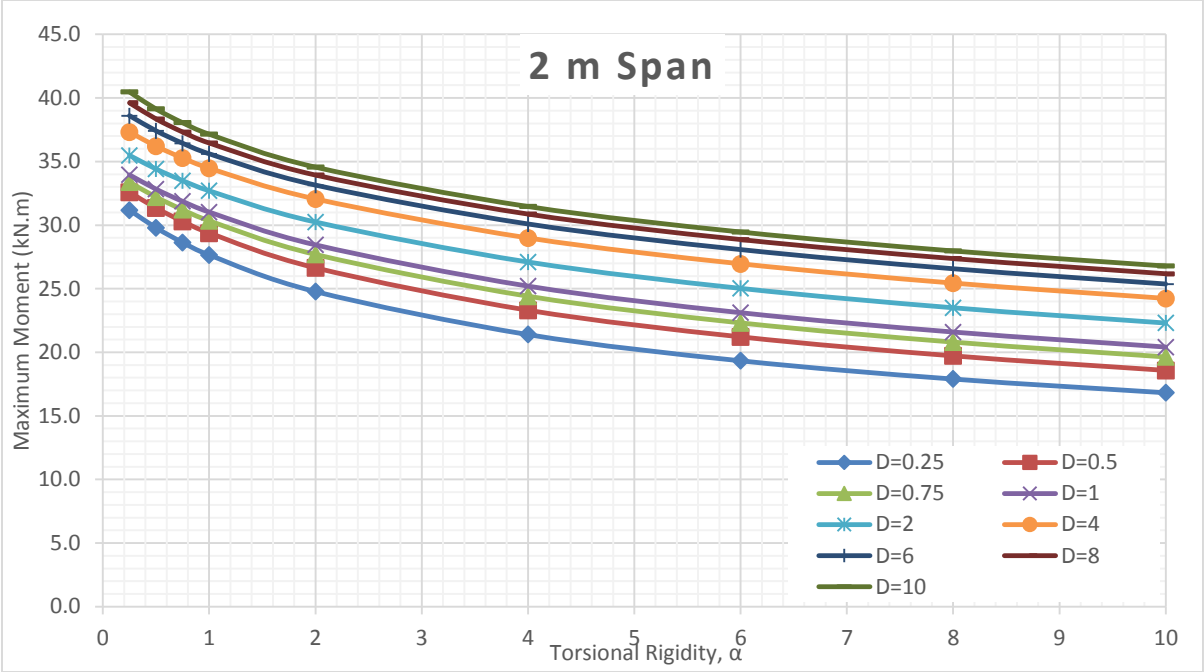


Figure 23 Maximum moment of 2-m span slab subjected to CHBDC axle 4 for different D values of case 2 main bars parallel to traffic

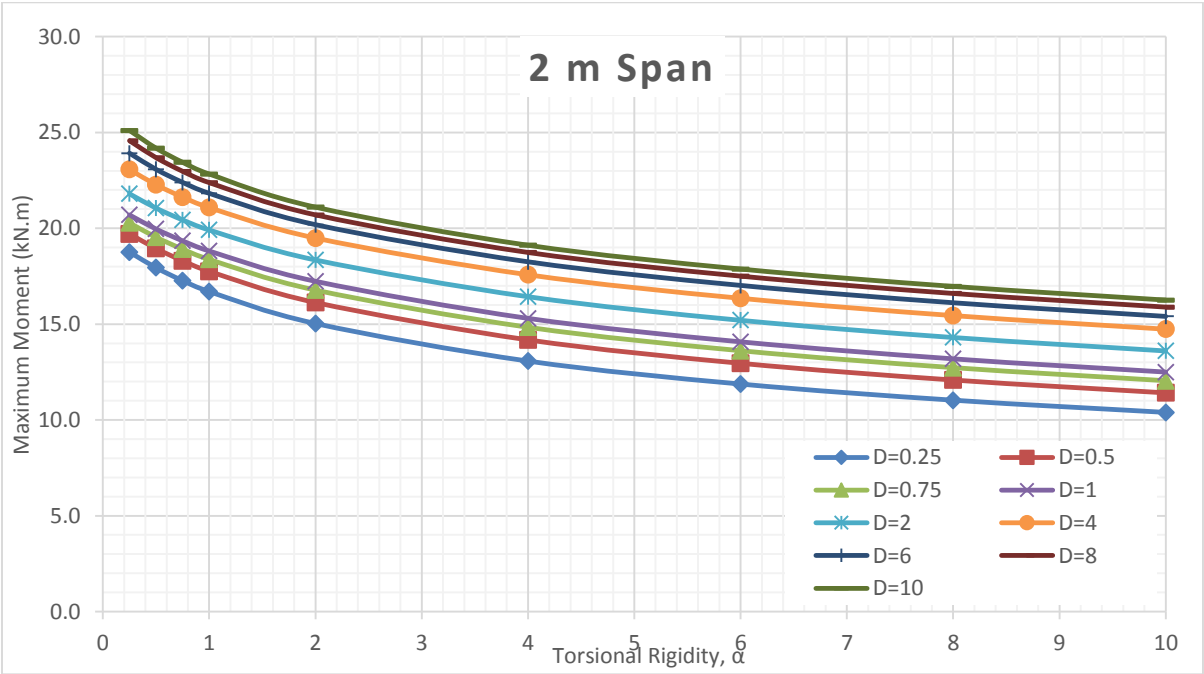


Figure 24 Maximum moment of 2-m span slab subjected to CHBDC axle 2 & 3 for different D values of case 2 main bars parallel to traffic

Additionally, FEA results were compared with orthotic plate theory analysis, both analyses showed very similar results with minor percentage of error, which is a result of the cumulative errors from

the additions used in the orthotropic plate analysis. Further outputs, results and illustrations are included in appendices D.1

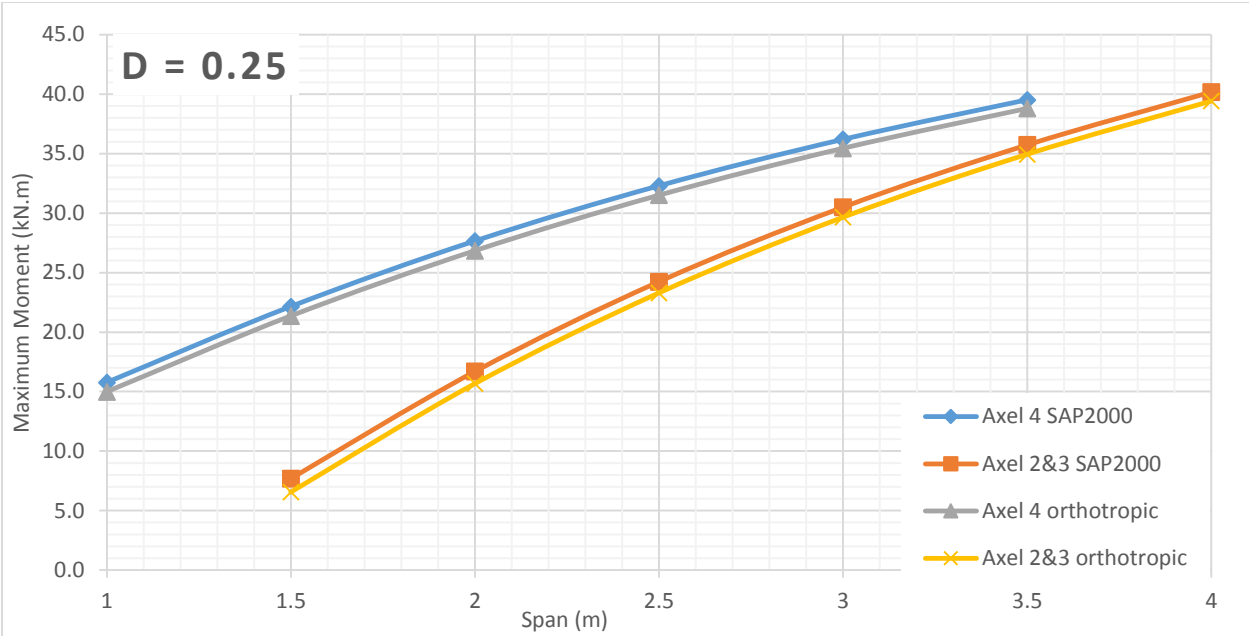


Figure 25 Comparison between FEA and Orthotropic Plate Theory for D = 0.25 of case 2 main bars parallel to traffic

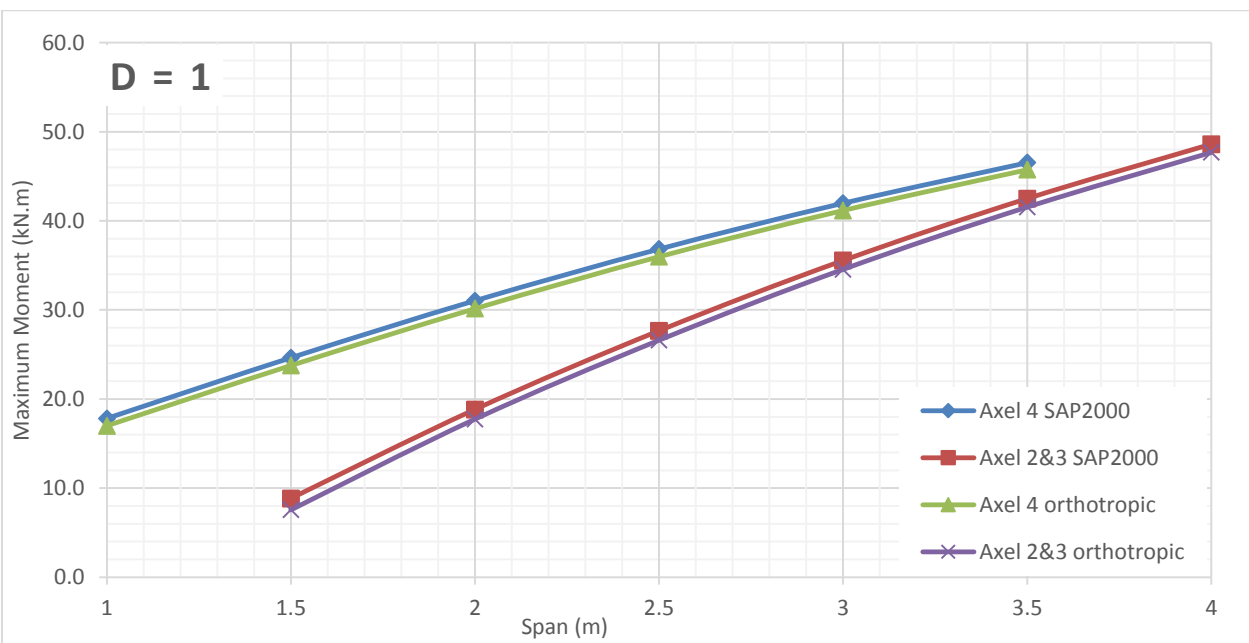


Figure 26 Comparison between FEA and Orthotropic Plate Theory for D = 1 of case 2 main bars parallel to traffic

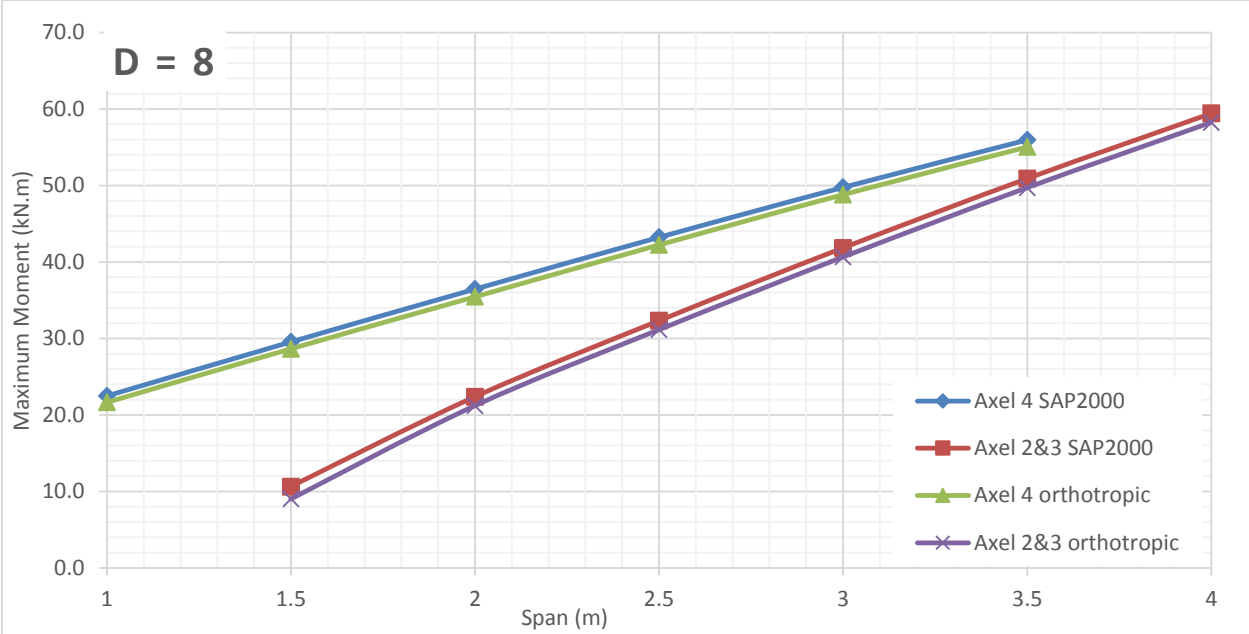


Figure 27 Comparison between FEA and Orthotropic Plate Theory for D = 8 of case 2 main bars parallel to traffic

3. Deflection

For each of the previous cases investigated for bending moment, the corresponding deflections were obtained for both analyses; FEA and orthotropic plate theory. Similar to bending moment, all results are in agreement from both analyses and similar comparisons and illustration are included in appendices B.2, C.2 and D.2.

4. Development of Empirical Equations

Since the current CHBDC provisions does not provide a detailed guideline for open, partially filled and fully filled grid deck systems for bending moment and deflections; it is extremely important to formulate a system of formulations to address these cases. In the previous sections, the relationships of bending moment and deflection were analyzed and studied with respect to span length "L", flexural rigidity "D" and torsional rigidity "α". These relationships can be further developed to formulate the intended equations. To develop these equations, the results obtained from axle 4 and axles 2 and 3 loading cases were multiplied by the corresponding dynamic load allowance values and lane load modification factors according to CHBDC requirement. Afterwards, the maximum values for bending moments and deflection were obtained and used to develop the following equations.

For main bars transverse to traffic direction:

For $L \leq 3\ m$

$$Moment\ (kN.m) = (-0.0351\ L^{0.457})(-0.245\ ln(\alpha) + 1.073)(-335.906\ D^{0.231}) \quad (31)$$

$$Deflection\ (m) = (-0.0430\ L^{2.274})(-0.186\ ln(\alpha) + 0.780)(-0.0019\ D^{0.202}) \quad (32)$$

For $L > 3\ m$

$$Moment\ (kN.m) = (-0.0377\ L^{0.140})(-0.280\ ln(\alpha) + 1.268)(-386.748\ D^{0.221}) \quad (33)$$

$$\text{Deflection (m)} = (-0.0327\ L^{3.012})(-0.150\ \ln(\alpha) + 0.653)(-0.0015\ D^{0.194}) \quad (34)$$

For main bars parallel to traffic direction:

For $L \leq 3$ m

$$\text{Moment (kN.m)} = (-0.0364\ L^{0.723})(-0.0385\ \ln(\alpha) + 0.296)(-1585.769\ D^{0.0883}) \quad (35)$$

$$\text{Deflection} = (-0.00145\ L^{2.664})(-0.167\ \ln(\alpha) - 1.205)(-0.0048\ D^{-0.0523}) \quad (36)$$

For $L > 3$ m

$$\text{Moment (kN.m)} = (-0.0331\ L^{0.832})(-0.0440\ \ln(\alpha) + 0.270)(-1454.668\ D^{0.0891}) \quad (37)$$

$$\text{Deflection (m)} = (-0.00556\ L^{2.854})(-0.119\ \ln(\alpha) - 0.712)(-0.0019\ D^{-0.0161}) \quad (38)$$

The following illustrations demonstrate the results of the proposed empirical equations with respect to the results obtained from the finite element analyses. Figure 28 show the results for the bending moment equation for L less than or equal to 3 m. It can be seen that all bending moment generated by the empirical equation are slightly greater than the moment obtained from FEA. While

the best fit line for the data and the R^2 are showing good convergence of the data. Similarly, the same analyses were conducted for all proposed equations and similar results were attained as demonstrated in Figure 28 through Figure 35.

For main bars transverse to traffic direction:

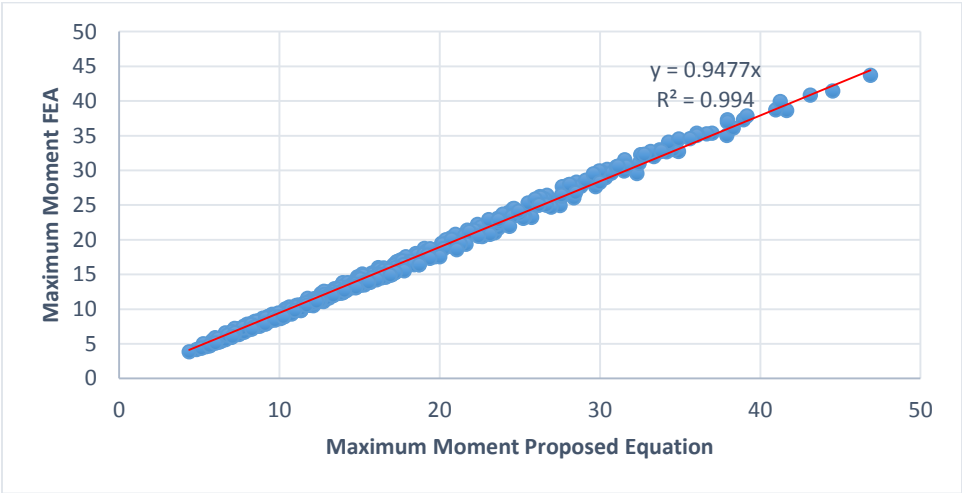


Figure 28 Maximum moment comparison between FEA and empirical equation for spans less than / equal to 3 m for main bars transverse to traffic direction

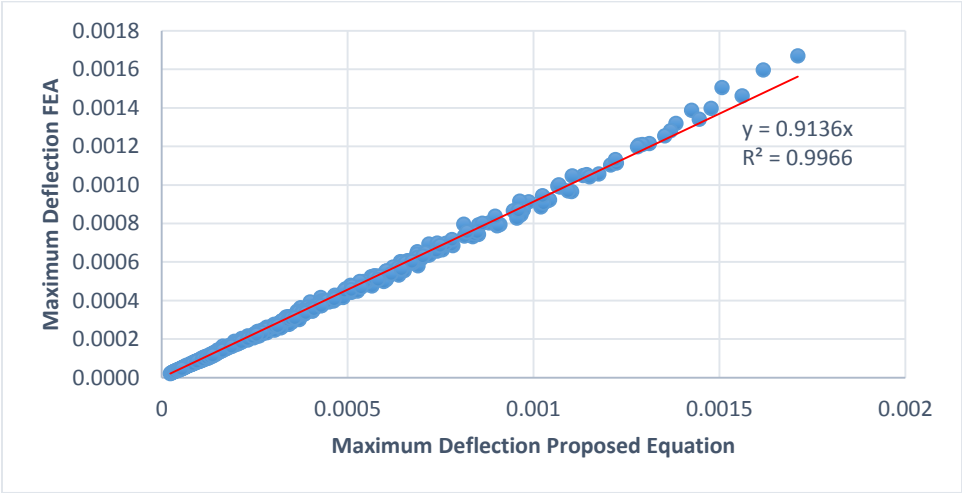


Figure 29 Maximum deflection comparison between FEA and empirical equation for spans less than / equal to 3 m for main bars transverse to traffic direction

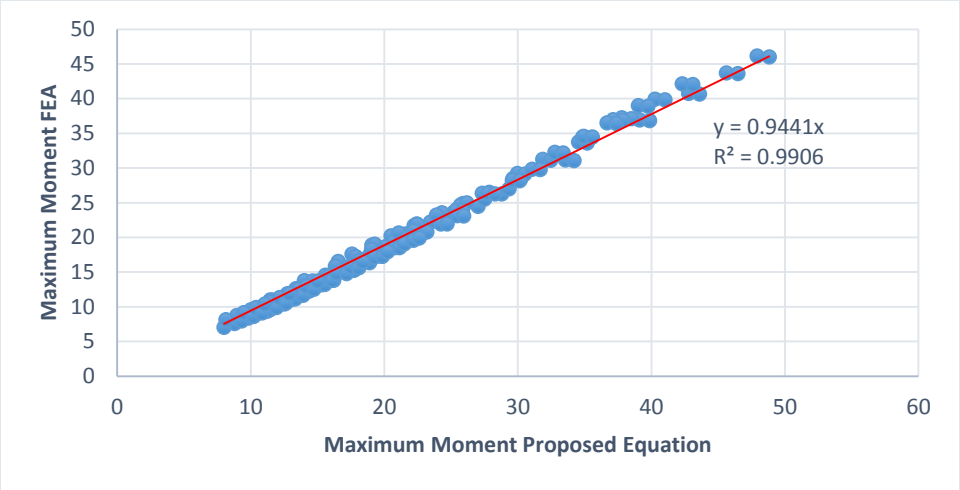


Figure 30 Maximum moment comparison between FEA and empirical equation for spans greater than 3 m for main bars transverse to traffic direction

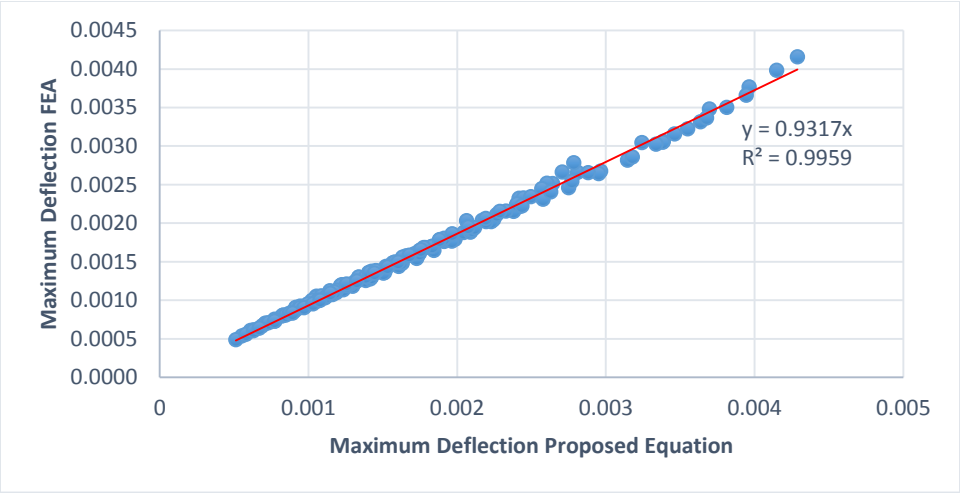


Figure 31 Maximum deflection comparison between FEA and empirical equation for spans greater than 3 m for main bars transverse to traffic direction

For main bars parallel to traffic direction:

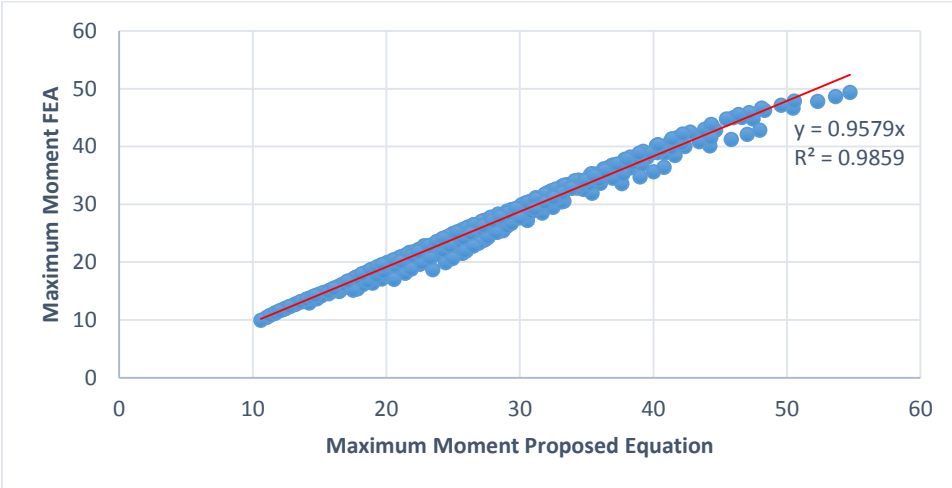


Figure 32 Maximum moment comparison between FEA and empirical equation for spans less than / equal to 3 m for main bars parallel to traffic direction

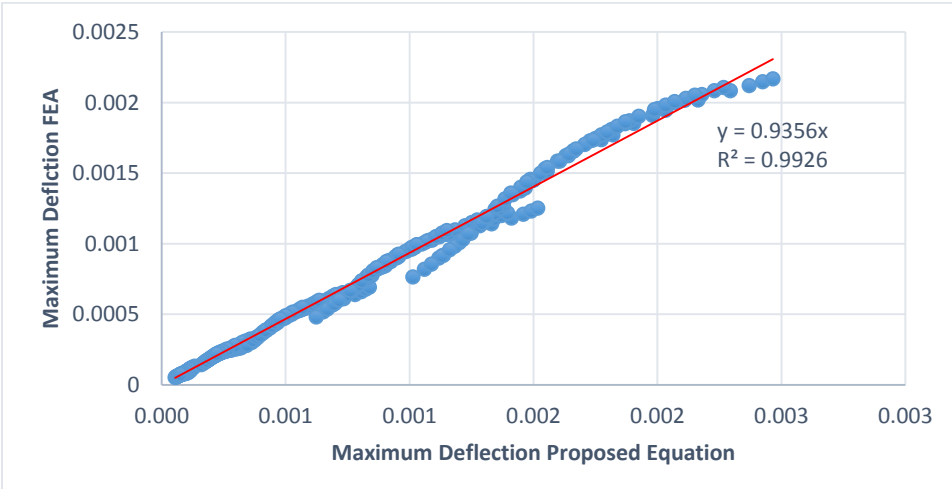


Figure 33 Maximum deflection comparison between FEA and empirical equation for spans less than / equal to 3 m transverse for main bars parallel to traffic direction

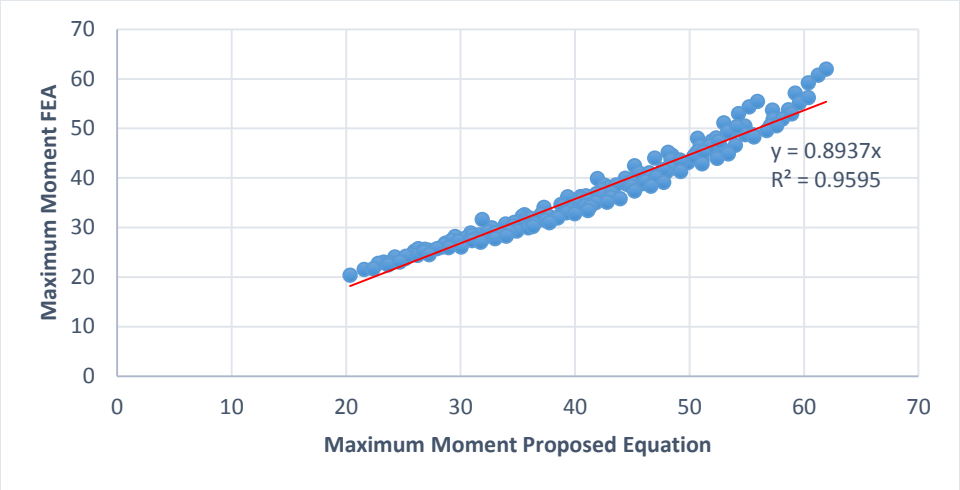


Figure 34 Maximum moment comparison between FEA and empirical equation for spans greater than 3 m transverse for main bars parallel to traffic direction

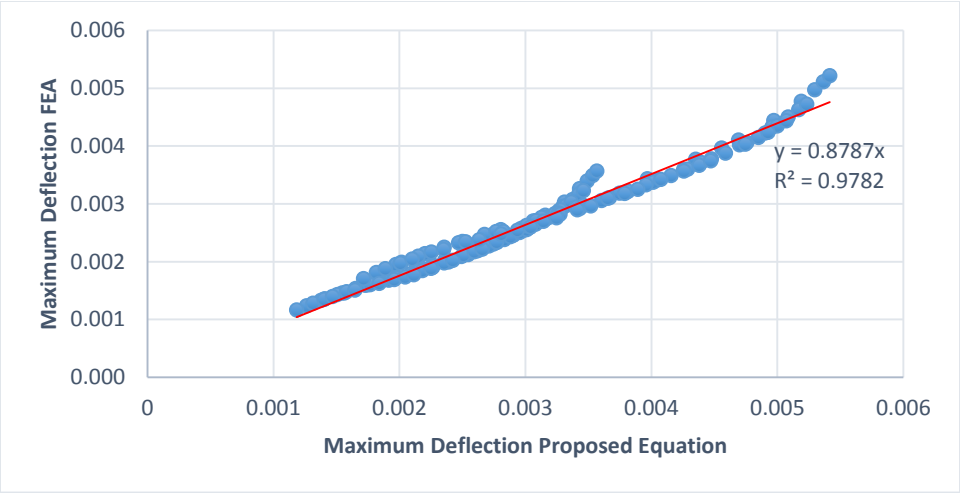


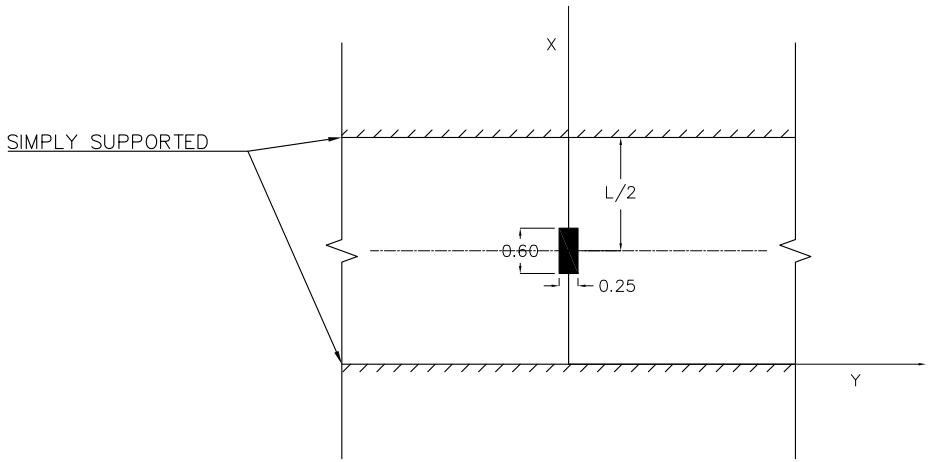
Figure 35 Maximum deflection comparison between FEA and empirical equation for spans greater than 3 m transverse for main bars parallel to traffic direction

5. Conclusion

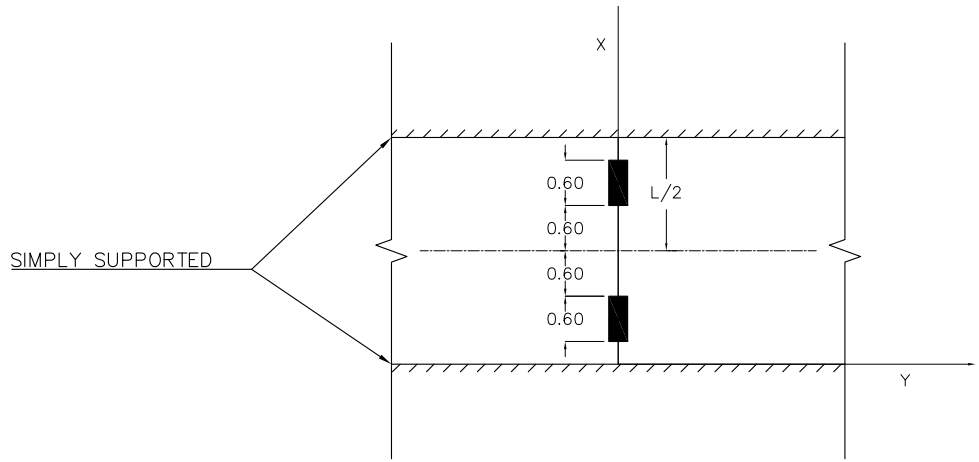
A detailed analysis for different bridge deck types was performed using finite element modeling and mathematical formulations for orthotropic plate theory. By comparing the results for both approaches, it can be seen that both approaches resulted in a very similar values for bending moment and deflection with minimum percent difference varying up to 10%. Furthermore, studying the relationships between bending moment and deflection with the three main parameters; span length "L", flexural rigidity "D" and torsional rigidity "α" improved the understanding of the behaviour of bending moment and deflection in different deck types covering cases 1, 2 and 3 as outlined in the orthotropic plate theory. Finally, based on these relationships general formulations were developed to cover all bridge deck types where main bars are perpendicular and transverse to the direction of traffic. Last of all, the proposed equations will fill a significant gap in the current CHBC provisions and will provide the designers with the tools to proceed with designing unlimited bridge deck configurations.

Appendices

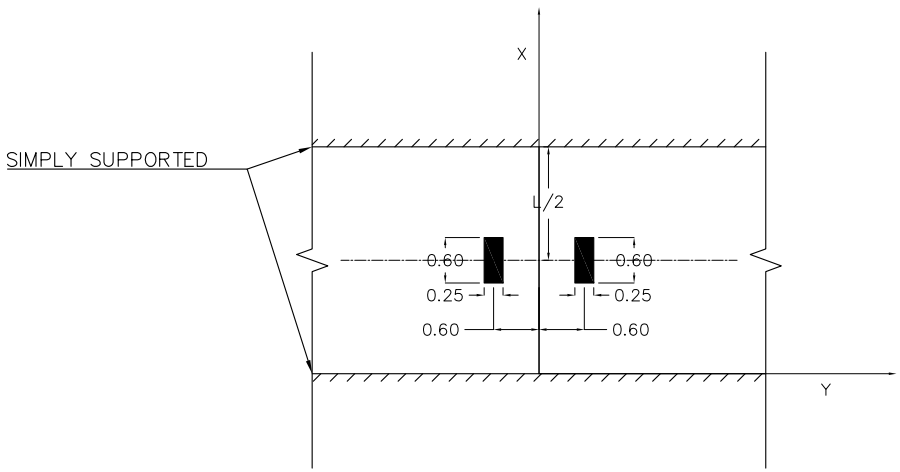
A.1 Loading Cases



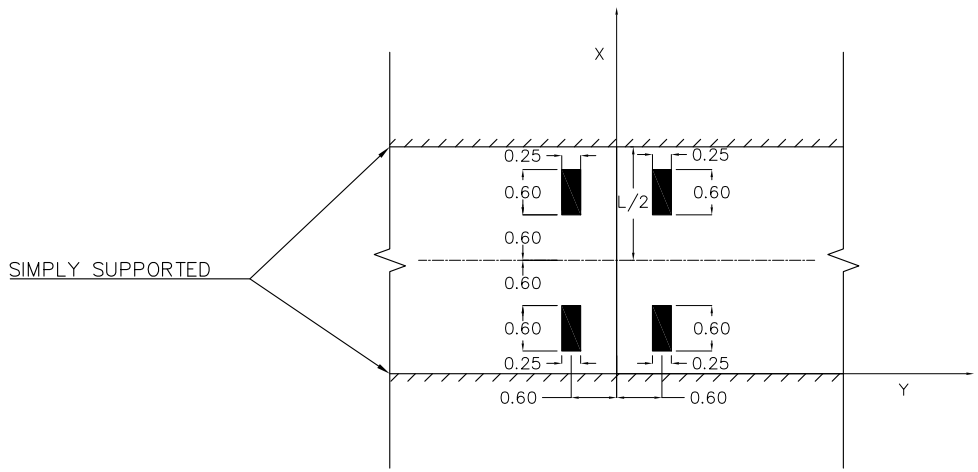
AXLE 4 ONE LANE LOADED



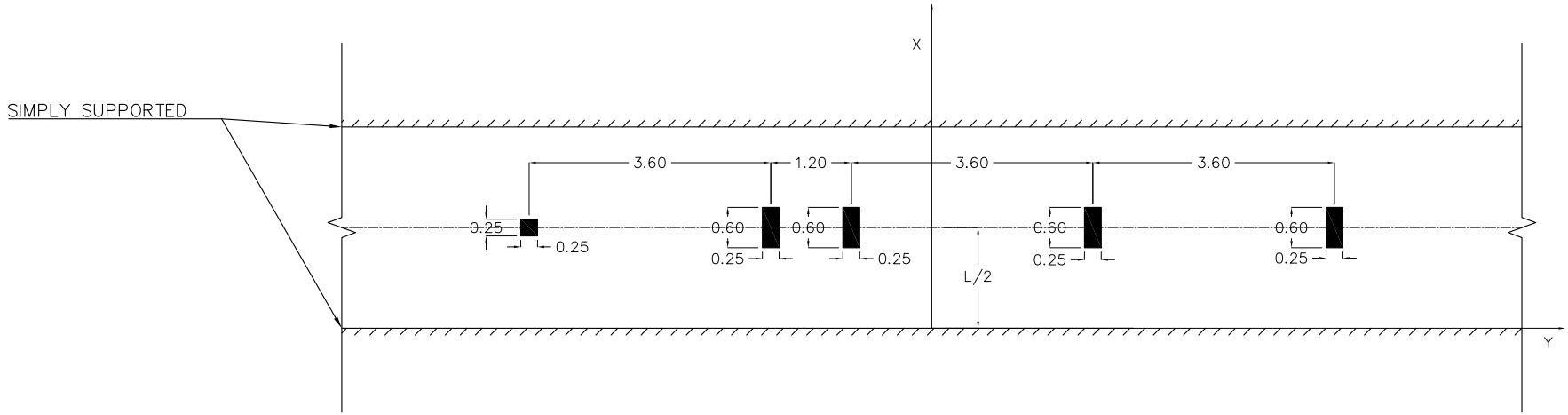
AXLE 4 TWO LANE LOADED



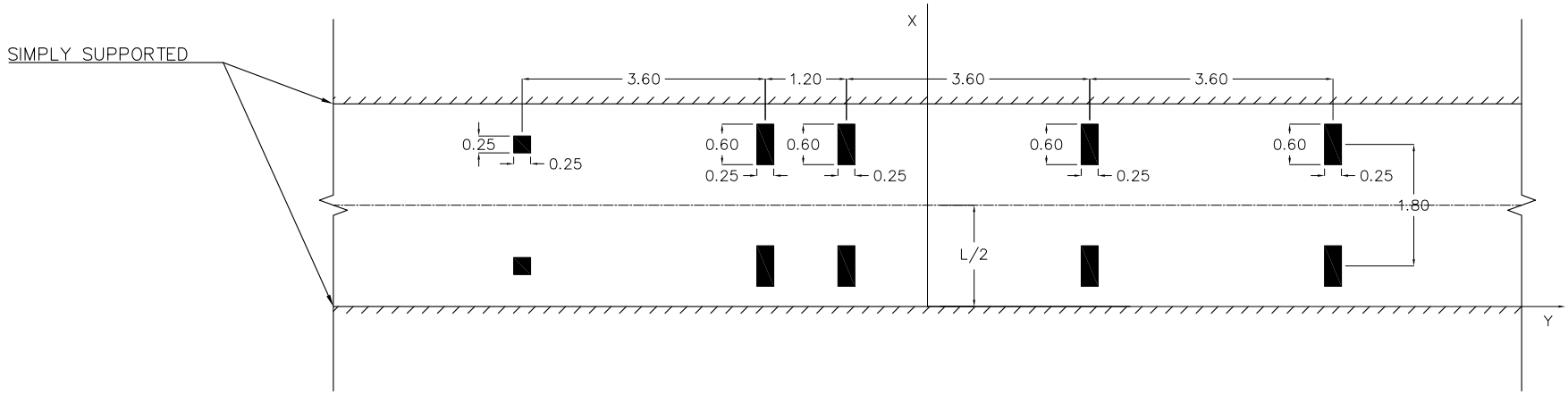
AXLE 2&3 ONE LANE LOADED



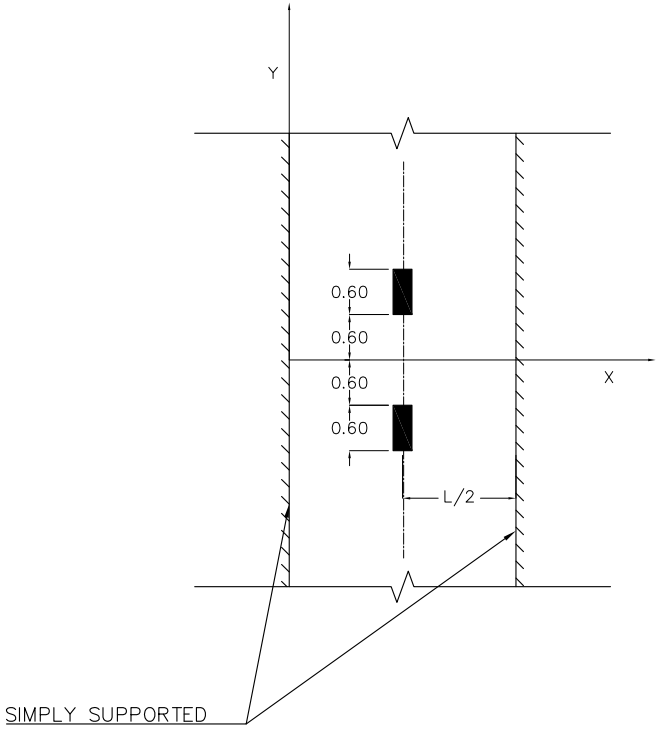
AXLE 2&3 TWO LANE LOADED



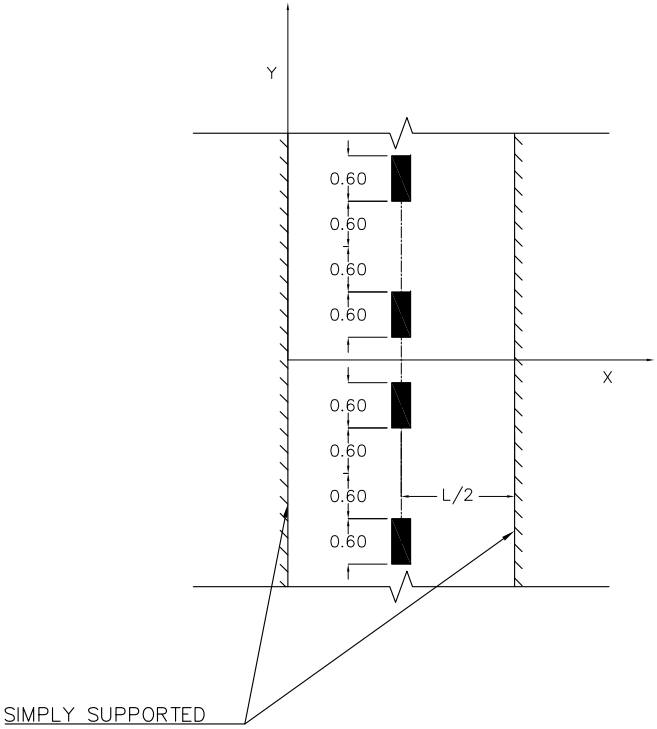
FULL TRUCK ONE LANE LOADED



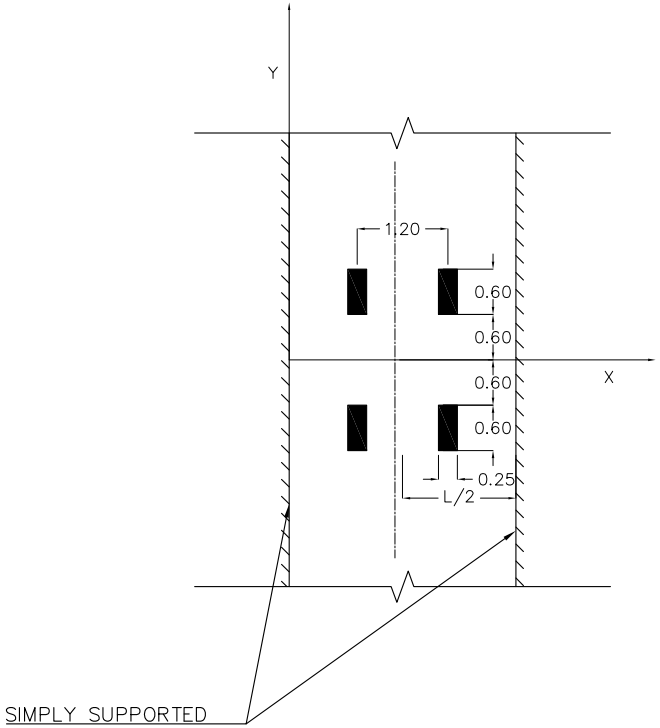
FULL TRUCK TWO LANE LOADED



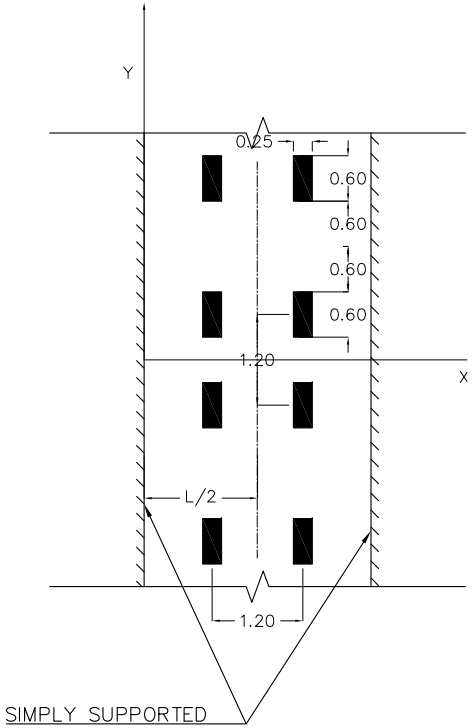
AXLE 4 TRANSVERSE ONE LANE LOADED



AXLE 4 TRANSVERSE TWO LANE LOADED



AXLE 2&3 TRANSVERSE ONE LANE LOADED



AXLE 2&3 TRANSVERSE TWO LANE LOADED

A.2 Materials Tables

Table 1 Material properties for Alpha 0.25

Alpha 0.25

D	Ex	Ey	v (Poisson's ratio)	Dx	Dy	Dxy	G
0.25	24648000	98592000	0	16432	65728	4108	6162000
0.5	24648000	49296000	0	16432	32864	2905	4357192
0.75	24648000	32864000	0	16432	21909	2372	3557632
1	24648000	24648000	0	16432	16432	2054	3081000
2	24648000	12324000	0	16432	8216	1452	2178596
4	24648000	6162000	0	16432	4108	1027	1540500
6	24648000	4108000	0	16432	2739	839	1257813
8	24648000	3081000	0	16432	2054	726	1089298
10	24648000	2464800	0	16432	1643	650	974298

Table 2 Material properties for Alpha 0.5

Alpha 0.5

D	Ex	Ey	v (Poisson's ratio)	Dx	Dy	Dxy	G
0.25	24648000	98592000	0	16432	65728	8216	12324000
0.5	24648000	49296000	0	16432	32864	5810	8714384
0.75	24648000	32864000	0	16432	21909	4744	7115265
1	24648000	24648000	0	16432	16432	4108	6162000
2	24648000	12324000	0	16432	8216	2905	4357192
4	24648000	6162000	0	16432	4108	2054	3081000
6	24648000	4108000	0	16432	2739	1677	2515626
8	24648000	3081000	0	16432	2054	1452	2178596
10	24648000	2464800	0	16432	1643	1299	1948595

Table 3 Material properties for Alpha 0.75

Alpha 0.75

D	Ex	Ey	v (Poisson's ratio)	Dx	Dy	Dxy	G
0.25	24648000	98592000	0	16432	65728	12324	18486000
0.5	24648000	49296000	0	16432	32864	8714	13071576
0.75	24648000	32864000	0	16432	21909	7115	10672897
1	24648000	24648000	0	16432	16432	6162	9243000
2	24648000	12324000	0	16432	8216	4357	6535788
4	24648000	6162000	0	16432	4108	3081	4621500
6	24648000	4108000	0	16432	2739	2516	3773439
8	24648000	3081000	0	16432	2054	2179	3267894
10	24648000	2464800	0	16432	1643	1949	2922893

Table 4 Material properties for Alpha 1

Alpha 1

D	Ex	Ey	v (Poisson's ratio)	Dx	Dy	Dxy	G
0.25	24648000	98592000	0	16432	65728	16432	24648000
0.5	24648000	49296000	0	16432	32864	11619	17428768
0.75	24648000	32864000	0	16432	21909	9487	14230529
1	24648000	24648000	0	16432	16432	8216	12324000
2	24648000	12324000	0	16432	8216	5810	8714384
4	24648000	6162000	0	16432	4108	4108	6162000
6	24648000	4108000	0	16432	2739	3354	5031252
8	24648000	3081000	0	16432	2054	2905	4357192
10	24648000	2464800	0	16432	1643	2598	3897191

Table 5 Material properties for Alpha 2

Alpha 2

D	Ex	Ey	v (Poisson's ratio)	Dx	Dy	Dxy	G
0.25	24648000	98592000	0	16432	65728	32864	49296000
0.5	24648000	49296000	0	16432	32864	23238	34857536
0.75	24648000	32864000	0	16432	21909	18974	28461059
1	24648000	24648000	0	16432	16432	16432	24648000
2	24648000	12324000	0	16432	8216	11619	17428768
4	24648000	6162000	0	16432	4108	8216	12324000
6	24648000	4108000	0	16432	2739	6708	10062504
8	24648000	3081000	0	16432	2054	5810	8714384
10	24648000	2464800	0	16432	1643	5196	7794382

Table 6 Material properties for Alpha 4

Alpha 4

D	Ex	Ey	v (Poisson's ratio)	Dx	Dy	Dxy	G
0.25	24648000	98592000	0	16432	65728	65728	98592000
0.5	24648000	49296000	0	16432	32864	46477	69715072
0.75	24648000	32864000	0	16432	21909	37948	56922118
1	24648000	24648000	0	16432	16432	32864	49296000
2	24648000	12324000	0	16432	8216	23238	34857536
4	24648000	6162000	0	16432	4108	16432	24648000
6	24648000	4108000	0	16432	2739	13417	20125008
8	24648000	3081000	0	16432	2054	11619	17428768
10	24648000	2464800	0	16432	1643	10393	15588764

Table 7 Material properties for Alpha 6

Alpha 6

D	Ex	Ey	v (Poisson's ratio)	Dx	Dy	Dxy	G
0.25	24648000	98592000	0	16432	65728	98592	147888000
0.5	24648000	49296000	0	16432	32864	69715	104572608
0.75	24648000	32864000	0	16432	21909	56922	85383177
1	24648000	24648000	0	16432	16432	49296	73944000
2	24648000	12324000	0	16432	8216	34858	52286304
4	24648000	6162000	0	16432	4108	24648	36972000
6	24648000	4108000	0	16432	2739	20125	30187512
8	24648000	3081000	0	16432	2054	17429	26143152
10	24648000	2464800	0	16432	1643	15589	23383146

Table 8 Material properties for Alpha 8

Alpha 8

D	Ex	Ey	v (Poisson's ratio)	Dx	Dy	Dxy	G
0.25	24648000	98592000	0	16432	65728	131456	197184000
0.5	24648000	49296000	0	16432	32864	92953	139430144
0.75	24648000	32864000	0	16432	21909	75896	113844235
1	24648000	24648000	0	16432	16432	65728	98592000
2	24648000	12324000	0	16432	8216	46477	69715072
4	24648000	6162000	0	16432	4108	32864	49296000
6	24648000	4108000	0	16432	2739	26833	40250015
8	24648000	3081000	0	16432	2054	23238	34857536
10	24648000	2464800	0	16432	1643	20785	31177528

Table 9 Material properties for Alpha 10

Alpha 10

D	Ex	Ey	v (Poisson's ratio)	Dx	Dy	Dxy	G
0.25	24648000	98592000	0	16432	65728	164320	246480000
0.5	24648000	49296000	0	16432	32864	116192	174287679
0.75	24648000	32864000	0	16432	21909	94870	142305294
1	24648000	24648000	0	16432	16432	82160	123240000
2	24648000	12324000	0	16432	8216	58096	87143840
4	24648000	6162000	0	16432	4108	41080	61620000
6	24648000	4108000	0	16432	2739	33542	50312519
8	24648000	3081000	0	16432	2054	29048	43571920
10	24648000	2464800	0	16432	1643	25981	38971910

B.1 Finite Element Analysis Results (Bending Moment)

B.1.1 BENDING MOMENT RESULTS TABLES

Alpha 0.25 Bending Moment Results

Table 10 Maximum moment results for alpha 0.25 for slabs subjected to CHBDC axle 4 loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4	1	10.6927	12.6817	14.0059	15.0245	17.7734	20.9820	23.0925	24.7007	26.0135
	1.5	13.3125	15.8001	17.4593	18.7376	22.1970	26.2556	28.9397	30.9937	32.6766
	2	15.1364	17.9700	19.8615	21.3196	25.2701	29.9146	32.9927	35.3523	37.2883
	2.5	16.5409	19.6406	21.7107	23.3071	27.6348	32.7287	36.1086	38.7021	40.8316
	3	17.6844	21.0007	23.2161	24.9248	29.5593	35.0184	38.6434	41.4268	43.7134
	3.5	18.6493	22.1482	24.4861	26.2897	31.1828	36.9497	40.7813	43.7245	46.1435
	4	20.6387	24.5134	27.1034	29.1019	34.5267	40.9262	45.1824	48.4542	51.1450

Table 11 Maximum moment results for alpha 0.25 for slabs subjected to CHBDC axle 2 & 3 loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2and 3	1	9.0561	9.8074	10.4124	10.9201	12.5461	14.7303	16.2590	17.4466	18.4215
	1.5	13.2348	14.4648	15.2088	15.7740	17.3116	19.2677	20.7894	22.0345	23.1038
	2	16.1042	17.9346	19.0376	19.8527	21.8542	24.1066	25.5595	26.6847	27.7005
	2.5	18.2557	20.5519	21.9666	23.0220	25.6295	28.4350	30.1620	31.4375	32.4656
	3	19.9734	22.6356	24.3071	25.5566	28.6934	32.0913	34.1667	35.6778	36.8751
	3.5	21.4830	24.5344	26.4776	27.9136	31.5617	35.4724	38.3171	40.4720	42.0559
	4	24.5619	28.2231	30.5816	32.3412	36.8702	41.7423	44.8218	47.5464	49.6086

Table 12 Maximum moment results for alpha 0.25 for slabs subjected to CHBDC truck loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
TRUCK	1	10.6926	12.6817	14.0059	15.0245	17.7734	20.9820	23.0925	24.7007	26.0135
	1.5	13.3186	15.8038	17.4605	18.7378	22.1969	26.2556	28.9397	30.9937	32.6766
	2	16.0717	17.9625	19.8692	21.3288	25.2729	29.9145	32.9925	35.3522	37.2882
	2.5	18.3242	20.5439	21.9228	23.2777	27.6459	32.7347	36.1103	38.7023	40.8314
	3	20.2259	22.7478	24.3675	25.5682	29.5184	35.0312	38.6558	41.4346	43.7179
	3.5	22.0975	24.8889	26.7060	28.0665	31.5805	36.9147	40.7886	43.7407	46.1593
	4	25.7944	28.9768	31.1178	32.7625	37.0622	41.7225	45.1033	48.4358	51.1531

Table 13 Maximum moment results for alpha 0.25 for slabs subjected to CHBDC axle 4 loading (main bars parallel to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4 Transverse	1	17.0759	18.1882	18.9801	19.6145	21.4913	23.9990	25.4421	26.4378	27.1882
	1.5	24.3410	25.4118	26.1205	26.6766	28.2528	30.2565	31.6682	32.7847	33.8341
	2	31.1844	32.5820	33.3813	33.9621	35.4872	37.3202	38.5974	39.6170	40.4810
	2.5	37.1776	39.2096	40.2883	41.0204	42.7524	44.6022	45.8218	46.7764	47.5780
	3	42.2787	45.0869	46.5739	47.5616	49.7613	51.8527	53.1183	54.0700	54.8519
	3.5	46.6173	50.2135	52.1630	53.4646	56.3240	58.8762	60.3054	61.3275	62.1402

Table 14 Maximum moment results for alpha 0.25 for slabs subjected to CHBDC axle 2 & 3 loading (main bars parallel to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2&3 Transverse	1.5	8.7044	9.3365	9.7040	9.9615	10.5686	11.1654	11.5179	11.7723	11.9893
	2	18.7595	19.7105	20.2801	20.7004	21.8004	23.0703	23.9127	24.5629	25.1004
	2.5	27.9956	29.4964	30.2757	30.7958	32.0031	33.2839	34.1548	34.8464	35.4292
	3	36.0051	38.4137	39.6444	40.4334	42.0894	43.5680	44.4629	45.2634	45.8902
	3.5	42.7981	46.2567	48.0678	49.2450	51.6845	53.6668	54.7142	55.4527	56.0862
	4	48.5710	53.0855	55.5303	57.1474	60.5777	63.3395	64.7030	65.6001	66.2772

Alpha 0.5 Bending Moment Results

Table 15 Maximum moment results for alpha 0.5 for slabs subjected to CHBDC axle 4 loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4	1	9.7609	11.5768	12.7858	13.7158	16.2263	19.1578	21.0871	22.5580	23.7592
	1.5	12.1524	14.4234	15.9383	17.1054	20.2644	23.9718	26.4244	28.3021	29.8409
	2	13.8174	16.4043	18.1312	19.4625	23.0698	27.3119	30.1243	32.2808	34.0507
	2.5	15.0995	17.9293	19.8193	21.2767	25.2284	29.8808	32.9687	35.3388	37.2853
	3	16.1434	19.1709	20.4417	22.7535	26.9852	31.9710	35.2827	37.8260	39.9160
	3.5	17.0242	20.2184	22.3529	23.9995	28.4673	33.7340	37.2343	39.9236	42.1344
	4	18.8402	22.3776	24.7422	26.5669	31.5202	37.3646	41.2526	44.2421	46.7012

Table 16 Maximum moment results for alpha 0.5 for slabs subjected to CHBDC axle 2 & 3 loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2and 3	1	8.5416	9.3046	9.8773	10.3482	11.7755	13.6756	15.0039	16.0421	16.9002
	1.5	12.2963	13.5131	14.2604	14.8246	16.3432	18.1978	19.5667	20.6803	21.6268
	2	14.8973	16.6399	17.6996	18.4890	20.4486	22.6555	24.0708	25.1546	26.0899
	2.5	16.8535	19.0121	20.3481	21.3475	23.8374	26.5475	28.2289	29.4742	30.4774
	3	18.4186	20.9071	21.7849	23.6444	26.6031	29.8319	31.8232	33.2822	34.4432
	3.5	19.7845	22.6074	24.4178	25.7583	29.1737	32.8715	35.1328	36.7778	38.0912
	4	22.5863	25.9729	28.1556	29.7847	33.9732	38.5424	41.3520	43.3943	45.0033

Table 17 Maximum moment results for alpha 0.5 for slabs subjected to CHBDC truck loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
TRUCK	1	9.7610	11.5768	12.7858	13.7158	16.2263	19.1578	21.0871	22.5580	23.7592
	1.5	12.2854	14.4236	15.9387	17.1057	20.2644	23.9717	26.4244	28.3021	29.8409
	2	14.9631	16.6522	18.1225	19.4593	23.0704	27.3121	30.1243	32.2808	34.0507
	2.5	17.0887	19.1367	20.4252	21.3892	25.2200	29.8813	32.9695	35.3392	37.2856
	3	18.9173	21.2182	22.0899	23.8171	26.9328	31.9596	35.2807	37.8265	39.9169
	3.5	20.7185	23.2541	24.9083	26.1519	29.3934	33.6797	37.2106	39.9132	42.1301
	4	24.2597	27.1444	29.0771	30.5563	34.4684	38.7786	41.4719	44.1864	46.6668

Table 18 Maximum moment results for alpha 0.5 for slabs subjected to CHBDC axle 4 loading (main bars parallel to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4 Transverse	1	16.5613	17.5927	18.3087	18.8749	20.4514	22.4019	23.6762	24.6371	25.3708
	1.5	23.4968	24.6229	25.3346	25.8778	27.3675	29.1953	30.4561	31.4437	32.2632
	2	29.7927	31.3376	32.2132	32.8373	34.4132	36.2037	37.4075	38.3510	39.1408
	2.5	35.2115	37.3918	38.5781	39.3887	41.2892	43.2344	44.4602	45.3938	46.1639
	3	39.8073	42.6991	43.3934	45.3502	47.7747	50.0735	51.4247	52.4134	53.2084
	3.5	43.7170	47.3138	49.3175	50.6812	53.7576	56.5759	58.1523	59.2635	60.1328

Table 19 Maximum moment results for alpha 0.5 for slabs subjected to CHBDC axle 2 & 3 loading (main bars parallel to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2&3 Transverse	1.5	8.2844	8.8886	9.2459	9.4992	10.1061	10.7092	11.0633	11.3165	11.5144
	2	17.9425	18.9450	19.5356	19.9640	21.0554	22.2755	23.0701	23.6775	24.1761
	2.5	26.4898	28.1110	28.9840	29.5736	30.9356	32.3145	33.1872	33.8578	34.4157
	3	33.7678	36.2763	36.8248	38.4938	40.4195	42.1652	43.1718	43.9082	44.5036
	3.5	39.9031	43.3837	45.2721	46.5309	49.2683	51.6248	52.8828	53.7526	54.4284
	4	45.1151	49.5450	52.0123	53.6821	57.3668	60.5340	62.1712	63.2614	64.0801

Alpha 0.75 Bending Moment Results

Table 20 Maximum moment results for alpha 0.75 for slabs subjected to CHBDC axle 4 loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4	1	9.0368	10.7181	11.8376	12.6989	15.0241	17.7405	19.5290	20.8932	22.0077
	1.5	11.2509	13.3536	14.7563	15.8370	18.7626	22.1970	24.4700	26.2106	27.6374
	2	12.7924	15.1875	16.7865	18.0192	21.3599	25.2894	27.8953	29.8941	31.5349
	2.5	13.9794	16.5994	18.3494	19.6989	23.3584	27.6677	30.5288	32.7252	34.5295
	3	14.9458	17.7489	19.6216	21.0662	24.9849	29.6029	32.6711	35.0279	36.9651
	3.5	15.7613	18.7187	20.6950	22.2197	26.3570	31.2351	34.4779	36.9699	39.0188
	4	17.4425	20.7177	22.9072	24.5968	29.1837	34.5968	38.1987	40.9687	43.2477

Table 21 Maximum moment results for alpha 0.75 for slabs subjected to CHBDC axle 2 & 3 loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2and 3	1	8.1212	8.8869	9.4350	9.8793	11.1698	12.8716	14.0568	14.9857	15.7565
	1.5	11.5549	12.7554	13.4991	14.0583	15.5510	17.3311	18.5857	19.6066	20.4671
	2	13.9483	15.6201	16.6438	17.4102	19.3262	21.4838	22.8616	23.9091	24.7832
	2.5	15.7532	17.8029	19.0762	20.0307	22.4238	25.0481	26.6848	27.8989	28.8765
	3	17.1998	19.5514	21.0321	22.1438	24.9606	28.0511	29.9704	31.3826	32.5095
	3.5	18.4542	21.0998	22.8047	24.0701	27.3026	30.8282	33.0007	34.5897	35.8547
	4	21.0411	24.2159	26.2595	27.7879	31.7216	36.0446	38.7221	40.6802	42.2304

Table 22 Maximum moment results for alpha 0.75 for slabs subjected to CHBDC truck loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
TRUCK	1	9.0367	10.7181	11.8376	12.6989	15.0241	17.7405	19.5290	20.8932	22.0077
	1.5	11.5831	13.3526	14.7559	15.8369	18.7626	22.1970	24.4700	26.2106	27.6374
	2	14.1020	15.7023	16.7817	18.0159	21.3591	25.2894	27.8953	29.8941	31.5349
	2.5	16.1347	18.0451	19.2582	20.1686	23.3528	27.6661	30.5282	32.7250	34.5295
	3	17.9106	20.0372	21.4196	22.4588	25.1359	29.5959	32.6672	35.0258	36.9638
	3.5	19.6686	21.9968	23.5236	24.6757	27.6977	31.2259	34.4681	36.9625	39.0134
	4	23.1088	25.7456	27.5160	28.8691	32.4747	36.4999	39.0404	40.9545	43.2340

Table 23 Maximum moment results for alpha 0.75 for slabs subjected to CHBDC axle 4 loading (main bars parallel to traffic)

Maximum Moment (kN.m)

	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4 Transverse	1	16.1334	17.1112	17.7742	18.2925	19.7189	21.4421	22.5719	23.4064	24.0655
	1.5	22.7753	23.9487	24.6688	25.2072	26.6433	28.3495	29.5044	30.4014	31.1424
	2	28.6369	30.2838	31.2160	31.8744	33.4993	35.2736	36.4311	37.3232	38.0619
	2.5	33.6193	35.8906	37.1488	38.0139	40.0386	42.0659	43.3070	44.2332	44.9862
	3	37.8296	40.7636	42.4027	43.5254	46.1024	48.5534	49.9742	50.9974	51.8087
	3.5	41.4120	44.9899	47.0207	48.4205	51.6349	54.6351	56.3187	57.4983	58.4133

Table 24 Maximum moment results for alpha 0.75 for slabs subjected to CHBDC axle 2 & 3 loading (main bars parallel to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2&3 Transverse	1.5	7.9542	8.5357	8.8834	9.1319	9.7336	10.3371	10.6915	10.9439	11.1404
	2	17.2669	18.3050	18.9119	19.3479	20.4393	21.6289	22.3905	22.9672	23.4376
	2.5	25.2679	26.9688	27.9013	28.5392	30.0144	31.4746	32.3678	33.0374	33.5846
	3	31.9815	34.5481	35.9489	36.8929	39.0038	40.9375	42.0334	42.8170	43.4376
	3.5	37.6135	41.0863	43.0175	44.3284	47.2582	49.8692	51.2800	52.2494	52.9936
	4	42.3962	46.7380	49.2048	50.9003	54.7390	58.1741	60.0005	61.2283	62.1507

Alpha 1 Bending Moment Results

Table 25 Maximum moment results for alpha 1 for slabs subjected to CHBDC axle 4 loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4	1	8.4531	10.0260	11.0734	11.8793	14.0553	16.5982	18.2733	19.5514	20.5961
	1.5	10.5243	12.4913	13.8035	14.8147	17.5522	20.7667	22.8947	24.5248	25.8615
	2	11.9662	14.2067	15.7027	16.8560	19.9817	23.6593	26.0988	27.9704	29.5071
	2.5	13.0765	15.5275	17.1646	18.4272	21.8512	25.8840	28.5622	30.6186	32.3083
	3	13.9805	16.6027	18.3547	19.7061	23.3726	27.6942	30.5661	32.7727	34.5865
	3.5	14.7434	17.5099	19.3588	20.7852	24.6561	29.2210	32.2563	34.5892	36.5077
	4	16.3167	19.3800	21.4281	23.0088	27.3004	32.3659	35.7372	38.3303	40.4640

Table 26 Maximum moment results for alpha 1 for slabs subjected to CHBDC axle 2 & 3 loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2and 3	1	7.7677	8.5313	9.0600	9.4840	10.6753	12.2314	13.3096	14.1552	14.8582
	1.5	10.9484	12.1312	12.8680	13.4202	14.8851	16.6033	17.7728	18.7246	19.5217
	2	13.1754	14.7880	15.7810	16.5264	18.3998	20.5083	21.8509	22.8662	23.6963
	2.5	14.8585	16.8189	18.0404	18.9576	21.2686	23.8156	25.4100	26.5940	27.5469
	3	16.2095	18.4493	19.8616	20.9233	23.6230	26.5969	28.4534	29.8236	30.9190
	3.5	17.3747	19.8866	21.4953	22.6995	25.7827	29.1646	31.2606	32.7998	34.0242
	4	19.7909	22.7920	24.7230	26.1701	29.9026	34.0197	36.5864	38.4720	39.9701

Table 27 Maximum moment results for alpha 1 for slabs subjected to CHBDC truck loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
TRUCK	1	8.4532	10.0260	11.0734	11.8793	14.0553	16.5982	18.2733	19.5514	20.5961
	1.5	11.0157	12.4933	13.8043	14.8150	17.5522	20.7667	22.8947	24.5248	25.8615
	2	13.4090	14.9334	15.8890	16.8641	19.9833	23.6595	26.0989	27.9704	29.5071
	2.5	15.3704	17.1673	18.3165	19.1816	21.8668	25.8873	28.5633	30.6191	32.3086
	3	17.1063	19.0911	20.3873	21.3664	23.9035	27.7145	30.5747	32.7770	34.5890
	3.5	18.8366	20.9945	22.4175	23.4947	26.3349	29.5101	32.2922	34.6096	36.5204
	4	22.2232	24.6378	26.2752	27.5296	30.8837	34.6711	37.0807	38.8700	40.5154

Table 28 Maximum moment results for alpha 1 for slabs subjected to CHBDC axle 4 loading (main bars parallel to traffic)

Maximum Moment (kN.m)

	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4 Transverse	1	15.7661	16.7075	17.3325	17.8158	19.1316	20.6887	21.7224	22.4919	23.1043
	1.5	22.1461	23.3594	24.0896	24.6275	26.0299	27.6498	28.7276	29.5580	30.2412
	2	27.6522	29.3721	30.3472	31.0330	32.7020	34.4739	35.6018	36.4586	37.1611
	2.5	32.2900	34.6174	35.9254	36.8295	38.9478	41.0446	42.3039	43.2298	43.9738
	3	36.1936	39.1459	40.8210	41.9787	44.6625	47.2280	48.7054	49.7592	50.5872
	3.5	39.5170	43.0666	45.1074	46.5280	49.8322	52.9612	54.7247	55.9577	56.9098

Table 29 Maximum moment results for alpha 1 for slabs subjected to CHBDC axle 2 & 3 loading (main bars parallel to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2&3 Transverse	1.5	7.6906	8.2474	8.5863	8.8299	9.4243	10.0252	10.3787	10.6303	10.8258
	2	16.6966	17.7565	18.3761	18.8186	19.9136	21.0841	21.8224	22.3765	22.8259
	2.5	24.2457	26.0014	26.9758	27.6451	29.2054	30.7329	31.6472	32.3205	32.8631
	3	30.5073	33.1036	34.5487	35.5350	37.7746	39.8488	41.0169	41.8416	42.4864
	3.5	35.7400	39.1882	41.1406	42.4833	45.5416	48.3343	49.8595	50.9064	51.7057
	4	40.1844	44.4358	46.8889	48.5944	52.5269	56.1449	58.1067	59.4360	60.4369

Alpha 2 Bending Moment Results

Table 30 Maximum moment results for alpha 2 for slabs subjected to CHBDC axle 4 loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4	1	6.9021	8.1869	9.0428	9.7014	11.4809	13.5630	14.9366	15.9861	16.8448
	1.5	8.5932	10.1998	11.2718	12.0980	14.3358	16.9658	18.7088	20.0451	21.1417
	2	9.7705	11.6005	12.8225	13.7647	16.3195	19.3276	21.3247	22.8581	24.1179
	2.5	10.6774	12.6789	14.0161	15.0476	17.8459	21.1440	23.3360	25.0203	26.4050
	3	11.4168	13.5571	14.9879	16.0919	19.0881	22.6220	24.9722	26.7790	28.2652
	3.5	12.0442	14.2990	15.8082	16.9732	20.1361	23.8686	26.3522	28.2623	29.8338
	4	13.3426	15.8307	17.5003	18.7903	22.2959	26.4372	29.1954	31.3181	33.0657

Table 31 Maximum moment results for alpha 2 for slabs subjected to CHBDC axle 2 & 3 loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2and 3	1	6.7548	7.4940	7.9718	8.3461	9.3436	10.5461	11.3775	12.0256	12.5641
	1.5	9.2908	10.4011	11.1002	11.6211	12.9816	14.5263	15.5237	16.2880	16.9389
	2	11.0783	12.5211	13.4226	14.1004	15.8248	17.7620	18.9882	19.9063	20.6490
	2.5	12.4399	14.1530	15.2304	16.0414	18.1116	20.4144	21.8677	22.9491	23.8189
	3	13.5391	15.4714	16.6961	17.6203	19.9926	22.6293	24.2951	25.5328	26.5262
	3.5	14.4760	16.6174	17.9888	19.0194	21.6783	24.6509	26.5194	27.9046	29.0137
	4	16.4576	18.9734	20.5999	21.8272	25.0161	28.5692	30.8191	32.4895	33.8278

Table 32 Maximum moment results for alpha 2 for slabs subjected to CHBDC truck loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
TRUCK	1	6.9104	8.1892	9.0437	9.7019	11.4810	13.5631	14.9366	15.9861	16.8448
	1.5	9.4916	10.5342	11.3028	12.1181	14.3418	16.9672	18.7093	20.0453	21.1418
	2	11.5765	12.8790	13.7160	14.3485	16.3736	19.3463	21.3338	22.8633	24.1212
	2.5	13.3680	14.8491	15.8149	16.5497	18.4646	21.2338	23.3872	25.0532	26.4279
	3	15.0136	16.6125	17.6710	18.4819	20.6169	23.0711	25.1348	26.8928	28.3496
	3.5	16.7473	18.3980	19.5368	20.4087	22.7408	25.4218	27.1451	28.5390	30.0495
	4	20.0388	21.8650	23.1013	24.0684	26.7430	29.8608	31.8874	33.4158	34.6524

Table 33 Maximum moment results for alpha 2 for slabs subjected to CHBDC axle 4 loading (main bars parallel to traffic)

Maximum Moment (kN.m)

	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4 Transverse	1	14.6566	15.5358	16.0842	16.4939	17.5678	18.7864	19.5723	20.1709	20.6609
	1.5	20.2331	21.5429	22.3113	22.8604	24.2185	25.6700	26.5851	27.2713	27.8271
	2	24.7786	26.6318	27.7003	28.4521	30.2477	32.0555	33.1420	33.9358	34.5685
	2.5	28.5087	30.9181	32.3099	33.2912	35.6161	37.8962	39.2238	40.1712	40.9131
	3	31.6303	34.5586	36.2711	37.4813	40.3657	43.1825	44.8013	45.9414	46.8238
	3.5	34.3037	37.6955	39.7071	41.1368	44.5740	47.9505	49.8876	51.2452	52.2900

Table 34 Maximum moment results for alpha 2 for slabs subjected to CHBDC axle 2 & 3 loading (main bars parallel to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2&3 Transverse	1.5	6.9645	7.4679	7.7746	7.9972	8.5573	9.1373	9.4825	9.7293	9.9215
	2	15.0279	16.1288	16.7765	17.2362	18.3510	19.4939	20.1869	20.6939	21.0978
	2.5	21.3394	23.1770	24.2341	24.9732	26.7130	28.4107	29.3956	30.0967	30.6451
	3	26.4187	29.0049	30.5106	31.5679	34.0570	36.4441	37.7929	38.7324	39.4537
	3.5	30.6364	33.9136	35.8540	37.2287	40.4961	43.6506	45.4285	46.6587	47.5961
	4	34.2503	38.1342	40.4742	42.1482	46.1755	50.1158	52.3500	53.8971	55.0744

Alpha 4 Bending Moment Results

Table 35 Maximum moment results for alpha 4 for slabs subjected to CHBDC axle 4 loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4	1	5.3469	6.3429	7.0067	7.5178	8.8997	10.5196	11.5904	12.4099	13.0815
	1.5	6.6568	7.9020	8.7332	9.3740	11.1106	13.1542	14.5105	15.5515	16.4067
	2	7.5694	8.9871	9.9343	10.6650	12.6471	14.9834	16.5365	17.7300	18.7115
	2.5	8.2761	9.8236	10.8594	11.6590	13.8294	16.3904	18.0943	19.4048	20.4830
	3	8.8619	10.5088	11.6147	12.4693	14.7920	17.5353	19.3617	20.7671	21.9238
	3.5	9.3748	11.0963	12.2575	13.1567	15.6052	18.5012	20.4308	21.9160	23.1388
	4	10.4411	12.3153	13.5889	14.5788	17.2835	20.4929	22.6346	24.2845	25.6437

Table 36 Maximum moment results for alpha 4 for slabs subjected to CHBDC axle 2 & 3 loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2and 3	1	5.6093	6.2930	6.7201	7.0458	7.8936	8.8420	9.4666	9.9557	10.3581
	1.5	7.5346	8.5296	9.1601	9.6289	10.8397	12.1913	13.0470	13.6868	14.2035
	2	8.8938	10.1368	10.9232	11.5150	13.0326	14.7345	15.8099	16.6114	17.2563
	2.5	9.9423	11.3801	12.2956	12.9866	14.7709	16.7642	18.0311	18.9756	19.7354
	3	10.8059	12.3956	13.4170	14.1895	16.1974	18.4441	19.8776	20.9479	21.8096
	3.5	11.5576	13.2734	14.3923	15.2412	17.4581	19.9514	21.5437	22.7338	23.6924
	4	13.1647	15.1254	16.4175	17.4051	20.0091	22.9520	24.8428	26.2590	27.4011

Table 37 Maximum moment results for alpha 4 for slabs subjected to CHBDC axle truck loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
TRUCK	1	5.7271	6.3714	7.0214	7.5271	8.9024	10.5202	11.5906	12.4100	13.0815
	1.5	7.9430	8.8302	9.4084	9.8415	11.1690	13.1765	14.5220	15.5584	16.4112
	2	9.7696	10.8120	11.4990	12.0228	13.4042	15.1208	16.6221	17.7891	18.7549
	2.5	11.4508	12.5681	13.3265	13.9121	15.4677	17.2793	18.4517	19.6200	20.6525
	3	13.0589	14.2425	15.0344	15.6472	17.3273	19.3055	20.5986	21.5783	22.3749
	3.5	14.7939	16.0136	16.8409	17.4813	19.2195	21.3279	22.7188	23.7771	24.6397
	4	17.9858	19.3010	20.2040	20.9090	22.8438	25.1585	26.7444	27.9600	28.9573

Table 38 Maximum moment results for alpha 4 for slabs subjected to CHBDC axle 4 loading (main bars parallel to traffic)

Maximum Moment (kN.m)

	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4 Transverse	1	13.2545	14.1190	14.6328	15.0028	15.9254	16.9158	17.5384	18.0032	18.3781
	1.5	17.8446	19.2297	20.0338	20.6063	21.9813	23.3658	24.1920	24.7908	25.2647
	2	21.3971	23.2996	24.4150	25.2042	27.1049	28.9898	30.0873	30.8668	31.4737
	2.5	24.2672	26.6232	28.0277	29.0302	31.4531	33.8724	35.2762	36.2667	37.0326
	3	26.6927	29.4234	31.0803	32.2744	35.1889	38.1329	39.8501	41.0627	41.9993
	3.5	28.8328	31.8587	33.7271	35.0871	38.4479	41.8844	43.9070	45.3405	46.4497

Table 39 Maximum moment results for alpha 4 for slabs subjected to CHBDC axle 2 & 3 loading (main bars parallel to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2&3 Transverse	1.5	6.1742	6.6287	6.9060	7.1080	7.6129	8.1421	8.4673	8.7019	8.8859
	2	13.0664	14.1803	14.8359	15.3016	16.4361	17.5775	18.2509	18.7331	19.1106
	2.5	18.0873	19.8870	20.9597	21.7248	23.5674	25.3893	26.4484	27.1938	27.7689
	3	22.0525	24.4458	25.9029	26.9538	29.5164	32.0795	33.5615	34.6008	35.3989
	3.5	25.3945	28.2645	30.0502	31.3540	34.5812	37.8657	39.7845	41.1362	42.1764
	4	28.3616	31.5971	33.6515	35.1694	38.9848	42.9408	45.2804	46.9392	48.2211

Alpha 6 Bending Moment Results

Table 40 Maximum moment results for alpha 6 for slabs subjected to CHBDC axle 4 loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4	1	4.5194	5.3618	5.9234	6.3560	7.5263	8.8999	9.8091	10.5058	11.0772
	1.5	5.6267	6.6794	7.3825	7.9246	9.3945	11.1257	12.2757	13.1592	13.8853
	2	6.4007	7.5973	8.3979	9.0158	10.6930	12.6715	13.9878	15.0000	15.8329
	2.5	7.0087	8.3087	9.1821	9.8572	11.6926	13.8606	15.3043	16.4153	17.3299
	3	7.5272	8.8999	9.8279	10.5472	12.5077	14.8286	16.3756	17.5667	18.5476
	3.5	7.9974	9.4193	10.3872	11.1401	13.1999	15.6465	17.2798	18.5381	19.5747
	4	8.9708	10.4985	11.5488	12.3704	14.6322	17.3355	19.1456	20.5419	21.6932

Table 41 Maximum moment results for alpha 6 for slabs subjected to CHBDC axle 2 & 3 loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2and 3	1	4.9346	5.5731	5.9717	6.2688	7.0434	7.8954	8.4367	8.8448	9.1883
	1.5	6.5480	7.4596	8.0393	8.4706	9.5815	10.8179	11.5970	12.1770	12.6433
	2	7.6893	8.8055	9.5173	10.0534	11.4363	12.9823	13.9621	14.6920	15.2788
	2.5	8.5842	9.8526	10.6686	11.2865	12.8929	14.6907	15.8381	16.6949	17.3846
	3	9.3440	10.7219	11.6191	12.3007	14.0884	16.0986	17.3881	18.3532	19.1314
	3.5	10.0297	11.4834	12.4483	13.1866	15.1366	17.3490	18.7725	19.8402	20.7023
	4	11.4834	13.1103	14.2006	15.0431	17.2953	19.8755	21.5499	22.8104	23.8304

Table 42 Maximum moment results for alpha 6 for slabs subjected to CHBDC truck loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
TRUCK	1	5.1177	5.7031	6.0741	6.3871	7.5379	8.9033	9.8106	10.5066	11.0777
	1.5	7.1179	7.8956	8.4069	8.7927	9.8142	11.1941	12.3164	13.1862	13.9046
	2	8.8494	9.7195	10.3106	10.7647	11.9738	13.3767	14.2834	15.1575	15.9563
	2.5	10.4824	11.4171	12.0442	12.5291	13.8586	15.4303	16.4591	17.2393	17.8738
	3	12.0654	13.0405	13.7021	14.2157	15.6072	17.2846	18.4034	19.2568	19.9537
	3.5	13.8186	14.8038	15.4797	16.0071	17.4567	19.1910	20.3615	21.2721	22.0188
	4	16.9764	18.0201	18.7451	19.3156	20.9015	22.8233	24.1153	25.1126	25.9458

Table 43 Maximum moment results for alpha 6 for slabs subjected to CHBDC axle 4 loading (main bars parallel to traffic)

Maximum Moment (kN.m)

	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4 Transverse	1	12.3257	13.1960	13.7081	14.0721	14.9577	15.8741	16.4353	16.8489	17.1801
	1.5	16.3131	17.7154	18.5345	19.1133	20.5102	21.8983	22.7102	23.2893	23.7417
	2	19.3388	21.2060	22.3191	23.1136	25.0338	26.9567	28.0735	28.8621	29.4721
	2.5	21.7966	24.0337	25.3962	26.3803	28.7901	31.2325	32.6634	33.6752	34.4573
	3	23.9246	26.4364	27.9985	29.1406	31.9796	34.9006	36.6324	37.8633	38.8175
	3.5	25.8656	28.5708	30.2849	31.5526	34.7517	38.1004	40.1099	41.5474	42.6663

Table 44 Maximum moment results for alpha 6 for slabs subjected to CHBDC axle 2 & 3 loading (main bars parallel to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2&3 Transverse	1.5	5.7098	6.1388	6.3999	6.5899	7.0652	7.5654	7.8692	8.0894	8.2647
	2	11.8665	12.9599	13.6112	14.0765	15.2060	16.3490	17.0201	17.4976	17.8691
	2.5	16.2009	17.9063	18.9467	19.6985	21.5390	23.3934	24.4738	25.2407	25.8324
	3	19.6454	21.8229	23.1874	24.1884	26.6839	29.2497	30.7610	31.8311	32.6575
	3.5	22.6269	25.1436	26.7595	27.9622	31.0173	34.2309	36.1520	37.5229	38.5872
	4	25.3616	28.1115	29.9138	31.2728	34.7866	38.5663	40.8609	42.5126	43.8021

Alpha 8 Bending Moment Results

Table 45 Maximum moment results for alpha 8 for slabs subjected to CHBDC axle 4 loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4	1	3.9862	4.7296	5.2253	5.6072	6.6411	7.8556	8.6605	9.2776	9.7842
	1.5	4.9633	5.8917	6.5120	6.9905	8.2883	9.8180	10.8348	11.6164	12.2591
	2	5.6513	6.7030	7.4085	7.9534	9.4336	11.1812	12.3445	13.2396	13.9763
	2.5	6.2028	7.3381	8.1047	8.6985	10.3161	12.2300	13.5056	14.4877	15.2965
	3	6.6871	7.8765	8.6860	9.3158	11.0386	13.0849	14.4509	15.5034	16.3705
	3.5	7.1388	8.3613	9.1999	9.8552	11.6575	13.8097	15.2501	16.3612	17.2770
	4	8.0712	9.3657	10.2669	10.9758	12.9414	15.3093	16.9016	18.1324	19.1483

Table 46 Maximum moment results for alpha 8 for slabs subjected to CHBDC axle 2 & 3 loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2and 3	1	4.4714	5.0738	5.4505	5.7288	6.4553	7.2492	7.7494	8.1226	8.4237
	1.5	5.8885	6.7362	7.2770	7.6800	8.7176	9.8727	10.6000	11.1406	11.5747
	2	6.8967	7.9194	8.5760	9.0714	10.3552	11.7892	12.7007	13.3799	13.9261
	2.5	7.7040	8.8485	9.5920	10.1571	11.6350	13.2933	14.3552	15.1491	15.7888
	3	8.4104	9.6356	10.4426	11.0589	12.6885	14.5309	15.7181	16.6084	17.3272
	3.5	9.0667	10.3426	11.1940	11.8529	13.6105	15.6228	16.9262	17.9068	18.7000
	4	10.4460	11.8450	12.7951	13.5343	15.5352	17.8570	19.3770	20.5264	21.4592

Table 47 Maximum moment results for alpha 8 for slabs subjected to CHBDC truck loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
TRUCK	1	4.7123	5.2501	5.5934	5.8542	6.6679	7.8653	8.6653	9.2804	9.7860
	1.5	6.5898	7.2853	7.7465	8.0967	9.0277	10.0912	10.9187	11.6758	12.3037
	2	8.2753	9.0376	9.5493	9.9511	11.0344	12.3031	13.1283	13.7521	14.2585
	2.5	9.8806	10.6911	11.2416	11.6682	12.8232	14.2223	15.1478	15.8526	16.4276
	3	11.4525	12.2892	12.8635	13.3108	14.5324	15.9893	16.9791	17.7423	18.3679
	3.5	13.2241	14.0577	14.6347	15.0877	16.3447	17.8634	18.8820	19.6671	20.3232
	4	16.3662	17.2389	17.8501	18.3339	19.6916	21.3550	22.4828	23.3577	24.0810

Table 48 Maximum moment results for alpha 8 for slabs subjected to CHBDC axle 4 loading (main bars parallel to traffic)

Maximum Moment (kN.m)

Axle 4 Transverse	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
	1	11.6298	12.5124	13.0229	13.3871	14.2649	15.1539	15.6878	16.0767	16.3856
	1.5	15.2050	16.6006	17.4233	18.0070	19.4111	20.8107	21.6239	22.1999	22.6470
	2	17.9024	19.7119	20.8056	21.5922	23.5081	25.4396	26.5681	27.3651	27.9809
	2.5	20.1274	22.2388	23.5467	24.5008	26.8657	29.2897	30.7253	31.7446	32.5343
	3	22.1052	24.4204	25.8866	26.9705	29.7051	32.5663	34.2811	35.5096	36.4657
	3.5	23.9572	26.4025	27.9793	29.1590	32.1845	35.4181	37.3798	38.7982	39.9080

Table 49 Maximum moment results for alpha 8 for slabs subjected to CHBDC axle 2 & 3 loading (main bars parallel to traffic)

		Maximum Moment (kN.m)								
Axle 2&3 Transverse	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
	1.5	5.3862	5.7981	6.0487	6.2309	6.6860	7.1652	7.4569	7.6689	7.8361
	2	11.0236	12.0871	12.7275	13.1877	14.3094	15.4468	16.1168	16.5931	16.9631
	2.5	14.9318	16.5368	17.5339	18.2620	20.0685	21.9181	23.0063	23.7771	24.3767
	3	18.0875	20.0715	21.3418	22.2859	24.6807	27.1971	28.7016	29.7758	30.6100
	3.5	20.8893	23.1217	24.5872	25.6934	28.5590	31.6508	33.5328	34.8897	35.9505
	4	23.5203	25.9090	27.5079	28.7305	31.9571	35.5255	37.7362	39.3463	40.6137

Alpha 10 Bending Moment Results

Table 50 Maximum moment results for alpha 10 for slabs subjected to CHBDC axle 4 loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4	1	3.6060	4.2788	4.7275	5.0733	6.0099	7.1109	7.8410	8.4013	8.8615
	1.5	4.4911	5.3302	5.8914	6.3245	7.4996	8.8853	9.8070	10.5158	11.0988
	2	5.1209	6.0674	6.7041	7.1965	8.5357	10.1183	11.1724	11.9838	12.6518
	2.5	5.6374	6.6521	7.3407	7.8754	9.3358	11.0675	12.2229	13.1128	13.8459
	3	6.1028	7.1582	7.8809	8.4451	9.9949	11.8429	13.0790	14.0321	14.8178
	3.5	6.5457	7.6239	8.3681	8.9519	10.5658	12.5039	13.8051	14.8100	15.6392
	4	7.4571	8.5862	9.3769	10.0035	11.7518	13.8740	15.3077	16.4184	17.3364

Table 51 Maximum moment results for alpha 10 for slabs subjected to CHBDC axle 2 & 3 loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2and 3	1	4.1263	4.6987	5.0578	5.3228	6.0125	6.7653	7.2377	7.5888	7.8712
	1.5	5.4061	6.2023	6.7118	7.0923	8.0726	9.1653	9.8536	10.3651	10.7756
	2	6.3252	7.2733	7.8862	8.3496	9.5555	10.9034	11.7622	12.4028	12.9181
	2.5	7.0783	8.1252	8.8115	9.3351	10.7124	12.2631	13.2593	14.0050	14.6064
	3	7.7548	8.8621	9.5987	10.1640	11.6697	13.3826	14.4911	15.3240	15.9972
	3.5	8.3964	9.5389	10.3076	10.9028	12.5104	14.3673	15.5776	16.4909	17.2311
	4	9.7355	10.9681	11.8131	12.4743	14.2819	16.4032	17.8034	18.8666	19.7318

Table 52 Maximum moment results for alpha 10 for slabs subjected to CHBDC truck loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
TRUCK	1	4.4177	4.9167	5.2377	5.4812	6.1212	7.1299	7.8513	8.4077	8.8657
	1.5	6.2241	6.8486	7.2704	7.5924	8.4521	9.4405	10.0770	10.6161	11.1768
	2	7.8761	8.5599	9.0229	9.3800	10.3599	11.5234	12.2852	12.8630	13.3328
	2.5	9.4654	10.1850	10.6780	11.0613	12.1056	13.3565	14.2024	14.8491	15.3782
	3	11.0317	11.7693	12.2792	12.6778	13.7740	15.0902	15.9714	16.6577	17.2286
	3.5	12.8199	13.5463	14.0525	14.4519	15.5681	16.9279	17.8458	18.5558	19.1416
	4	15.9538	16.7078	17.2391	17.6615	18.8552	20.3307	21.3381	22.1229	22.7735

Table 53 Maximum moment results for alpha 10 for slabs subjected to CHBDC axle 4 loading (main bars parallel to traffic)

Maximum Moment (kN.m)

Axle 4 Transverse	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
	1	11.0754	11.9654	12.4811	12.8443	13.7213	14.6007	15.1218	15.4978	15.7944
	1.5	14.3484	15.7266	16.5460	17.1301	18.5372	19.9441	20.7619	21.3395	21.7865
	2	16.8241	18.5697	19.6375	20.4107	22.3096	24.2352	25.3687	26.1709	26.7912
	2.5	18.9061	20.8987	22.1503	23.0709	25.3775	27.7703	29.1960	30.2150	31.0066
	3	20.8005	22.9463	24.3240	25.3516	27.9760	30.7652	32.4497	33.6655	34.6159
	3.5	22.6080	24.8436	26.3031	27.4043	30.2646	33.3744	35.2836	36.6699	37.7626

Table 54 Maximum moment results for alpha 10 for slabs subjected to CHBDC axle 2 & 3 loading (main bars parallel to traffic)

		Maximum Moment (kN.m)								
Axle 2&3 Transverse	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
	1.5	5.1402	5.5388	5.7821	5.9587	6.3991	6.8624	7.1447	7.3500	7.5121
	2	10.3864	11.4173	12.0442	12.4972	13.6081	14.7363	15.4048	15.8802	16.2495
	2.5	14.0077	15.5171	16.4692	17.1707	18.9313	20.7595	21.8453	22.6182	23.2176
	3	16.9858	18.8038	19.9875	20.8764	23.1634	25.6112	27.0935	28.1596	28.9916
	3.5	19.6866	21.6918	23.0296	24.0501	26.7348	29.6923	31.5200	32.8494	33.8950
	4	22.2648	24.3790	25.8149	26.9239	29.8963	33.2560	35.3724	36.9291	38.1629

B.1.2 MAXIMUM BENDING MOMENT VS SPAN LENGTH

Alpha 0.25 Bending Moment VS Span Length for Different D Values

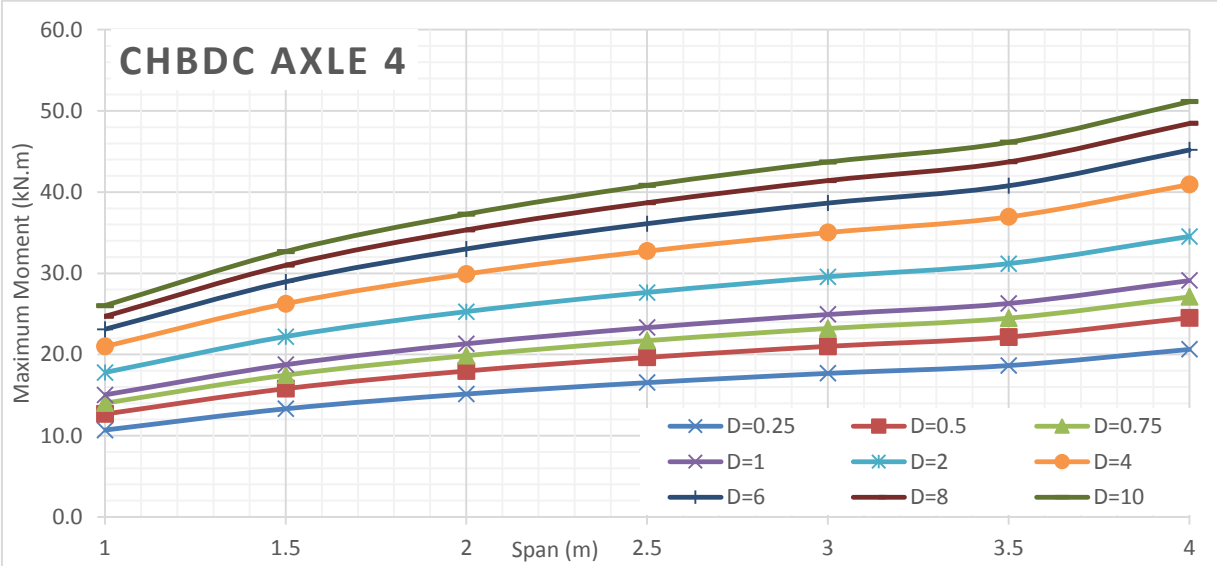


Figure 1 Maximum moment of deck slabs subjected to CHBDC axle 4 for different D values of alpha 0.25 FEA analyses

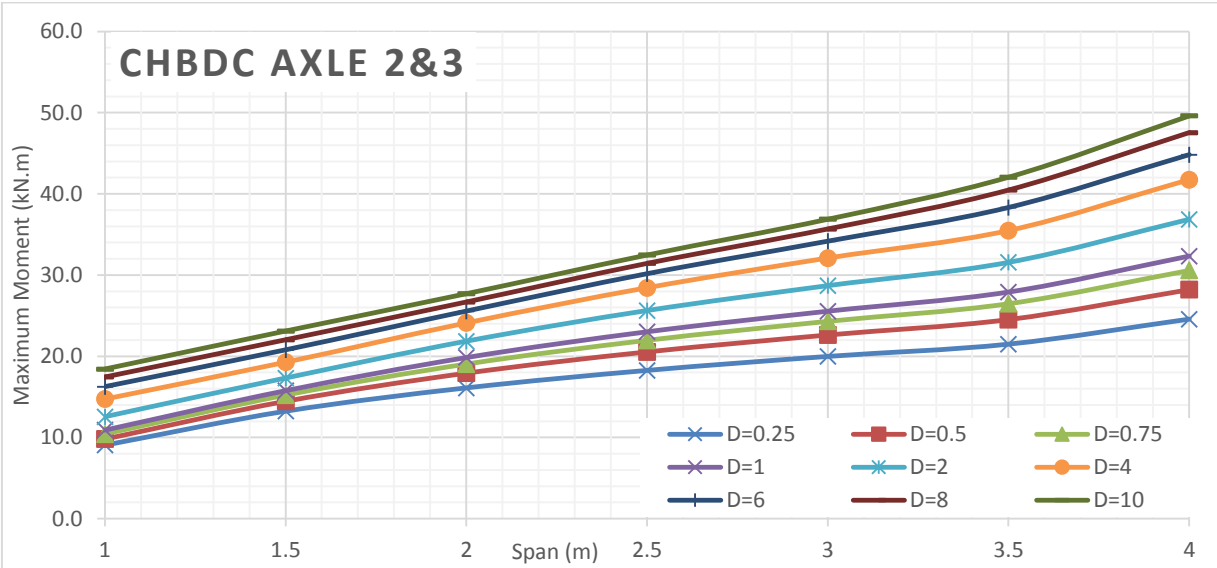


Figure 2 Maximum moment of deck slabs subjected to CHBDC axle 2 & 3 for different D values of alpha 0.25 FEA analyses

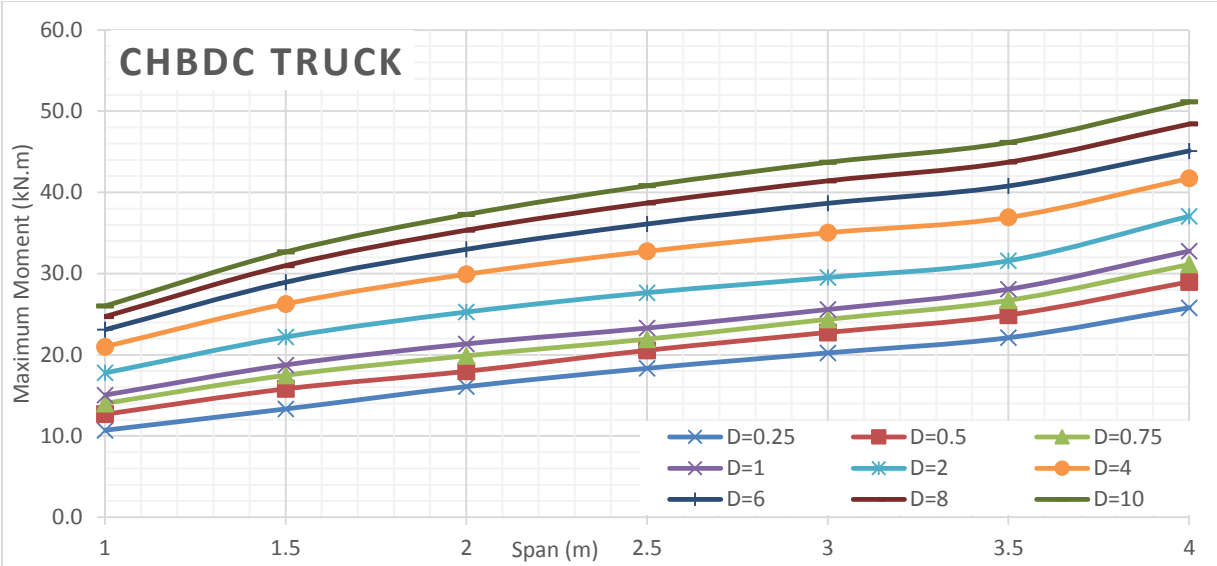


Figure 3 Maximum moment of deck slabs subjected to CHBDC truck for different D values of alpha 0.25 FEA analyses

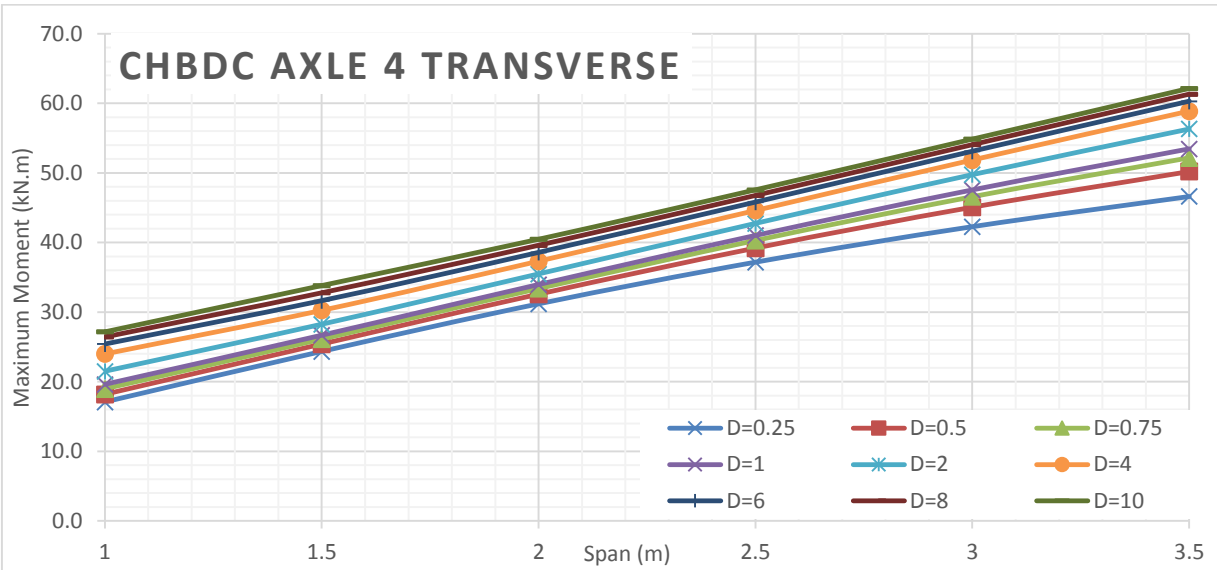


Figure 4 Maximum moment of deck slabs subjected to CHBDC axle 4 for different D values of alpha 0.25 FEA analyses

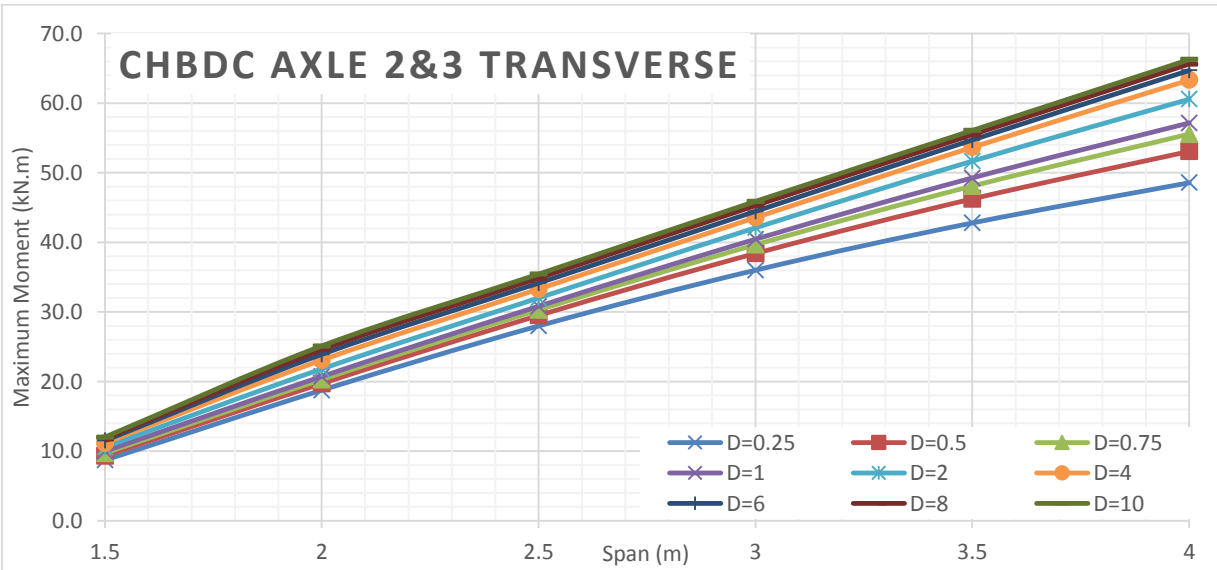


Figure 5 Maximum moment of deck slabs subjected to CHBDC axle 2 & 3 for different D values of alpha 0.25 FEA analyses

Alpha 0.5 Bending Moment VS Span Length for Different D Values

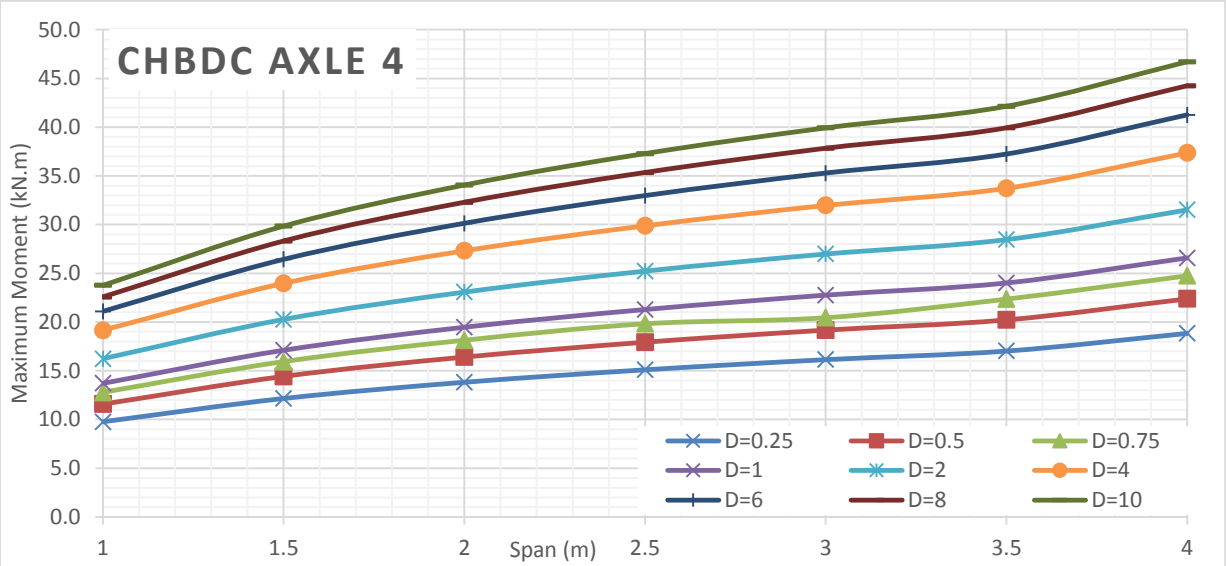


Figure 6 Maximum moment of deck slabs subjected to CHBDC axle 4 for different D values of alpha 0.5 FEA analyses

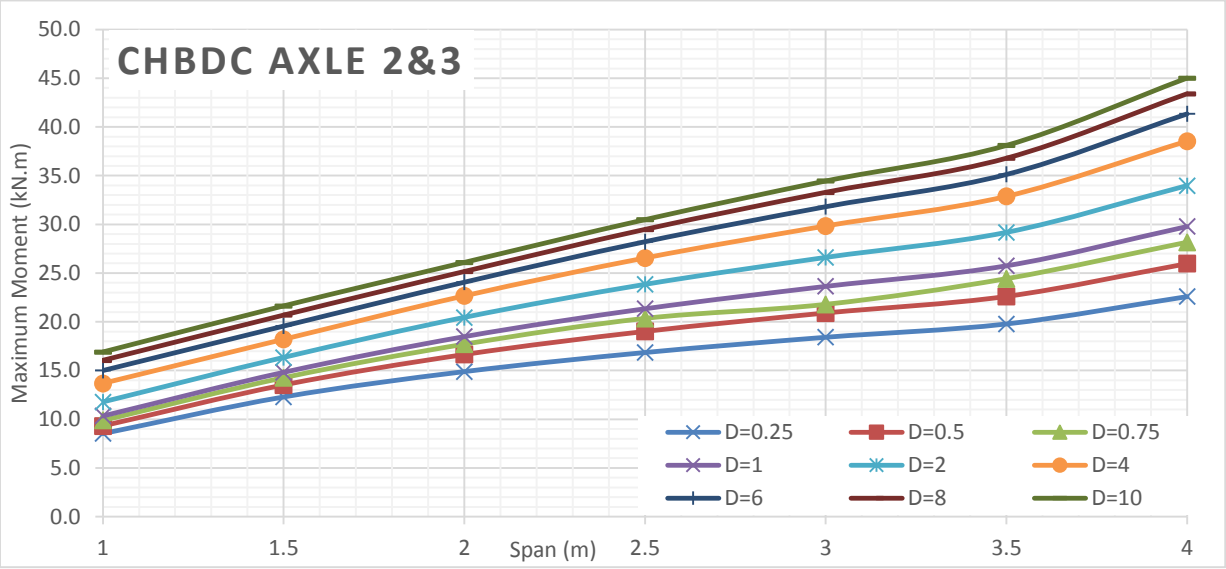


Figure 7 Maximum moment of deck slabs subjected to CHBDC axle 2 & 3 for different D values of alpha 0.5 FEA analyses

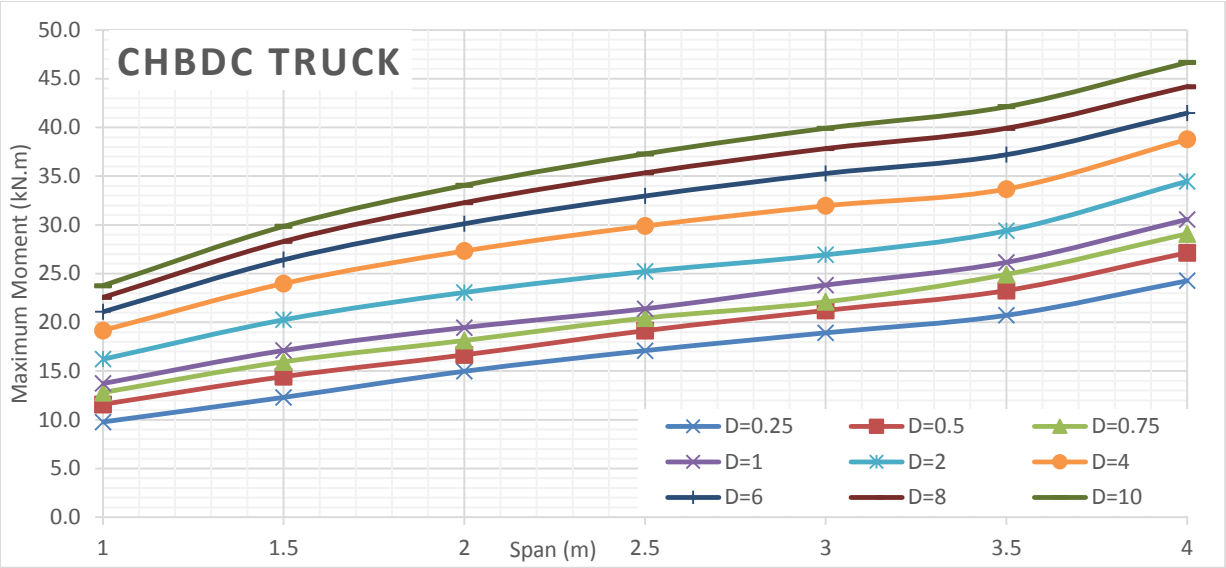


Figure 8 Maximum moment of deck slabs subjected to CHBDC truck for different D values of alpha 0.5 FEA analyses

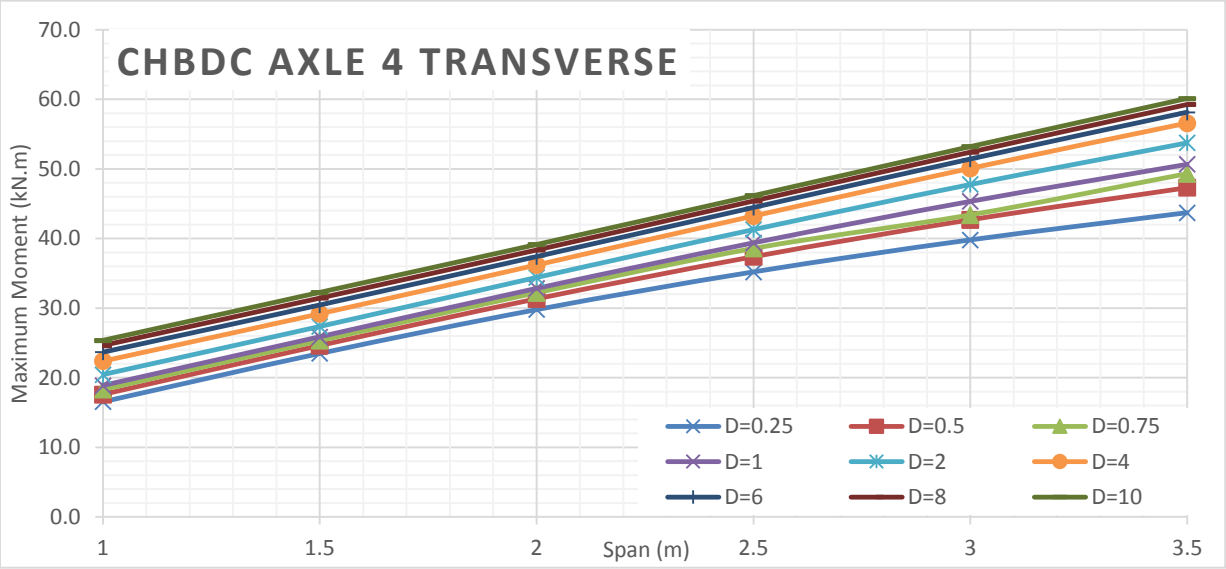


Figure 9 Maximum moment of deck slabs subjected to CHBDC axle 4 for different D values of alpha 0.5 FEA analyses

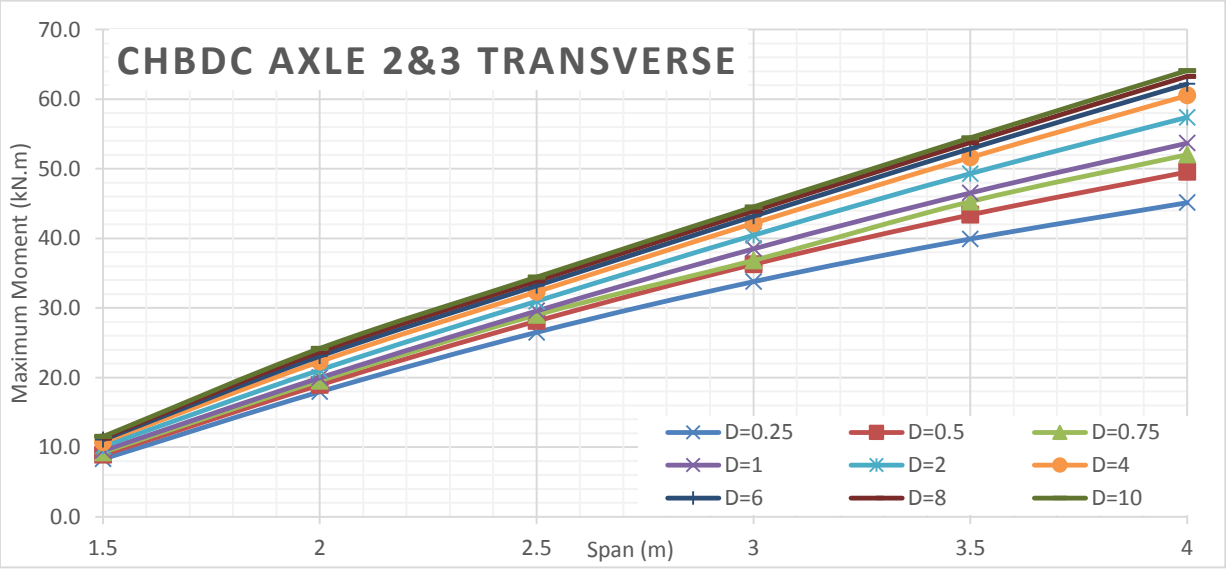


Figure 10 Maximum moment of deck slabs subjected to CHBDC axle 2 & 3 for different D values of alpha 0.5 FEA analyses

Alpha 0.75 Bending Moment VS Span Length for Different D Values

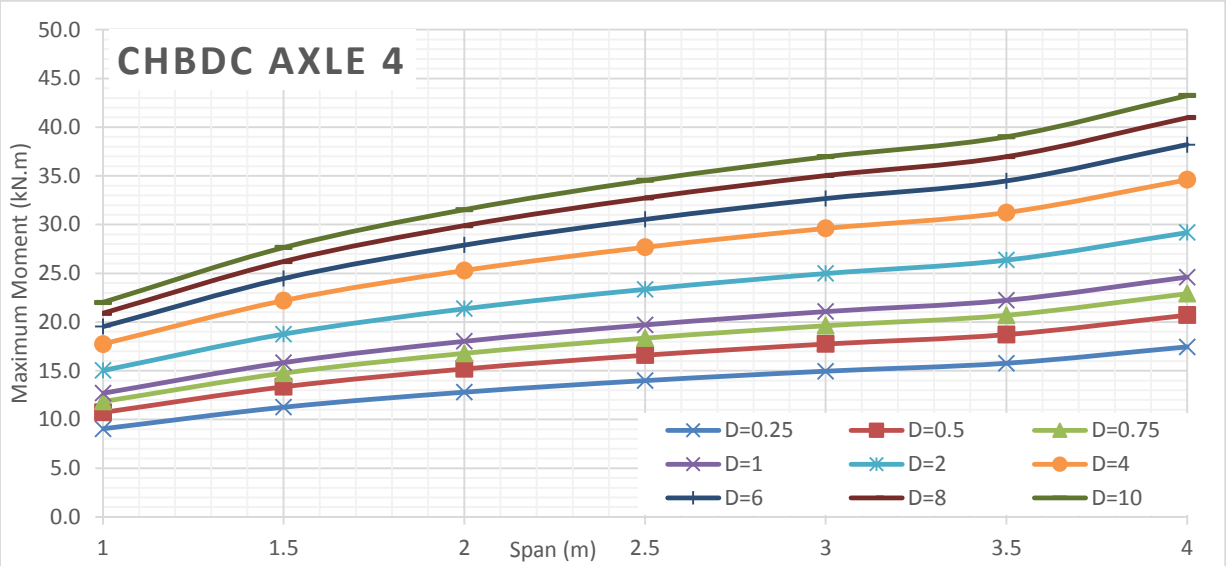


Figure 11 Maximum moment of deck slabs subjected to CHBDC axle 4 for different D values of alpha 0.75 FEA analyses

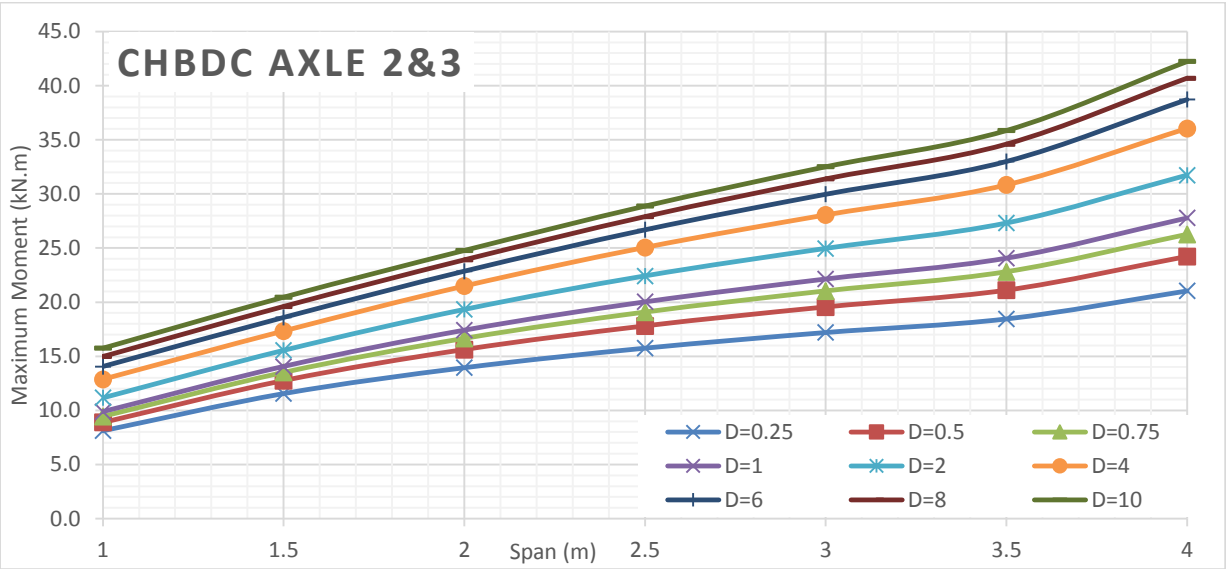


Figure 12 Maximum moment of deck slabs subjected to CHBDC axle 2 & 3 for different D values of alpha 0.75 FEA analyses

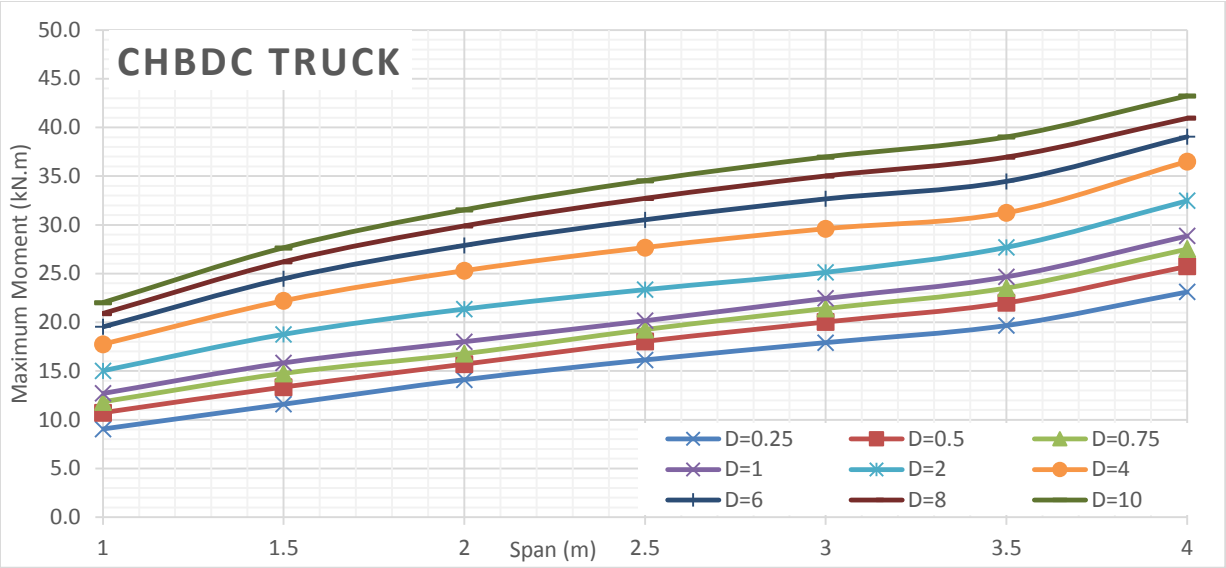


Figure 13 Maximum moment of deck slabs subjected to CHBDC truck for different D values of alpha 0.75 FEA analyses

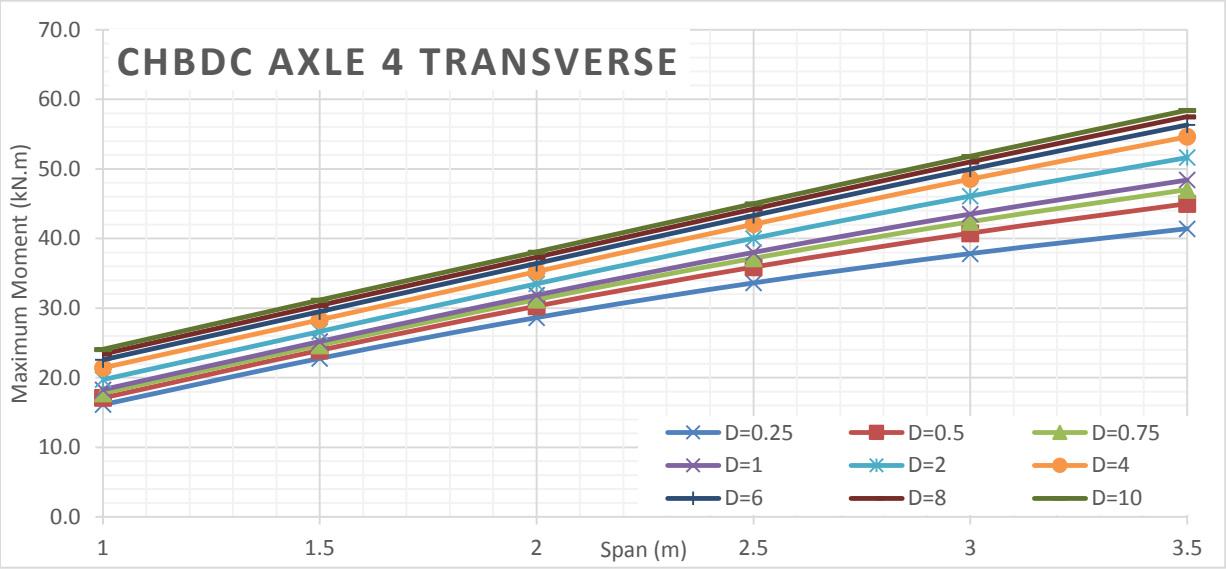


Figure 14 Maximum moment of deck slabs subjected to CHBDC axle 4 for different D values of alpha 0.75 FEA analyses

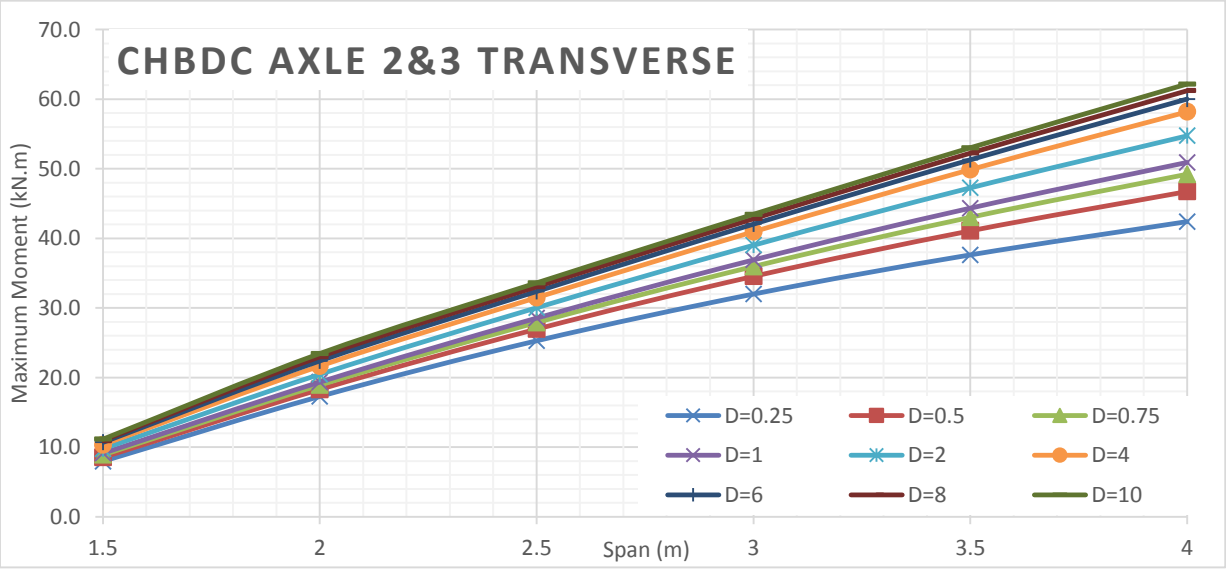


Figure 15 Maximum moment of deck slabs subjected to CHBDC axle 2 & 3 for different D values of alpha 0.75 FEA analyses

Alpha 1 Bending Moment VS Span Length for Different D Values

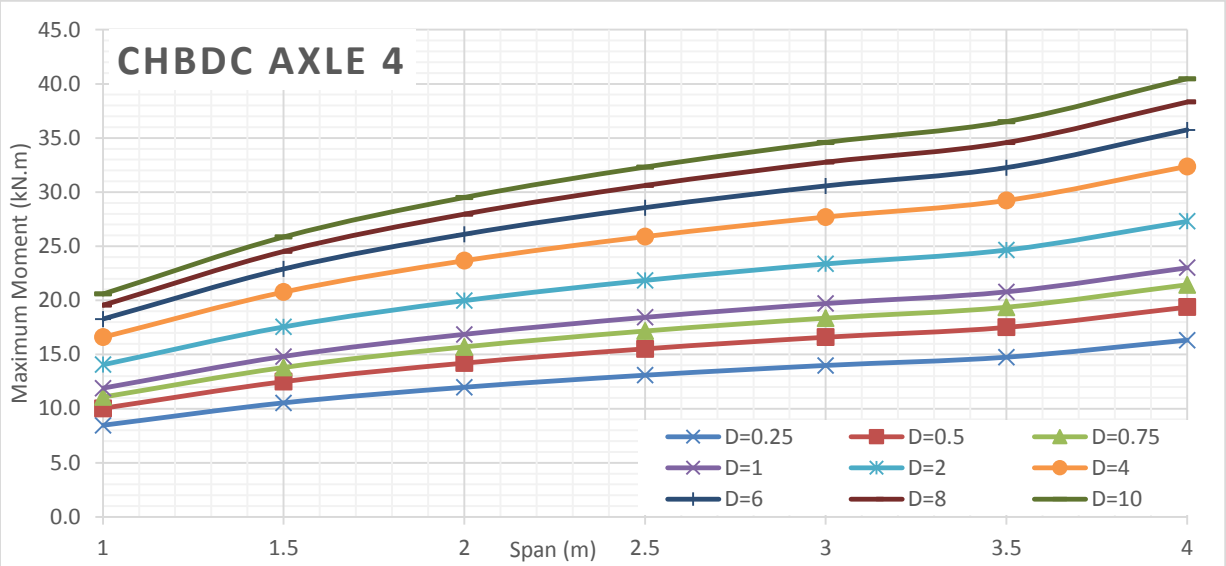


Figure 16 Maximum moment of deck slabs subjected to CHBDC axle 4 for different D values of alpha 1 FEA analyses

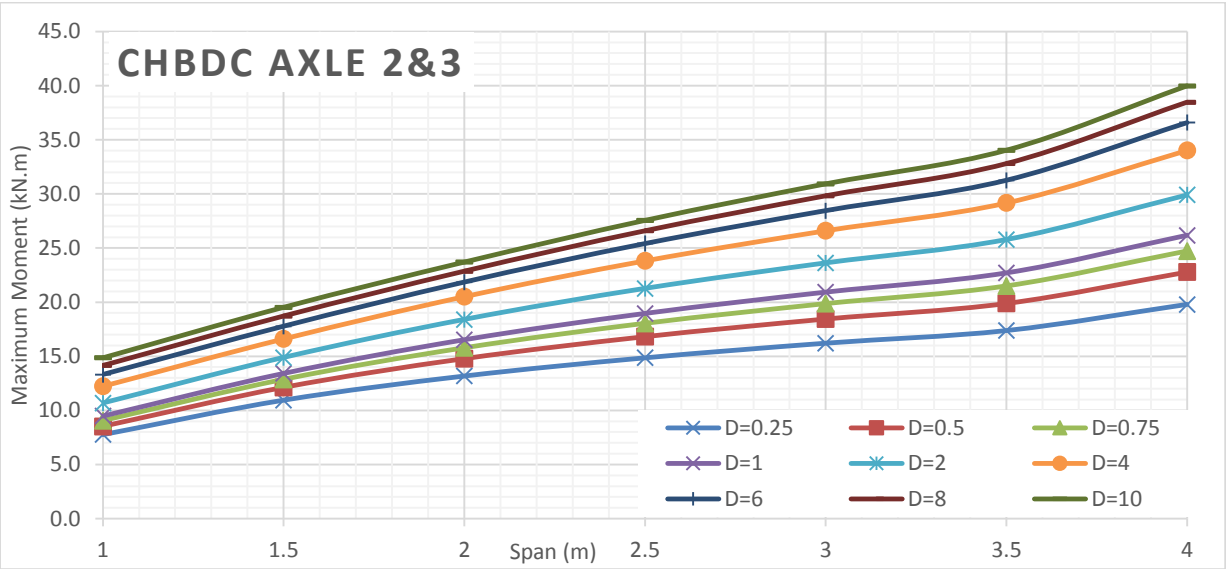


Figure 17 Maximum moment of deck slabs subjected to CHBDC axle 2 & 3 for different D values of alpha 1 FEA analyses

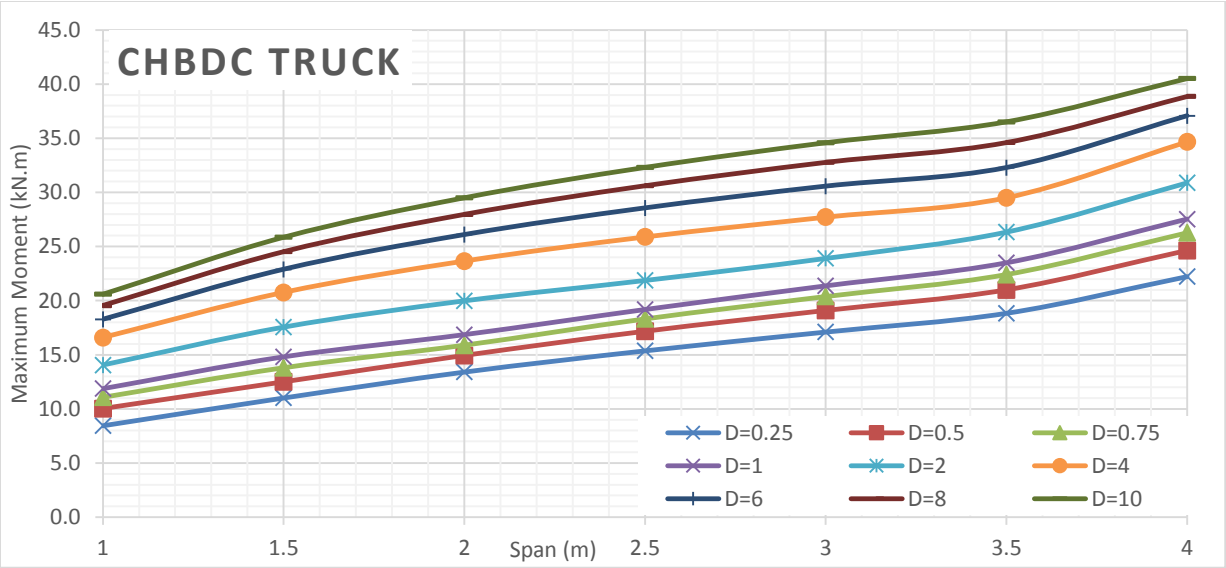


Figure 18 Maximum moment of deck slabs subjected to CHBDC truck for different D values of alpha 1 FEA analyses

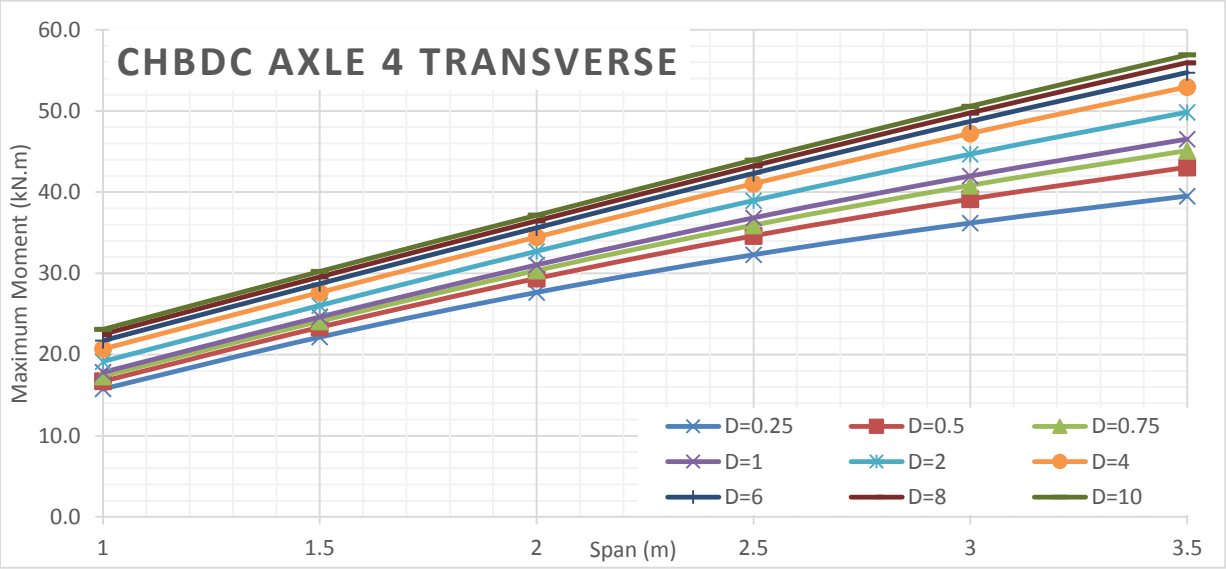


Figure 19 Maximum moment of deck slabs subjected to CHBDC axle 4 for different D values of alpha 1 FEA analyses

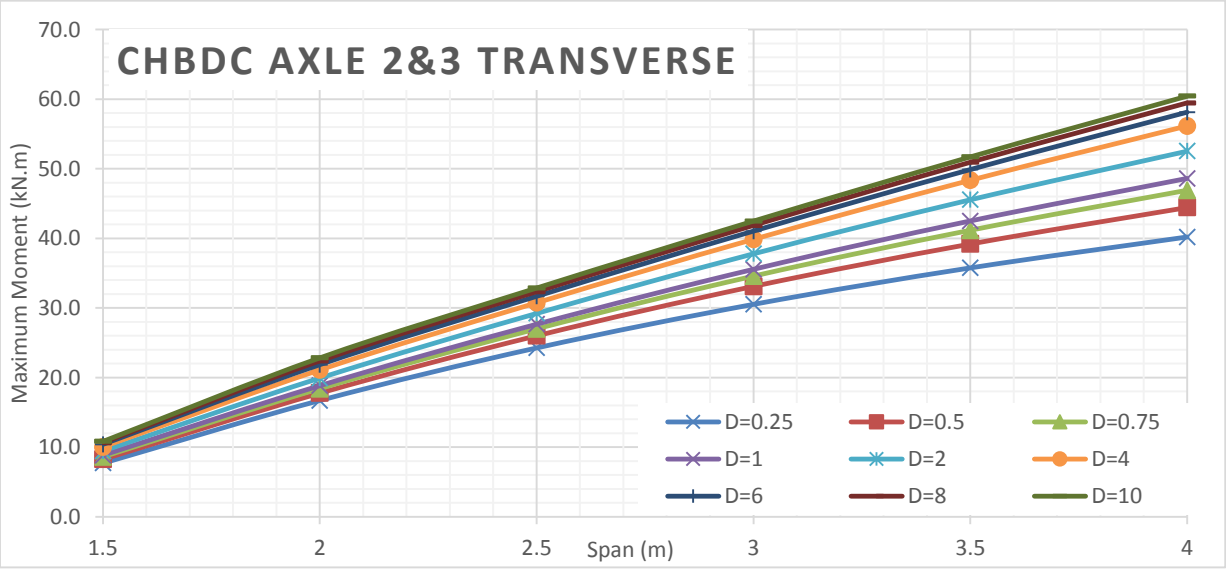


Figure 20 Maximum moment of deck slabs subjected to CHBDC axle 2 & 3 for different D values of alpha 1 FEA analyses

Alpha 2 Bending Moment VS Span Length for Different D Values

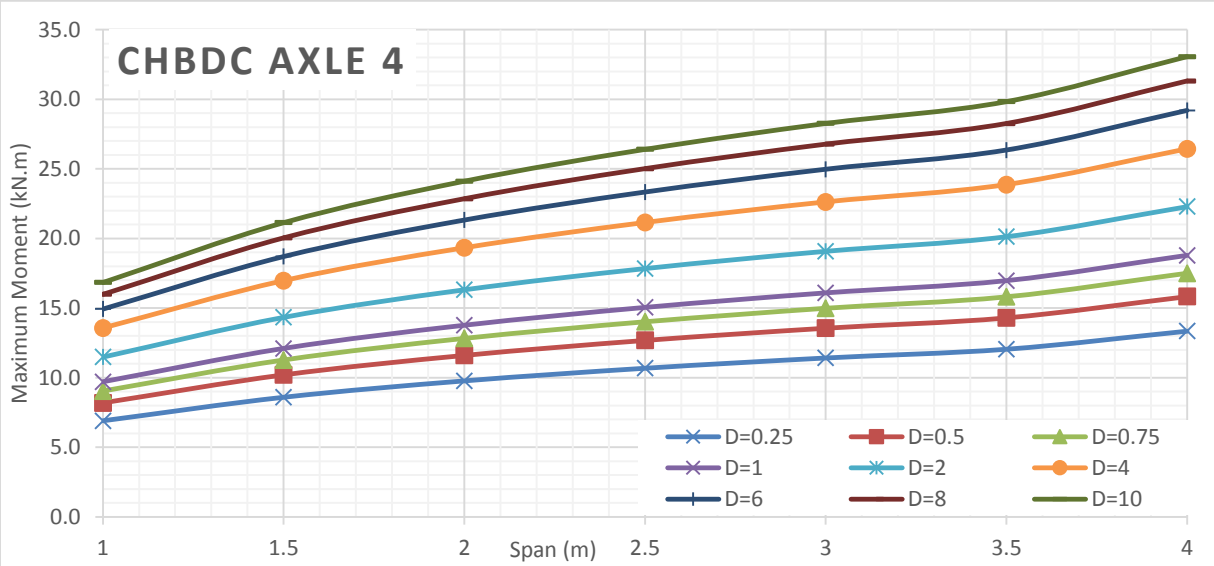


Figure 21 Maximum moment of deck slabs subjected to CHBDC axle 4 for different D values of alpha 2 FEA analyses

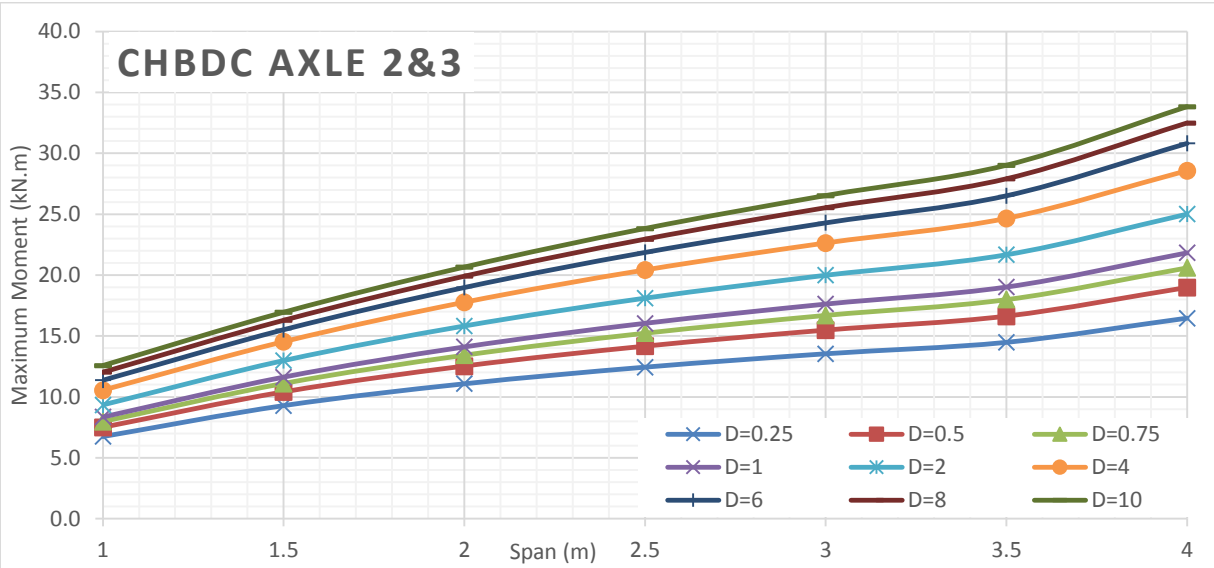


Figure 22 Maximum moment of deck slabs subjected to CHBDC axle 2 & 3 for different D values of alpha 2 FEA analyses

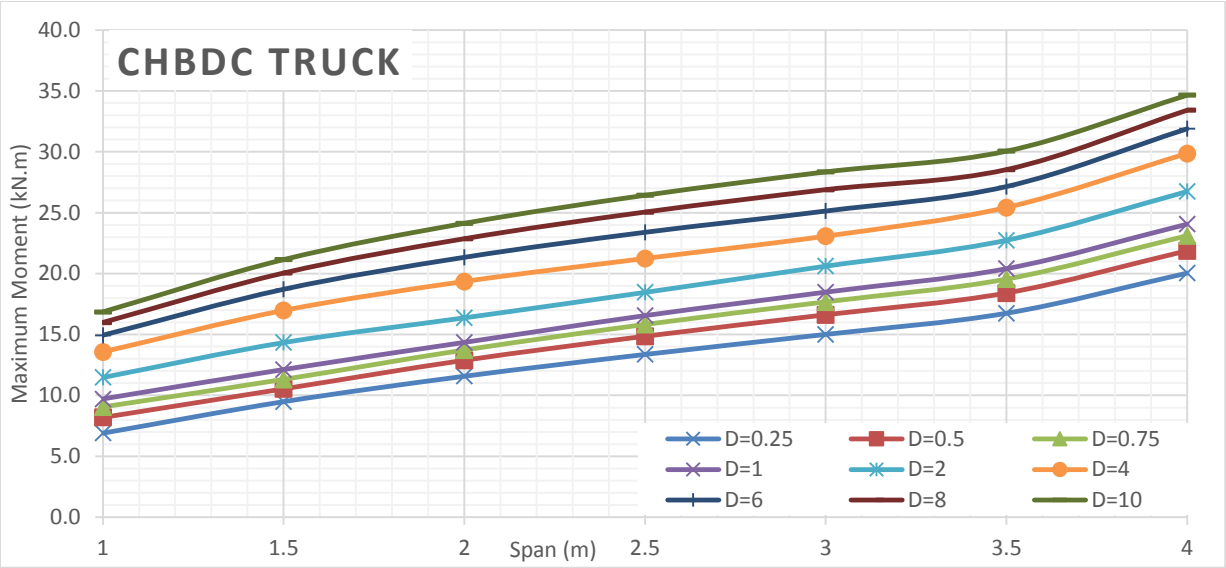


Figure 23 Maximum moment of deck slabs subjected to CHBDC truck for different D values of alpha 2 FEA analyses

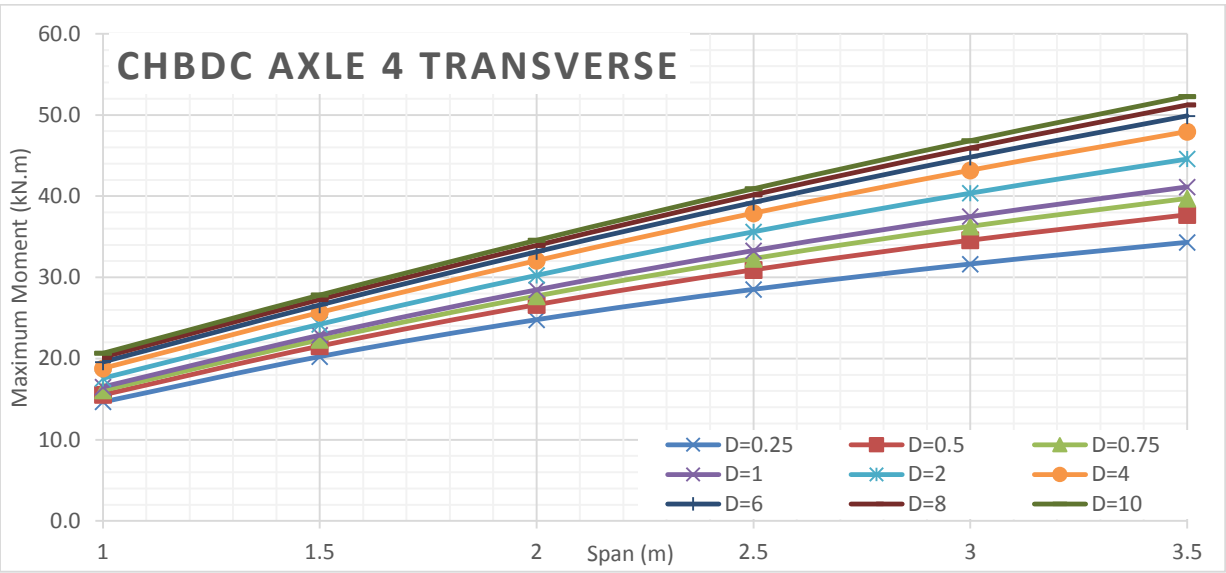


Figure 24 Maximum moment of deck slabs subjected to CHBDC axle 4 for different D values of alpha 2 FEA analyses

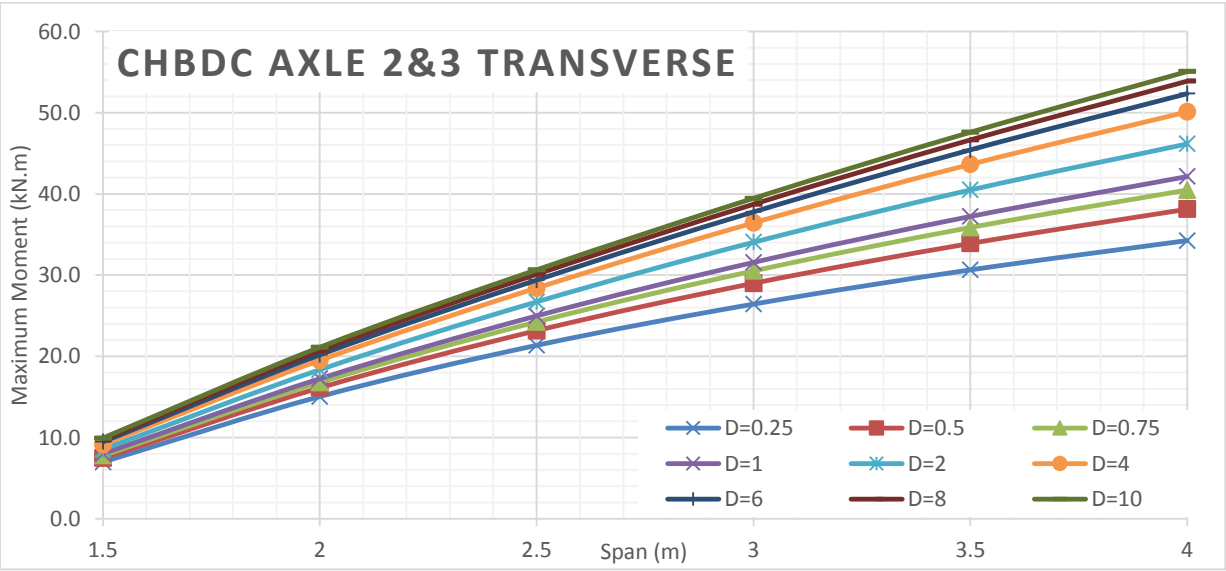


Figure 25 Maximum moment of deck slabs subjected to CHBDC axle 2 & 3 for different D values of alpha 2 FEA analyses

Alpha 4 Bending Moment VS Span Length for Different D Values

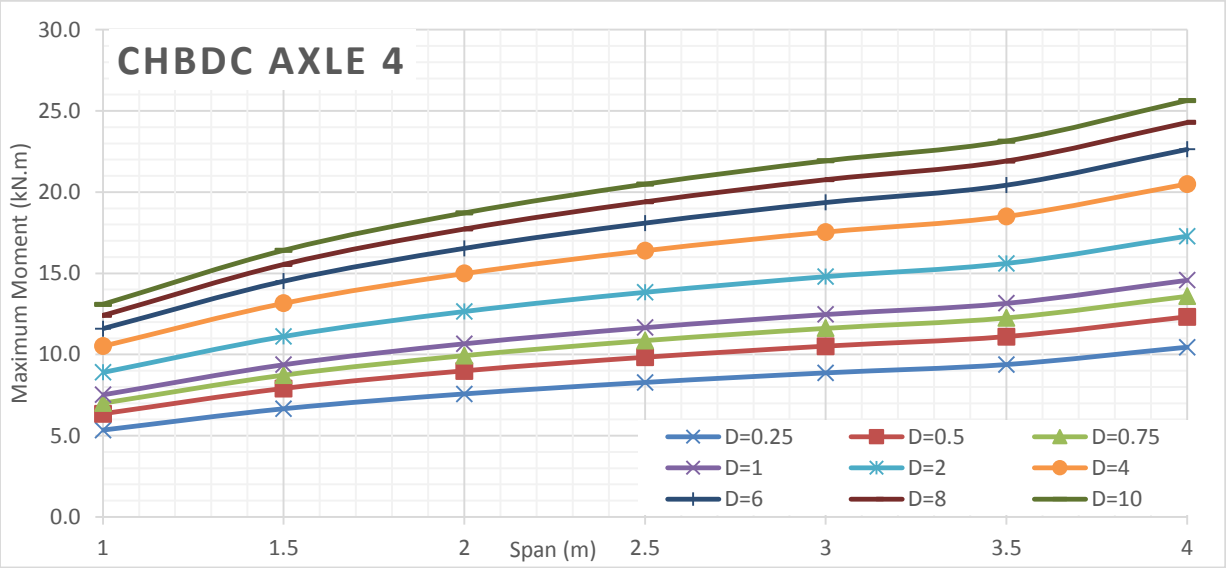


Figure 26 Maximum moment of deck slabs subjected to CHBDC axle 4 for different D values of alpha 4 FEA analyses

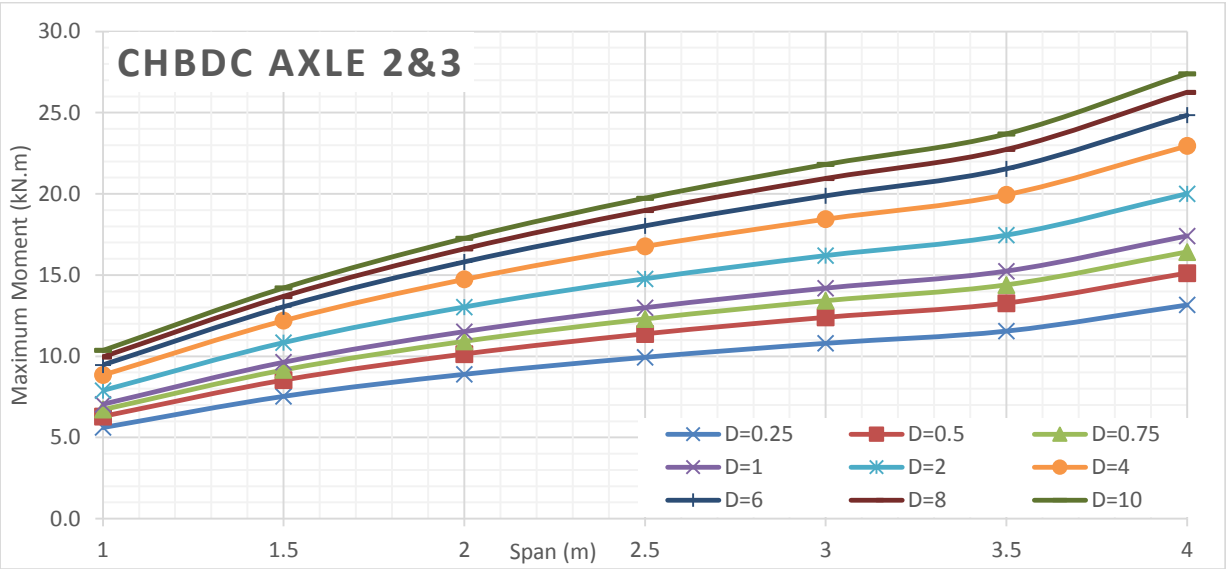


Figure 27 Maximum moment of deck slabs subjected to CHBDC axle 2 & 3 for different D values of alpha 4 FEA analyses

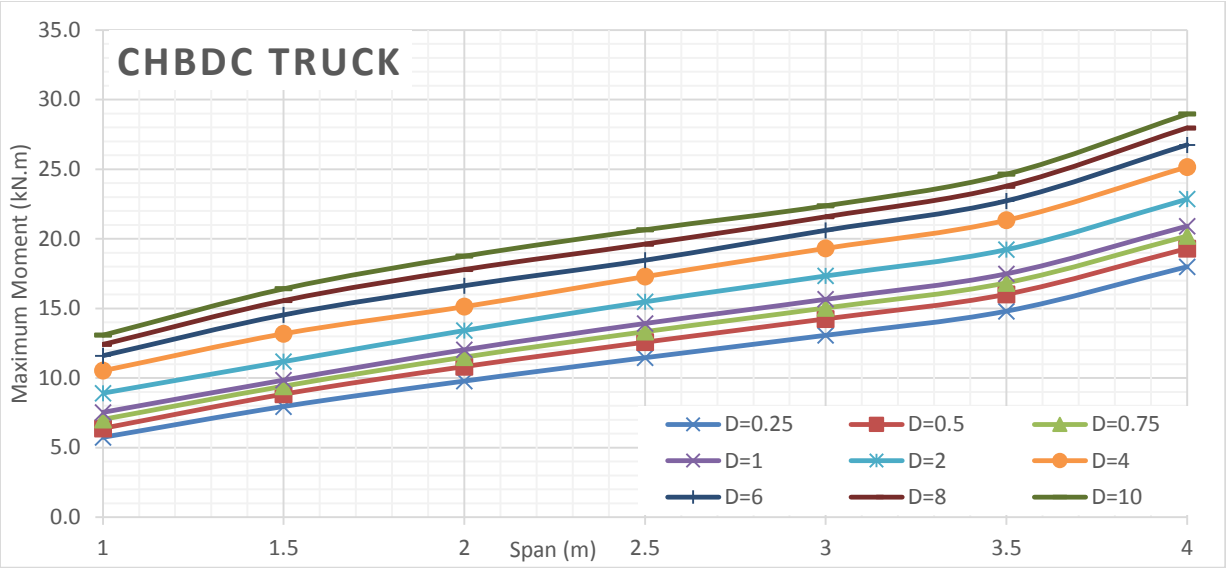


Figure 28 Maximum moment of deck slabs subjected to CHBDC truck for different D values of alpha 4 FEA analyses

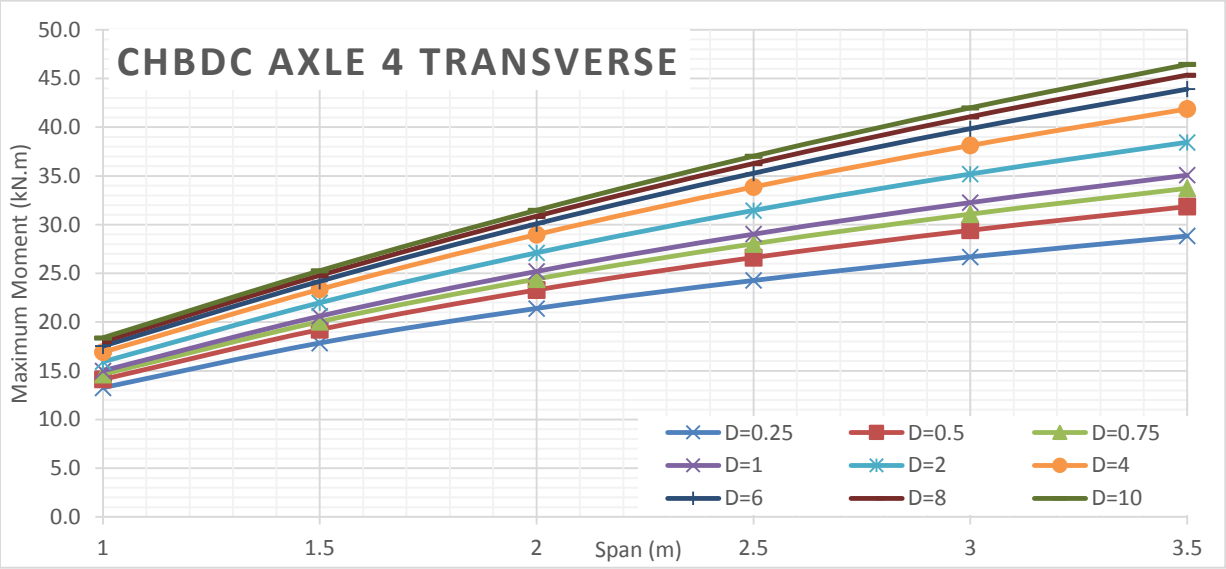


Figure 29 Maximum moment of deck slabs subjected to CHBDC axle 4 for different D values of alpha 4 FEA analyses

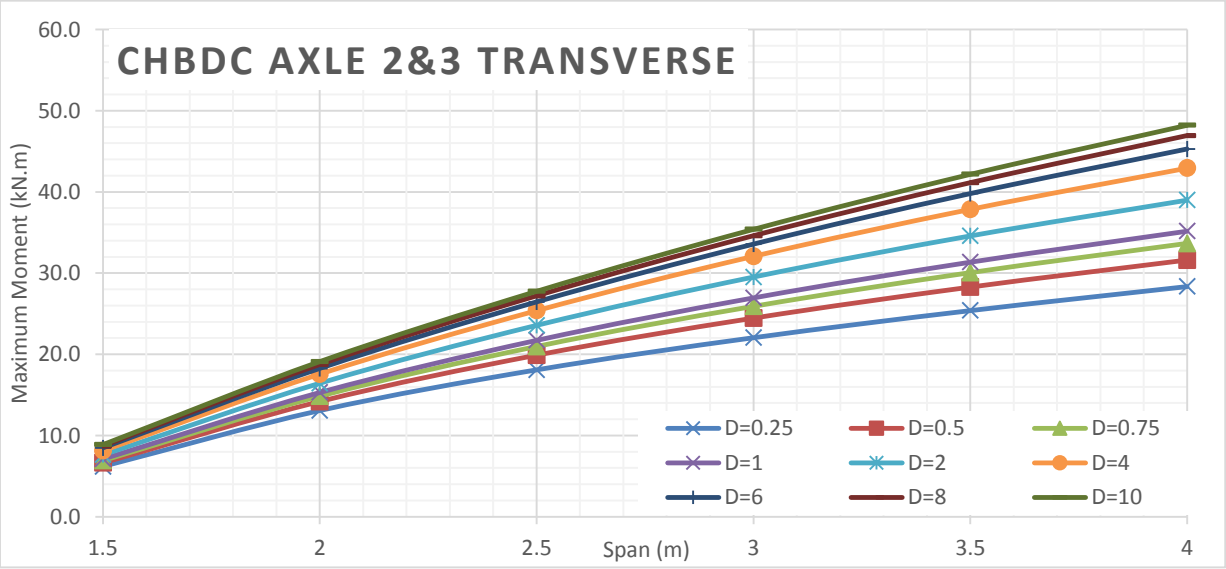


Figure 30 Maximum moment of deck slabs subjected to CHBDC axle 2 & 3 for different D values of alpha 4 FEA analyses

Alpha 6 Bending Moment VS Span Length for Different D Values

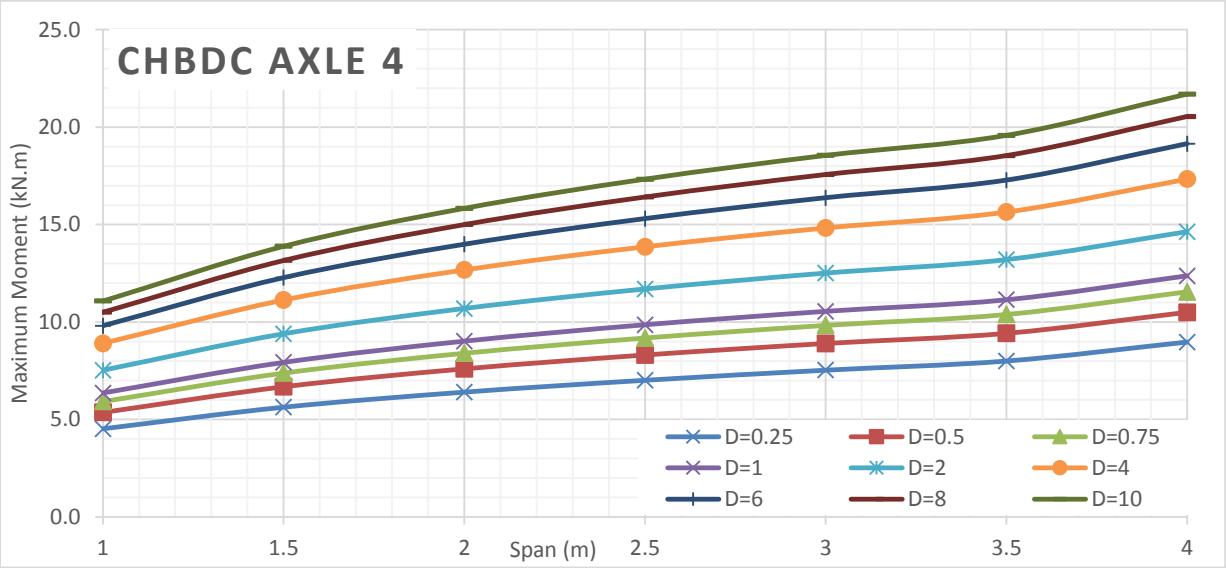


Figure 31 Maximum moment of deck slabs subjected to CHBDC axle 4 for different D values of alpha 6 FEA analyses

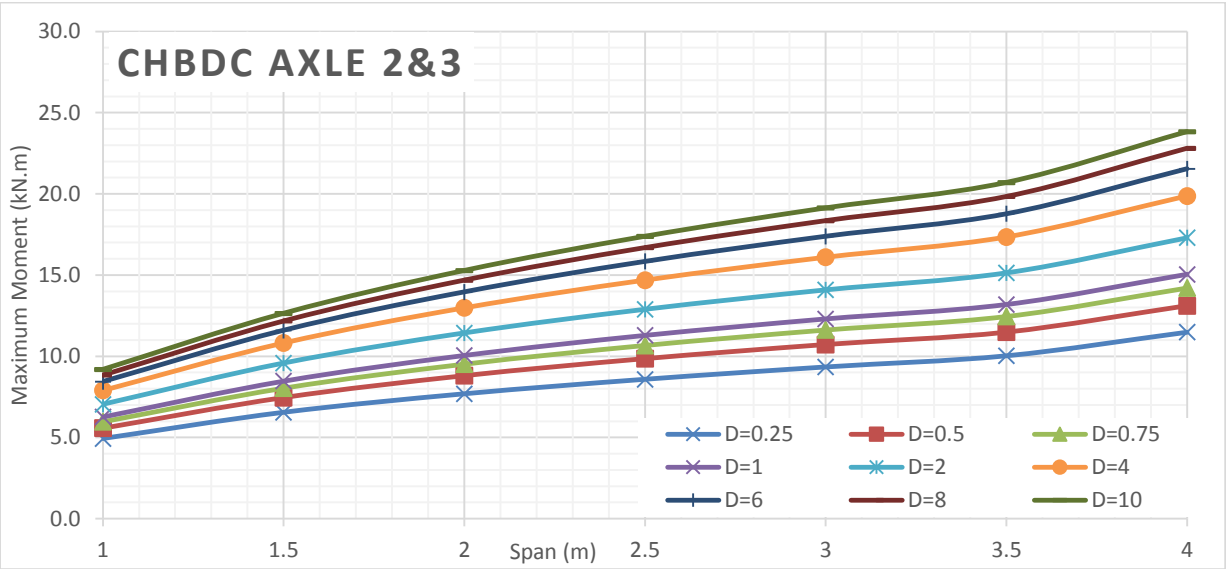


Figure 32 Maximum moment of deck slabs subjected to CHBDC axle 2 & 3 for different D values of alpha 6 FEA analyses

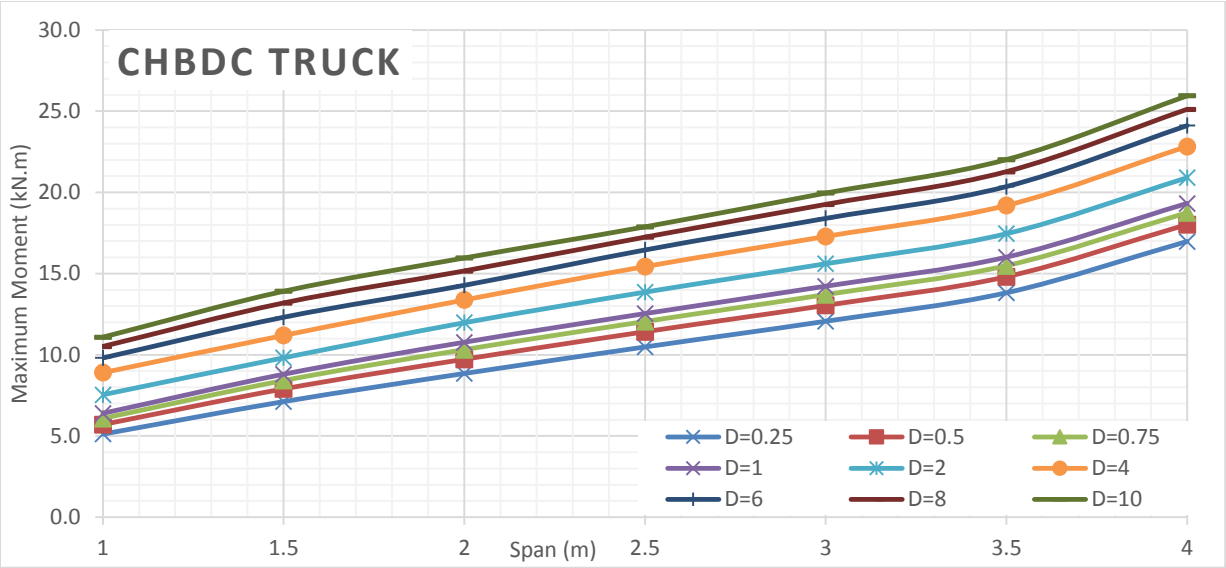


Figure 33 Maximum moment of deck slabs subjected to CHBDC truck for different D values of alpha 6 FEA analyses

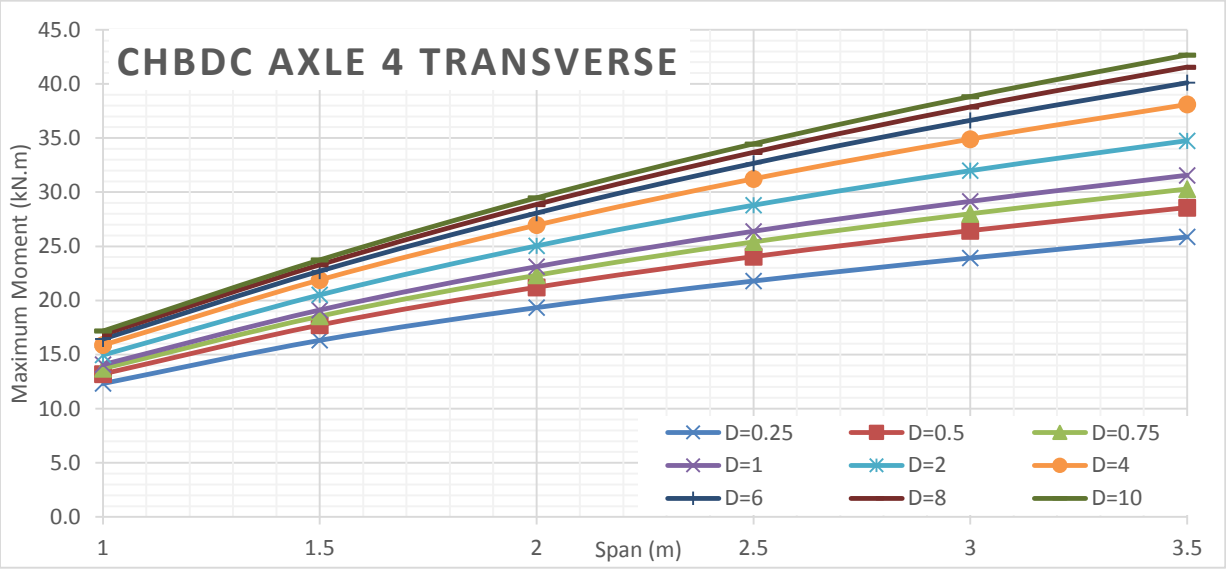


Figure 34 Maximum moment of deck slabs subjected to CHBDC axle 4 for different D values of alpha 6 FEA analyses

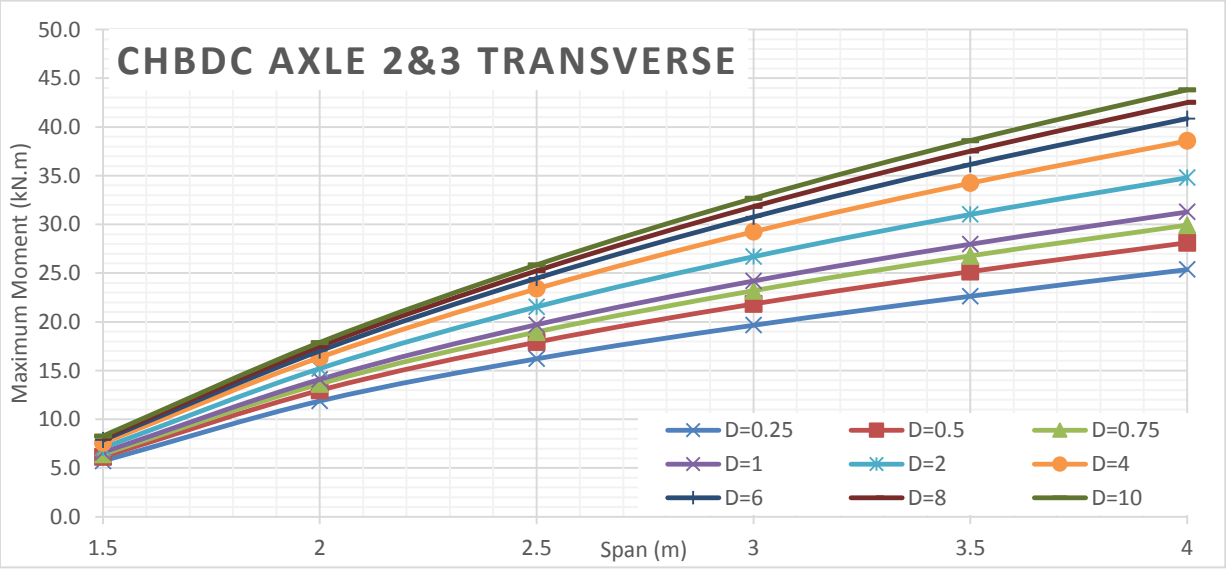


Figure 35 Maximum moment of deck slabs subjected to CHBDC axle 2 & 3 for different D values of alpha 6 FEA analyses

Alpha 8 Bending Moment VS Span Length for Different D Values

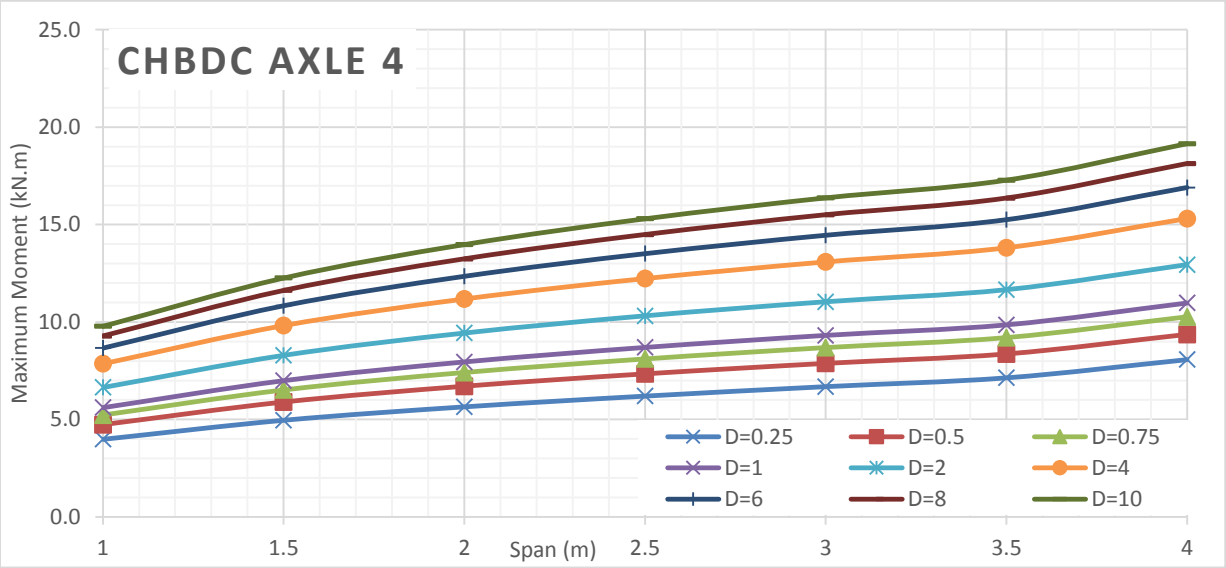


Figure 36 Maximum moment of deck slabs subjected to CHBDC axle 4 for different D values of alpha 8 FEA analyses

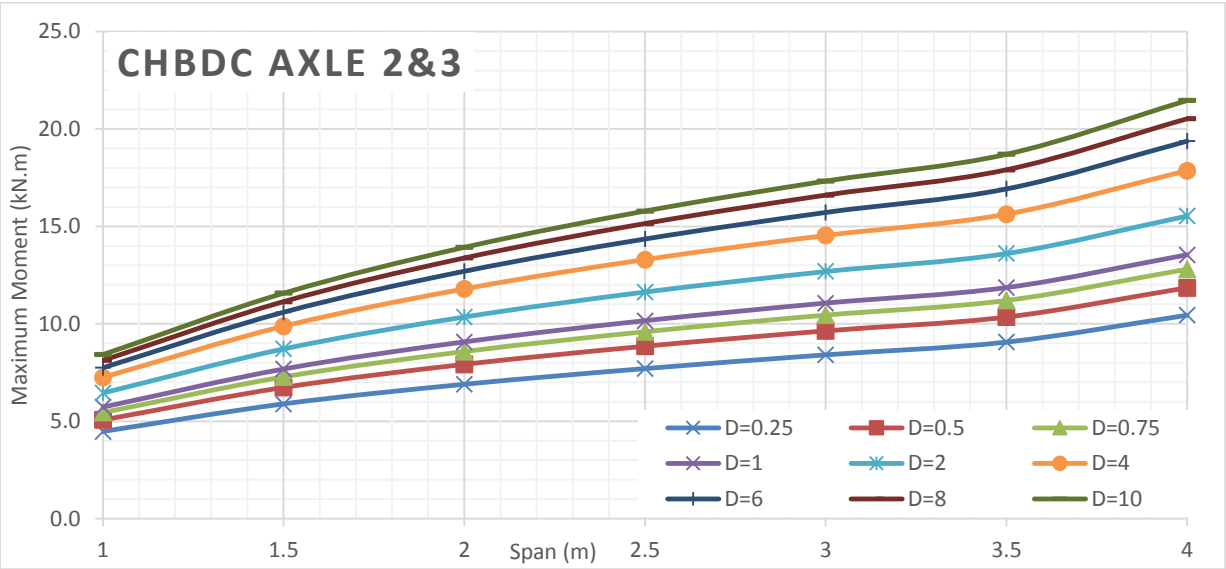


Figure 37 Maximum moment of deck slabs subjected to CHBDC axle 2 & 3 for different D values of alpha 8 FEA analyses

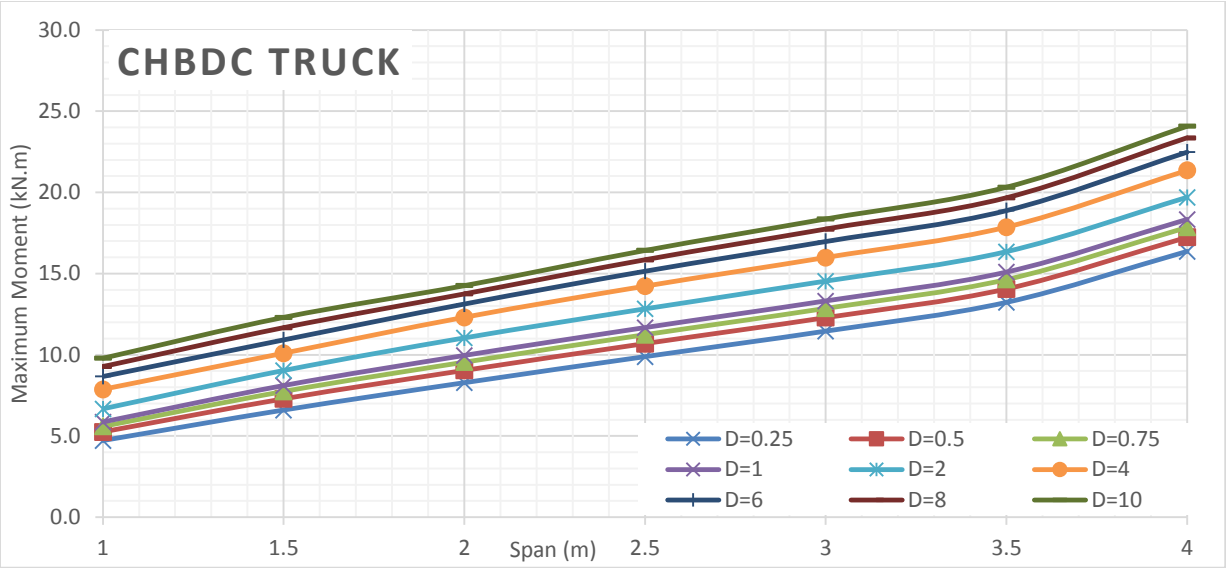


Figure 38 Maximum moment of deck slabs subjected to CHBDC truck for different D values of alpha 8 FEA analyses

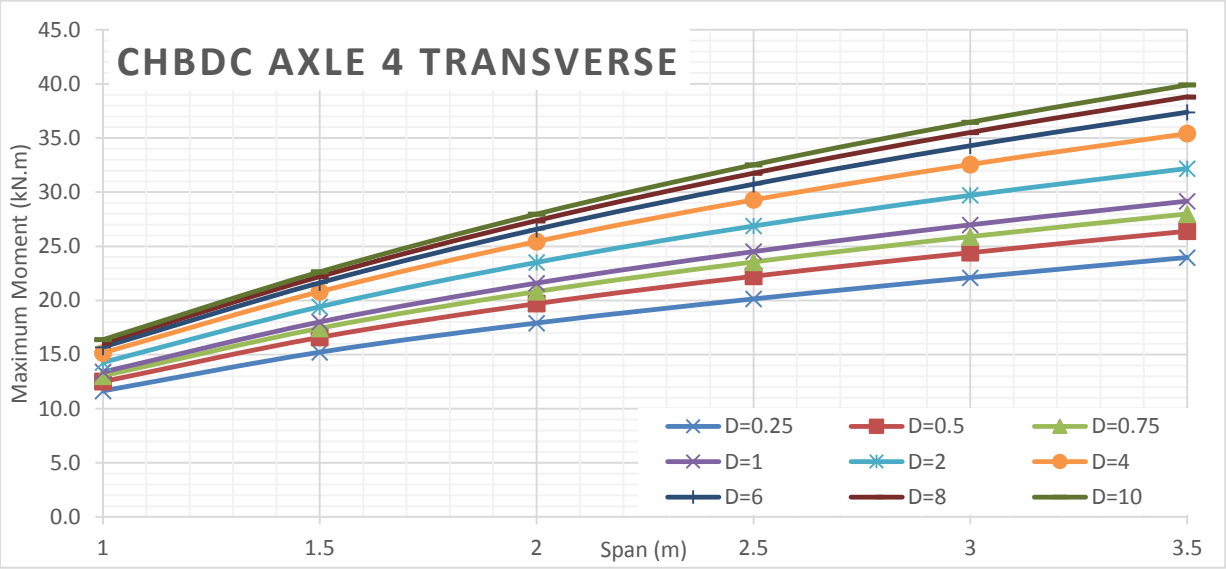


Figure 39 Maximum moment of deck slabs subjected to CHBDC axle 4 for different D values of alpha 8 FEA analyses

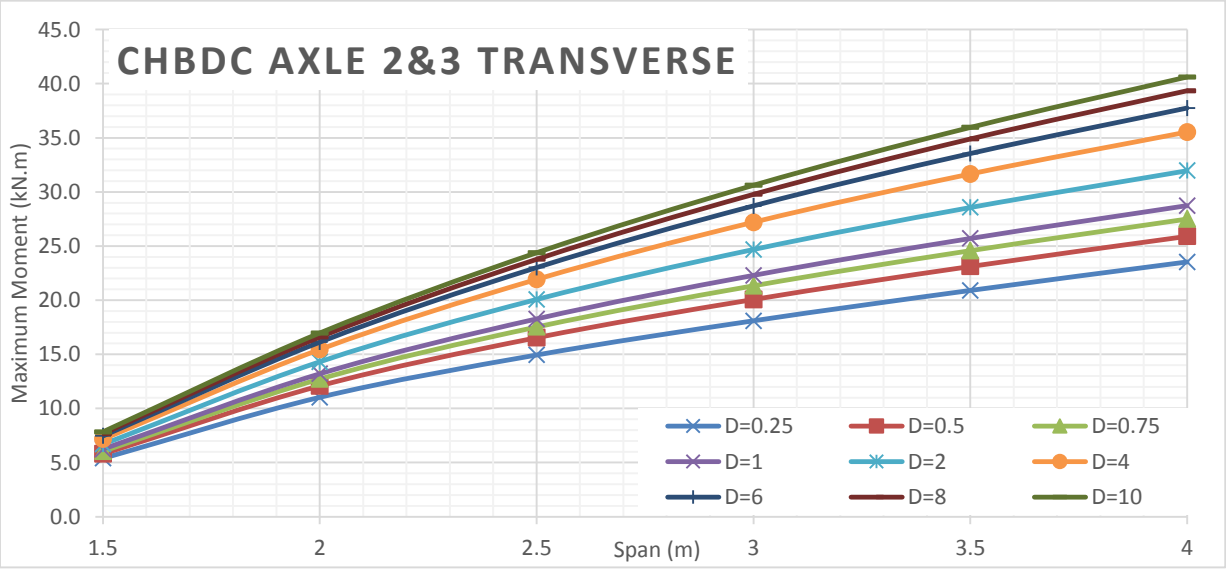


Figure 40 Maximum moment of deck slabs subjected to CHBDC axle 2 & 3 for different D values of alpha 8 FEA analyses

Alpha 10 Bending Moment VS Span Length for Different D Values

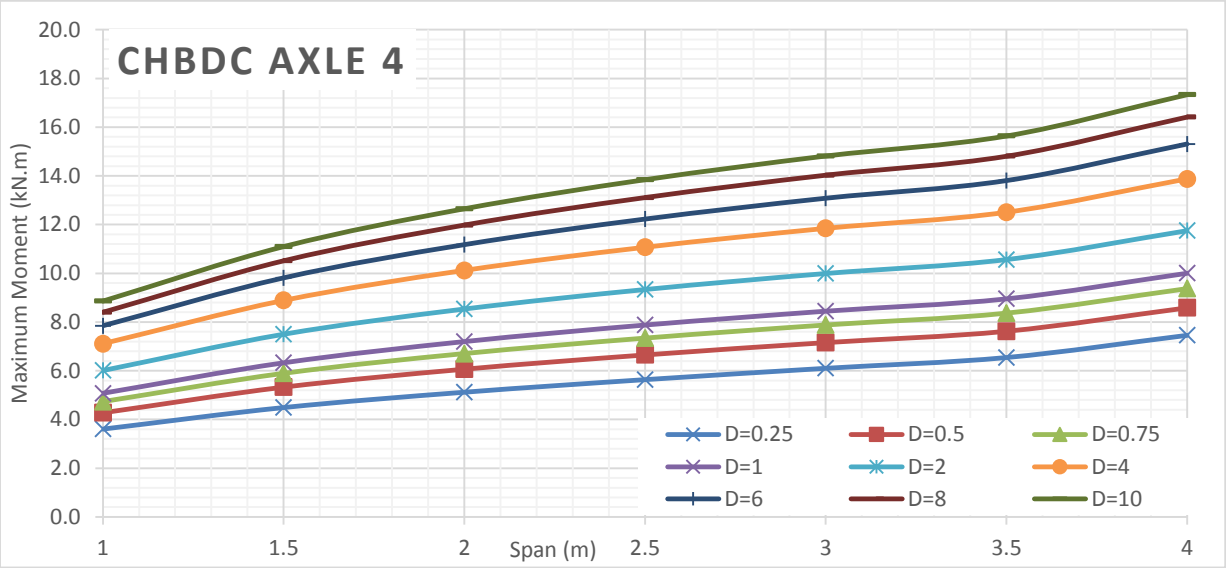


Figure 41 Maximum moment of deck slabs subjected to CHBDC axle 4 for different D values of alpha 10 FEA analyses

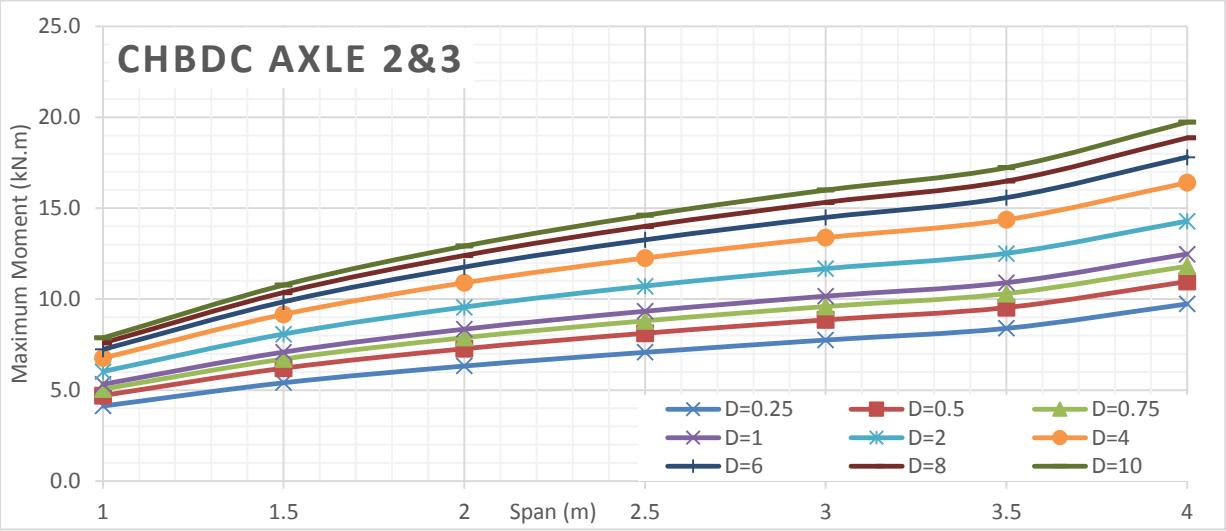


Figure 42 Maximum moment of deck slabs subjected to CHBDC axle 2 & 3 for different D values of alpha 10 FEA analyses

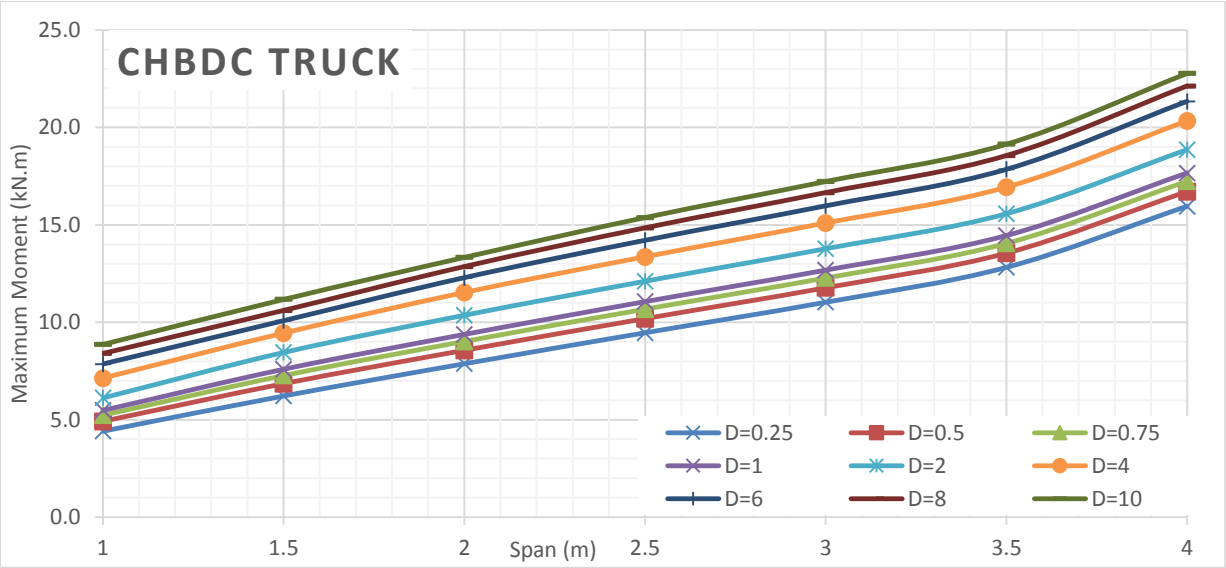


Figure 43 Maximum moment of deck slabs subjected to CHBDC truck for different D values of alpha 10 FEA analyses

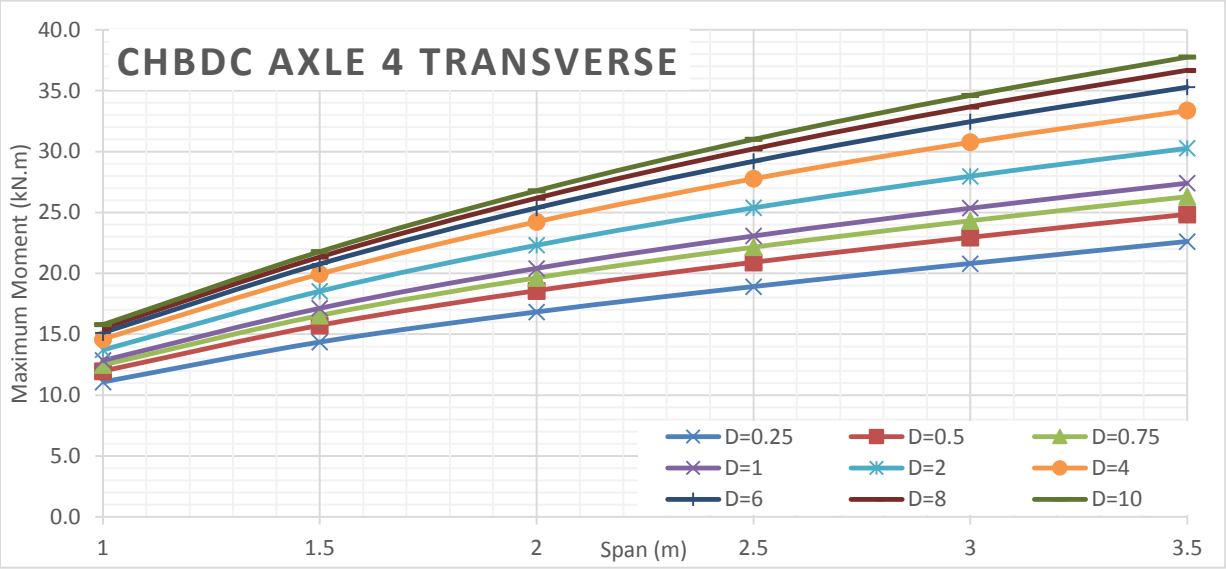


Figure 44 Maximum moment of deck slabs subjected to CHBDC axle 4 for different D values of alpha 10 FEA analyses

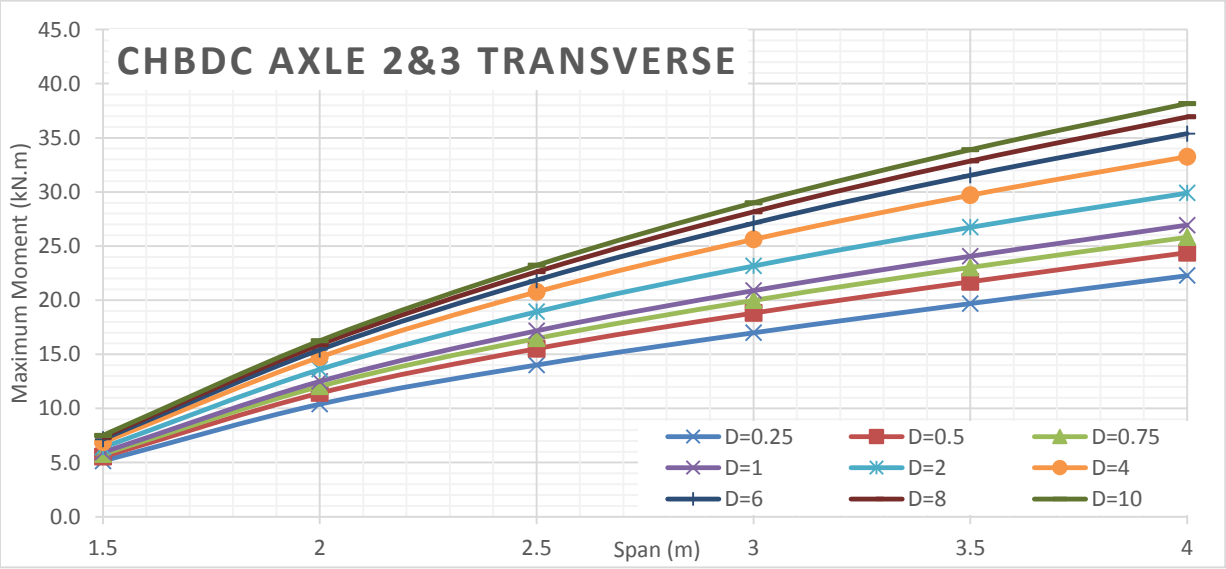


Figure 45 Maximum moment of deck slabs subjected to CHBDC axle 2 & 3 for different D values of alpha 10 FEA analyses

B.1.3 MAXIMUM BENDING MOMENT VS FLEXURAL RIGIDITY

Alpha 0.25 Bending Moment VS Flexural Rigidity for Different Span Length

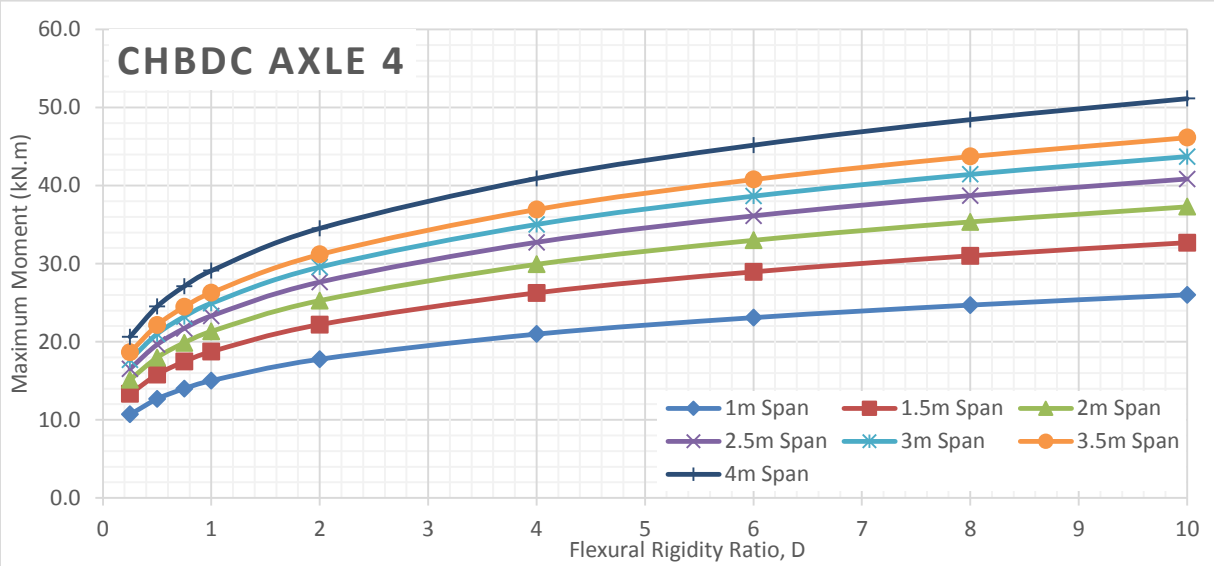


Figure 46 Maximum moment of deck slabs subjected to CHBDC axle 4 for different span values of alpha 0.25 FEA analyses

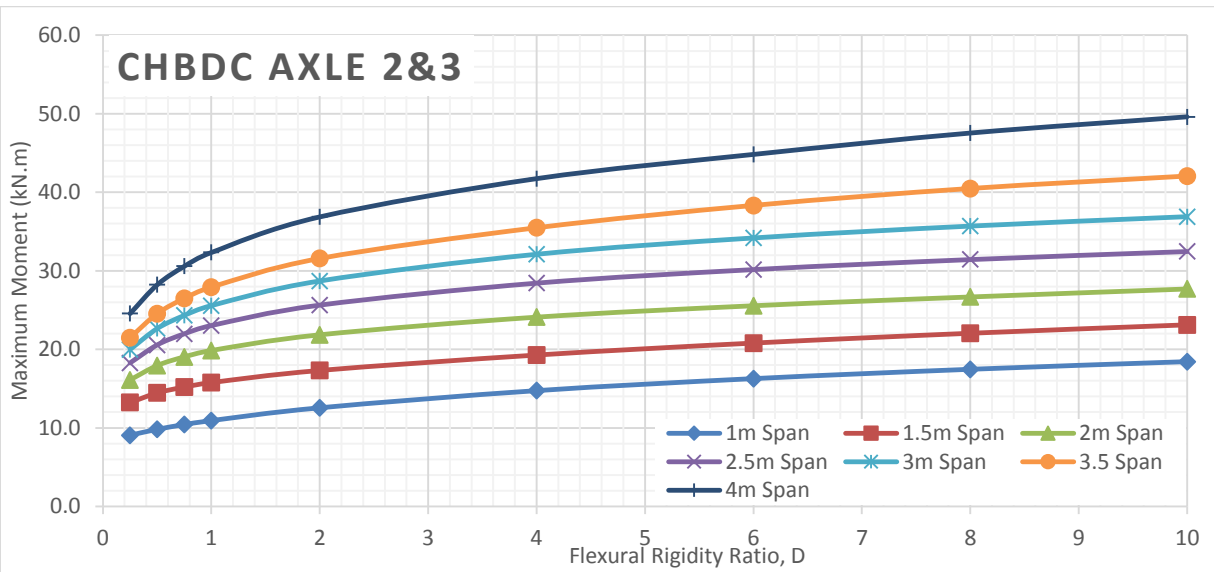


Figure 47 Maximum moment of deck slabs subjected to CHBDC axle 2 &3 for different span values of alpha 0.25 FEA analyses

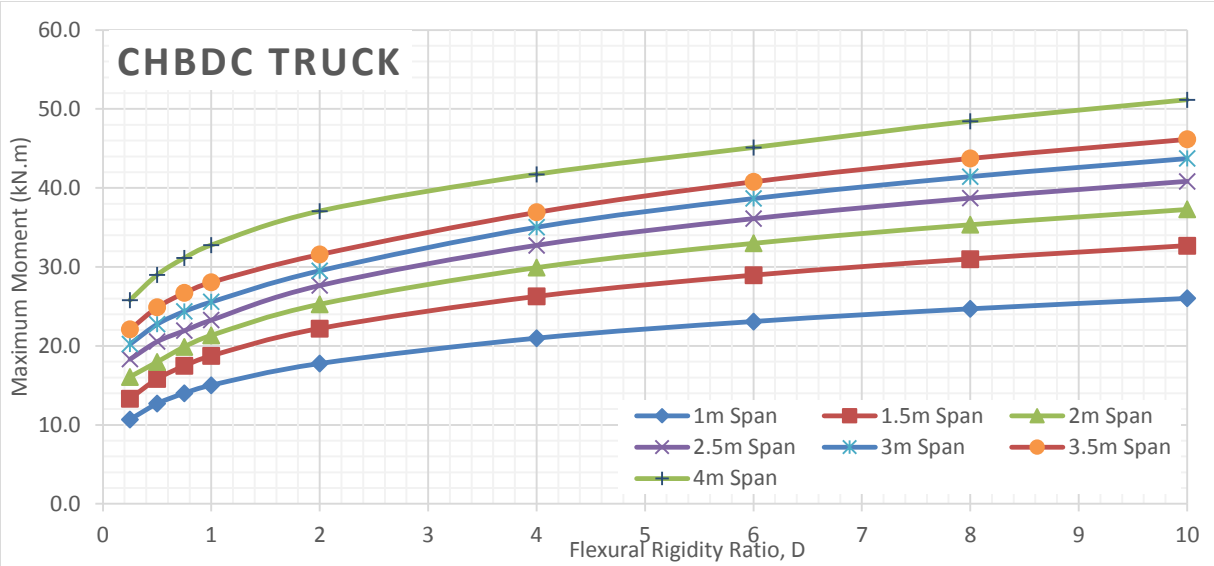


Figure 48 Maximum moment of deck slabs subjected to CHBDC truck for different span values of alpha 0.25 FEA analyses

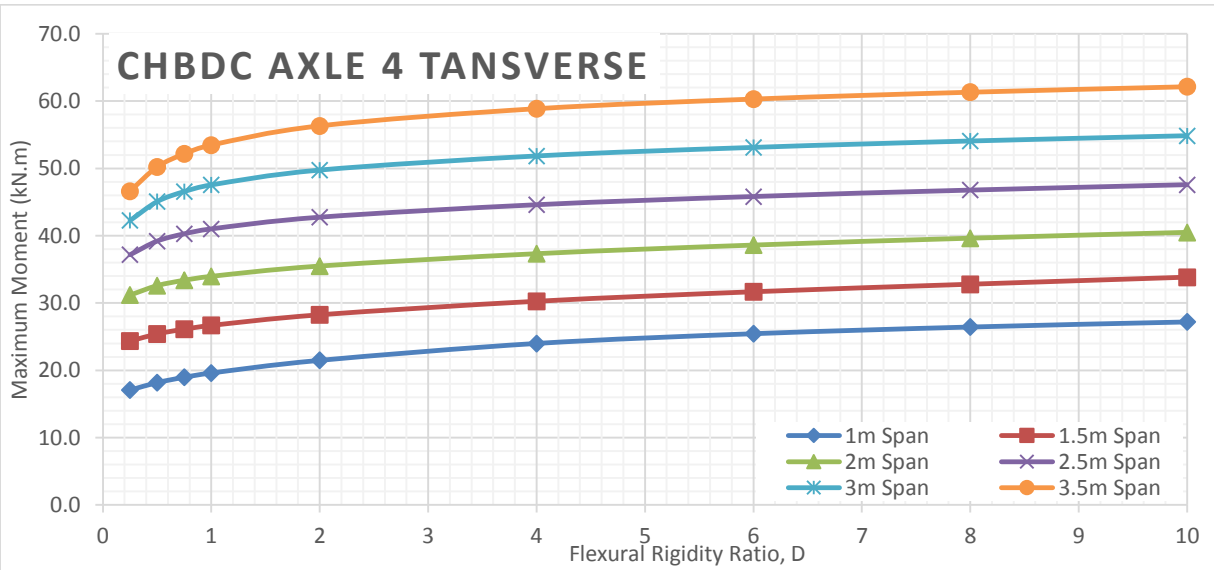


Figure 49 Maximum moment of deck slabs subjected to CHBDC axle 4 for different span values of alpha 0.25 FEA analyses

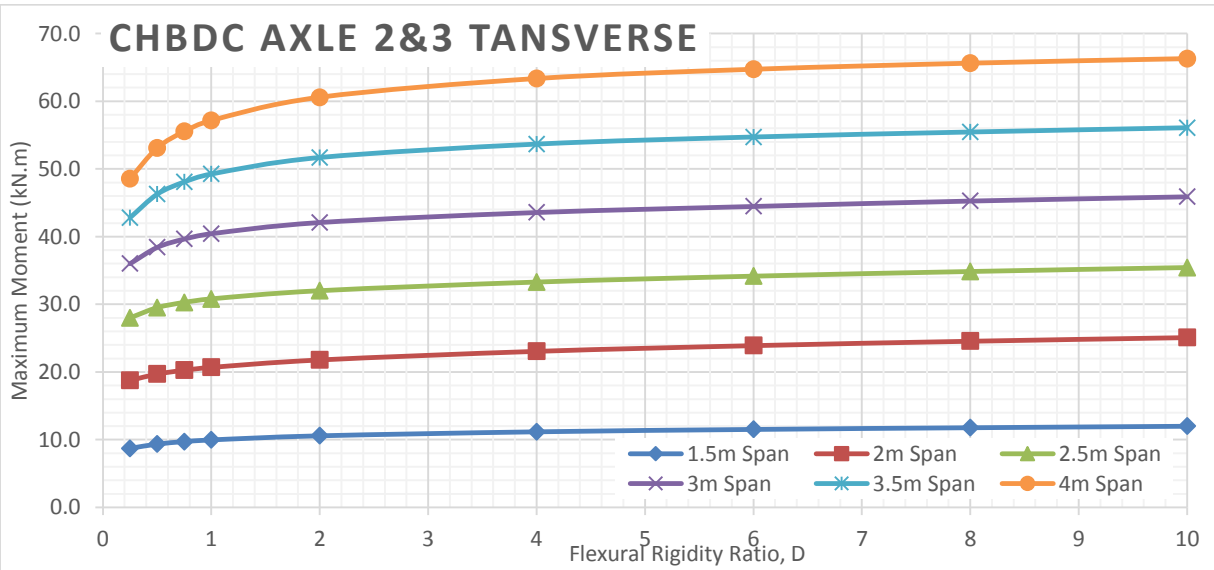


Figure 50 Maximum moment of deck slabs subjected to CHBDC axle 2 &3 for different span values of alpha 0.25 FEA analyses

Alpha 0.5 Bending Moment VS Flexural Rigidity for Different Span Length

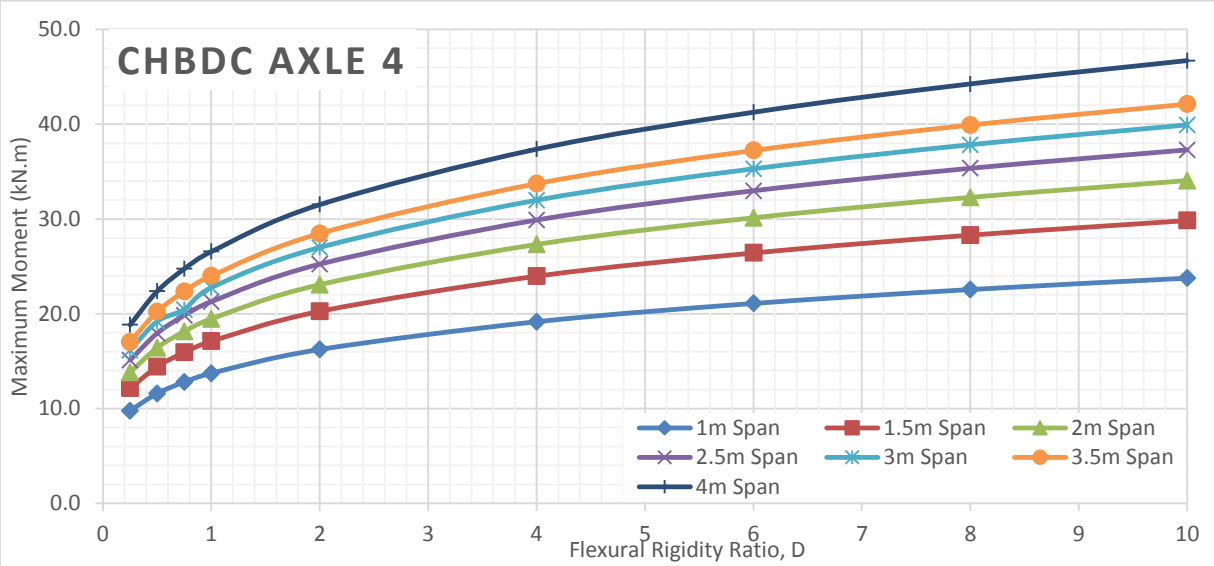


Figure 51 Maximum moment of deck slabs subjected to CHBDC axle 4 for different span values of alpha 0.5 FEA analyses

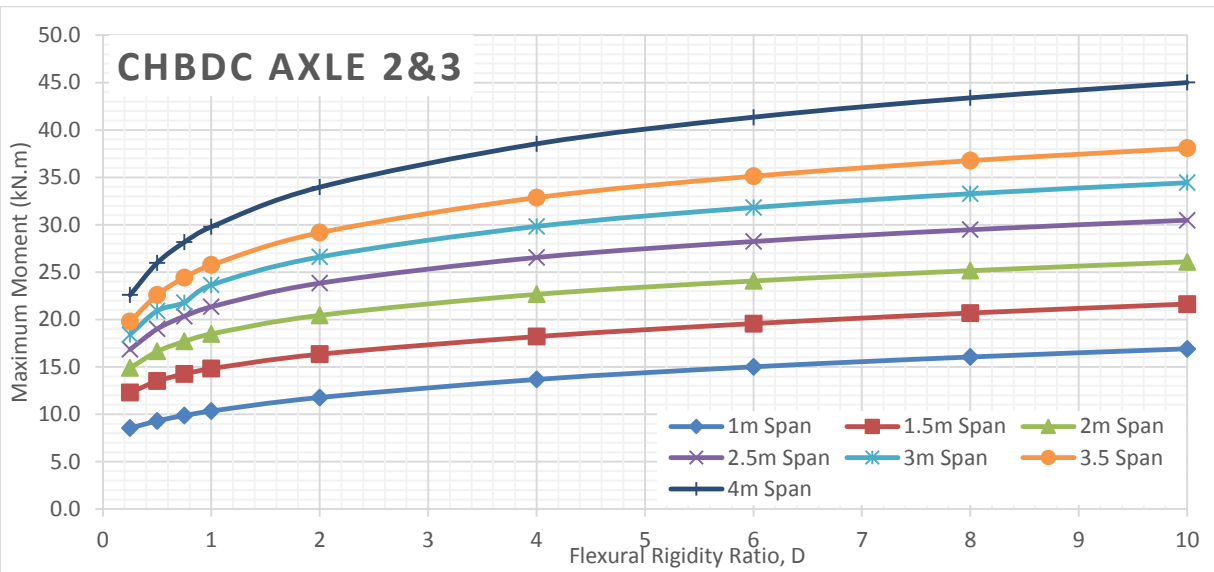


Figure 52 Maximum moment of deck slabs subjected to CHBDC axle 2 &3 for different span values of alpha 0.5 FEA analyses

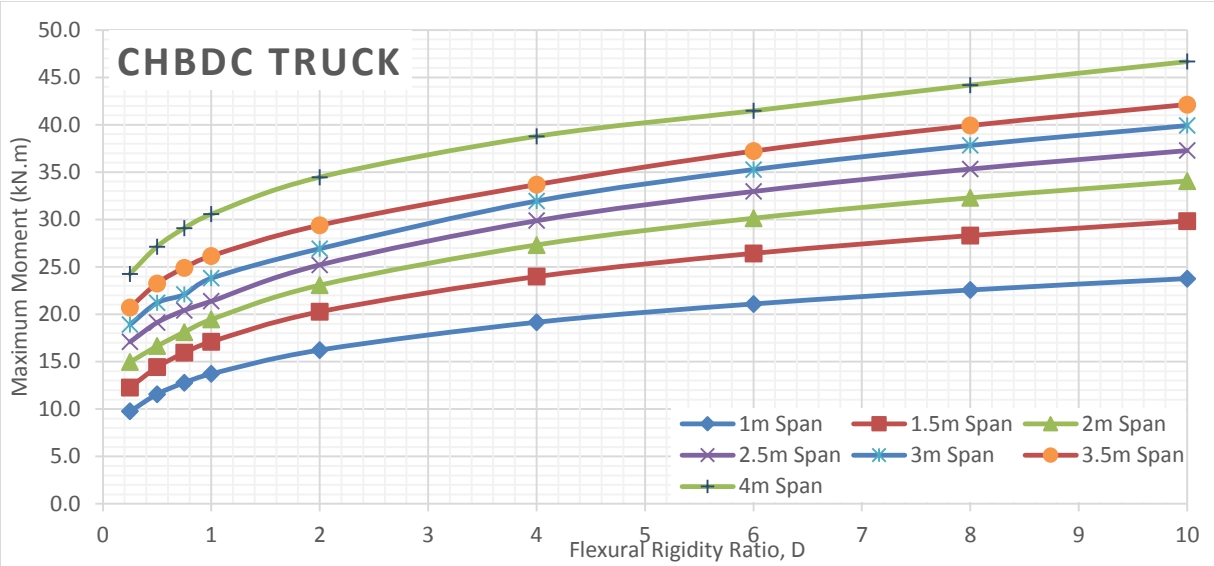


Figure 53 Maximum moment of deck slabs subjected to CHBDC truck for different span values of alpha 0.5 FEA analyses

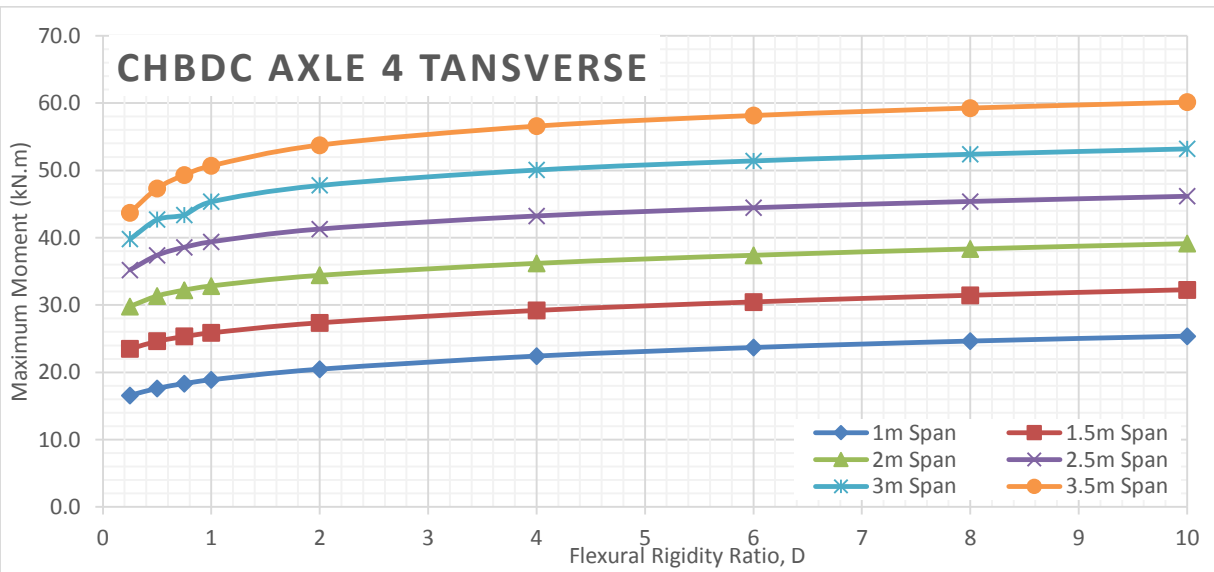


Figure 54 Maximum moment of deck slabs subjected to CHBDC axle 4 for different span values of alpha 0.5 FEA analyses

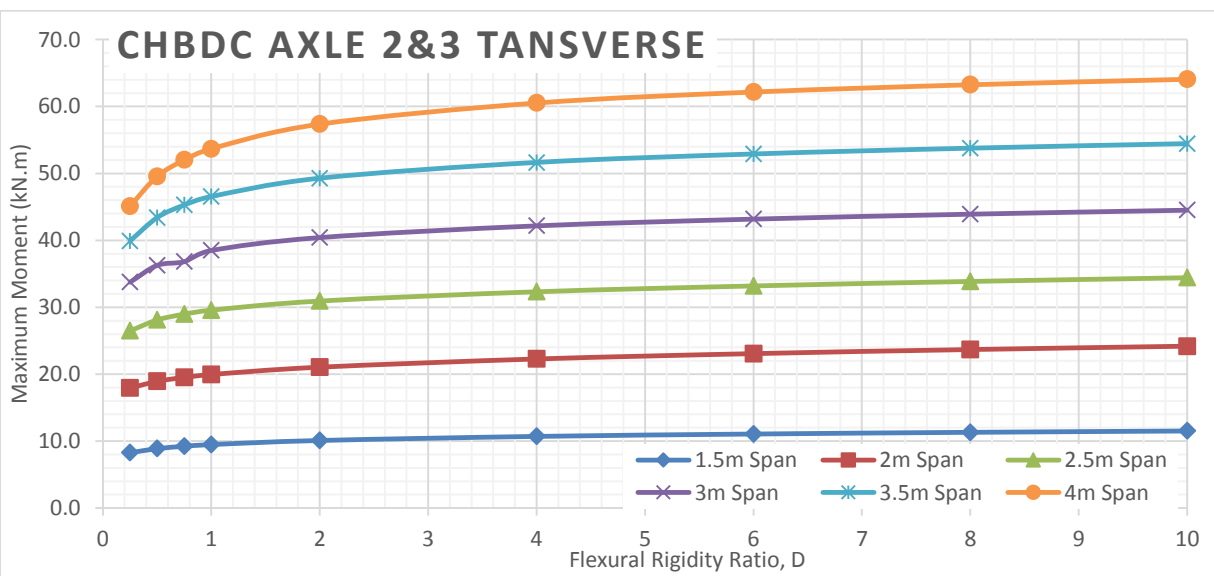


Figure 55 Maximum moment of deck slabs subjected to CHBDC axle 2 &3 for different span values of alpha 0.5 FEA analyses

Alpha 0.75 Bending Moment VS Flexural Rigidity for Different Span Length

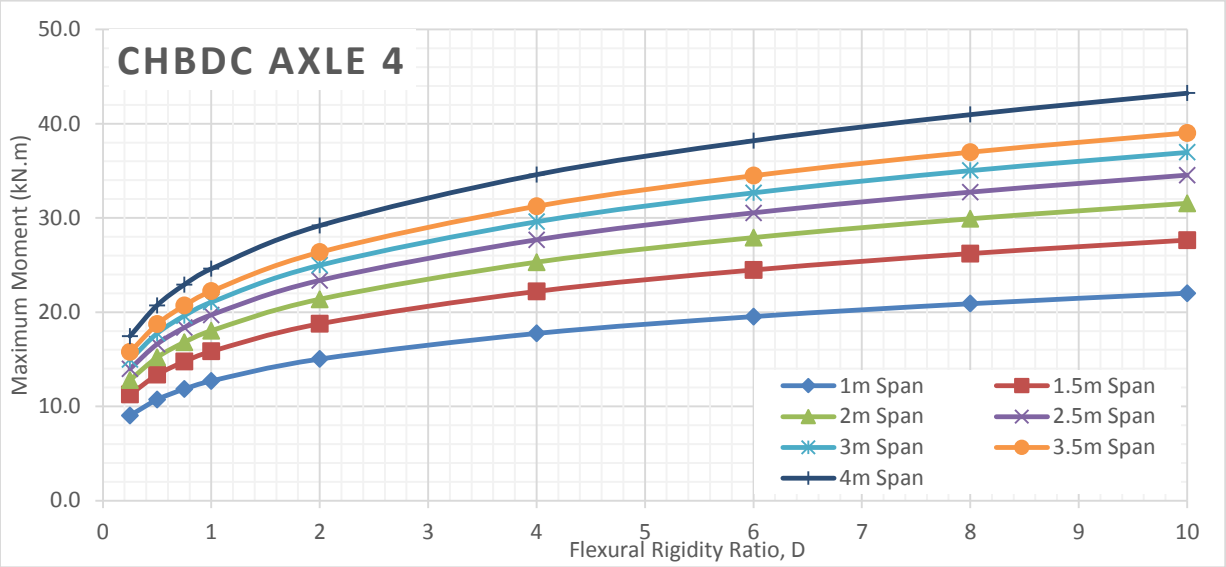


Figure 56 Maximum moment of deck slabs subjected to CHBDC axle 4 for different span values of alpha 0.75 FEA analyses

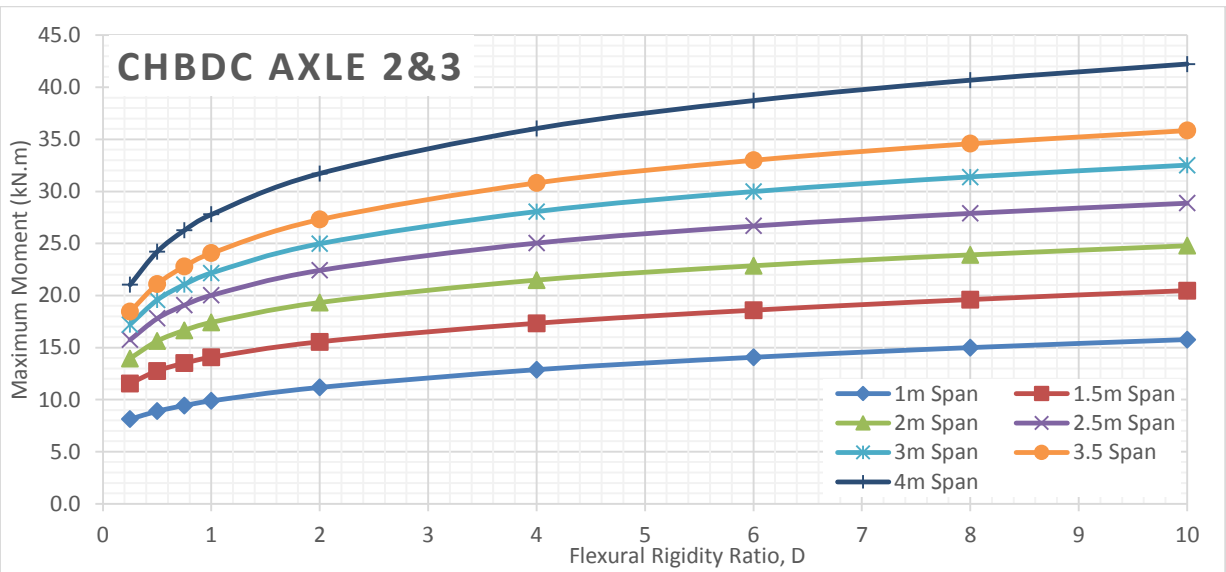


Figure 57 Maximum moment of deck slabs subjected to CHBDC axle 2 &3 for different span values of alpha 0.75 FEA analyses

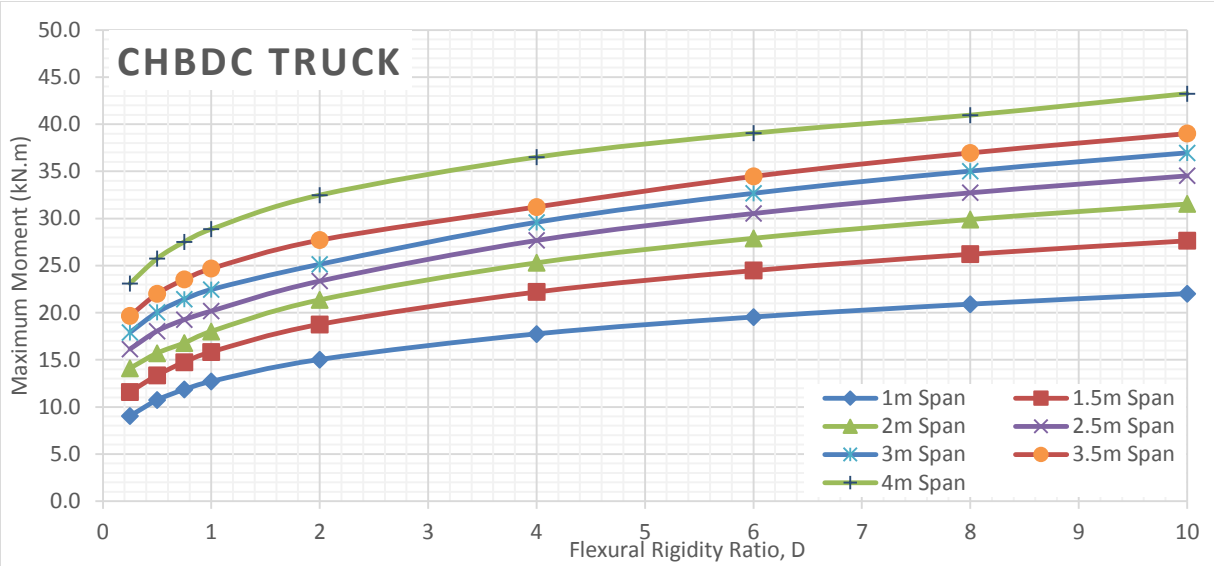


Figure 58 Maximum moment of deck slabs subjected to CHBDC truck for different span values of alpha 0.75 FEA analyses

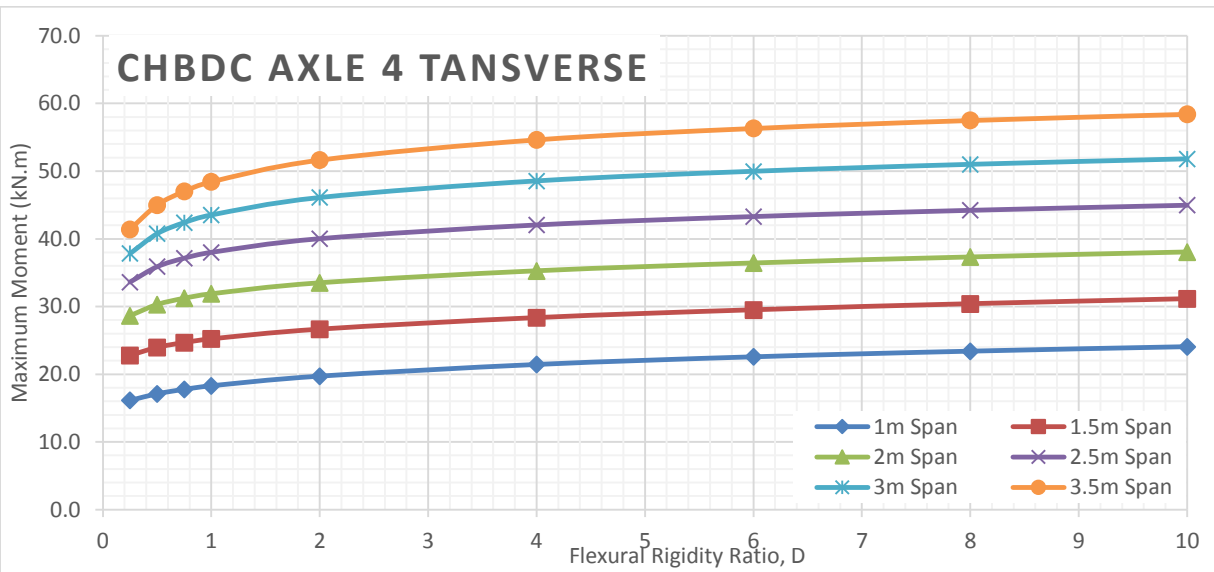


Figure 59 Maximum moment of deck slabs subjected to CHBDC axle 4 for different span values of alpha 0.75 FEA analyses

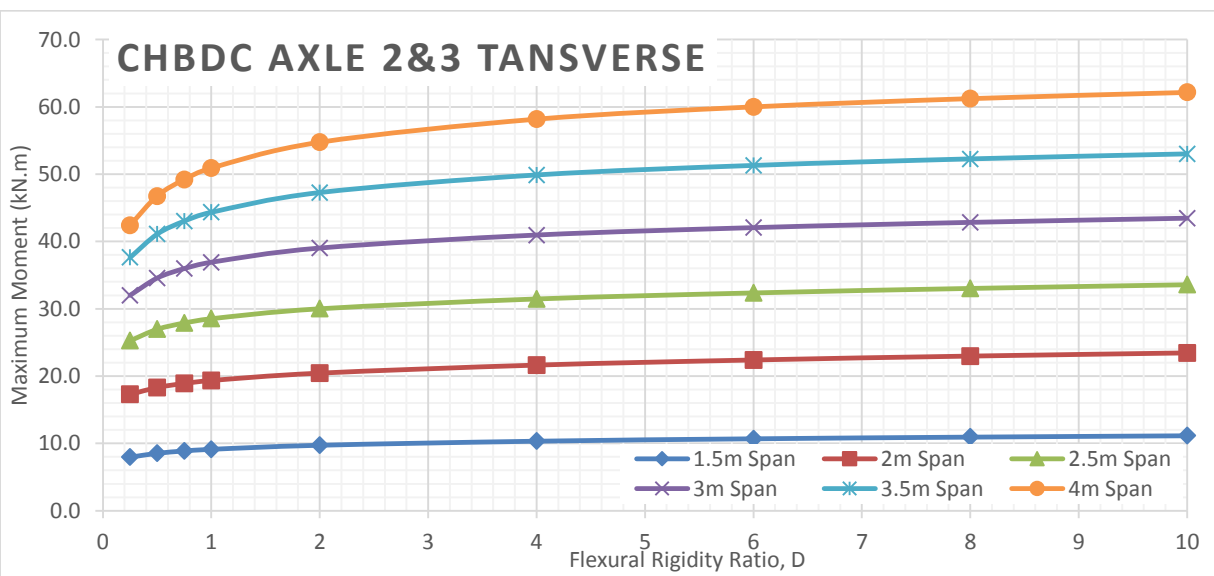


Figure 60 Maximum moment of deck slabs subjected to CHBDC axle 2 &3 for different span values of alpha 0.75 FEA analyses

Alpha 1 Bending Moment VS Flexural Rigidity for Different Span Length

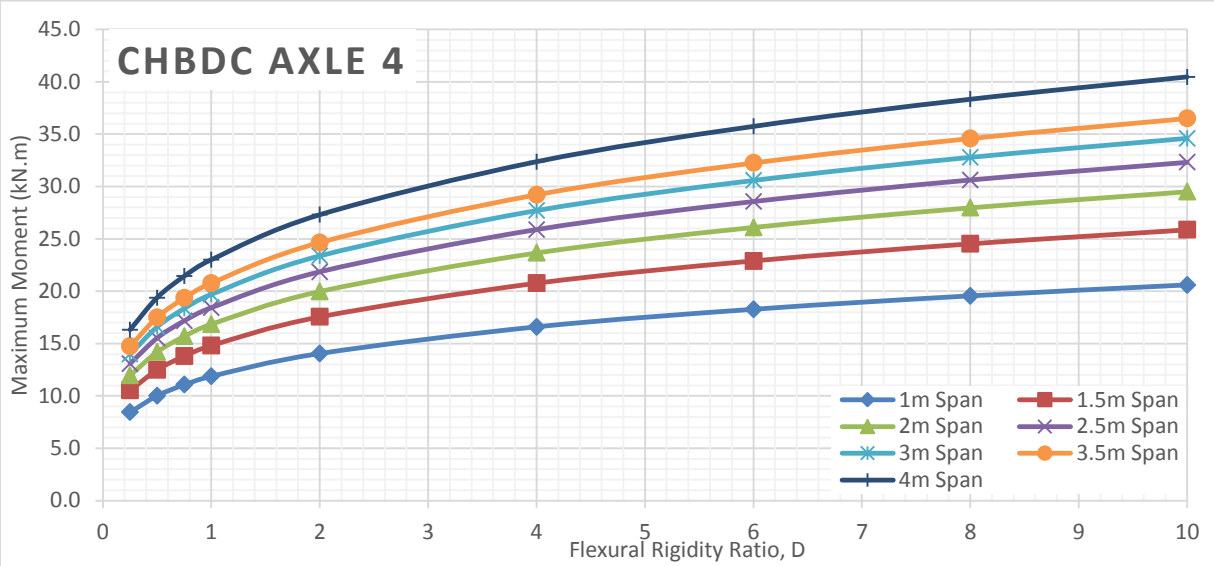


Figure 61 Maximum moment of deck slabs subjected to CHBDC axle 4 for different span values of alpha 1 FEA analyses

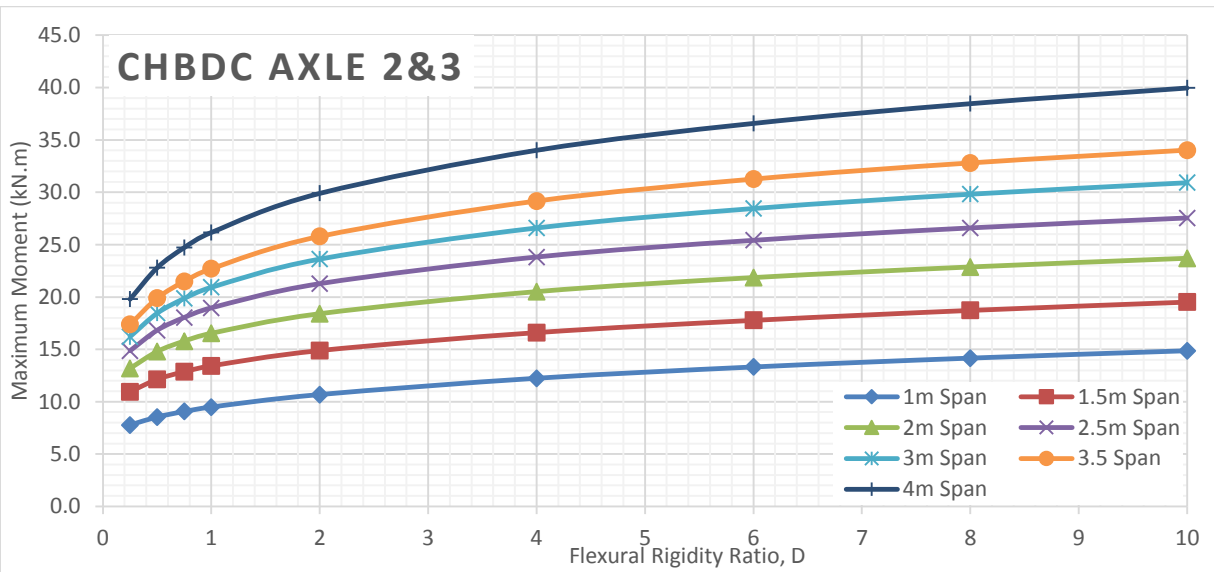


Figure 62 Maximum moment of deck slabs subjected to CHBDC axle 2 &3 for different span values of alpha 1 FEA analyses

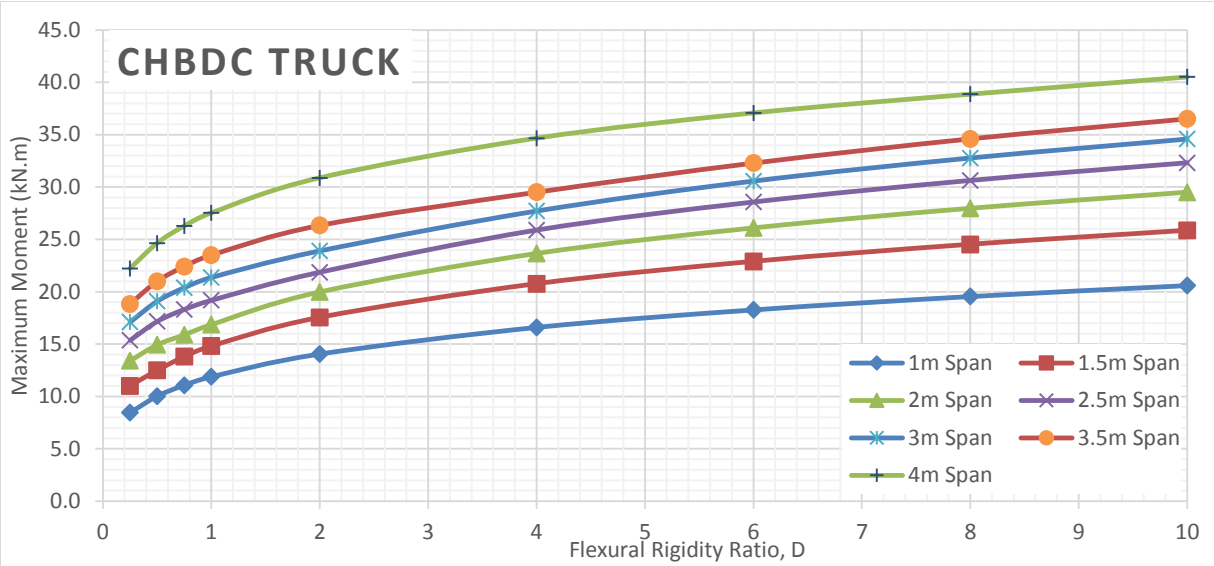


Figure 63 Maximum moment of deck slabs subjected to CHBDC truck for different span values of alpha 1 FEA analyses

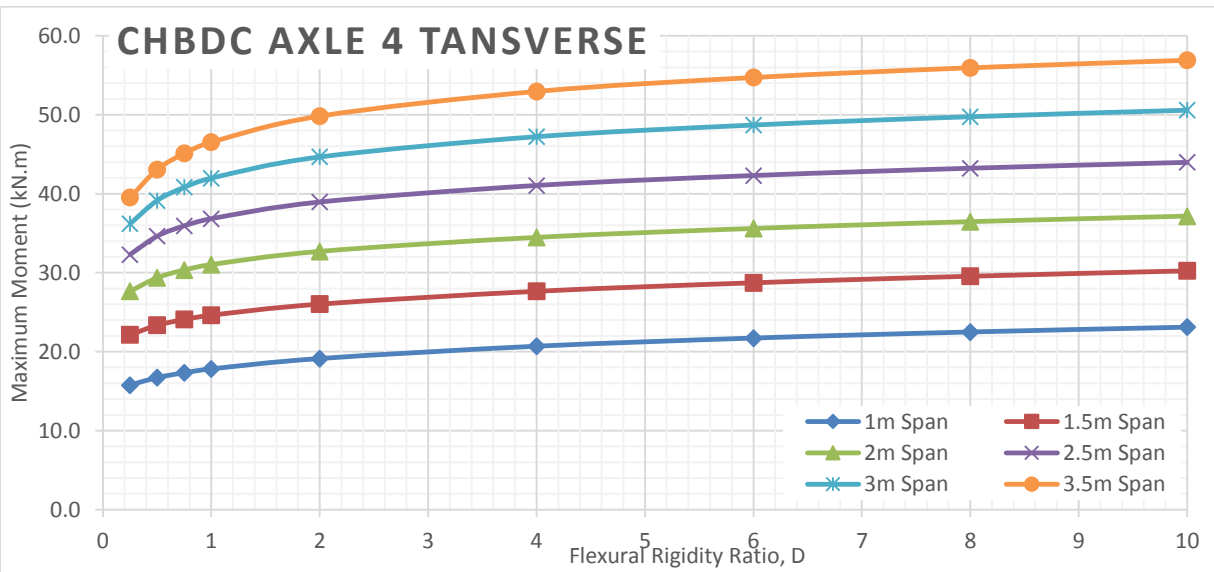


Figure 64 Maximum moment of deck slabs subjected to CHBDC axle 4 for different span values of alpha 1 FEA analyses

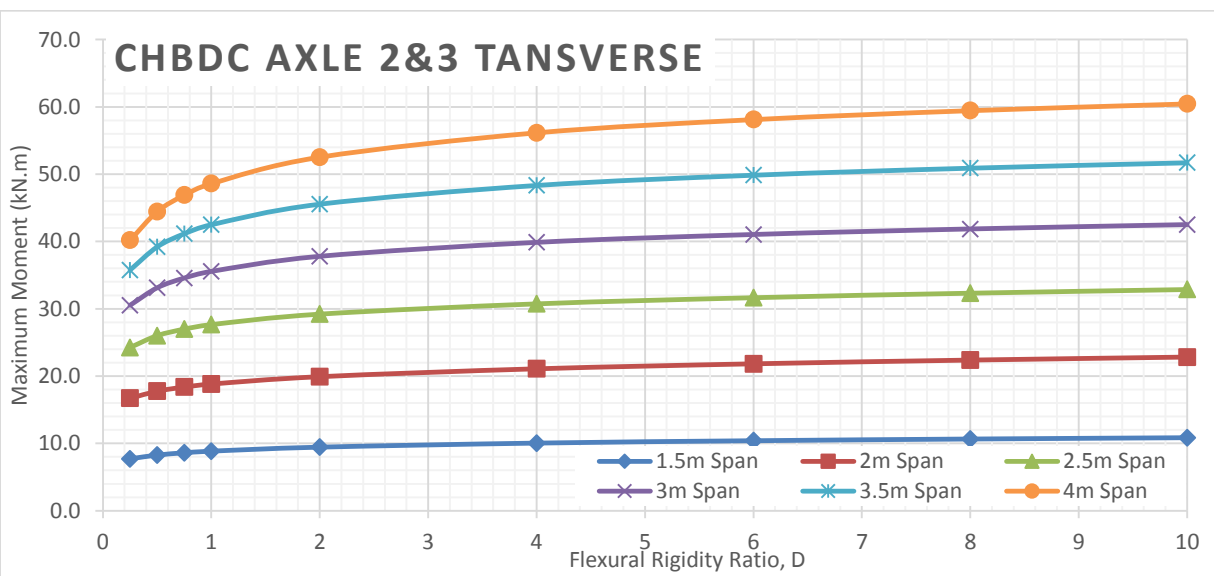


Figure 65 Maximum moment of deck slabs subjected to CHBDC axle 2 &3 for different span values of alpha 1 FEA analyses

Alpha 2 Bending Moment VS Flexural Rigidity for Different Span Length

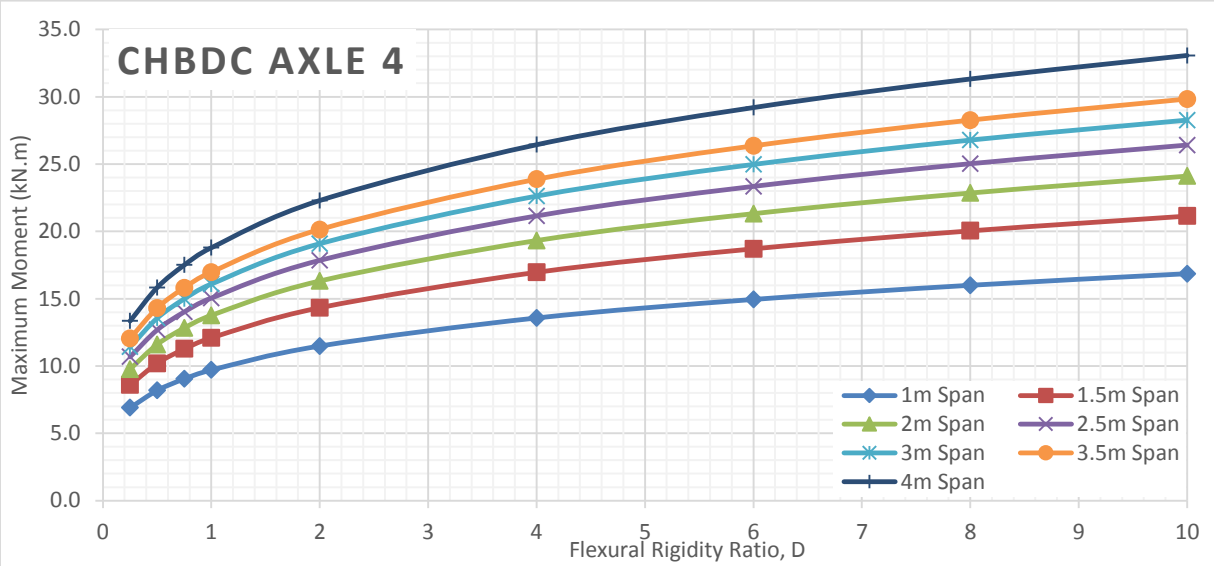


Figure 66 Maximum moment of deck slabs subjected to CHBDC axle 4 for different span values of alpha 2 FEA analyses

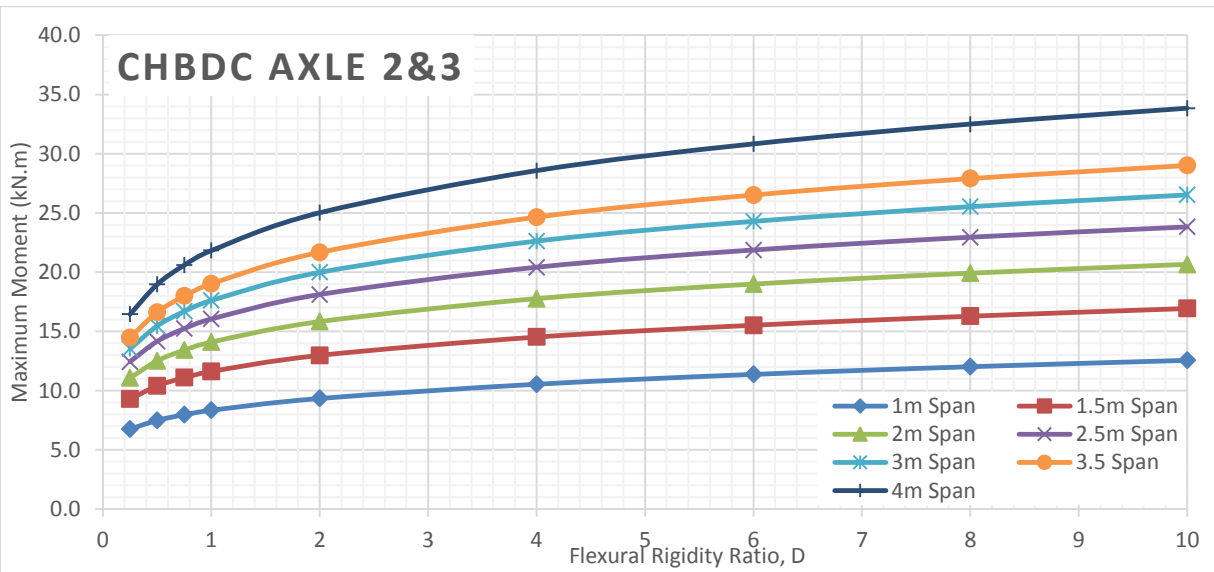


Figure 67 Maximum moment of deck slabs subjected to CHBDC axle 2 &3 for different span values of alpha 2 FEA analyses

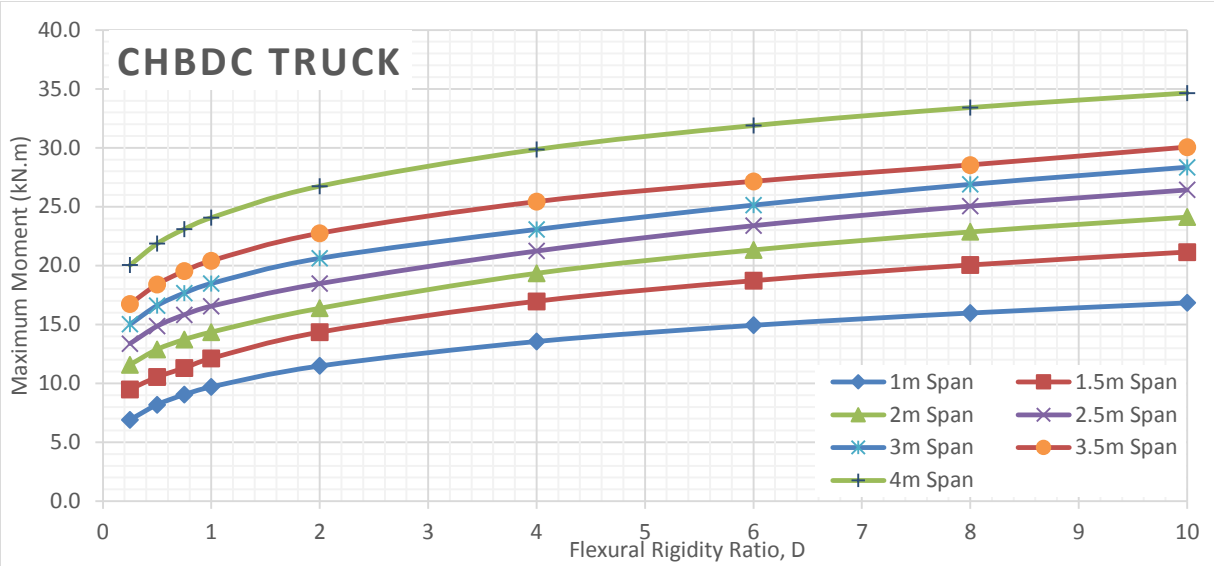


Figure 68 Maximum moment of deck slabs subjected to CHBDC truck for different span values of alpha 2 FEA analyses

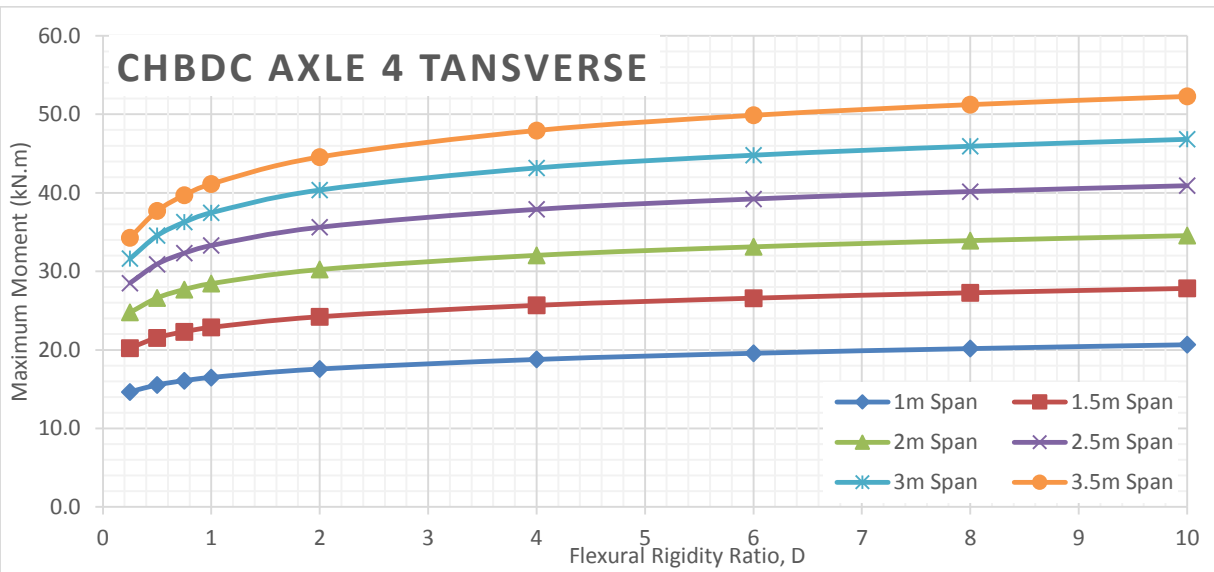


Figure 69 Maximum moment of deck slabs subjected to CHBDC axle 4 for different span values of alpha 2 FEA analyses

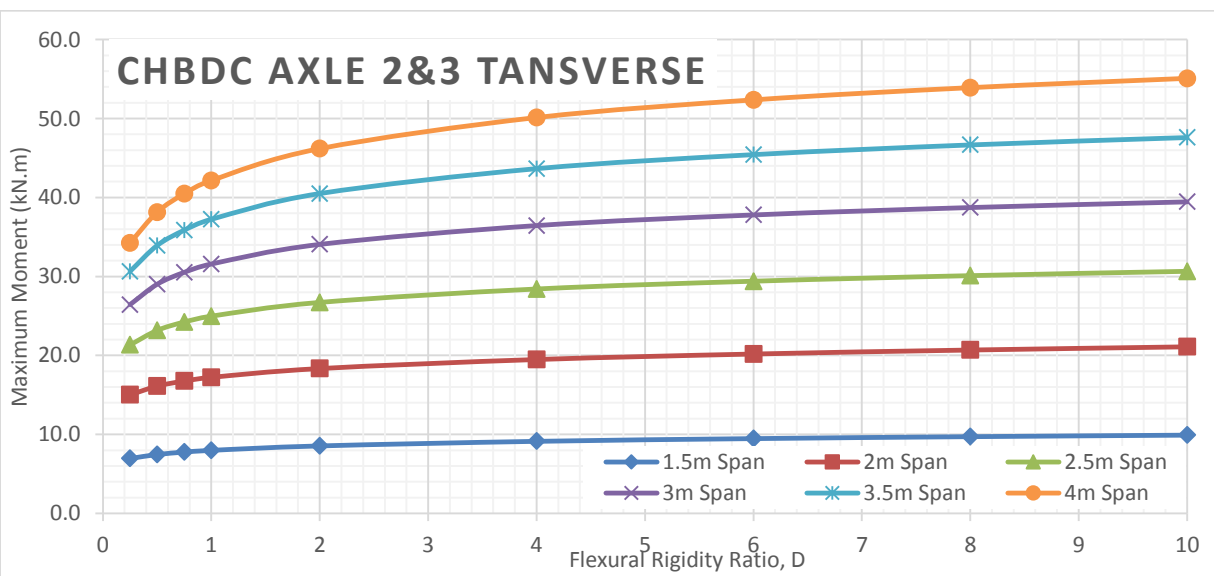


Figure 70 Maximum moment of deck slabs subjected to CHBDC axle 2 &3 for different span values of alpha 2 FEA analyses

Alpha 4 Bending Moment VS Flexural Rigidity for Different Span Length

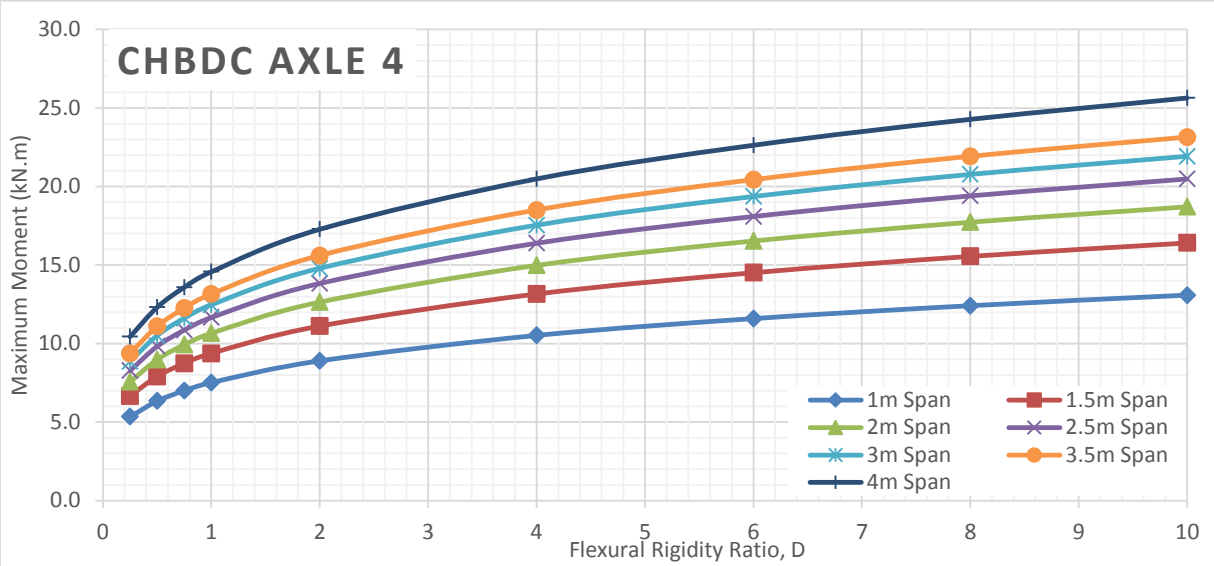


Figure 71 Maximum moment of deck slabs subjected to CHBDC axle 4 for different span values of alpha 4 FEA analyses

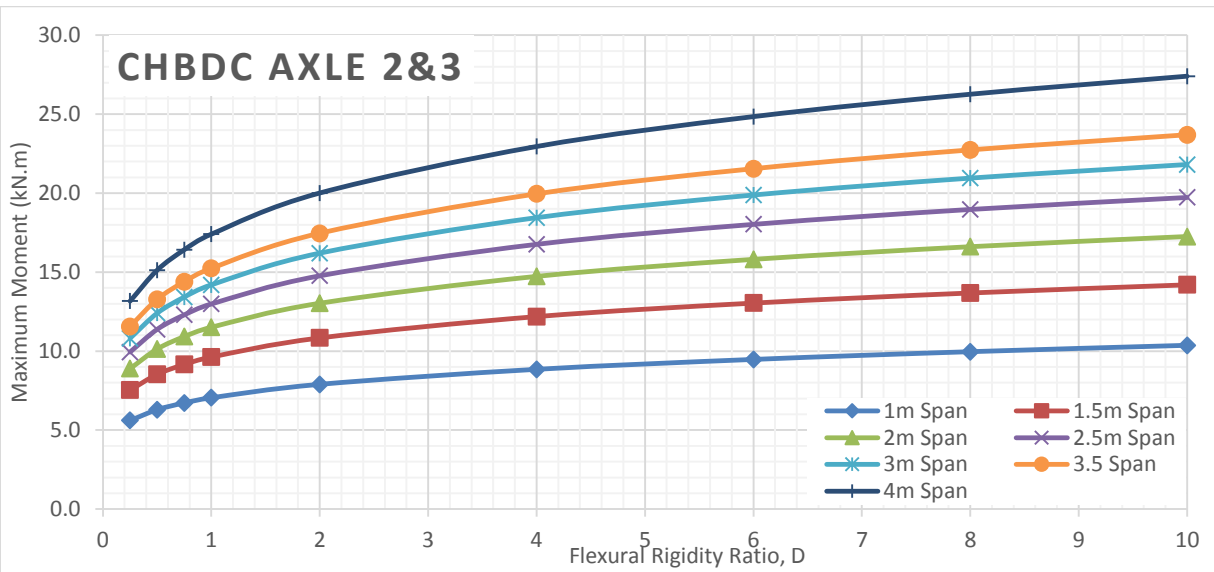


Figure 72 Maximum moment of deck slabs subjected to CHBDC axle 2 &3 for different span values of alpha 4 FEA analyses

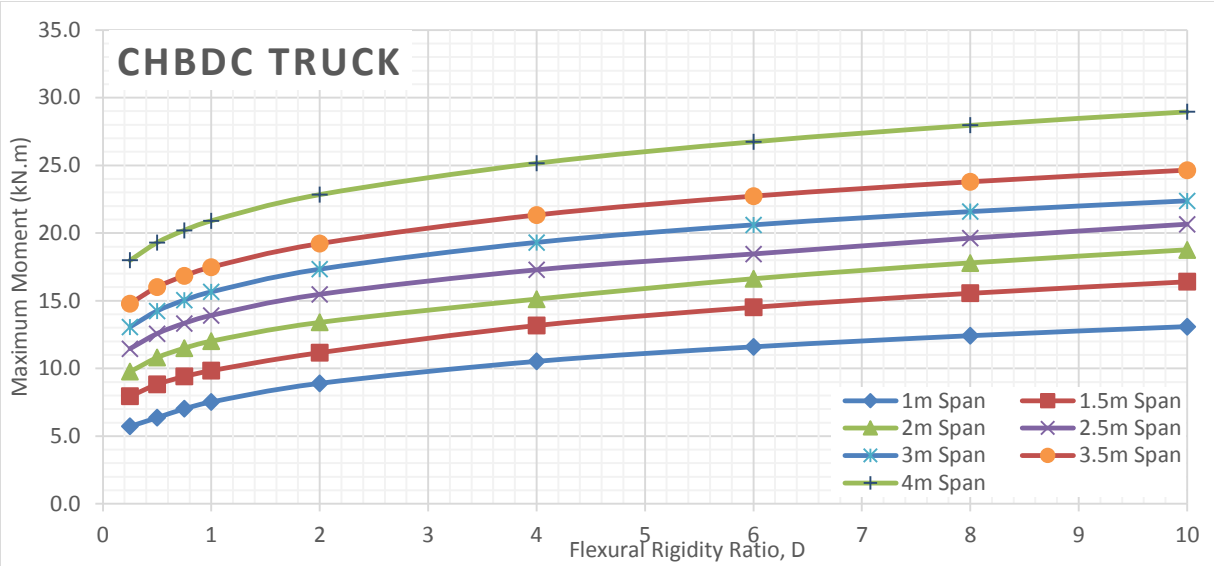


Figure 73 Maximum moment of deck slabs subjected to CHBDC truck for different span values of alpha 4 FEA analyses

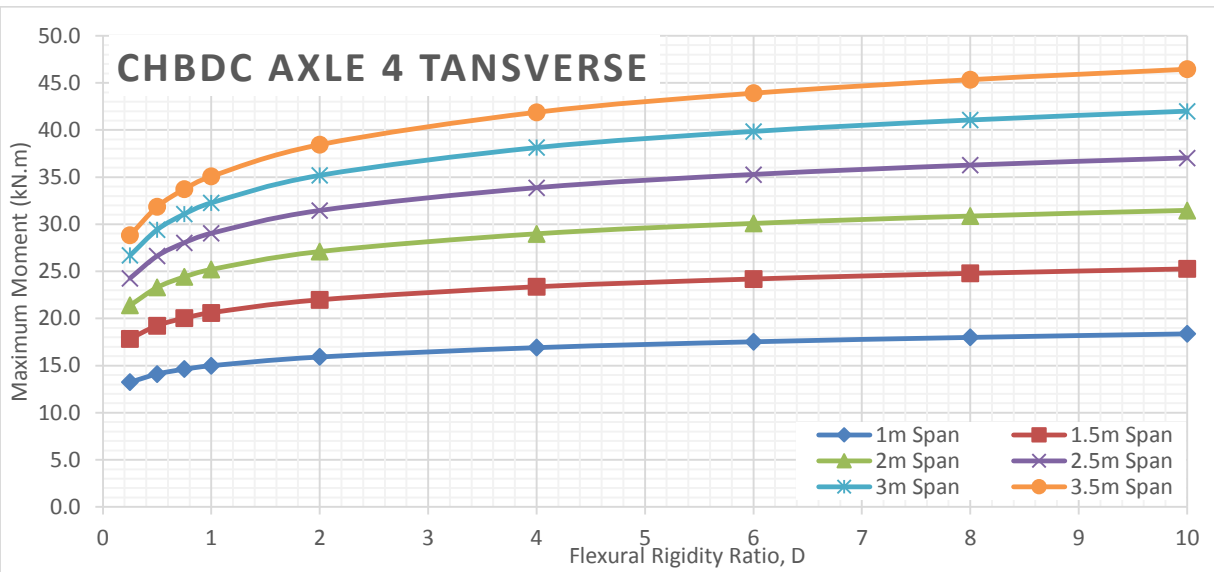


Figure 74 Maximum moment of deck slabs subjected to CHBDC axle 4 for different span values of alpha 4 FEA analyses

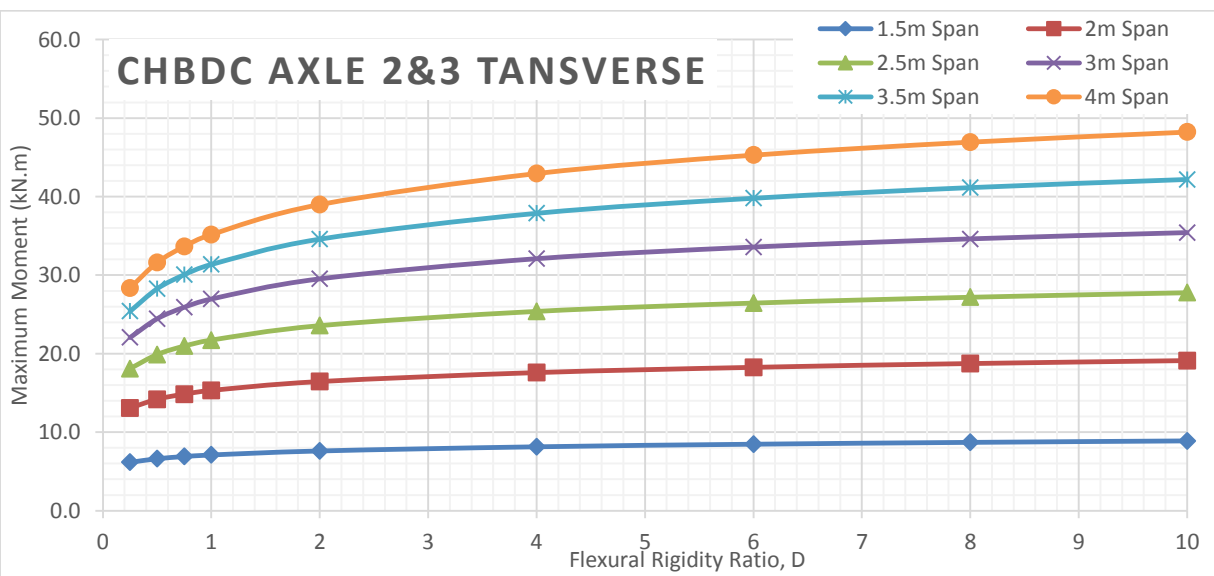


Figure 75 Maximum moment of deck slabs subjected to CHBDC axle 2 &3 for different span values of alpha 4 FEA analyses

Alpha 6 Bending Moment VS Flexural Rigidity for Different Span Length

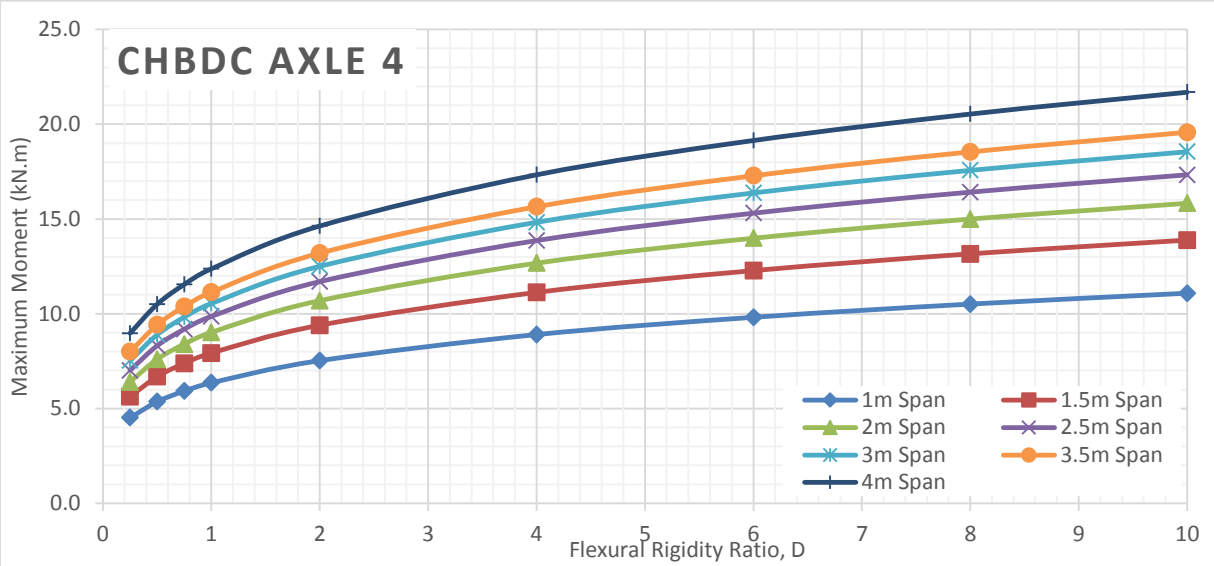


Figure 76 Maximum moment of deck slabs subjected to CHBDC axle 4 for different span values of alpha 6 FEA analyses

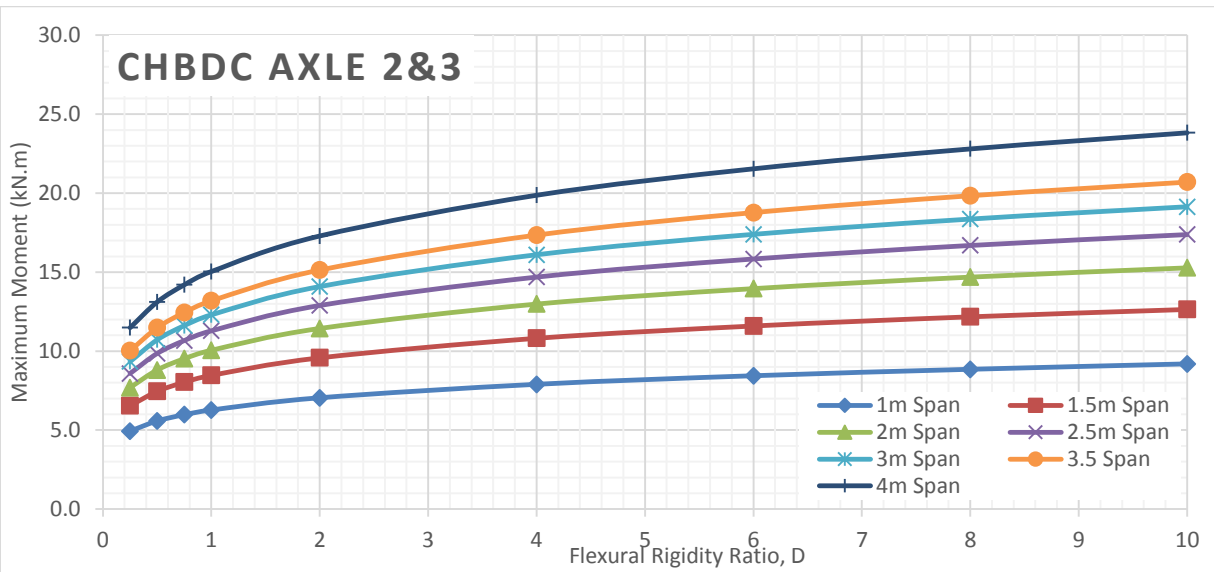


Figure 77 Maximum moment of deck slabs subjected to CHBDC axle 2 &3 for different span values of alpha 6 FEA analyses

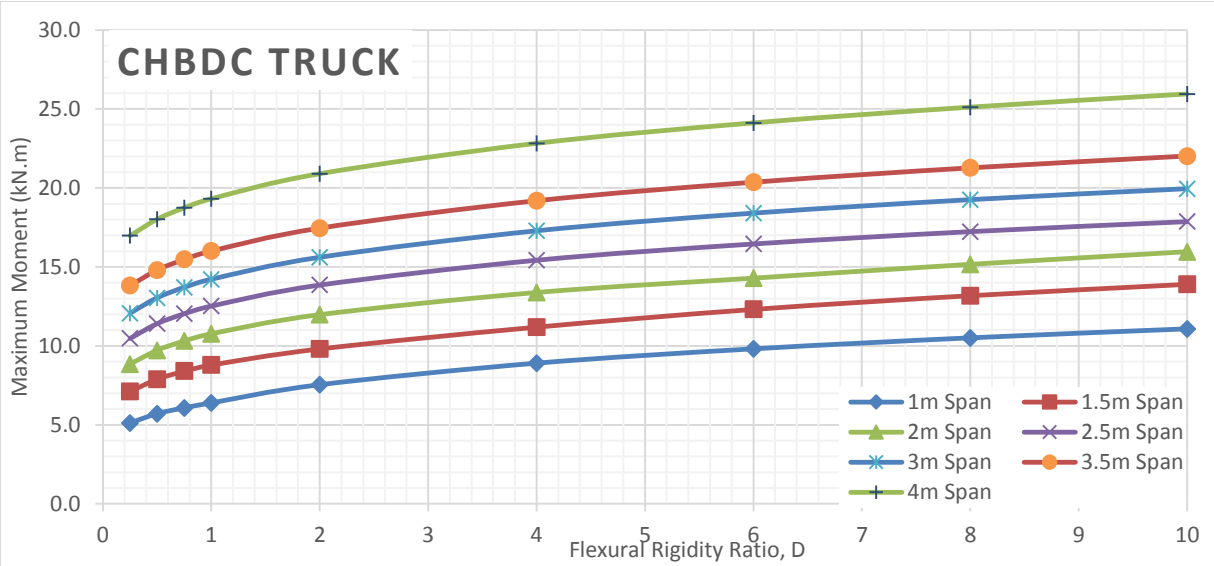


Figure 78 Maximum moment of deck slabs subjected to CHBDC truck for different span values of alpha 6 FEA analyses

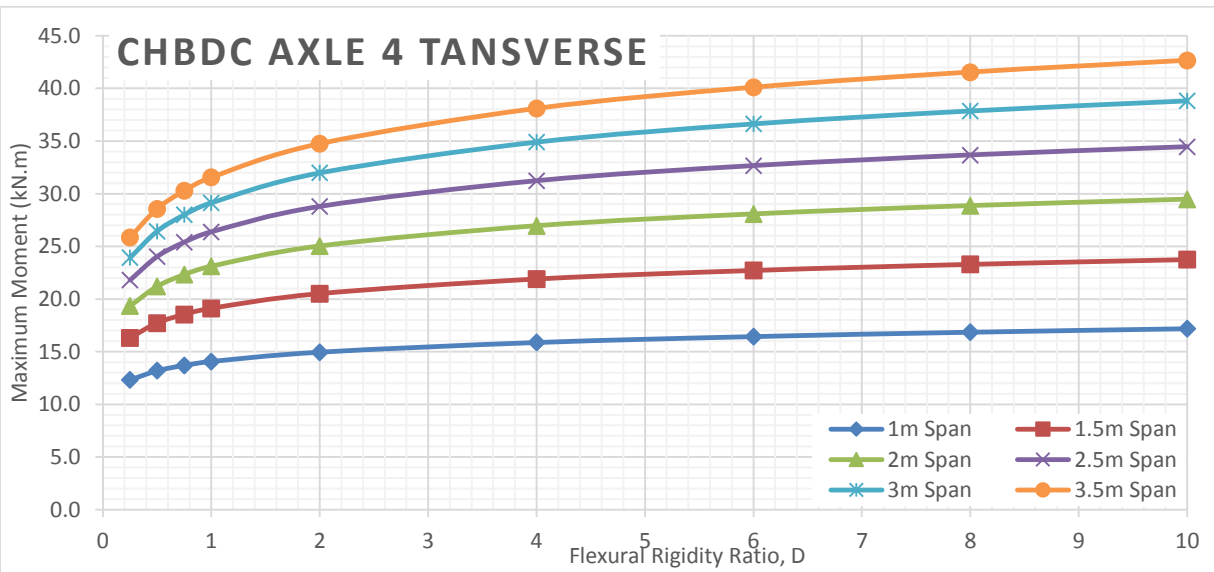


Figure 79 Maximum moment of deck slabs subjected to CHBDC axle 4 for different span values of alpha 6 FEA analyses

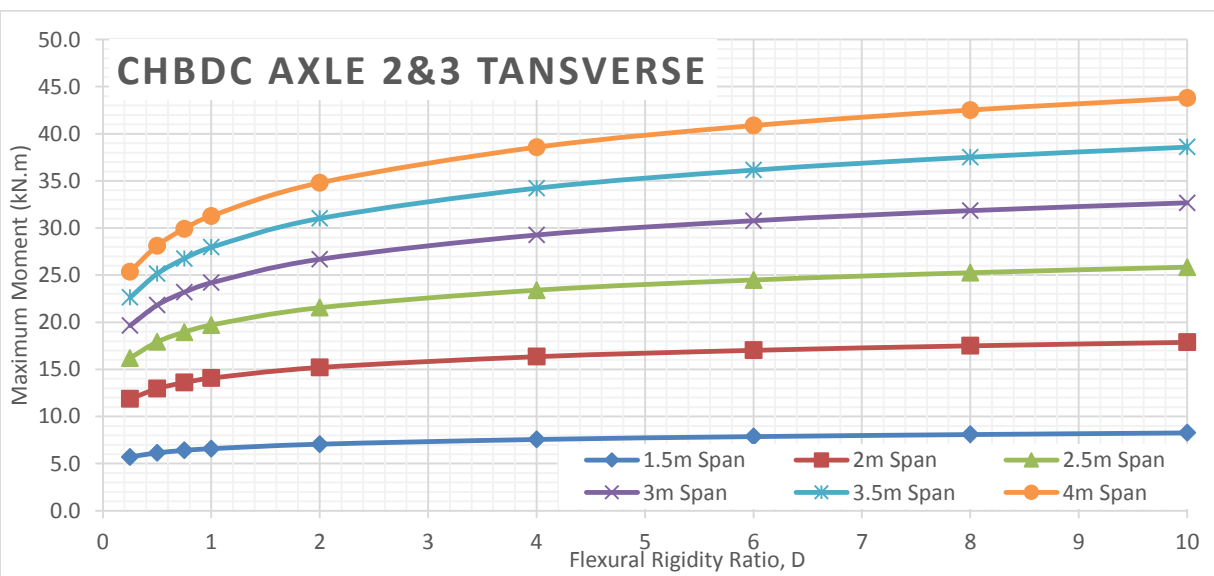


Figure 80 Maximum moment of deck slabs subjected to CHBDC axle 2 &3 for different span values of alpha 6 FEA analyses

Alpha 8 Bending Moment VS Flexural Rigidity for Different Span Length

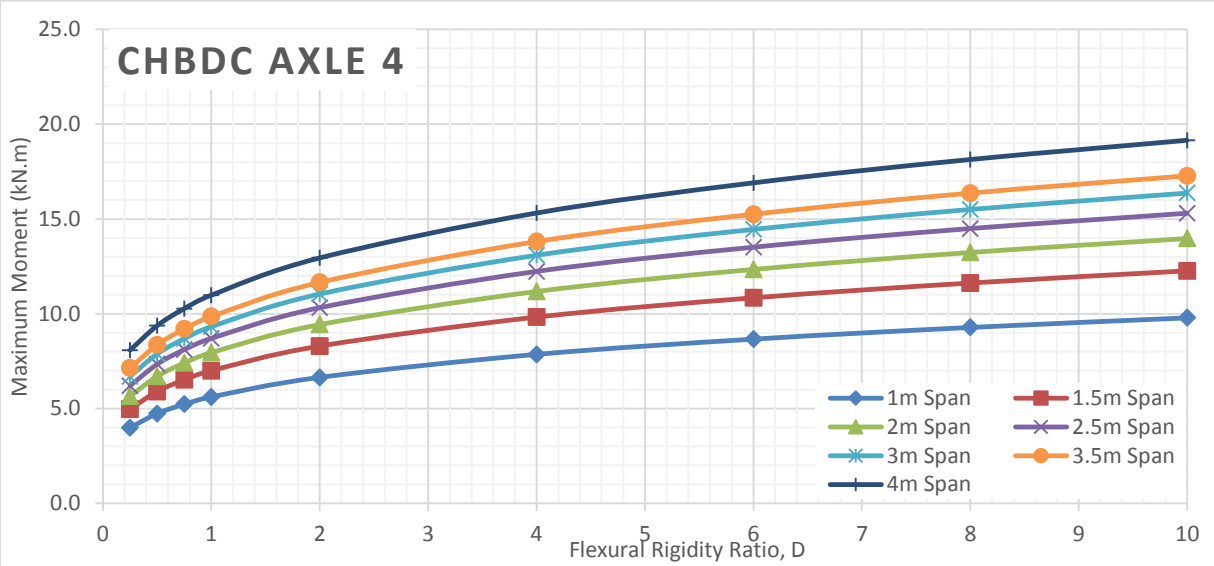


Figure 81 Maximum moment of deck slabs subjected to CHBDC axle 4 for different span values of alpha 8 FEA analyses

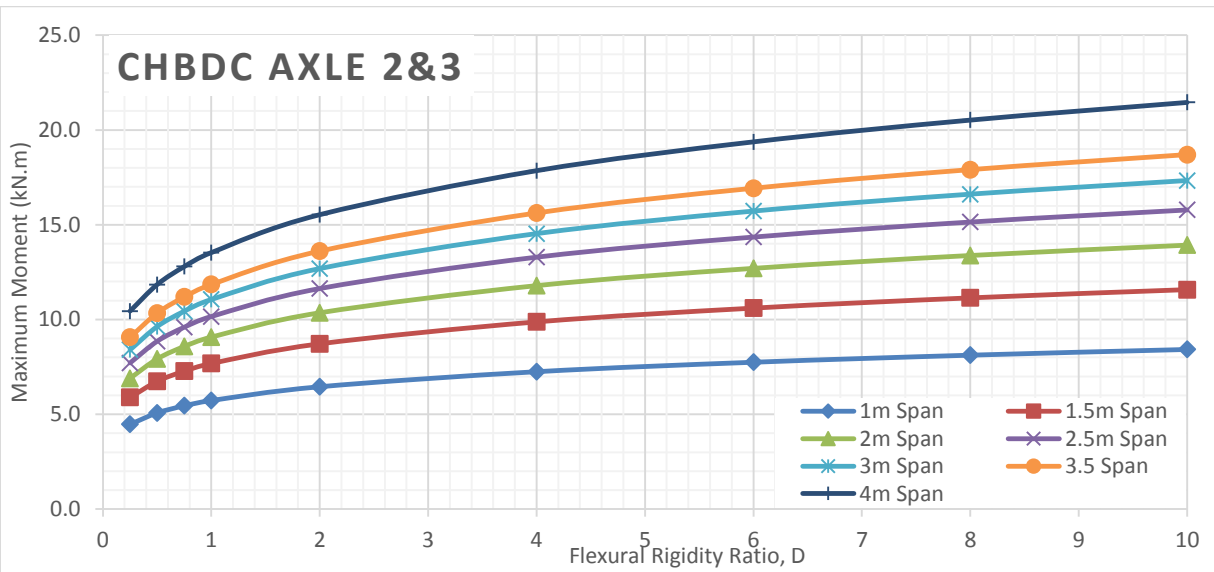


Figure 82 Maximum moment of deck slabs subjected to CHBDC axle 2 &3 for different span values of alpha 8 FEA analyses

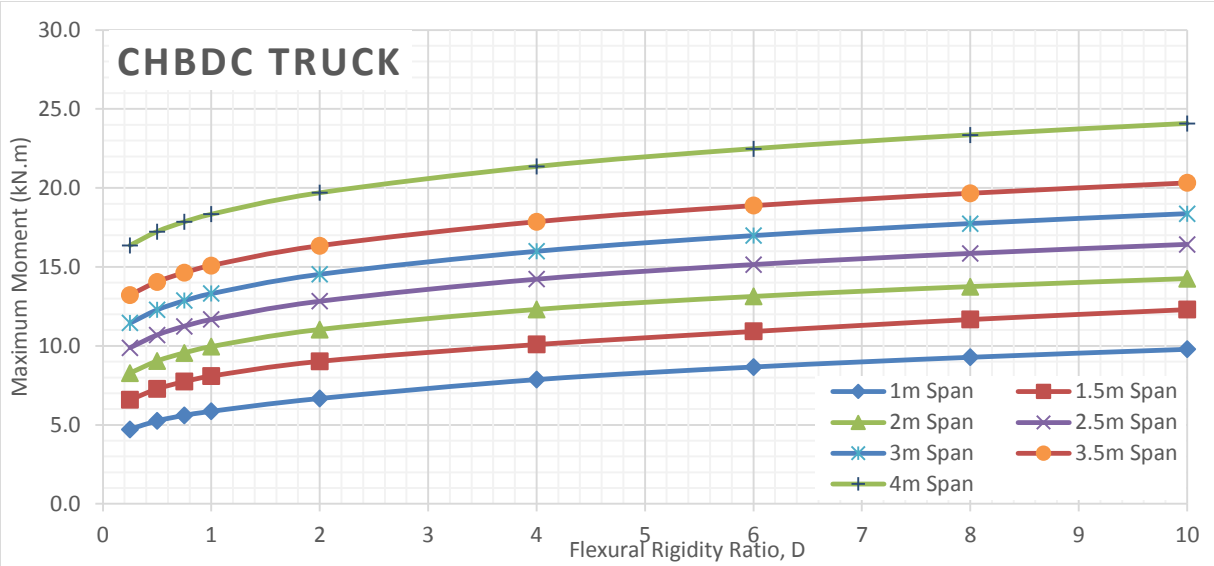


Figure 83 Maximum moment of deck slabs subjected to CHBDC truck for different span values of alpha 8 FEA analyses

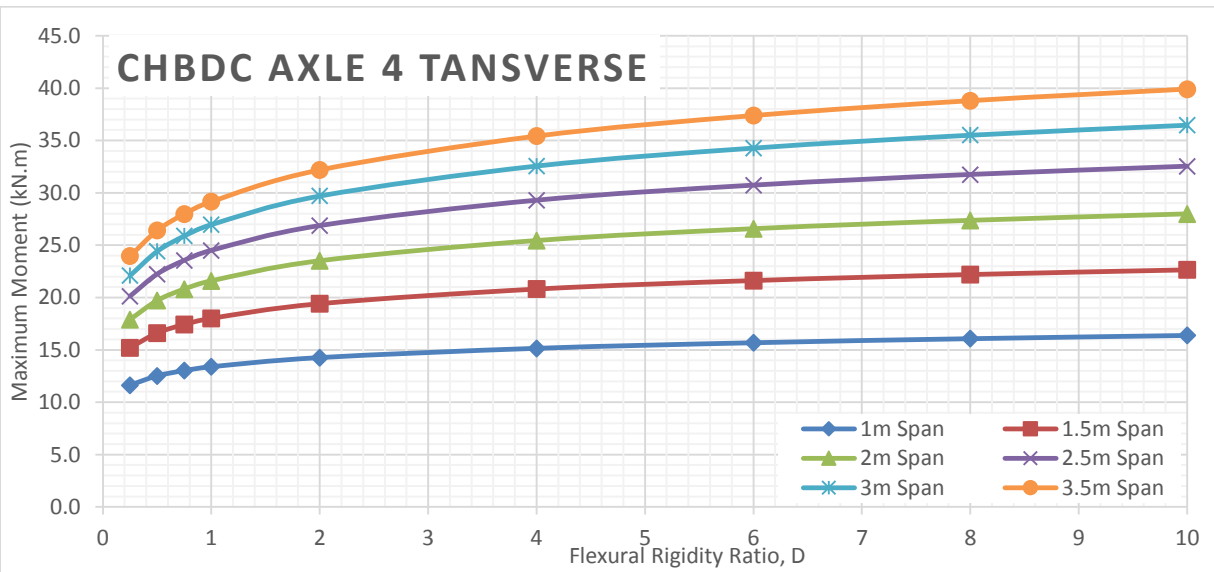


Figure 84 Maximum moment of deck slabs subjected to CHBDC axle 4 for different span values of alpha 8 FEA analyses

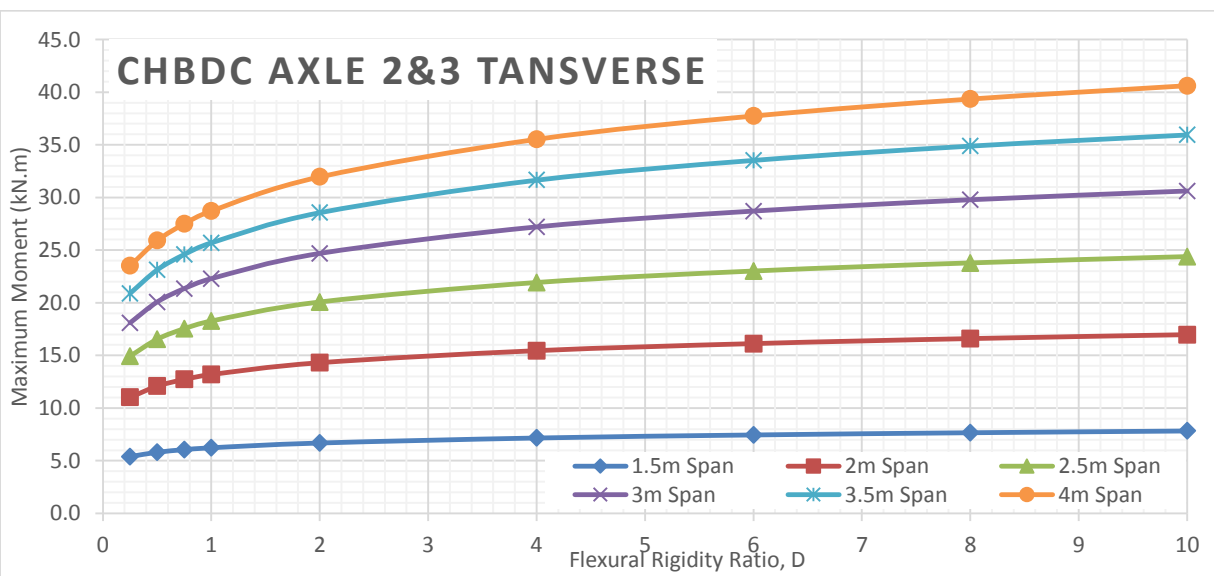


Figure 85 Maximum moment of deck slabs subjected to CHBDC axle 2 &3 for different span values of alpha 8 FEA analyses

Alpha 10 Bending Moment VS Flexural Rigidity for Different Span Length

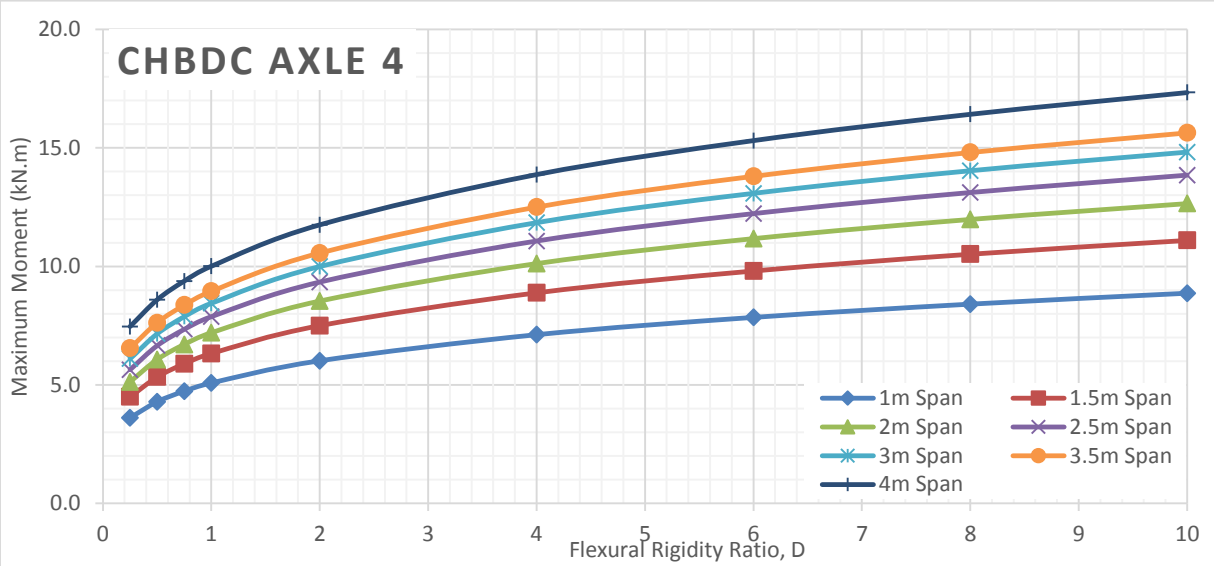


Figure 86 Maximum moment of deck slabs subjected to CHBDC axle 4 for different span values of alpha 10 FEA analyses

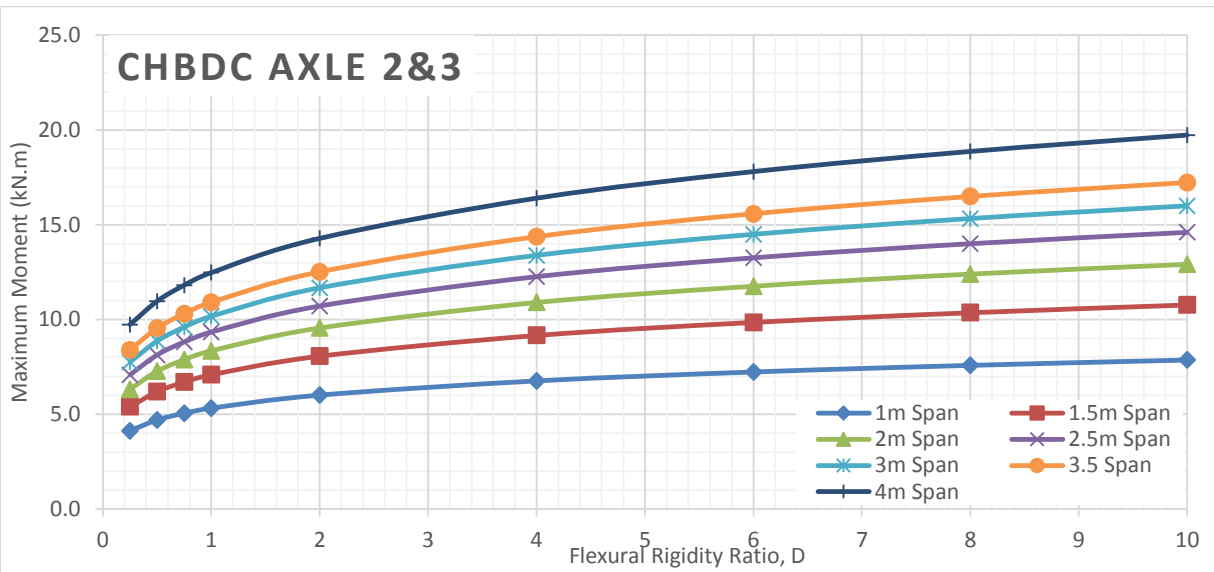


Figure 87 Maximum moment of deck slabs subjected to CHBDC axle 2 &3 for different span values of alpha 10 FEA analyses

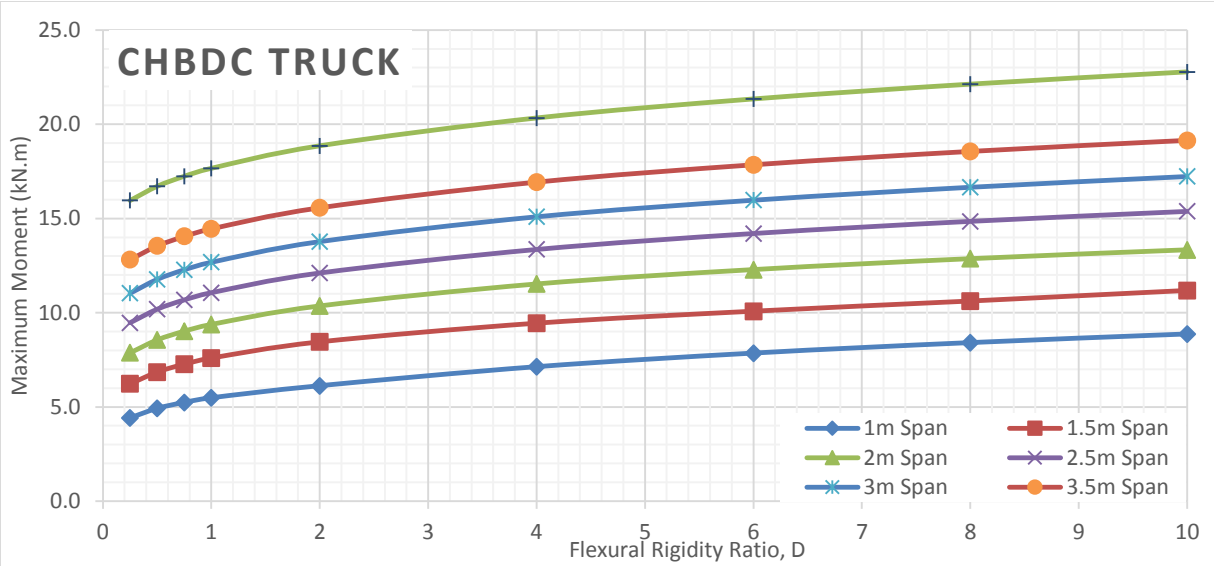


Figure 88 Maximum moment of deck slabs subjected to CHBDC truck for different span values of alpha 10 FEA analyses

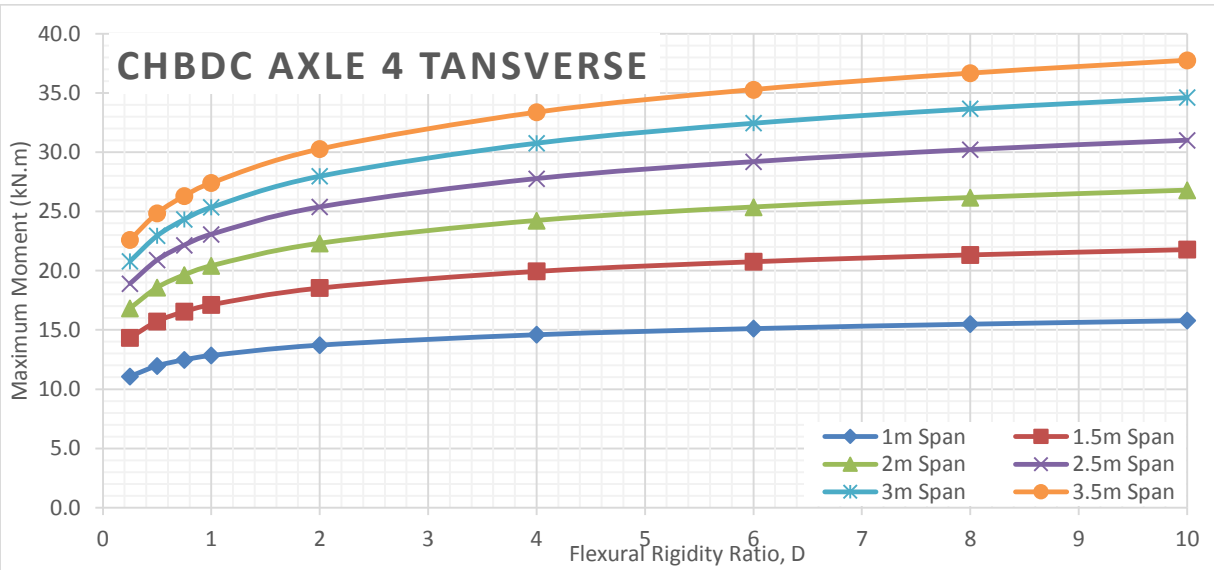


Figure 89 Maximum moment of deck slabs subjected to CHBDC axle 4 for different span values of alpha 10 FEA analyses

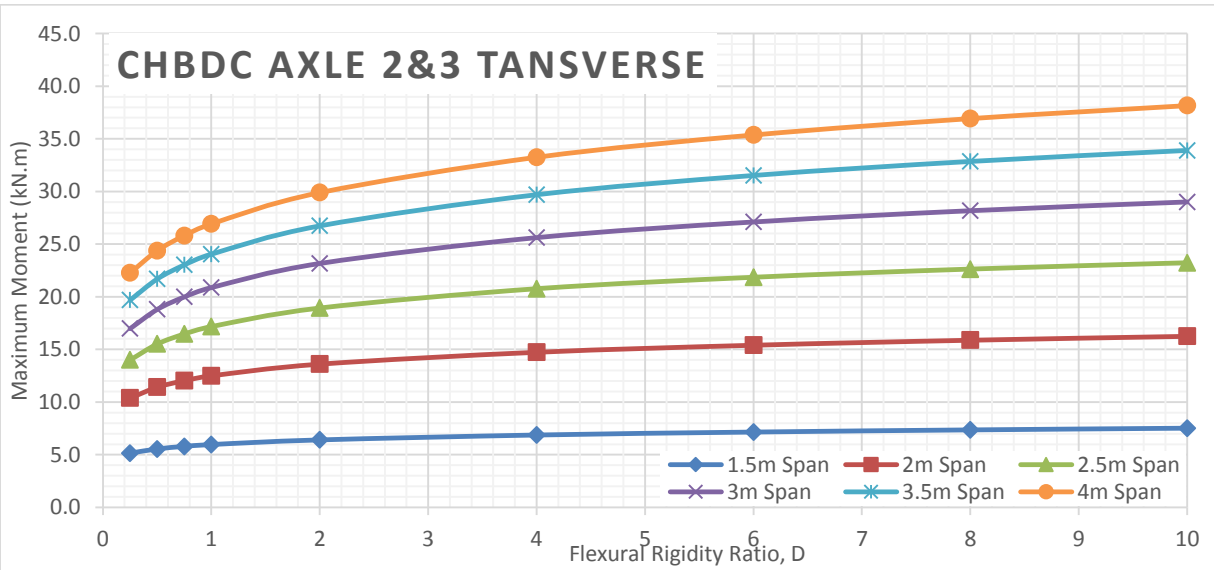


Figure 90 Maximum moment of deck slabs subjected to CHBDC axle 2 &3 for different span values of alpha 10 FEA analyses

B.1.4 MAXIMUM BENDING MOMENT VS TORSIONAL RIGIDITY

Axle 4 Bending Moment VS Torsional Rigidity for Different D Values at Different span length

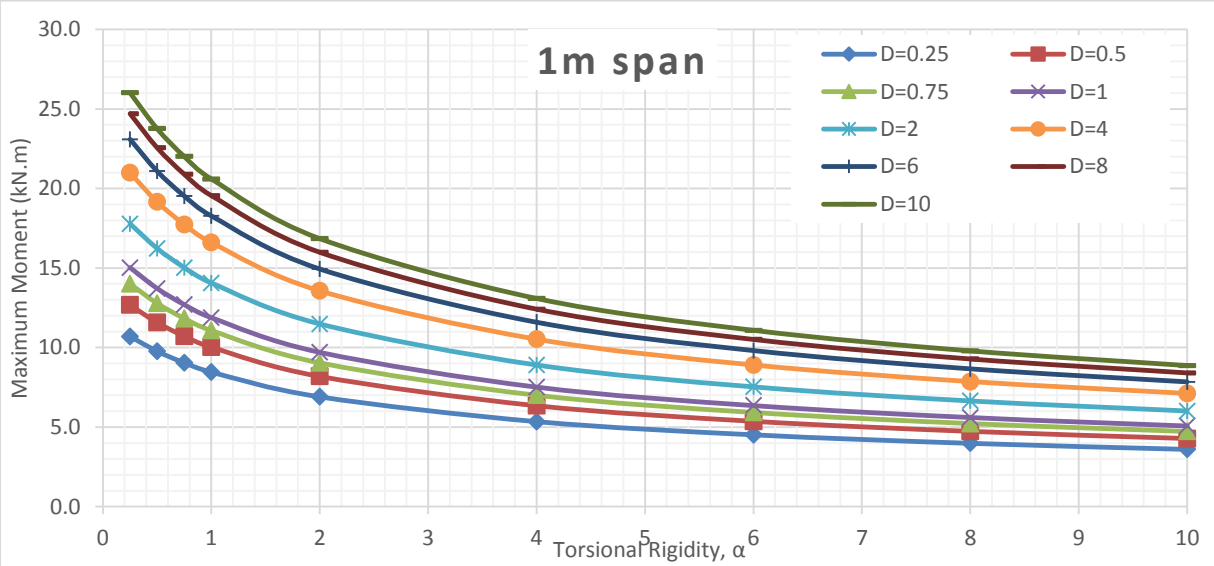


Figure 91 Maximum moment of 1 m span slab subjected to CHBDC axle 4 for different D values FEA analyses

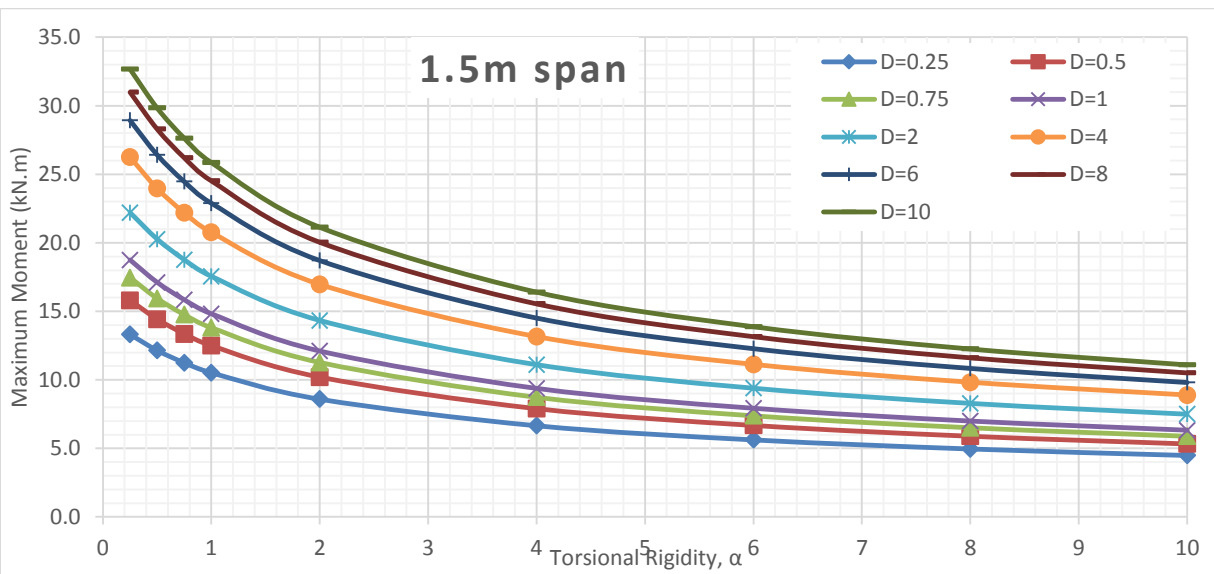


Figure 92 Maximum moment of 1.5 m span slab subjected to CHBDC axle 4 for different D values FEA analyses

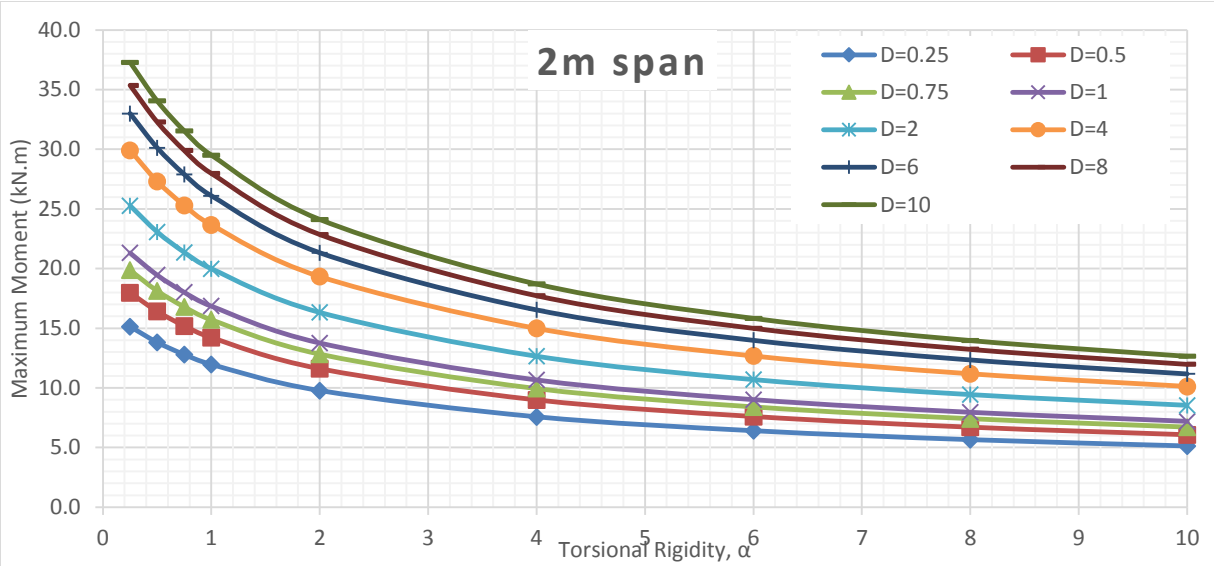


Figure 93 Maximum moment of 2 m span slab subjected to CHBDC axle 4 for different D values FEA analyses

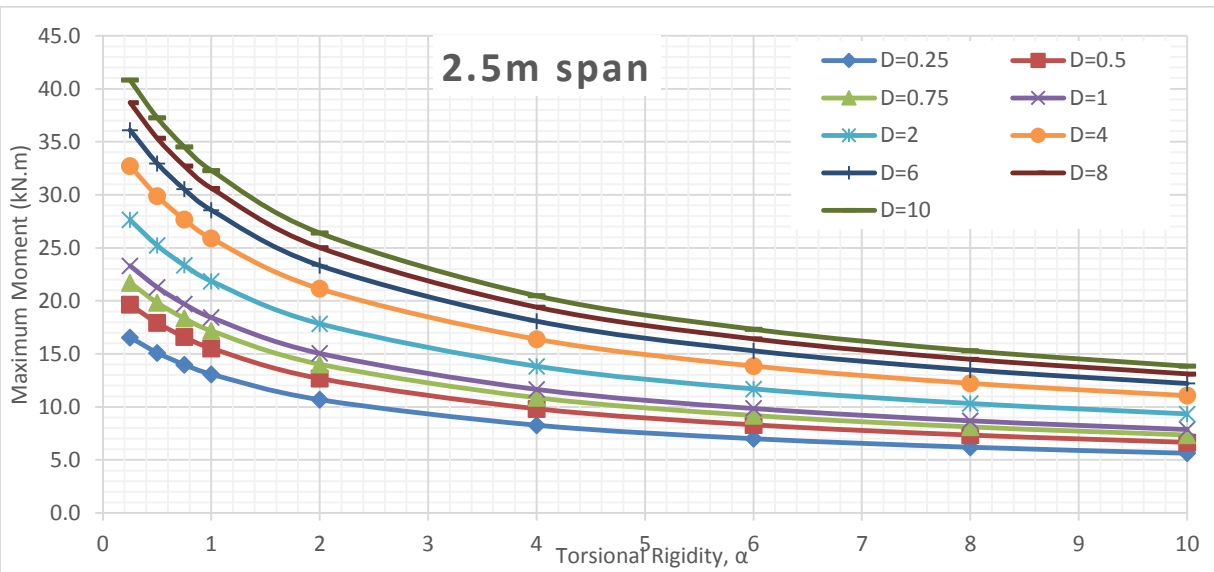


Figure 94 Maximum moment of 2.5 m span slab subjected to CHBDC axle 4 for different D values FEA analyses

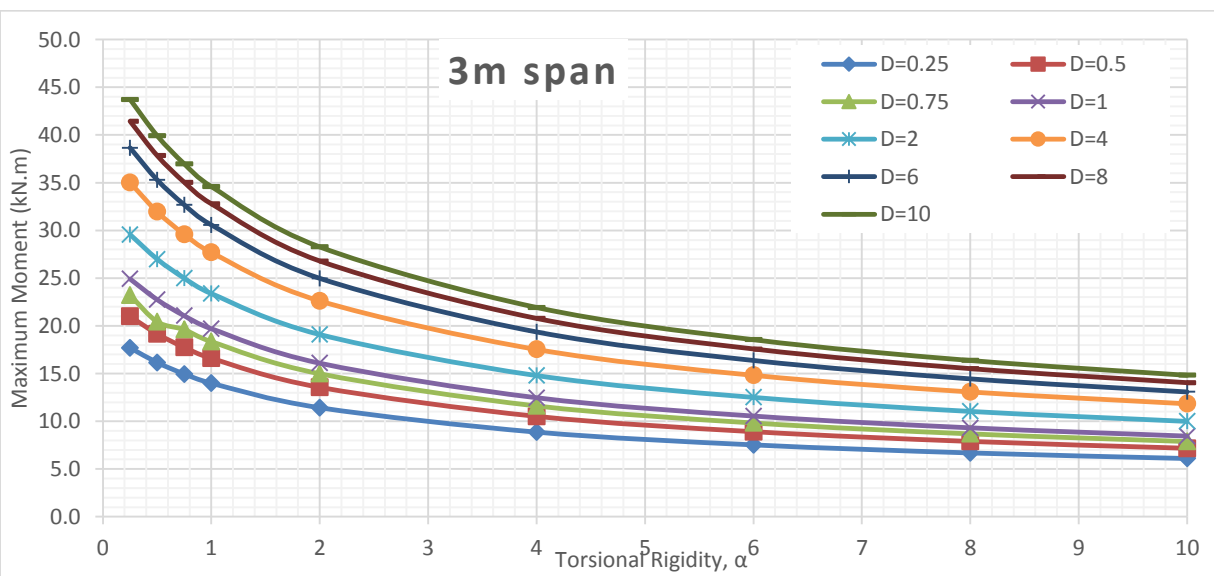


Figure 95 Maximum moment of 3 m span slab subjected to CHBDC axle 4 for different D values FEA analyses

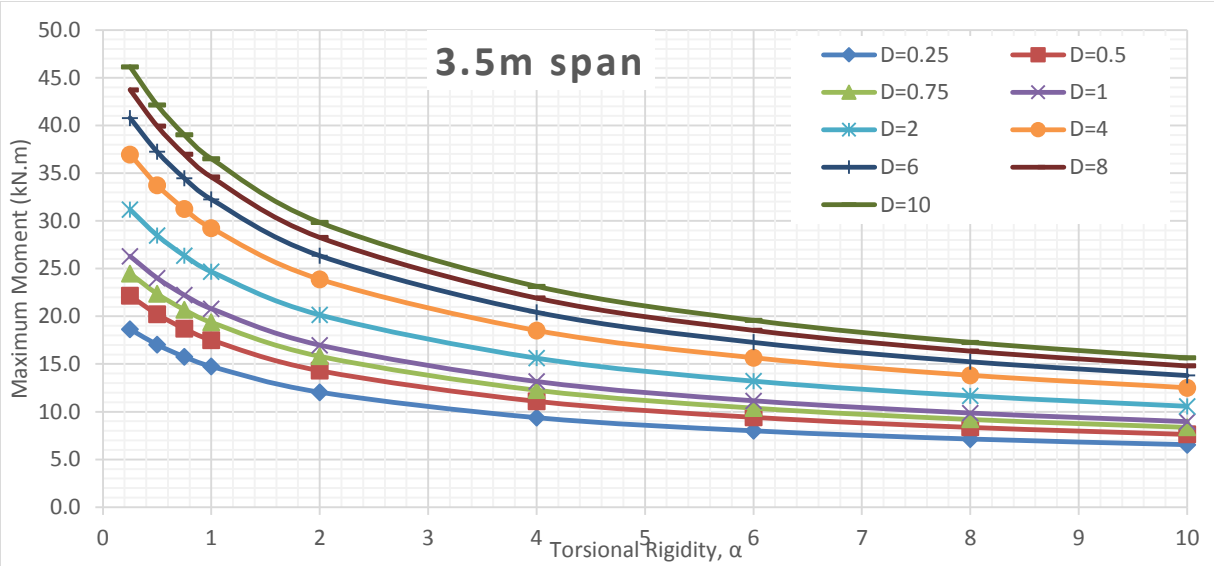


Figure 96 Maximum moment of 3.5 m span slab subjected to CHBDC axle 4 for different D values FEA analyses

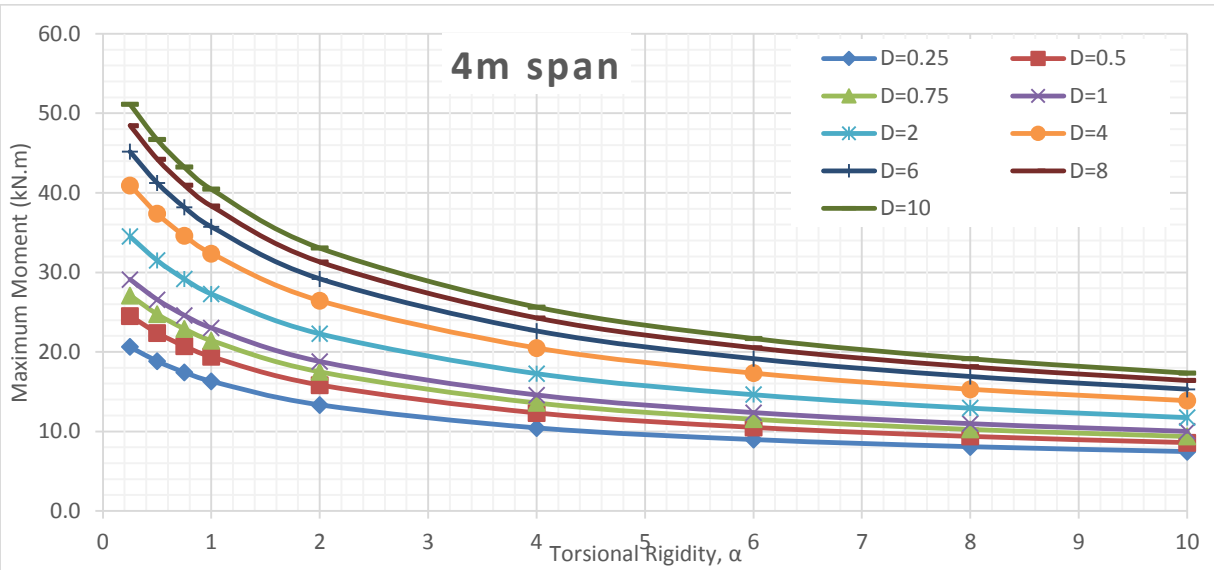


Figure 97 Maximum moment of 4 m span slab subjected to CHBDC axle 4 for different D values FEA analyses

Axle 2 &3 Bending Moment VS Torsional Rigidity for Different D Values at Different span length

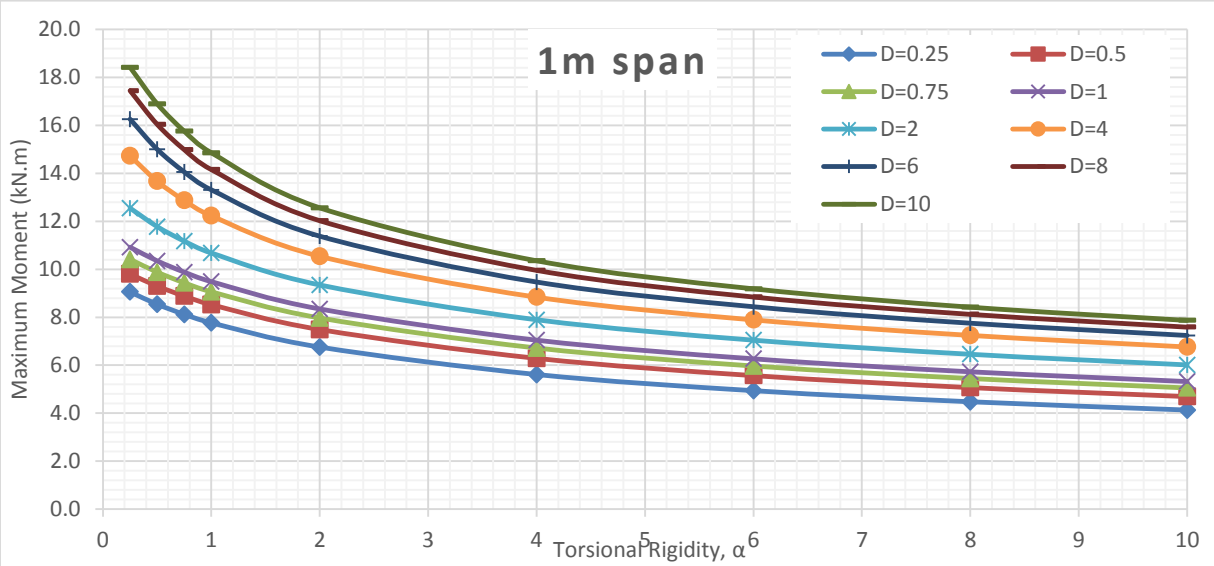


Figure 98 Maximum moment of 1 m span slab subjected to CHBDC axle 2 & 3 for different D values FEA analyses

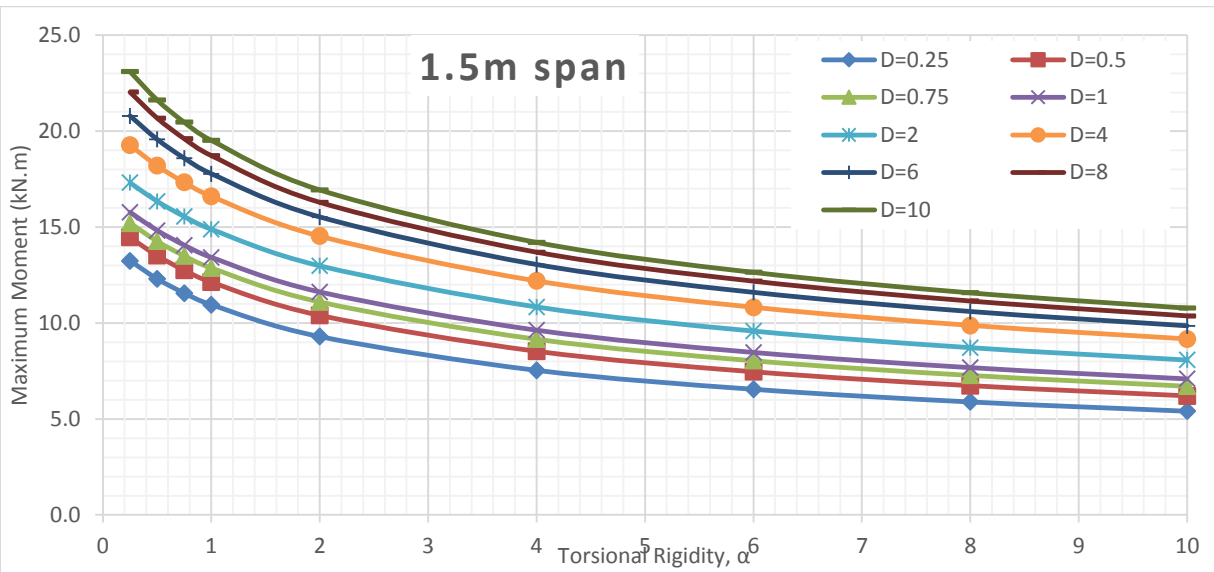


Figure 99 Maximum moment of 1.5 m span slab subjected to CHBDC axle 2 & 3 for different D values FEA analyses

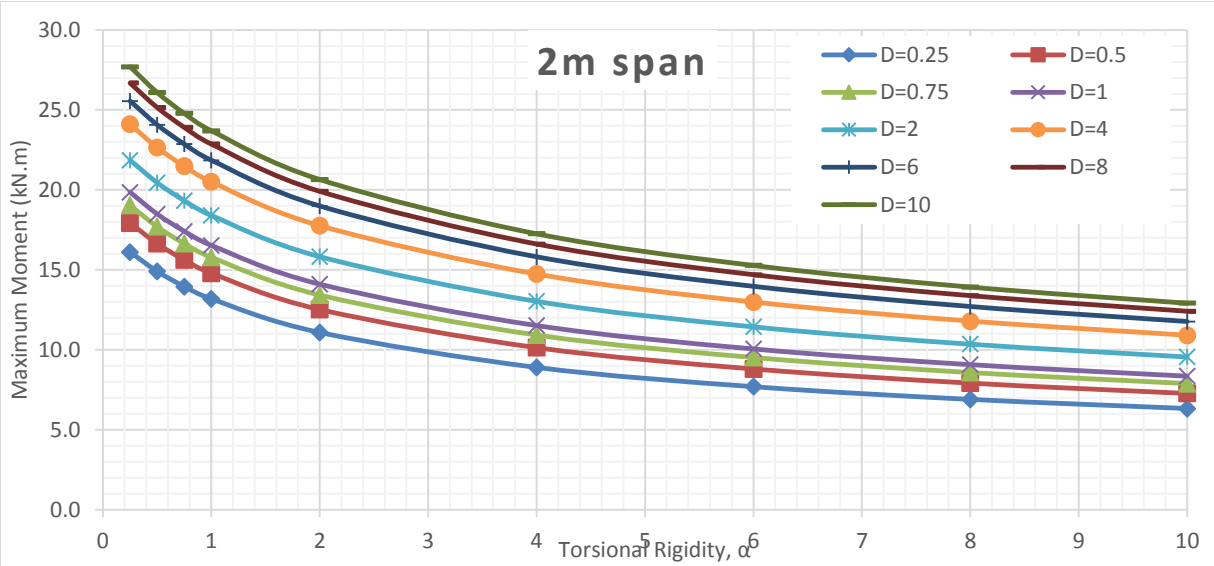


Figure 100 Maximum moment of 2 m span slab subjected to CHBDC axle 2 & 3 for different D values FEA analyses

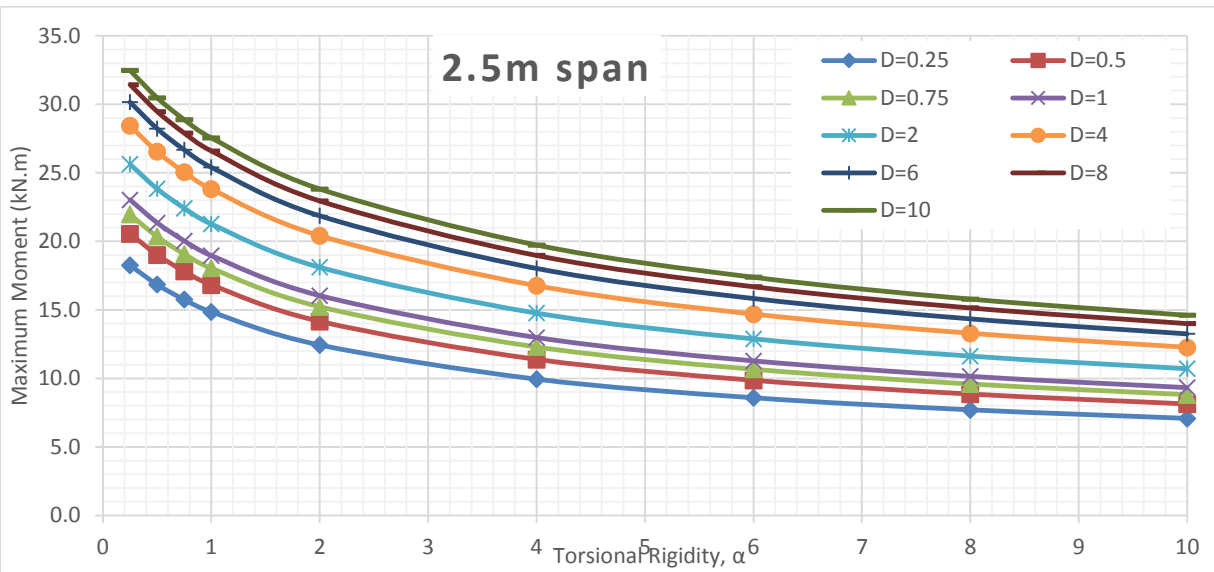


Figure 101 Maximum moment of 2.5 m span slab subjected to CHBDC axle 2 & 3 for different D values FEA analyses

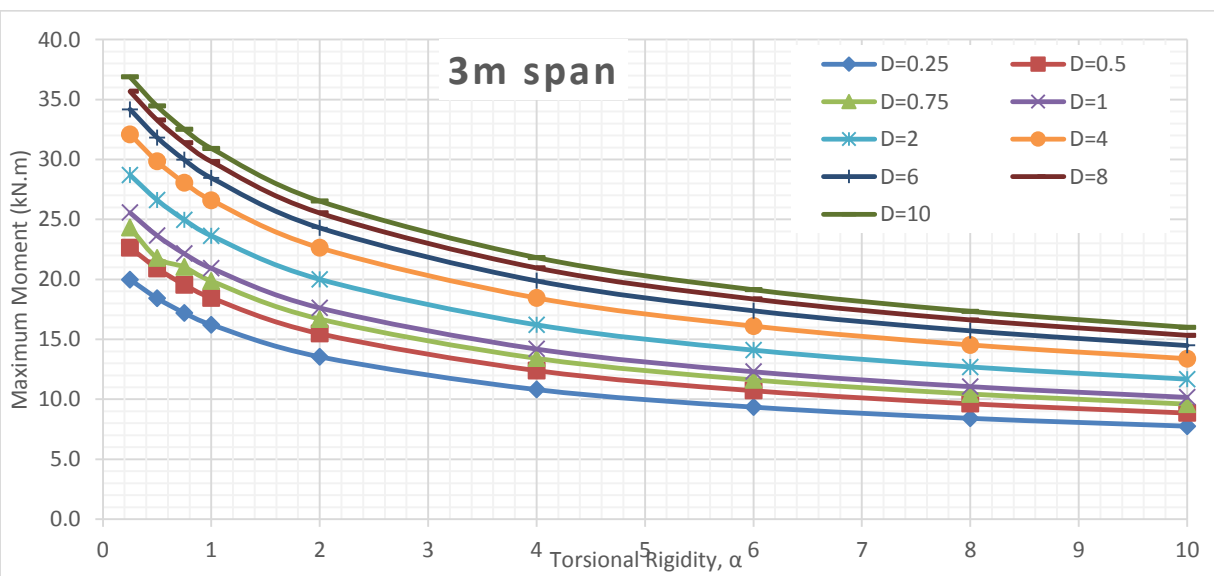


Figure 102 Maximum moment of 3 m span slab subjected to CHBDC axle 2 & 3 for different D values FEA analyses

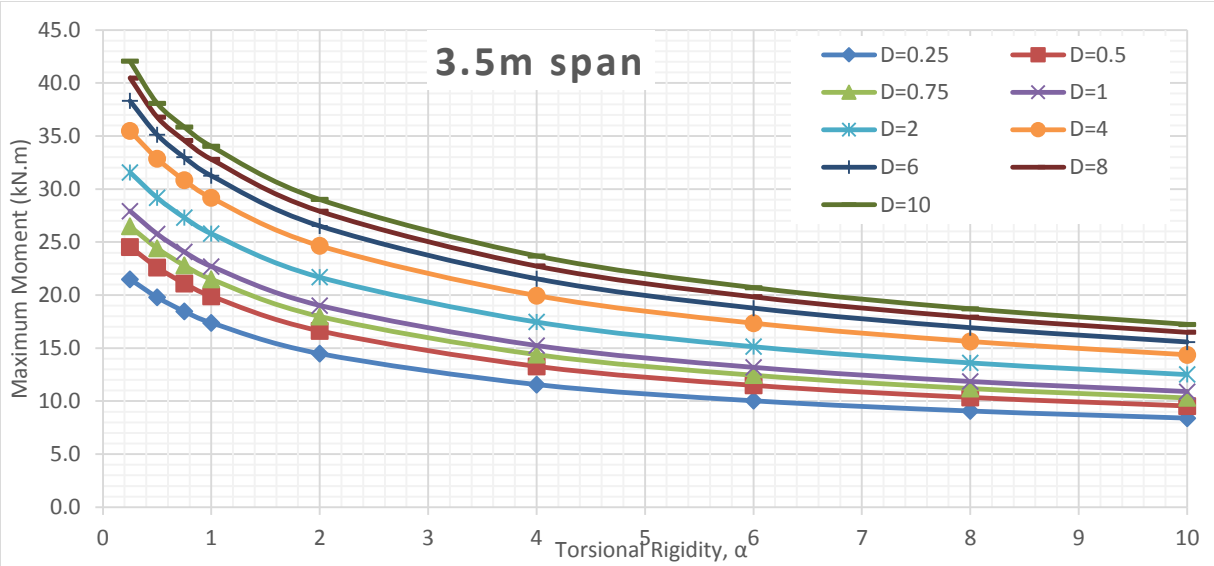


Figure 103 Maximum moment of 3.5 m span slab subjected to CHBDC axle 2 & 3 for different D values FEA analyses

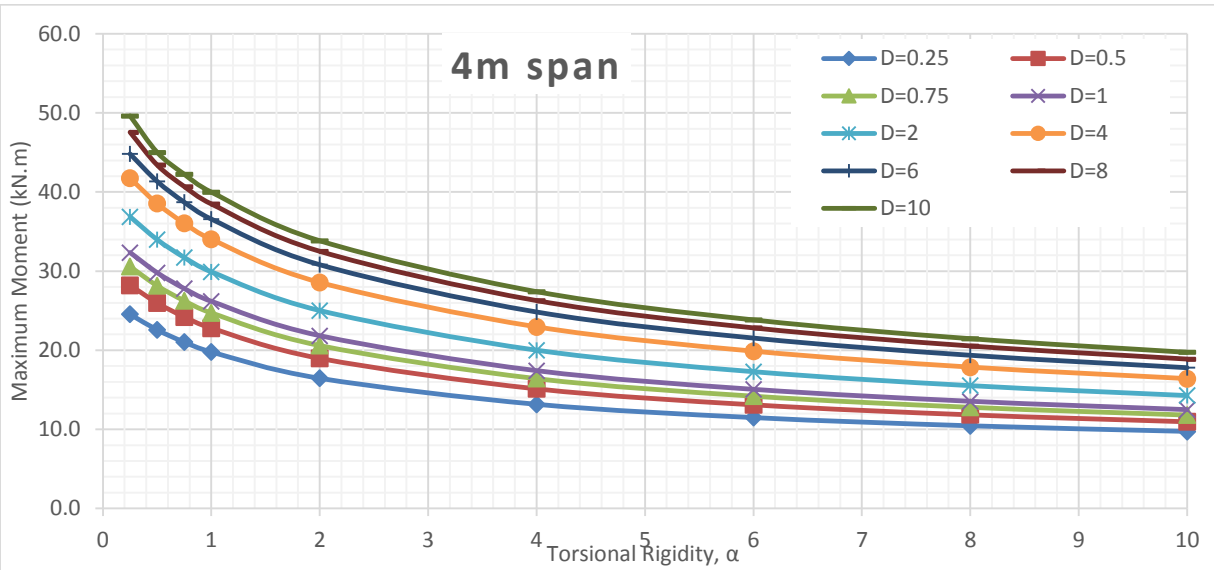


Figure 104 Maximum moment of 4 m span slab subjected to CHBDC axle 2 & 3 for different D values FEA analyses

Truck Bending Moment VS Torsional Rigidity for Different D Values at Different span length

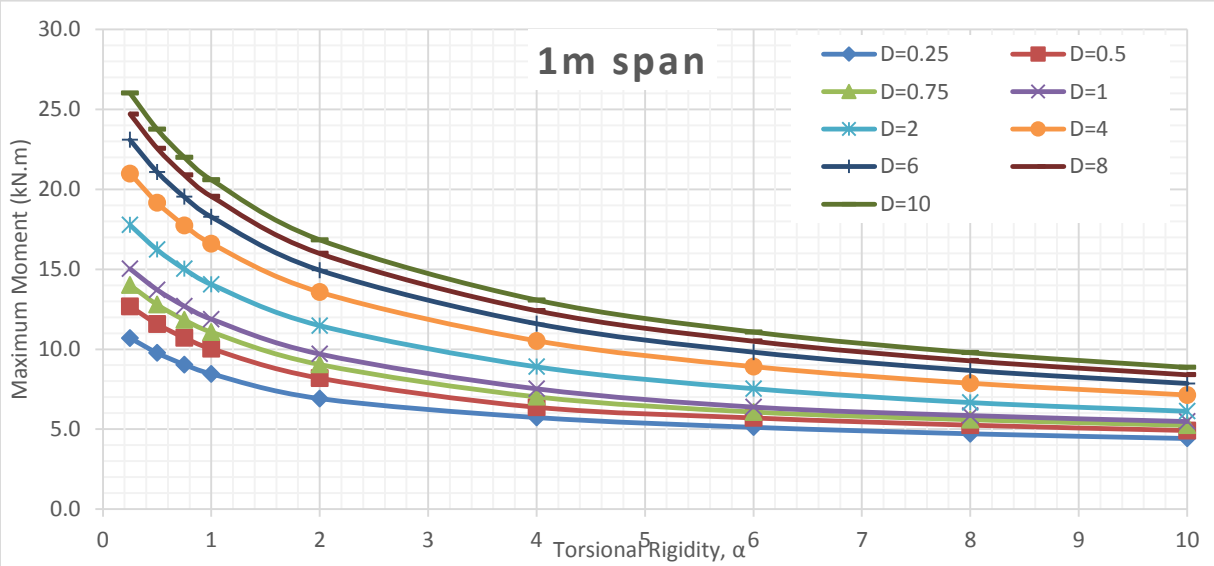


Figure 105 Maximum moment of 1 m span slab subjected to CHBDC truck for different D values FEA analyses

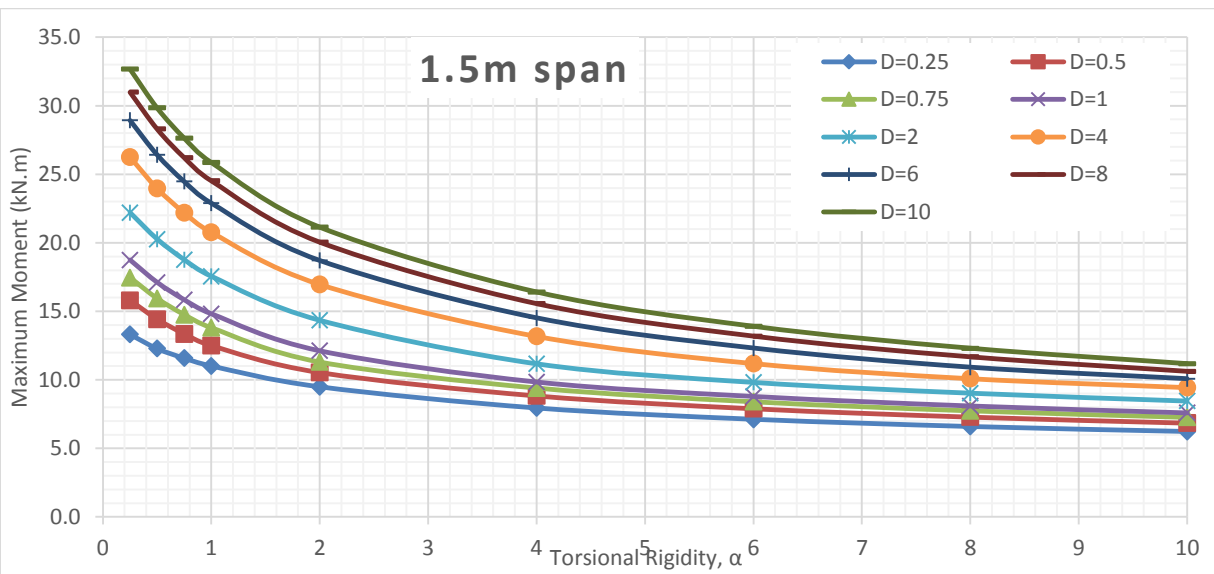


Figure 106 Maximum moment of 1.5 m span slab subjected to CHBDC truck for different D values FEA analyses

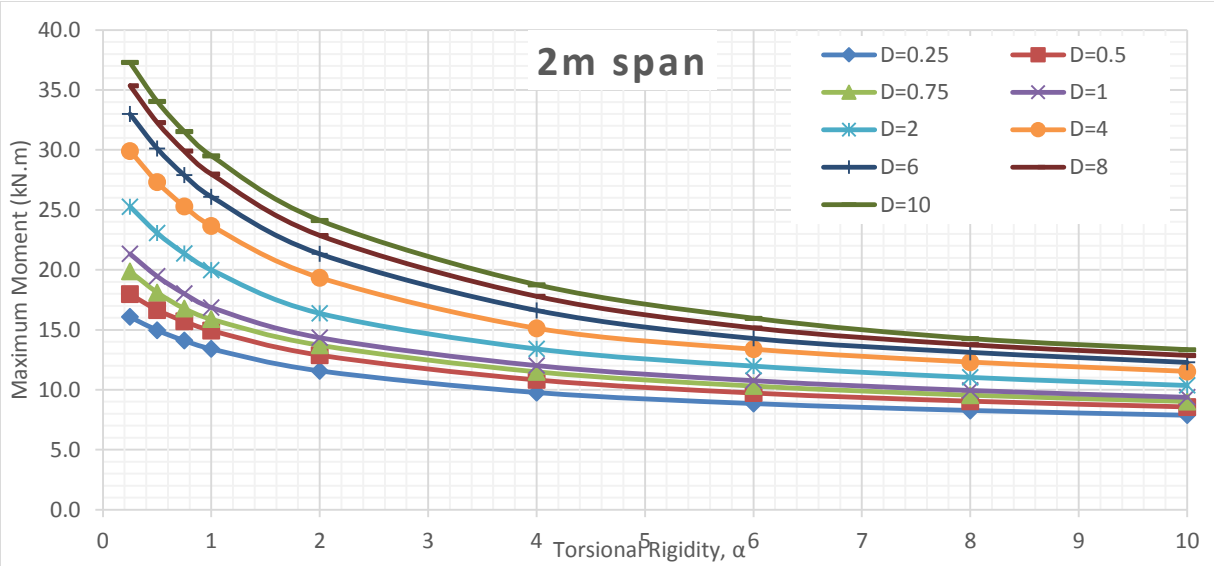


Figure 107 Maximum moment of 2 m span slab subjected to CHBDC truck for different D values FEA analyses

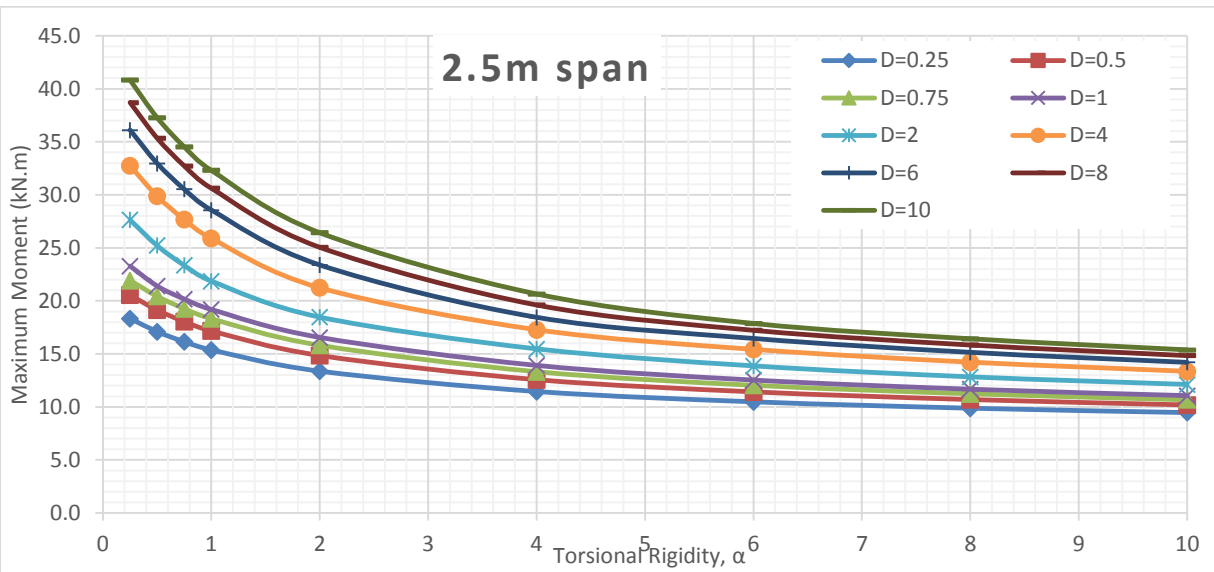


Figure 108 Maximum moment of 2.5 m span slab subjected to CHBDC truck for different D values FEA analyses

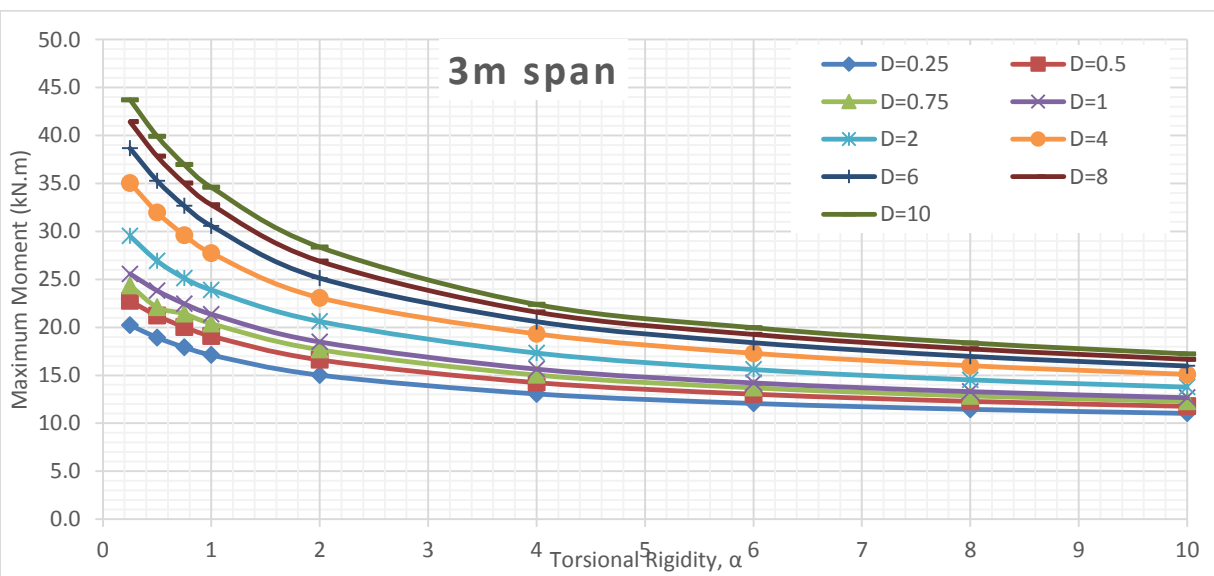


Figure 109 Maximum moment of 3 m span slab subjected to CHBDC truck for different D values FEA analyses

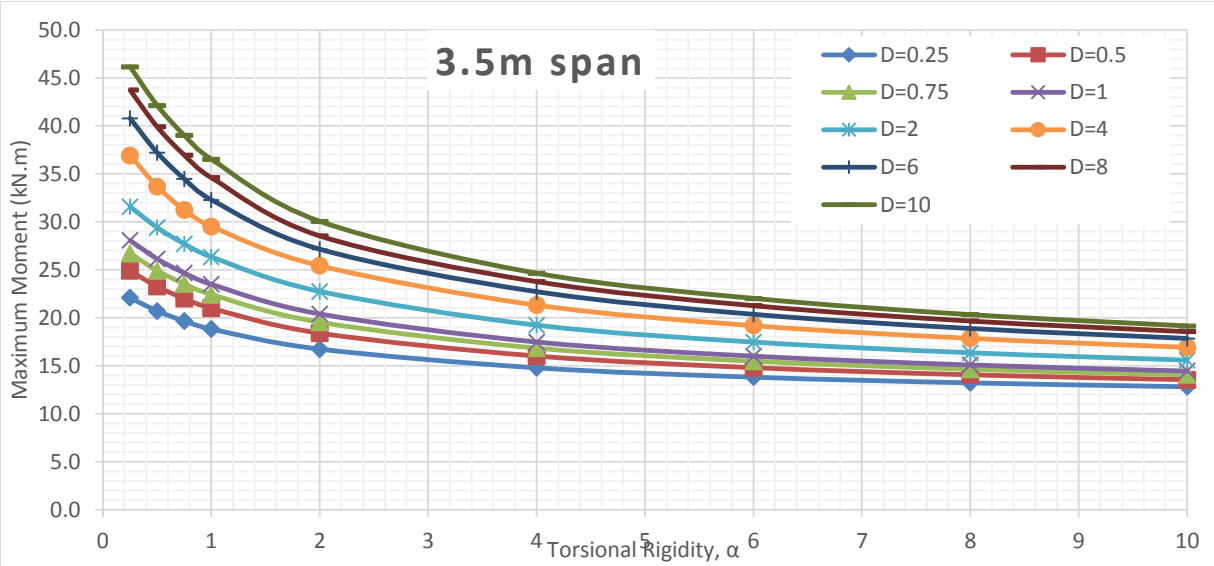


Figure 110 Maximum moment of 3.5 m span slab subjected to CHBDC truck for different D values FEA analyses

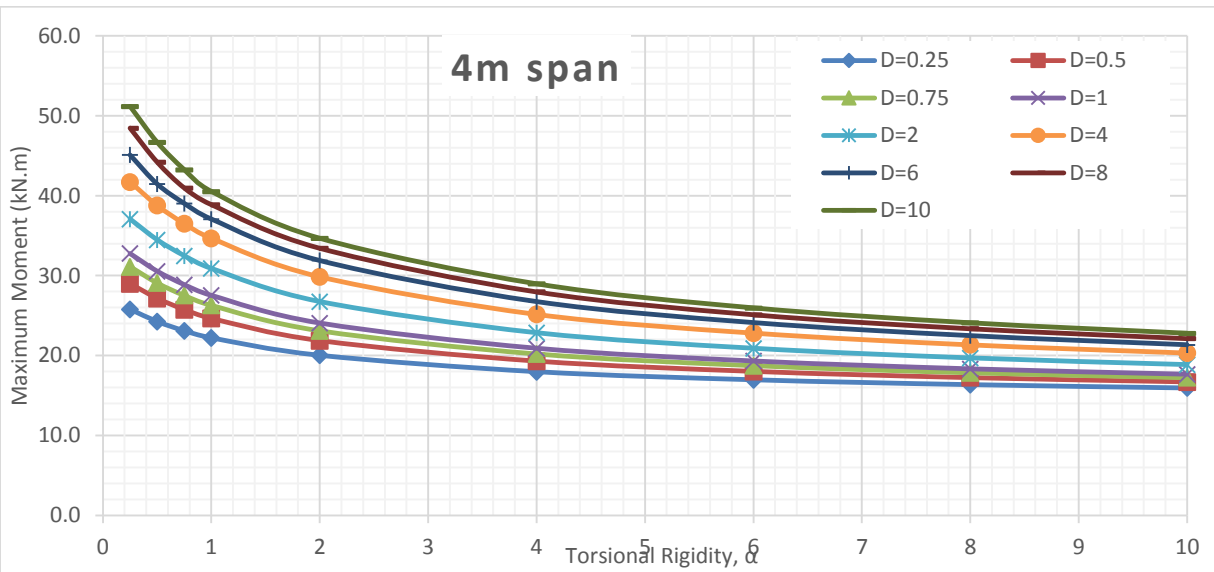


Figure 111 Maximum moment of 4 m span slab subjected to CHBDC truck for different D values FEA analyses

Axle 4 Transverse Bending Moment VS Torsional Rigidity for Different D Values at Different span length

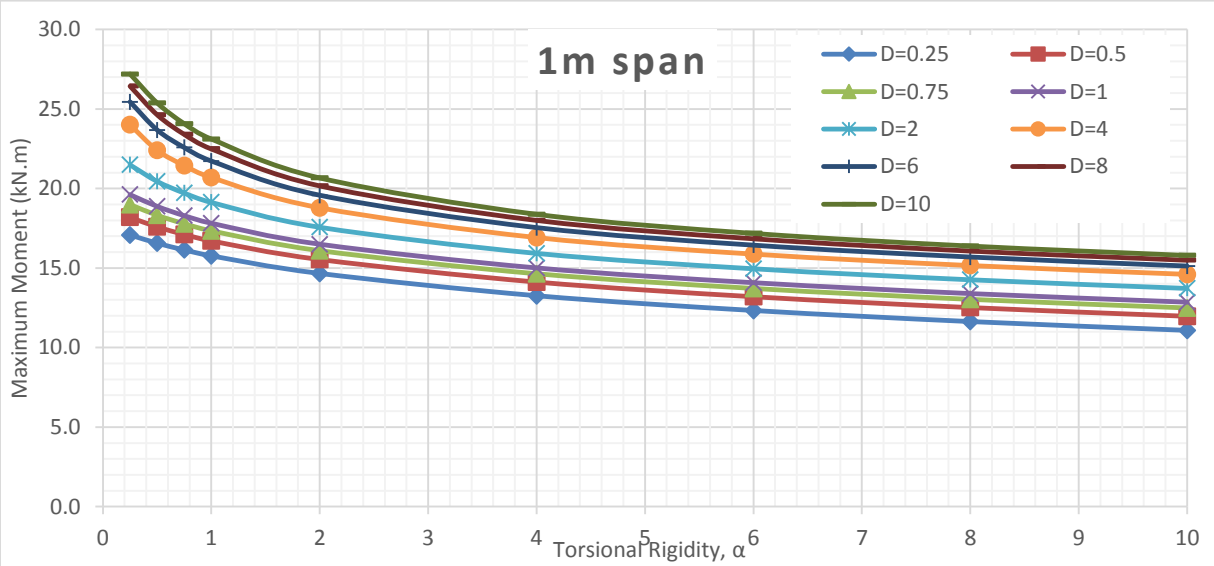


Figure 112 Maximum moment of 1 m span slab subjected to CHBDC axle 4 for different D values FEA analyses

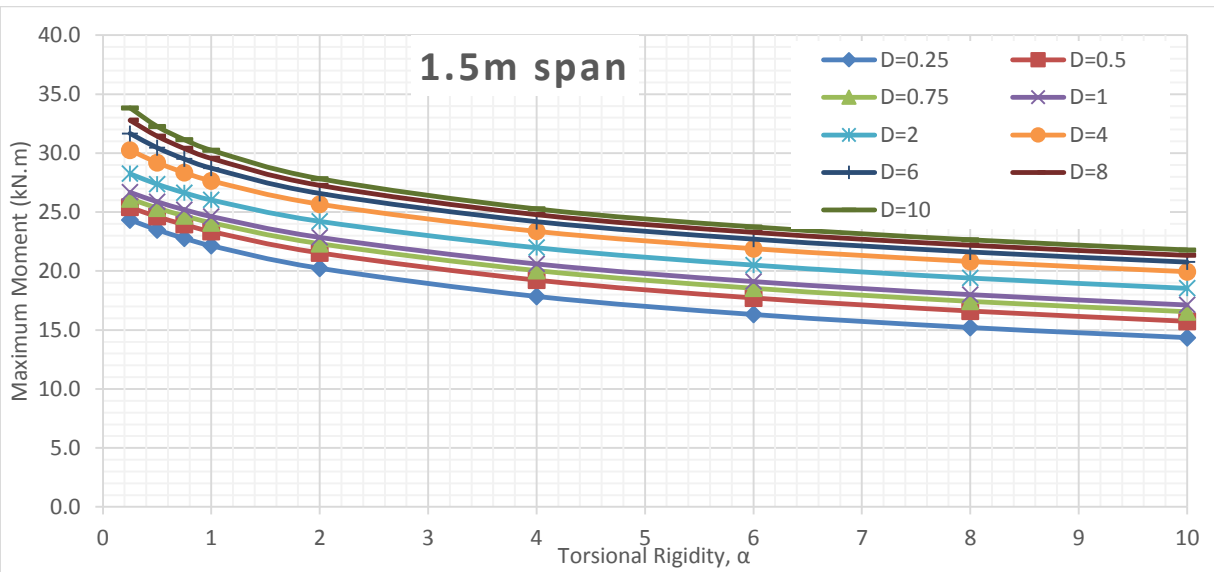


Figure 113 Maximum moment of 1.5 m span slab subjected to CHBDC axle 4 for different D values FEA analyses

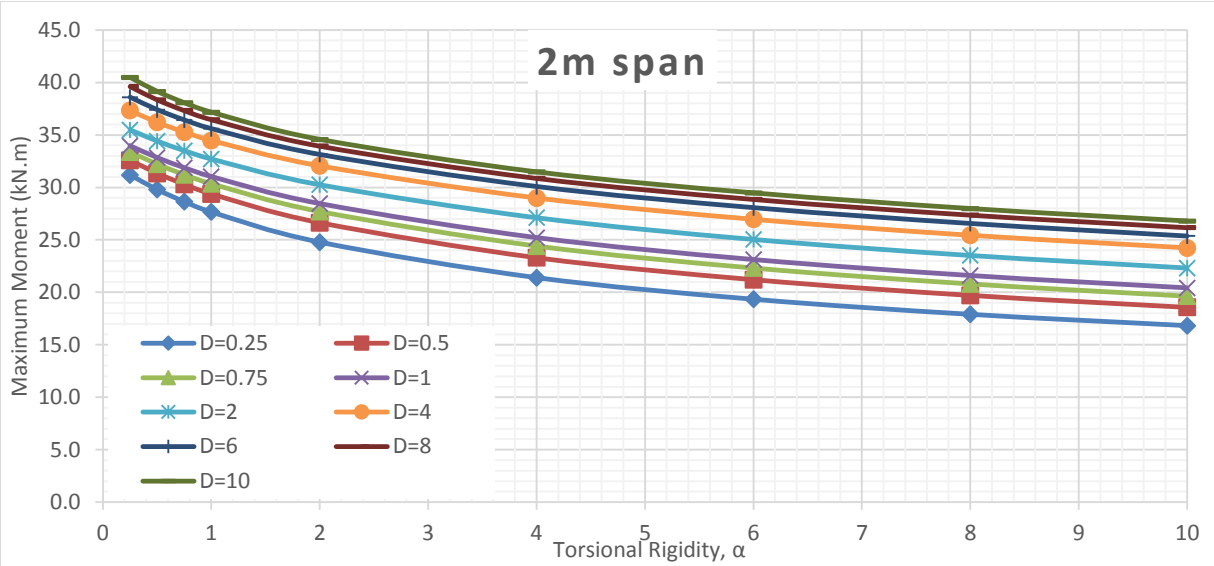


Figure 114 Maximum moment of 2 m span slab subjected to CHBDC axle 4 for different D values FEA analyses

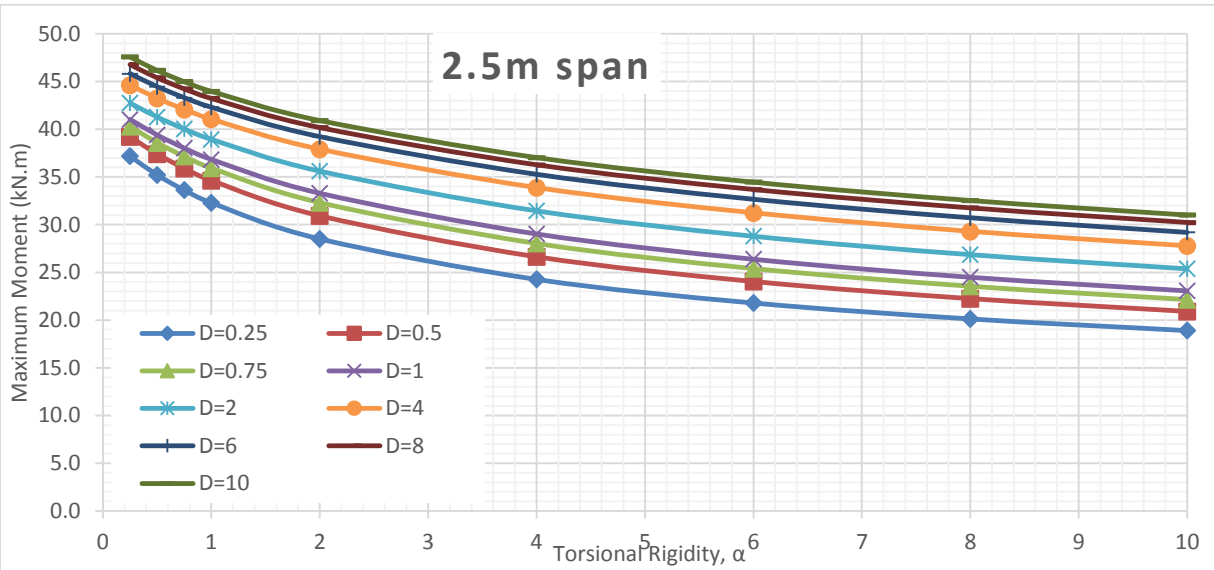


Figure 115 Maximum moment of 2.5 m span slab subjected to CHBDC axle 4 for different D values FEA analyses

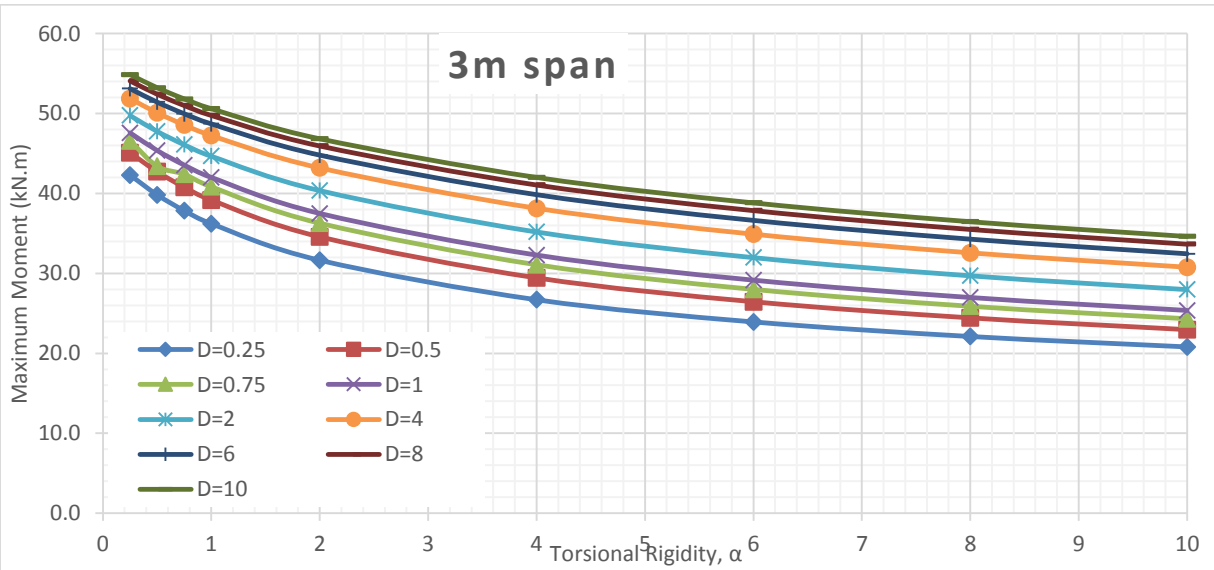


Figure 116 Maximum moment of 3 m span slab subjected to CHBDC axle 4 for different D values FEA analyses

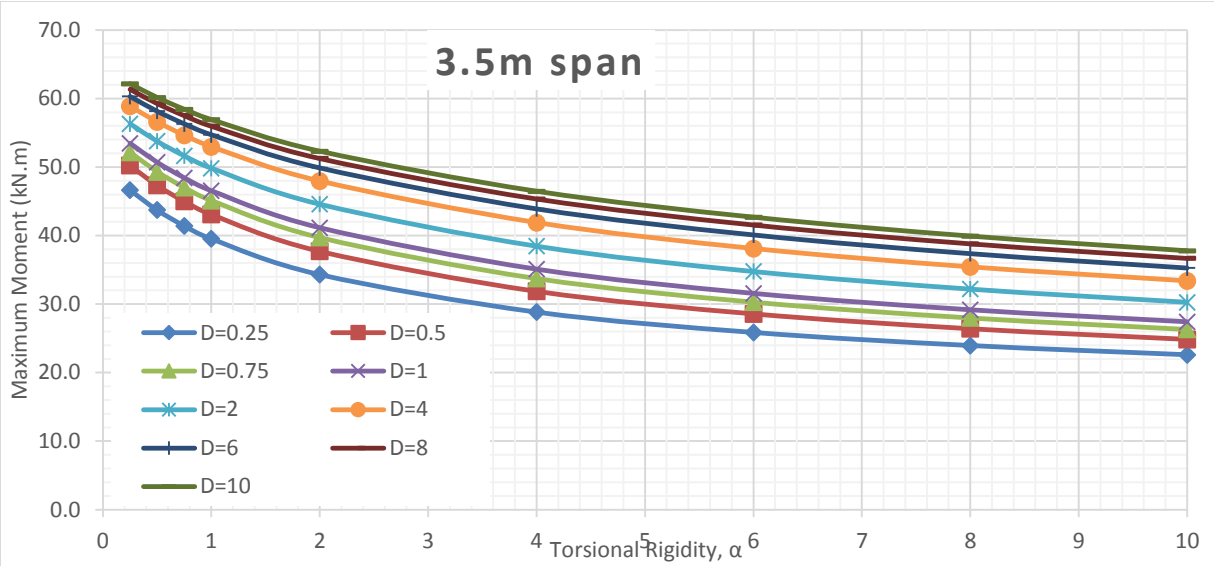


Figure 117 Maximum moment of 3.5 m span slab subjected to CHBDC axle 4 for different D values FEA analyses

Axle 2 & 3 Transverse Bending Moment VS Torsional Rigidity for Different D Values at Different span length

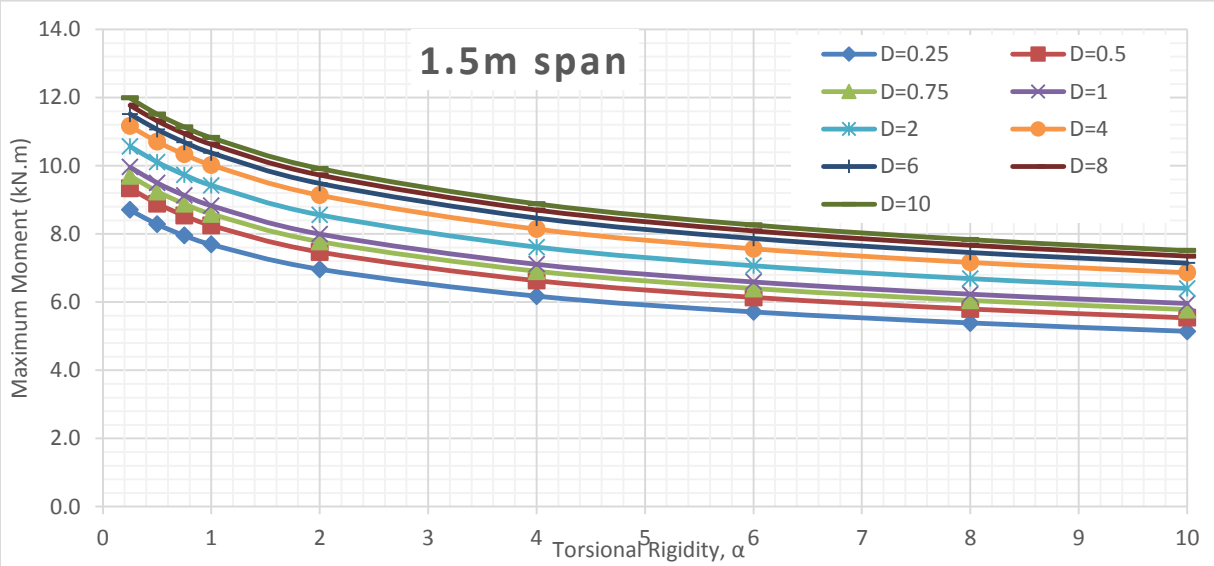


Figure 118 Maximum moment of 1.5 m span slab subjected to CHBDC axle 2 & 3 for different D values FEA analyses

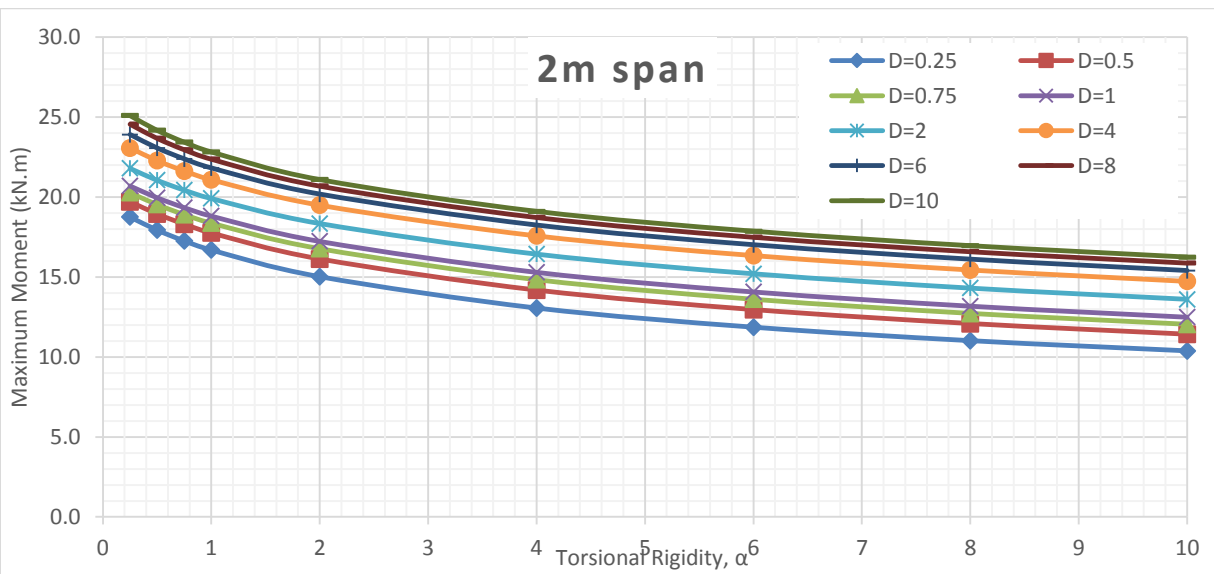


Figure 119 Maximum moment of 2 m span slab subjected to CHBDC axle 2 & 3 for different D values FEA analyses

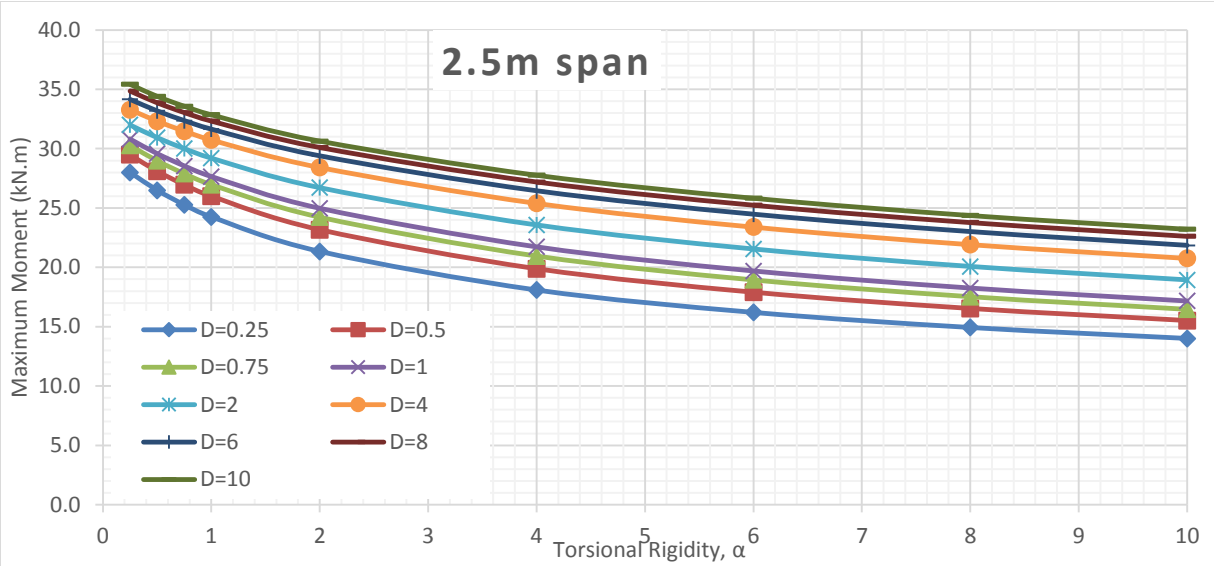


Figure 120 Maximum moment of 2.5 m span slab subjected to CHBDC axle 2 & 3 for different D values FEA analyses

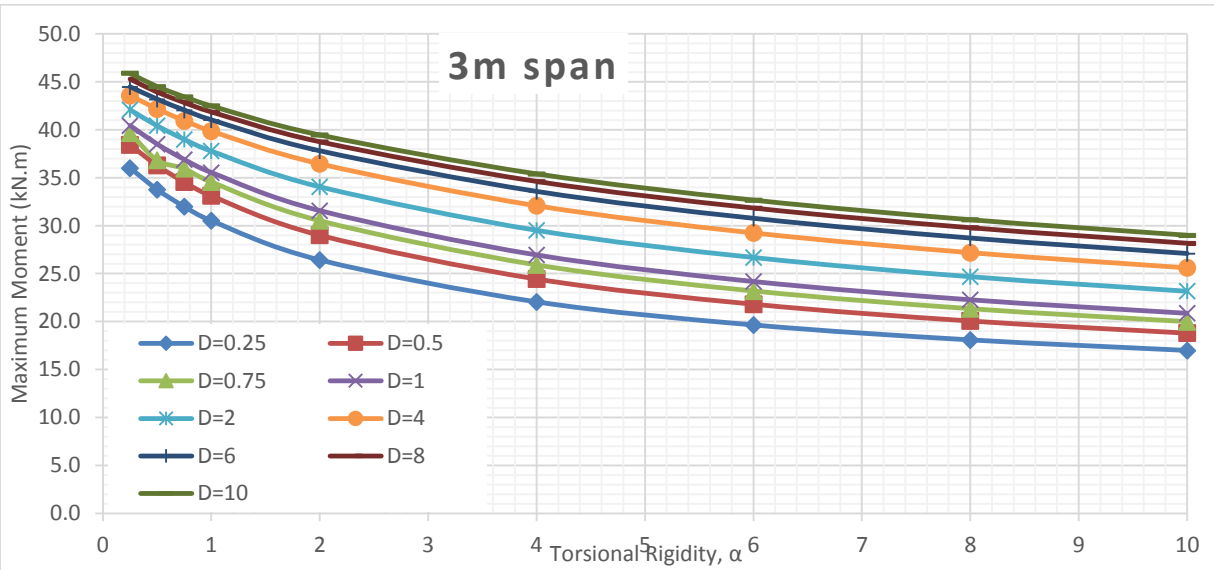


Figure 121 Maximum moment of 3 m span slab subjected to CHBDC axle 2 & 3 for different D values FEA analyses

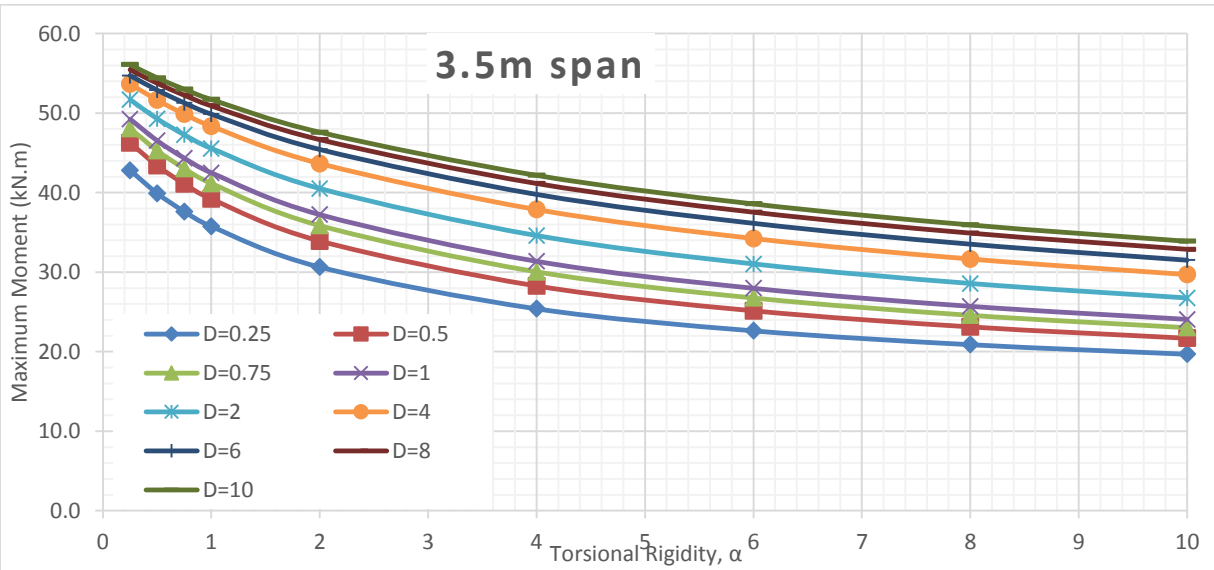


Figure 122 Maximum moment of 3.5 m span slab subjected to CHBDC axle 2 & 3 for different D values FEA analyses

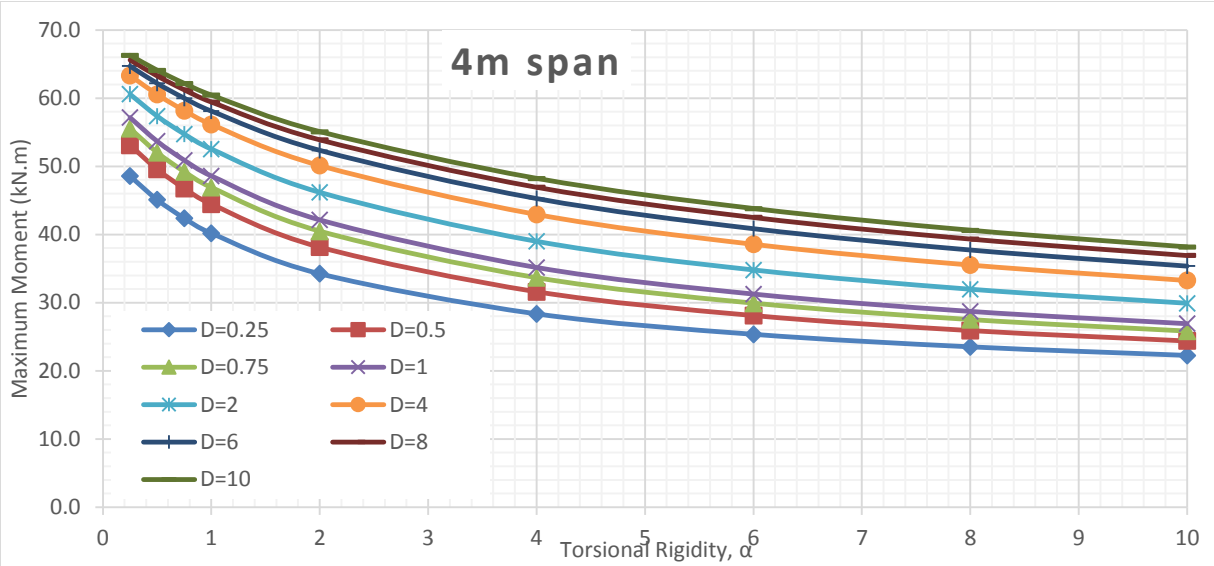


Figure 123 Maximum moment of 4 m span slab subjected to CHBDC axle 2 & 3 for different D values FEA analyses

B.2 Finite Element Analysis Results (Deflection)

B.2.1 DEFLECTION RESULTS TABLES

Alpha 0.25 Deflection Results

Table 55 Maximum deflection results for alpha 0.25 for slabs subjected to CHBDC axle 4 loading (main bars perpendicular to traffic)

		Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4	1	6.60E-05	7.80E-05	8.60E-05	9.20E-05	1.09E-04	1.28E-04	1.41E-04	1.51E-04	1.59E-04
	1.5	1.64E-04	1.95E-04	2.15E-04	2.31E-04	2.74E-04	3.24E-04	3.58E-04	3.84E-04	4.05E-04
	2	3.04E-04	3.61E-04	3.99E-04	4.28E-04	5.08E-04	6.03E-04	6.66E-04	7.15E-04	7.55E-04
	2.5	4.84E-04	5.75E-04	6.36E-04	6.83E-04	8.12E-04	9.63E-04	1.07E-03	1.14E-03	1.21E-03
	3	7.58E-04	9.01E-04	9.97E-04	1.07E-03	1.27E-03	1.51E-03	1.67E-03	1.80E-03	1.90E-03
	3.5	1.23E-03	1.47E-03	1.62E-03	1.74E-03	2.07E-03	2.46E-03	2.72E-03	2.93E-03	3.09E-03
	4	1.80E-03	2.14E-03	2.36E-03	2.54E-03	3.02E-03	3.59E-03	3.97E-03	4.26E-03	4.51E-03

Table 56 Maximum deflection results for alpha 0.25 for slabs subjected to CHBDC axle 2 & 3 loading (main bars perpendicular to traffic)

		Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2and 3	1	5.50E-05	6.00E-05	6.40E-05	6.70E-05	7.70E-05	9.00E-05	9.90E-05	1.07E-04	1.13E-04
	1.5	1.75E-04	1.88E-04	1.95E-04	2.01E-04	2.17E-04	2.40E-04	2.57E-04	2.73E-04	2.86E-04
	2	3.60E-04	4.02E-04	4.25E-04	4.39E-04	4.70E-04	5.05E-04	5.30E-04	5.50E-04	5.69E-04
	2.5	6.07E-04	6.91E-04	7.40E-04	7.74E-04	8.51E-04	9.15E-04	9.53E-04	9.82E-04	1.01E-03
	3	1.02E-03	1.18E-03	1.28E-03	1.36E-03	1.54E-03	1.71E-03	1.79E-03	1.85E-03	1.88E-03
	3.5	1.68E-03	1.96E-03	2.14E-03	2.27E-03	2.60E-03	2.93E-03	3.12E-03	3.24E-03	3.33E-03
	4	2.47E-03	2.89E-03	3.16E-03	3.36E-03	3.88E-03	4.42E-03	4.74E-03	4.96E-03	5.13E-03

Table 57 Maximum deflection results for alpha 0.25 for slabs subjected to CHBDC truck loading (main bars perpendicular to traffic)

		Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
TRUCK	1	6.60E-05	7.80E-05	8.60E-05	9.20E-05	1.09E-04	1.28E-04	1.41E-04	1.51E-04	1.59E-04
	1.5	1.74E-04	1.95E-04	2.15E-04	2.31E-04	2.74E-04	3.24E-04	3.58E-04	3.84E-04	4.05E-04
	2	3.59E-04	4.01E-04	4.24E-04	4.39E-04	5.09E-04	6.03E-04	6.66E-04	7.15E-04	7.55E-04
	2.5	6.05E-04	6.87E-04	7.36E-04	7.70E-04	8.48E-04	9.64E-04	1.07E-03	1.14E-03	1.21E-03
	3	1.02E-03	1.18E-03	1.28E-03	1.35E-03	1.53E-03	1.70E-03	1.79E-03	1.84E-03	1.90E-03
	3.5	1.72E-03	1.97E-03	2.13E-03	2.26E-03	2.58E-03	2.92E-03	3.10E-03	3.23E-03	3.32E-03
	4	2.60E-03	2.94E-03	3.18E-03	3.37E-03	3.86E-03	4.40E-03	4.72E-03	4.94E-03	5.11E-03

Table 58 Maximum deflection results for alpha 0.25 for slabs subjected to CHBDC axle 4 loading (main bars parallel to traffic)

		Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4 Transverse	1	8.70E-05	9.20E-05	9.60E-05	1.00E-04	1.11E-04	1.26E-04	1.35E-04	1.41E-04	1.46E-04
	1.5	2.72E-04	2.81E-04	2.88E-04	2.93E-04	3.09E-04	3.32E-04	3.50E-04	3.64E-04	3.78E-04
	2	6.15E-04	6.34E-04	6.46E-04	6.54E-04	6.78E-04	7.09E-04	7.33E-04	7.52E-04	7.69E-04
	2.5	1.14E-03	1.19E-03	1.22E-03	1.23E-03	1.27E-03	1.31E-03	1.34E-03	1.37E-03	1.39E-03
	3	1.85E-03	1.96E-03	2.02E-03	2.06E-03	2.13E-03	2.19E-03	2.23E-03	2.27E-03	2.29E-03
	3.5	2.73E-03	2.95E-03	3.07E-03	3.14E-03	3.28E-03	3.39E-03	3.45E-03	3.49E-03	3.53E-03

Table 59 Maximum deflection results for alpha 0.25 for slabs subjected to CHBDC axle 2 & 3 loading (main bars parallel to traffic)

		Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2&3 Transverse	1.5	1.16E-04	1.20E-04	1.23E-04	1.24E-04	1.28E-04	1.36E-04	1.44E-04	1.50E-04	1.56E-04
	2	4.99E-04	5.18E-04	5.28E-04	5.35E-04	5.54E-04	5.70E-04	5.84E-04	5.98E-04	6.10E-04
	2.5	1.15E-03	1.21E-03	1.24E-03	1.25E-03	1.30E-03	1.34E-03	1.36E-03	1.38E-03	1.40E-03
	3	2.08E-03	2.22E-03	2.29E-03	2.33E-03	2.42E-03	2.49E-03	2.54E-03	2.57E-03	2.59E-03
	3.5	3.28E-03	3.55E-03	3.69E-03	3.78E-03	3.96E-03	4.10E-03	4.18E-03	4.23E-03	4.27E-03
	4	4.75E-03	5.21E-03	5.45E-03	5.61E-03	5.95E-03	6.21E-03	6.34E-03	6.42E-03	6.48E-03

Alpha 0.5 Deflection Results

Table 60 Maximum deflection results for alpha 0.5 for slabs subjected to CHBDC axle 4 loading (main bars perpendicular to traffic)

		Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4	1	6.00E-05	7.10E-05	7.80E-05	8.40E-05	9.90E-05	1.17E-04	1.29E-04	1.38E-04	1.45E-04
	1.5	1.50E-04	1.78E-04	1.97E-04	2.11E-04	2.50E-04	2.96E-04	3.27E-04	3.50E-04	3.70E-04
	2	2.77E-04	3.29E-04	3.64E-04	3.91E-04	4.64E-04	5.51E-04	6.08E-04	6.52E-04	6.89E-04
	2.5	4.42E-04	5.25E-04	5.81E-04	6.24E-04	7.41E-04	8.80E-04	9.72E-04	1.04E-03	1.10E-03
	3	6.92E-04	8.23E-04	8.78E-04	9.78E-04	1.16E-03	1.38E-03	1.53E-03	1.64E-03	1.74E-03
	3.5	1.13E-03	1.34E-03	1.48E-03	1.59E-03	1.89E-03	2.25E-03	2.49E-03	2.67E-03	2.82E-03
	4	1.64E-03	1.95E-03	2.16E-03	2.32E-03	2.75E-03	3.27E-03	3.62E-03	3.89E-03	4.11E-03

Table 61 Maximum deflection results for alpha 0.5 for slabs subjected to CHBDC axle 2 & 3 loading (main bars perpendicular to traffic)

		Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2and 3	1	5.20E-05	5.70E-05	6.00E-05	6.30E-05	7.20E-05	8.40E-05	9.20E-05	9.80E-05	1.03E-04
	1.5	1.62E-04	1.75E-04	1.83E-04	1.89E-04	2.06E-04	2.27E-04	2.43E-04	2.57E-04	2.68E-04
	2	3.31E-04	3.71E-04	3.92E-04	4.07E-04	4.40E-04	4.76E-04	5.02E-04	5.22E-04	5.39E-04
	2.5	5.57E-04	6.34E-04	6.80E-04	7.12E-04	7.87E-04	8.53E-04	8.94E-04	9.24E-04	9.49E-04
	3	9.31E-04	1.08E-03	1.13E-03	1.24E-03	1.41E-03	1.57E-03	1.66E-03	1.71E-03	1.75E-03
	3.5	1.53E-03	1.79E-03	1.95E-03	2.07E-03	2.38E-03	2.69E-03	2.87E-03	2.99E-03	3.07E-03
	4	2.25E-03	2.64E-03	2.89E-03	3.07E-03	3.55E-03	4.05E-03	4.35E-03	4.56E-03	4.72E-03

Table 62 Maximum deflection results for alpha 0.5 for slabs subjected to CHBDC truck loading (main bars perpendicular to traffic)

		Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
TRUCK	1	6.00E-05	7.10E-05	7.80E-05	8.40E-05	9.90E-05	1.17E-04	1.29E-04	1.38E-04	1.45E-04
	1.5	1.61E-04	1.78E-04	1.97E-04	2.11E-04	2.50E-04	2.96E-04	3.27E-04	3.50E-04	3.70E-04
	2	3.31E-04	3.70E-04	3.92E-04	4.07E-04	4.64E-04	5.51E-04	6.08E-04	6.52E-04	6.89E-04
	2.5	5.62E-04	6.35E-04	6.80E-04	7.12E-04	7.86E-04	8.80E-04	9.72E-04	1.04E-03	1.10E-03
	3	9.55E-04	1.09E-03	1.14E-03	1.24E-03	1.41E-03	1.57E-03	1.65E-03	1.71E-03	1.75E-03
	3.5	1.61E-03	1.83E-03	1.98E-03	2.09E-03	2.38E-03	2.69E-03	2.86E-03	2.98E-03	3.07E-03
	4	2.45E-03	2.76E-03	2.97E-03	3.13E-03	3.57E-03	4.06E-03	4.35E-03	4.56E-03	4.71E-03

Table 63 Maximum deflection results for alpha 0.5 for slabs subjected to CHBDC axle 4 loading (main bars parallel to traffic)

		Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4 Transverse	1	8.50E-05	9.00E-05	9.30E-05	9.60E-05	1.05E-04	1.17E-04	1.25E-04	1.31E-04	1.35E-04
	1.5	2.64E-04	2.74E-04	2.80E-04	2.85E-04	3.00E-04	3.20E-04	3.36E-04	3.49E-04	3.59E-04
	2	5.88E-04	6.12E-04	6.26E-04	6.35E-04	6.60E-04	6.90E-04	7.12E-04	7.30E-04	7.45E-04
	2.5	1.07E-03	1.14E-03	1.17E-03	1.19E-03	1.23E-03	1.28E-03	1.31E-03	1.33E-03	1.35E-03
	3	1.73E-03	1.85E-03	1.88E-03	1.96E-03	2.05E-03	2.12E-03	2.17E-03	2.21E-03	2.23E-03
	3.5	2.54E-03	2.77E-03	2.88E-03	2.96E-03	3.13E-03	3.26E-03	3.34E-03	3.39E-03	3.43E-03

Table 64 Maximum deflection results for alpha 0.5 for slabs subjected to CHBDC axle 2 & 3 loading (main bars parallel to traffic)

		Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2&3 Transverse	1.5	1.12E-04	1.16E-04	1.19E-04	1.20E-04	1.25E-04	1.32E-04	1.38E-04	1.44E-04	1.48E-04
	2	4.77E-04	4.99E-04	5.10E-04	5.18E-04	5.36E-04	5.54E-04	5.68E-04	5.80E-04	5.91E-04
	2.5	1.08E-03	1.15E-03	1.18E-03	1.20E-03	1.25E-03	1.30E-03	1.32E-03	1.34E-03	1.36E-03
	3	1.94E-03	2.09E-03	2.12E-03	2.21E-03	2.32E-03	2.41E-03	2.46E-03	2.49E-03	2.52E-03
	3.5	3.05E-03	3.32E-03	3.47E-03	3.56E-03	3.77E-03	3.95E-03	4.04E-03	4.10E-03	4.14E-03
	4	4.39E-03	4.84E-03	5.09E-03	5.26E-03	5.62E-03	5.93E-03	6.09E-03	6.19E-03	6.26E-03

Alpha 0.75 Deflection Results

Table 65 Maximum deflection results for alpha 0.75 for slabs subjected to CHBDC axle 4 loading (main bars perpendicular to traffic)

		Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4	1	5.50E-05	6.60E-05	7.30E-05	7.80E-05	9.20E-05	1.09E-04	1.19E-04	1.28E-04	1.35E-04
	1.5	1.39E-04	1.65E-04	1.82E-04	1.95E-04	2.32E-04	2.74E-04	3.03E-04	3.24E-04	3.42E-04
	2	2.57E-04	3.05E-04	3.37E-04	3.62E-04	4.30E-04	5.10E-04	5.63E-04	6.04E-04	6.38E-04
	2.5	4.09E-04	4.86E-04	5.38E-04	5.78E-04	6.86E-04	8.14E-04	9.00E-04	9.66E-04	1.02E-03
	3	6.41E-04	7.62E-04	8.43E-04	9.06E-04	1.08E-03	1.28E-03	1.42E-03	1.52E-03	1.61E-03
	3.5	1.04E-03	1.24E-03	1.37E-03	1.47E-03	1.75E-03	2.08E-03	2.30E-03	2.47E-03	2.61E-03
	4	1.52E-03	1.80E-03	2.00E-03	2.15E-03	2.55E-03	3.03E-03	3.35E-03	3.60E-03	3.81E-03

Table 66 Maximum deflection results for alpha 0.75 for slabs subjected to CHBDC axle 2 & 3 loading (main bars perpendicular to traffic)

		Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2and 3	1	5.00E-05	5.40E-05	5.80E-05	6.00E-05	6.80E-05	7.90E-05	8.60E-05	9.20E-05	9.60E-05
	1.5	1.51E-04	1.65E-04	1.73E-04	1.79E-04	1.96E-04	2.17E-04	2.32E-04	2.44E-04	2.55E-04
	2	3.08E-04	3.46E-04	3.67E-04	3.81E-04	4.15E-04	4.53E-04	4.78E-04	4.98E-04	5.15E-04
	2.5	5.17E-04	5.90E-04	6.33E-04	6.64E-04	7.37E-04	8.04E-04	8.46E-04	8.77E-04	9.03E-04
	3	8.62E-04	1.00E-03	1.09E-03	1.15E-03	1.31E-03	1.46E-03	1.55E-03	1.60E-03	1.64E-03
	3.5	1.42E-03	1.66E-03	1.81E-03	1.92E-03	2.21E-03	2.50E-03	2.67E-03	2.79E-03	2.87E-03
	4	2.09E-03	2.45E-03	2.68E-03	2.85E-03	3.29E-03	3.77E-03	4.05E-03	4.25E-03	4.40E-03

Table 67 Maximum deflection results for alpha 0.75 for slabs subjected to CHBDC truck loading (main bars perpendicular to traffic)

		Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
TRUCK	1	5.50E-05	6.60E-05	7.30E-05	7.80E-05	9.20E-05	1.09E-04	1.19E-04	1.28E-04	1.35E-04
	1.5	1.51E-04	1.65E-04	1.82E-04	1.95E-04	2.32E-04	2.74E-04	3.03E-04	3.24E-04	3.42E-04
	2	3.11E-04	3.47E-04	3.68E-04	3.82E-04	4.30E-04	5.10E-04	5.63E-04	6.04E-04	6.38E-04
	2.5	5.28E-04	5.96E-04	6.37E-04	6.67E-04	7.37E-04	8.14E-04	9.00E-04	9.66E-04	1.02E-03
	3	9.03E-04	1.03E-03	1.10E-03	1.16E-03	1.31E-03	1.47E-03	1.55E-03	1.60E-03	1.64E-03
	3.5	1.53E-03	1.73E-03	1.86E-03	1.96E-03	2.23E-03	2.51E-03	2.68E-03	2.79E-03	2.88E-03
	4	2.33E-03	2.61E-03	2.81E-03	2.95E-03	3.35E-03	3.79E-03	4.07E-03	4.26E-03	4.41E-03

Table 68 Maximum deflection results for alpha 0.75 for slabs subjected to CHBDC axle 4 loading (main bars parallel to traffic)

		Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4 Transverse	1	8.30E-05	8.70E-05	9.10E-05	9.30E-05	1.01E-04	1.11E-04	1.18E-04	1.23E-04	1.27E-04
	1.5	2.56E-04	2.67E-04	2.74E-04	2.79E-04	2.93E-04	3.12E-04	3.25E-04	3.37E-04	3.46E-04
	2	5.65E-04	5.93E-04	6.08E-04	6.18E-04	6.45E-04	6.75E-04	6.95E-04	7.12E-04	7.26E-04
	2.5	1.02E-03	1.09E-03	1.12E-03	1.15E-03	1.20E-03	1.25E-03	1.28E-03	1.30E-03	1.32E-03
	3	1.63E-03	1.76E-03	1.83E-03	1.88E-03	1.98E-03	2.06E-03	2.12E-03	2.15E-03	2.18E-03
	3.5	2.39E-03	2.61E-03	2.74E-03	2.82E-03	3.00E-03	3.15E-03	3.24E-03	3.30E-03	3.34E-03

Table 69 Maximum deflection results for alpha 0.75 for slabs subjected to CHBDC axle 2 & 3 loading (main bars parallel to traffic)

		Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2&3 Transverse	1.5	1.09E-04	1.13E-04	1.16E-04	1.17E-04	1.22E-04	1.29E-04	1.34E-04	1.39E-04	1.43E-04
	2	4.57E-04	4.82E-04	4.95E-04	5.03E-04	5.22E-04	5.41E-04	5.55E-04	5.67E-04	5.77E-04
	2.5	1.03E-03	1.10E-03	1.14E-03	1.16E-03	1.22E-03	1.26E-03	1.29E-03	1.31E-03	1.33E-03
	3	1.83E-03	1.98E-03	2.07E-03	2.12E-03	2.24E-03	2.34E-03	2.39E-03	2.43E-03	2.46E-03
	3.5	2.86E-03	3.14E-03	3.29E-03	3.39E-03	3.61E-03	3.81E-03	3.91E-03	3.98E-03	4.03E-03
	4	4.11E-03	4.55E-03	4.80E-03	4.97E-03	5.36E-03	5.69E-03	5.87E-03	5.98E-03	6.07E-03

Alpha 1 Deflection Results

Table 70 Maximum deflection results for alpha 1 for slabs subjected to CHBDC axle 4 loading (main bars perpendicular to traffic)

		Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4	1	5.20E-05	6.10E-05	6.80E-05	7.30E-05	8.60E-05	1.02E-04	1.12E-04	1.20E-04	1.26E-04
	1.5	1.30E-04	1.54E-04	1.70E-04	1.83E-04	2.17E-04	2.57E-04	2.83E-04	3.04E-04	3.20E-04
	2	2.40E-04	2.85E-04	3.15E-04	3.39E-04	4.02E-04	4.77E-04	5.27E-04	5.65E-04	5.97E-04
	2.5	3.83E-04	4.55E-04	5.03E-04	5.40E-04	6.42E-04	7.62E-04	8.42E-04	9.04E-04	9.55E-04
	3	5.99E-04	7.13E-04	7.89E-04	8.47E-04	1.01E-03	1.20E-03	1.32E-03	1.42E-03	1.50E-03
	3.5	9.75E-04	1.16E-03	1.28E-03	1.38E-03	1.64E-03	1.95E-03	2.15E-03	2.31E-03	2.45E-03
	4	1.42E-03	1.69E-03	1.87E-03	2.01E-03	2.39E-03	2.84E-03	3.14E-03	3.37E-03	3.56E-03

Table 71 Maximum deflection results for alpha 1 for slabs subjected to CHBDC axle 2 & 3 loading (main bars perpendicular to traffic)

		Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2and 3	1	4.80E-05	5.20E-05	5.50E-05	5.80E-05	6.50E-05	7.50E-05	8.10E-05	8.70E-05	9.10E-05
	1.5	1.43E-04	1.56E-04	1.65E-04	1.71E-04	1.88E-04	2.09E-04	2.23E-04	2.34E-04	2.43E-04
	2	2.90E-04	3.26E-04	3.47E-04	3.61E-04	3.95E-04	4.34E-04	4.59E-04	4.78E-04	4.94E-04
	2.5	4.85E-04	5.54E-04	5.96E-04	6.26E-04	6.96E-04	7.64E-04	8.06E-04	8.38E-04	8.64E-04
	3	8.07E-04	9.37E-04	1.02E-03	1.08E-03	1.23E-03	1.38E-03	1.46E-03	1.52E-03	1.56E-03
	3.5	1.33E-03	1.55E-03	1.69E-03	1.80E-03	2.07E-03	2.35E-03	2.51E-03	2.63E-03	2.71E-03
	4	1.95E-03	2.29E-03	2.51E-03	2.67E-03	3.08E-03	3.53E-03	3.80E-03	3.99E-03	4.14E-03

Table 72 Maximum deflection results for alpha 1 for slabs subjected to CHBDC truck loading (main bars perpendicular to traffic)

		Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
TRUCK	1	5.20E-05	6.10E-05	6.80E-05	7.30E-05	8.60E-05	1.02E-04	1.12E-04	1.20E-04	1.26E-04
	1.5	1.43E-04	1.57E-04	1.70E-04	1.83E-04	2.17E-04	2.57E-04	2.83E-04	3.04E-04	3.20E-04
	2	2.94E-04	3.28E-04	3.48E-04	3.62E-04	4.02E-04	4.77E-04	5.27E-04	5.65E-04	5.97E-04
	2.5	5.02E-04	5.64E-04	6.03E-04	6.31E-04	6.99E-04	7.66E-04	8.42E-04	9.04E-04	9.55E-04
	3	8.61E-04	9.73E-04	1.05E-03	1.10E-03	1.24E-03	1.38E-03	1.46E-03	1.52E-03	1.56E-03
	3.5	1.47E-03	1.65E-03	1.77E-03	1.86E-03	2.11E-03	2.37E-03	2.53E-03	2.64E-03	2.72E-03
	4	2.24E-03	2.50E-03	2.68E-03	2.81E-03	3.18E-03	3.59E-03	3.84E-03	4.02E-03	4.16E-03

Table 73 Maximum deflection results for alpha 1 for slabs subjected to CHBDC axle 4 loading (main bars parallel to traffic)

		Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4 Transverse	1	8.10E-05	8.60E-05	8.90E-05	9.10E-05	9.80E-05	1.07E-04	1.13E-04	1.18E-04	1.22E-04
	1.5	2.49E-04	2.61E-04	2.68E-04	2.73E-04	2.87E-04	3.05E-04	3.17E-04	3.27E-04	3.36E-04
	2	5.45E-04	5.75E-04	5.92E-04	6.03E-04	6.31E-04	6.61E-04	6.81E-04	6.97E-04	7.10E-04
	2.5	9.78E-04	1.05E-03	1.08E-03	1.11E-03	1.17E-03	1.22E-03	1.25E-03	1.28E-03	1.30E-03
	3	1.55E-03	1.68E-03	1.76E-03	1.81E-03	1.91E-03	2.01E-03	2.07E-03	2.10E-03	2.14E-03
	3.5	2.26E-03	2.49E-03	2.61E-03	2.70E-03	2.89E-03	3.06E-03	3.15E-03	3.21E-03	3.26E-03

Table 74 Maximum deflection results for alpha 1 for slabs subjected to CHBDC axle 2 & 3 loading (main bars parallel to traffic)

		Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2&3 Transverse	1.5	1.06E-04	1.10E-04	1.13E-04	1.14E-04	1.19E-04	1.26E-04	1.31E-04	1.35E-04	1.39E-04
	2	4.41E-04	4.67E-04	4.81E-04	4.90E-04	5.10E-04	5.29E-04	5.43E-04	5.55E-04	5.65E-04
	2.5	9.85E-04	1.06E-03	1.10E-03	1.12E-03	1.18E-03	1.23E-03	1.26E-03	1.28E-03	1.30E-03
	3	1.74E-03	1.90E-03	1.98E-03	2.04E-03	2.17E-03	2.28E-03	2.33E-03	2.37E-03	2.40E-03
	3.5	2.71E-03	2.98E-03	3.14E-03	3.24E-03	3.48E-03	3.69E-03	3.80E-03	3.87E-03	3.92E-03
	4	3.88E-03	4.31E-03	4.56E-03	4.74E-03	5.13E-03	5.49E-03	5.68E-03	5.80E-03	5.90E-03

Alpha 2 Deflection Results

Table 75 Maximum deflection results for alpha 2 for slabs subjected to CHBDC axle 4 loading (main bars perpendicular to traffic)

		Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4	1	4.20E-05	5.00E-05	5.50E-05	5.90E-05	7.00E-05	8.30E-05	9.10E-05	9.80E-05	1.03E-04
	1.5	1.06E-04	1.26E-04	1.39E-04	1.49E-04	1.77E-04	2.10E-04	2.31E-04	2.48E-04	2.62E-04
	2	1.96E-04	2.33E-04	2.58E-04	2.77E-04	3.28E-04	3.89E-04	4.30E-04	4.62E-04	4.88E-04
	2.5	3.12E-04	3.71E-04	4.11E-04	4.41E-04	5.24E-04	6.22E-04	6.88E-04	7.38E-04	7.80E-04
	3	4.90E-04	5.82E-04	6.44E-04	6.92E-04	8.22E-04	9.77E-04	1.08E-03	1.16E-03	1.23E-03
	3.5	7.96E-04	9.46E-04	1.05E-03	1.13E-03	1.34E-03	1.59E-03	1.76E-03	1.89E-03	2.00E-03
	4	1.16E-03	1.38E-03	1.53E-03	1.64E-03	1.95E-03	2.32E-03	2.56E-03	2.75E-03	2.91E-03

Table 76 Maximum deflection results for alpha 2 for slabs subjected to CHBDC axle 2 & 3 loading (main bars perpendicular to traffic)

		Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2and 3	1	4.10E-05	4.60E-05	4.90E-05	5.10E-05	5.70E-05	6.50E-05	7.00E-05	7.40E-05	7.70E-05
	1.5	1.20E-04	1.33E-04	1.42E-04	1.48E-04	1.65E-04	1.83E-04	1.96E-04	2.05E-04	2.13E-04
	2	2.40E-04	2.72E-04	2.91E-04	3.04E-04	3.39E-04	3.77E-04	4.01E-04	4.19E-04	4.35E-04
	2.5	4.00E-04	4.59E-04	4.95E-04	5.21E-04	5.85E-04	6.53E-04	6.95E-04	7.27E-04	7.52E-04
	3	6.60E-04	7.68E-04	8.37E-04	8.87E-04	1.02E-03	1.15E-03	1.23E-03	1.28E-03	1.32E-03
	3.5	1.09E-03	1.27E-03	1.39E-03	1.48E-03	1.70E-03	1.94E-03	2.09E-03	2.19E-03	2.27E-03
	4	1.60E-03	1.87E-03	2.05E-03	2.19E-03	2.53E-03	2.91E-03	3.15E-03	3.32E-03	3.45E-03

Table 77 Maximum deflection results for alpha 2 for slabs subjected to CHBDC truck loading (main bars perpendicular to traffic)

		Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
TRUCK	1	4.20E-05	5.00E-05	5.50E-05	5.90E-05	7.00E-05	8.30E-05	9.10E-05	9.80E-05	1.03E-04
	1.5	1.22E-04	1.35E-04	1.43E-04	1.49E-04	1.77E-04	2.10E-04	2.31E-04	2.48E-04	2.62E-04
	2	2.51E-04	2.80E-04	2.97E-04	3.10E-04	3.43E-04	3.90E-04	4.30E-04	4.62E-04	4.88E-04
	2.5	4.34E-04	4.83E-04	5.15E-04	5.38E-04	5.97E-04	6.61E-04	7.02E-04	7.39E-04	7.81E-04
	3	7.55E-04	8.40E-04	8.96E-04	9.39E-04	1.05E-03	1.17E-03	1.24E-03	1.29E-03	1.33E-03
	3.5	1.31E-03	1.44E-03	1.54E-03	1.61E-03	1.80E-03	2.01E-03	2.14E-03	2.23E-03	2.31E-03
	4	2.03E-03	2.22E-03	2.35E-03	2.45E-03	2.73E-03	3.05E-03	3.26E-03	3.41E-03	3.53E-03

Table 78 Maximum deflection results for alpha 2 for slabs subjected to CHBDC axle 4 loading (main bars parallel to traffic)

		Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4 Transverse	1	7.60E-05	8.00E-05	8.30E-05	8.50E-05	9.00E-05	9.70E-05	1.01E-04	1.05E-04	1.07E-04
	1.5	2.28E-04	2.42E-04	2.50E-04	2.55E-04	2.69E-04	2.84E-04	2.94E-04	3.02E-04	3.09E-04
	2	4.85E-04	5.21E-04	5.41E-04	5.55E-04	5.87E-04	6.19E-04	6.38E-04	6.53E-04	6.65E-04
	2.5	8.52E-04	9.28E-04	9.70E-04	9.99E-04	1.07E-03	1.13E-03	1.17E-03	1.19E-03	1.21E-03
	3	1.33E-03	1.47E-03	1.54E-03	1.60E-03	1.72E-03	1.84E-03	1.91E-03	1.95E-03	1.99E-03
	3.5	1.92E-03	2.14E-03	2.27E-03	2.35E-03	2.56E-03	2.76E-03	2.87E-03	2.94E-03	3.00E-03

Table 79 Maximum deflection results for alpha 2 for slabs subjected to CHBDC axle 2 & 3 loading (main bars parallel to traffic)

		Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2&3 Transverse	1.5	9.60E-05	1.02E-04	1.05E-04	1.07E-04	1.12E-04	1.18E-04	1.22E-04	1.25E-04	1.28E-04
	2	3.91E-04	4.21E-04	4.37E-04	4.48E-04	4.72E-04	4.96E-04	5.10E-04	5.21E-04	5.30E-04
	2.5	8.55E-04	9.34E-04	9.79E-04	1.01E-03	1.08E-03	1.14E-03	1.17E-03	1.20E-03	1.22E-03
	3	1.49E-03	1.65E-03	1.74E-03	1.80E-03	1.94E-03	2.07E-03	2.14E-03	2.19E-03	2.23E-03
	3.5	2.29E-03	2.56E-03	2.71E-03	2.82E-03	3.08E-03	3.32E-03	3.45E-03	3.54E-03	3.60E-03
	4	3.27E-03	3.66E-03	3.90E-03	4.07E-03	4.48E-03	4.88E-03	5.09E-03	5.24E-03	5.35E-03

Alpha 4 Deflection Results

Table 80 Maximum deflection results for alpha 4 for slabs subjected to CHBDC axle 4 loading (main bars perpendicular to traffic)

		Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4	1	3.30E-05	3.90E-05	4.30E-05	4.60E-05	5.50E-05	6.40E-05	7.10E-05	7.60E-05	8.00E-05
	1.5	8.20E-05	9.70E-05	1.08E-04	1.16E-04	1.37E-04	1.62E-04	1.79E-04	1.92E-04	2.03E-04
	2	1.52E-04	1.80E-04	2.00E-04	2.14E-04	2.54E-04	3.02E-04	3.33E-04	3.58E-04	3.78E-04
	2.5	2.42E-04	2.88E-04	3.18E-04	3.42E-04	4.06E-04	4.82E-04	5.33E-04	5.72E-04	6.04E-04
	3	3.80E-04	4.51E-04	4.99E-04	5.36E-04	6.37E-04	7.57E-04	8.37E-04	8.99E-04	9.50E-04
	3.5	6.22E-04	7.35E-04	8.12E-04	8.72E-04	1.04E-03	1.23E-03	1.36E-03	1.46E-03	1.55E-03
	4	9.13E-04	1.07E-03	1.19E-03	1.27E-03	1.51E-03	1.79E-03	1.98E-03	2.13E-03	2.25E-03

Table 81 Maximum deflection results for alpha 4 for slabs subjected to CHBDC axle 2 & 3 loading (main bars perpendicular to traffic)

		Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2and 3	1	3.40E-05	3.90E-05	4.10E-05	4.30E-05	4.80E-05	5.40E-05	5.80E-05	6.10E-05	6.30E-05
	1.5	9.60E-05	1.09E-04	1.17E-04	1.23E-04	1.38E-04	1.55E-04	1.65E-04	1.73E-04	1.80E-04
	2	1.90E-04	2.17E-04	2.33E-04	2.46E-04	2.78E-04	3.13E-04	3.36E-04	3.52E-04	3.65E-04
	2.5	3.14E-04	3.62E-04	3.92E-04	4.14E-04	4.71E-04	5.33E-04	5.73E-04	6.02E-04	6.25E-04
	3	5.15E-04	6.00E-04	6.54E-04	6.95E-04	8.00E-04	9.13E-04	9.82E-04	1.03E-03	1.07E-03
	3.5	8.52E-04	9.92E-04	1.08E-03	1.15E-03	1.34E-03	1.54E-03	1.66E-03	1.75E-03	1.82E-03
	4	1.26E-03	1.47E-03	1.60E-03	1.71E-03	1.98E-03	2.29E-03	2.48E-03	2.62E-03	2.74E-03

Table 82 Maximum deflection results for alpha 4 for slabs subjected to CHBDC truck loading (main bars perpendicular to traffic)

		Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
TRUCK	1	3.50E-05	3.90E-05	4.30E-05	4.60E-05	5.50E-05	6.40E-05	7.10E-05	7.60E-05	8.00E-05
	1.5	1.02E-04	1.13E-04	1.20E-04	1.25E-04	1.40E-04	1.63E-04	1.80E-04	1.92E-04	2.03E-04
	2	2.11E-04	2.33E-04	2.47E-04	2.58E-04	2.87E-04	3.20E-04	3.40E-04	3.59E-04	3.79E-04
	2.5	3.70E-04	4.06E-04	4.30E-04	4.48E-04	4.97E-04	5.52E-04	5.88E-04	6.15E-04	6.37E-04
	3	6.57E-04	7.16E-04	7.56E-04	7.87E-04	8.70E-04	9.64E-04	1.02E-03	1.07E-03	1.11E-03
	3.5	1.16E-03	1.25E-03	1.32E-03	1.37E-03	1.50E-03	1.66E-03	1.77E-03	1.84E-03	1.90E-03
	4	1.83E-03	1.96E-03	2.05E-03	2.12E-03	2.32E-03	2.55E-03	2.70E-03	2.82E-03	2.91E-03

Table 83 Maximum deflection results for alpha 4 for slabs subjected to CHBDC axle 4 loading (main bars parallel to traffic)

		Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4 Transverse	1	6.90E-05	7.30E-05	7.60E-05	7.80E-05	8.20E-05	8.70E-05	9.10E-05	9.30E-05	9.50E-05
	1.5	2.00E-04	2.16E-04	2.25E-04	2.31E-04	2.46E-04	2.61E-04	2.70E-04	2.76E-04	2.81E-04
	2	4.13E-04	4.52E-04	4.74E-04	4.90E-04	5.27E-04	5.63E-04	5.83E-04	5.98E-04	6.09E-04
	2.5	7.10E-04	7.86E-04	8.31E-04	8.62E-04	9.38E-04	1.01E-03	1.05E-03	1.08E-03	1.10E-03
	3	1.10E-03	1.22E-03	1.30E-03	1.35E-03	1.49E-03	1.62E-03	1.69E-03	1.74E-03	1.78E-03
	3.5	1.57E-03	1.76E-03	1.88E-03	1.96E-03	2.17E-03	2.38E-03	2.51E-03	2.59E-03	2.66E-03

Table 84 Maximum deflection results for alpha 4 for slabs subjected to CHBDC axle 2 & 3 loading (main bars parallel to traffic)

		Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2&3 Transverse	1.5	8.40E-05	9.00E-05	9.40E-05	9.70E-05	1.03E-04	1.09E-04	1.12E-04	1.15E-04	1.17E-04
	2	3.31E-04	3.63E-04	3.81E-04	3.93E-04	4.23E-04	4.51E-04	4.67E-04	4.78E-04	4.87E-04
	2.5	7.10E-04	7.88E-04	8.34E-04	8.66E-04	9.42E-04	1.02E-03	1.06E-03	1.09E-03	1.11E-03
	3	1.22E-03	1.37E-03	1.45E-03	1.52E-03	1.67E-03	1.81E-03	1.90E-03	1.96E-03	2.00E-03
	3.5	1.87E-03	2.10E-03	2.24E-03	2.35E-03	2.60E-03	2.86E-03	3.00E-03	3.10E-03	3.18E-03
	4	2.66E-03	2.99E-03	3.20E-03	3.36E-03	3.74E-03	4.14E-03	4.37E-03	4.53E-03	4.66E-03

Alpha 6 Deflection Results

Table 85 Maximum deflection results for alpha 6 for slabs subjected to CHBDC axle 4 loading (main bars perpendicular to traffic)

		Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4	1	2.80E-05	3.30E-05	3.60E-05	3.90E-05	4.60E-05	5.50E-05	6.00E-05	6.40E-05	6.80E-05
	1.5	6.90E-05	8.20E-05	9.10E-05	9.80E-05	1.16E-04	1.37E-04	1.52E-04	1.63E-04	1.72E-04
	2	1.28E-04	1.52E-04	1.69E-04	1.81E-04	2.15E-04	2.55E-04	2.82E-04	3.03E-04	3.20E-04
	2.5	2.05E-04	2.43E-04	2.69E-04	2.89E-04	3.43E-04	4.07E-04	4.50E-04	4.84E-04	5.11E-04
	3	3.24E-04	3.82E-04	4.22E-04	4.53E-04	5.38E-04	6.40E-04	7.08E-04	7.60E-04	8.03E-04
	3.5	5.33E-04	6.25E-04	6.89E-04	7.39E-04	8.76E-04	1.04E-03	1.15E-03	1.24E-03	1.31E-03
	4	7.90E-04	9.19E-04	1.01E-03	1.08E-03	1.28E-03	1.52E-03	1.68E-03	1.80E-03	1.90E-03

Table 86 Maximum deflection results for alpha 6 for slabs subjected to CHBDC axle 2 & 3 loading (main bars perpendicular to traffic)

		Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2and 3	1	3.00E-05	3.40E-05	3.70E-05	3.80E-05	4.30E-05	4.80E-05	5.20E-05	5.40E-05	5.60E-05
	1.5	8.30E-05	9.50E-05	1.02E-04	1.08E-04	1.22E-04	1.37E-04	1.47E-04	1.54E-04	1.60E-04
	2	1.62E-04	1.86E-04	2.02E-04	2.13E-04	2.43E-04	2.76E-04	2.96E-04	3.12E-04	3.24E-04
	2.5	2.68E-04	3.10E-04	3.36E-04	3.56E-04	4.08E-04	4.65E-04	5.01E-04	5.29E-04	5.50E-04
	3	4.40E-04	5.11E-04	5.57E-04	5.92E-04	6.84E-04	7.85E-04	8.48E-04	8.96E-04	9.34E-04
	3.5	7.32E-04	8.47E-04	9.24E-04	9.83E-04	1.14E-03	1.31E-03	1.42E-03	1.51E-03	1.57E-03
	4	1.09E-03	1.26E-03	1.37E-03	1.46E-03	1.69E-03	1.95E-03	2.12E-03	2.25E-03	2.35E-03

Table 87 Maximum deflection results for alpha 6 for slabs subjected to CHBDC truck loading (main bars perpendicular to traffic)

		Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
TRUCK	1	3.10E-05	3.50E-05	3.70E-05	3.90E-05	4.60E-05	5.50E-05	6.00E-05	6.40E-05	6.80E-05
	1.5	9.10E-05	1.01E-04	1.07E-04	1.12E-04	1.25E-04	1.39E-04	1.52E-04	1.63E-04	1.72E-04
	2	1.90E-04	2.09E-04	2.21E-04	2.30E-04	2.56E-04	2.85E-04	3.04E-04	3.18E-04	3.30E-04
	2.5	3.39E-04	3.68E-04	3.88E-04	4.03E-04	4.44E-04	4.93E-04	5.25E-04	5.49E-04	5.69E-04
	3	6.11E-04	6.57E-04	6.88E-04	7.13E-04	7.80E-04	8.59E-04	9.12E-04	9.52E-04	9.85E-04
	3.5	1.09E-03	1.16E-03	1.21E-03	1.25E-03	1.36E-03	1.49E-03	1.58E-03	1.64E-03	1.70E-03
	4	1.74E-03	1.84E-03	1.90E-03	1.96E-03	2.11E-03	2.30E-03	2.43E-03	2.52E-03	2.60E-03

Table 88 Maximum deflection results for alpha 6 for slabs subjected to CHBDC axle 4 loading (main bars parallel to traffic)

		Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4 Transverse	1	6.40E-05	6.90E-05	7.10E-05	7.30E-05	7.80E-05	8.20E-05	8.50E-05	8.70E-05	8.90E-05
	1.5	1.82E-04	1.99E-04	2.08E-04	2.15E-04	2.30E-04	2.45E-04	2.54E-04	2.60E-04	2.65E-04
	2	3.69E-04	4.08E-04	4.31E-04	4.47E-04	4.86E-04	5.24E-04	5.45E-04	5.60E-04	5.72E-04
	2.5	6.28E-04	7.01E-04	7.44E-04	7.76E-04	8.53E-04	9.29E-04	9.73E-04	1.00E-03	1.03E-03
	3	9.66E-04	1.08E-03	1.15E-03	1.21E-03	1.34E-03	1.47E-03	1.55E-03	1.60E-03	1.64E-03
	3.5	1.39E-03	1.55E-03	1.66E-03	1.74E-03	1.94E-03	2.15E-03	2.27E-03	2.36E-03	2.43E-03

Table 89 Maximum deflection results for alpha 6 for slabs subjected to CHBDC axle 2 & 3 loading (main bars parallel to traffic)

		Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2&3 Transverse	1.5	7.60E-05	8.30E-05	8.70E-05	8.90E-05	9.60E-05	1.02E-04	1.06E-04	1.08E-04	1.10E-04
	2	2.94E-04	3.26E-04	3.45E-04	3.58E-04	3.89E-04	4.20E-04	4.37E-04	4.49E-04	4.58E-04
	2.5	6.26E-04	7.00E-04	7.45E-04	7.77E-04	8.54E-04	9.32E-04	9.76E-04	1.01E-03	1.03E-03
	3	1.07E-03	1.21E-03	1.29E-03	1.35E-03	1.50E-03	1.65E-03	1.73E-03	1.79E-03	1.84E-03
	3.5	1.65E-03	1.85E-03	1.98E-03	2.07E-03	2.31E-03	2.56E-03	2.71E-03	2.82E-03	2.90E-03
	4	2.36E-03	2.64E-03	2.82E-03	2.96E-03	3.31E-03	3.69E-03	3.92E-03	4.08E-03	4.21E-03

Alpha 8 Deflection Results

Table 90 Maximum deflection results for alpha 8 for slabs subjected to CHBDC axle 4 loading (main bars perpendicular to traffic)

		Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4	1	2.40E-05	2.90E-05	3.20E-05	3.40E-05	4.10E-05	4.80E-05	5.30E-05	5.70E-05	6.00E-05
	1.5	6.10E-05	7.30E-05	8.00E-05	8.60E-05	1.02E-04	1.21E-04	1.34E-04	1.44E-04	1.52E-04
	2	1.13E-04	1.35E-04	1.49E-04	1.60E-04	1.90E-04	2.25E-04	2.49E-04	2.67E-04	2.82E-04
	2.5	1.82E-04	2.15E-04	2.38E-04	2.55E-04	3.03E-04	3.59E-04	3.97E-04	4.27E-04	4.51E-04
	3	2.89E-04	3.39E-04	3.74E-04	4.01E-04	4.75E-04	5.64E-04	6.24E-04	6.70E-04	7.08E-04
	3.5	4.79E-04	5.57E-04	6.12E-04	6.55E-04	7.74E-04	9.18E-04	1.02E-03	1.09E-03	1.15E-03
	4	7.16E-04	8.24E-04	9.00E-04	9.61E-04	1.13E-03	1.34E-03	1.48E-03	1.59E-03	1.68E-03

Table 91 Maximum deflection results for alpha 8 for slabs subjected to CHBDC axle 2 & 3 loading (main bars perpendicular to traffic)

		Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2and 3	1	2.70E-05	3.10E-05	3.30E-05	3.50E-05	4.00E-05	4.40E-05	4.70E-05	5.00E-05	5.20E-05
	1.5	7.40E-05	8.50E-05	9.20E-05	9.70E-05	1.11E-04	1.25E-04	1.35E-04	1.41E-04	1.47E-04
	2	1.45E-04	1.67E-04	1.81E-04	1.92E-04	2.19E-04	2.50E-04	2.69E-04	2.84E-04	2.95E-04
	2.5	2.39E-04	2.76E-04	3.00E-04	3.18E-04	3.66E-04	4.19E-04	4.53E-04	4.79E-04	4.99E-04
	3	3.94E-04	4.55E-04	4.95E-04	5.26E-04	6.09E-04	7.01E-04	7.60E-04	8.05E-04	8.40E-04
	3.5	6.60E-04	7.57E-04	8.23E-04	8.74E-04	1.01E-03	1.17E-03	1.27E-03	1.35E-03	1.41E-03
	4	9.93E-04	1.13E-03	1.23E-03	1.30E-03	1.50E-03	1.74E-03	1.89E-03	2.01E-03	2.10E-03

Table 92 Maximum deflection results for alpha 8 for slabs subjected to CHBDC truck loading (main bars perpendicular to traffic)

		Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
TRUCK	1	2.90E-05	3.20E-05	3.40E-05	3.60E-05	4.10E-05	4.80E-05	5.30E-05	5.70E-05	6.00E-05
	1.5	8.40E-05	9.30E-05	9.90E-05	1.03E-04	1.15E-04	1.28E-04	1.37E-04	1.44E-04	1.52E-04
	2	1.78E-04	1.94E-04	2.05E-04	2.13E-04	2.36E-04	2.62E-04	2.80E-04	2.93E-04	3.03E-04
	2.5	3.21E-04	3.45E-04	3.62E-04	3.75E-04	4.11E-04	4.54E-04	4.83E-04	5.05E-04	5.23E-04
	3	5.84E-04	6.21E-04	6.47E-04	6.68E-04	7.25E-04	7.94E-04	8.40E-04	8.76E-04	9.06E-04
	3.5	1.05E-03	1.11E-03	1.15E-03	1.18E-03	1.27E-03	1.38E-03	1.46E-03	1.52E-03	1.56E-03
	4	1.69E-03	1.76E-03	1.82E-03	1.86E-03	1.99E-03	2.15E-03	2.26E-03	2.34E-03	2.41E-03

Table 93 Maximum deflection results for alpha 8 for slabs subjected to CHBDC axle 4 loading (main bars parallel to traffic)

		Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4 Transverse	1	6.10E-05	6.50E-05	6.80E-05	7.00E-05	7.40E-05	7.90E-05	8.10E-05	8.30E-05	8.50E-05
	1.5	1.69E-04	1.85E-04	1.95E-04	2.02E-04	2.18E-04	2.33E-04	2.42E-04	2.49E-04	2.53E-04
	2	3.38E-04	3.76E-04	3.99E-04	4.15E-04	4.55E-04	4.94E-04	5.16E-04	5.32E-04	5.43E-04
	2.5	5.74E-04	6.42E-04	6.84E-04	7.14E-04	7.91E-04	8.68E-04	9.13E-04	9.44E-04	9.69E-04
	3	8.82E-04	9.87E-04	1.05E-03	1.10E-03	1.23E-03	1.36E-03	1.44E-03	1.49E-03	1.54E-03
	3.5	1.27E-03	1.42E-03	1.52E-03	1.59E-03	1.78E-03	1.98E-03	2.10E-03	2.19E-03	2.25E-03

Table 94 Maximum deflection results for alpha 8 for slabs subjected to CHBDC axle 2 & 3 loading (main bars parallel to traffic)

		Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2&3 Transverse	1.5	7.00E-05	7.70E-05	8.10E-05	8.40E-05	9.10E-05	9.70E-05	1.01E-04	1.04E-04	1.06E-04
	2	2.69E-04	3.00E-04	3.18E-04	3.32E-04	3.64E-04	3.95E-04	4.13E-04	4.26E-04	4.35E-04
	2.5	5.70E-04	6.39E-04	6.82E-04	7.13E-04	7.91E-04	8.69E-04	9.14E-04	9.46E-04	9.71E-04
	3	9.80E-04	1.10E-03	1.17E-03	1.23E-03	1.37E-03	1.52E-03	1.61E-03	1.67E-03	1.72E-03
	3.5	1.51E-03	1.69E-03	1.80E-03	1.89E-03	2.12E-03	2.36E-03	2.50E-03	2.61E-03	2.69E-03
	4	2.17E-03	2.41E-03	2.57E-03	2.70E-03	3.02E-03	3.38E-03	3.60E-03	3.76E-03	3.89E-03

Alpha 10 Deflection Results

Table 95 Maximum deflection results for alpha 10 for slabs subjected to CHBDC axle 4 loading (main bars perpendicular to traffic)

		Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4	1	2.20E-05	2.60E-05	2.90E-05	3.10E-05	3.70E-05	4.40E-05	4.80E-05	5.10E-05	5.40E-05
	1.5	5.50E-05	6.60E-05	7.30E-05	7.80E-05	9.30E-05	1.10E-04	1.21E-04	1.30E-04	1.37E-04
	2	1.03E-04	1.22E-04	1.35E-04	1.45E-04	1.72E-04	2.04E-04	2.25E-04	2.42E-04	2.55E-04
	2.5	1.66E-04	1.95E-04	2.15E-04	2.31E-04	2.74E-04	3.25E-04	3.59E-04	3.86E-04	4.08E-04
	3	2.65E-04	3.09E-04	3.39E-04	3.64E-04	4.30E-04	5.11E-04	5.65E-04	6.06E-04	6.41E-04
	3.5	4.42E-04	5.10E-04	5.58E-04	5.96E-04	7.02E-04	8.32E-04	9.19E-04	9.87E-04	1.04E-03
	4	6.67E-04	7.59E-04	8.26E-04	8.79E-04	1.03E-03	1.21E-03	1.34E-03	1.44E-03	1.52E-03

Table 96 Maximum deflection results for alpha 10 for slabs subjected to CHBDC axle 2 & 3 loading (main bars perpendicular to traffic)

		Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2and 3	1	2.50E-05	2.90E-05	3.10E-05	3.30E-05	3.70E-05	4.10E-05	4.40E-05	4.60E-05	4.80E-05
	1.5	6.80E-05	7.80E-05	8.50E-05	9.00E-05	1.02E-04	1.16E-04	1.25E-04	1.32E-04	1.37E-04
	2	1.32E-04	1.52E-04	1.66E-04	1.76E-04	2.02E-04	2.31E-04	2.49E-04	2.63E-04	2.74E-04
	2.5	2.19E-04	2.52E-04	2.74E-04	2.91E-04	3.35E-04	3.85E-04	4.17E-04	4.41E-04	4.61E-04
	3	3.62E-04	4.16E-04	4.52E-04	4.80E-04	5.55E-04	6.41E-04	6.96E-04	7.38E-04	7.71E-04
	3.5	6.11E-04	6.95E-04	7.54E-04	7.99E-04	9.23E-04	1.07E-03	1.16E-03	1.23E-03	1.29E-03
	4	9.27E-04	1.04E-03	1.13E-03	1.19E-03	1.37E-03	1.59E-03	1.73E-03	1.83E-03	1.92E-03

Table 97 Maximum deflection results for alpha 10 for slabs subjected to CHBDC truck loading (main bars perpendicular to traffic)

		Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
TRUCK	1	2.70E-05	3.00E-05	3.20E-05	3.40E-05	3.80E-05	4.40E-05	4.80E-05	5.10E-05	5.40E-05
	1.5	7.90E-05	8.70E-05	9.30E-05	9.70E-05	1.08E-04	1.20E-04	1.28E-04	1.34E-04	1.39E-04
	2	1.70E-04	1.84E-04	1.93E-04	2.01E-04	2.21E-04	2.46E-04	2.62E-04	2.74E-04	2.84E-04
	2.5	3.08E-04	3.29E-04	3.44E-04	3.56E-04	3.88E-04	4.27E-04	4.53E-04	4.73E-04	4.90E-04
	3	5.66E-04	5.98E-04	6.20E-04	6.38E-04	6.88E-04	7.50E-04	7.91E-04	8.23E-04	8.50E-04
	3.5	1.03E-03	1.07E-03	1.11E-03	1.14E-03	1.22E-03	1.31E-03	1.38E-03	1.43E-03	1.47E-03
	4	1.65E-03	1.72E-03	1.76E-03	1.80E-03	1.91E-03	2.05E-03	2.14E-03	2.22E-03	2.28E-03

Table 98 Maximum deflection results for alpha 10 for slabs subjected to CHBDC axle 4 loading (main bars parallel to traffic)

		Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4 Transverse	1	5.80E-05	6.20E-05	6.50E-05	6.70E-05	7.20E-05	7.60E-05	7.80E-05	8.00E-05	8.20E-05
	1.5	1.58E-04	1.75E-04	1.85E-04	1.92E-04	2.08E-04	2.24E-04	2.33E-04	2.39E-04	2.44E-04
	2	3.15E-04	3.52E-04	3.74E-04	3.90E-04	4.30E-04	4.69E-04	4.92E-04	5.08E-04	5.20E-04
	2.5	5.35E-04	5.98E-04	6.38E-04	6.68E-04	7.42E-04	8.19E-04	8.64E-04	8.96E-04	9.21E-04
	3	8.24E-04	9.19E-04	9.82E-04	1.03E-03	1.15E-03	1.28E-03	1.36E-03	1.41E-03	1.45E-03
	3.5	1.20E-03	1.33E-03	1.41E-03	1.48E-03	1.65E-03	1.85E-03	1.97E-03	2.05E-03	2.12E-03

Table 99 Maximum deflection results for alpha 10 for slabs subjected to CHBDC axle 2 & 3 loading (main bars parallel to traffic)

		Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2&3 Transverse	1.5	6.60E-05	7.30E-05	7.70E-05	8.00E-05	8.70E-05	9.30E-05	9.70E-05	1.00E-04	1.02E-04
	2	2.50E-04	2.80E-04	2.98E-04	3.11E-04	3.43E-04	3.75E-04	3.94E-04	4.07E-04	4.17E-04
	2.5	5.30E-04	5.95E-04	6.35E-04	6.65E-04	7.41E-04	8.19E-04	8.65E-04	8.98E-04	9.23E-04
	3	9.14E-04	1.02E-03	1.09E-03	1.15E-03	1.28E-03	1.43E-03	1.51E-03	1.58E-03	1.63E-03
	3.5	1.42E-03	1.57E-03	1.68E-03	1.76E-03	1.97E-03	2.20E-03	2.34E-03	2.45E-03	2.53E-03
	4	2.05E-03	2.26E-03	2.40E-03	2.51E-03	2.81E-03	3.15E-03	3.36E-03	3.52E-03	3.64E-03

B.2.2 MAXIMUM Deflection VS SPAN LENGTH

Alpha 0.25 Deflection VS Span Length for Different D Values

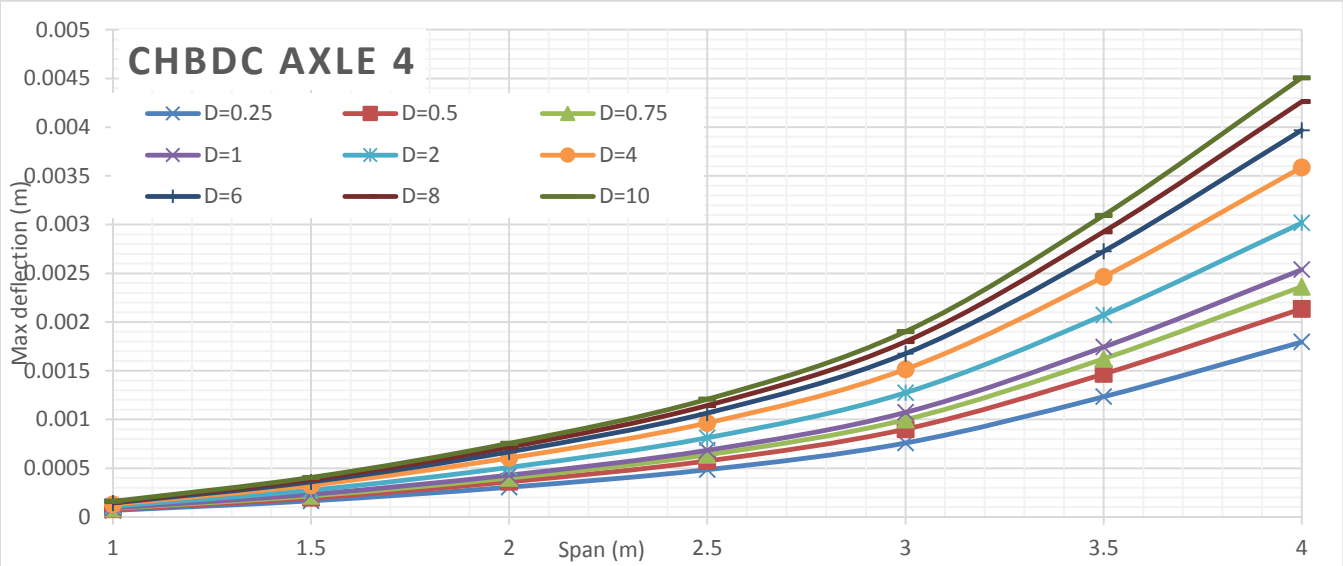


Figure 124 Maximum deflection of deck slabs subjected to CHBDC axle 4 for different D values of alpha 0.25 FEA analyses

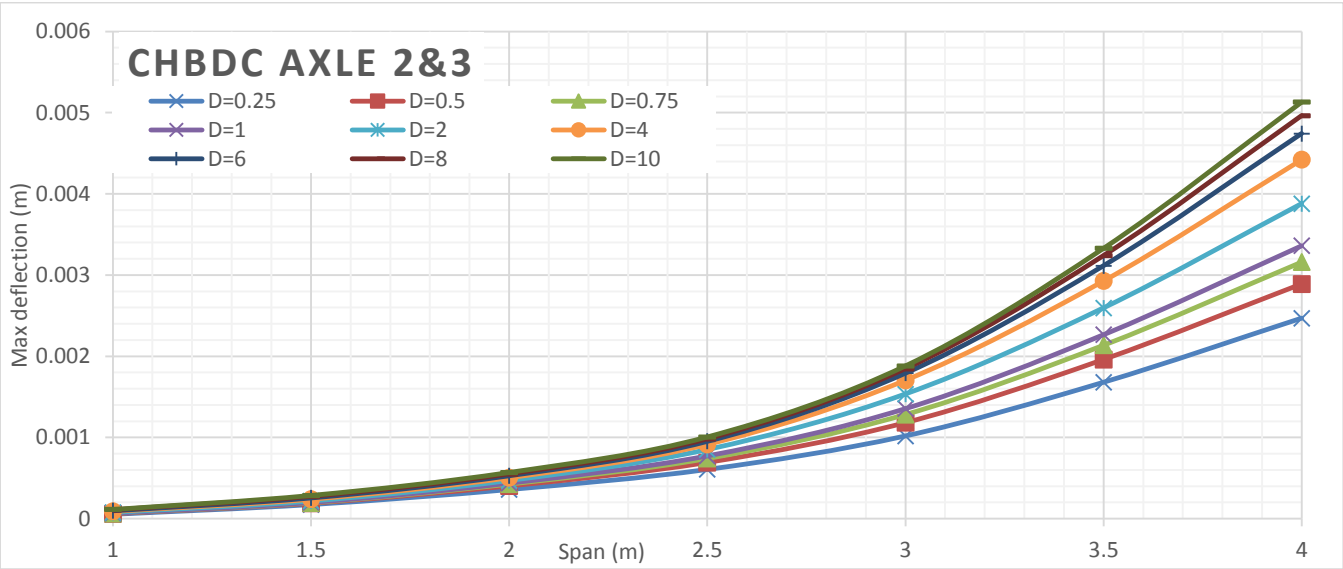


Figure 125 Maximum deflection of deck slabs subjected to CHBDC axle 2 & 3 for different D values of alpha 0.25 FEA analyses

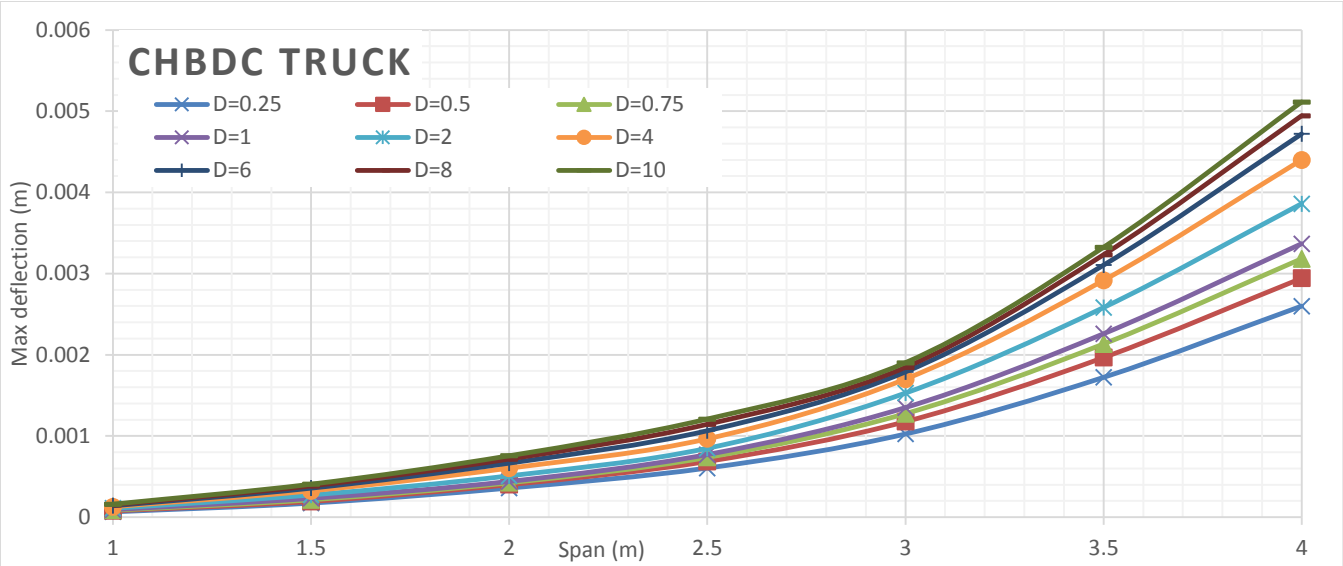


Figure 126 Maximum deflection of deck slabs subjected to CHBDC truck for different D values of alpha 0.25 FEA analyses

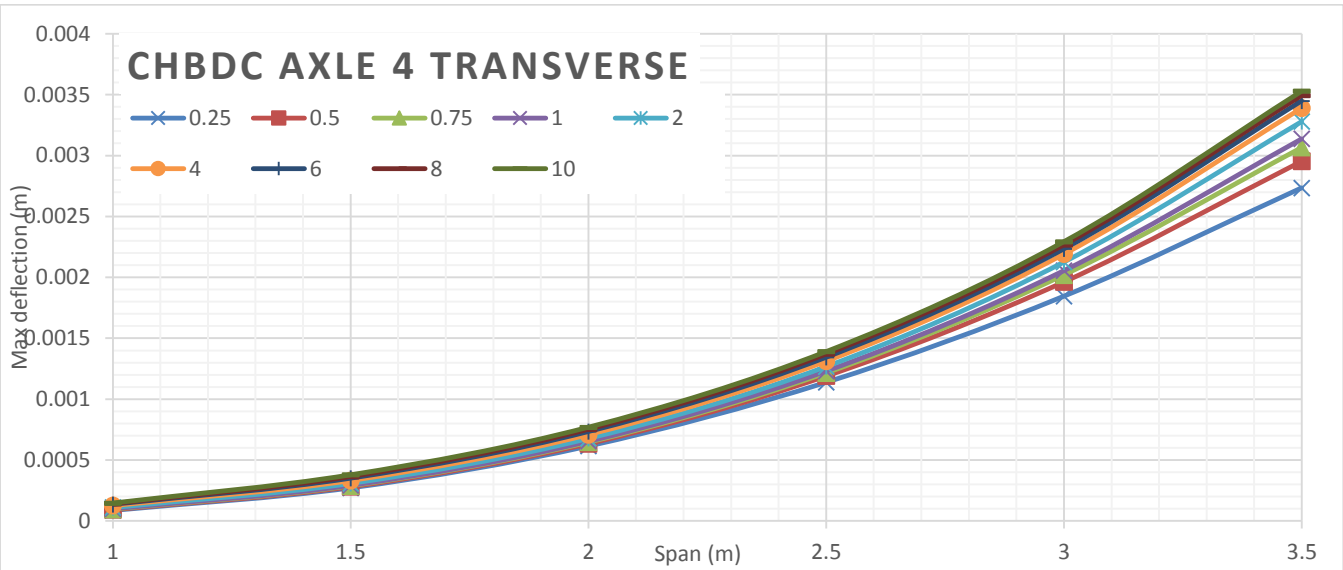


Figure 127 Maximum deflection of deck slabs subjected to CHBDC axle 4 for different D values of alpha 0.25 FEA analyses

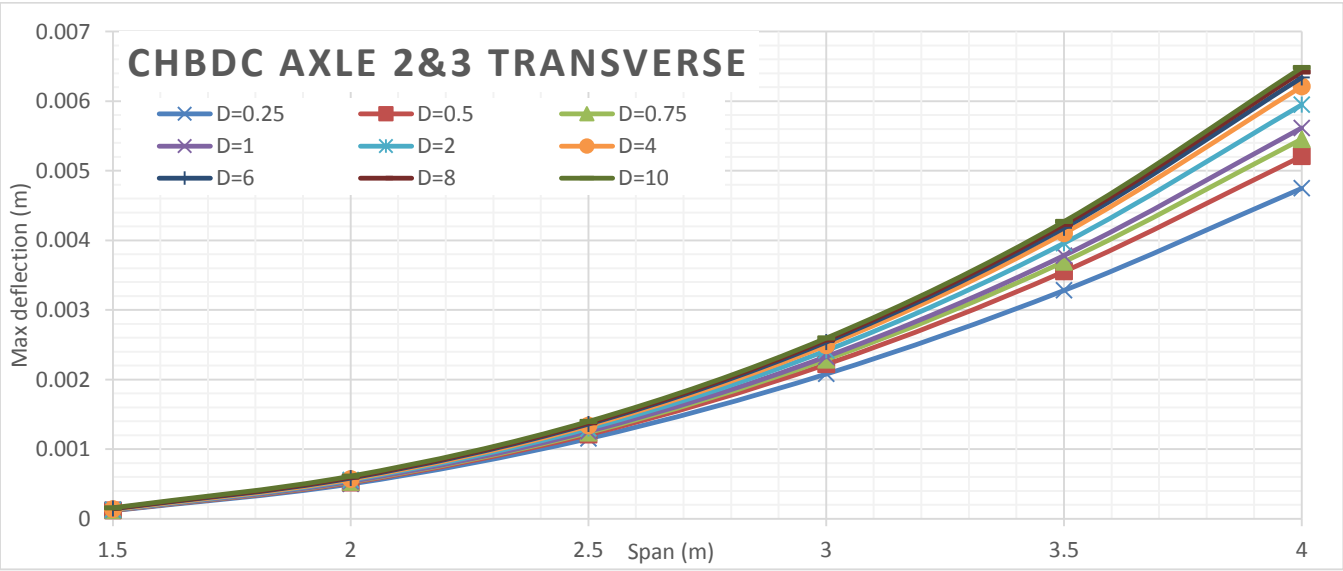


Figure 128 Maximum deflection of deck slabs subjected to CHBDC axle 2 & 3 for different D values of alpha 0.25 FEA analyses

Alpha 0.5 Deflection VS Span Length for Different D Values

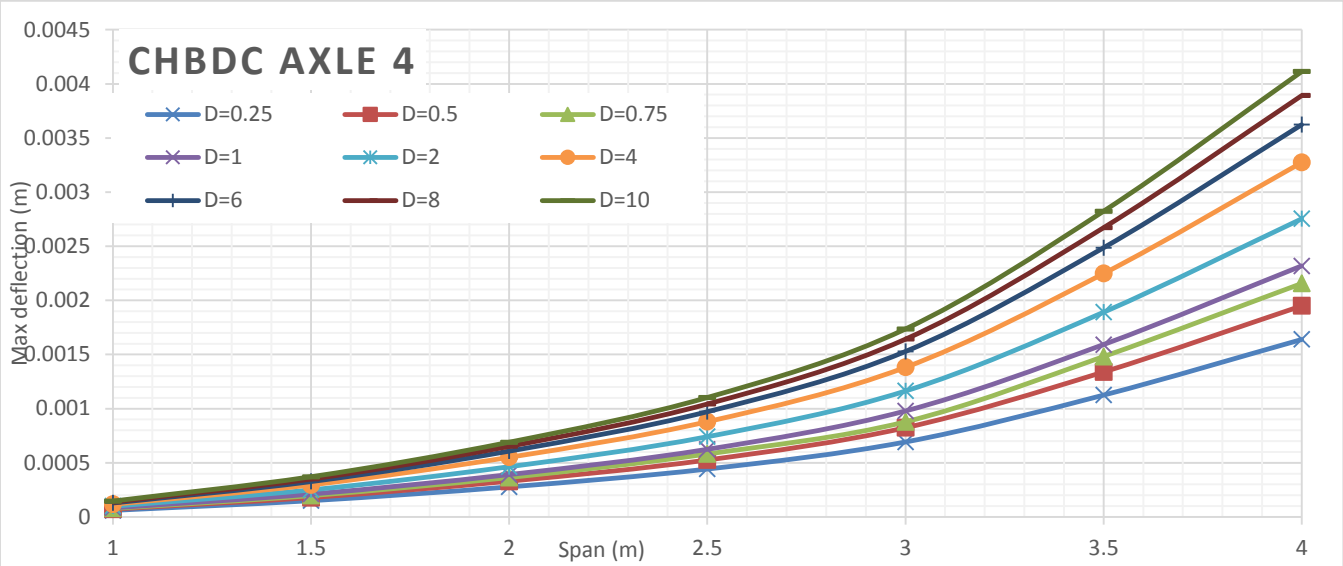


Figure 129 Maximum deflection of deck slabs subjected to CHBDC axle 4 for different D values of alpha 0.5 FEA analyses

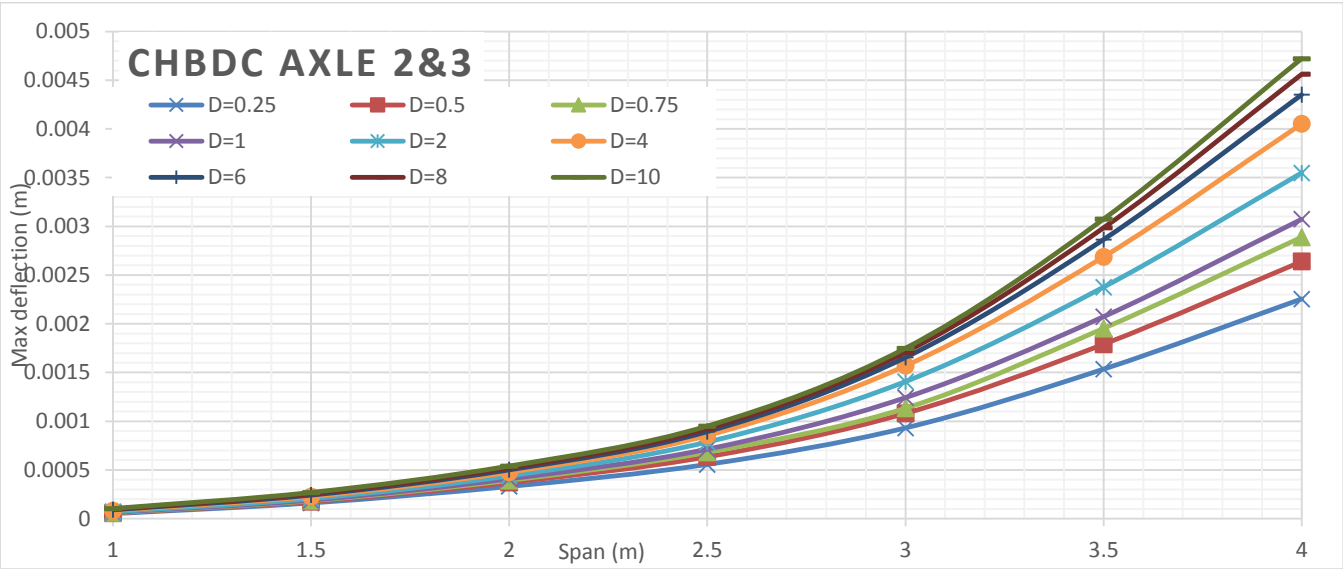


Figure 130 Maximum deflection of deck slabs subjected to CHBDC axle 2 & 3 for different D values of alpha 0.5 FEA analyses

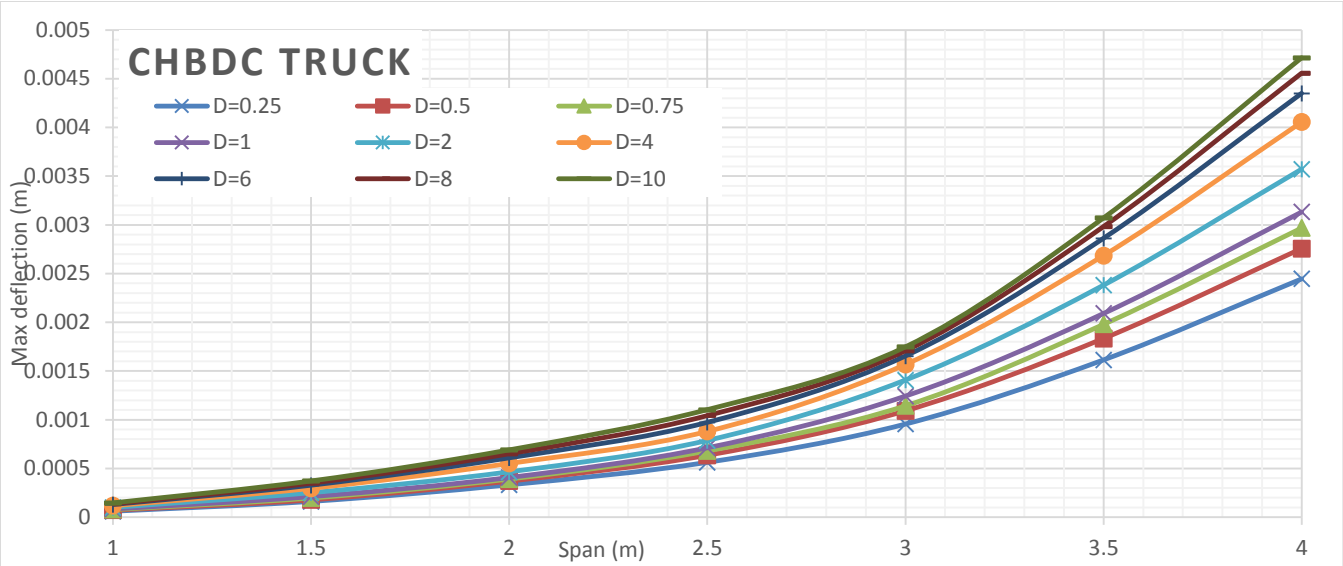


Figure 131 Maximum deflection of deck slabs subjected to CHBDC truck for different D values of alpha 0.5 FEA analyses

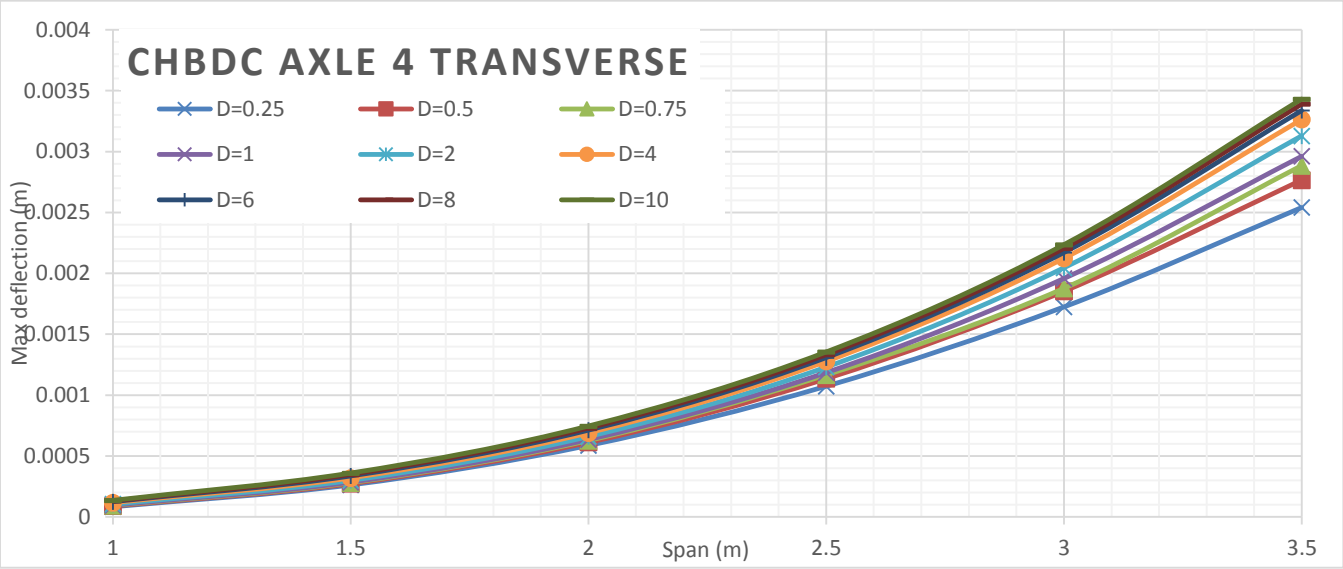


Figure 132 Maximum deflection of deck slabs subjected to CHBDC axle 4 for different D values of alpha 0.5 FEA analyses

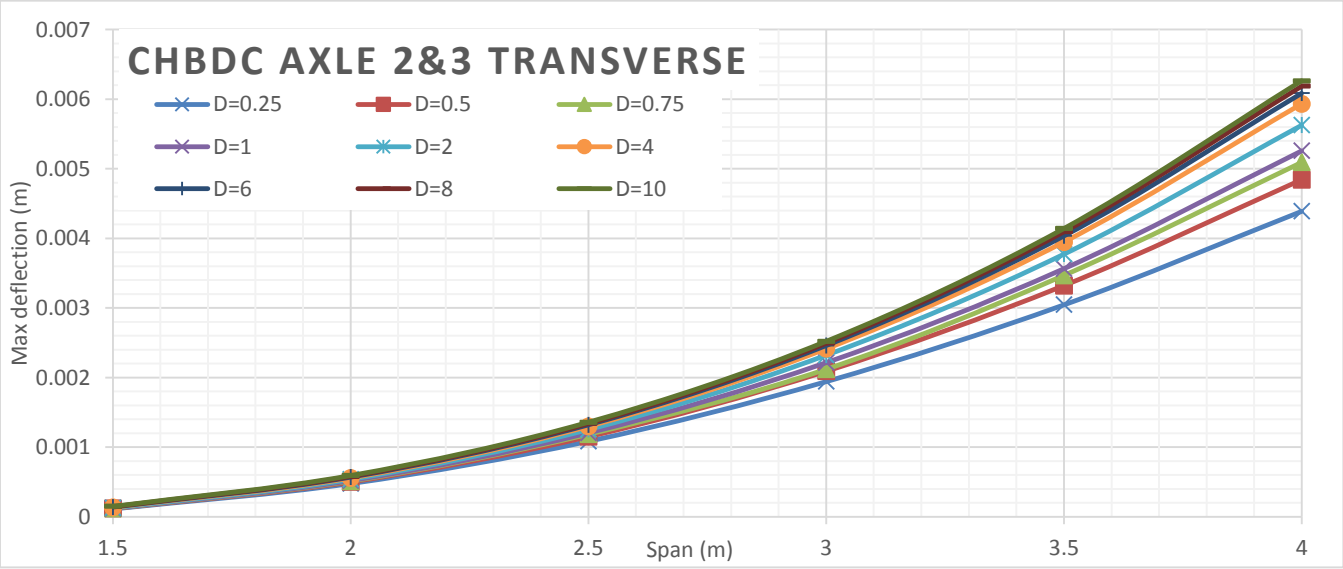


Figure 133 Maximum deflection of deck slabs subjected to CHBDC axle 2 & 3 for different D values of alpha 0.5 FEA analyses

Alpha 0.75 Deflection VS Span Length for Different D Values

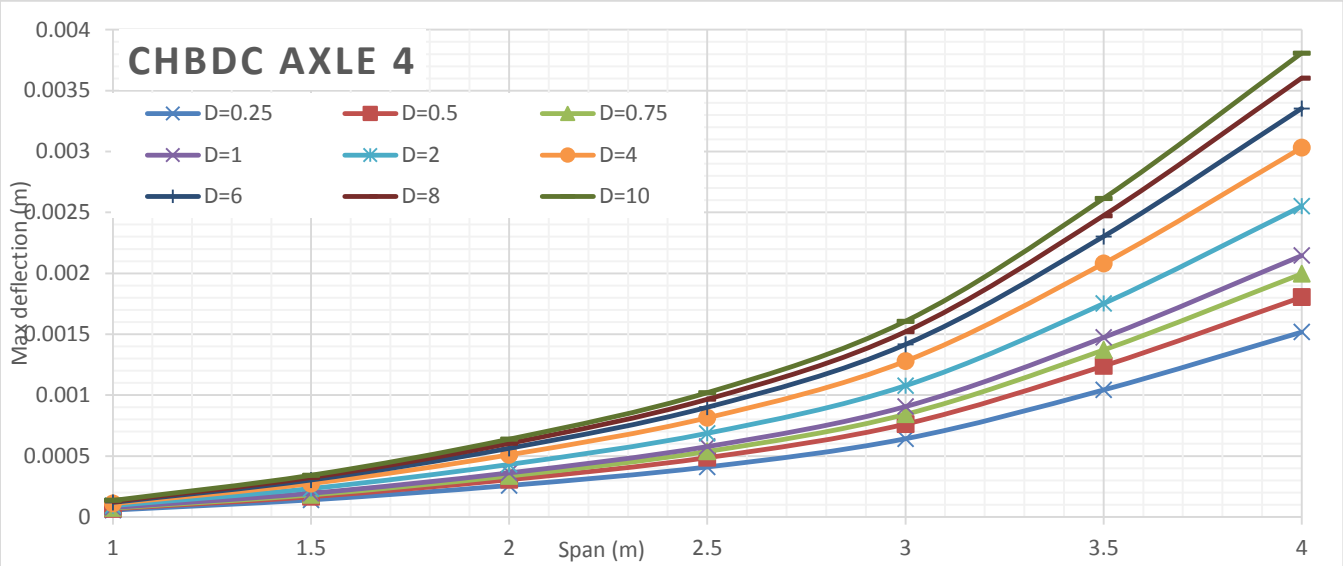


Figure 134 Maximum deflection of deck slabs subjected to CHBDC axle 4 for different D values of alpha 0.75 FEA analyses

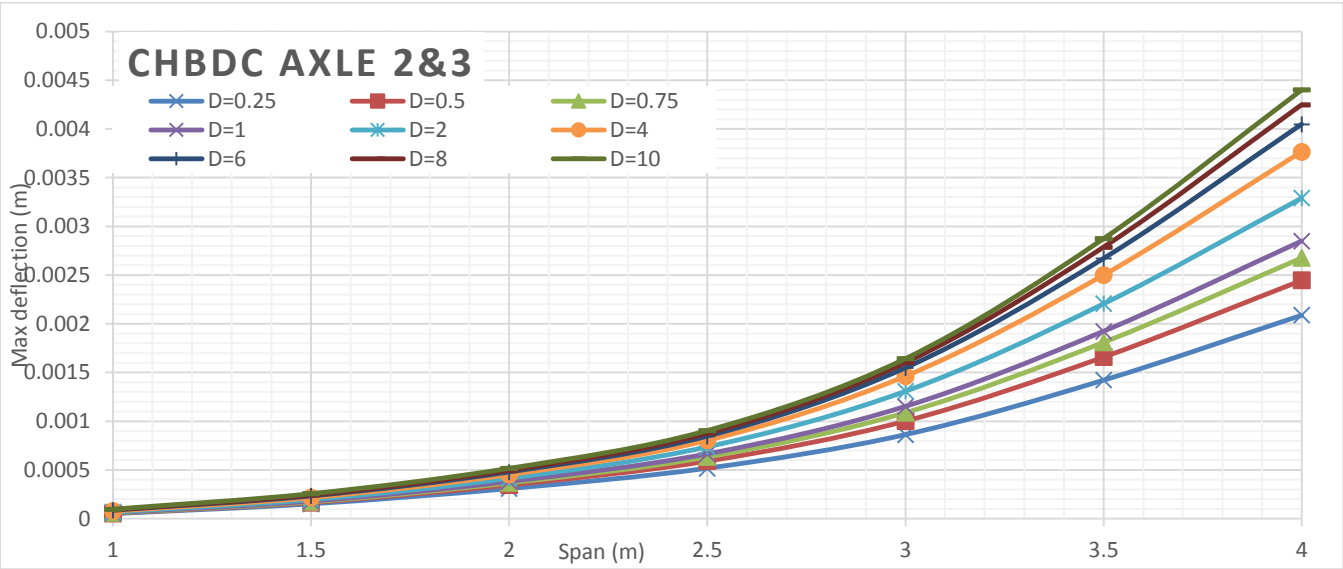


Figure 135 Maximum deflection of deck slabs subjected to CHBDC axle 2 & 3 for different D values of alpha 0.75 FEA analyses

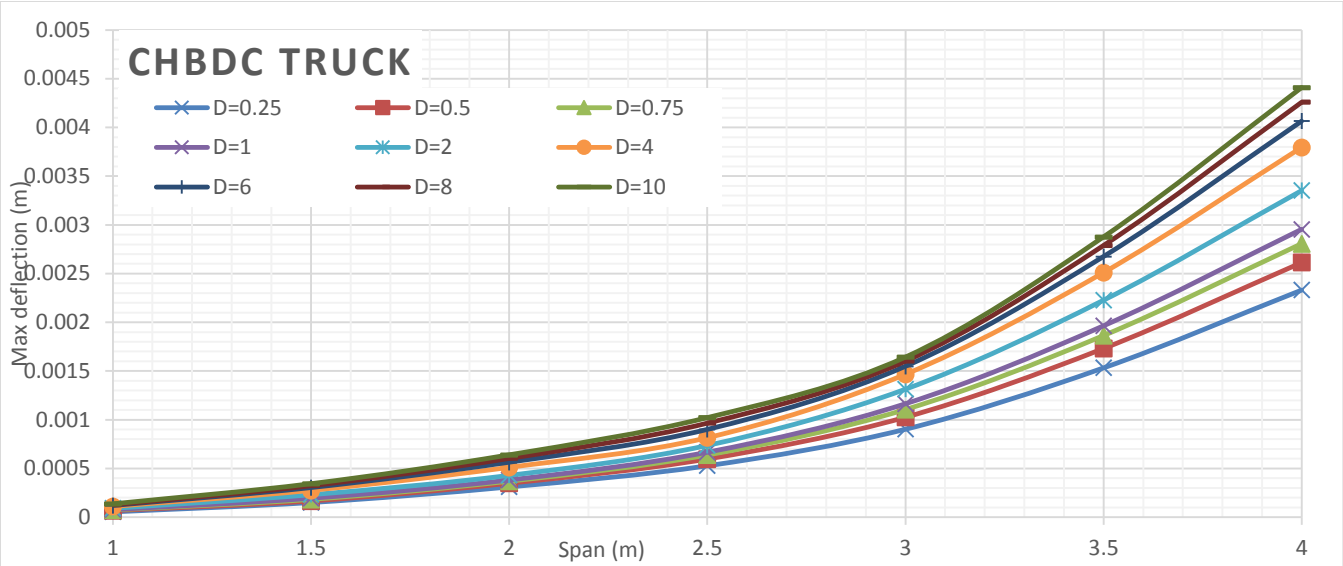


Figure 136 Maximum deflection of deck slabs subjected to CHBDC truck for different D values of alpha 0.75 FEA analyses

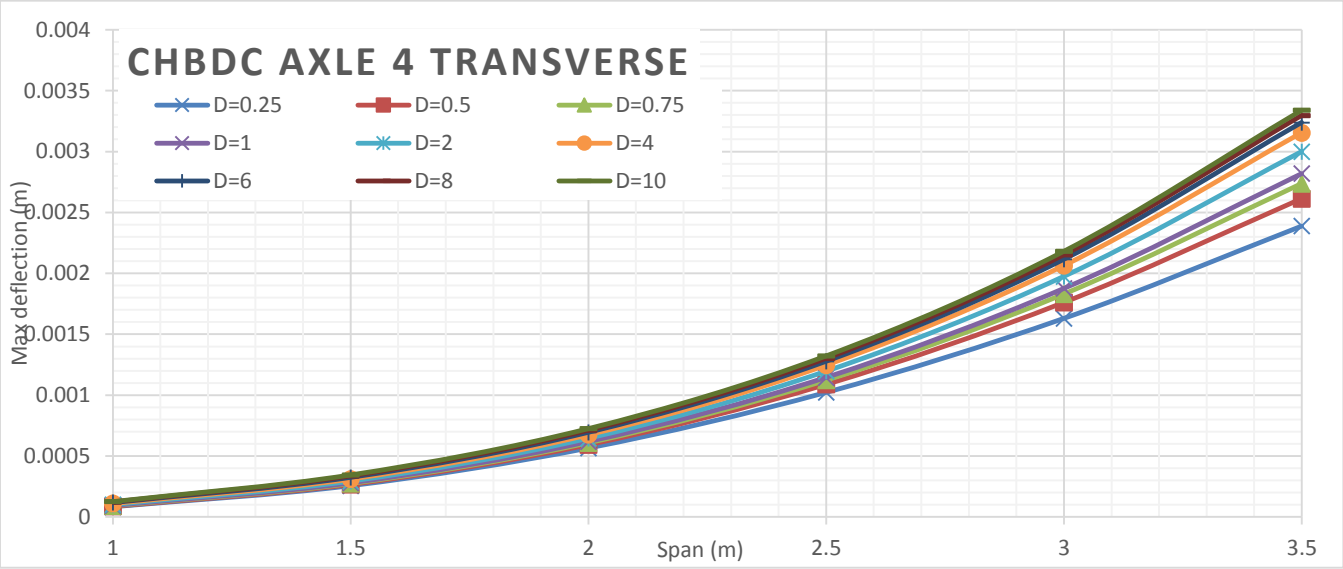


Figure 137 Maximum deflection of deck slabs subjected to CHBDC axle 4 for different D values of alpha 0.75 FEA analyses

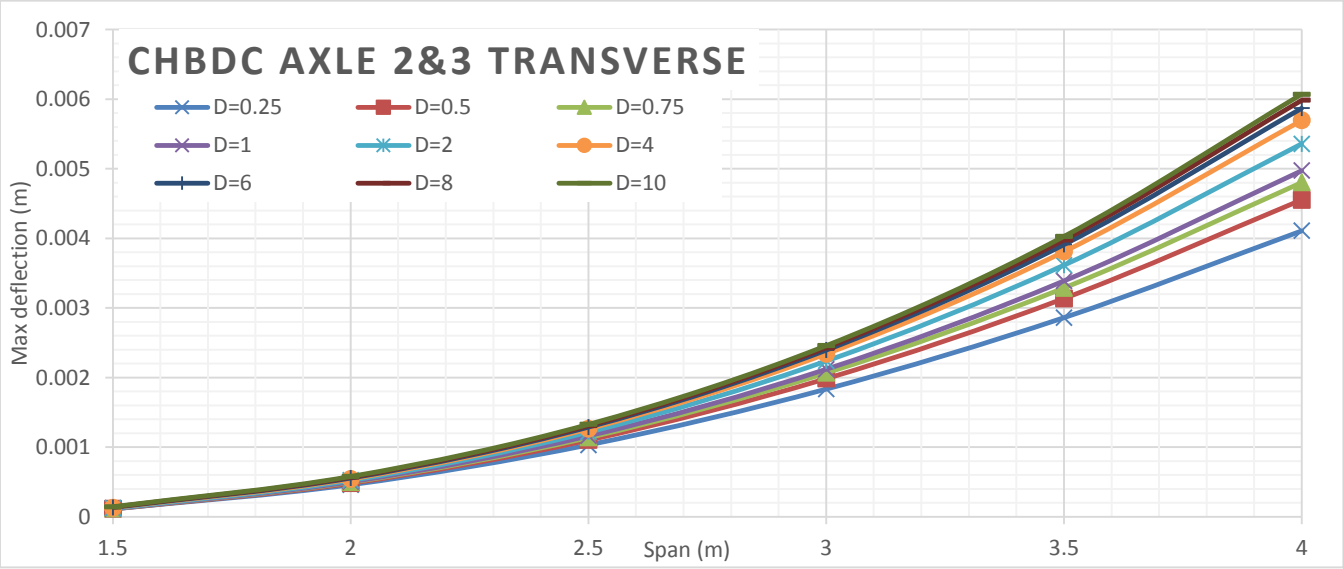


Figure 138 Maximum deflection of deck slabs subjected to CHBDC axle 2 & 3 for different D values of alpha 0.75 FEA analyses

Alpha 1 Deflection VS Span Length for Different D Values

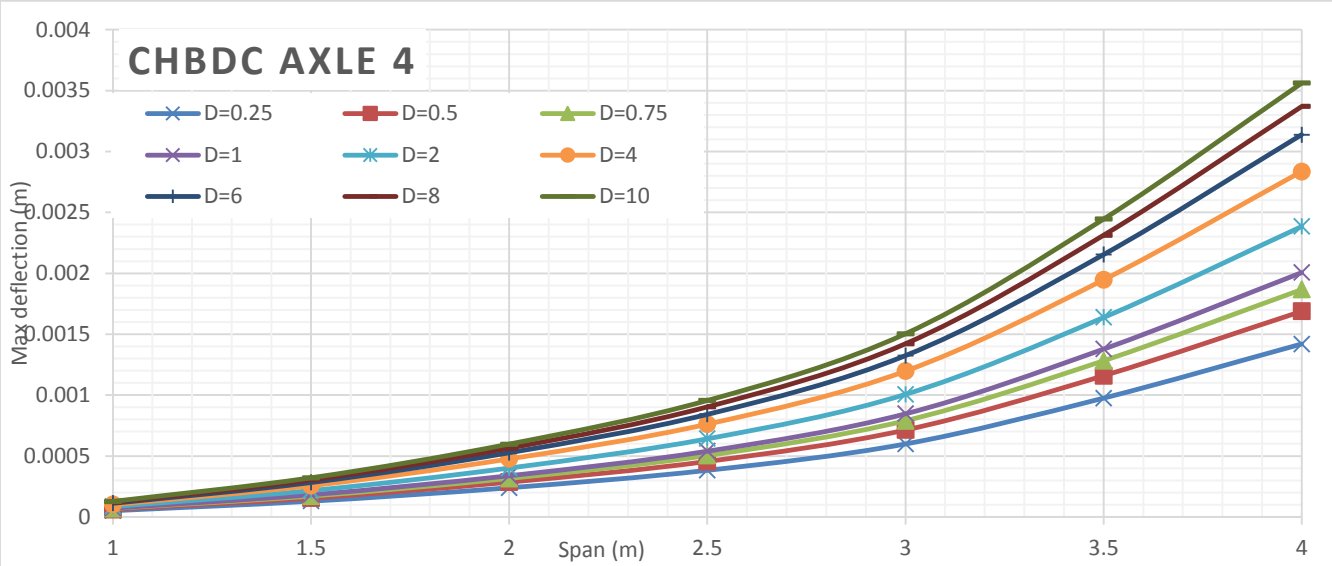


Figure 139 Maximum deflection of deck slabs subjected to CHBDC axle 4 for different D values of alpha 1 FEA analyses

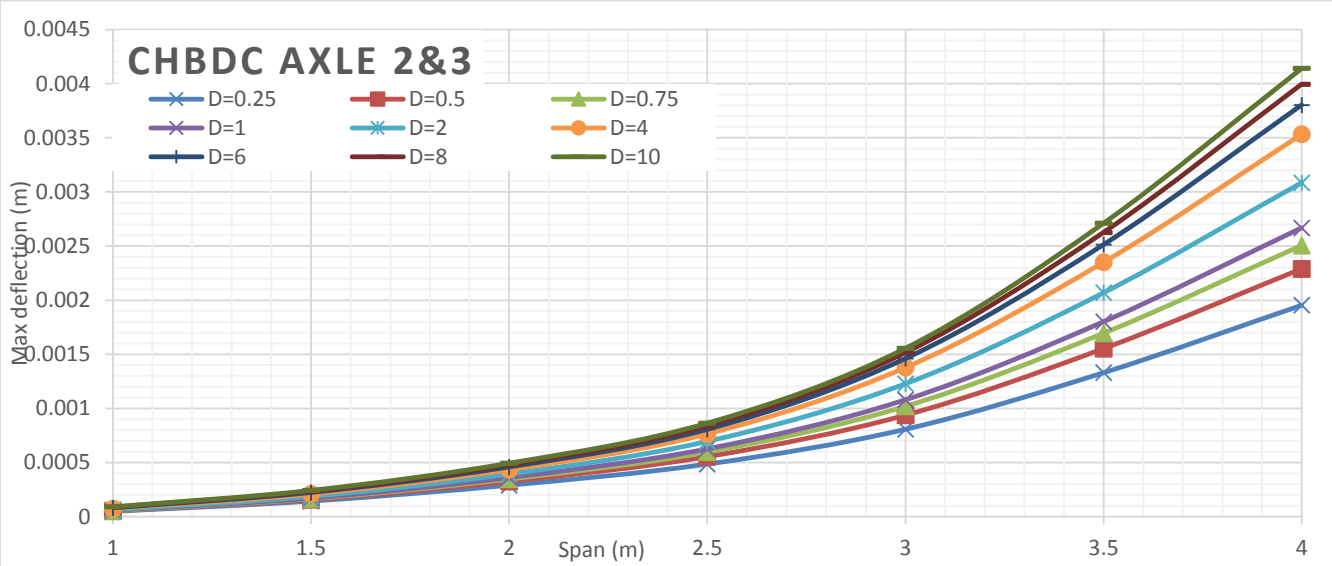


Figure 140 Maximum deflection of deck slabs subjected to CHBDC axle 2 & 3 for different D values of alpha 1 FEA analyses

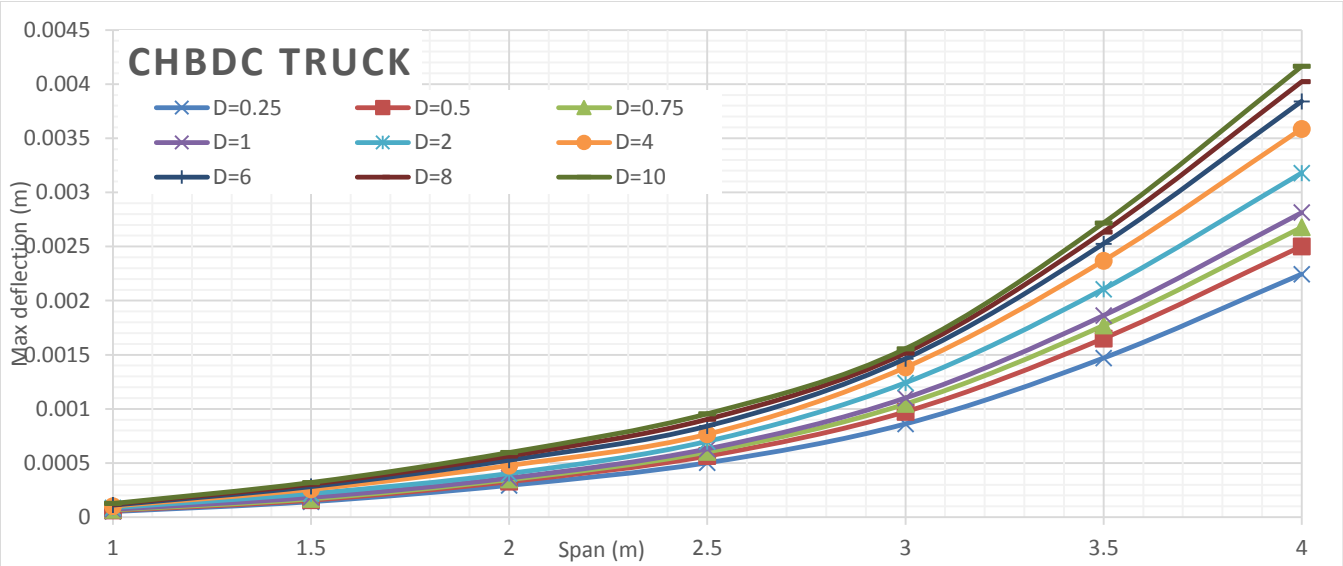


Figure 141 Maximum deflection of deck slabs subjected to CHBDC truck for different D values of alpha 1 FEA analyses

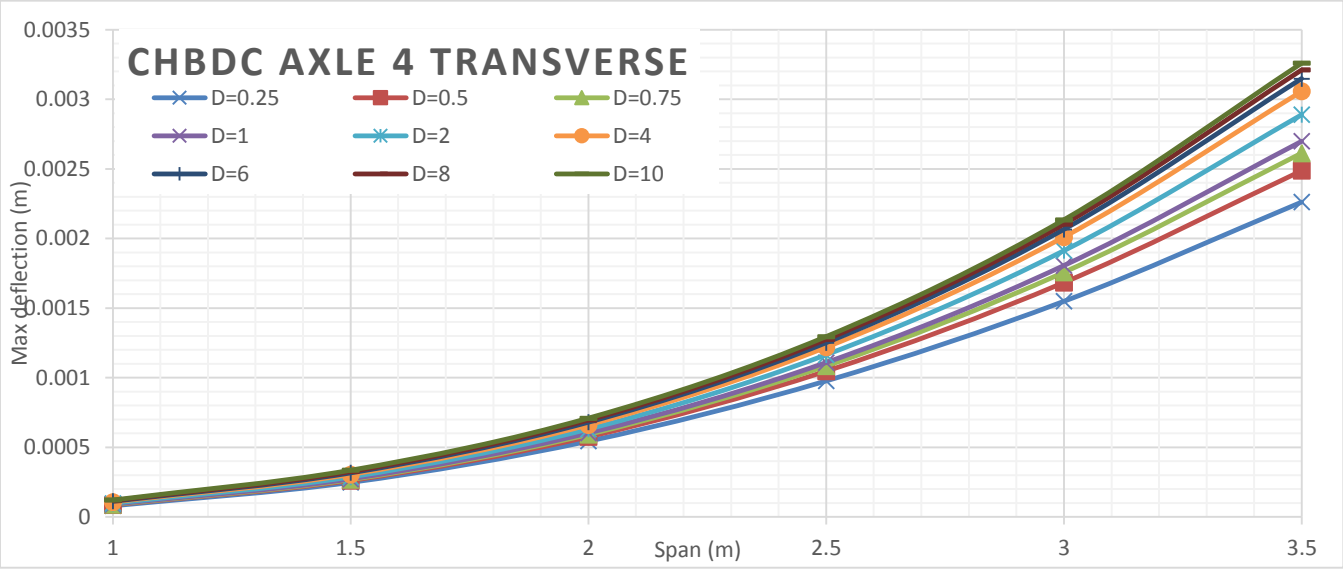


Figure 142 Maximum deflection of deck slabs subjected to CHBDC axle 4 for different D values of alpha 1 FEA analyses

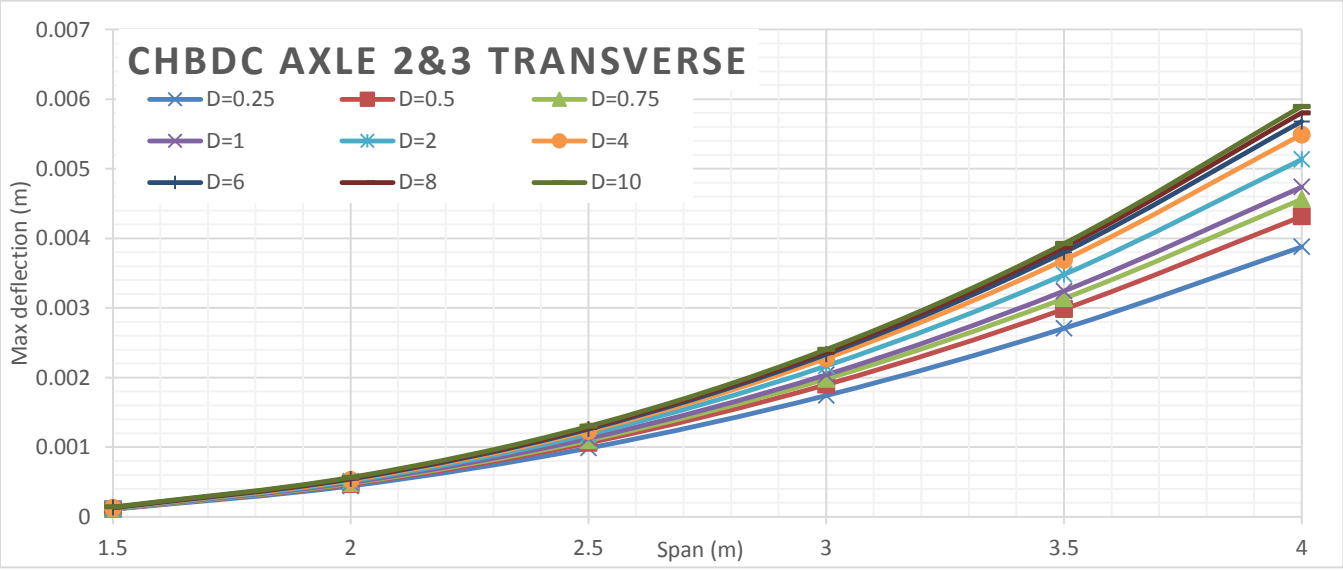


Figure 143 Maximum deflection of deck slabs subjected to CHBDC axle 2 & 3 for different D values of alpha 1 FEA analyses

Alpha 2 Deflection VS Span Length for Different D Values

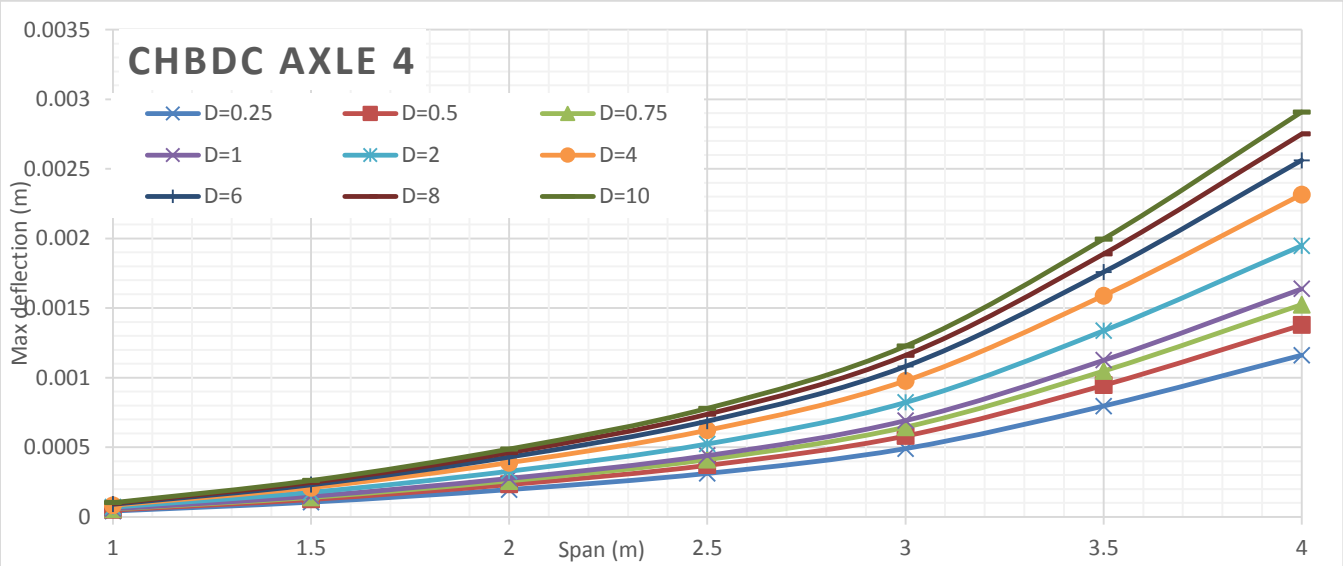


Figure 144 Maximum deflection of deck slabs subjected to CHBDC axle 4 for different D values of alpha 2 FEA analyses

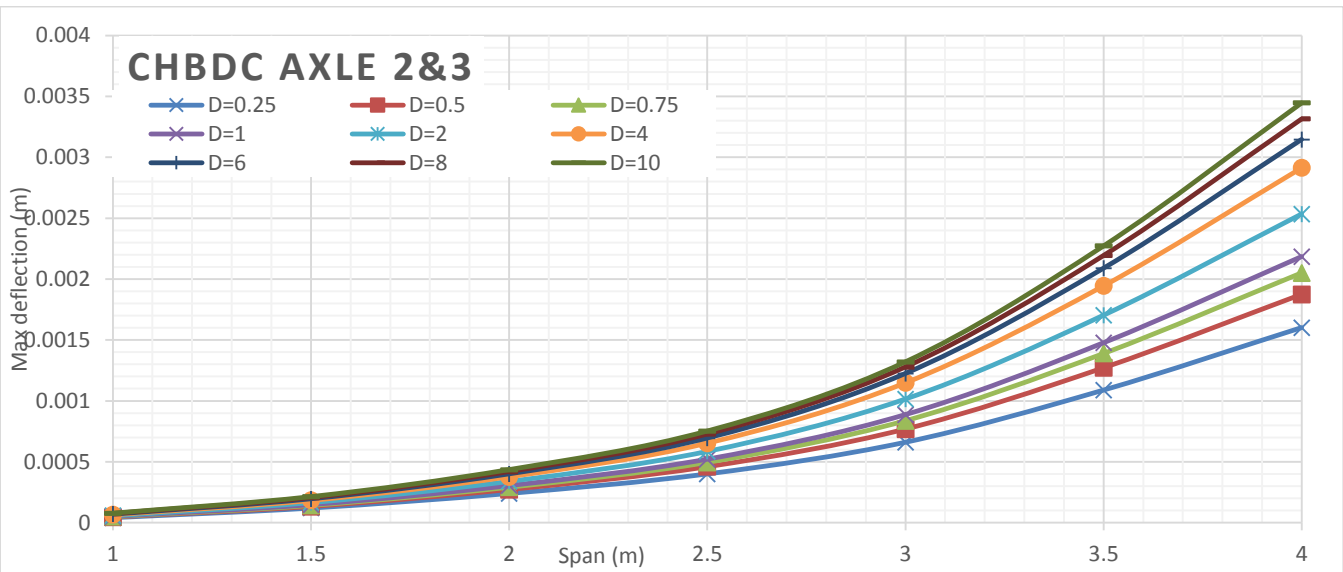


Figure 145 Maximum deflection of deck slabs subjected to CHBDC axle 2 & 3 for different D values of alpha 2 FEA analyses

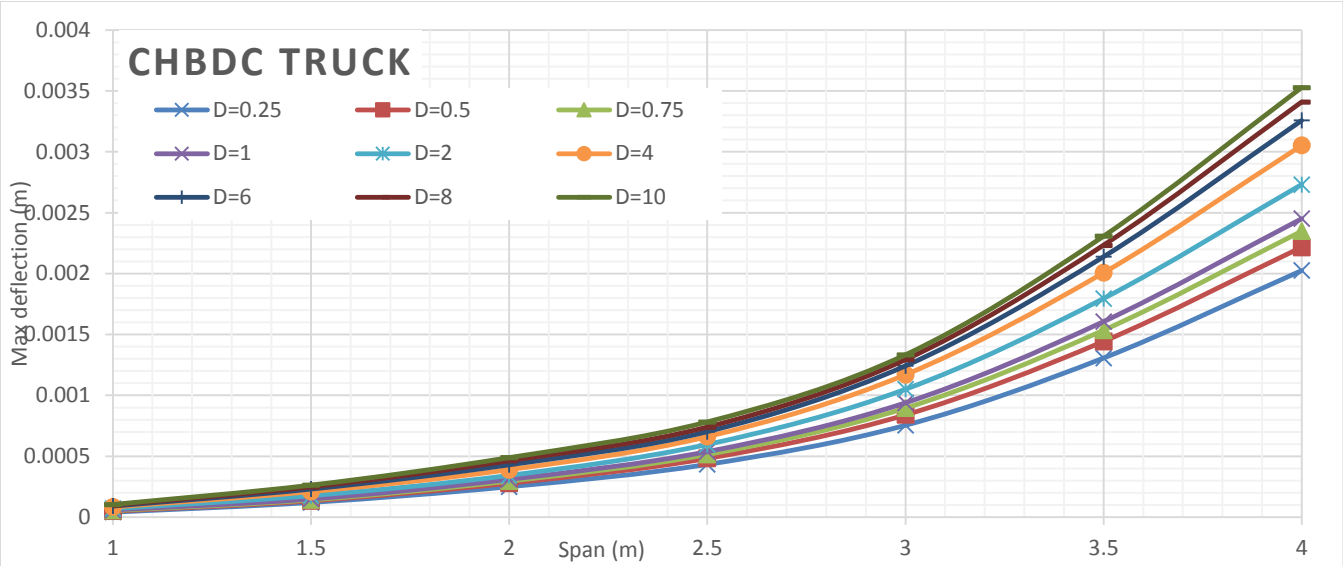


Figure 146 Maximum deflection of deck slabs subjected to CHBDC truck for different D values of alpha 2 FEA analyses

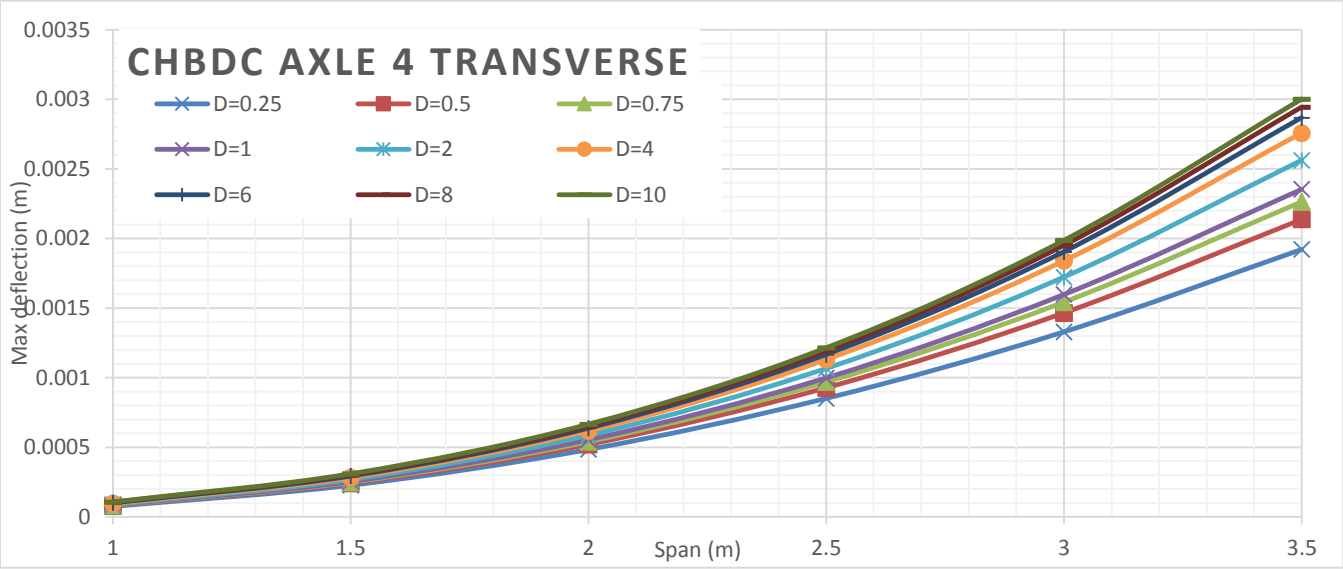


Figure 147 Maximum deflection of deck slabs subjected to CHBDC axle 4 for different D values of alpha 2 FEA analyses

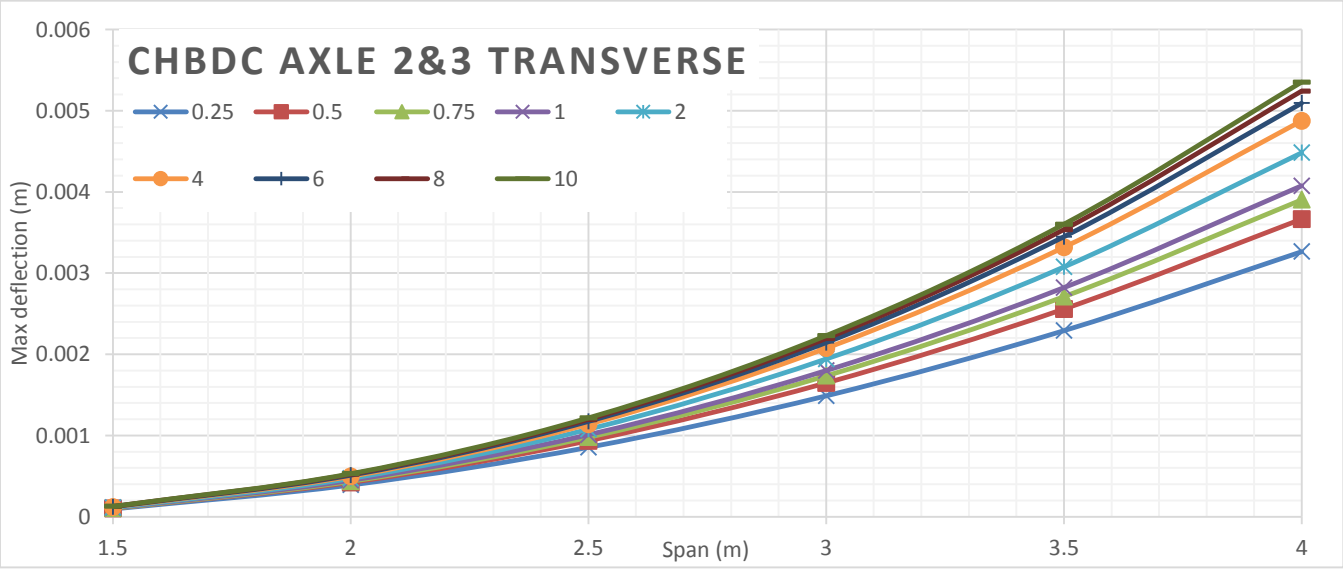


Figure 148 Maximum deflection of deck slabs subjected to CHBDC axle 2 & 3 for different D values of alpha 2 FEA analyses

Alpha 4 Deflection VS Span Length for Different D Values

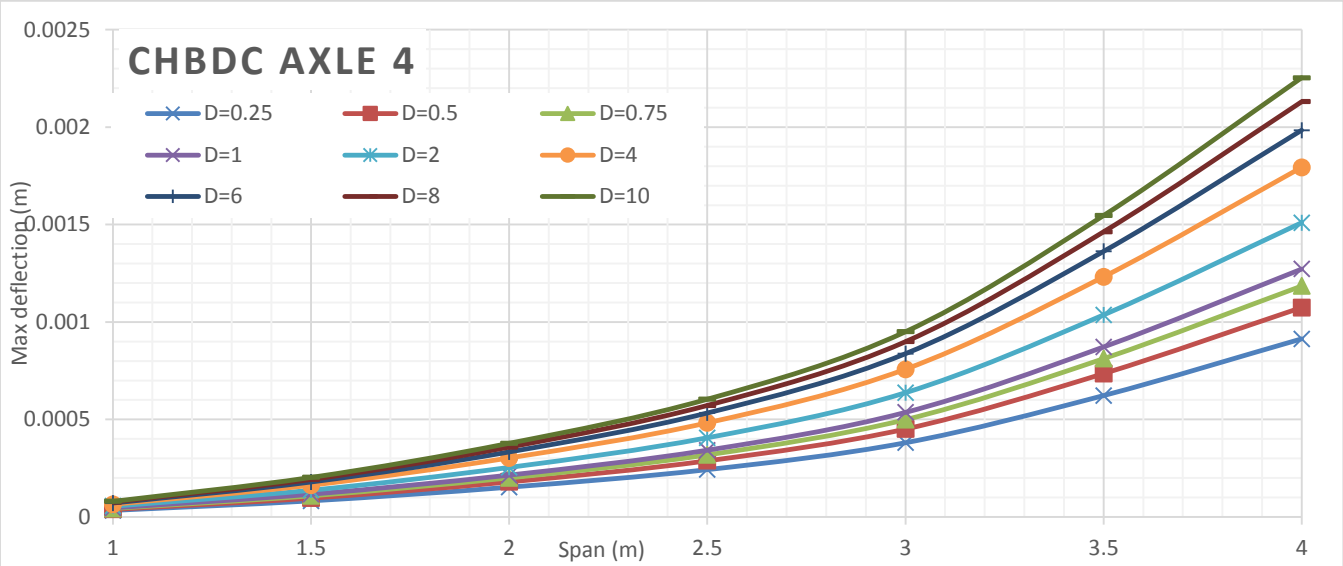


Figure 149 Maximum deflection of deck slabs subjected to CHBDC axle 4 for different D values of alpha 4 FEA analyses

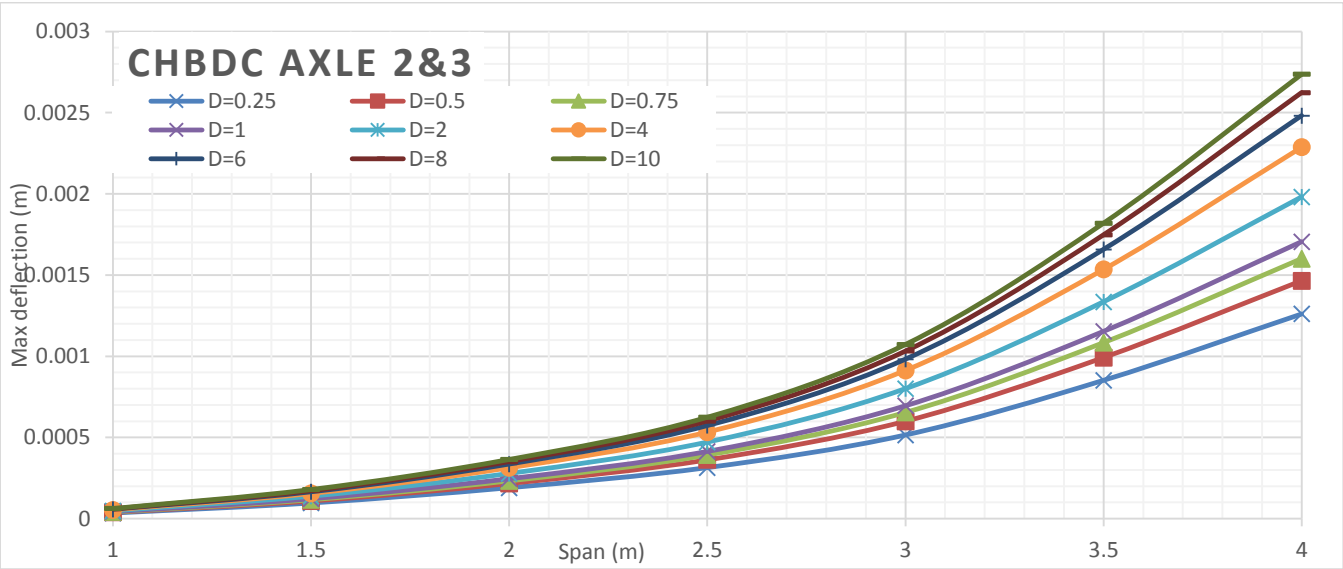


Figure 150 Maximum deflection of deck slabs subjected to CHBDC axle 2 & 3 for different D values of alpha 4 FEA analyses

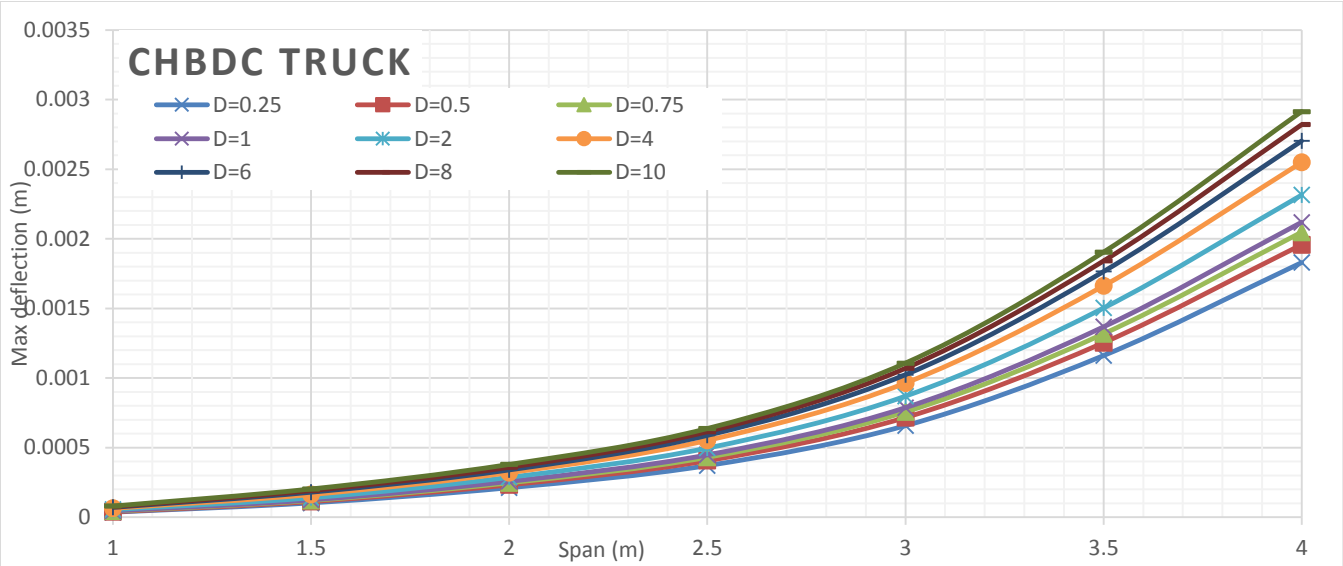


Figure 151 Maximum deflection of deck slabs subjected to CHBDC truck for different D values of alpha 4 FEA analyses

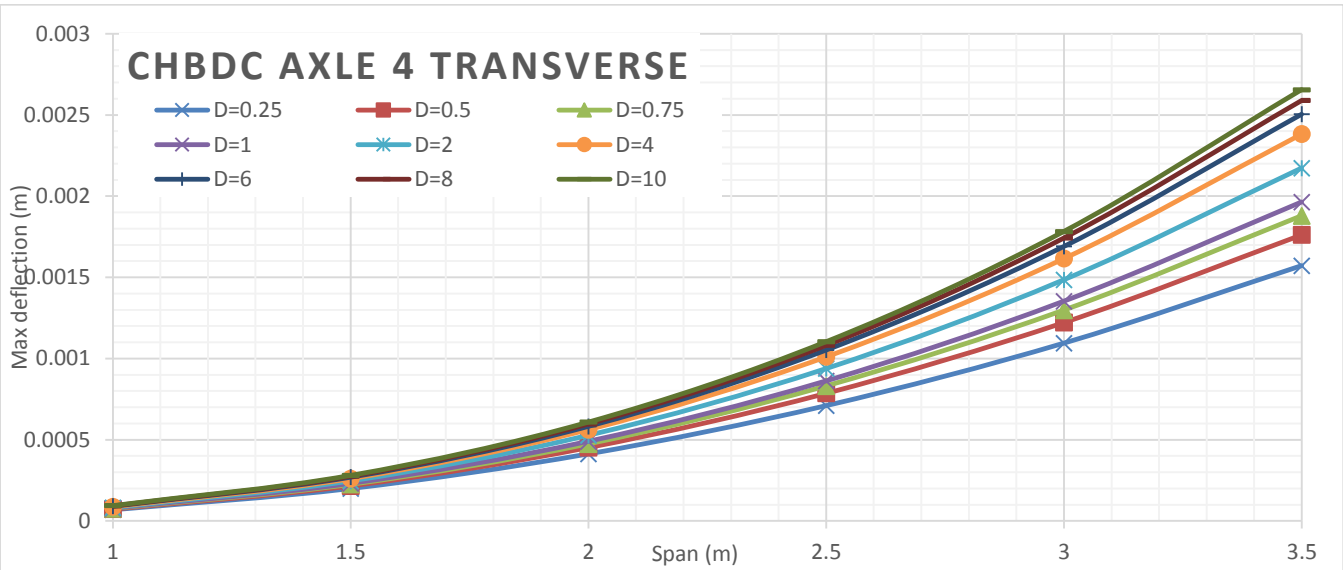


Figure 152 Maximum deflection of deck slabs subjected to CHBDC axle 4 for different D values of alpha 4 FEA analyses

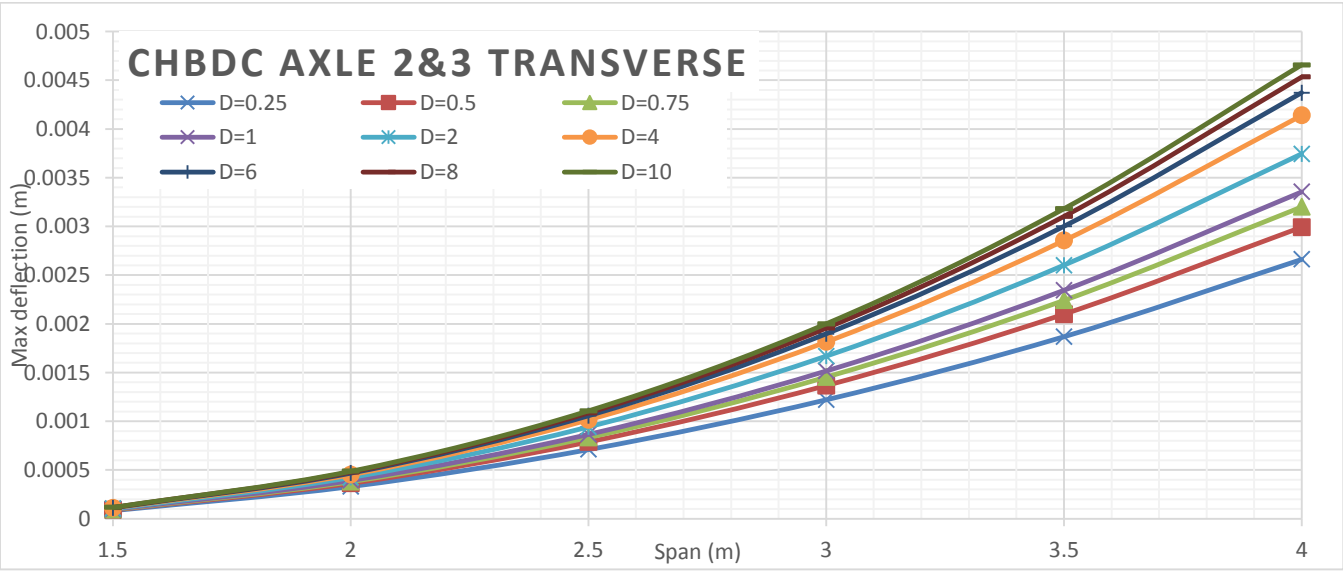


Figure 153 Maximum deflection of deck slabs subjected to CHBDC axle 2 & 3 for different D values of alpha 4 FEA analyses

Alpha 6 Deflection VS Span Length for Different D Values

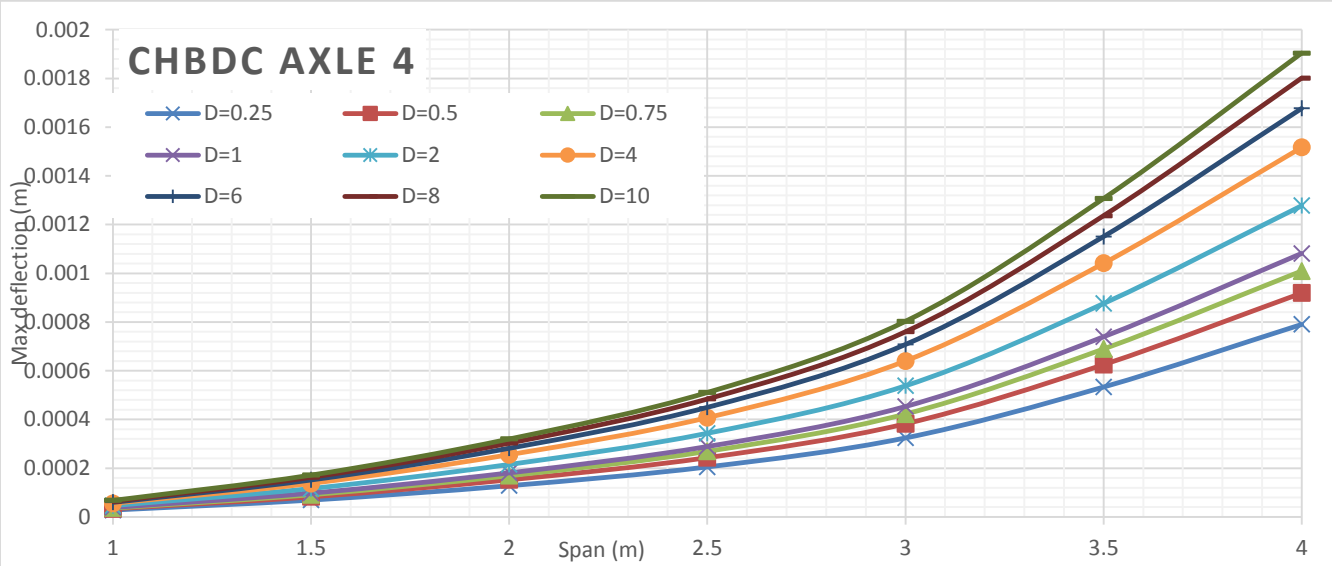


Figure 154 Maximum deflection of deck slabs subjected to CHBDC axle 4 for different D values of alpha 6 FEA analyses

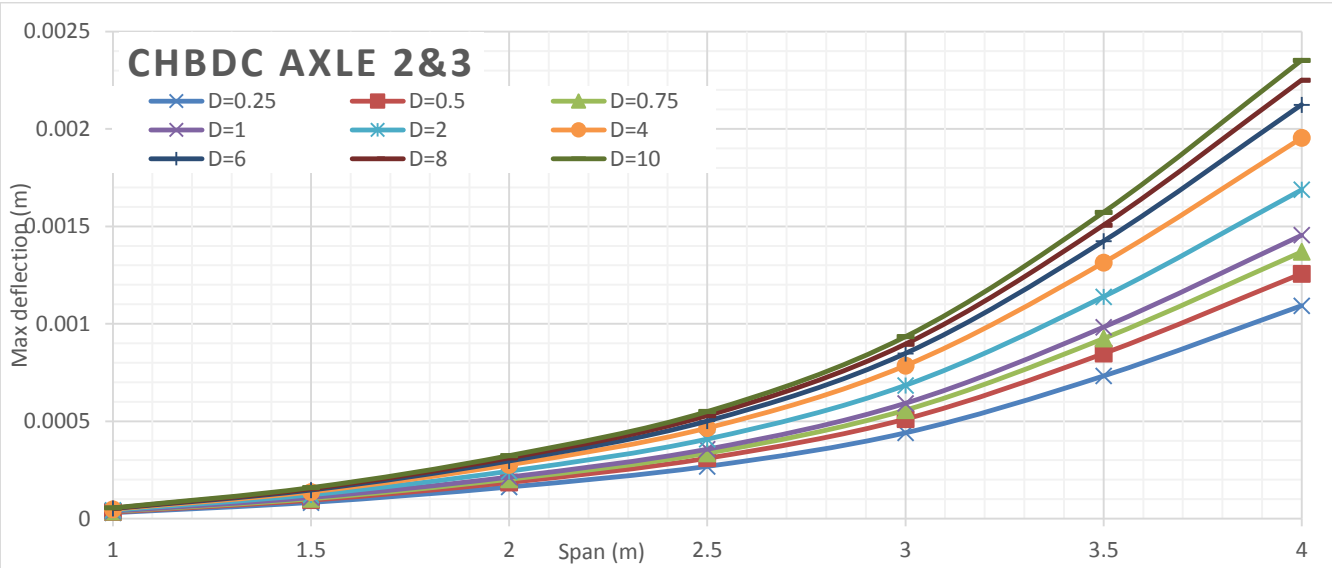


Figure 155 Maximum deflection of deck slabs subjected to CHBDC axle 2 & 3 for different D values of alpha 6 FEA analyses

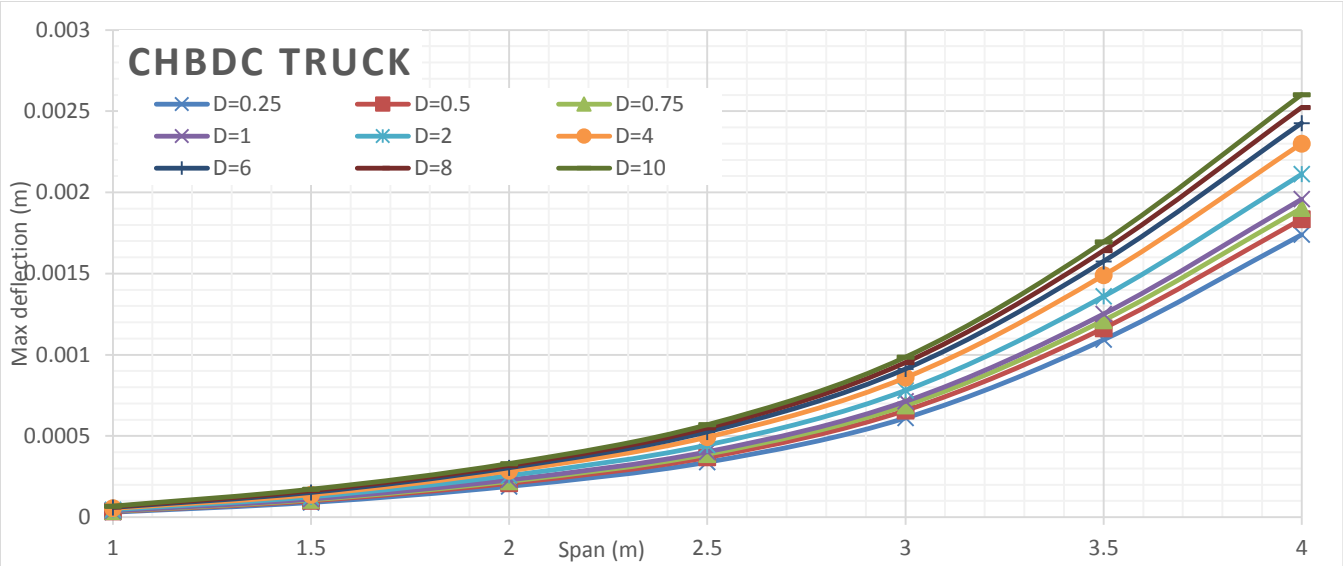


Figure 156 Maximum deflection of deck slabs subjected to CHBDC truck for different D values of alpha 6 FEA analyses

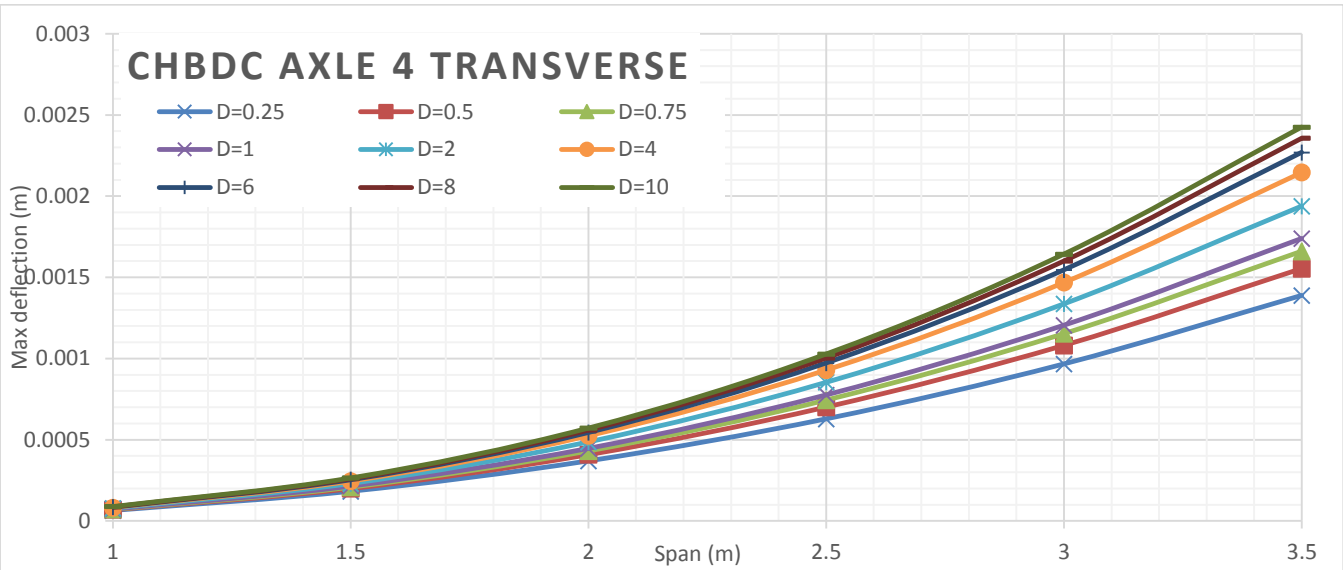


Figure 157 Maximum deflection of deck slabs subjected to CHBDC axle 4 for different D values of alpha 6 FEA analyses

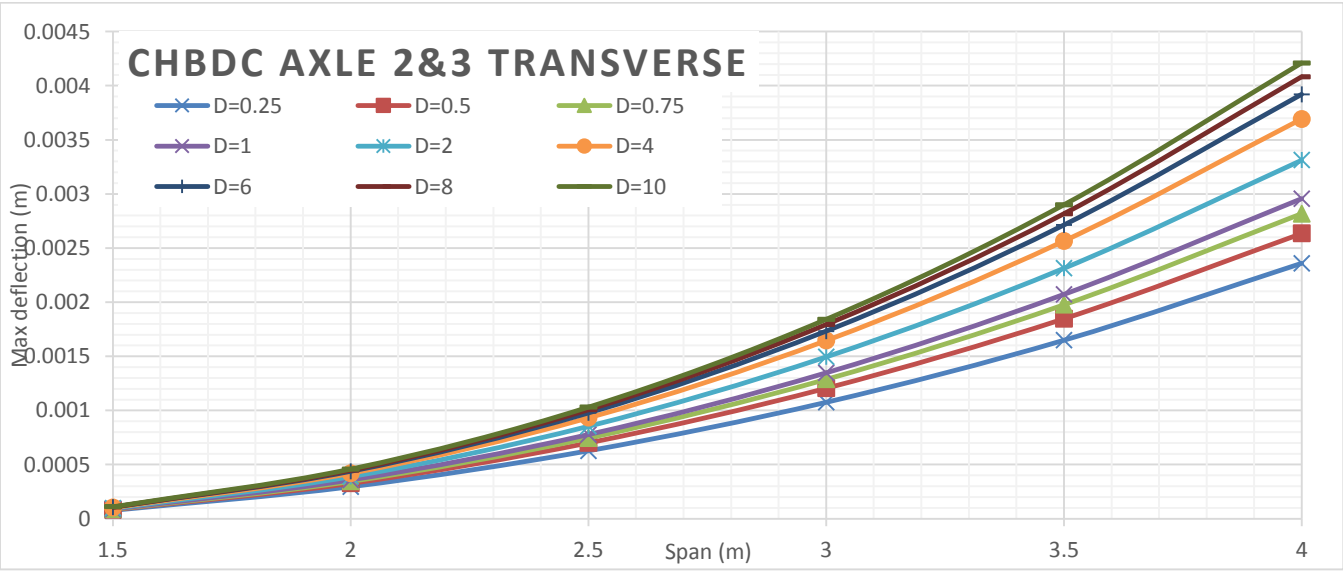


Figure 158 Maximum deflection of deck slabs subjected to CHBDC axle 2 & 3 for different D values of alpha 6 FEA analyses

Alpha 8 Deflection VS Span Length for Different D Values

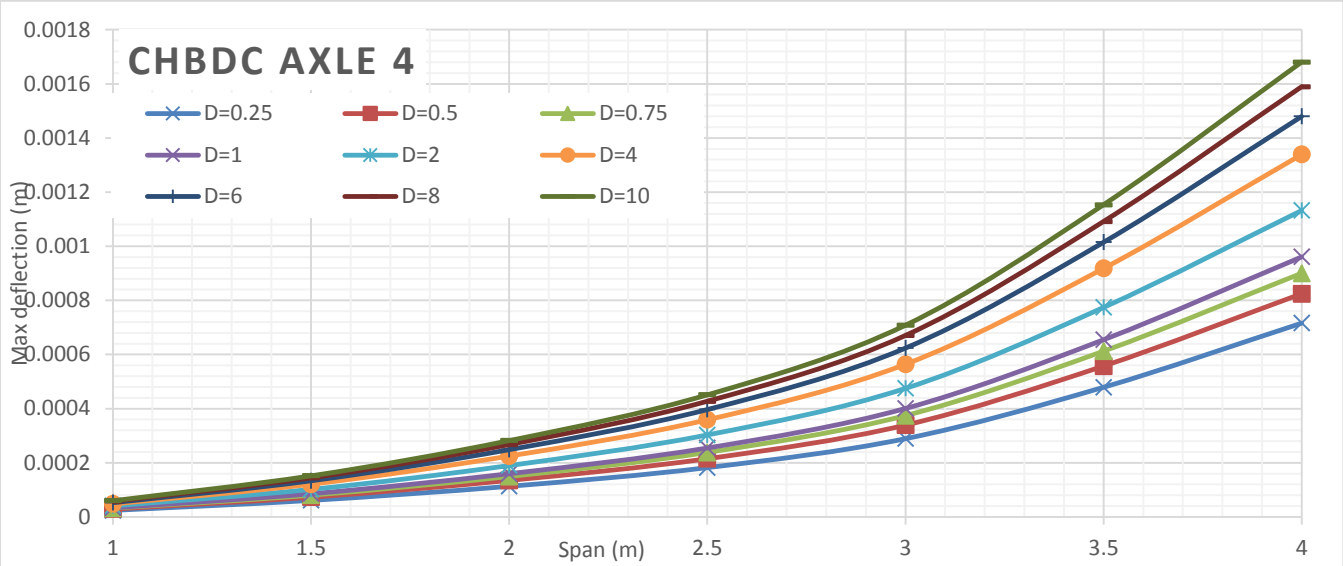


Figure 159 Maximum deflection of deck slabs subjected to CHBDC axle 4 for different D values of alpha 8 FEA analyses

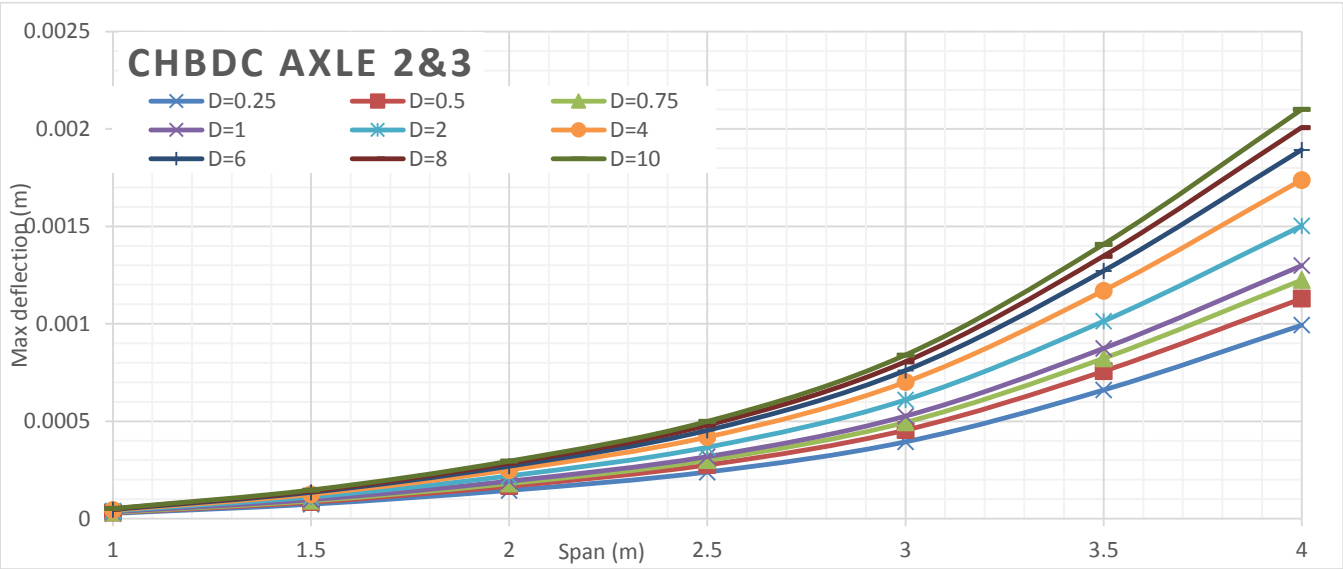


Figure 160 Maximum deflection of deck slabs subjected to CHBDC axle 2 & 3 for different D values of alpha 8 FEA analyses

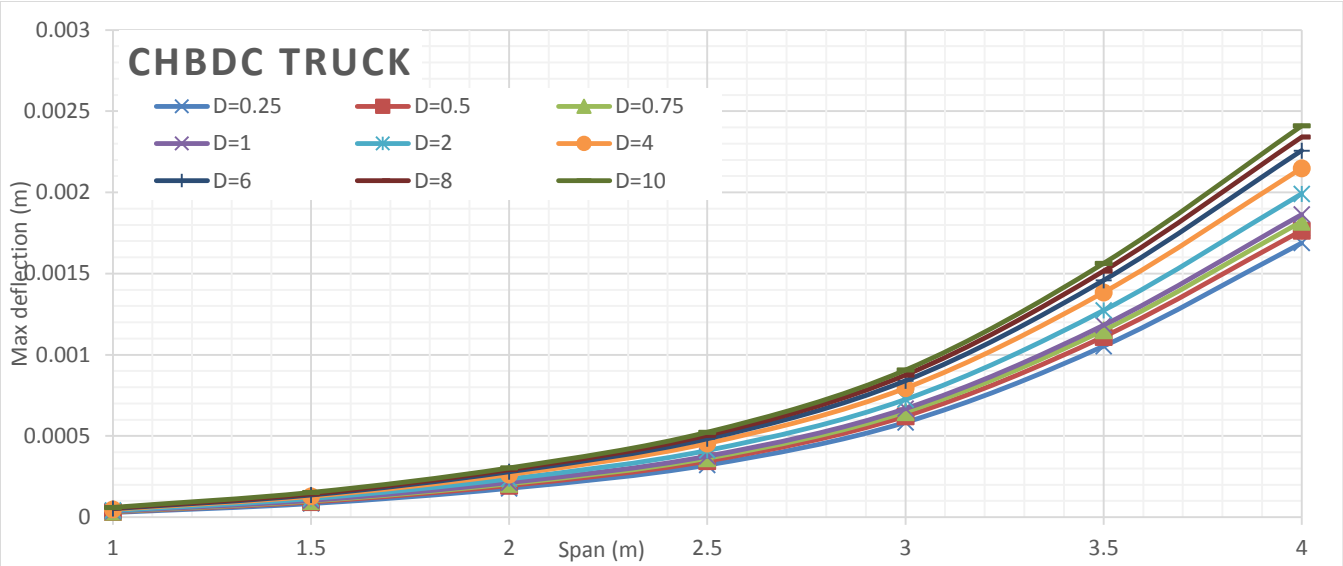


Figure 161 Maximum deflection of deck slabs subjected to CHBDC truck for different D values of alpha 8 FEA analyses

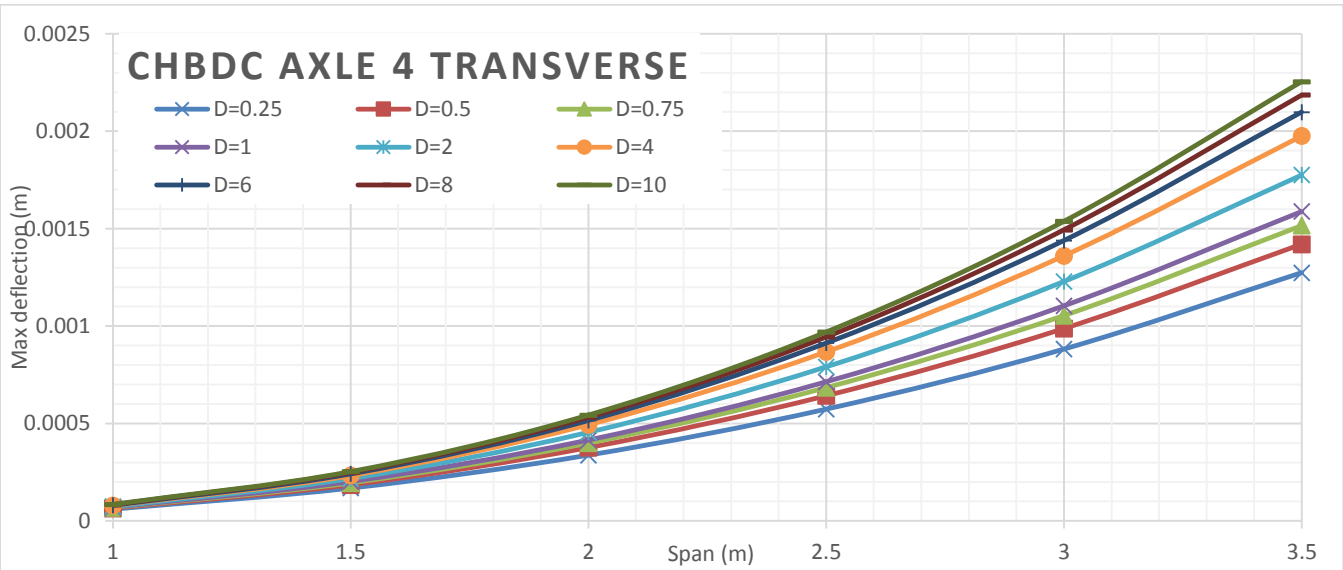


Figure 162 Maximum deflection of deck slabs subjected to CHBDC axle 4 for different D values of alpha 8 FEA analyses

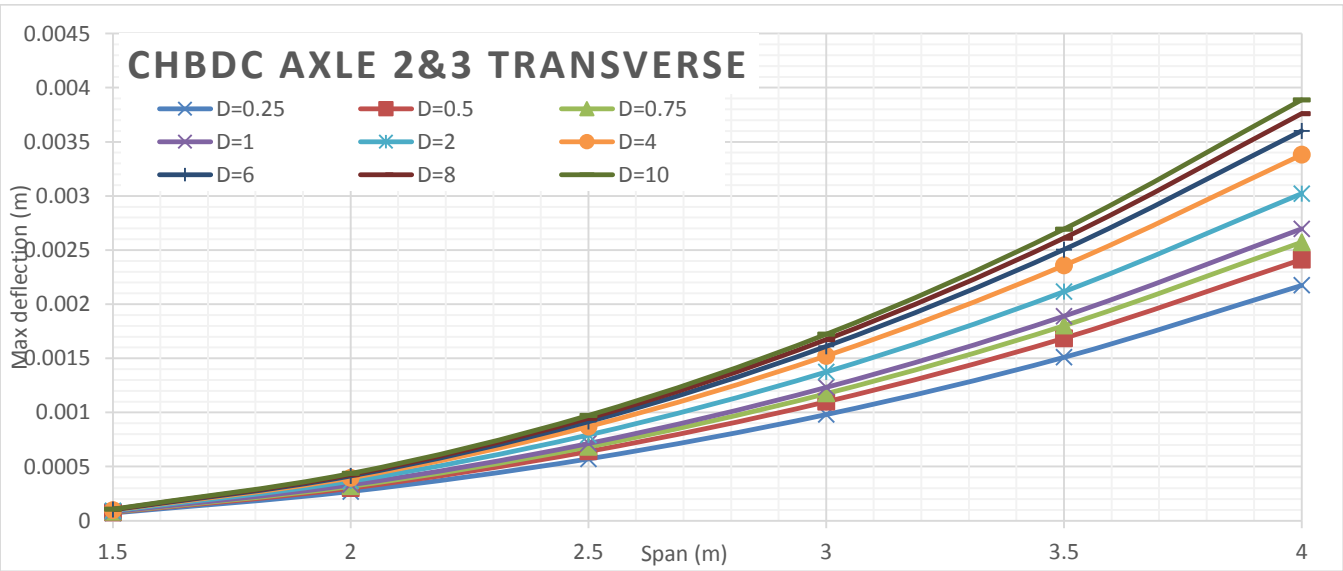


Figure 163 Maximum deflection of deck slabs subjected to CHBDC axle 2 & 3 for different D values of alpha 8 FEA analyses

Alpha 10 Deflection VS Span Length for Different D Values

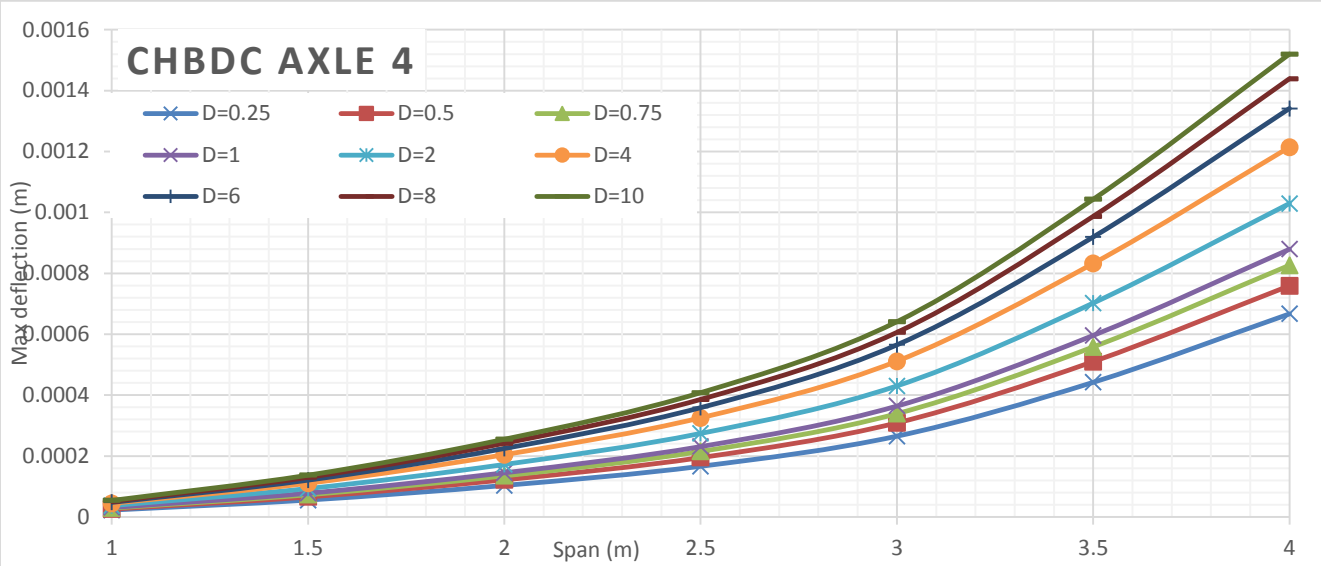


Figure 164 Maximum deflection of deck slabs subjected to CHBDC axle 4 for different D values of alpha 10 FEA analyses

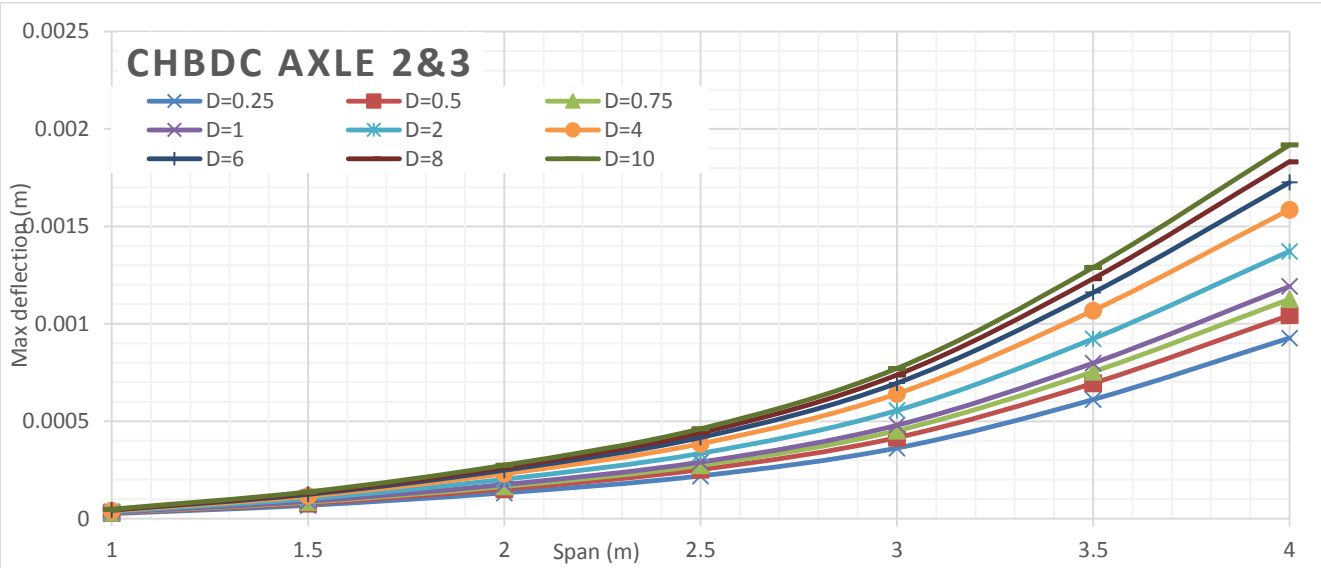


Figure 165 Maximum deflection of deck slabs subjected to CHBDC axle 2 & 3 for different D values of alpha 10 FEA analyses

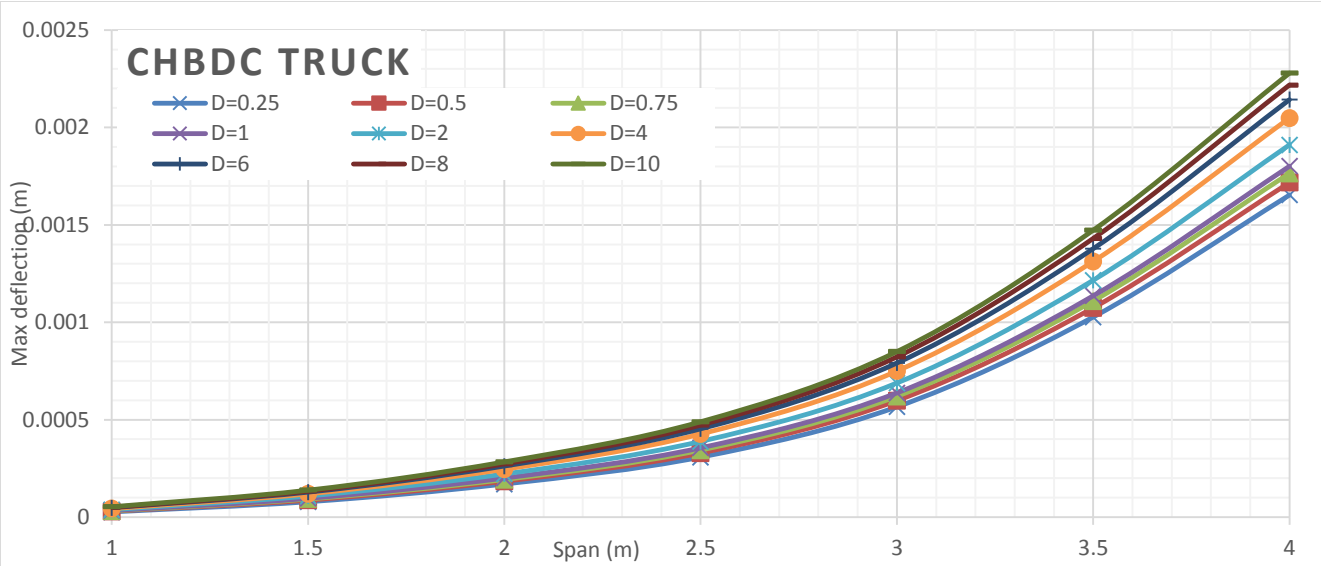


Figure 166 Maximum deflection of deck slabs subjected to CHBDC truck for different D values of alpha 10 FEA analyses

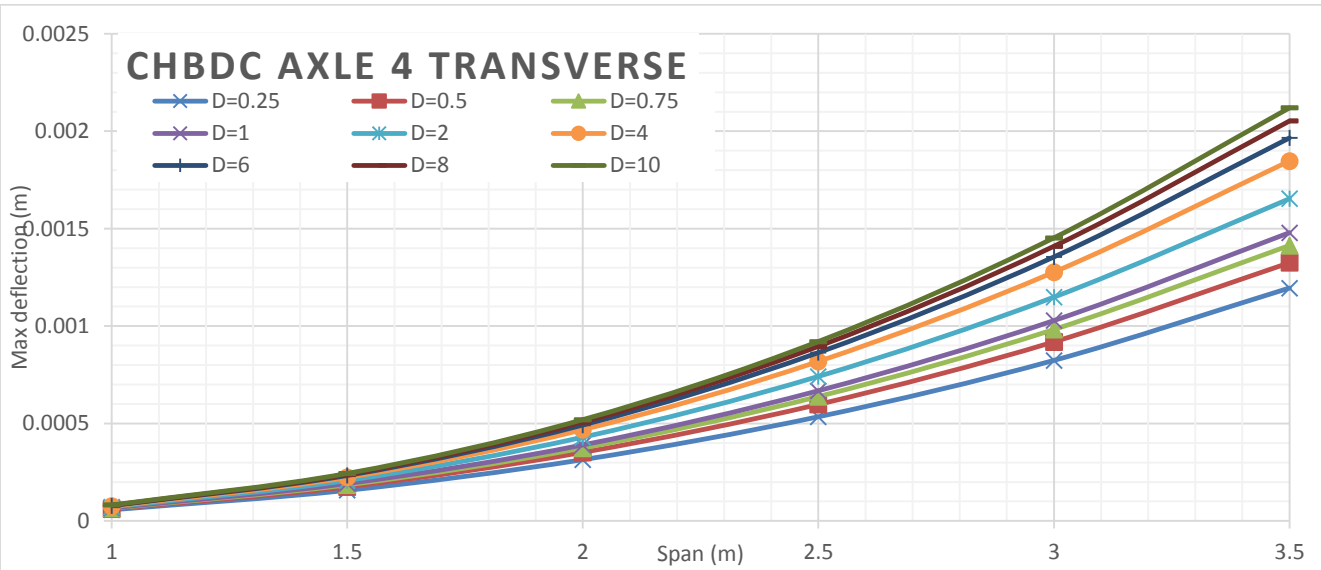


Figure 167 Maximum deflection of deck slabs subjected to CHBDC axle 4 for different D values of alpha 10 FEA analyses

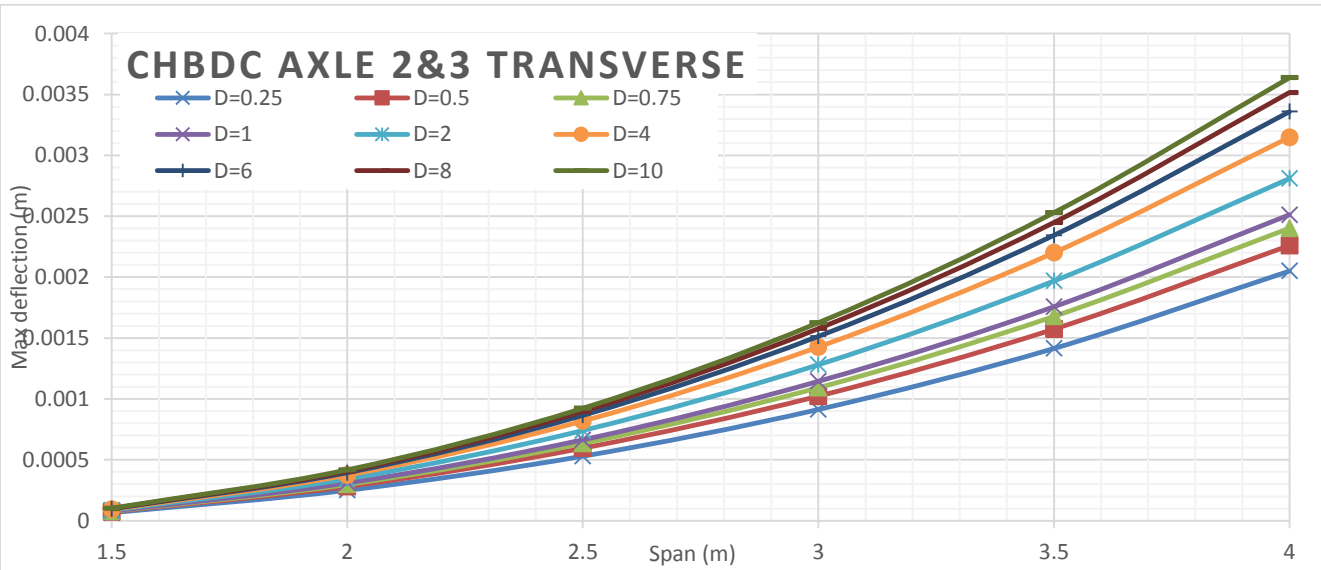


Figure 168 Maximum deflection of deck slabs subjected to CHBDC axle 2 & 3 for different D values of alpha 10 FEA analyses

B.2.3 DEFLECTION VS FLEXURAL RIGIDITY

Alpha 0.25 Deflection VS Flexural Rigidity for Different Span Length

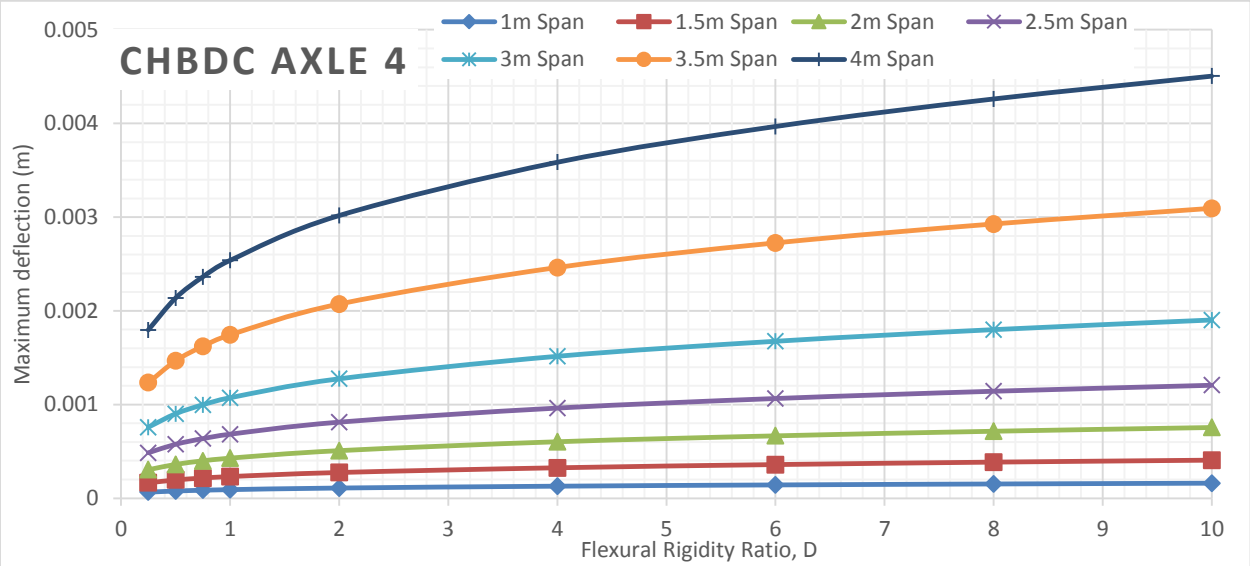


Figure 169 Maximum deflection of deck slabs subjected to CHBDC axle 4 for different span values of alpha 0.25 FEA analyses

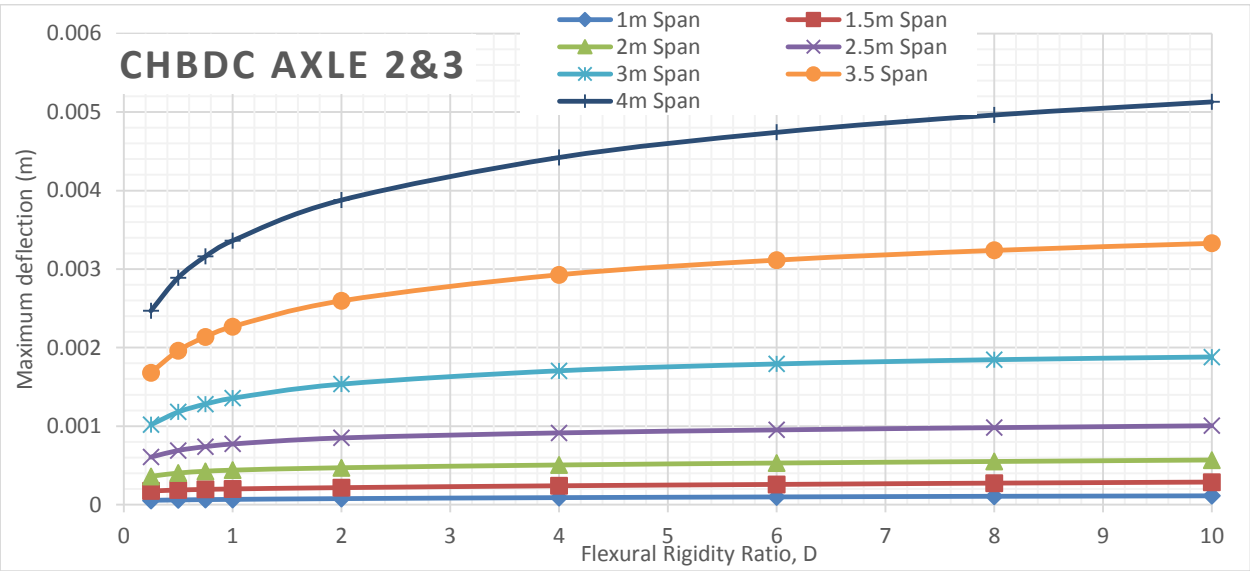


Figure 170 Maximum deflection of deck slabs subjected to CHBDC axle 2 & 3 for different span values of alpha 0.25 FEA analyses

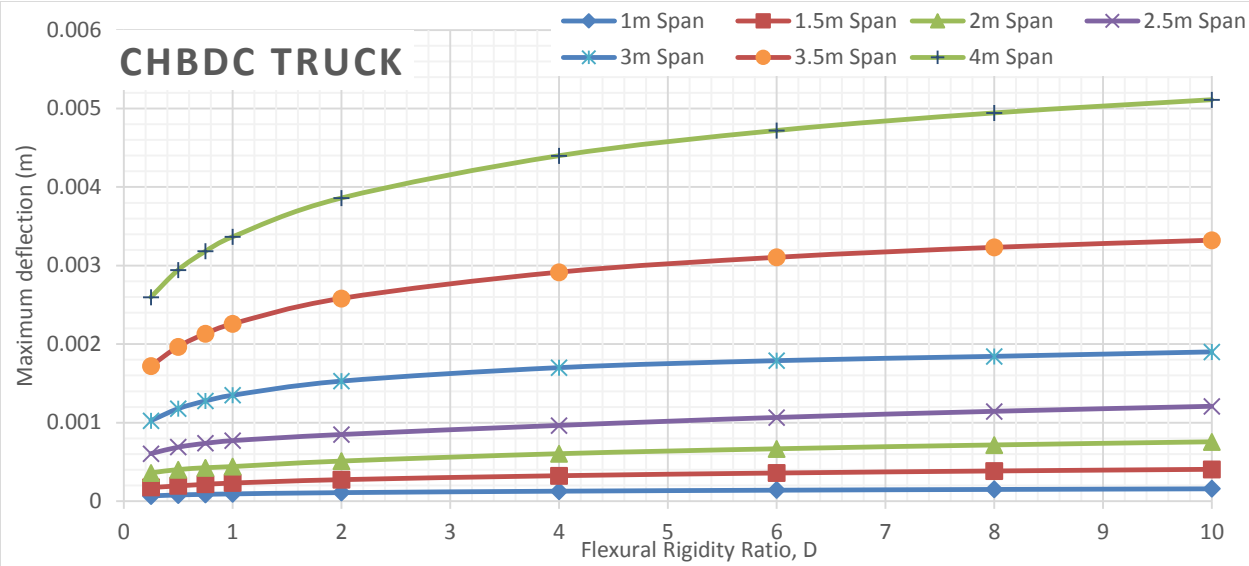


Figure 171 Maximum deflection of deck slabs subjected to CHBDC truck for different span values of alpha 0.25 FEA analyses

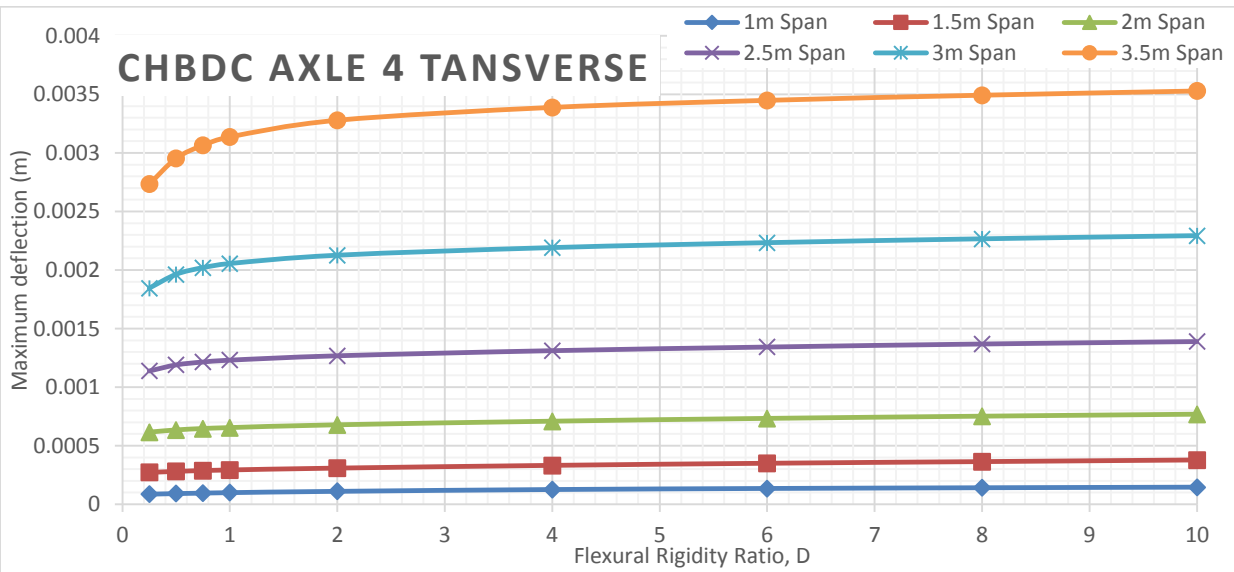


Figure 172 Maximum deflection of deck slabs subjected to CHBDC axle 4 for different span values of alpha 0.25 FEA analyses

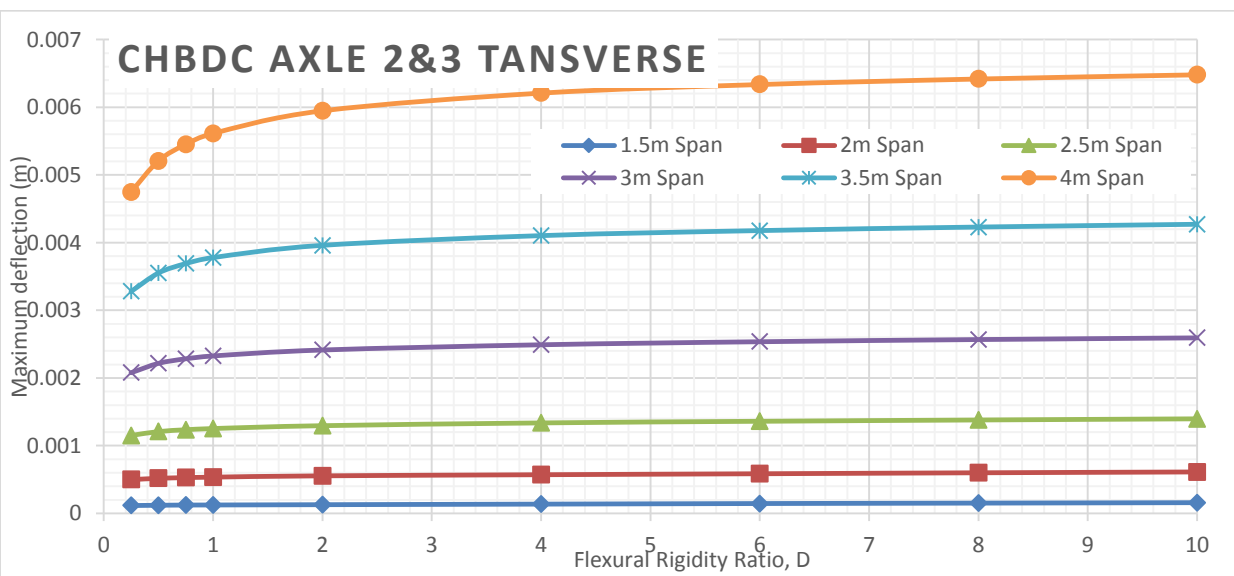


Figure 173 Maximum deflection of deck slabs subjected to CHBDC axle 2 & 3 for different span values of alpha 0.25 FEA analyses

Alpha 0.5 Deflection VS Flexural Rigidity for Different Span Length

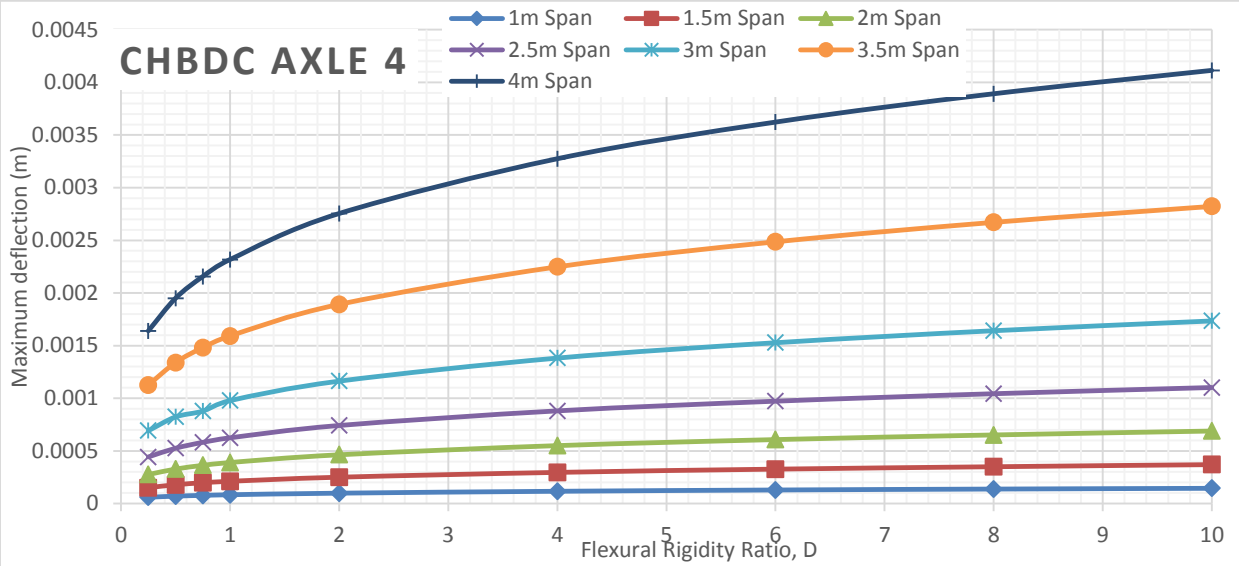


Figure 174 Maximum deflection of deck slabs subjected to CHBDC axle 4 for different span values of alpha 0.5 FEA analyses

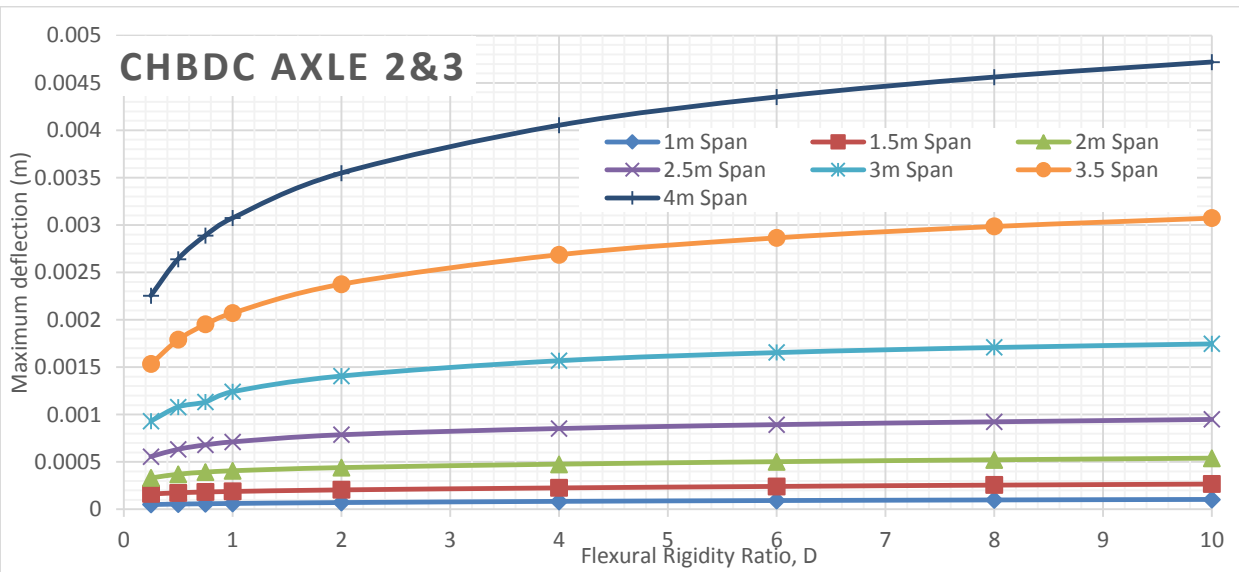


Figure 175 Maximum deflection of deck slabs subjected to CHBDC axle 2 & 3 for different span values of alpha 0.5 FEA analyses

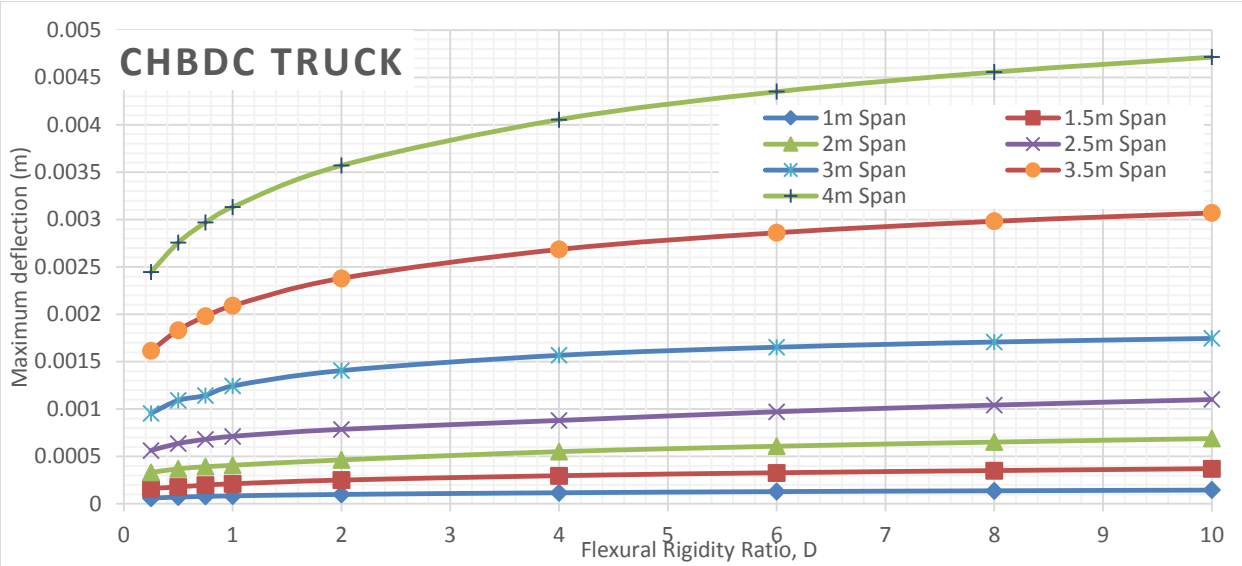


Figure 176 Maximum deflection of deck slabs subjected to CHBDC truck for different span values of alpha 0.5 FEA analyses

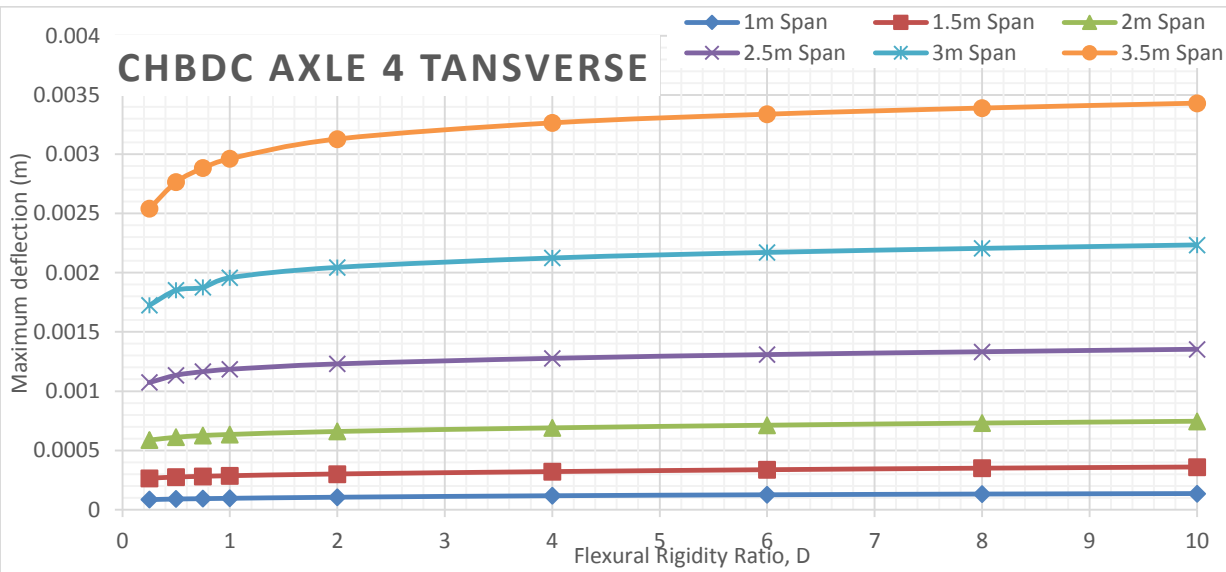


Figure 177 Maximum deflection of deck slabs subjected to CHBDC axle 4 for different span values of alpha 0.5 FEA analyses

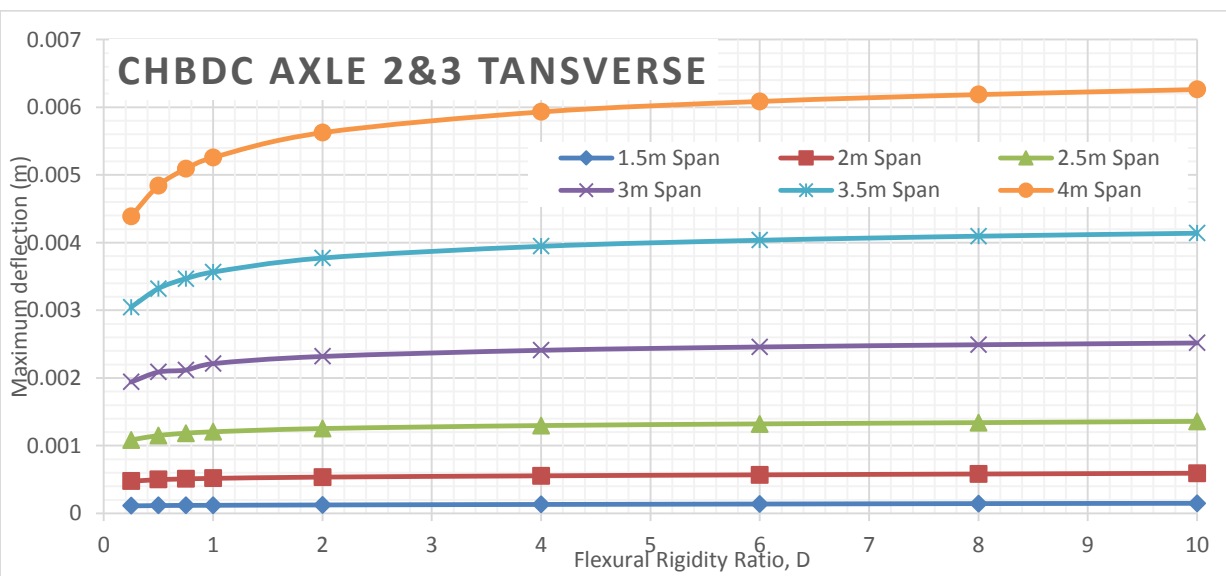


Figure 178 Maximum deflection of deck slabs subjected to CHBDC axle 2 & 3 for different span values of alpha 0.5 FEA analyses

Alpha 0.75 Deflection VS Flexural Rigidity for Different Span Length

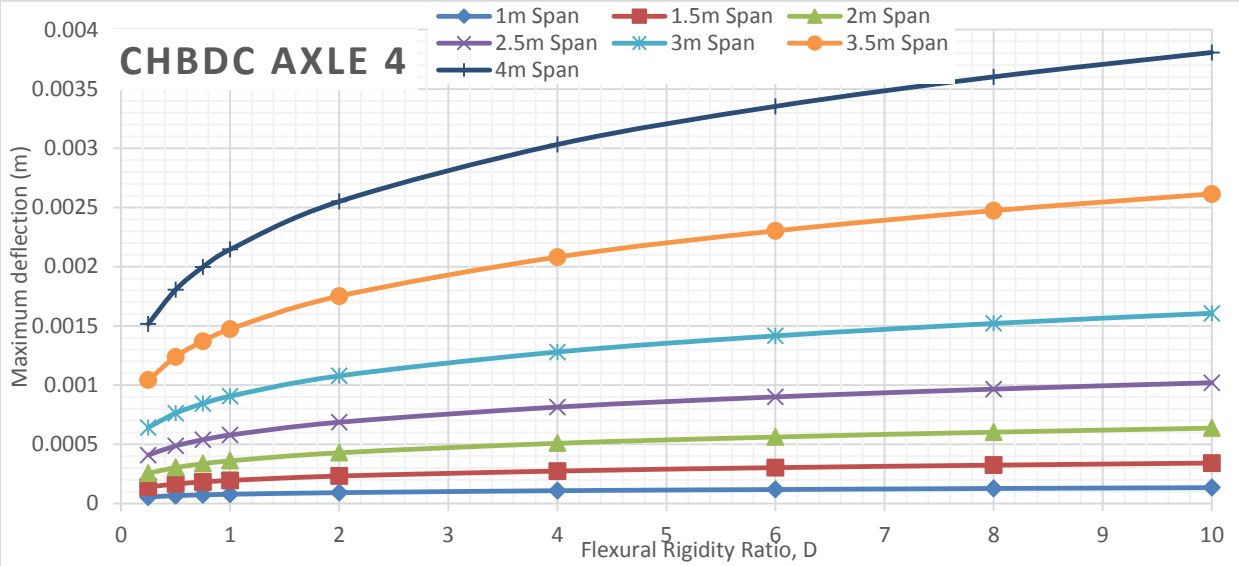


Figure 179 Maximum deflection of deck slabs subjected to CHBDC axle 4 for different span values of alpha 0.75 FEA analyses

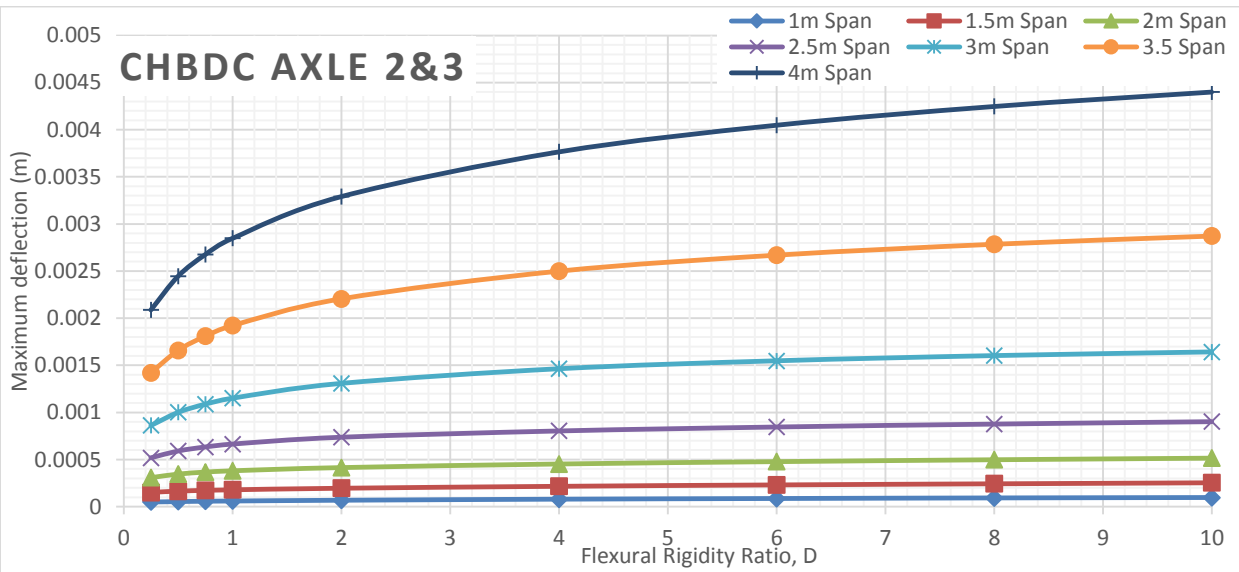


Figure 180 Maximum deflection of deck slabs subjected to CHBDC axle 2 & 3 for different span values of alpha 0.75 FEA analyses

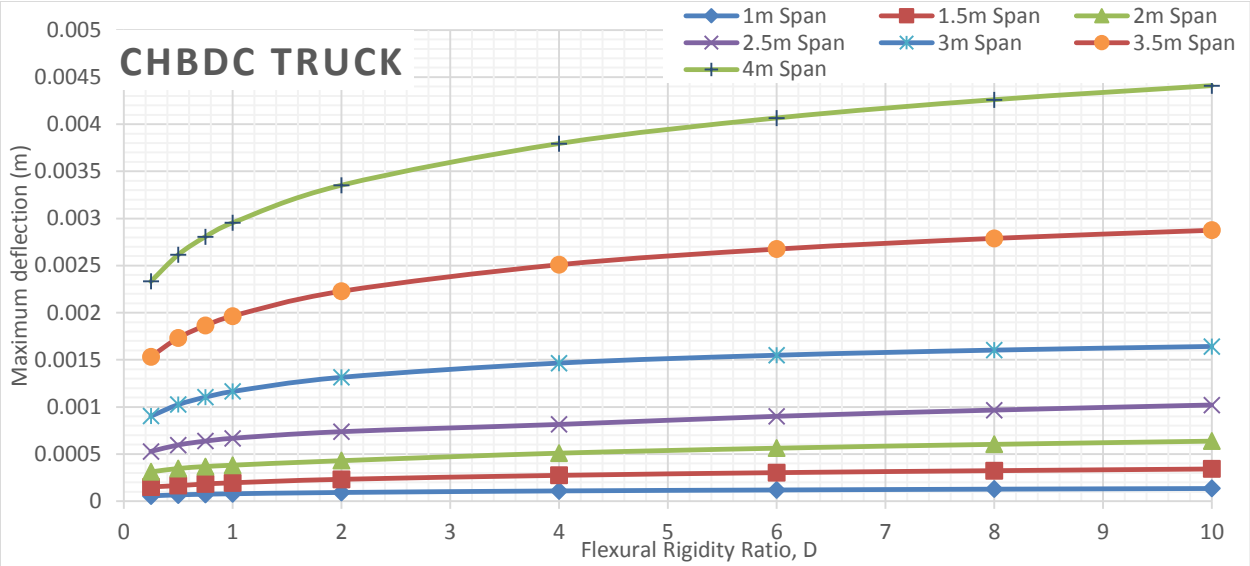


Figure 181 Maximum deflection of deck slabs subjected to CHBDC truck for different span values of alpha 0.75 FEA analyses

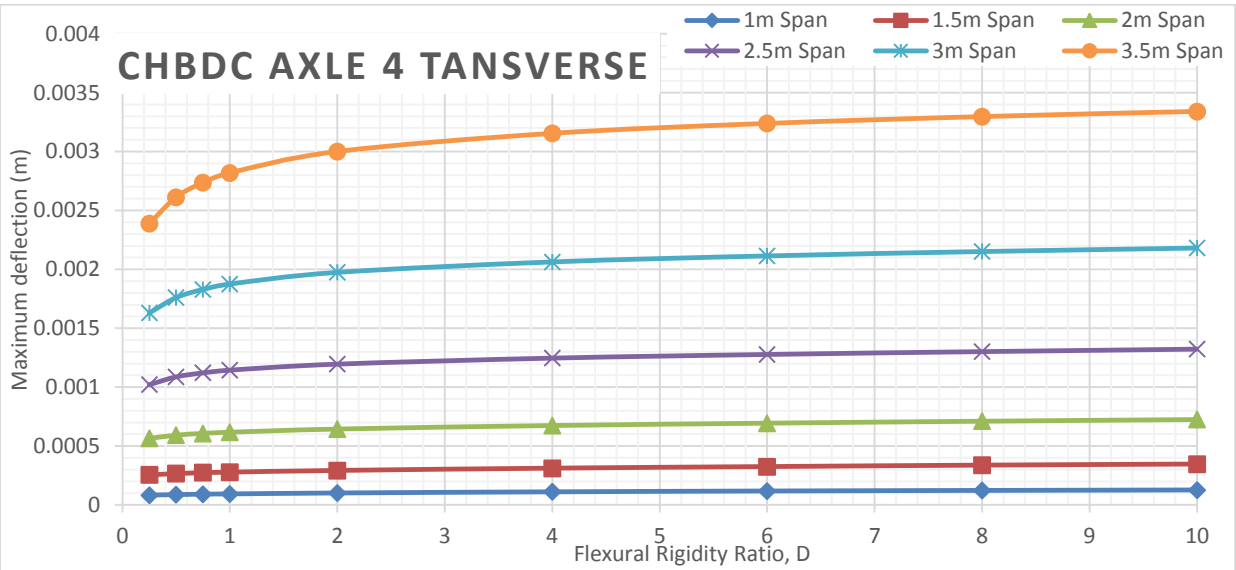


Figure 182 Maximum deflection of deck slabs subjected to CHBDC axle 4 for different span values of alpha 0.75 FEA analyses

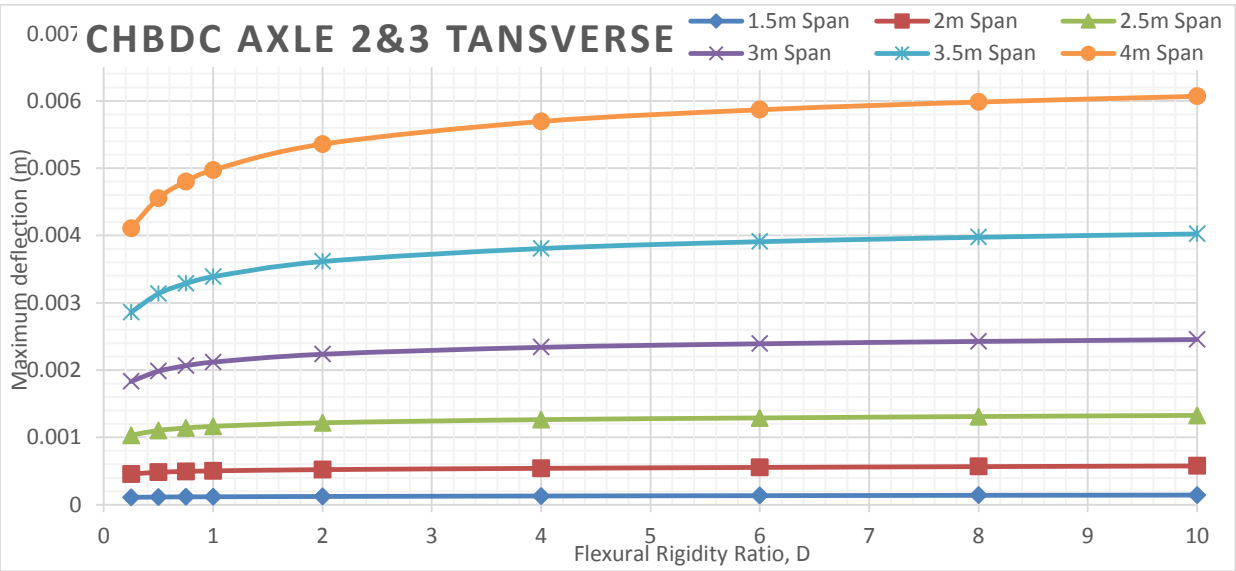


Figure 183 Maximum deflection of deck slabs subjected to CHBDC axle 2 & 3 for different span values of alpha 0.75 FEA analyses

Alpha 1 Deflection VS Flexural Rigidity for Different Span Length

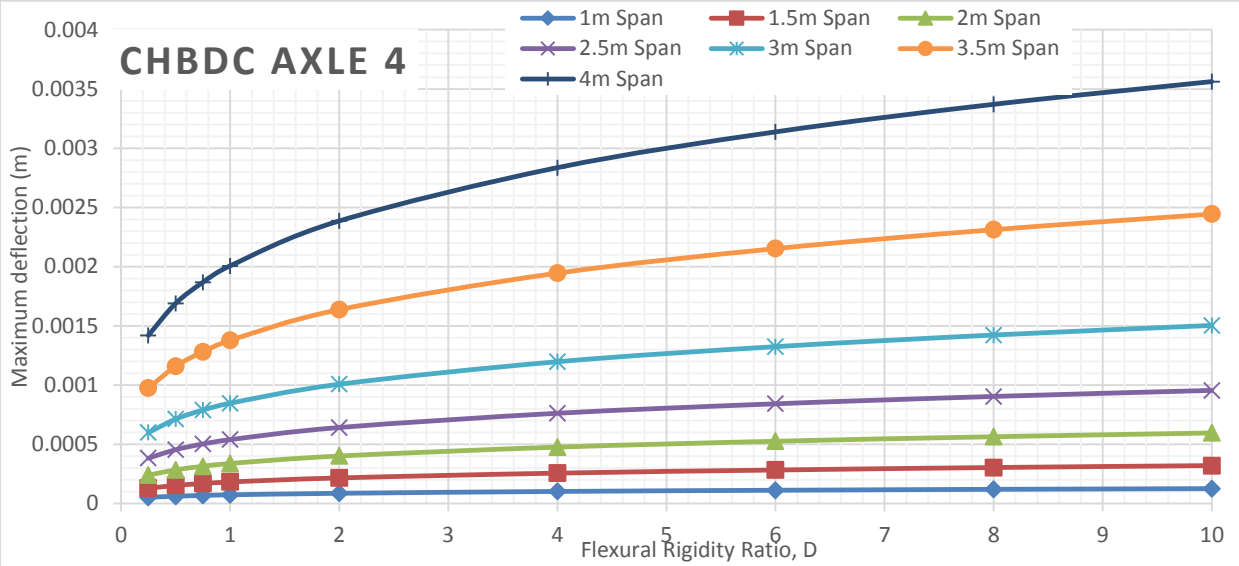


Figure 184 Maximum deflection of deck slabs subjected to CHBDC axle 4 for different span values of alpha 1 FEA analyses

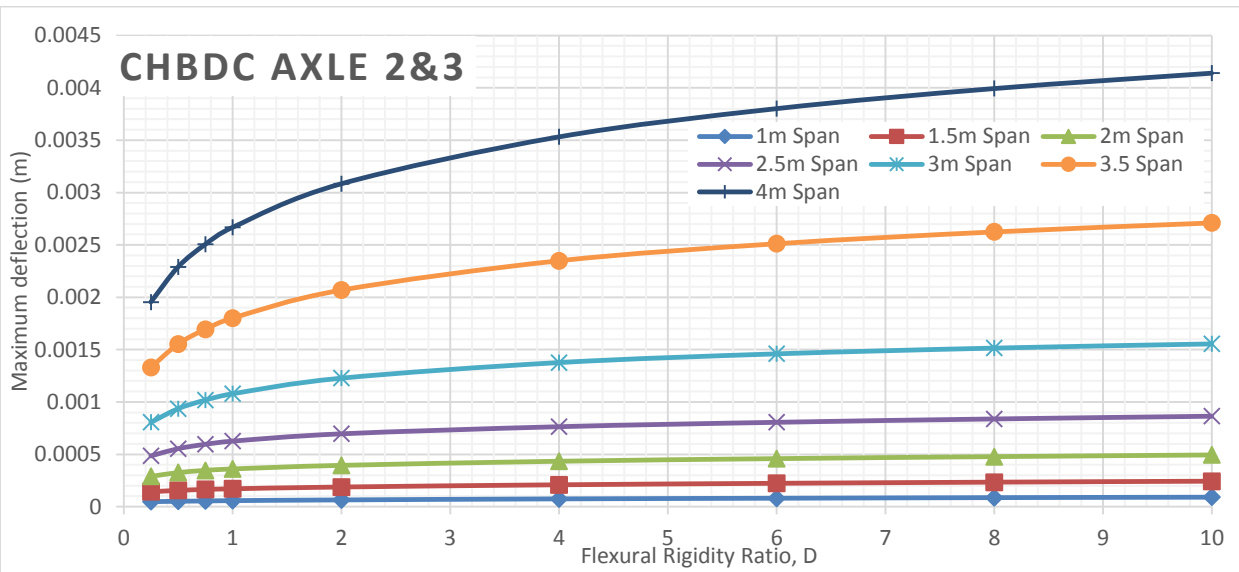


Figure 185 Maximum deflection of deck slabs subjected to CHBDC axle 2 & 3 for different span values of alpha 1 FEA analyses

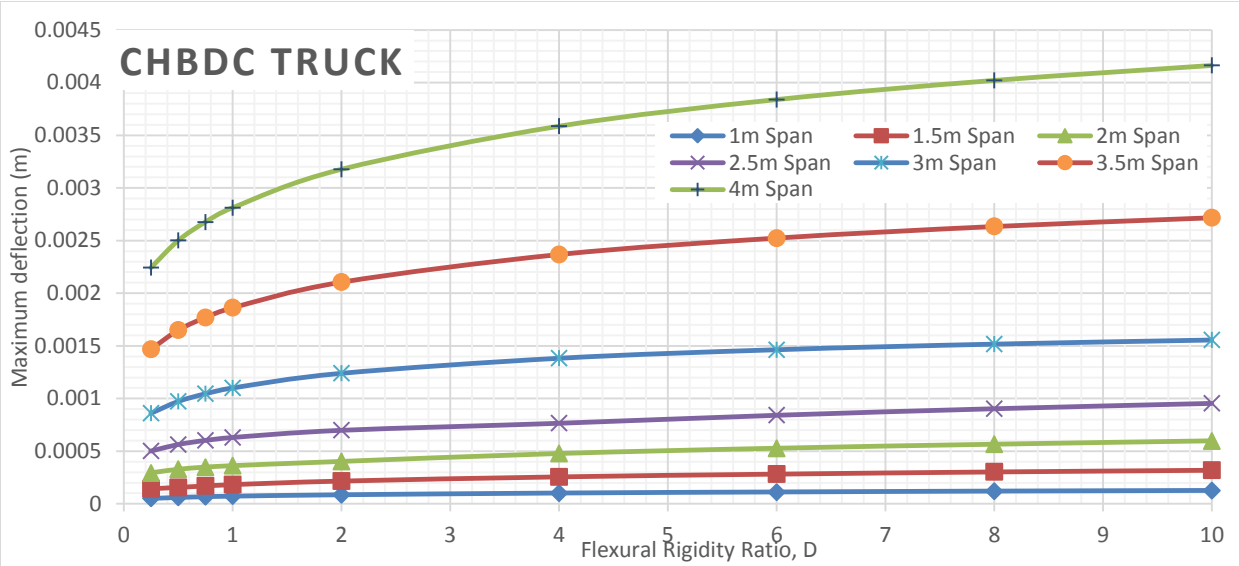


Figure 186 Maximum deflection of deck slabs subjected to CHBDC truck for different span values of alpha 1 FEA analyses

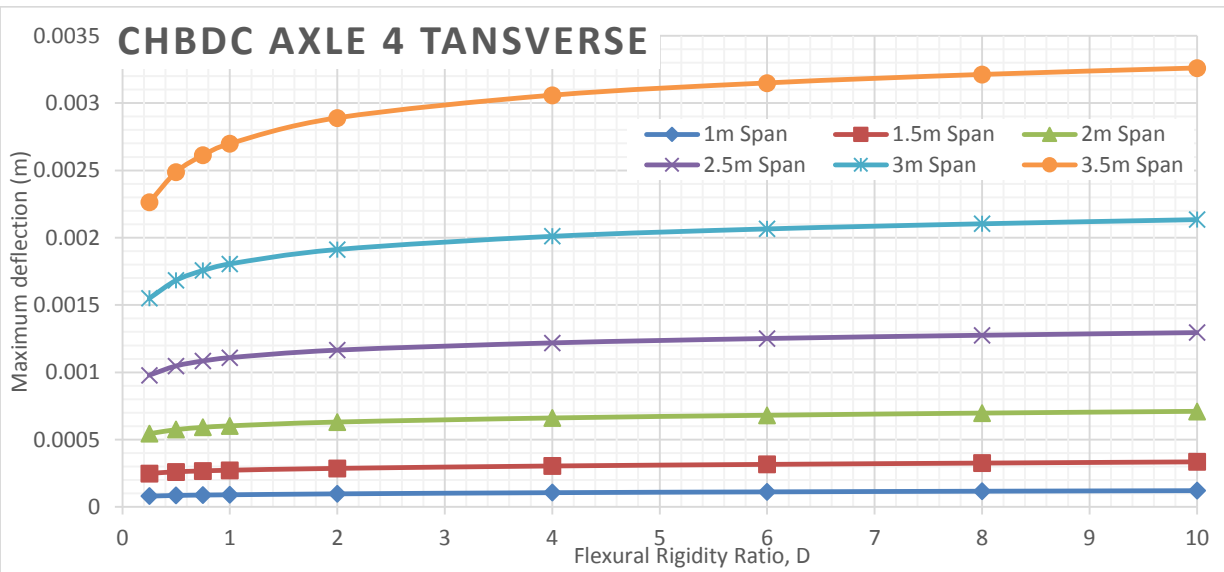


Figure 187 Maximum deflection of deck slabs subjected to CHBDC axle 4 for different span values of alpha 1 FEA analyses

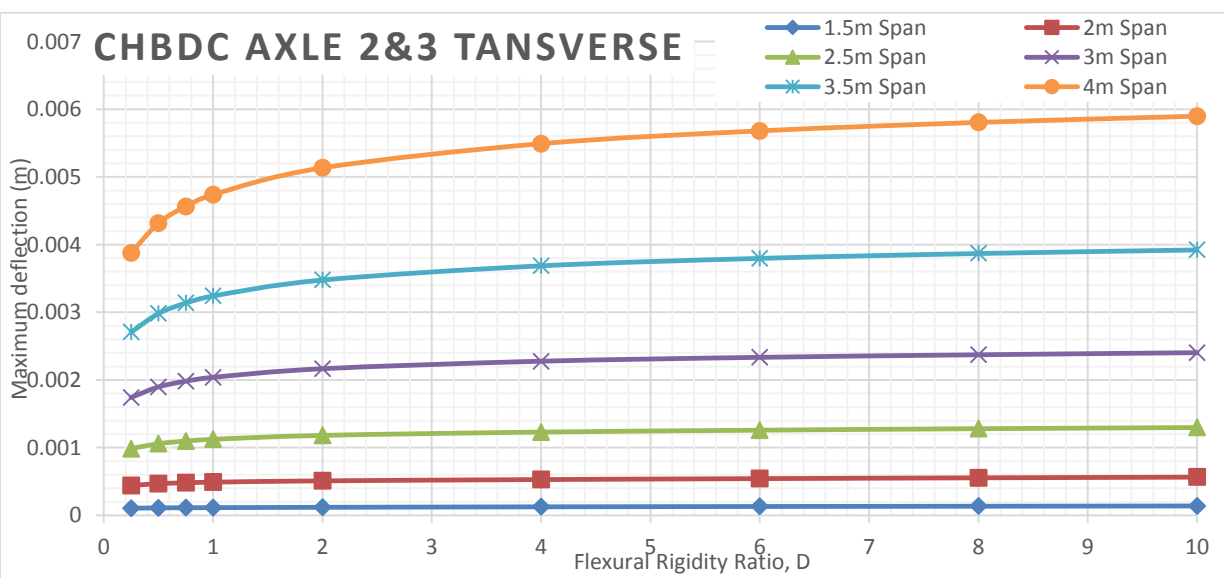


Figure 188 Maximum deflection of deck slabs subjected to CHBDC axle 2 & 3 for different span values of alpha 1 FEA analyses

Alpha 2 Deflection VS Flexural Rigidity for Different Span Length

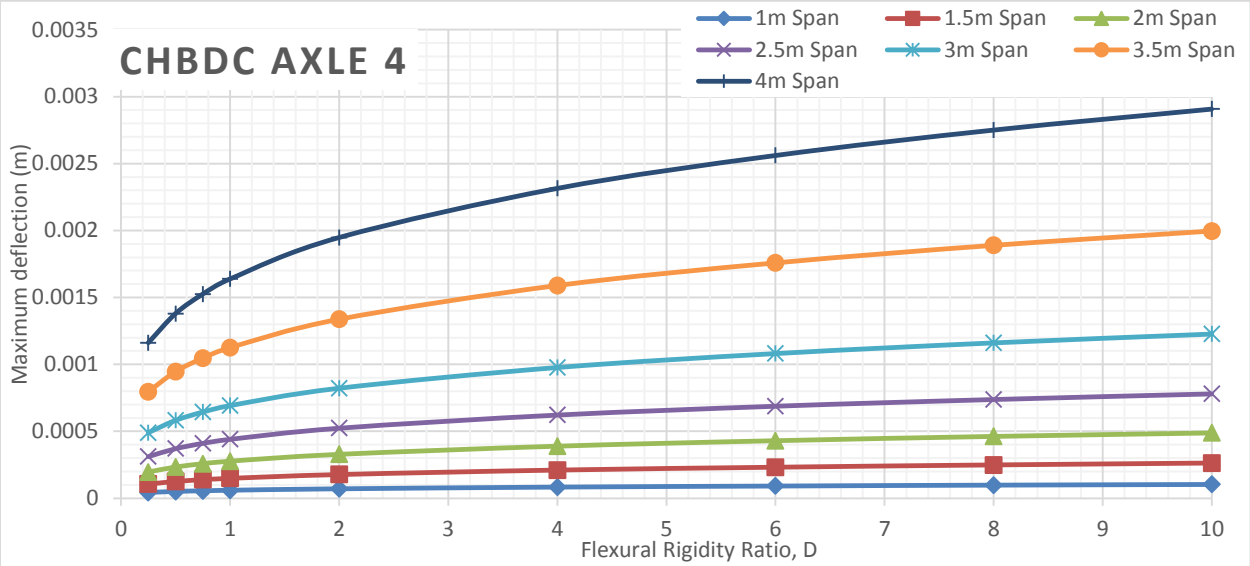


Figure 189 Maximum deflection of deck slabs subjected to CHBDC axle 4 for different span values of alpha 2 FEA analyses

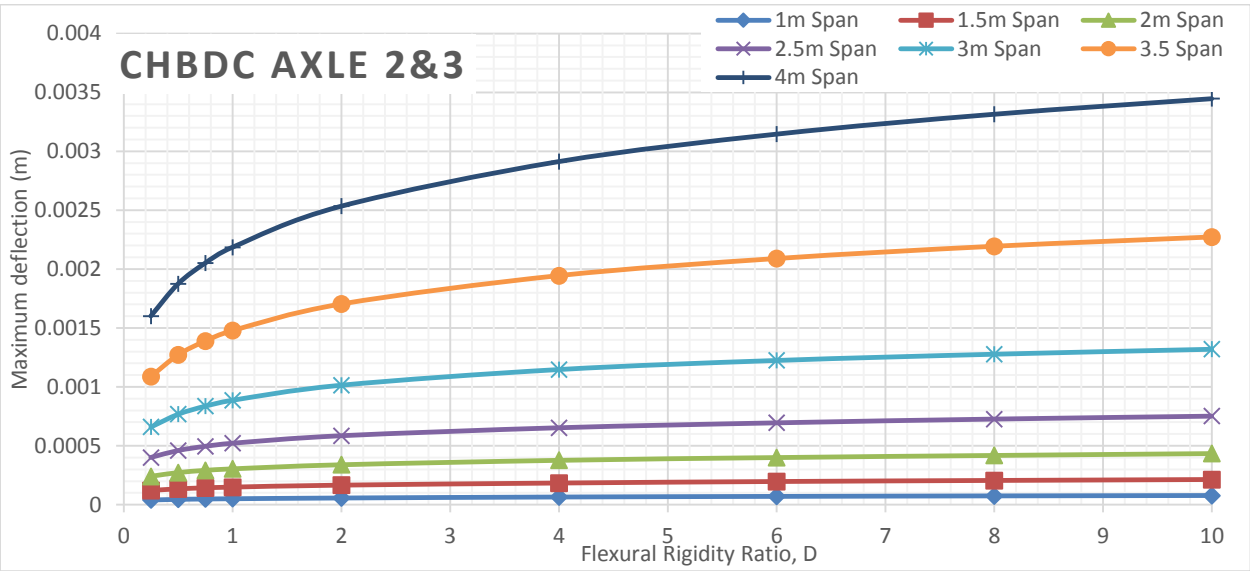


Figure 190 Maximum deflection of deck slabs subjected to CHBDC axle 2 & 3 for different span values of alpha 2 FEA analyses

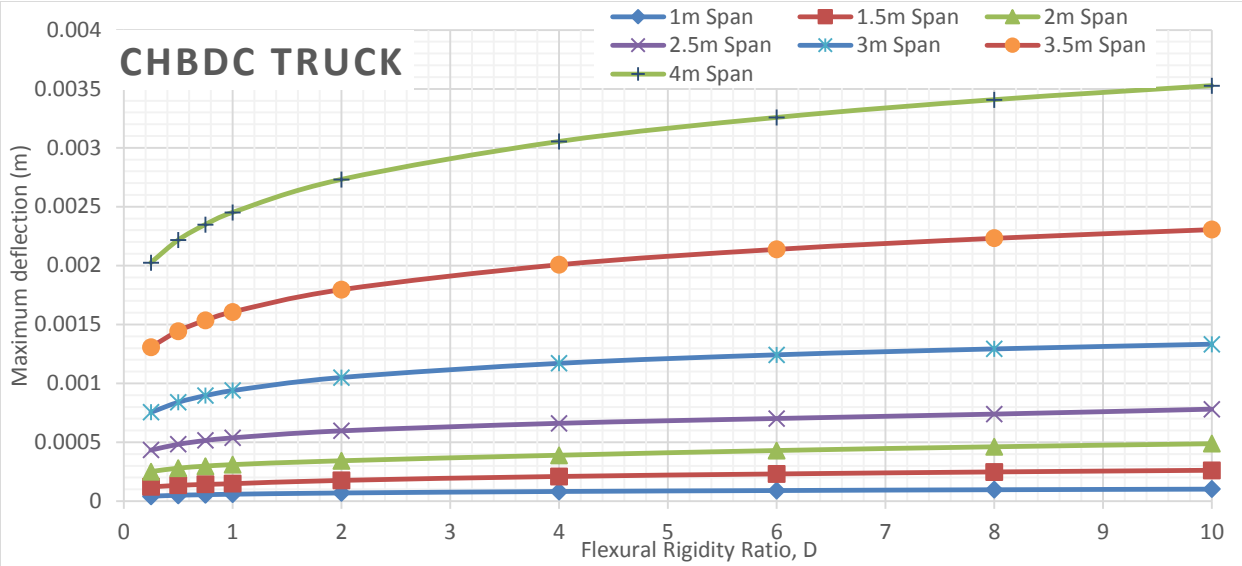


Figure 191 Maximum deflection of deck slabs subjected to CHBDC truck for different span values of alpha 2 FEA analyses

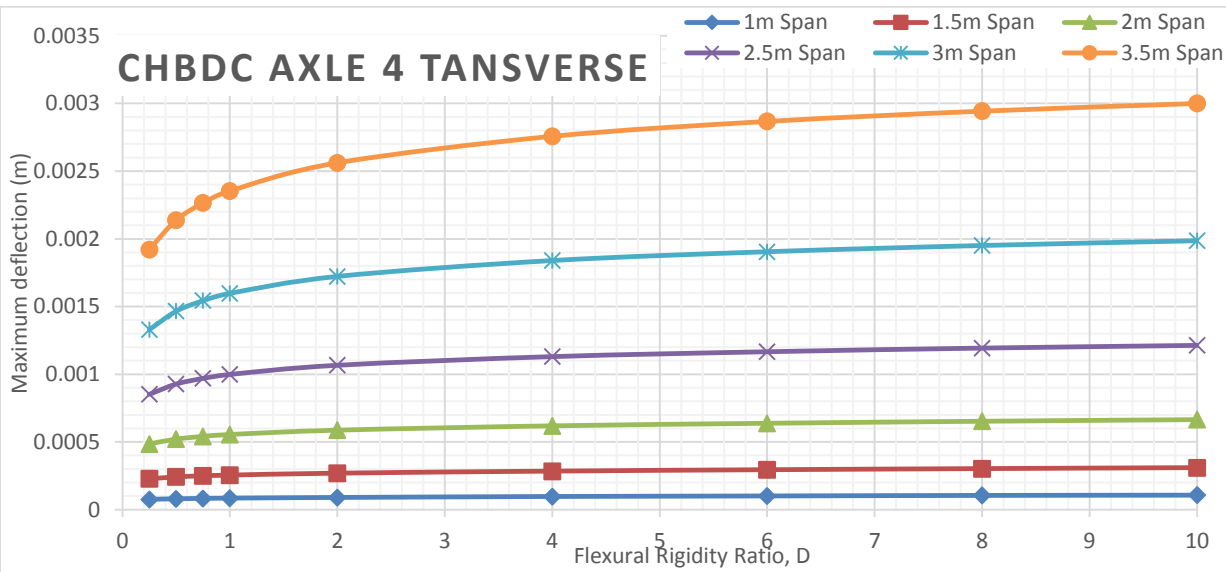


Figure 192 Maximum deflection of deck slabs subjected to CHBDC axle 4 for different span values of alpha 2 FEA analyses

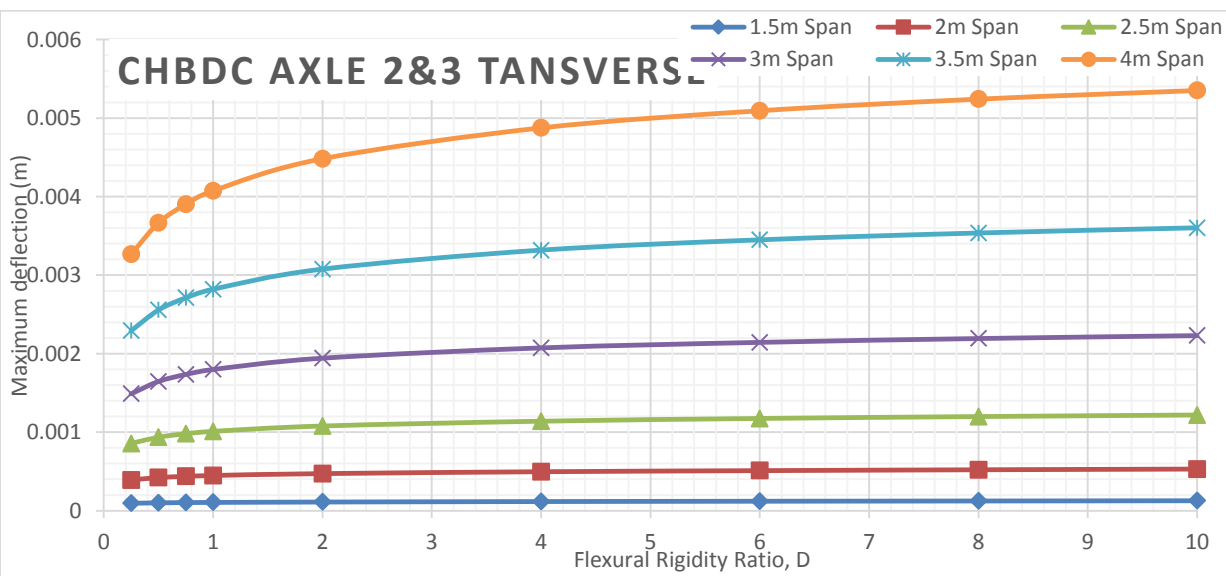


Figure 193 Maximum deflection of deck slabs subjected to CHBDC axle 2 & 3 for different span values of alpha 2 FEA analyses

Alpha 4 Deflection VS Flexural Rigidity for Different Span Length

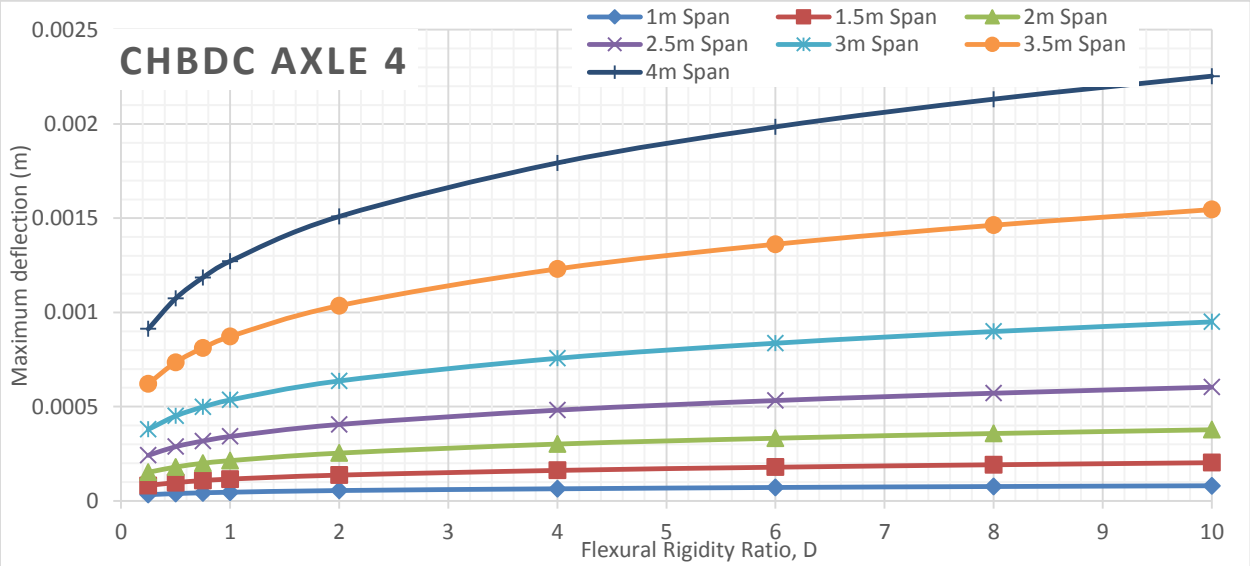


Figure 194 Maximum deflection of deck slabs subjected to CHBDC axle 4 for different span values of alpha 4 FEA analyses

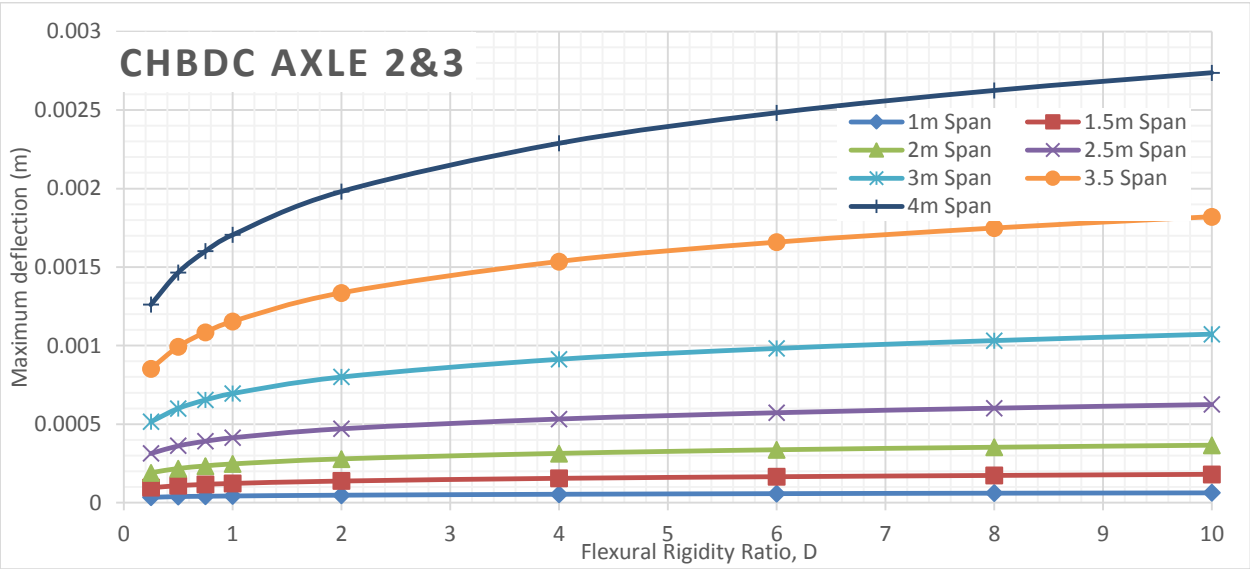


Figure 195 Maximum deflection of deck slabs subjected to CHBDC axle 2 & 3 for different span values of alpha 4 FEA analyses

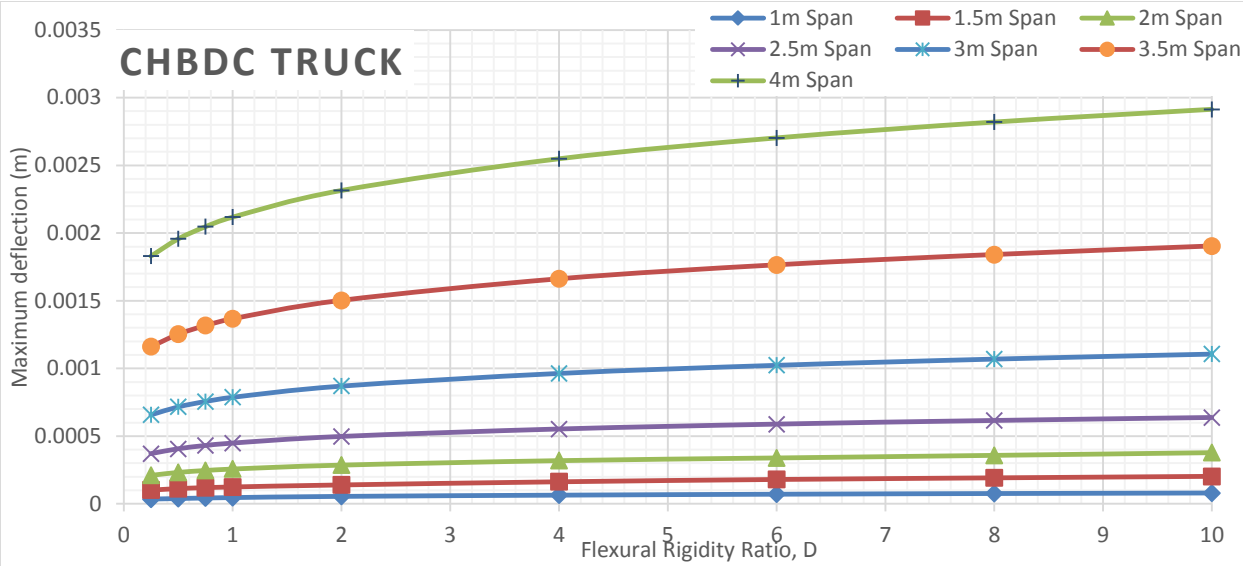


Figure 196 Maximum deflection of deck slabs subjected to CHBDC truck for different span values of alpha 4 FEA analyses

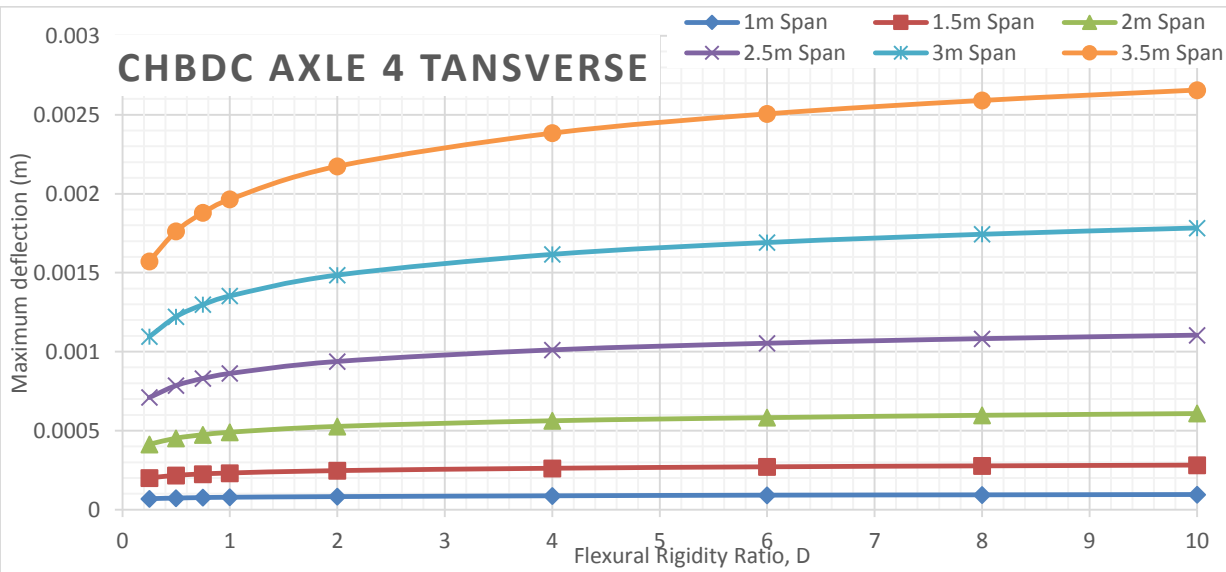


Figure 197 Maximum deflection of deck slabs subjected to CHBDC axle 4 for different span values of alpha 4 FEA analyses

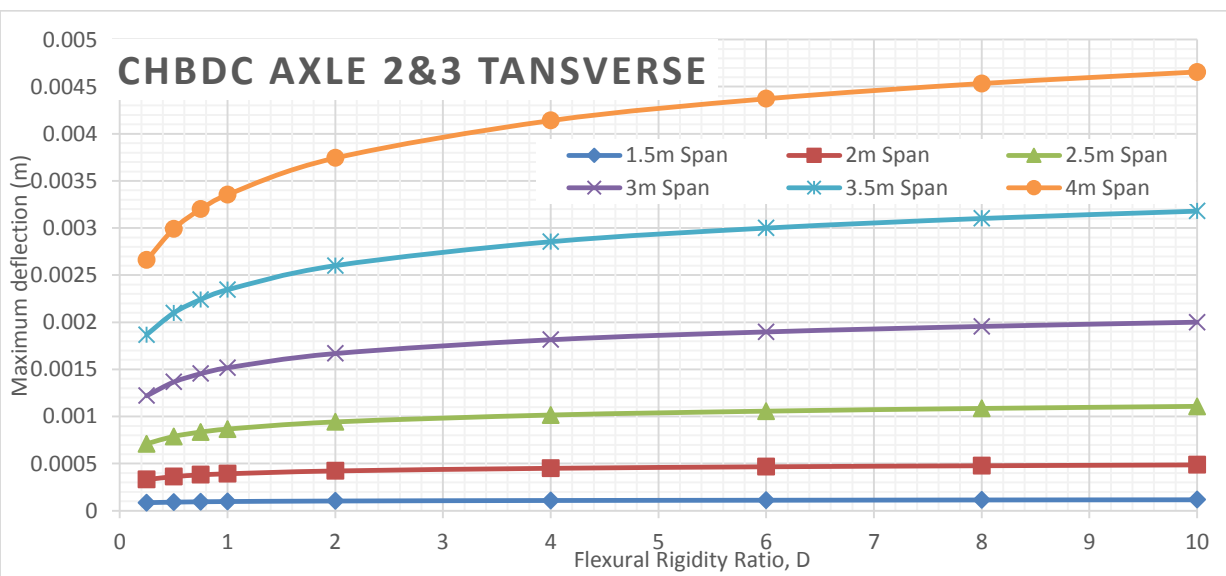


Figure 198 Maximum deflection of deck slabs subjected to CHBDC axle 2 & 3 for different span values of alpha 4 FEA analyses

Alpha 6 Deflection VS Flexural Rigidity for Different Span Length

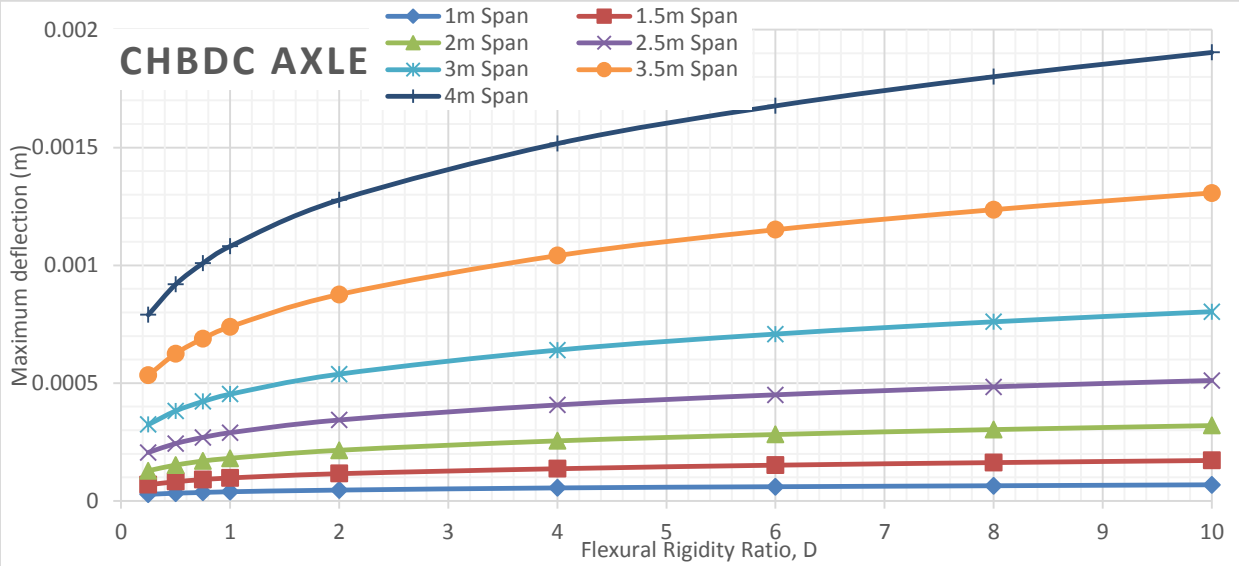


Figure 199 Maximum deflection of deck slabs subjected to CHBDC axle 4 for different span values of alpha 6 FEA analyses

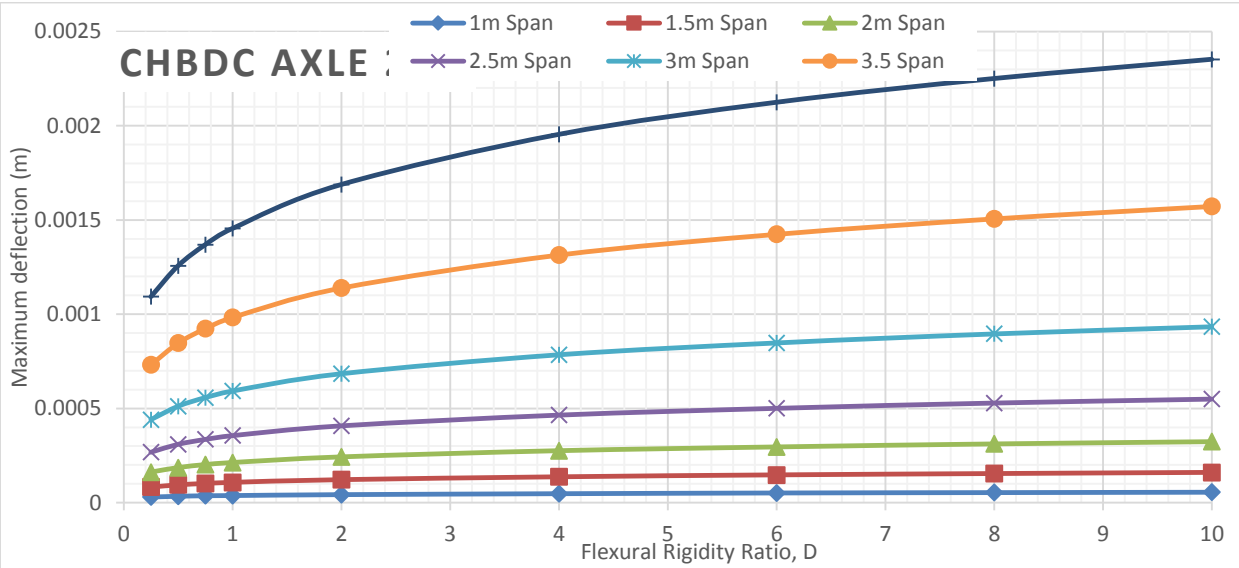


Figure 200 Maximum deflection of deck slabs subjected to CHBDC axle 2 & 3 for different span values of alpha 6 FEA analyses

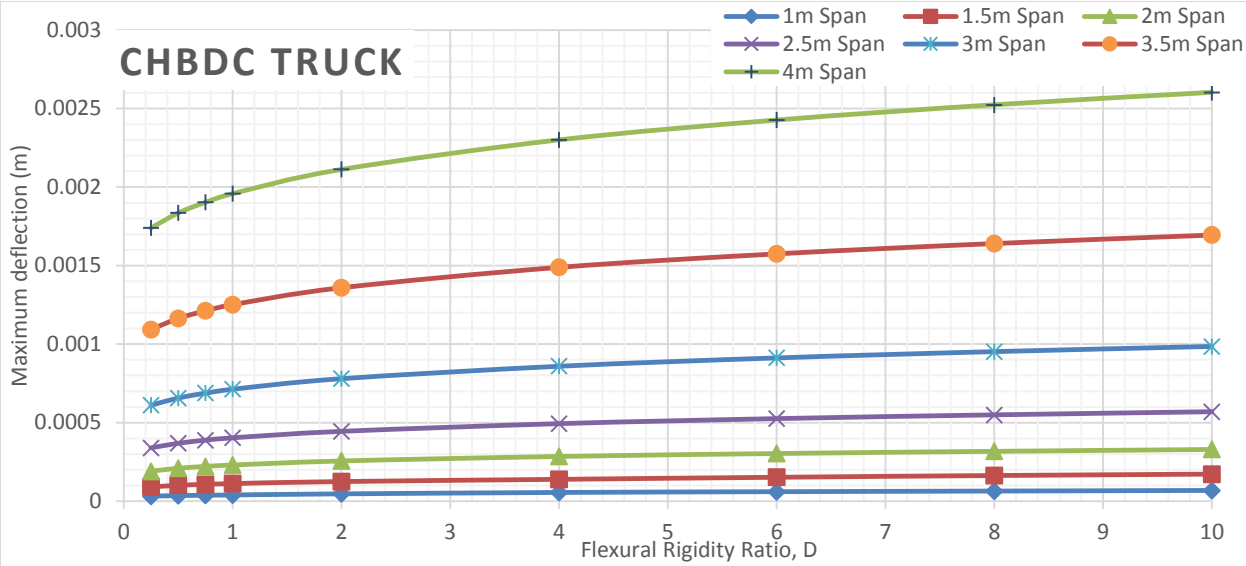


Figure 201 Maximum deflection of deck slabs subjected to CHBDC truck for different span values of alpha 6 FEA analyses

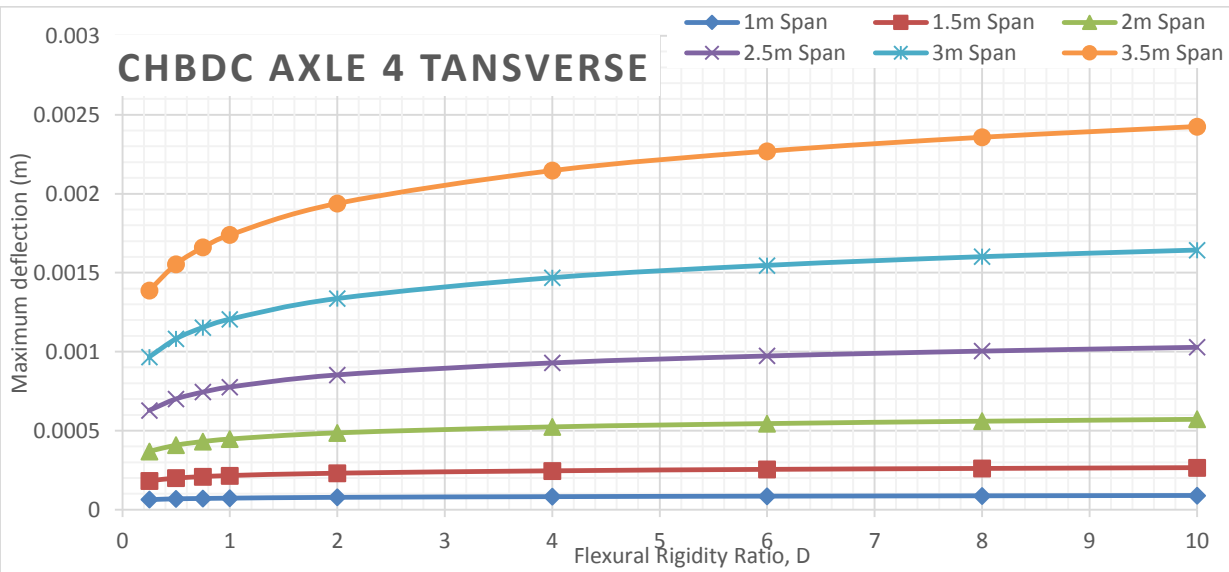


Figure 202 Maximum deflection of deck slabs subjected to CHBDC axle 4 for different span values of alpha 6 FEA analyses

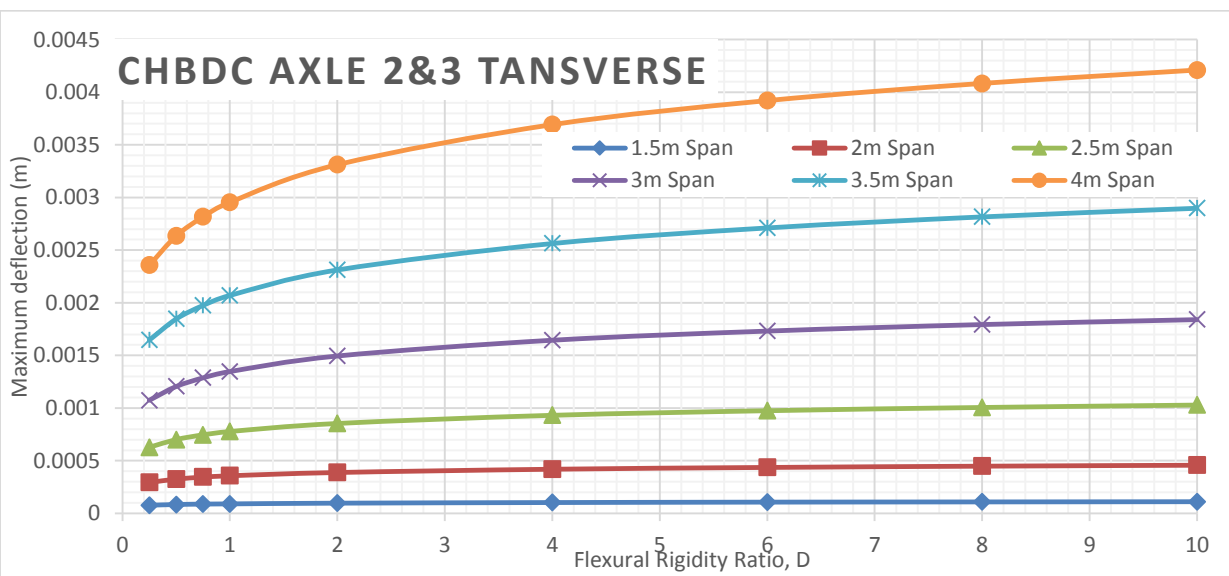


Figure 203 Maximum deflection of deck slabs subjected to CHBDC axle 2 & 3 for different span values of alpha 6 FEA analyses

Alpha 8 Deflection VS Flexural Rigidity for Different Span Length

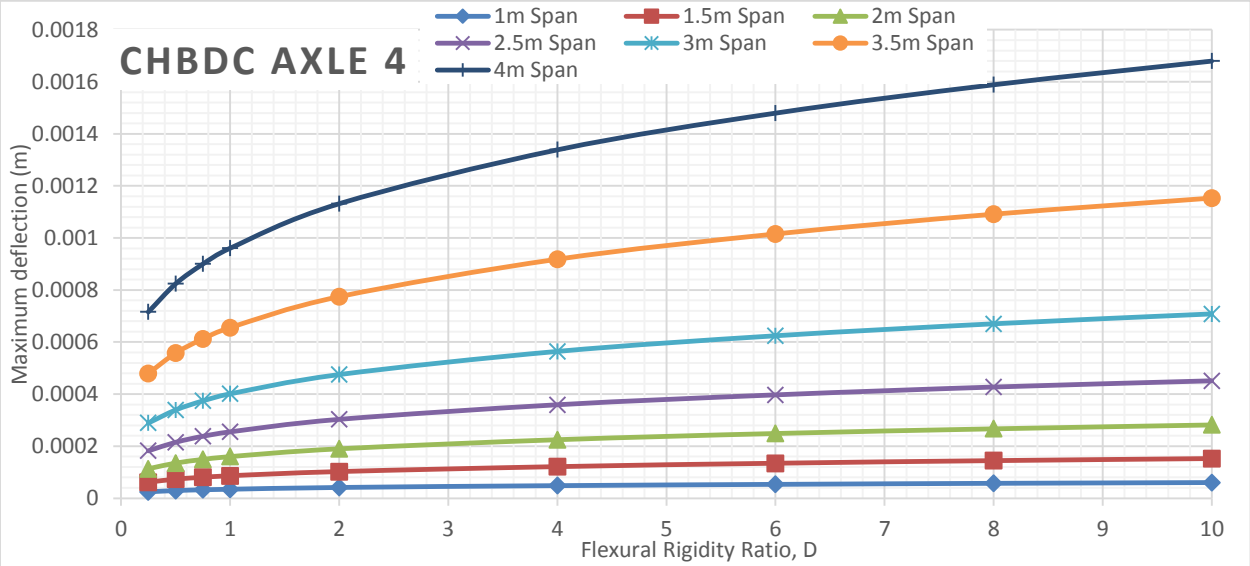


Figure 204 Maximum deflection of deck slabs subjected to CHBDC axle 4 for different span values of alpha 8 FEA analyses

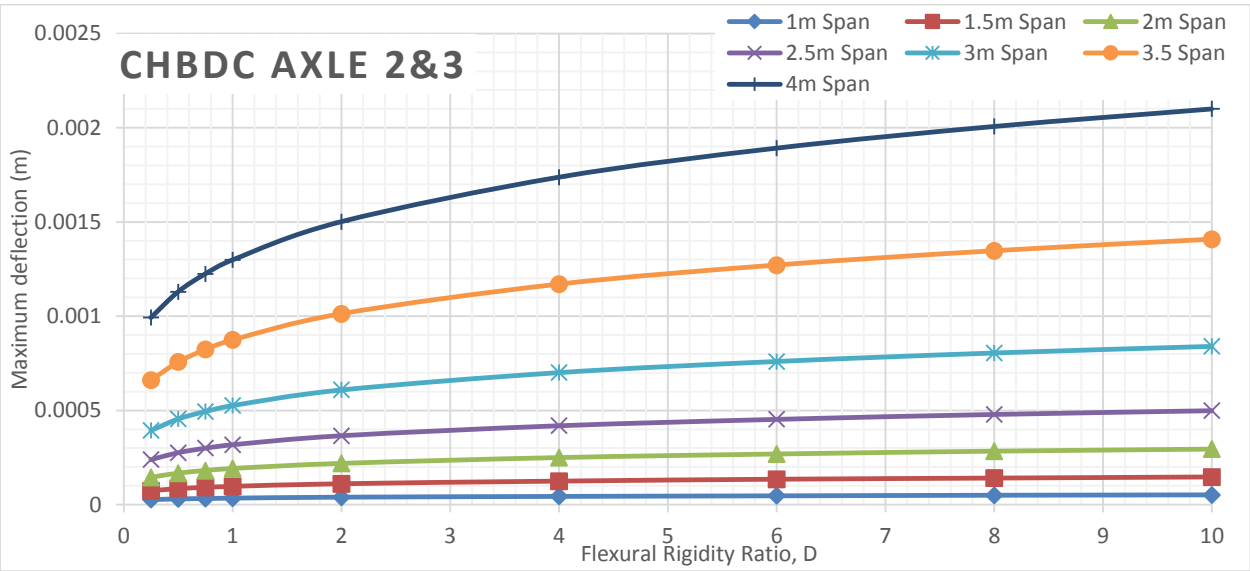


Figure 205 Maximum deflection of deck slabs subjected to CHBDC axle 2 & 3 for different span values of alpha 8 FEA analyses

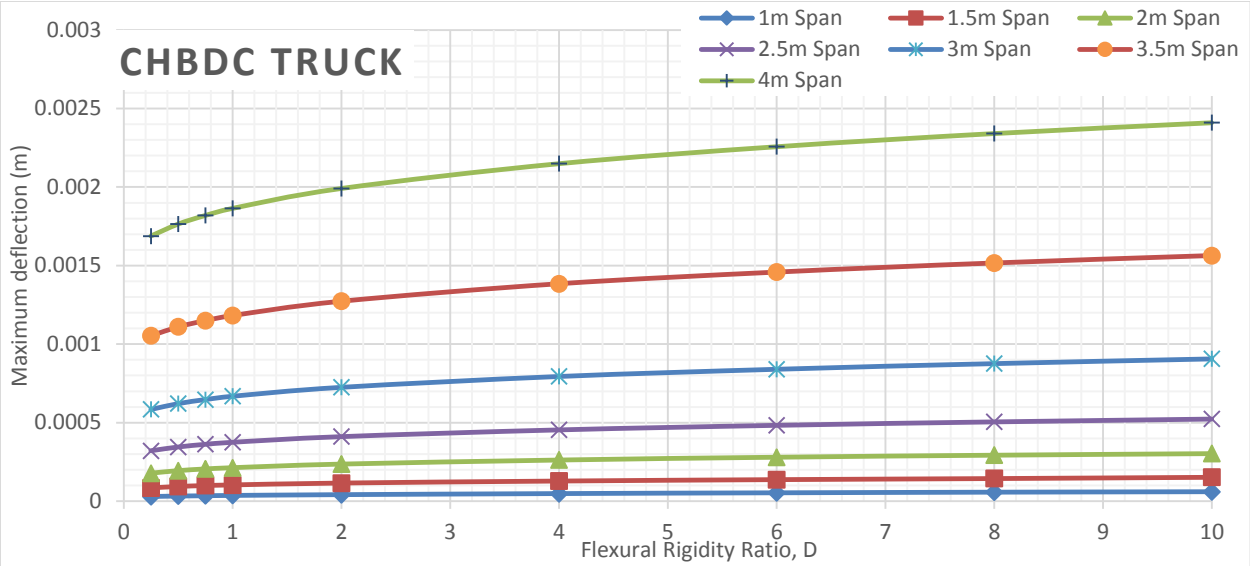


Figure 206 Maximum deflection of deck slabs subjected to CHBDC truck for different span values of alpha 8 FEA analyses

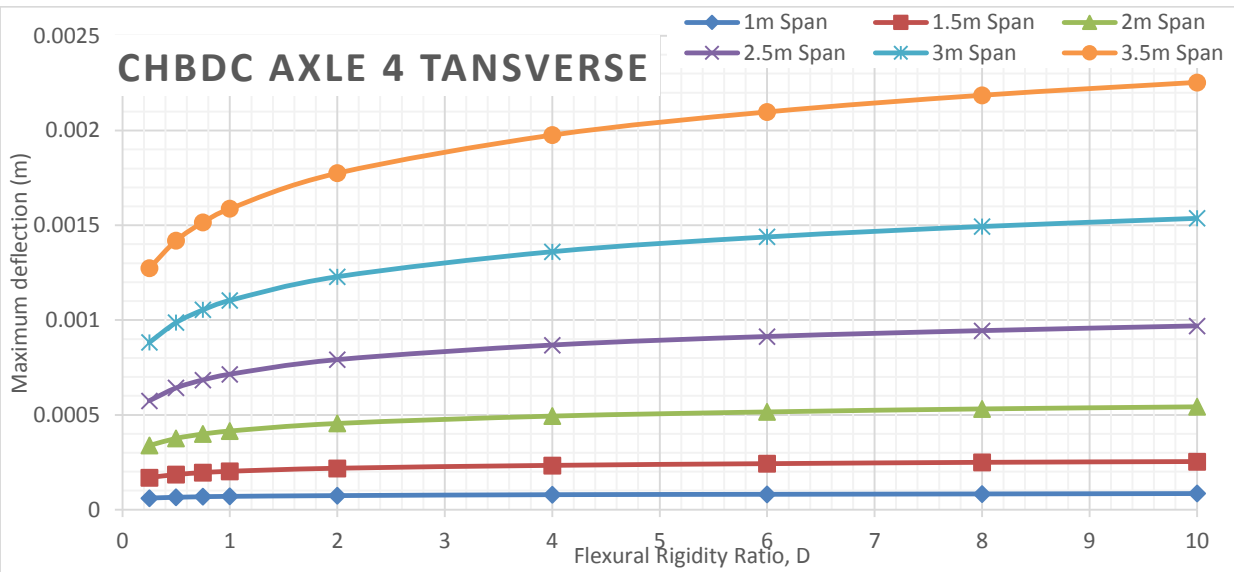


Figure 207 Maximum deflection of deck slabs subjected to CHBDC axle 4 for different span values of alpha 8 FEA analyses

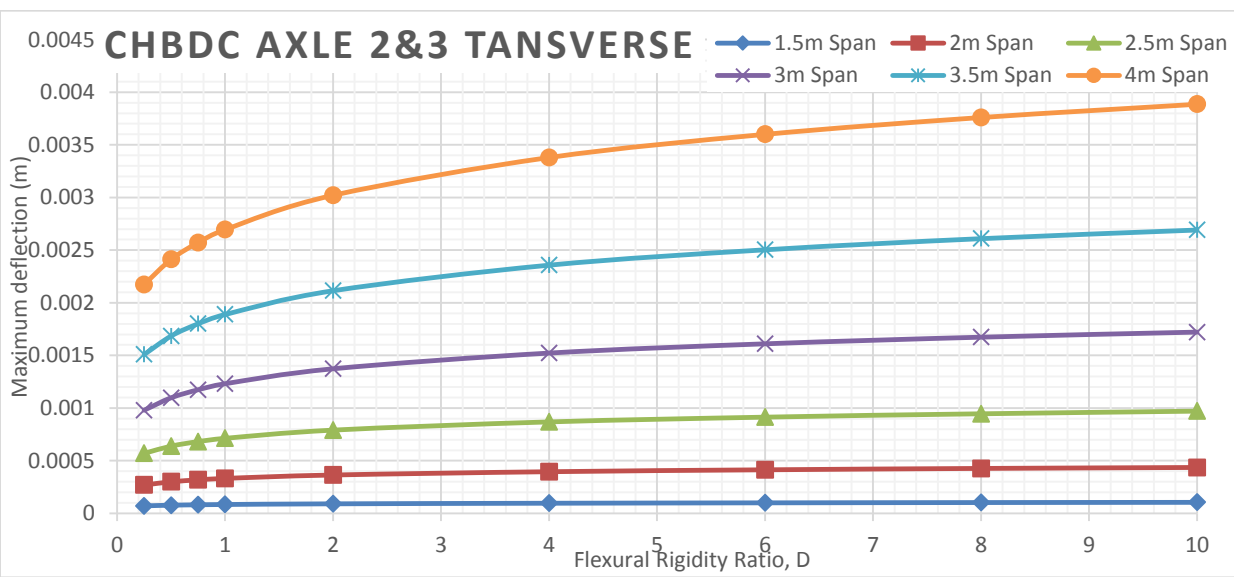


Figure 208 Maximum deflection of deck slabs subjected to CHBDC axle 2 & 3 for different span values of alpha 8 FEA analyses

Alpha 10 Deflection VS Flexural Rigidity for Different Span Length

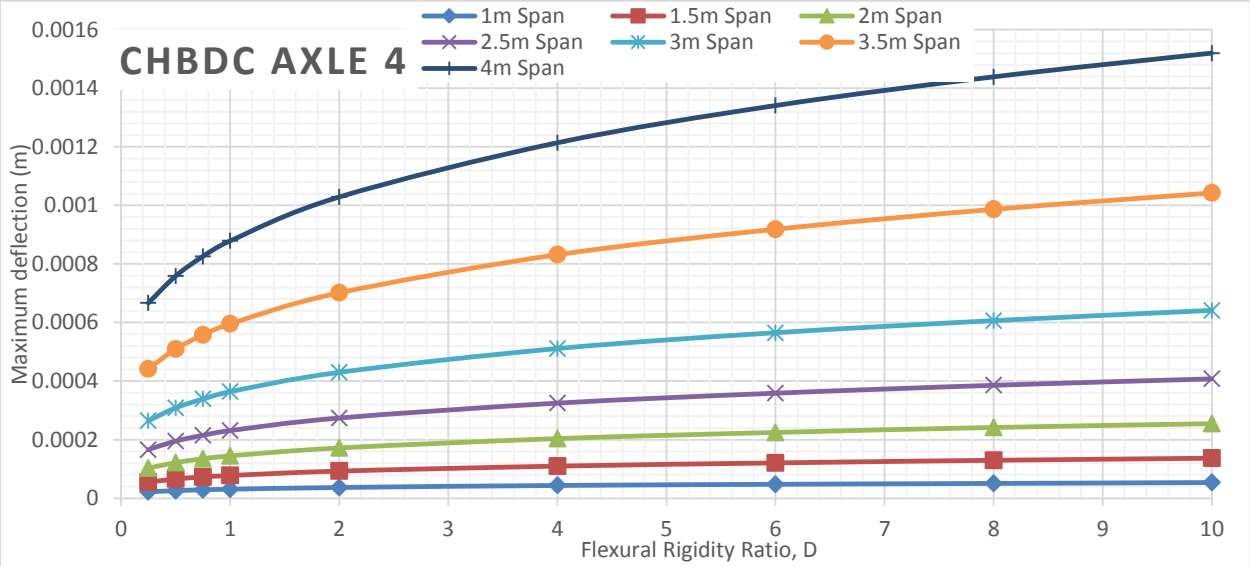


Figure 209 Maximum deflection of deck slabs subjected to CHBDC axle 4 for different span values of alpha 10 FEA analyses

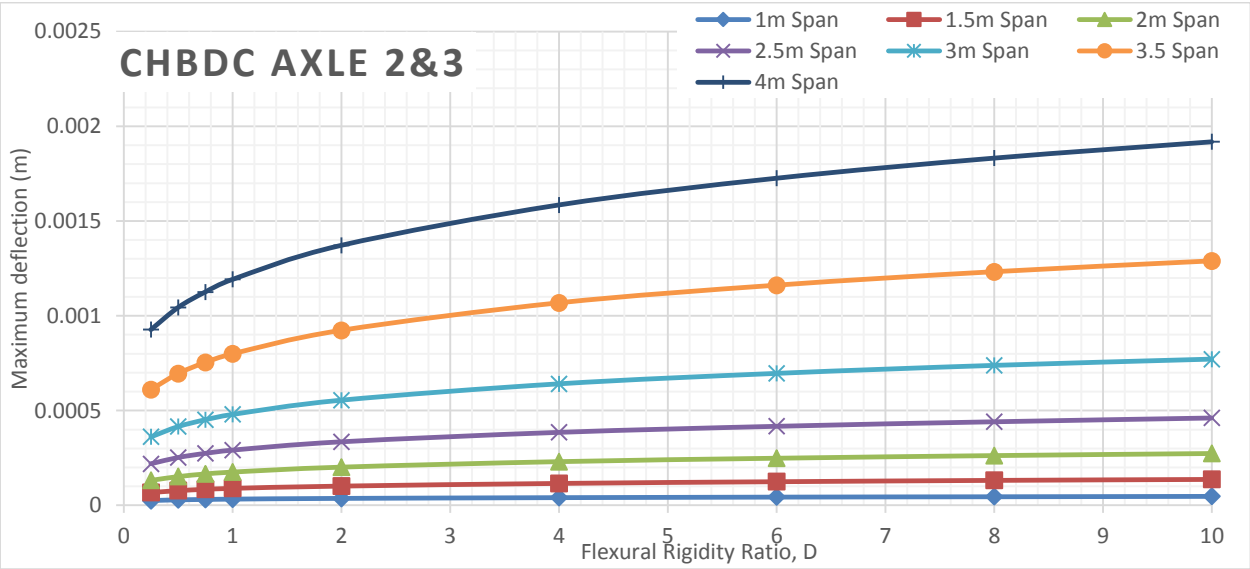


Figure 210 Maximum deflection of deck slabs subjected to CHBDC axle 2 & 3 for different span values of alpha 10 FEA analyses

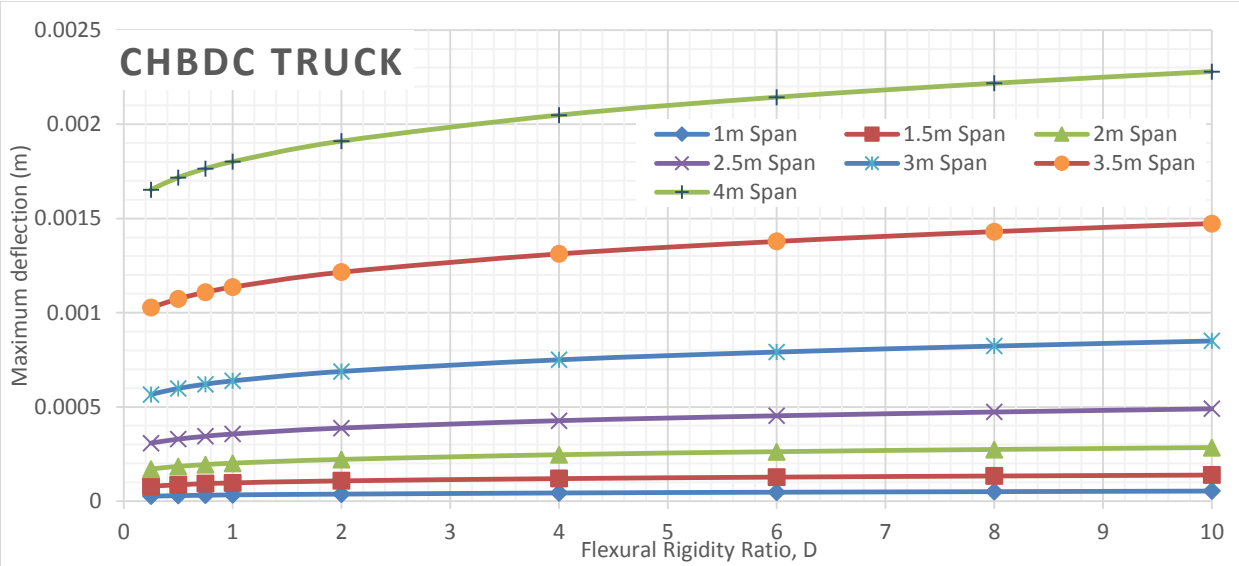


Figure 211 Maximum deflection of deck slabs subjected to CHBDC truck for different span values of alpha 10 FEA analyses

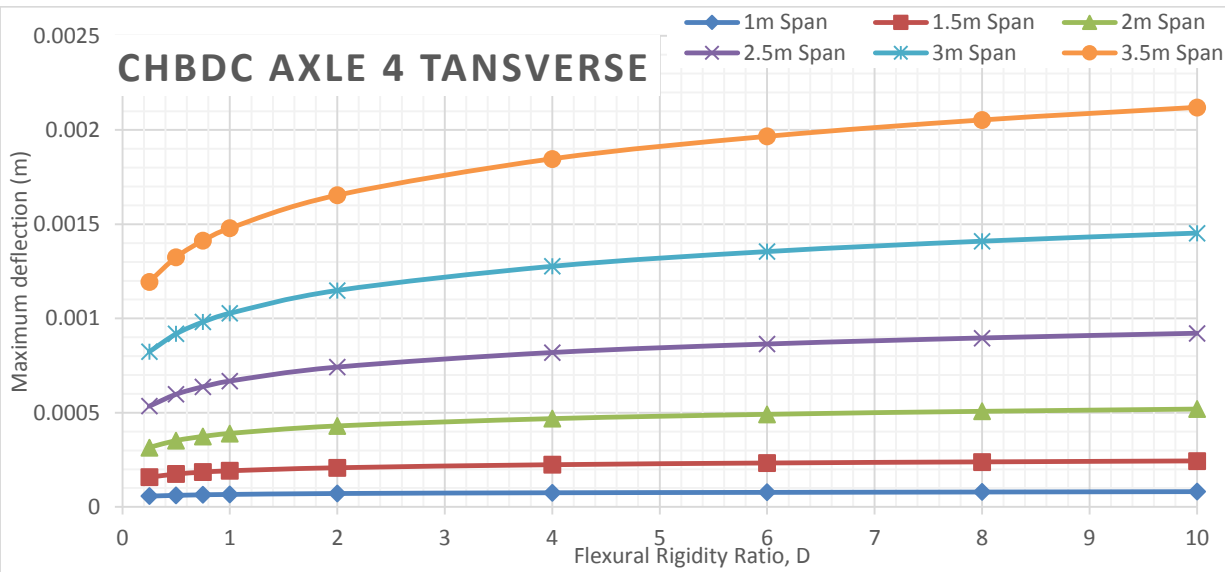


Figure 212 Maximum deflection of deck slabs subjected to CHBDC axle 4 for different span values of alpha 10 FEA analyses

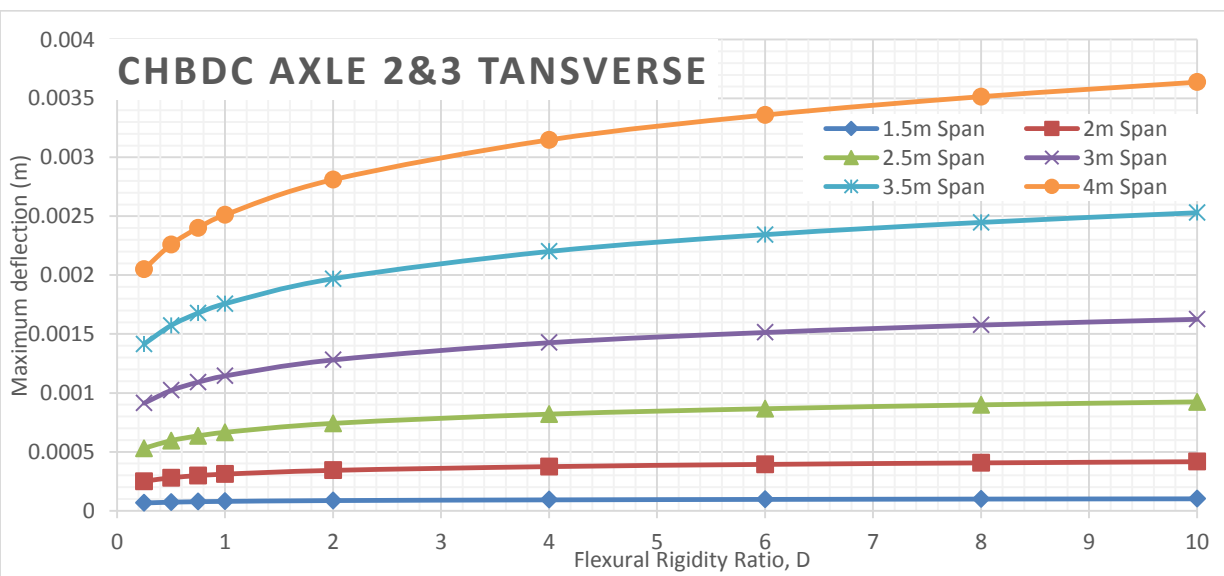


Figure 213 Maximum deflection of deck slabs subjected to CHBDC axle 2 & 3 for different span values of alpha 10 FEA analyses

B.2.4 MAXIMUM DEFLECTION VS TORSIONAL RIGIDITY

Axle 4 Deflection VS Torsional Rigidity for Different D Values at Different span length

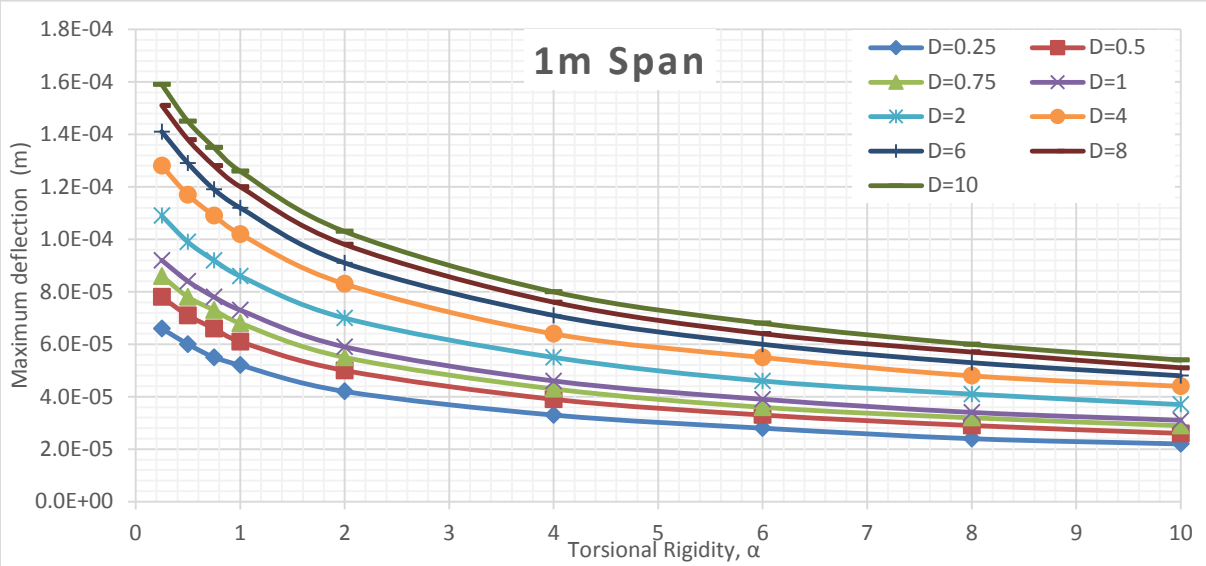


Figure 214 Maximum deflection of 1 m span slab subjected to CHBDC axle 4 for different D values FEA analyses

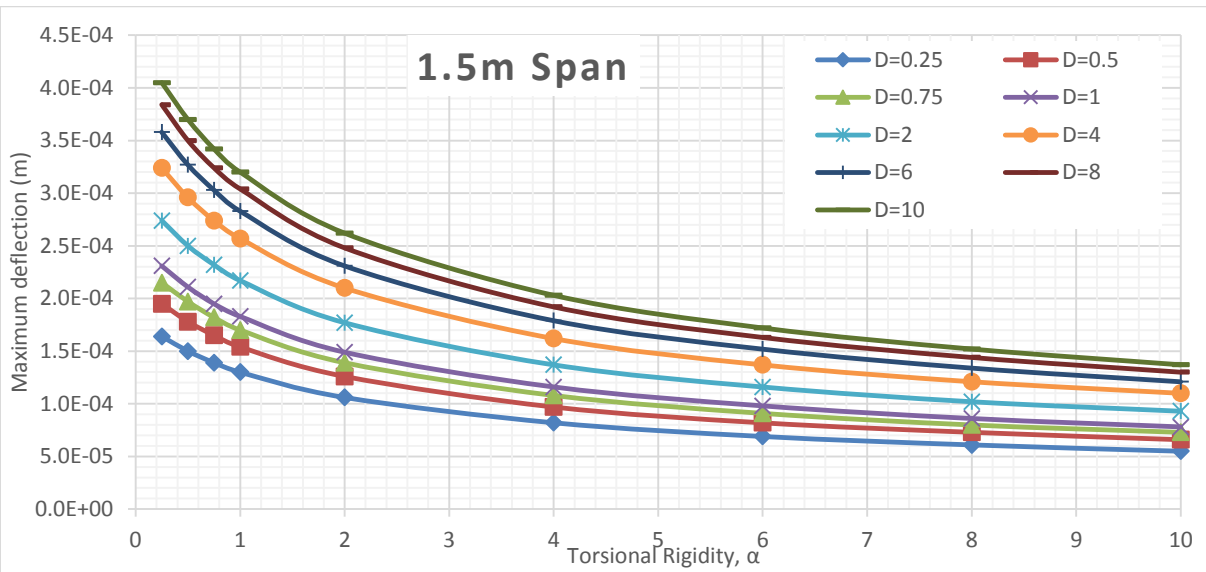


Figure 215 Maximum deflection of 1.5 m span slab subjected to CHBDC axle 4 for different D values FEA analyses

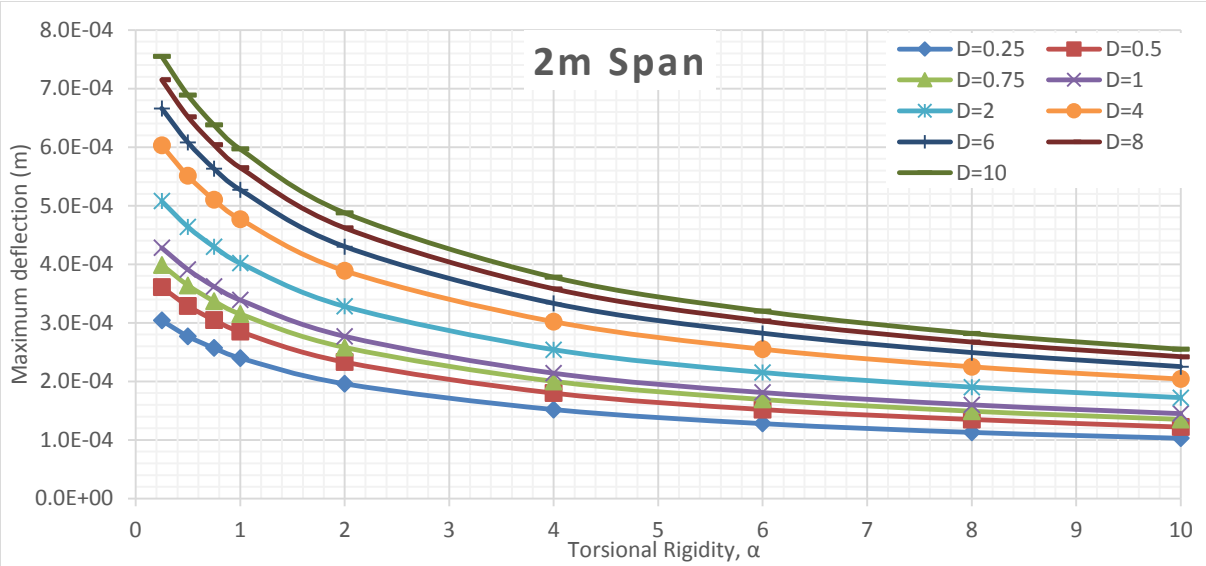


Figure 216 Maximum deflection of 2 m span slab subjected to CHBDC axle 4 for different D values FEA analyses

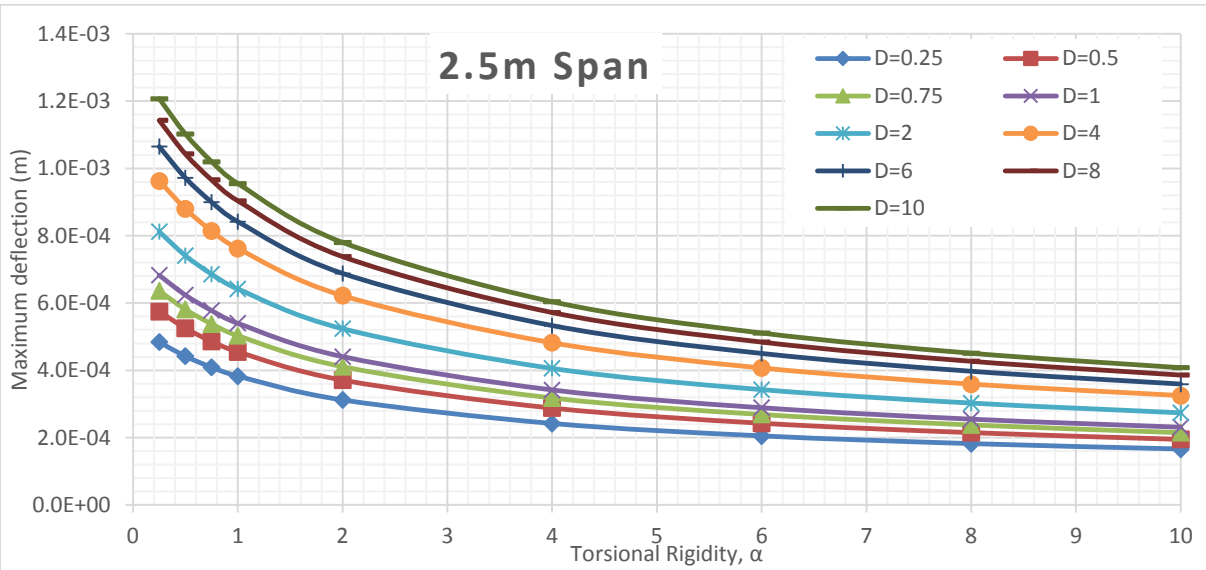


Figure 217 Maximum deflection of 2.5 m span slab subjected to CHBDC axle 4 for different D values FEA analyses

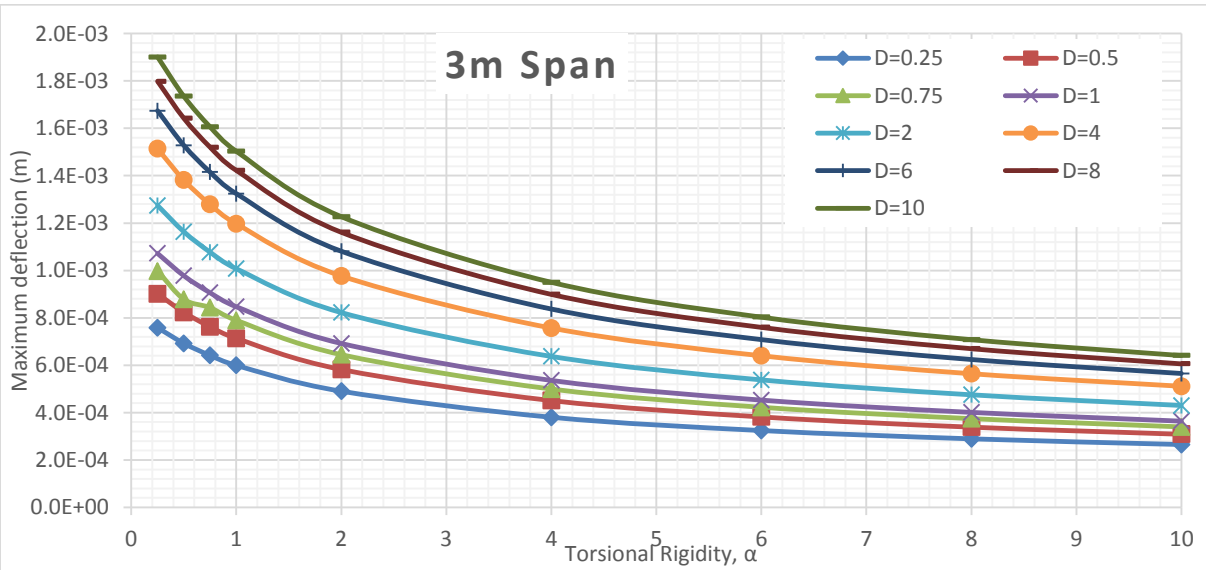


Figure 218 Maximum deflection of 3 m span slab subjected to CHBDC axle 4 for different D values FEA analyses

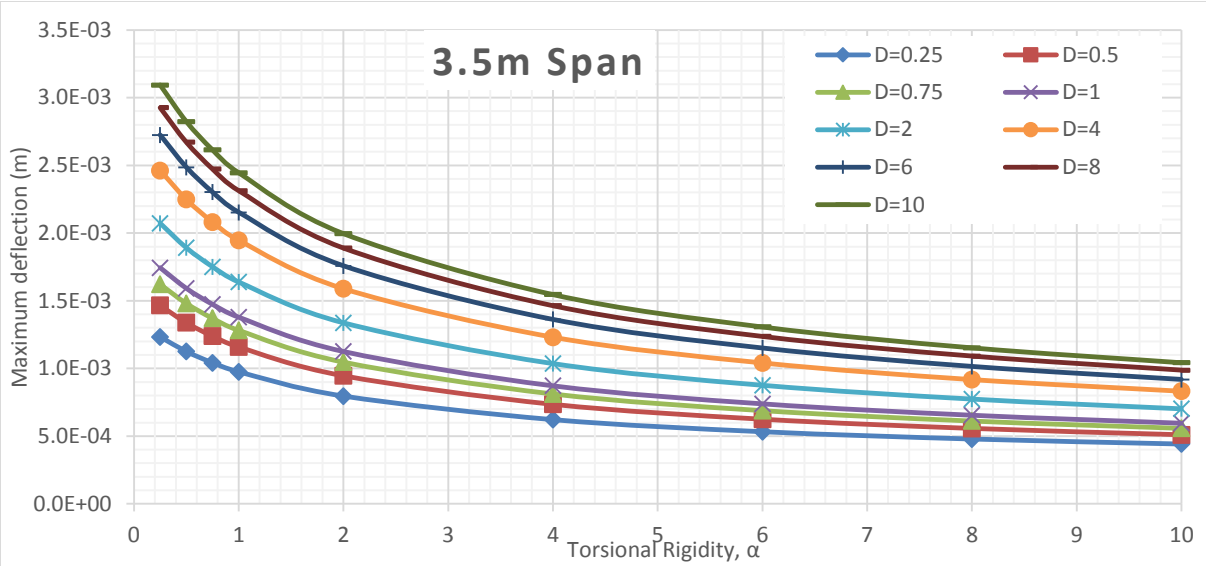


Figure 219 Maximum deflection of 3.5 m span slab subjected to CHBDC axle 4 for different D values FEA analyses

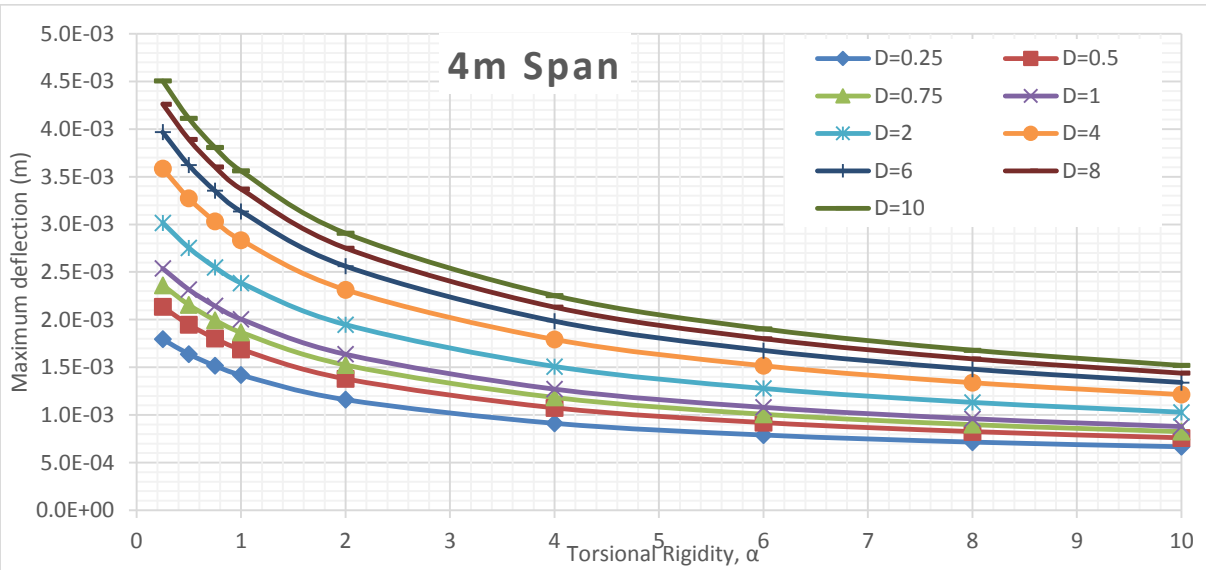


Figure 220 Maximum deflection of 4 m span slab subjected to CHBDC axle 4 for different D values FEA analyses

Axle 2 & 3 Deflection VS Torsional Rigidity for Different D Values at Different span length

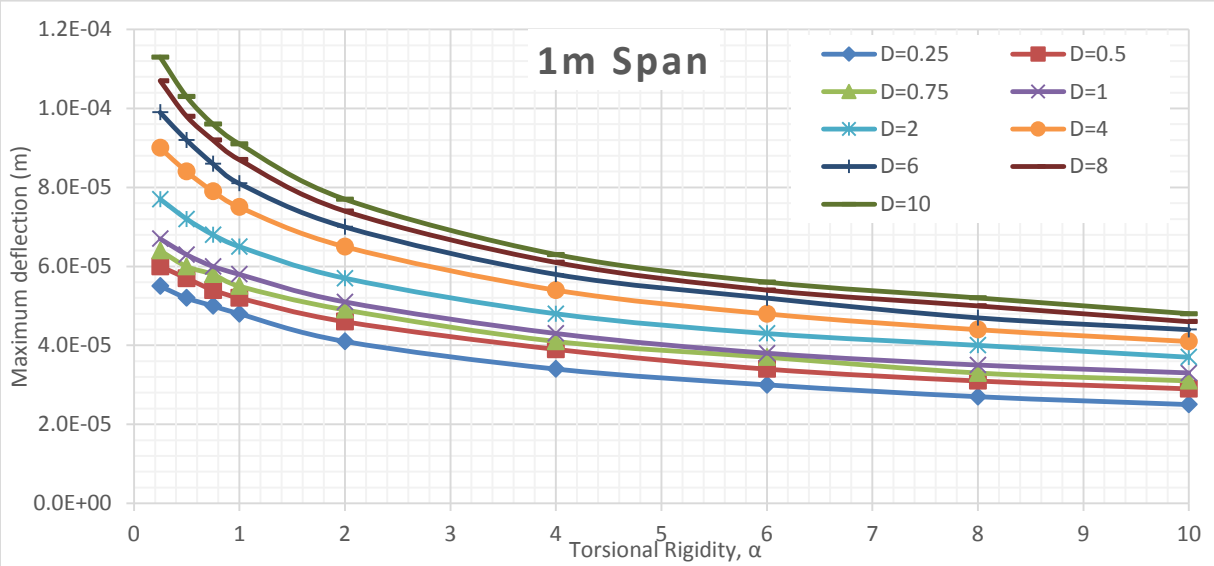


Figure 221 Maximum deflection of 1 m span slab subjected to CHBDC axle 2 & 3 for different D values FEA analyses

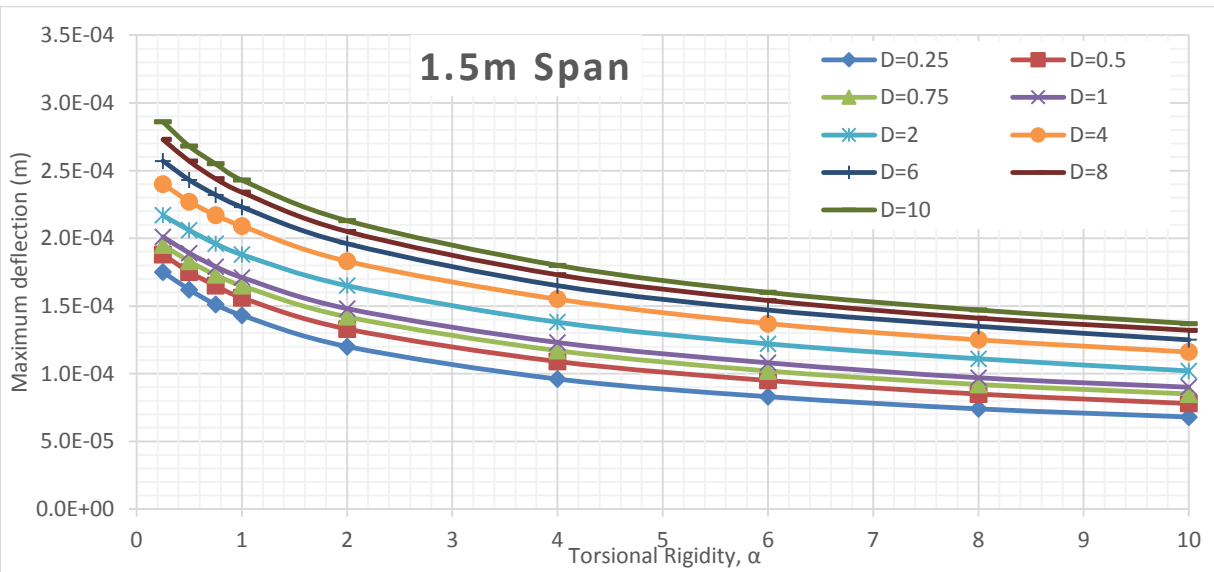


Figure 222 Maximum deflection of 1.5 m span slab subjected to CHBDC axle 2 & 3 for different D values FEA analyses

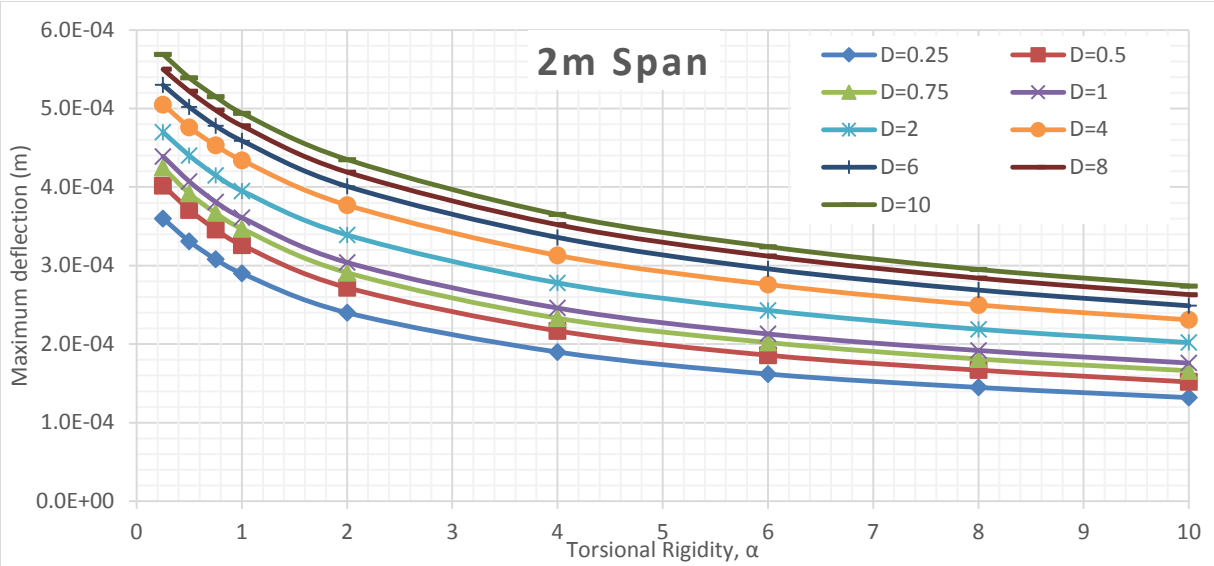


Figure 223 Maximum deflection of 2 m span slab subjected to CHBDC axle 2 & 3 for different D values FEA analyses

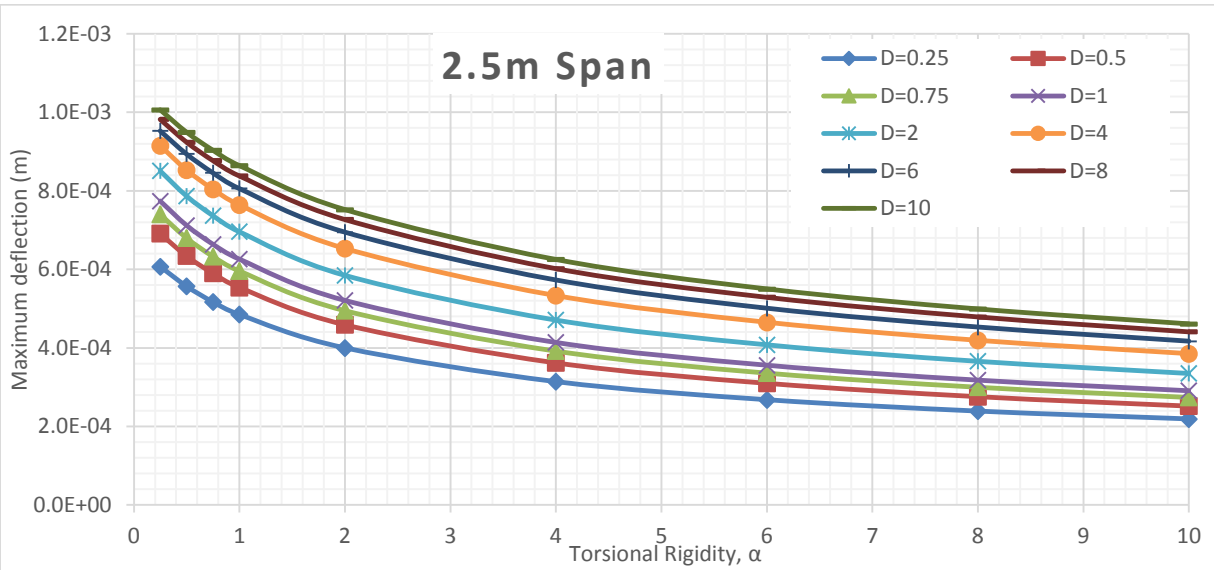


Figure 224 Maximum deflection of 2.5 m span slab subjected to CHBDC axle 2 & 3 for different D values FEA analyses

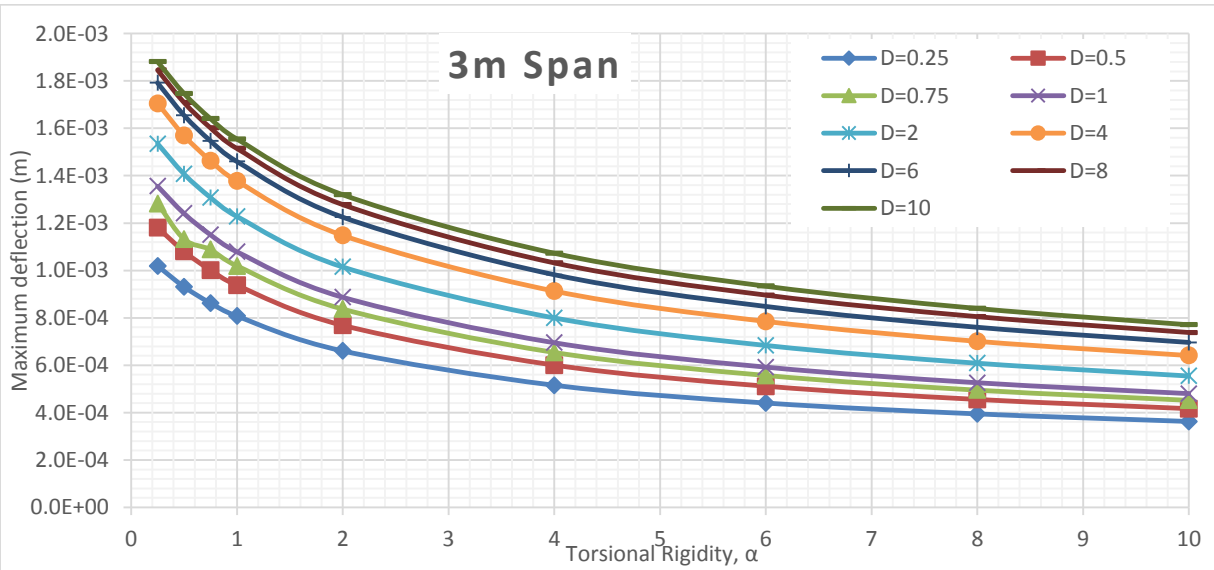


Figure 225 Maximum deflection of 3 m span slab subjected to CHBDC axle 2 & 3 for different D values FEA analyses

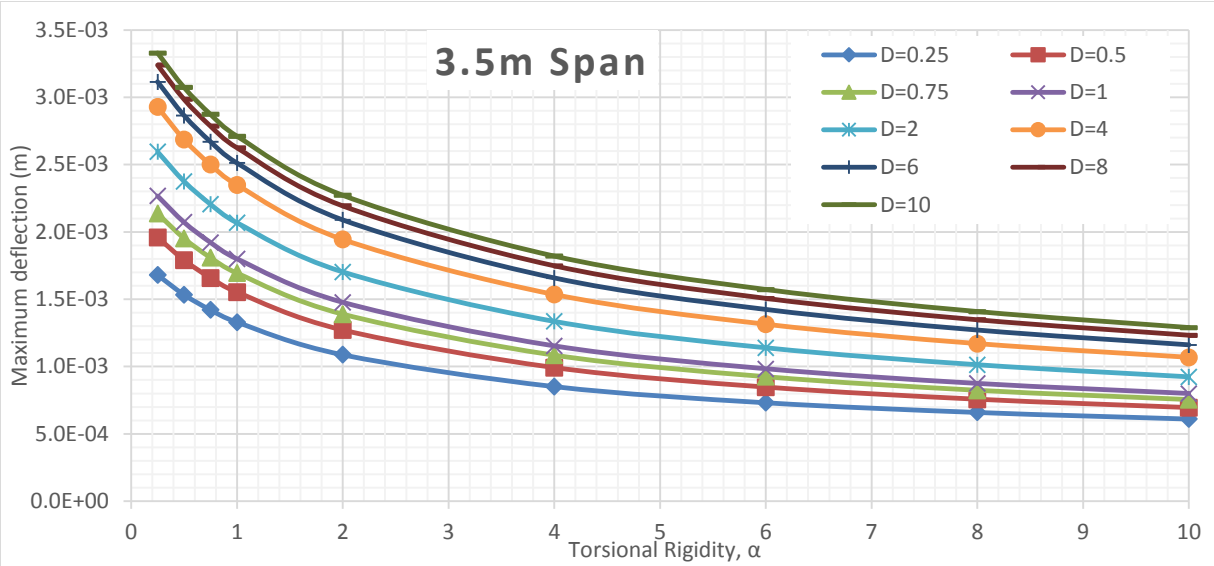


Figure 226 Maximum deflection of 3.5 m span slab subjected to CHBDC axle 2 & 3 for different D values FEA analyses

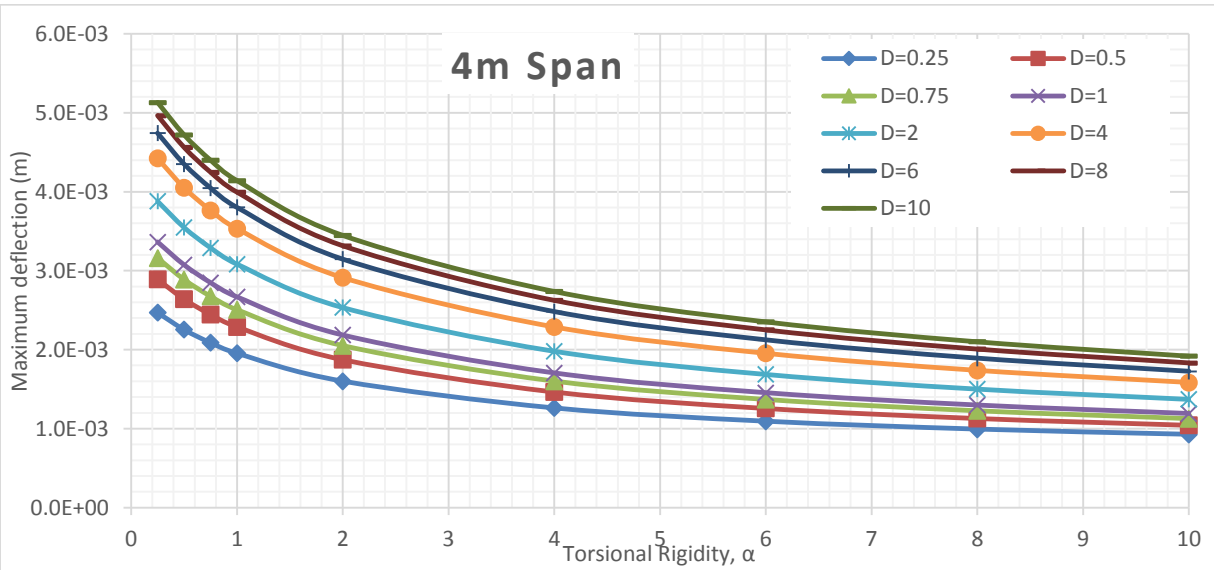


Figure 227 Maximum deflection of 4 m span slab subjected to CHBDC axle 2 & 3 for different D values FEA analyses

Truck Deflection VS Torsional Rigidity for Different D Values at Different span length

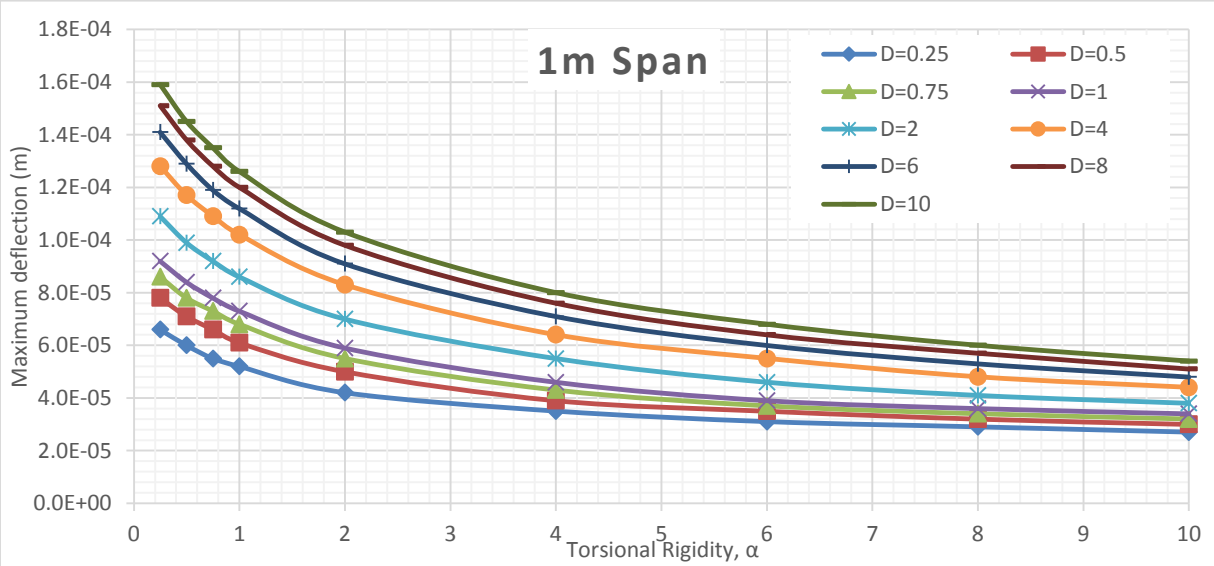


Figure 228 Maximum deflection of 1 m span slab subjected to CHBDC truck for different D values FEA analyses

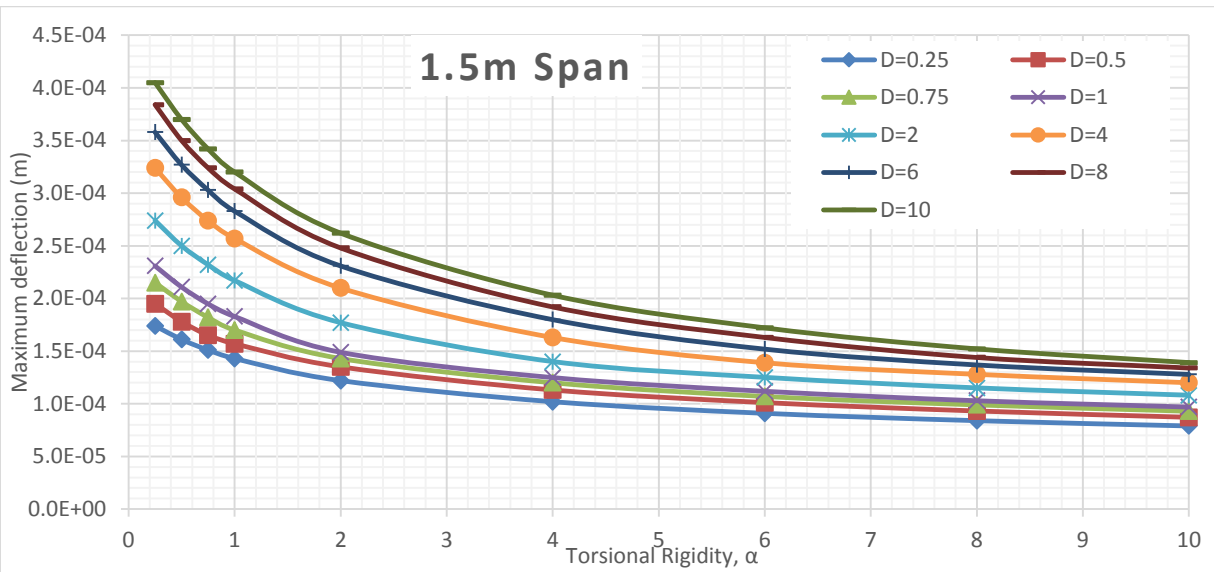


Figure 229 Maximum deflection of 1.5 m span slab subjected to CHBDC truck for different D values FEA analyses

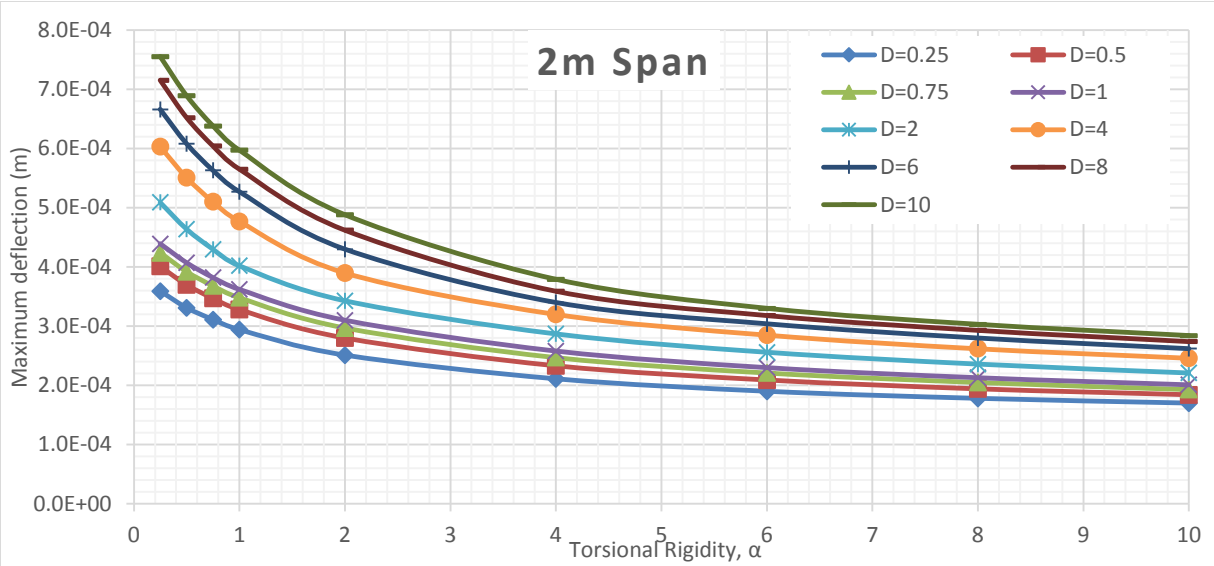


Figure 230 Maximum deflection of 2 m span slab subjected to CHBDC truck for different D values FEA analyses

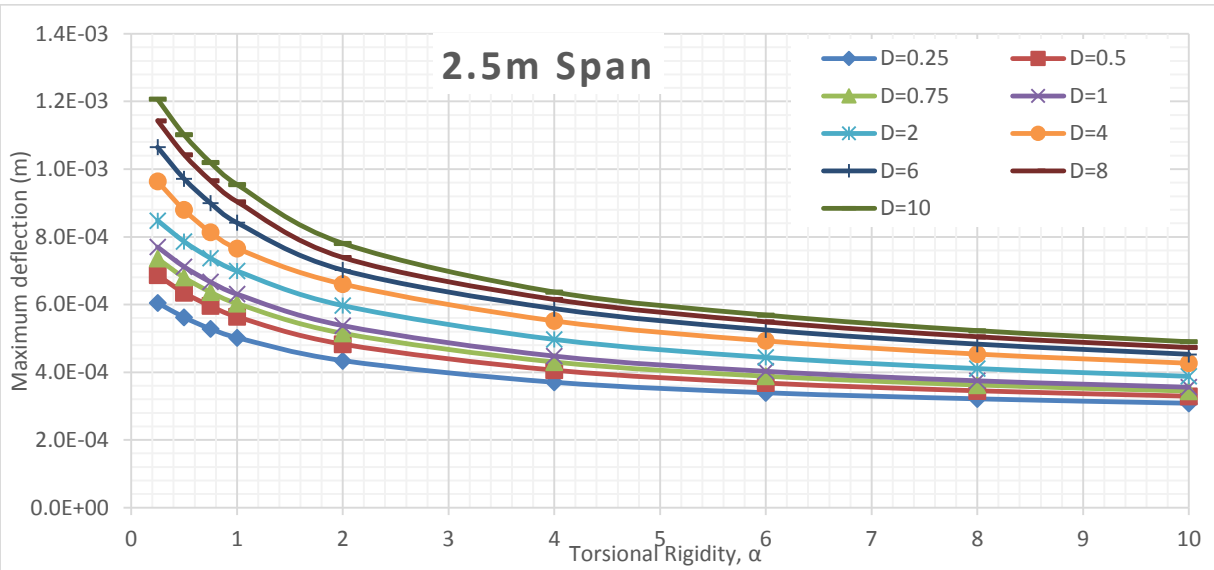


Figure 231 Maximum deflection of 2.5 m span slab subjected to CHBDC truck for different D values FEA analyses

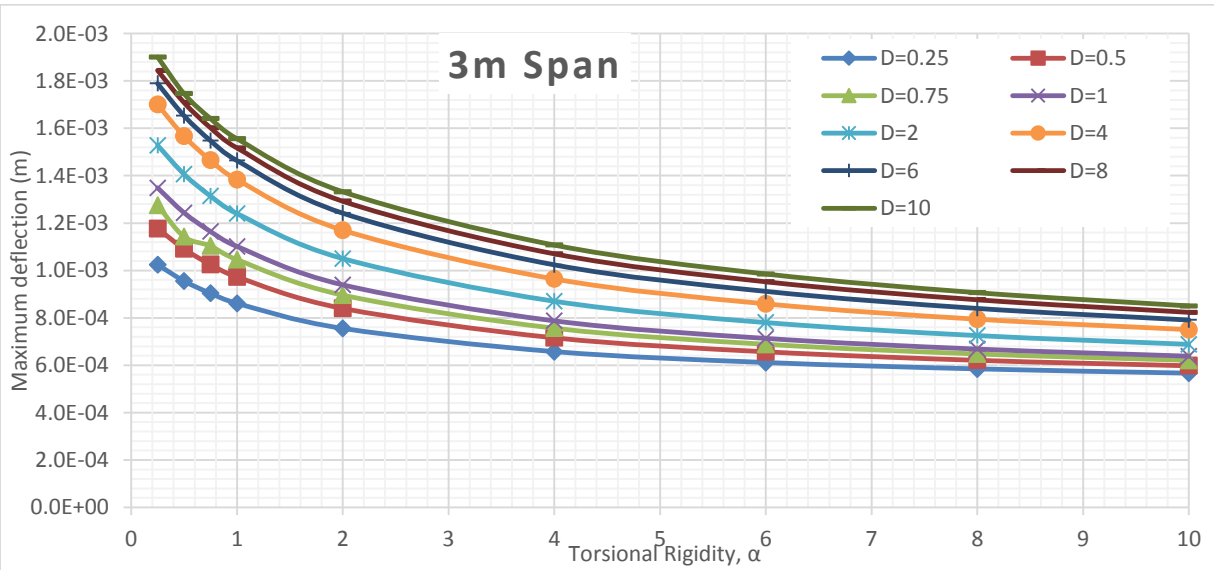


Figure 232 Maximum deflection of 3 m span slab subjected to CHBDC truck for different D values FEA analyses

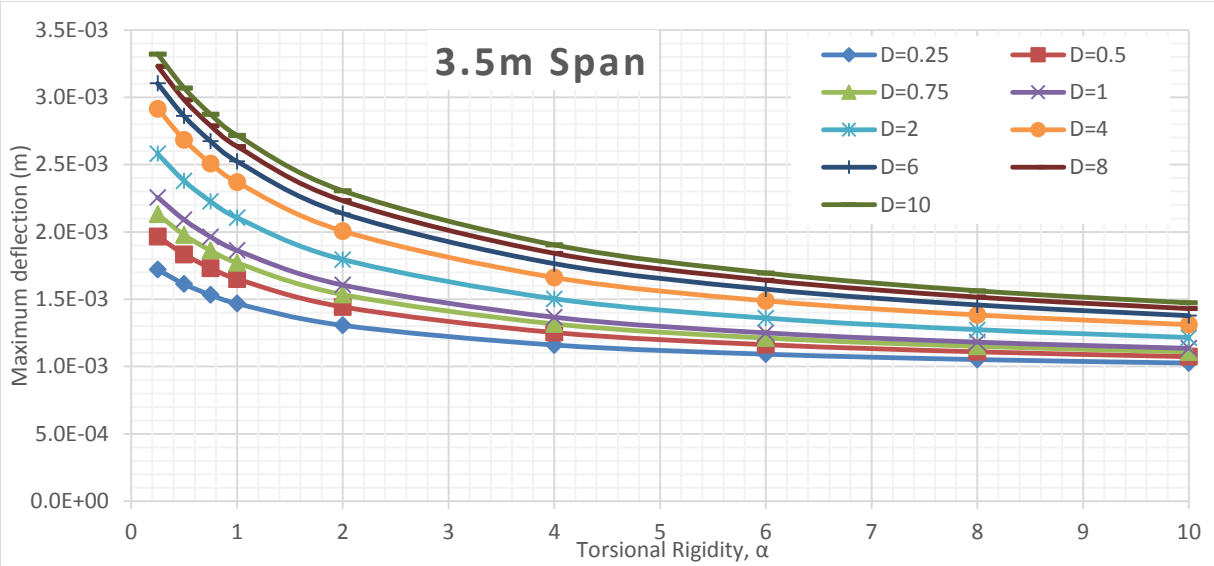


Figure 233 Maximum deflection of 3.5 m span slab subjected to CHBDC truck for different D values FEA analyses

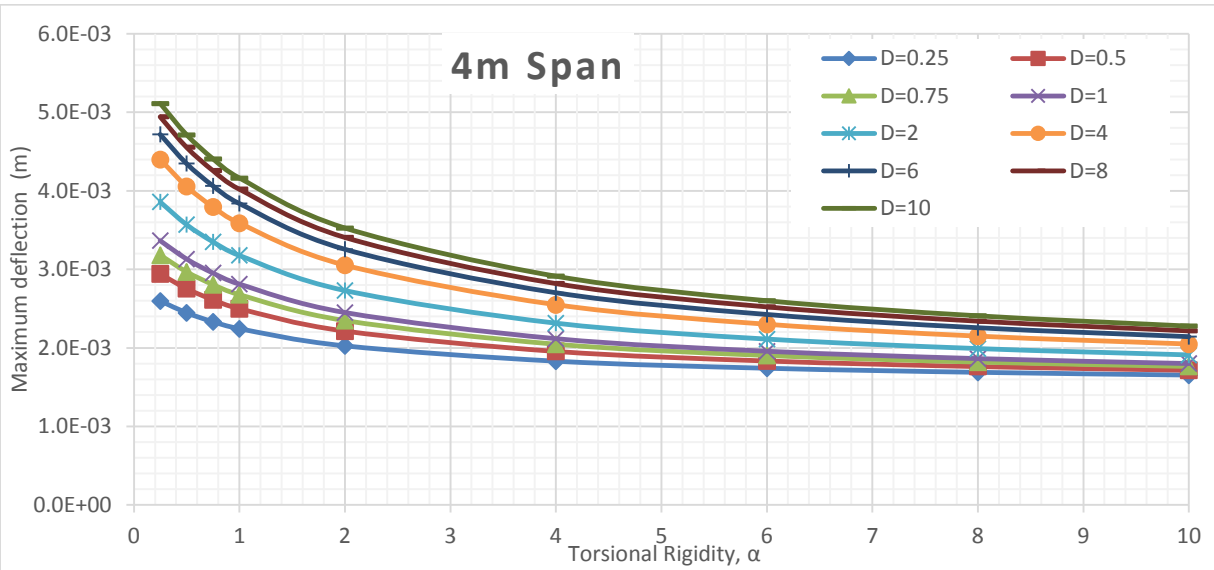


Figure 234 Maximum deflection of 4 m span slab subjected to CHBDC truck for different D values FEA analyses

Axle 4 Transverse Deflection VS Torsional Rigidity for Different D Values at Different span length

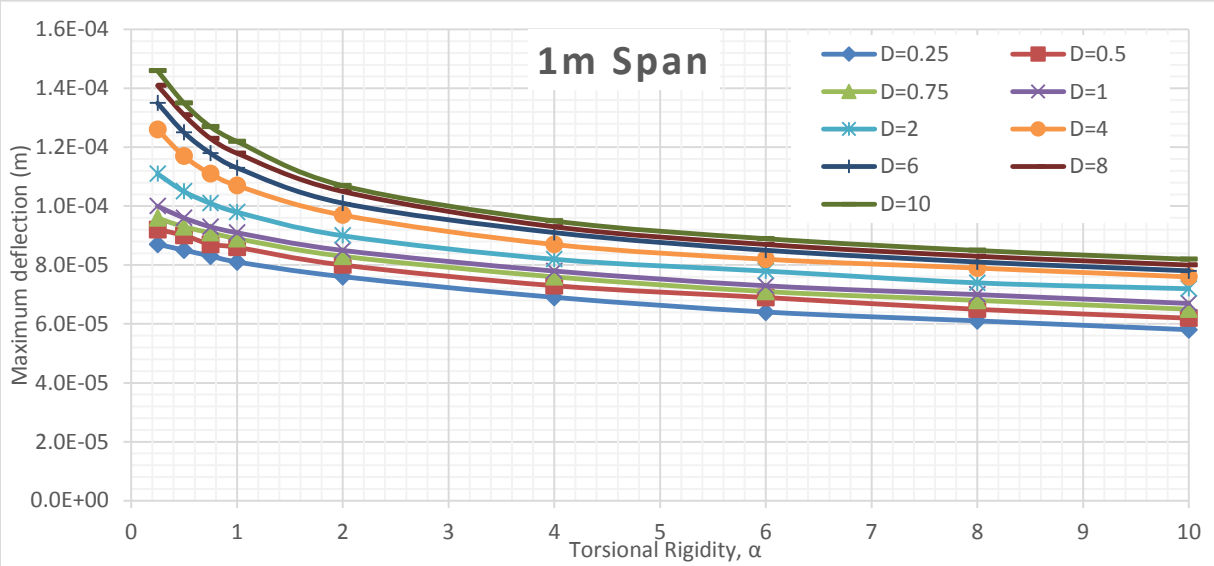


Figure 235 Maximum deflection of 1 m span slab subjected to CHBDC axle 4 for different D values FEA analyses

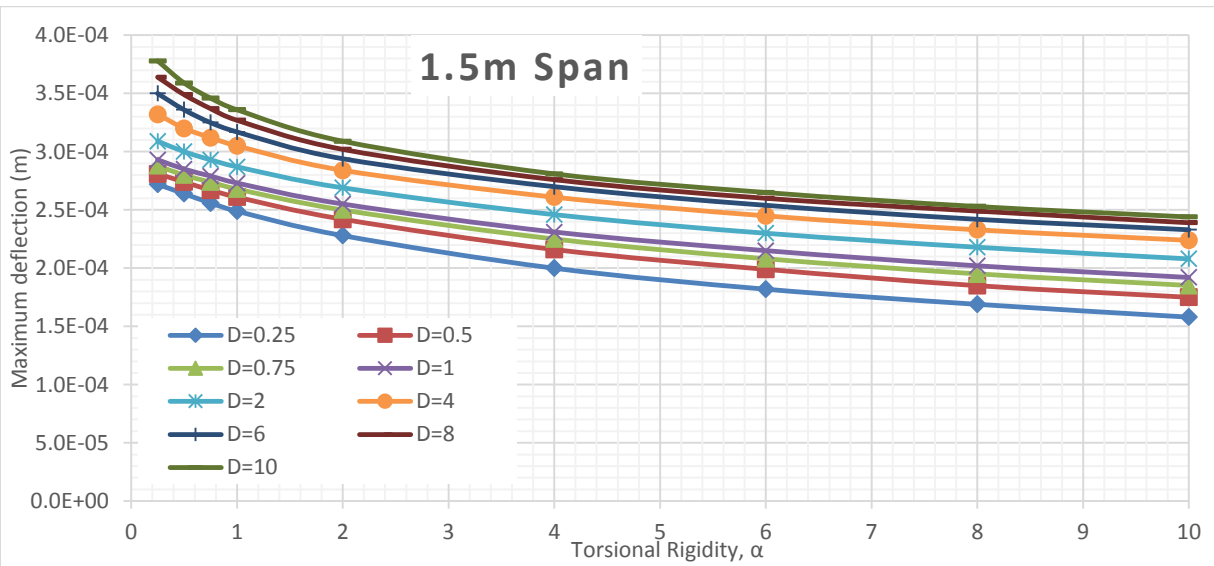


Figure 236 Maximum deflection of 1.5 m span slab subjected to CHBDC axle 4 for different D values FEA analyses

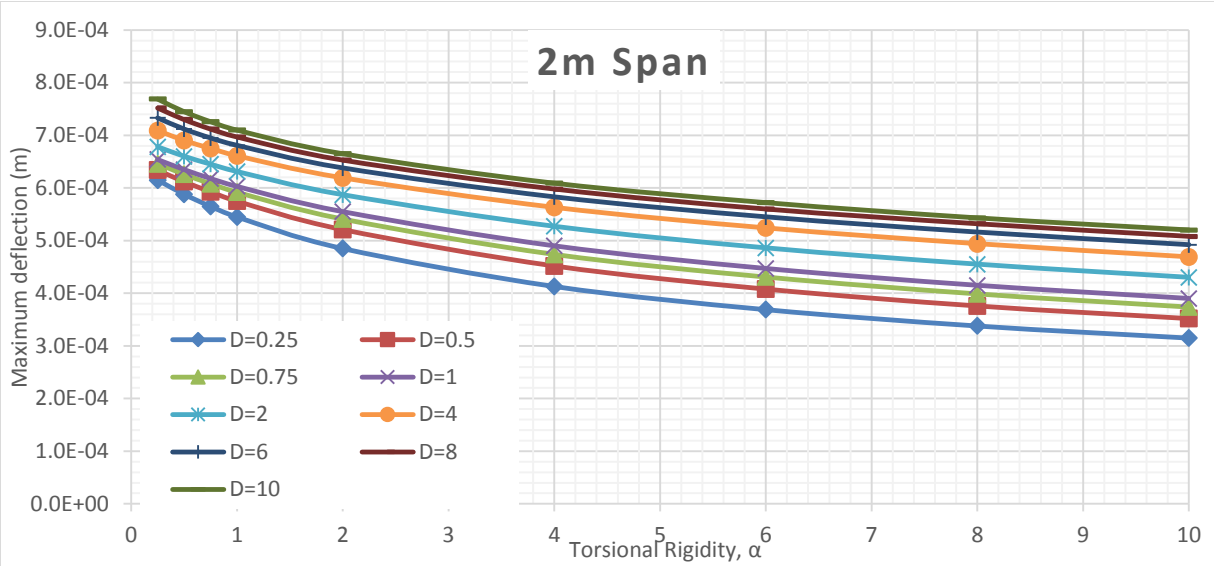


Figure 237 Maximum deflection of 2 m span slab subjected to CHBDC axle 4 for different D values FEA analyses

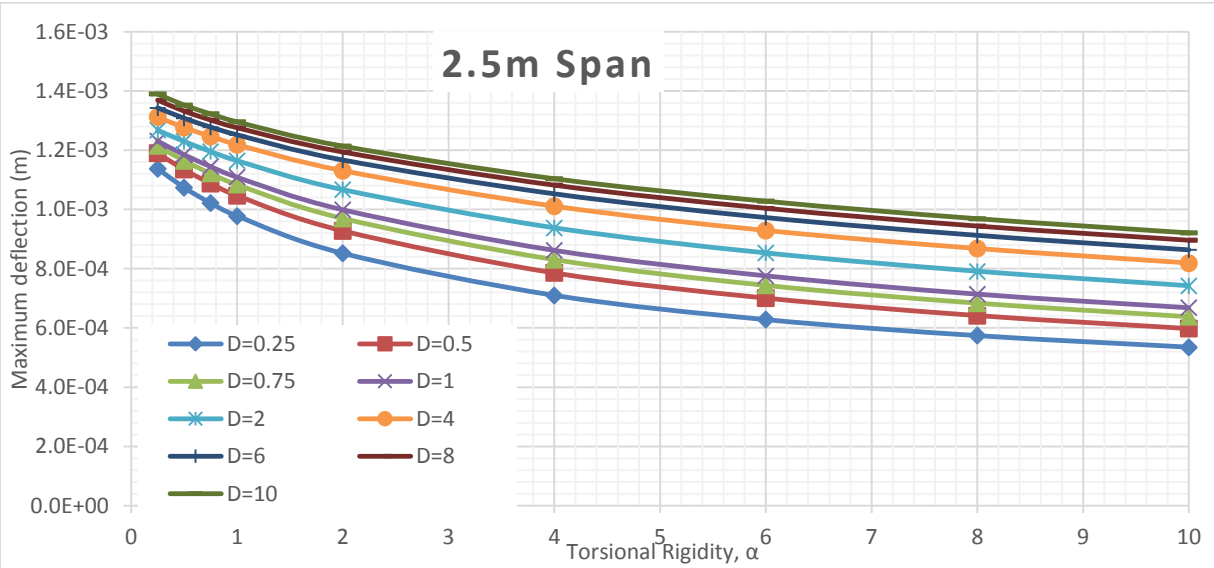


Figure 238 Maximum deflection of 2.5 m span slab subjected to CHBDC axle 4 for different D values FEA analyses

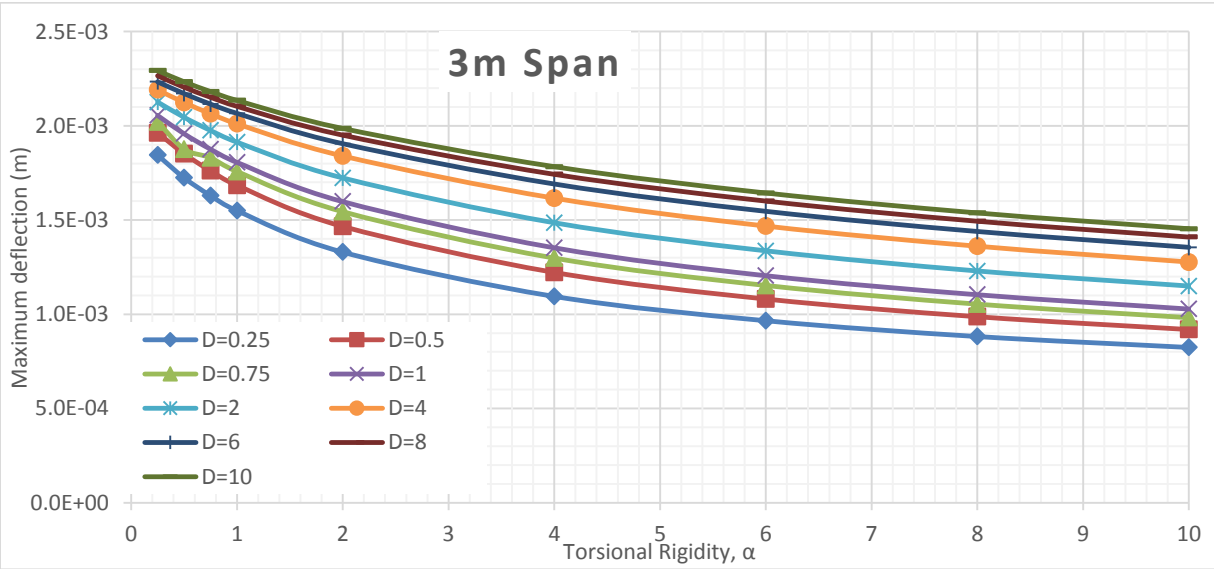


Figure 239 Maximum deflection of 3 m span slab subjected to CHBDC axle 4 for different D values FEA analyses

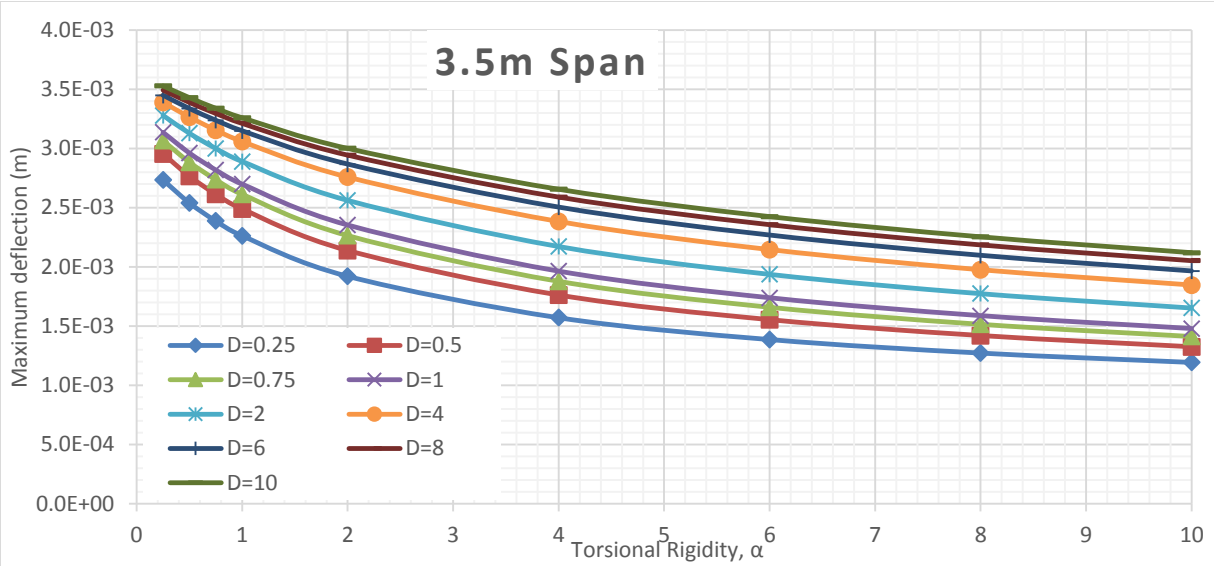


Figure 240 Maximum deflection of 3.5 m span slab subjected to CHBDC axle 4 for different D values FEA analyses

Axle 2 & 3 Transverse Deflection VS Torsional Rigidity for Different D Values at Different span length

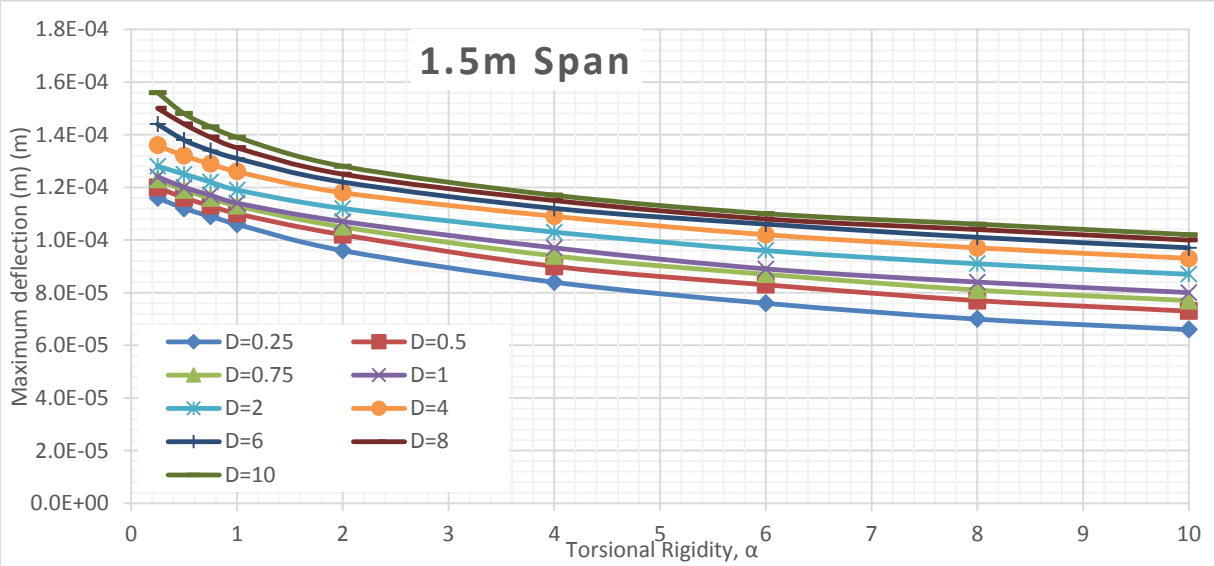


Figure 241 Maximum deflection of 1.5 m span slab subjected to CHBDC axle 2 & 3 for different D values FEA analyses

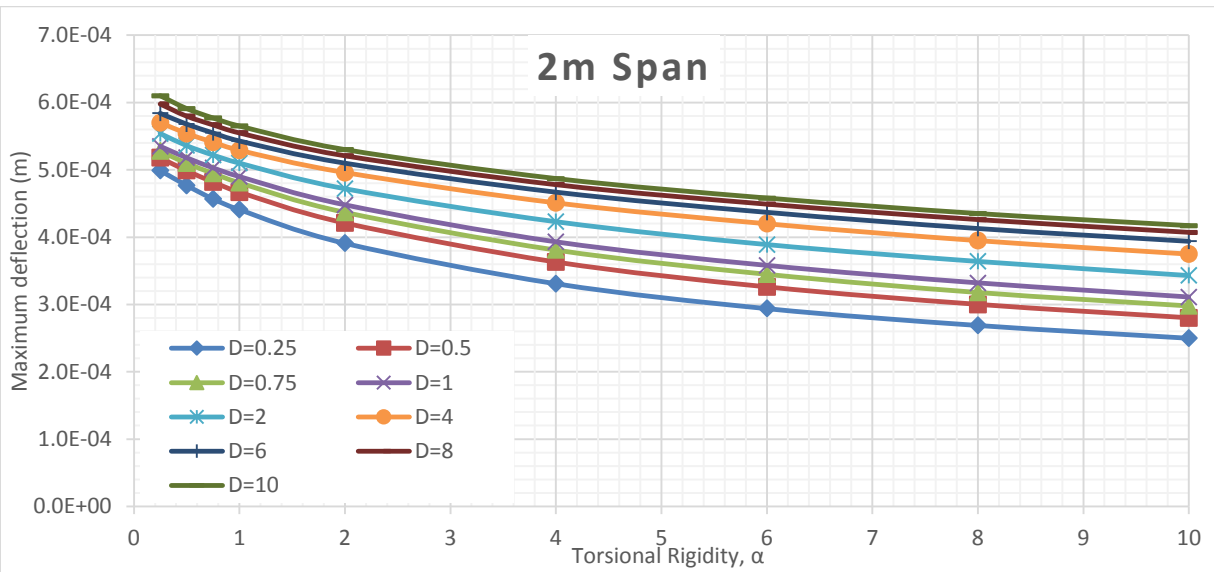


Figure 242 Maximum deflection of 2 m span slab subjected to CHBDC axle 2 & 3 for different D values FEA analyses

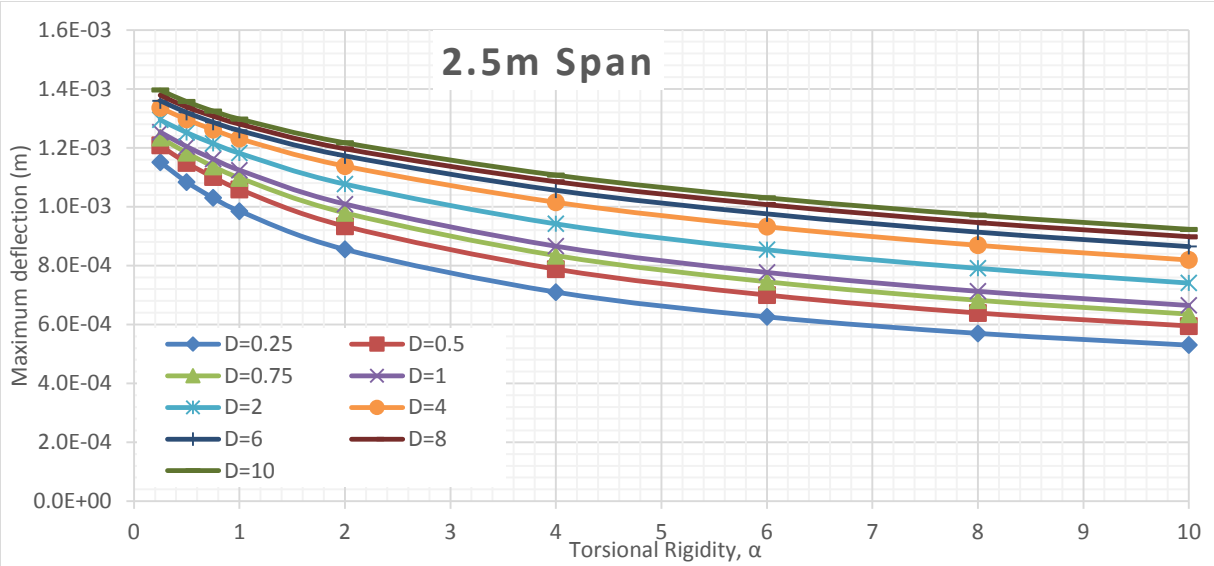


Figure 243 Maximum deflection of 2.5 m span slab subjected to CHBDC axle 2 & 3 for different D values FEA analyses

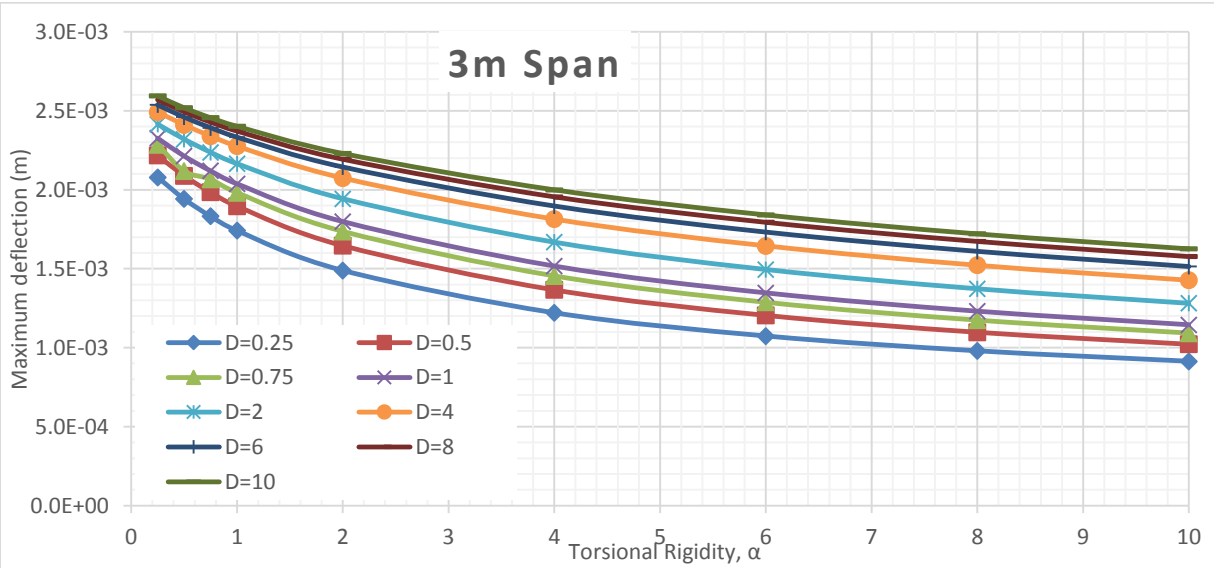


Figure 244 Maximum deflection of 3 m span slab subjected to CHBDC axle 2 & 3 for different D values FEA analyses

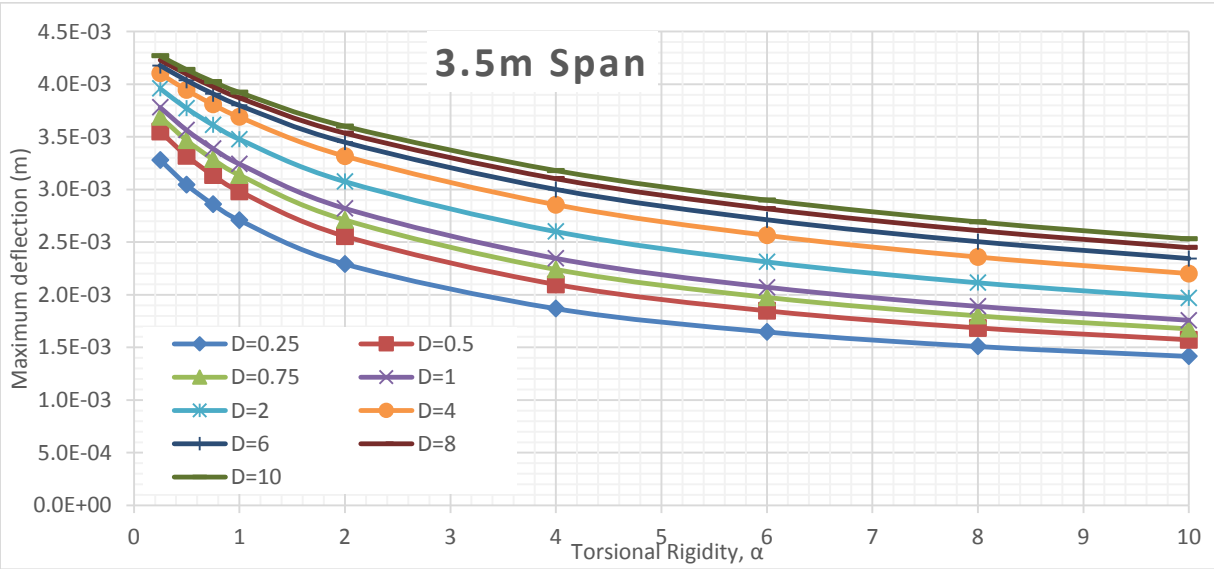


Figure 245 Maximum deflection of 3.5 m span slab subjected to CHBDC axle 2 & 3 for different D values FEA analyses

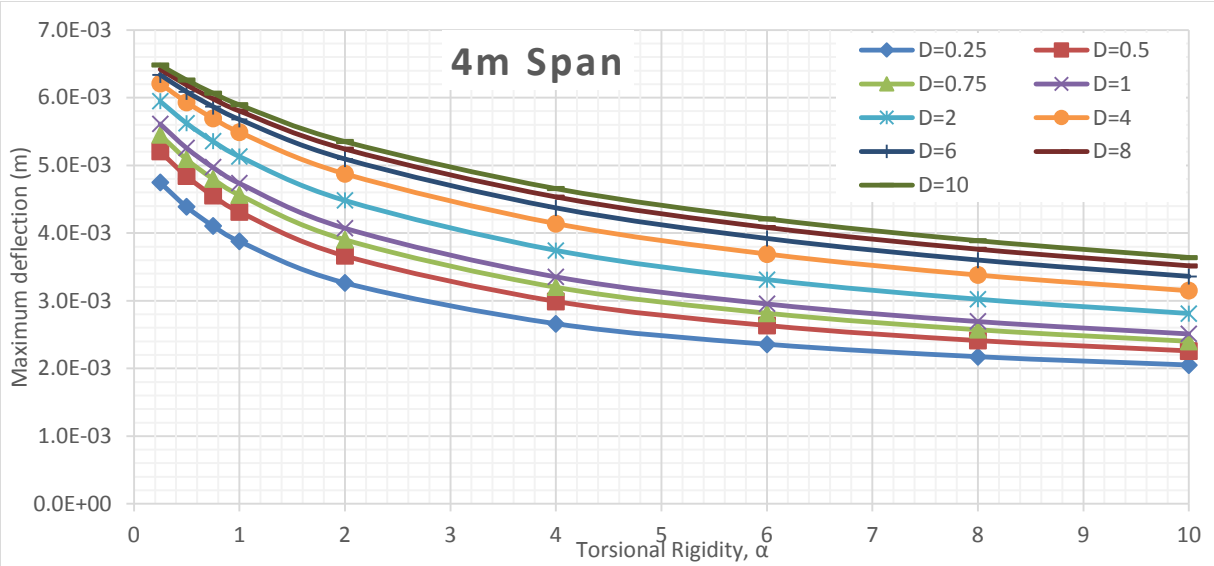


Figure 246 Maximum deflection of 4 m span slab subjected to CHBDC axle 2 & 3 for different D values FEA analyses

C.1 Orthotropic Plate Results (Bending Moment)

C.1.1 BENDING MOMENT RESULTS TABLES

Alpha 0.25 Bending Moment Results

Table 100 Maximum moment results for alpha 0.25 for slabs subjected to CHBDC axle 4 loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4	1	10.6531	12.6182	13.9219	14.9219	17.6071	20.7121	22.7347	24.2641	25.5045
	1.5	13.2693	15.7350	17.3755	18.6367	22.0377	26.0017	28.6054	30.5875	32.2043
	2	15.0973	17.9095	19.7829	21.2245	25.1184	29.6711	32.6714	34.9613	36.8334
	2.5	16.5026	19.5815	21.6336	23.2137	27.4856	32.4890	35.7922	38.3171	40.3837
	3	17.6847	20.9810	23.1787	24.8712	29.4500	34.8189	38.3678	41.0830	43.3071
	3.5	18.6093	22.0867	24.4064	26.1936	31.0311	36.7085	40.4645	43.3401	45.6970
	4	20.3552	24.1740	26.7240	28.6899	34.0167	40.2787	44.4278	47.6081	50.2171

Table 101 Maximum moment results for alpha 0.25 for slabs subjected to CHBDC axle 2 & 3 loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2and 3	1	8.7636	9.6574	10.3032	10.8366	12.4384	14.5446	16.0071	17.1361	18.0576
	1.5	12.7447	14.0553	14.8602	15.4607	17.0786	19.1038	20.5689	21.7625	22.7838
	2	15.6482	17.5075	18.6380	19.4593	21.5206	23.7771	25.2590	26.4191	27.3969
	2.5	17.8350	20.1526	21.5859	22.6346	25.2618	28.0373	29.7533	31.0316	32.0695
	3	19.6050	22.2905	23.9741	25.2169	28.3642	31.7073	33.7500	35.2426	36.4298
	3.5	21.0239	24.0096	25.8996	27.3043	30.8980	34.7641	37.1384	38.8700	40.2402
	4	23.7373	27.2879	29.5570	31.2521	35.6101	40.3027	43.1688	45.2446	46.8757

Table 102 Maximum moment results for alpha 0.25 for slabs subjected to CHBDC axle 4 loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
TRUCK	1	10.6530	12.6181	13.9219	14.9219	17.6071	20.7121	22.7347	24.2641	25.5045
	1.5	13.2754	15.7387	17.3766	18.6369	22.0376	26.0017	28.6054	30.5875	32.2043
	2	15.4544	17.9019	19.7905	21.2336	25.1212	29.6710	32.6712	34.9613	36.8334
	2.5	17.6051	19.8886	21.5612	23.1841	27.4966	32.4950	35.7939	38.3173	40.3835
	3	19.6537	22.0213	23.6470	24.8950	29.4088	34.8316	38.3801	41.0908	43.3116
	3.5	21.6717	24.0091	25.6620	26.9682	30.8198	36.6732	40.4715	43.3562	45.7128
	4	25.4447	27.9188	29.6869	31.1094	35.1236	40.0663	44.3510	47.5898	50.2245

Table 103 Maximum moment results for alpha 0.25 for slabs subjected to CHBDC axle 4 loading (main bars Parallel to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4 Transverse	1	16.1817	17.2642	18.0625	18.7148	20.6504	23.1358	24.5653	25.5507	26.2932
	1.5	23.4737	24.4885	25.1583	25.6871	27.2180	29.2436	30.7122	31.8879	32.9559
	2	30.2947	31.6613	32.4366	32.9956	34.4509	36.2083	37.4586	38.4763	39.3517
	2.5	36.3073	38.3104	39.3744	40.0952	41.7865	43.5647	44.7308	45.6474	46.4232
	3	41.4484	44.2200	45.6904	46.6682	48.8444	50.8946	52.1190	53.0330	53.7819
	3.5	45.8113	49.3669	51.2946	52.5833	55.4191	57.9481	59.3540	60.3514	61.1392

Table 104 Maximum moment results for alpha 0.25 for slabs subjected to CHBDC axle 2 & 3 loading (main bars Parallel to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2&3 Transverse	1.5	7.4724	8.0104	8.3157	8.5263	9.0125	9.4780	9.7487	9.9428	10.1056
	2	17.6176	18.5841	19.1669	19.5942	20.6912	21.9237	22.7326	23.3566	23.8736
	2.5	26.8916	28.3609	29.1298	29.6453	30.8403	32.0897	32.9149	33.5694	34.1272
	3	34.9848	37.3503	38.5559	39.3294	40.9478	42.3485	43.1599	43.7717	44.2833
	3.5	41.8302	45.2359	47.0211	48.1772	50.5678	52.4638	53.4246	54.0833	54.6005
	4	47.6380	52.0864	54.4965	56.0899	59.4590	62.1346	63.4222	64.2481	64.8579

Alpha 0.5 Bending Moment Results

Table 105 Maximum moment results for alpha 0.5 for slabs subjected to CHBDC axle 4 loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4	1	9.7254	11.5197	12.7104	13.6238	16.0774	18.9172	20.7690	22.1707	23.3085
	1.5	12.1131	14.3643	15.8624	17.0143	20.1212	23.7447	26.1266	27.9412	29.4223
	2	13.7821	16.3498	18.0603	19.3768	22.9337	27.0946	29.8385	31.9340	33.6480
	2.5	15.0649	17.8759	19.7498	21.1927	25.0947	29.6670	32.6874	34.9974	36.8890
	3	16.1455	19.1555	21.1625	22.7083	26.8909	31.7971	35.0419	37.5256	39.5611
	3.5	16.9885	20.1633	22.2813	23.9133	28.3314	33.5188	36.9525	39.5826	41.7391
	4	18.5805	22.0662	24.3939	26.1885	31.0521	36.7719	40.5639	43.4716	45.8581

Table 106 Maximum moment results for alpha 0.5 for slabs subjected to CHBDC axle 2 & 3 loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2and 3	1	8.2888	9.1597	9.7658	10.2543	11.6789	13.5113	14.7821	15.7694	16.5811
	1.5	11.8786	13.1635	13.9583	14.5508	16.1273	18.0334	19.3689	20.4376	21.3426
	2	14.4974	16.2673	17.3531	18.1469	20.1552	22.3597	23.7922	24.8985	25.8193
	2.5	16.4809	18.6578	20.0107	21.0049	23.5145	26.1970	27.8669	29.1115	30.1195
	3	18.0924	20.5998	22.1761	23.3426	26.3113	29.4948	31.4579	32.9005	34.0519
	3.5	19.3845	22.1626	23.9243	25.2356	28.6008	32.2452	34.5000	36.1538	37.4683
	4	21.8504	25.1352	27.2360	28.8070	32.8577	37.2527	39.9621	41.9391	43.5018

Table 107 Maximum moment results for alpha 0.5 for slabs subjected to CHBDC axle 4 loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
TRUCK	1	9.7255	11.5197	12.7104	13.6238	16.0774	18.9172	20.7690	22.1707	23.3085
	1.5	12.1077	14.3645	15.8628	17.0146	20.1212	23.7447	26.1266	27.9412	29.4223
	2	14.4576	16.3271	18.0516	19.3736	22.9343	27.0948	29.8385	31.9340	33.6480
	2.5	16.6160	18.6288	19.9475	21.1517	25.0862	29.6674	32.6881	34.9978	36.8893
	3	18.6732	20.7786	22.2110	23.3136	26.8384	31.7857	35.0399	37.5260	39.5620
	3.5	20.6482	22.7804	24.2532	25.4073	28.5525	33.4646	36.9287	39.5721	41.7348
	4	24.2904	26.5967	28.1967	29.4636	32.9930	37.1580	40.4757	43.4176	45.8247

Table 108 Maximum moment results for alpha 0.5 for slabs subjected to CHBDC axle 4 loading (main bars Parallel to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4 Transverse	1	15.7174	16.7180	17.4316	18.0050	19.6286	21.5675	22.8219	23.7721	24.4975
	1.5	22.6609	23.7370	24.4173	24.9391	26.3912	28.2245	29.5174	30.5410	31.3951
	2	28.9365	30.4437	31.2946	31.8989	33.4193	35.1541	36.3370	37.2764	38.0713
	2.5	34.3818	36.5251	37.6915	38.4876	40.3465	42.2347	43.4219	44.3290	45.0810
	3	39.0172	41.8715	43.4316	44.4876	46.8794	49.1362	50.4539	51.4146	52.1860
	3.5	42.9527	46.5100	48.4893	49.8374	52.8808	55.6664	57.2183	58.3079	59.1572

Table 109 Maximum moment results for alpha 0.5 for slabs subjected to CHBDC axle 2 & 3 loading (main bars Parallel to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2&3 Transverse	1.5	7.0958	7.6159	7.9173	8.1283	8.6242	9.1049	9.3824	9.5792	9.7320
	2	16.8469	17.8396	18.4303	18.8589	19.9432	21.1373	21.9079	22.4951	22.9769
	2.5	25.4483	27.0294	27.8812	28.4585	29.7938	31.1399	31.9875	32.6380	33.1798
	3	32.8157	35.2704	36.5756	37.4385	39.3149	40.9820	41.9245	42.6084	43.1607
	3.5	39.0068	42.4219	44.2769	45.5128	48.1887	50.4571	51.6421	52.4483	53.0683
	4	44.2532	48.6093	51.0362	52.6779	56.2918	59.3693	60.9360	61.9643	62.7271

Alpha 0.75 Bending Moment Results

Table 110 Maximum moment results for alpha 0.75 for slabs subjected to CHBDC axle 4 loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4	1	9.0044	10.6661	11.7688	12.6150	14.8887	17.5223	19.2413	20.5436	21.6016
	1.5	11.2145	13.2991	14.6865	15.7534	18.6318	21.9907	24.2001	25.8844	27.2598
	2	12.7600	15.1375	16.7216	17.9409	21.2359	25.0922	27.6367	29.5810	31.1721
	2.5	13.9475	16.5504	18.2857	19.6220	23.2365	27.4737	30.2743	32.4171	34.1726
	3	14.9492	17.7367	19.5954	21.0272	24.9018	29.4485	32.4568	34.7606	36.6492
	3.5	15.7287	18.6684	20.6298	22.1412	26.2334	31.0400	34.2230	36.6621	38.6627
	4	17.2014	20.4282	22.5832	24.2448	28.7485	34.0470	37.5612	40.2571	42.4703

Table 111 Maximum moment results for alpha 0.75 for slabs subjected to CHBDC axle 2 & 3 loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2and 3	1	7.8972	8.7472	9.3239	9.7804	11.0818	12.7233	13.8577	14.7413	15.4709
	1.5	11.1909	12.4489	13.2305	13.8127	15.3487	17.1631	18.4056	19.3865	20.2103
	2	13.5919	15.2887	16.3364	17.1058	19.0623	21.2126	22.6001	23.6618	24.5382
	2.5	15.4180	17.4833	18.7721	19.7222	22.1337	24.7321	26.3566	27.5675	28.5466
	3	16.9064	19.2735	20.7652	21.8713	24.6972	27.7490	29.6429	31.0399	32.1574
	3.5	18.0999	20.7150	22.3758	23.6136	26.7985	30.2656	32.4226	34.0112	35.2777
	4	20.3740	23.4517	25.4215	26.8960	30.7071	34.8663	37.4481	39.3419	40.8453

Table 112 Maximum moment results for alpha 0.75 for slabs subjected to CHBDC axle 4 loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
TRUCK	1	9.0044	10.6661	11.7688	12.6150	14.8887	17.5223	19.2413	20.5436	21.6016
	1.5	11.2112	13.2981	14.6861	15.7532	18.6318	21.9907	24.2001	25.8844	27.2598
	2	13.7028	15.3180	16.7168	17.9376	21.2351	25.0921	27.6367	29.5810	31.1721
	2.5	15.8494	17.6718	18.8724	19.7803	23.2309	27.4721	30.2738	32.4169	34.1725
	3	17.8906	19.8143	21.1118	22.1108	24.8950	29.4415	32.4530	34.7584	36.6480
	3.5	19.8188	21.8037	23.1513	24.1998	27.0506	31.0308	34.2132	36.6546	38.6573
	4	23.3475	25.5288	27.0097	28.1684	31.3621	35.1301	37.5784	40.2433	42.4572

Table 113 Maximum moment results for alpha 0.75 for slabs subjected to CHBDC axle 4 loading (main bars Parallel to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4 Transverse	1	15.3270	16.2728	16.9280	17.4469	18.8972	20.6236	21.7386	22.5623	23.2129
	1.5	21.9670	23.0934	23.7858	24.3057	25.7077	27.4096	28.5818	29.5008	30.2642
	2	27.8095	29.4147	30.3216	30.9612	32.5379	34.2670	35.4065	36.2932	37.0331
	2.5	32.8202	35.0520	36.2872	37.1359	39.1182	41.0963	42.3068	43.2126	43.9515
	3	37.0715	39.9680	41.5830	42.6896	45.2284	47.6369	49.0284	50.0289	50.8220
	3.5	40.6808	44.2204	46.2251	47.6075	50.7830	53.7452	55.4037	56.5634	57.4613

Table 114 Maximum moment results for alpha 0.75 for slabs subjected to CHBDC axle 2 & 3 loading (main bars Parallel to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2&3 Transverse	1.5	6.8001	7.3042	7.6006	7.8101	8.3090	8.7977	9.0798	9.2789	9.4329
	2	16.2121	17.2237	17.8214	18.2522	19.3301	20.4974	21.2398	21.8001	22.2562
	2.5	24.2783	25.9301	26.8377	27.4581	28.8962	30.3203	31.1904	31.8428	32.3765
	3	31.0849	33.5872	34.9546	35.8757	37.9278	39.7879	40.8311	41.5738	42.1617
	3.5	36.7743	40.1742	42.0662	43.3500	46.2108	48.7357	50.0823	50.9988	51.6979
	4	41.5906	45.8543	48.2770	49.9416	53.7033	57.0473	58.8073	59.9800	60.8544

Alpha 1 Bending Moment Results

Table 115 Maximum moment results for alpha 1 for slabs subjected to CHBDC axle 4 loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4	1	8.4232	9.9780	11.0099	11.8019	13.9306	16.3979	18.0098	19.2319	20.2254
	1.5	10.4902	12.4405	13.7387	14.7370	17.4313	20.5768	22.6472	24.2262	25.5163
	2	11.9361	14.1604	15.6426	16.7835	19.8673	23.4781	25.8619	27.6841	29.1759
	2.5	13.0468	15.4819	17.1055	18.3560	21.7387	25.7058	28.3291	30.3371	31.9826
	3	13.9848	16.5929	18.3322	19.6721	23.2984	27.5552	30.3729	32.5314	34.3016
	3.5	14.7133	17.4635	19.2986	20.7127	24.5423	29.0418	32.0228	34.3078	36.1827
	4	16.0897	19.1080	21.1238	22.6782	26.8919	31.8509	35.1411	37.6660	39.7396

Table 116 Maximum moment results for alpha 1 for slabs subjected to CHBDC axle 2 & 3 loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2and 3	1	7.5657	8.3968	8.9505	9.3830	10.5940	12.0957	13.1281	13.9330	14.5989
	1.5	10.6258	11.8574	12.6247	13.1959	14.6940	16.4347	17.6068	18.5227	19.2866
	2	12.8537	14.4889	15.5035	16.2510	18.1584	20.2563	21.6031	22.6273	23.4676
	2.5	14.5534	16.5271	17.7628	18.6760	21.0037	23.5261	25.1077	26.2867	27.2387
	3	15.9426	18.1952	19.6177	20.6743	23.3820	26.3220	28.1550	29.5108	30.5968
	3.5	17.0566	19.5391	21.1177	22.2956	25.3330	28.6533	30.7278	32.2603	33.4849
	4	19.1767	22.0869	23.9509	25.3473	28.9643	32.9300	35.4047	37.2273	38.6787

Table 117 Maximum moment results for alpha 1 for slabs subjected to CHBDC axle 4 loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
TRUCK	1	8.4233	9.9780	11.0099	11.8019	13.9306	16.3979	18.0098	19.2319	20.2254
	1.5	10.8212	12.4426	13.7394	14.7374	17.4313	20.5768	22.6472	24.2262	25.5163
	2	13.4673	14.8776	15.7842	16.7917	19.8689	23.4784	25.8619	27.6842	29.1759
	2.5	15.7607	17.3960	18.4497	19.2444	21.7544	25.7092	28.3303	30.3375	31.9828
	3	17.8490	19.6766	20.8553	21.7451	24.0863	27.5757	30.3816	32.5358	34.3041
	3.5	19.7241	21.7184	23.0052	23.9771	26.5371	29.4360	32.0589	34.3283	36.1954
	4	23.4837	25.7823	27.2557	28.3650	31.2766	34.5622	36.6748	38.2645	39.7895

Table 118 Maximum moment results for alpha 1 for slabs subjected to CHBDC axle 4 loading (main bars Parallel to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4 Transverse	1	14.9893	15.8975	16.5110	16.9907	18.3153	19.8839	20.9027	21.6614	22.2654
	1.5	21.3623	22.5298	23.2343	23.7550	25.1249	26.7337	27.8195	28.6630	29.3605
	2	26.8500	28.5257	29.4750	30.1424	31.7670	33.4992	34.6105	35.4608	36.1620
	2.5	31.5146	33.8033	35.0863	35.9728	38.0481	40.0999	41.3331	42.2418	42.9741
	3	35.4618	38.3772	40.0265	41.1665	43.8087	46.3312	47.7817	48.8159	49.6285
	3.5	38.8123	42.3240	44.3389	45.7410	49.0027	52.0903	53.8285	55.0424	55.9791

Table 119 Maximum moment results for alpha 1 for slabs subjected to CHBDC axle 2 & 3 loading (main bars Parallel to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2&3 Transverse	1.5	6.5593	7.0491	7.3402	7.5474	8.0455	8.5381	8.8231	9.0240	9.1791
	2	15.6747	16.6997	17.3031	17.7363	18.8112	19.9592	20.6805	21.2204	21.6573
	2.5	23.3006	24.9981	25.9445	26.5957	28.1111	29.5984	30.4898	31.1469	31.6771
	3	29.6571	32.1824	33.5895	34.5497	36.7258	38.7298	39.8520	40.6429	41.2615
	3.5	34.9466	38.3185	40.2281	41.5409	44.5251	47.2331	48.6999	49.7010	50.4623
	4	39.4206	43.5951	46.0024	47.6753	51.5267	55.0531	56.9520	58.2310	59.1894

Alpha 2 Bending Moment Results

Table 120 Maximum moment results for alpha 2 for slabs subjected to CHBDC axle 4 loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4	1	6.8788	8.1494	8.9932	9.6411	11.3844	13.4096	14.7363	15.7445	16.5658
	1.5	8.5654	10.1588	11.2198	12.0362	14.2408	16.8190	18.5191	19.8178	20.8804
	2	9.7465	11.5637	12.7749	13.7077	16.2304	19.1883	21.1441	22.6412	23.8683
	2.5	10.6532	12.6425	13.9692	14.9914	17.7582	21.0070	23.1585	24.8072	26.1598
	3	11.4214	13.5527	14.9744	16.0700	19.0365	22.5226	24.8332	26.6050	28.0595
	3.5	12.0145	14.2611	15.7606	16.9164	20.0479	23.7313	26.1746	28.0494	29.5891
	4	13.1357	15.6000	17.2461	18.5157	21.9590	26.0154	28.7101	30.7799	32.4812

Table 121 Maximum moment results for alpha 2 for slabs subjected to CHBDC axle 2 & 3 loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2and 3	1	6.6070	7.3779	7.8727	8.2481	9.2547	10.4428	11.2408	11.8594	12.3712
	1.5	9.0670	10.2046	10.9177	11.4478	12.8220	14.3660	15.3688	16.1334	16.7604
	2	10.8466	12.3031	13.2174	13.8956	15.6390	17.5587	18.7788	19.6950	20.4378
	2.5	12.2138	13.9340	15.0204	15.8285	17.9081	20.1900	21.6291	22.7019	23.5660
	3	13.3397	15.2799	16.5125	17.4323	19.8084	22.4220	24.0686	25.2932	26.2771
	3.5	14.2429	16.3653	17.7206	18.7353	21.3675	24.2763	26.1126	27.4785	28.5754
	4	15.9563	18.4170	19.9977	21.1850	24.2783	27.7103	29.8792	31.4917	32.7851

Table 122 Maximum moment results for alpha 2 for slabs subjected to CHBDC axle 4 loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
TRUCK	1	6.8872	8.1517	8.9941	9.6416	11.3845	13.4096	14.7363	15.7445	16.5658
	1.5	9.3107	10.3401	11.2509	12.0563	14.2468	16.8204	18.5196	19.8180	20.8805
	2	11.5495	12.7672	13.5656	14.1734	16.2848	19.2071	21.1533	22.6465	23.8715
	2.5	13.5620	14.9218	15.8150	16.4972	18.3206	21.0972	23.2098	24.8403	26.1827
	3	15.4448	16.9332	17.9059	18.6481	20.6352	22.9346	24.9964	26.7192	28.1442
	3.5	17.1623	18.7745	19.8197	20.6146	22.7384	25.1998	26.8149	28.3272	29.8056
	4	20.2705	22.1221	23.3109	24.2112	26.6077	29.3818	31.2049	32.5953	33.7315

Table 123 Maximum moment results for alpha 2 for slabs subjected to CHBDC axle 4 loading (main bars Parallel to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4 Transverse	1	13.9584	14.8002	15.3301	15.7286	16.7834	17.9960	18.7852	19.3807	19.8621
	1.5	19.5159	20.7881	21.5320	22.0649	23.3889	24.8159	25.7225	26.4059	26.9615
	2	24.0394	25.8550	26.8985	27.6318	29.3860	31.1586	32.2284	33.0124	33.6391
	2.5	27.8022	30.1721	31.5421	32.5039	34.7836	37.0225	38.3286	39.2622	39.9945
	3	30.9649	33.8574	35.5482	36.7413	39.5787	42.3509	43.9453	45.0691	45.9395
	3.5	33.6458	37.0162	39.0087	40.4240	43.8145	47.1444	49.0553	50.3950	51.4263

Table 124 Maximum moment results for alpha 2 for slabs subjected to CHBDC axle 2 & 3 loading (main bars Parallel to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2&3 Transverse	1.5	5.9041	6.3502	6.6213	6.8173	7.2993	7.7892	8.0768	8.2804	8.4379
	2	14.1119	15.1607	15.7770	16.2166	17.2900	18.3992	19.0742	19.5685	19.9621
	2.5	20.5228	22.2870	23.3045	24.0175	25.7022	27.3487	28.3055	28.9883	29.5232
	3	25.6918	28.2036	29.6644	30.6901	33.1058	35.4246	36.7365	37.6516	38.3553
	3.5	29.9408	33.1596	35.0569	36.3990	39.5855	42.6576	44.3871	45.5832	46.4945
	4	33.5248	37.3891	39.6959	41.3409	45.2875	49.1384	51.3177	52.8247	53.9704

Alpha 4 Bending Moment Results

Table 125 Maximum moment results for alpha 4 for slabs subjected to CHBDC axle 4 loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4	1	5.3299	6.3156	6.9708	7.4742	8.8308	10.4117	11.4509	12.2429	12.8897
	1.5	6.6352	7.8708	8.6940	9.3277	11.0411	13.0491	14.3764	15.3922	16.2248
	2	7.5507	8.9596	9.8992	10.6231	12.5828	14.8847	16.4099	17.5792	18.5390
	2.5	8.2528	9.7950	10.8241	11.6172	13.7660	16.2933	17.9699	19.2567	20.3136
	3	8.8500	10.5029	11.6061	12.4565	14.7608	17.4729	19.2732	20.6557	21.7917
	3.5	9.3078	11.0495	12.2124	13.1090	15.5403	18.4041	20.3067	21.7684	22.9702
	4	10.1739	12.0830	13.3586	14.3429	17.0138	20.1645	22.2605	23.8724	25.1985

Table 126 Maximum moment results for alpha 4 for slabs subjected to CHBDC axle 2 & 3 loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2and 3	1	5.5101	6.2023	6.6378	6.9624	7.8057	8.7551	9.3717	9.8415	10.2265
	1.5	7.3942	8.3982	9.0310	9.5016	10.7150	12.0540	12.9042	13.5415	14.0570
	2	8.7441	9.9916	10.7824	11.3722	12.8967	14.5791	15.6434	16.4375	17.0771
	2.5	9.7852	11.2289	12.1488	12.8368	14.6219	16.5989	17.8513	18.7857	19.5378
	3	10.6487	12.2570	13.2859	14.0574	16.0654	18.2980	19.7157	20.7744	21.6269
	3.5	11.3416	13.0861	14.2061	15.0479	17.2455	19.6987	21.2607	22.4288	23.3703
	4	12.6527	14.6511	15.9403	16.9120	19.4590	22.3159	24.1404	25.5069	26.6091

Table 127 Maximum moment results for alpha 4 for slabs subjected to CHBDC axle 4 loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
TRUCK	1	5.6373	6.3420	6.9856	7.4836	8.8335	10.4123	11.4511	12.2430	12.8898
	1.5	7.9687	8.7940	9.3366	9.7508	11.0998	13.0715	14.3880	15.3992	16.2293
	2	9.9897	10.9586	11.5911	12.0737	13.3662	15.0227	16.4959	17.6386	18.5825
	2.5	11.8008	12.9088	13.6225	14.1635	15.6043	17.2727	18.3700	19.4729	20.4839
	3	13.4628	14.7150	15.5114	16.1106	17.6916	19.5066	20.6973	21.6069	22.3518
	3.5	14.9472	16.3431	17.2221	17.8791	19.5973	21.5492	22.8226	23.7933	24.5880
	4	17.6336	19.2869	20.3159	21.0793	23.0558	25.2746	26.7124	27.8054	28.6990

Table 128 Maximum moment results for alpha 4 for slabs subjected to CHBDC axle 4 loading (main bars Parallel to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4 Transverse	1	12.6364	13.4641	13.9550	14.3094	15.1979	16.1603	16.7703	17.2282	17.5990
	1.5	17.2075	18.5564	19.3409	19.8955	21.2305	22.5800	23.3884	23.9759	24.4419
	2	20.7374	22.6006	23.6941	24.4692	26.3280	28.1728	29.2494	30.0153	30.6123
	2.5	23.6222	25.9510	27.3348	28.3222	30.7071	33.0825	34.4627	35.4376	36.1921
	3	26.0318	28.7741	30.4213	31.6044	34.4871	37.3865	39.0782	40.2735	41.1974
	3.5	28.0689	31.1772	33.0611	34.4220	37.7649	41.1631	43.1596	44.5748	45.6701

Table 129 Maximum moment results for alpha 4 for slabs subjected to CHBDC axle 2 & 3 loading (main bars Parallel to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2&3 Transverse	1.5	5.2097	5.6048	5.8477	6.0253	6.4697	6.9339	7.2124	7.4121	7.5679
	2	12.2858	13.3307	13.9490	14.3903	15.4626	16.5500	17.1959	17.6604	18.0248
	2.5	17.4011	19.1360	20.1668	20.9019	22.6757	24.4384	25.4601	26.1805	26.7372
	3	21.3919	23.7611	25.1866	26.2106	28.7013	31.1927	32.6360	33.6499	34.4297
	3.5	24.6315	27.5615	29.3447	30.6349	33.8047	37.0156	38.8902	40.2112	41.2285
	4	27.3547	30.7793	32.8832	34.4147	38.2111	42.1051	44.3999	46.0256	47.2816

Alpha 6 Bending Moment Results

Table 130 Maximum moment results for alpha 6 for slabs subjected to CHBDC axle 4 loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4	1	4.5057	5.3399	5.8946	6.3211	7.4717	8.8153	9.7004	10.3763	10.9292
	1.5	5.6083	6.6534	7.3501	7.8866	9.3382	11.0419	12.1697	13.0340	13.7430
	2	6.3823	7.5740	8.3691	8.9818	10.6415	12.5935	13.8885	14.8823	15.6986
	2.5	6.9756	8.2799	9.1506	9.8218	11.6414	13.7838	15.2067	16.2997	17.1982
	3	7.4814	8.8797	9.8133	10.5331	12.4847	14.7838	16.3116	17.4858	18.4513
	3.5	7.8676	9.3405	10.3243	11.0830	13.1414	15.5681	17.1820	18.4229	19.4437
	4	8.5982	10.2121	11.2908	12.1232	14.3831	17.0513	18.8278	20.1949	21.3204

Table 131 Maximum moment results for alpha 6 for slabs subjected to CHBDC axle 2 & 3 loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2and 3	1	4.8589	5.4984	5.8997	6.1973	6.9634	7.8097	8.3497	8.7564	9.0869
	1.5	6.4448	7.3584	7.9364	8.3669	9.4772	10.6984	11.4692	12.0438	12.5065
	2	7.5745	8.6938	9.4069	9.9402	11.3231	12.8529	13.8209	14.5423	15.1227
	2.5	8.4461	9.7288	10.5500	11.1660	12.7703	14.5553	15.6890	16.5357	17.2175
	3	9.1716	10.5910	11.5030	12.1886	13.9801	15.9822	17.2580	18.2127	18.9825
	3.5	9.7533	11.2857	12.2730	13.0169	14.9656	17.1520	18.5494	19.5971	20.4429
	4	10.8534	12.5971	13.7253	14.5776	16.8189	19.3464	20.9681	22.1865	23.1716

Table 132 Maximum moment results for alpha 6 for slabs subjected to CHBDC axle 4 loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
TRUCK	1	5.0846	5.6385	6.0006	6.3525	7.4834	8.8188	9.7020	10.3771	10.9296
	1.5	7.2496	7.9649	8.4336	8.7916	9.7496	11.1106	12.2106	13.0612	13.7624
	2	9.1263	9.9817	10.5335	10.9521	12.0677	13.3597	14.2090	15.0405	15.8227
	2.5	10.7880	11.7871	12.4212	12.8977	14.1535	15.5936	16.5380	17.2594	17.8503
	3	12.2923	13.4411	14.1612	14.6978	16.0957	17.6766	18.7054	19.4889	20.1301
	3.5	13.6193	14.9157	15.7215	16.3183	17.8586	19.5781	20.6870	21.5279	22.2141
	4	16.0273	17.5846	18.5432	19.2481	21.0478	23.0275	24.2916	25.2452	26.0209

Table 133 Maximum moment results for alpha 6 for slabs subjected to CHBDC axle 4 loading (main bars Parallel to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4 Transverse	1	11.7517	12.5899	13.0781	13.4252	14.2720	15.1533	15.6965	16.0986	16.4218
	1.5	15.7256	17.0900	17.8885	18.4537	19.8088	21.1569	21.9473	22.5122	22.9542
	2	18.7184	20.5549	21.6468	22.4263	24.3105	26.1898	27.2828	28.0554	28.6536
	2.5	21.1461	23.3907	24.7428	25.7159	28.0940	30.4959	31.9013	32.8958	33.6650
	3	23.1679	25.7661	27.3469	28.4920	31.3171	34.2073	35.9137	37.1266	38.0671
	3.5	24.8737	27.7805	29.5628	30.8607	34.0875	37.4257	39.4138	40.8343	41.9396

Table 134 Maximum moment results for alpha 6 for slabs subjected to CHBDC axle 2 & 3 loading (main bars Parallel to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2&3 Transverse	1.5	4.8121	5.1787	5.4042	5.5694	5.9852	6.4249	6.6917	6.8847	7.0361
	2	11.1665	12.1917	12.8023	13.2395	14.3041	15.3821	16.0189	16.4740	16.8293
	2.5	15.5562	17.2269	18.2339	18.9589	20.7301	22.5173	23.5616	24.2996	24.8698
	3	18.9249	21.1553	22.5179	23.5069	25.9504	28.4491	29.9201	30.9625	31.7683
	3.5	21.6418	24.3520	26.0252	27.2481	30.2996	33.4639	35.3467	36.6889	37.7306
	4	23.9207	27.0476	28.9935	30.4233	34.0198	37.7941	40.0617	41.6882	42.9562

Alpha 8 Bending Moment Results

Table 135 Maximum moment results for alpha 8 for slabs subjected to CHBDC axle 4 loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4	1	3.9745	4.7110	5.2010	5.5779	6.5955	7.7856	8.5709	9.1713	9.6630
	1.5	4.9465	5.8689	6.4839	6.9577	8.2404	9.7474	10.7462	11.5122	12.1411
	2	5.6293	6.6810	7.3828	7.9239	9.3901	11.1160	12.2620	13.1422	13.8656
	2.5	6.1525	7.3035	8.0720	8.6646	10.2717	12.1656	13.4244	14.3920	15.1877
	3	6.5993	7.8334	8.6575	9.2931	11.0171	13.0495	14.4011	15.4404	16.2954
	3.5	6.9393	8.2390	9.1073	9.7772	11.5949	13.7395	15.1667	16.2647	17.1683
	4	7.5828	9.0065	9.9583	10.6928	12.6878	15.0446	16.6147	17.8236	18.8192

Table 136 Maximum moment results for alpha 8 for slabs subjected to CHBDC axle 2 & 3 loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2and 3	1	4.4100	5.0101	5.3869	5.6663	6.3829	7.1682	7.6646	8.0358	8.3359
	1.5	5.8059	6.6528	7.1904	7.5914	8.6271	9.7665	10.4846	11.0189	11.4482
	2	6.7967	7.8253	8.4830	8.9757	10.2566	11.6770	12.5768	13.2476	13.7871
	2.5	7.5609	8.7326	9.4852	10.0509	11.5280	13.1766	14.2259	15.0102	15.6422
	3	8.1981	9.4895	10.3216	10.9484	12.5902	14.4312	15.6072	16.4883	17.1995
	3.5	8.7087	10.0984	10.9963	11.6738	13.4531	15.4558	16.7391	17.7025	18.4812
	4	9.6741	11.2485	12.2696	13.0421	15.0782	17.3821	18.8643	19.9799	20.8833

Table 137 Maximum moment results for alpha 8 for slabs subjected to CHBDC axle 4 loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
TRUCK	1	4.7224	5.2199	5.5461	5.7943	6.6225	7.7953	8.5757	9.1741	9.6648
	1.5	6.7751	7.4228	7.8443	8.1654	9.0237	10.0170	10.8305	11.5719	12.1859
	2	8.5416	9.3315	9.8356	10.2156	11.2212	12.3787	13.1384	13.7186	14.1934
	2.5	10.0883	11.0252	11.6137	12.0528	13.1993	14.4992	15.3464	15.9921	16.5205
	3	11.4739	12.5622	13.2384	13.7392	15.0314	16.4738	17.4040	18.1093	18.6849
	3.5	12.6857	13.9210	14.6838	15.2458	16.6836	18.2681	19.2798	20.0426	20.6627
	4	14.8905	16.3852	17.3012	17.9720	19.6714	21.5163	22.6812	23.5537	24.2601

Table 138 Maximum moment results for alpha 8 for slabs subjected to CHBDC axle 4 loading (main bars Parallel to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4 Transverse	1	11.0875	11.9353	12.4270	12.7745	13.6115	14.4621	14.9754	15.3505	15.6495
	1.5	14.6502	16.0094	16.8104	17.3792	18.7462	20.1032	20.8929	21.4530	21.8884
	2	17.2942	19.0890	20.1655	20.9382	22.8193	24.7100	25.8130	26.5926	27.1954
	2.5	19.4306	21.5930	22.9067	23.8576	26.1999	28.5913	30.0010	31.0021	31.7779
	3	21.2068	23.6836	25.2023	26.3083	29.0584	31.9042	33.5992	34.8104	35.7527
	3.5	22.7032	25.4519	27.1494	28.3915	31.5026	34.7571	36.7131	38.1187	39.2168

Table 139 Maximum moment results for alpha 8 for slabs subjected to CHBDC axle 2 & 3 loading (main bars Parallel to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2&3 Transverse	1.5	4.5383	4.8870	5.1009	5.2576	5.6523	6.0719	6.3282	6.5145	6.6613
	2	10.3724	11.3760	11.9767	12.4081	13.4619	14.5315	15.1631	15.6138	15.9649
	2.5	14.2804	15.8881	16.8659	17.5740	19.3188	21.0999	22.1491	22.8936	23.4700
	3	17.2498	19.3637	20.6669	21.6187	23.9927	26.4549	27.9211	28.9673	29.7799
	3.5	19.6350	22.1755	23.7570	24.9196	27.8478	30.9279	32.7828	34.1155	35.1557
	4	21.6327	24.5402	26.3632	27.7100	31.1270	34.7620	36.9719	38.5696	39.8225

Alpha 10 Bending Moment Results

Table 140 Maximum moment results for alpha 10 for slabs subjected to CHBDC axle 4 loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4	1	3.5958	4.2626	4.7065	5.0480	5.9706	7.0508	7.7646	8.3108	8.7585
	1.5	4.4747	5.3095	5.8664	6.2954	7.4576	8.8240	9.7304	10.4260	10.9973
	2	5.0925	6.0443	6.6796	7.1695	8.4976	10.0620	11.1015	11.9002	12.5570
	2.5	5.5656	6.6073	7.3029	7.8395	9.2950	11.0113	12.1528	13.0305	13.7528
	3	5.9702	7.0872	7.8333	8.4088	9.9703	11.8122	13.0378	13.9806	14.7565
	3.5	6.2774	7.4537	8.2396	8.8460	10.4921	12.4352	13.7290	14.7247	15.5444
	4	6.8590	8.1471	9.0083	9.6731	11.4791	13.6135	15.0363	16.1320	17.0348

Table 141 Maximum moment results for alpha 10 for slabs subjected to CHBDC axle 2 & 3 loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2and 3	1	4.0745	4.6432	5.0009	5.2662	5.9465	6.6895	7.1567	7.5047	7.7849
	1.5	5.3356	6.1304	6.6364	7.0143	7.9922	9.0694	9.7483	10.2531	10.6584
	2	6.2287	7.1882	7.8033	8.2649	9.4672	10.8036	11.6512	12.2835	12.7922
	2.5	6.9172	8.0057	8.7066	9.2342	10.6146	12.1591	13.1439	13.8807	14.4748
	3	7.4920	8.6881	9.4607	10.0435	11.5729	13.2922	14.3924	15.2176	15.8842
	3.5	7.9521	9.2366	10.0682	10.6965	12.3496	14.2148	15.4121	16.3120	17.0399
	4	8.8223	10.2728	11.2153	11.9291	13.8140	15.9517	17.3298	18.3683	19.2100

Table 142 Maximum moment results for alpha 10 for slabs subjected to CHBDC axle 4 loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
TRUCK	1	4.4609	4.9170	5.2162	5.4444	6.0513	7.0700	7.7750	8.3173	8.7628
	1.5	6.4267	7.0288	7.4178	7.7131	8.5001	9.4100	10.0066	10.5268	11.0757
	2	8.1040	8.8508	9.3233	9.6776	10.6085	11.6719	12.3676	12.8985	13.3330
	2.5	9.5583	10.4540	11.0125	11.4270	12.5009	13.7062	14.4865	15.0793	15.5636
	3	10.8503	11.8973	12.5442	13.0213	14.2437	15.5941	16.4581	17.1102	17.6408
	3.5	11.9726	13.1646	13.8979	14.4364	15.8063	17.3015	18.2486	18.9590	19.5345
	4	14.0202	15.4676	16.3533	17.0006	18.6331	20.3902	21.4903	22.3097	22.9704

Table 143 Maximum moment results for alpha 10 for slabs subjected to CHBDC axle 4 loading (main bars Parallel to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4 Transverse	1	10.5576	11.4117	11.9073	12.2568	13.0941	13.9333	14.4322	14.7932	15.0788
	1.5	13.8149	15.1608	15.9589	16.5276	17.8994	19.2641	20.0572	20.6179	21.0521
	2	16.2091	17.9604	19.0176	19.7797	21.6457	23.5351	24.6423	25.4263	26.0328
	2.5	18.1394	20.2278	21.5042	22.4317	24.7303	27.0969	28.5010	29.5017	30.2791
	3	19.7424	22.1168	23.5807	24.6507	27.3263	30.1180	31.7922	32.9935	33.9311
	3.5	21.0913	23.7118	25.3380	26.5320	29.5381	32.7077	34.6254	36.0094	37.0941

Table 144 Maximum moment results for alpha 10 for slabs subjected to CHBDC axle 2 & 3 loading (main bars Parallel to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2&3 Transverse	1.5	4.3309	4.6676	4.8733	5.0237	5.4025	5.8059	6.0532	6.2336	6.3761
	2	9.7638	10.7464	11.3371	11.7623	12.8041	13.8651	14.4924	14.9400	15.2886
	2.5	13.3214	14.8725	15.8218	16.5121	18.2238	19.9869	21.0326	21.7776	22.3560
	3	16.0068	18.0235	19.2743	20.1917	22.4949	24.9080	26.3571	27.3967	28.2074
	3.5	18.1579	20.5626	22.0678	23.1787	25.9940	28.9846	30.8010	32.1135	33.1425
	4	19.9575	22.6941	24.4185	25.6969	28.9593	32.4619	34.6088	36.1696	37.3989

C.1.2 MAXIMUM BENDING MOMENT VS SPAN LENGTH

Alpha 0.25 Bending Moment VS Span Length for Different D Values

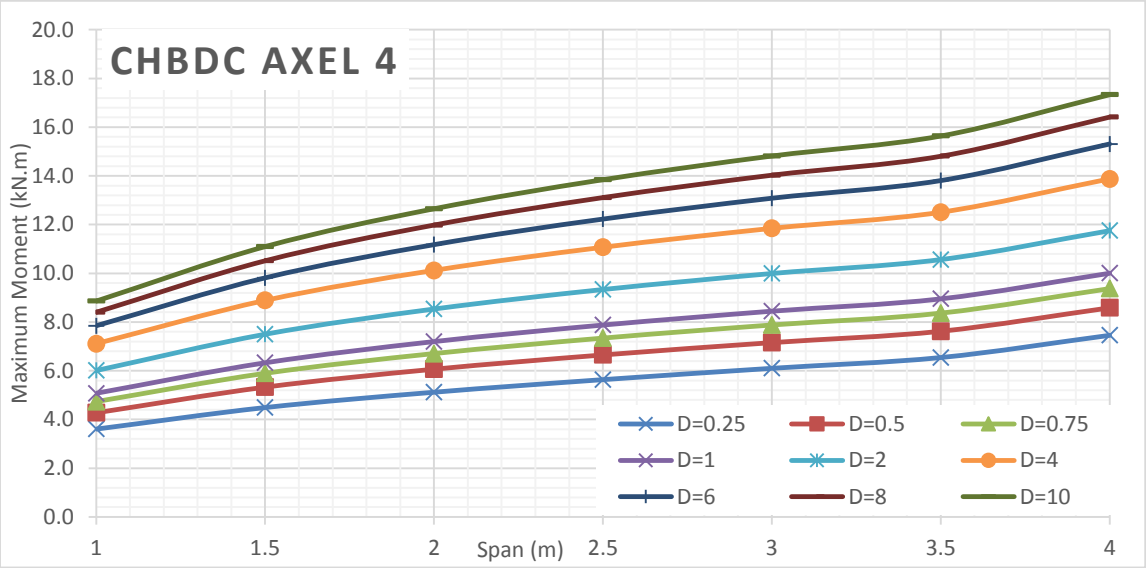


Figure 247 Maximum moment of deck slabs subjected to CHBDC axle 4 for different D values of alpha 0.25 Orthotropic analyses

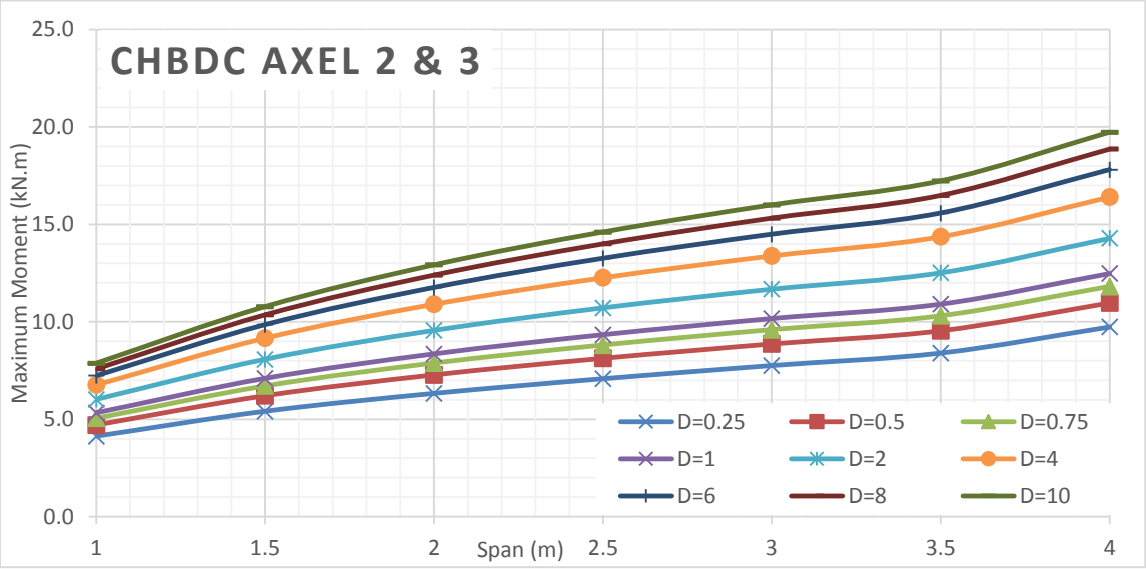


Figure 248 Maximum moment of deck slabs subjected to CHBDC axle 2 & 3 for different D values of alpha 0.25 Orthotropic analyses

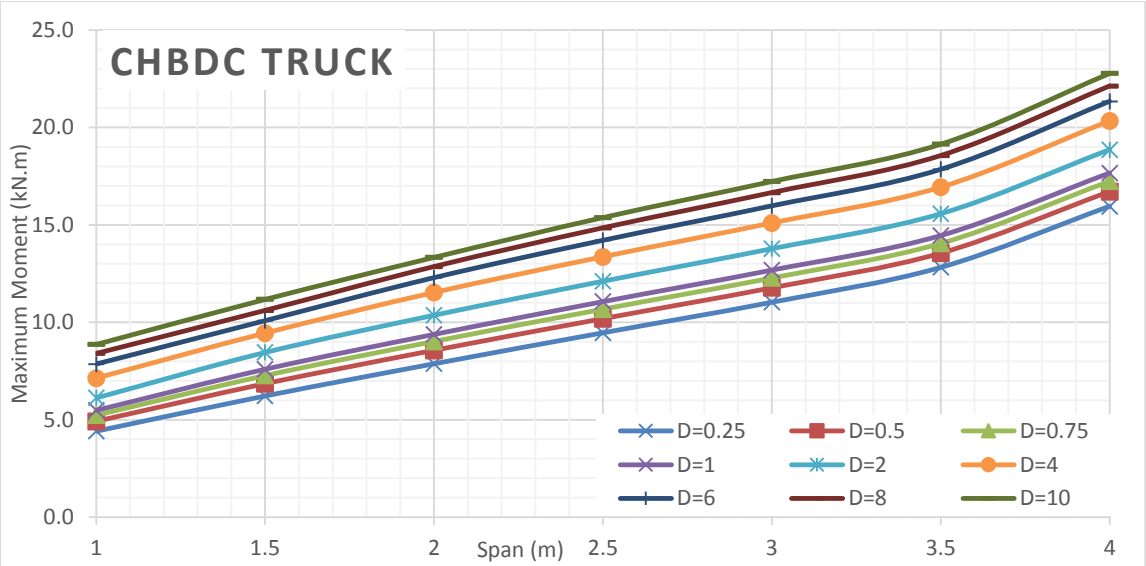


Figure 249 Maximum moment of deck slabs subjected to CHBDC truck for different D values of alpha 0.25 Orthotropic analyses

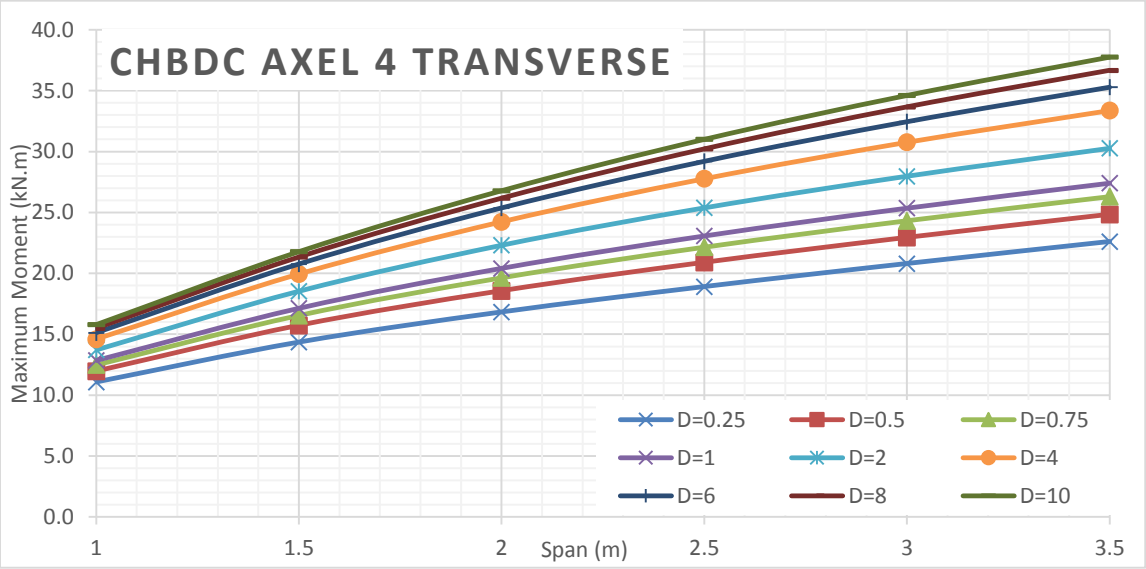


Figure 250 Maximum moment of deck slabs subjected to CHBDC axle 4 for different D values of alpha 0.25 Orthotropic analyses

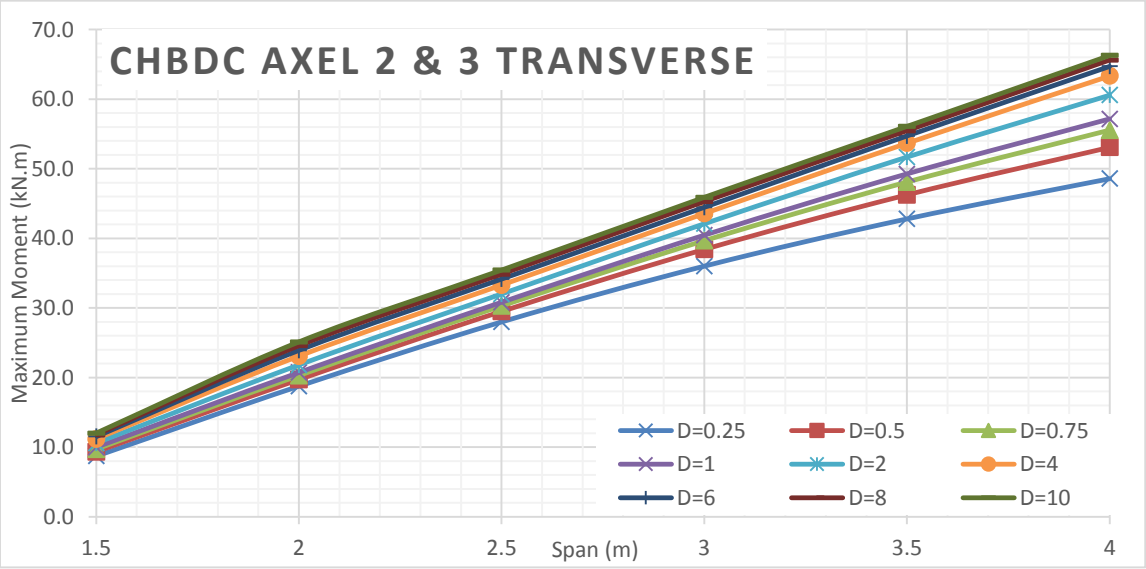


Figure 251 Maximum moment of deck slabs subjected to CHBDC axle 2 & 3 for different D values of alpha 0.25 Orthotropic analyses

Alpha 0.5 Bending Moment VS Span Length for Different D Values

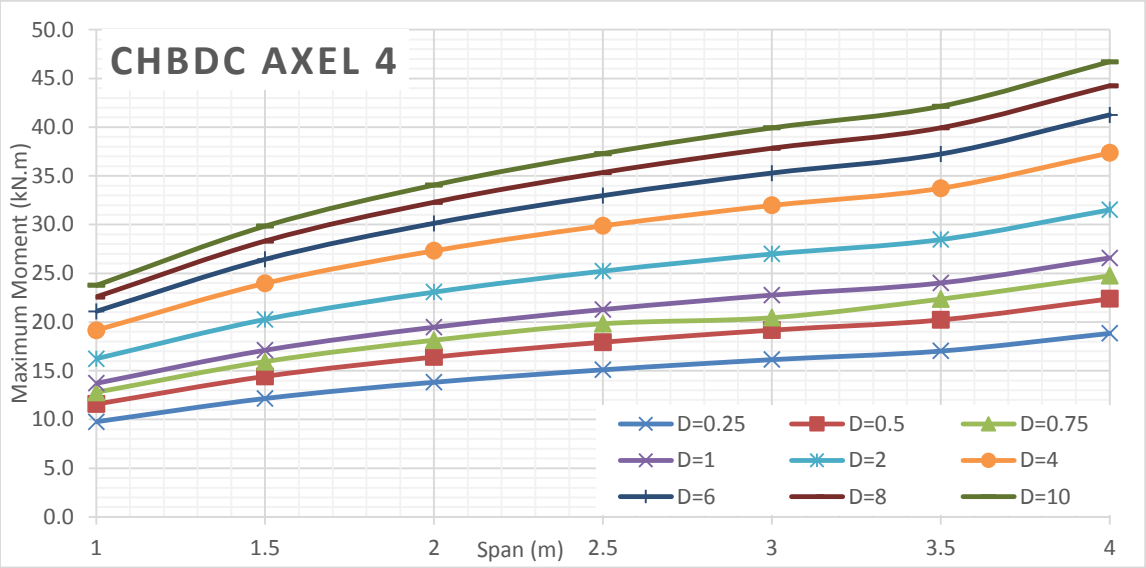


Figure 252 Maximum moment of deck slabs subjected to CHBDC axle 4 for different D values of alpha 0.5 Orthotropic analyses

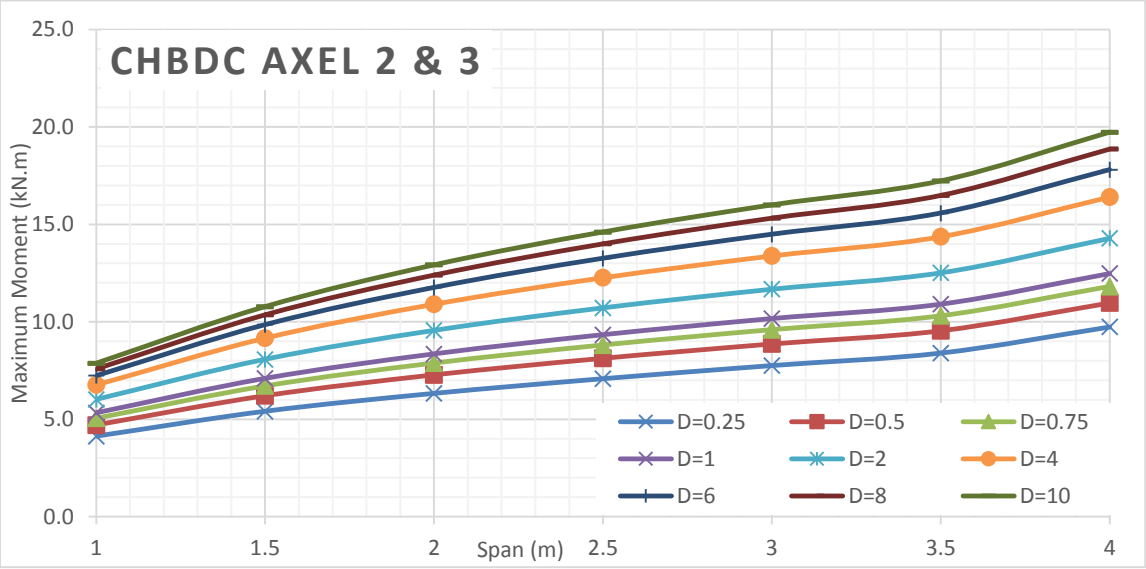


Figure 253 Maximum moment of deck slabs subjected to CHBDC axle 2 & 3 for different D values of alpha 0.5 Orthotropic analyses

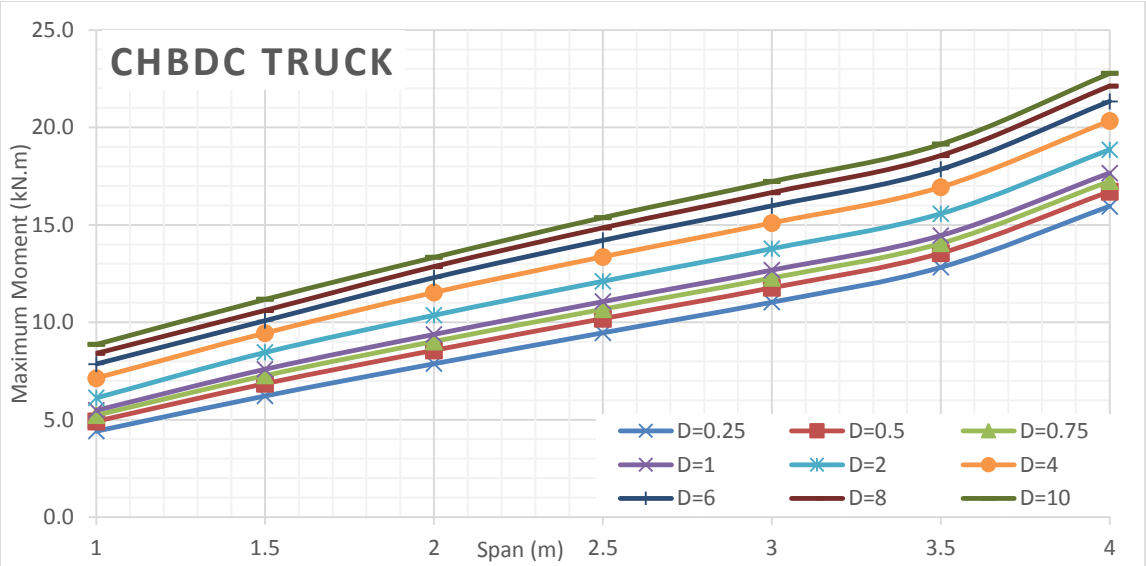


Figure 254 Maximum moment of deck slabs subjected to CHBDC truck for different D values of alpha 0.5 Orthotropic analyses

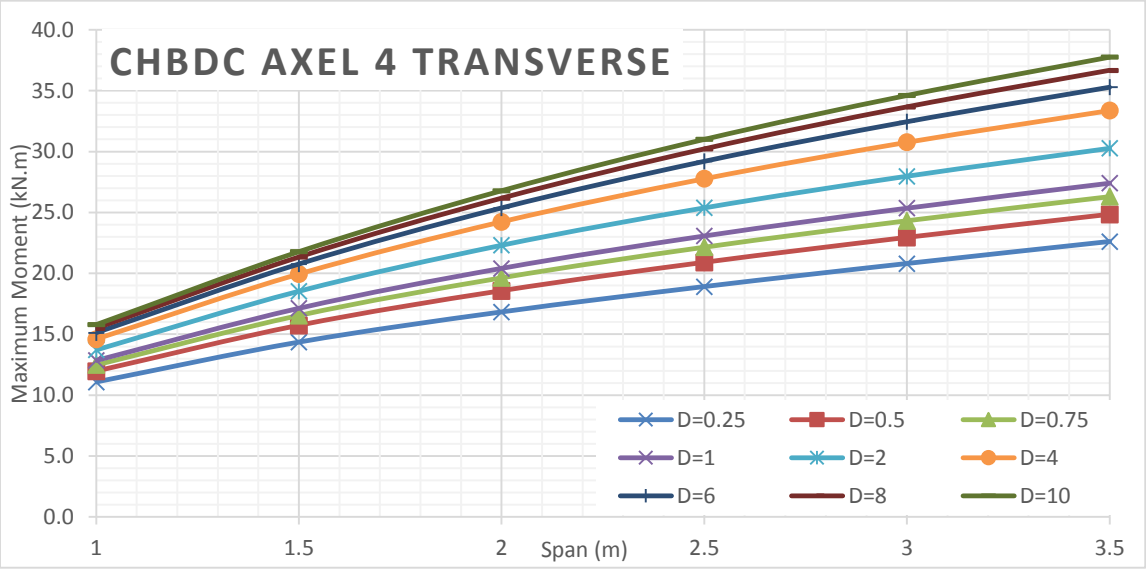


Figure 255 Maximum moment of deck slabs subjected to CHBDC axle 4 for different D values of alpha 0.5 Orthotropic analyses

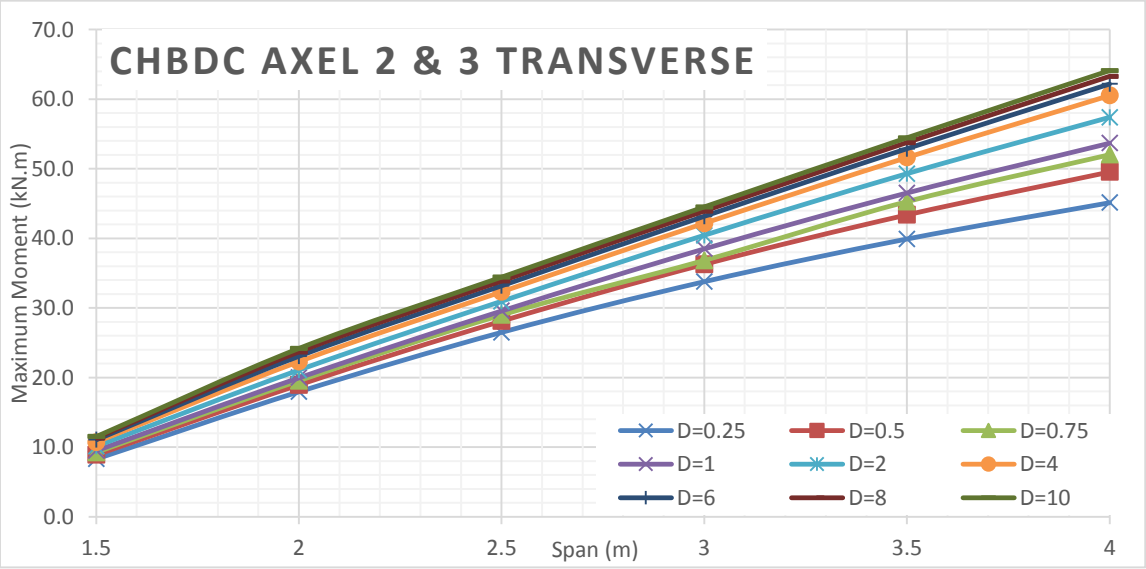


Figure 256 Maximum moment of deck slabs subjected to CHBDC axle 2 & 3 for different D values of alpha 0.5 Orthotropic analyses

Alpha 0.75 Bending Moment VS Span Length for Different D Values

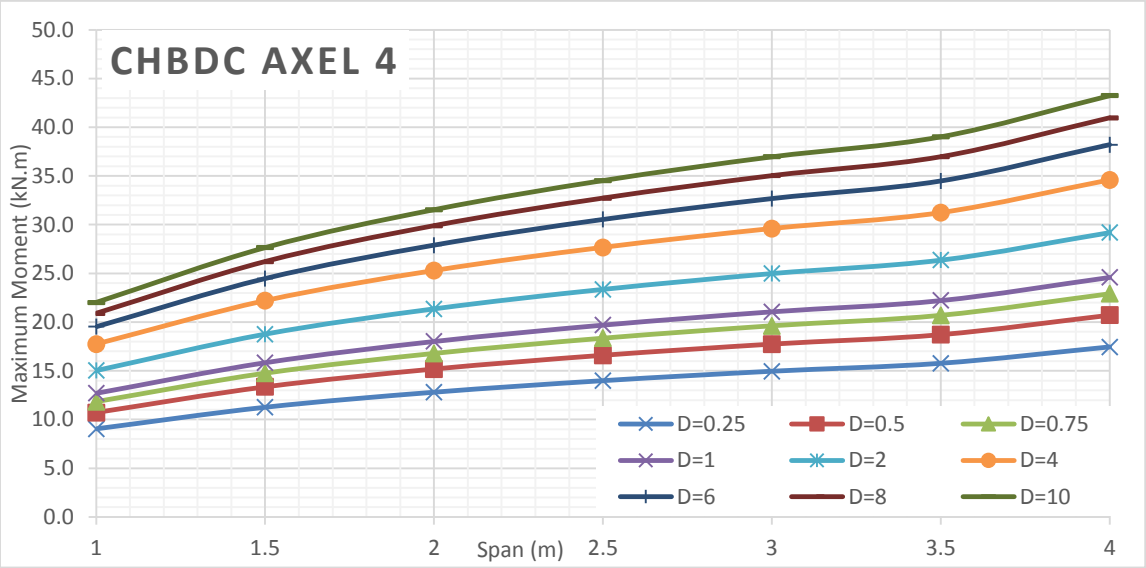


Figure 257 Maximum moment of deck slabs subjected to CHBDC axle 4 for different D values of alpha 0.75 Orthotropic analyses

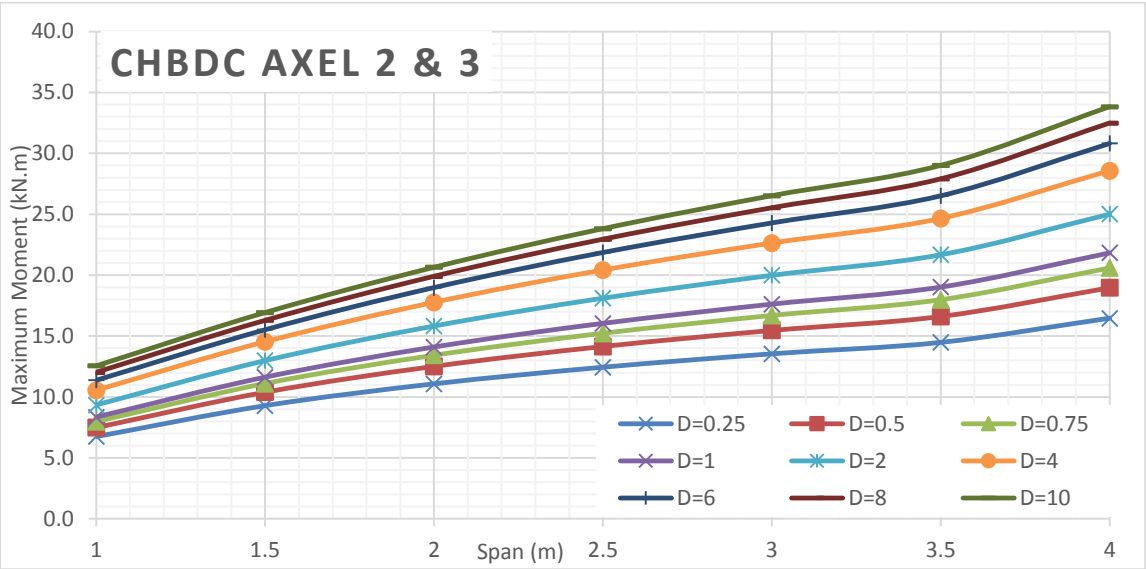


Figure 258 Maximum moment of deck slabs subjected to CHBDC axle 2 & 3 for different D values of alpha 0.75 Orthotropic analyses

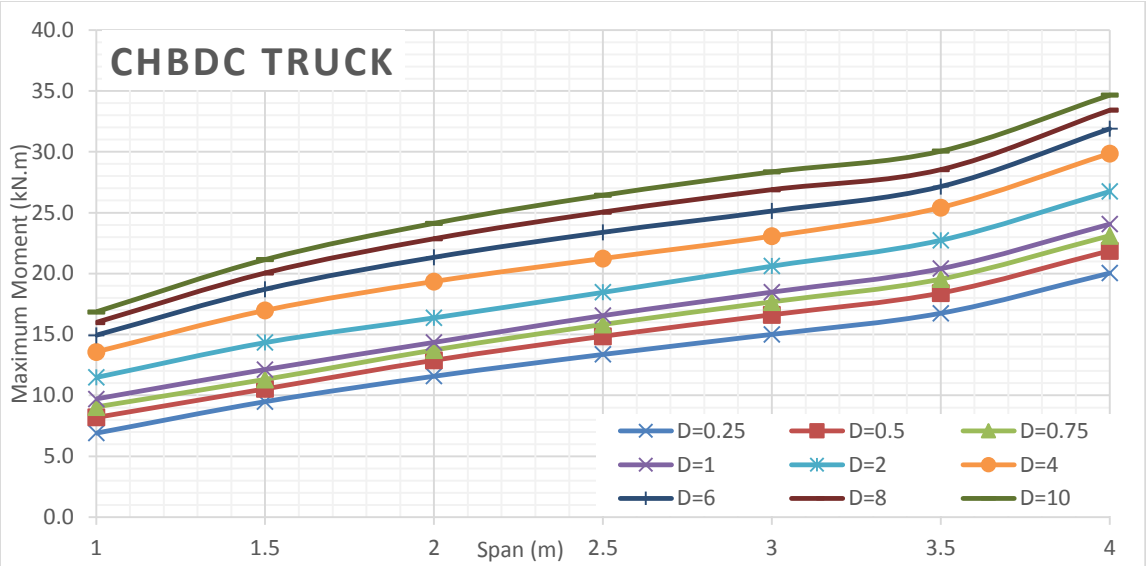


Figure 259 Maximum moment of deck slabs subjected to CHBDC truck for different D values of alpha 0.75 Orthotropic analyses

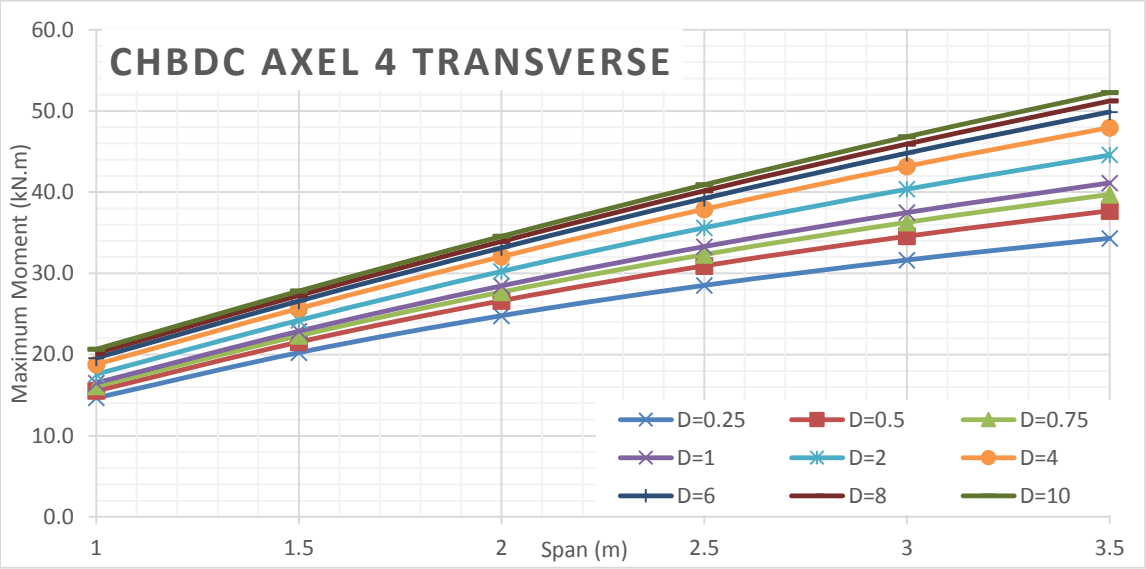


Figure 260 Maximum moment of deck slabs subjected to CHBDC axle 4 for different D values of alpha 0.75 Orthotropic analyses

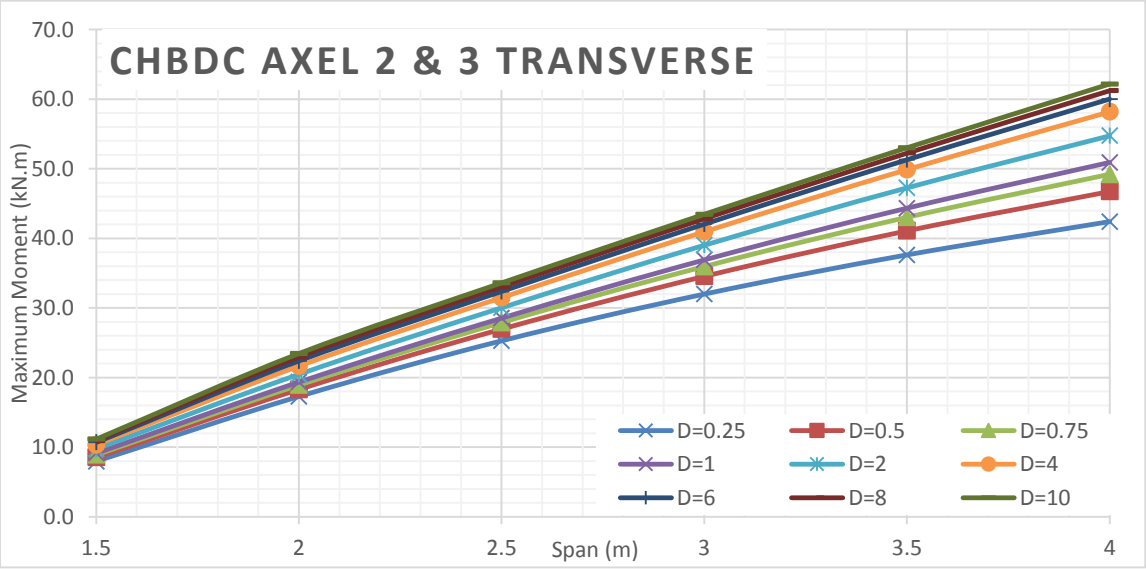


Figure 261 Maximum moment of deck slabs subjected to CHBDC axle 2 & 3 for different D values of alpha 0.75 Orthotropic analyses

Alpha 1 Bending Moment VS Span Length for Different D Values

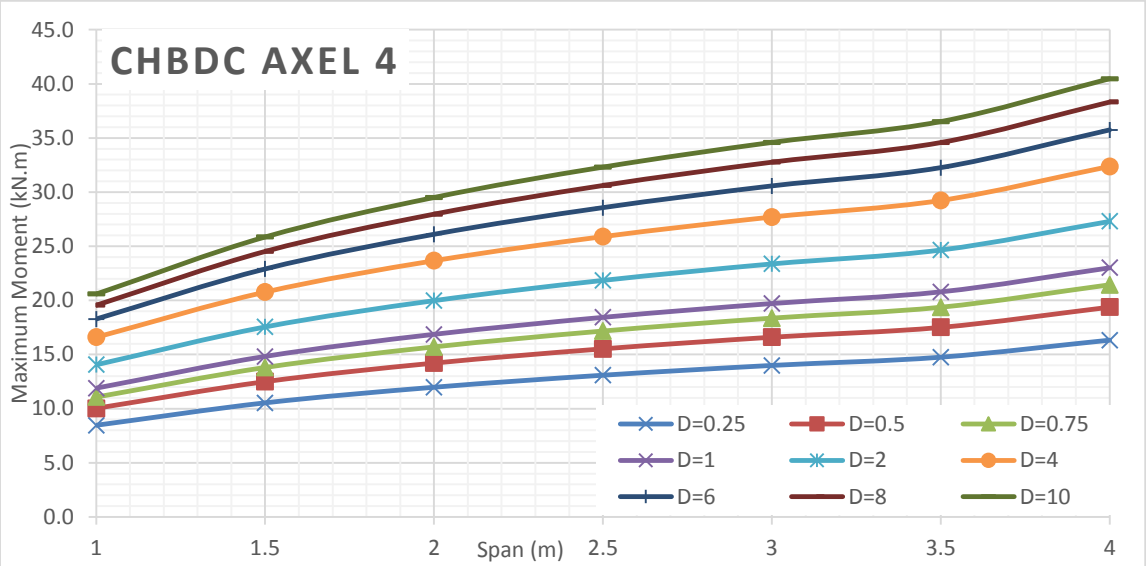


Figure 262 Maximum moment of deck slabs subjected to CHBDC axle 4 for different D values of alpha 1 Orthotropic analyses

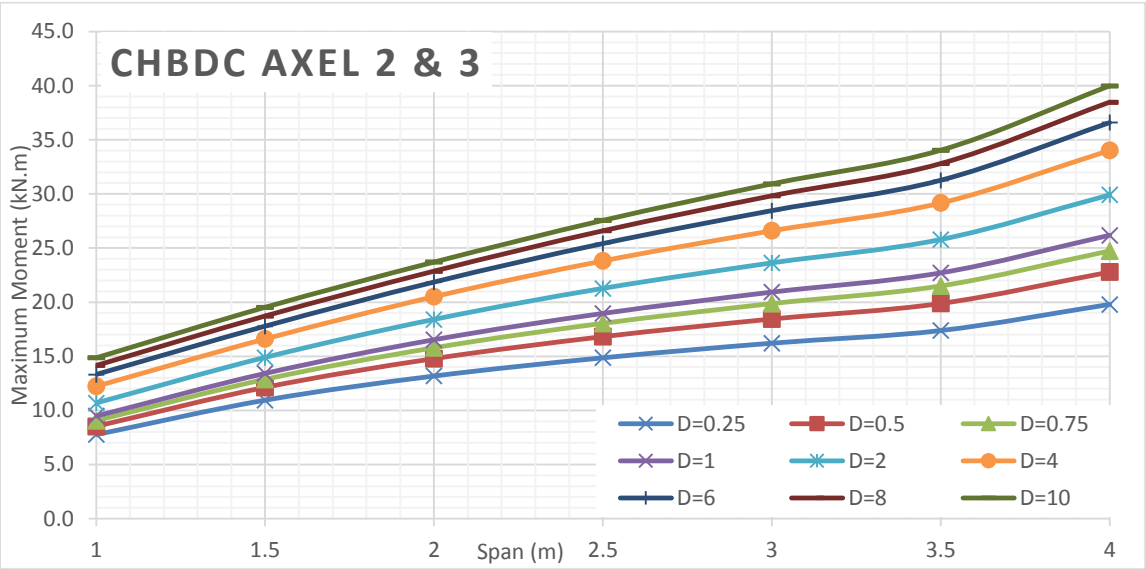


Figure 263 Maximum moment of deck slabs subjected to CHBDC axle 2 & 3 for different D values of alpha 1 Orthotropic analyses

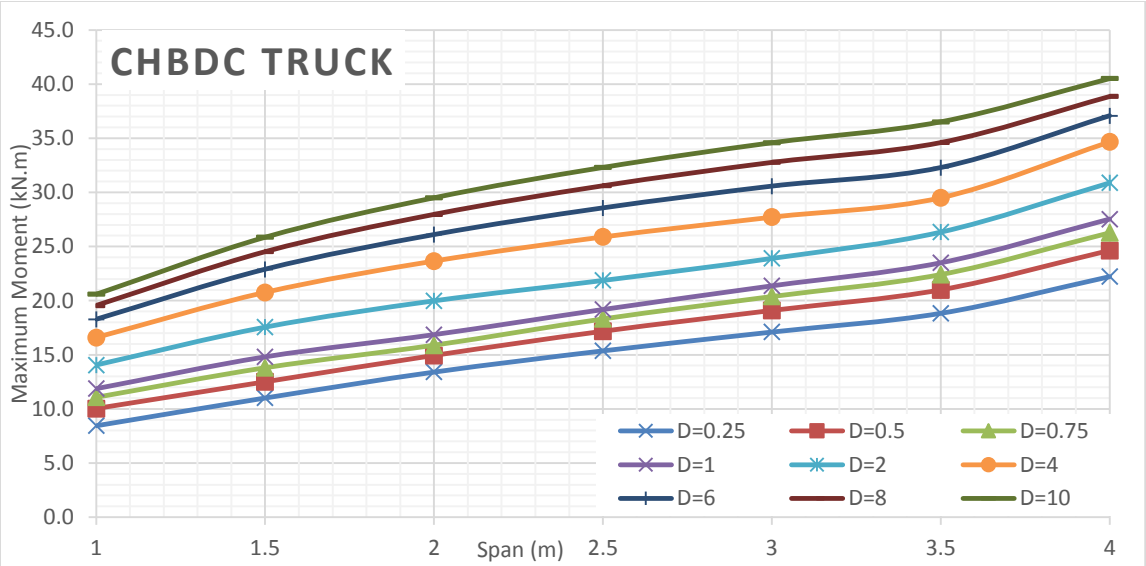


Figure 264 Maximum moment of deck slabs subjected to CHBDC truck for different D values of alpha 1 Orthotropic analyses

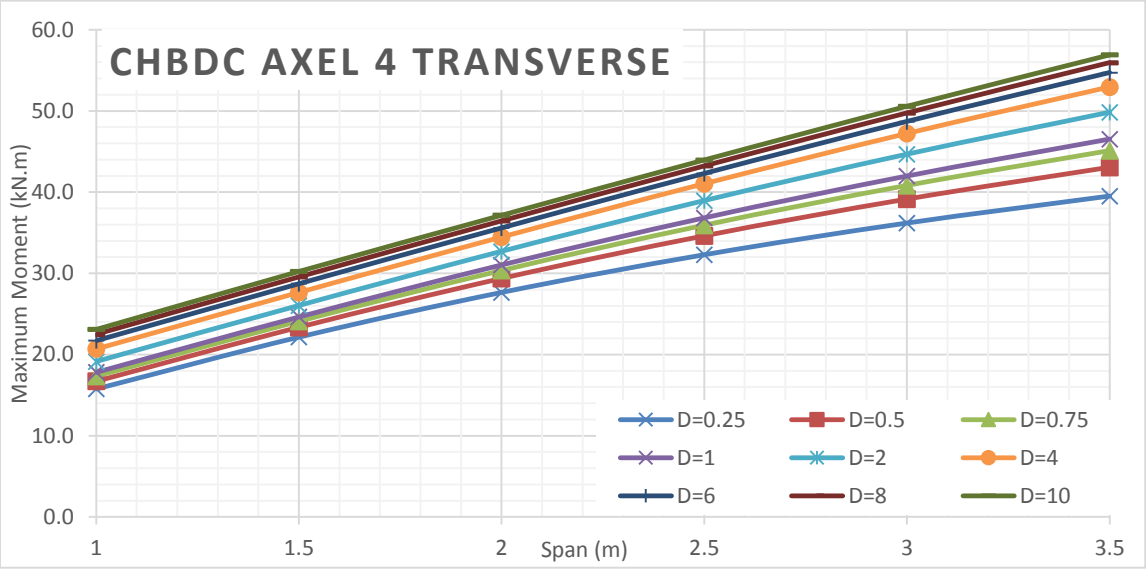


Figure 265 Maximum moment of deck slabs subjected to CHBDC axle 4 for different D values of alpha 1 Orthotropic analyses

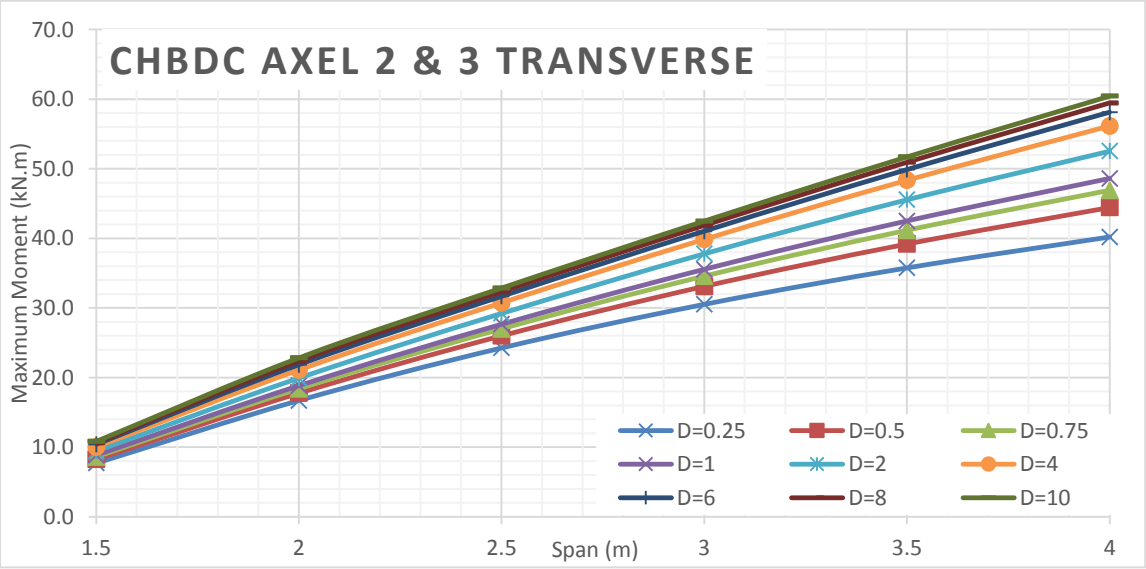


Figure 266 Maximum moment of deck slabs subjected to CHBDC axle 2 & 3 for different D values of alpha 1 Orthotropic analyses

Alpha 2 Bending Moment VS Span Length for Different D Values

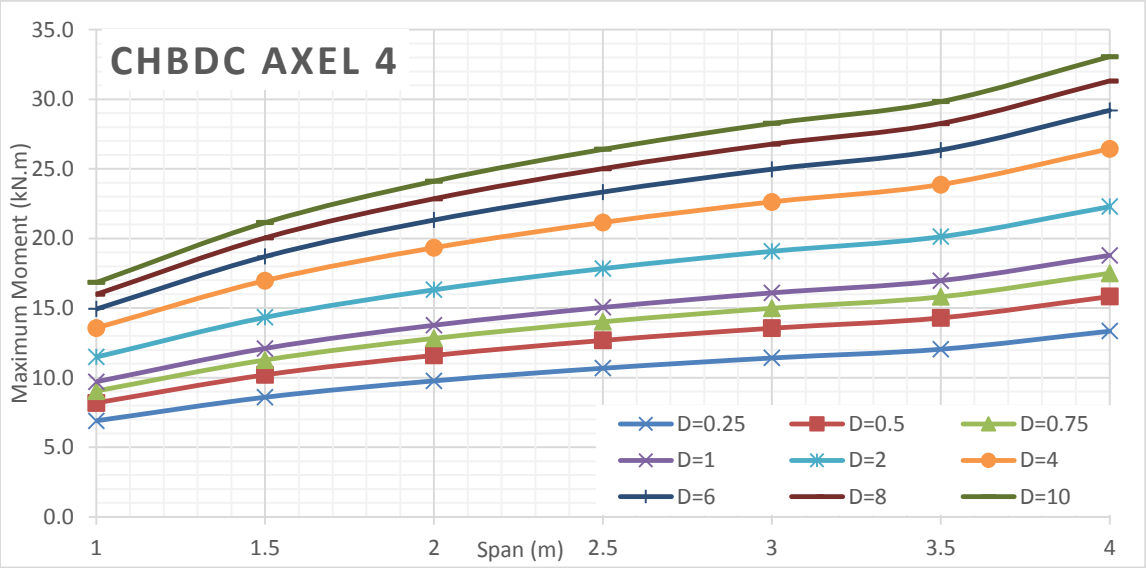


Figure 267 Maximum moment of deck slabs subjected to CHBDC axle 4 for different D values of alpha 2 Orthotropic analyses

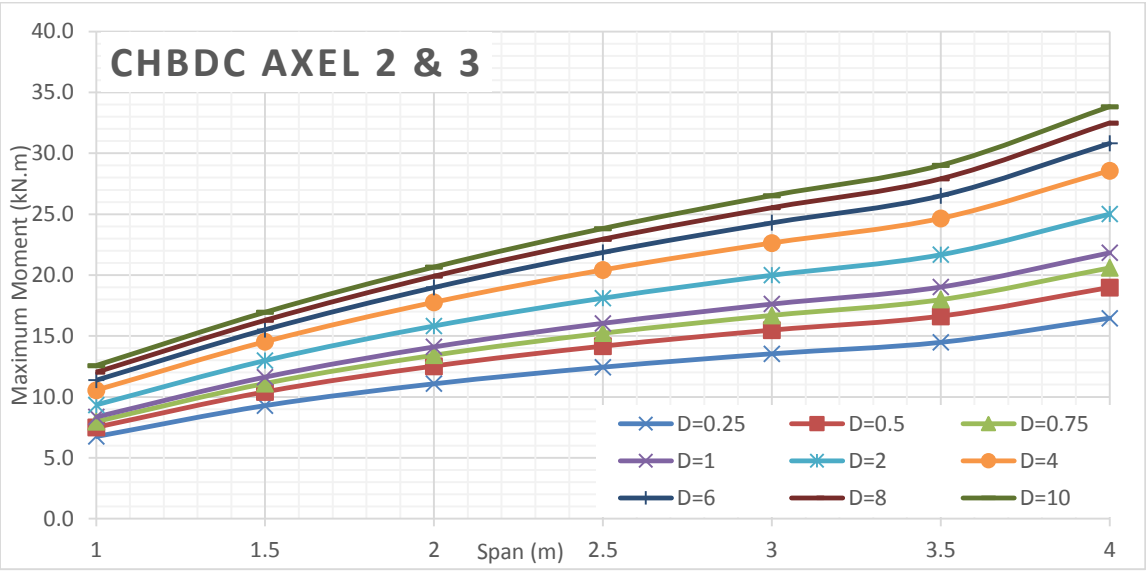


Figure 268 Maximum moment of deck slabs subjected to CHBDC axle 2 & 3 for different D values of alpha 2 Orthotropic analyses

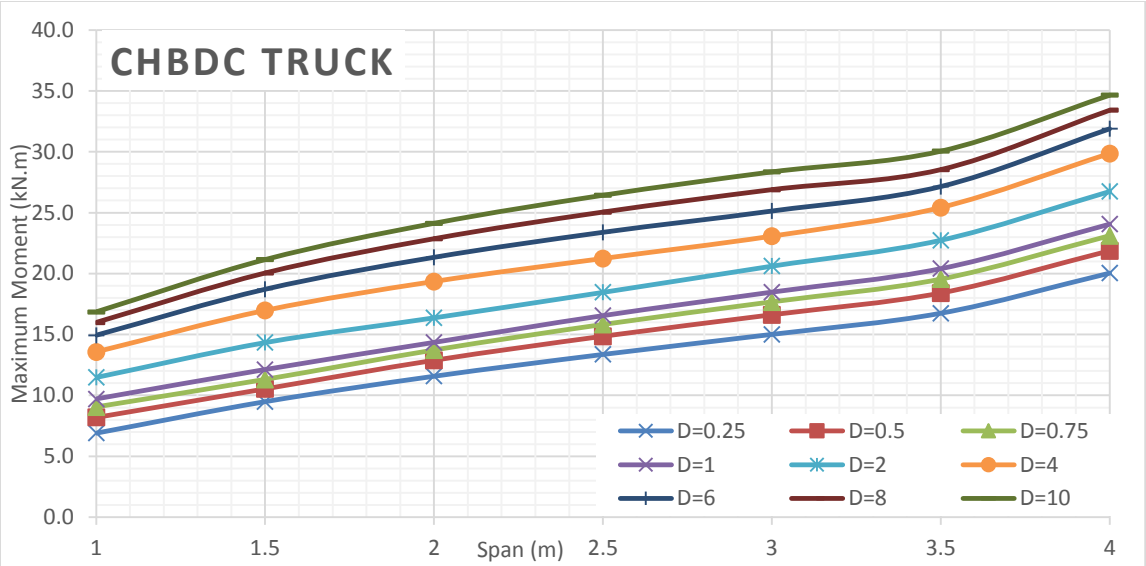


Figure 269 Maximum moment of deck slabs subjected to CHBDC truck for different D values of alpha 2 Orthotropic analyses

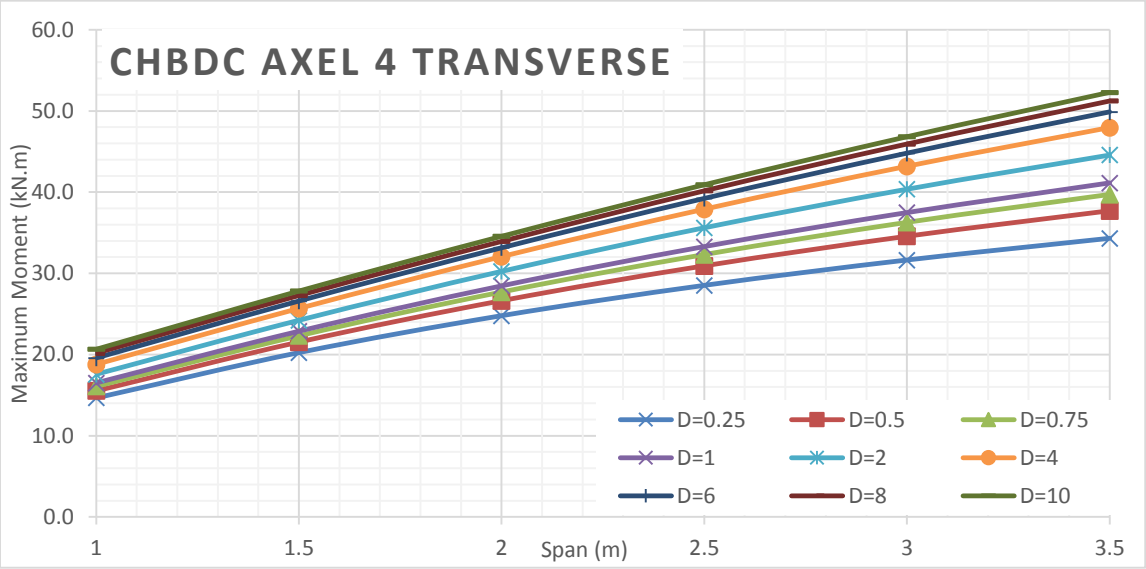


Figure 270 Maximum moment of deck slabs subjected to CHBDC axle 4 for different D values of alpha 2 Orthotropic analyses

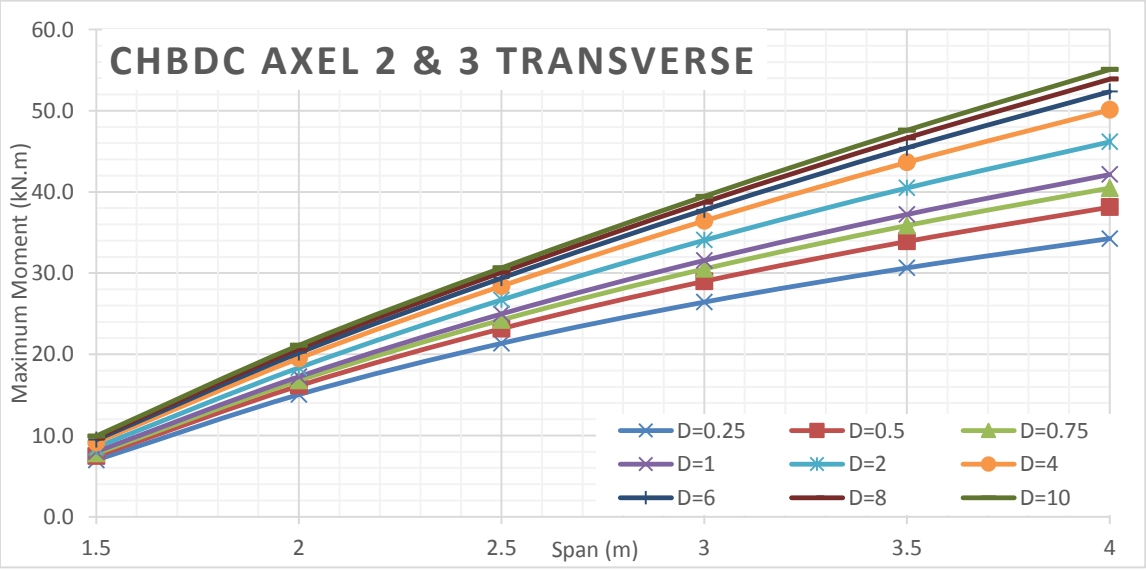


Figure 271 Maximum moment of deck slabs subjected to CHBDC axle 2 & 3 for different D values of alpha 2 Orthotropic analyses

Alpha 4 Bending Moment VS Span Length for Different D Values

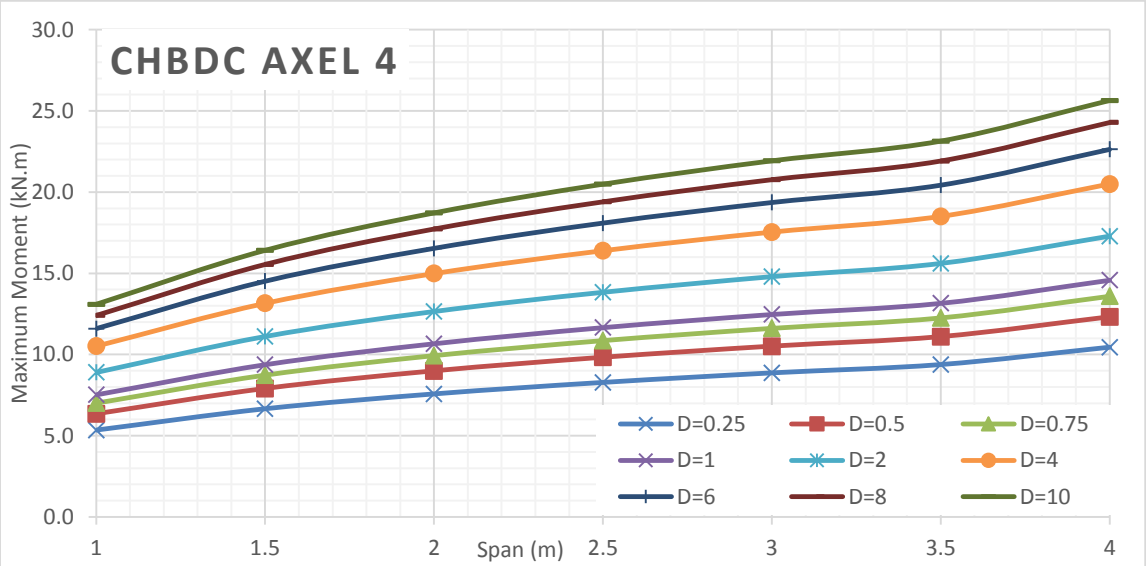


Figure 272 Maximum moment of deck slabs subjected to CHBDC axle 4 for different D values of alpha 4 Orthotropic analyses

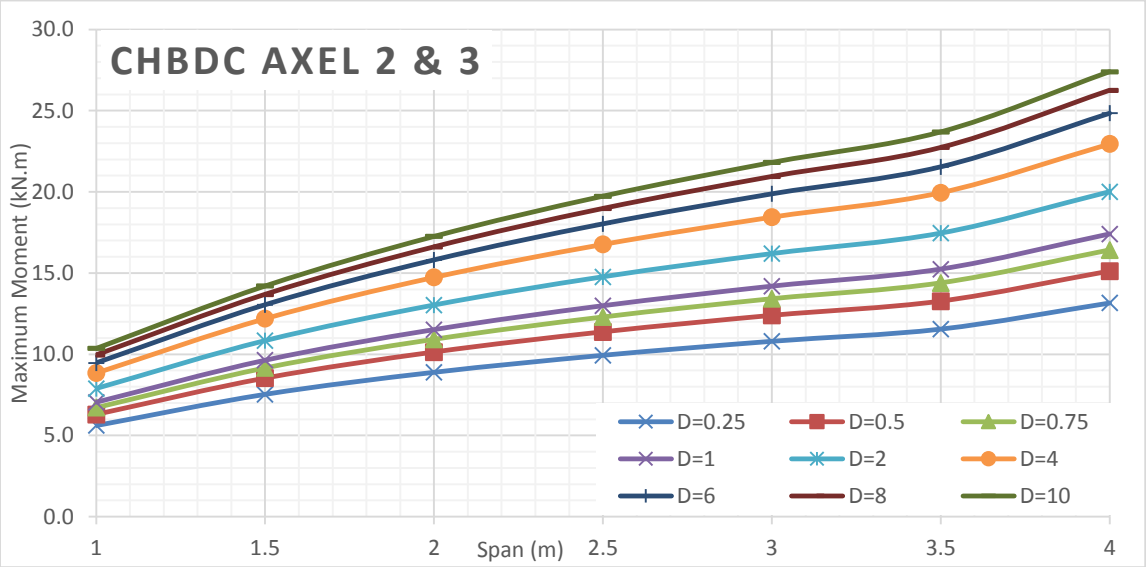


Figure 273 Maximum moment of deck slabs subjected to CHBDC axle 2 & 3 for different D values of alpha 4 Orthotropic analyses

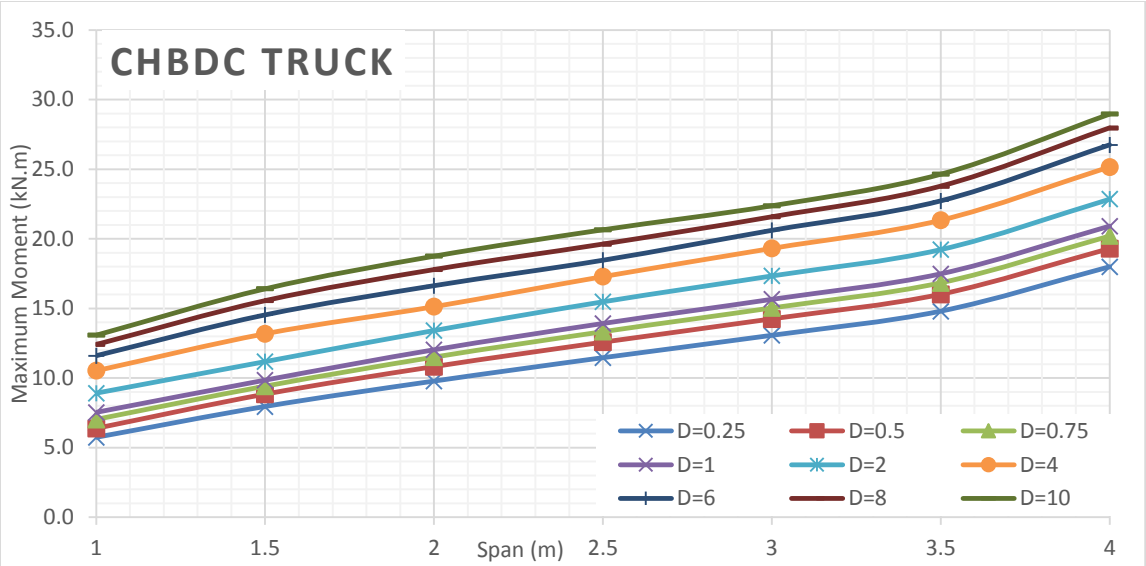


Figure 274 Maximum moment of deck slabs subjected to CHBDC truck for different D values of alpha 4 Orthotropic analyses

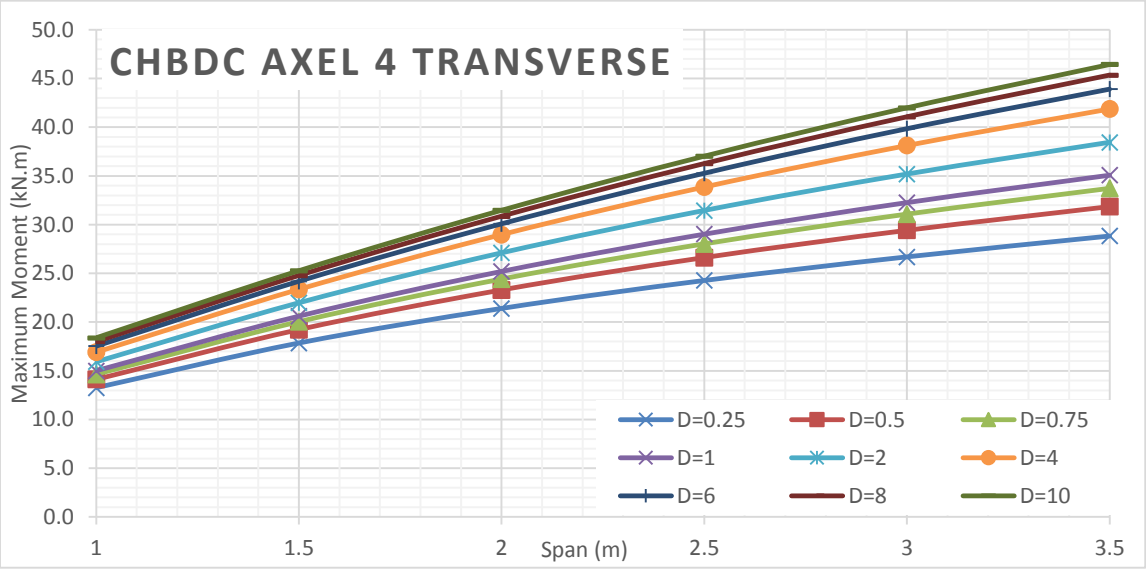


Figure 275 Maximum moment of deck slabs subjected to CHBDC axle 4 for different D values of alpha 4 Orthotropic analyses

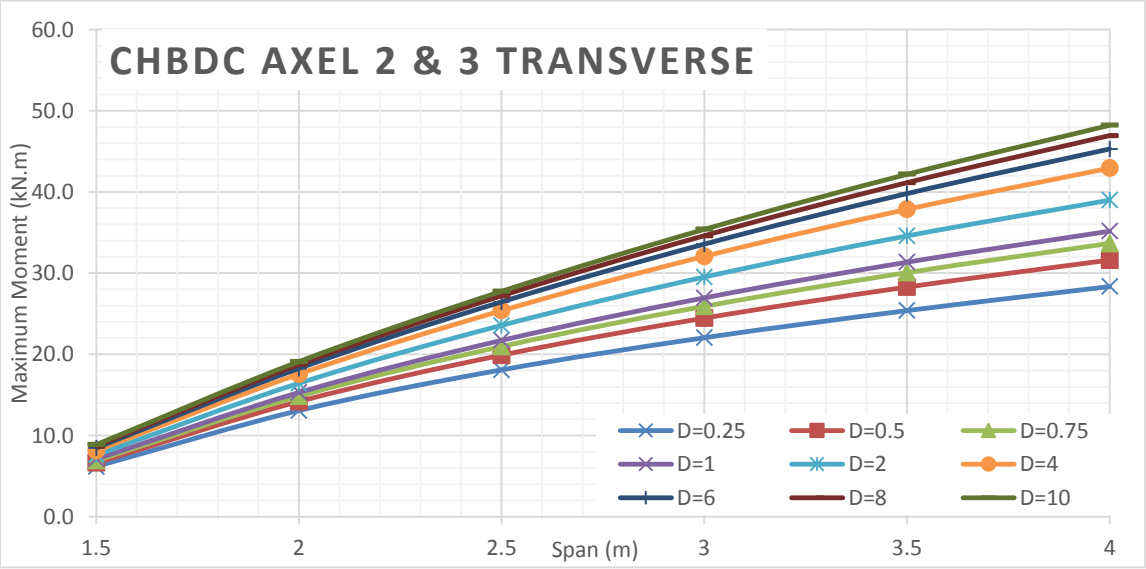


Figure 276 Maximum moment of deck slabs subjected to CHBDC axle 2 & 3 for different D values of alpha 4 Orthotropic analyses

Alpha 6 Bending Moment VS Span Length for Different D Values

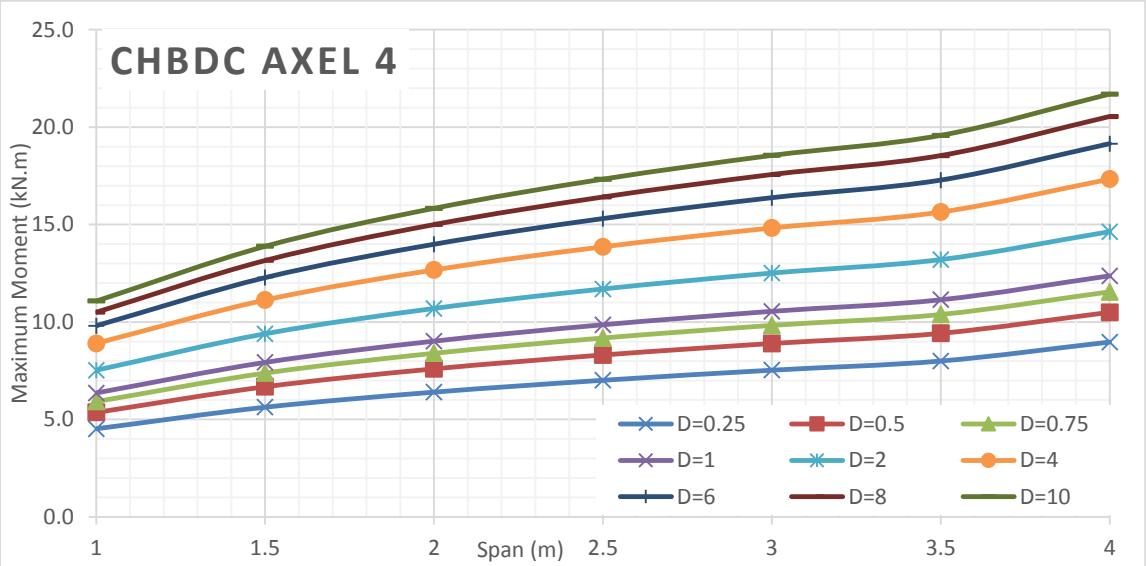


Figure 277 Maximum moment of deck slabs subjected to CHBDC axle 4 for different D values of alpha 6 Orthotropic analyses

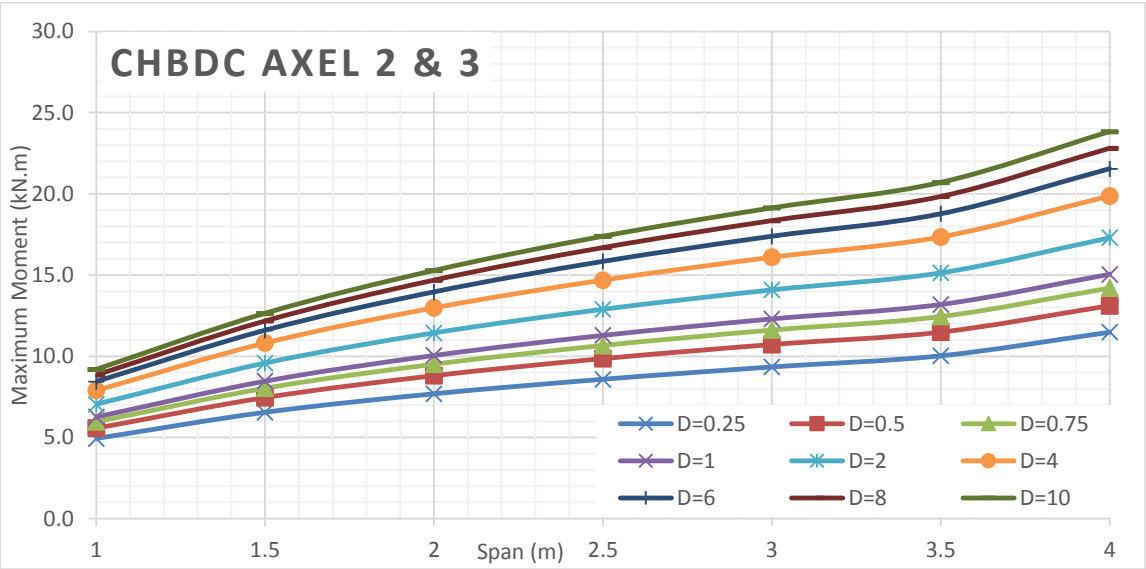


Figure 278 Maximum moment of deck slabs subjected to CHBDC axle 2 & 3 for different D values of alpha 6 Orthotropic analyses

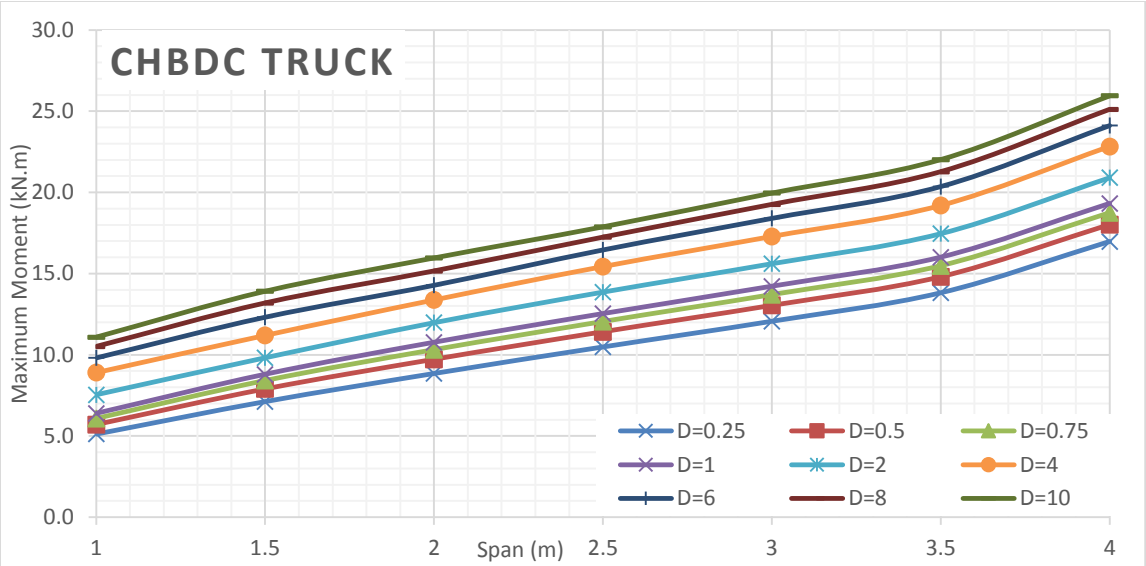


Figure 279 Maximum moment of deck slabs subjected to CHBDC truck for different D values of alpha 6 Orthotropic analyses

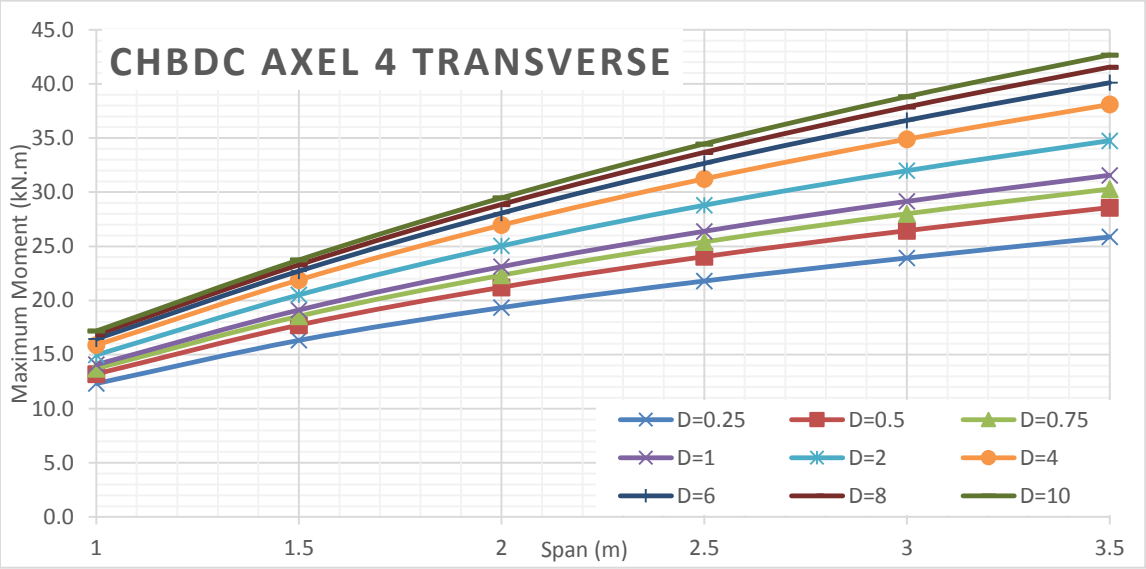


Figure 280 Maximum moment of deck slabs subjected to CHBDC axle 4 for different D values of alpha 6 Orthotropic analyses

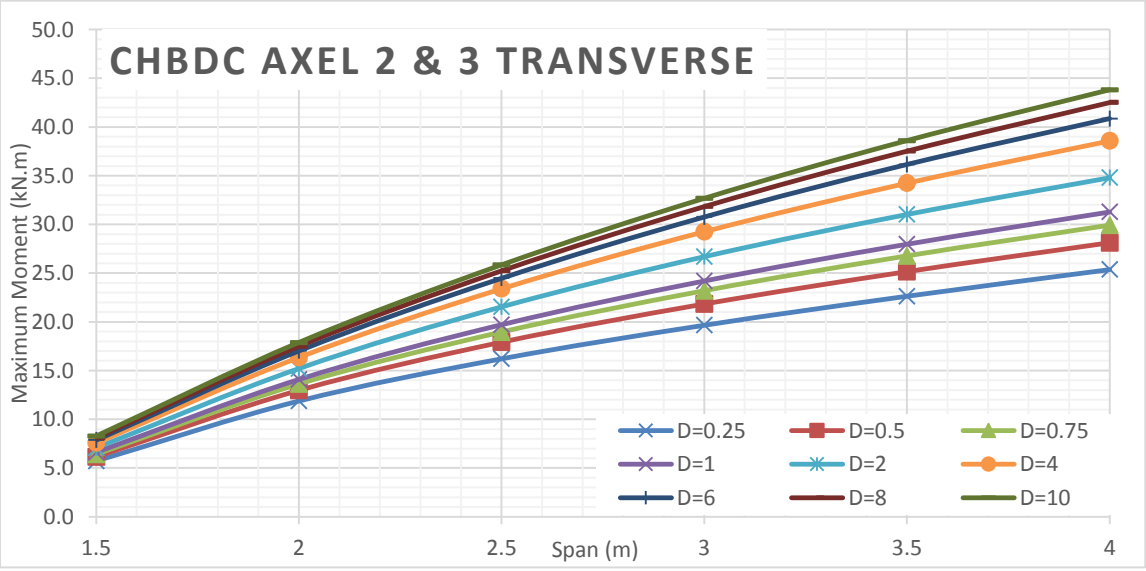


Figure 281 Maximum moment of deck slabs subjected to CHBDC axle 2 & 3 for different D values of alpha 6 Orthotropic analyses

Alpha 8 Bending Moment VS Span Length for Different D Values

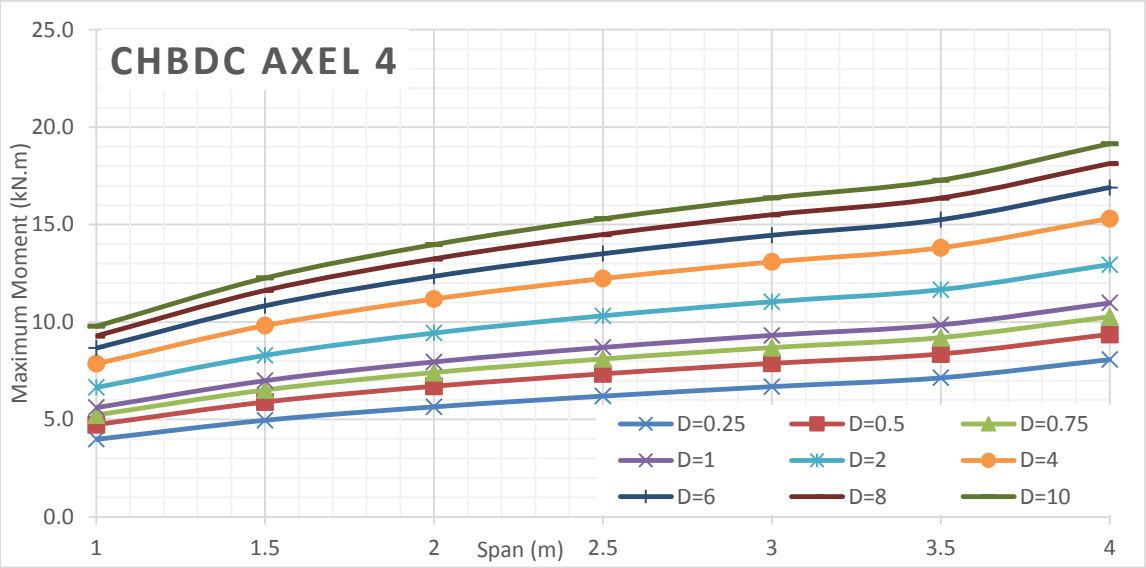


Figure 282 Maximum moment of deck slabs subjected to CHBDC axle 4 for different D values of alpha 8 Orthotropic analyses

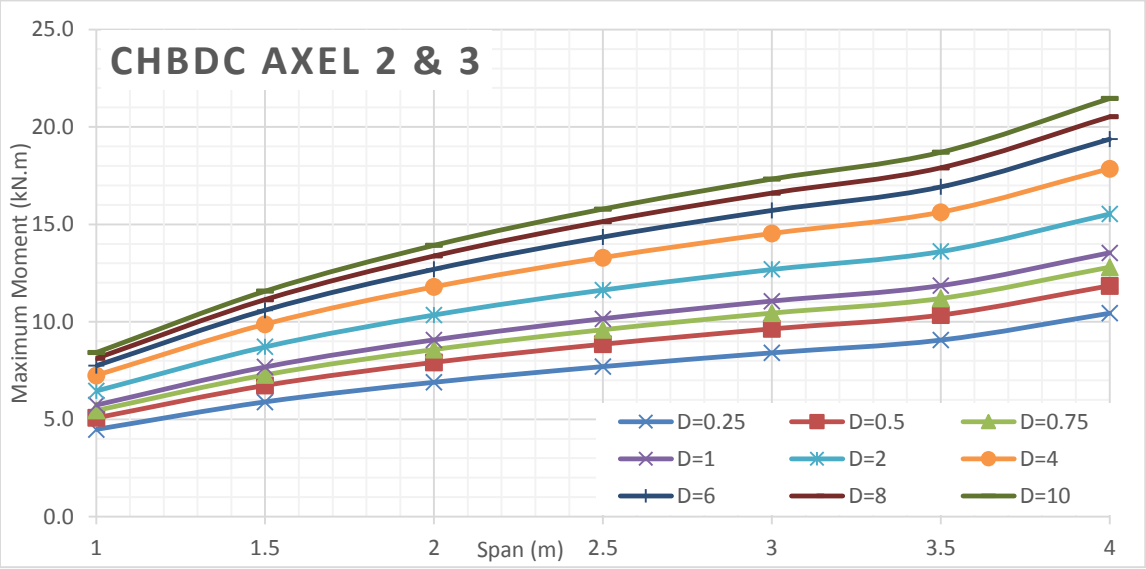


Figure 283 Maximum moment of deck slabs subjected to CHBDC axle 2 & 3 for different D values of alpha 8 Orthotropic analyses

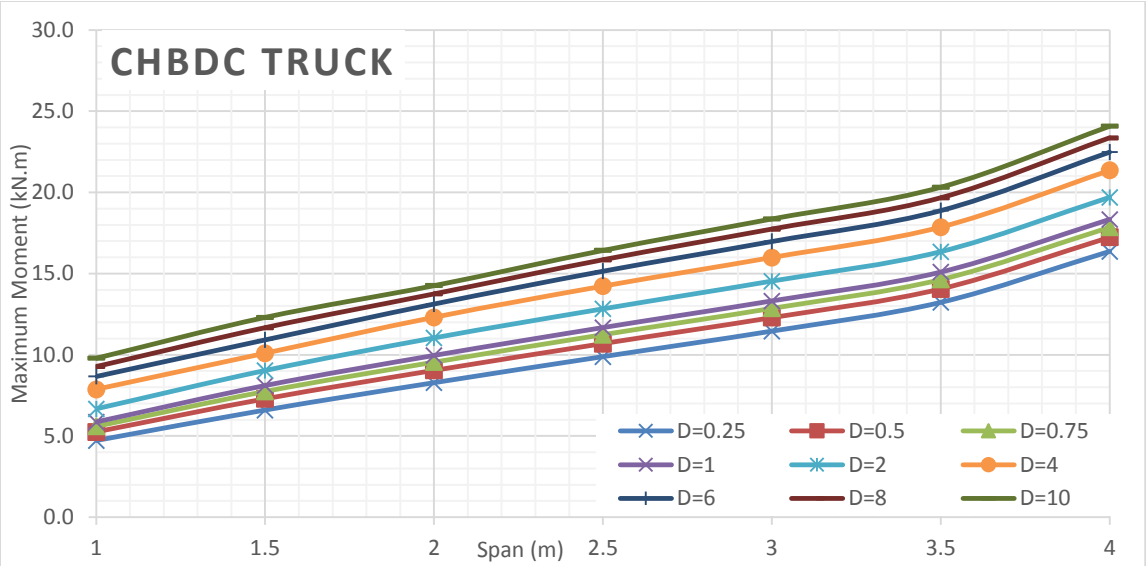


Figure 284 Maximum moment of deck slabs subjected to CHBDC truck for different D values of alpha 8 Orthotropic analyses

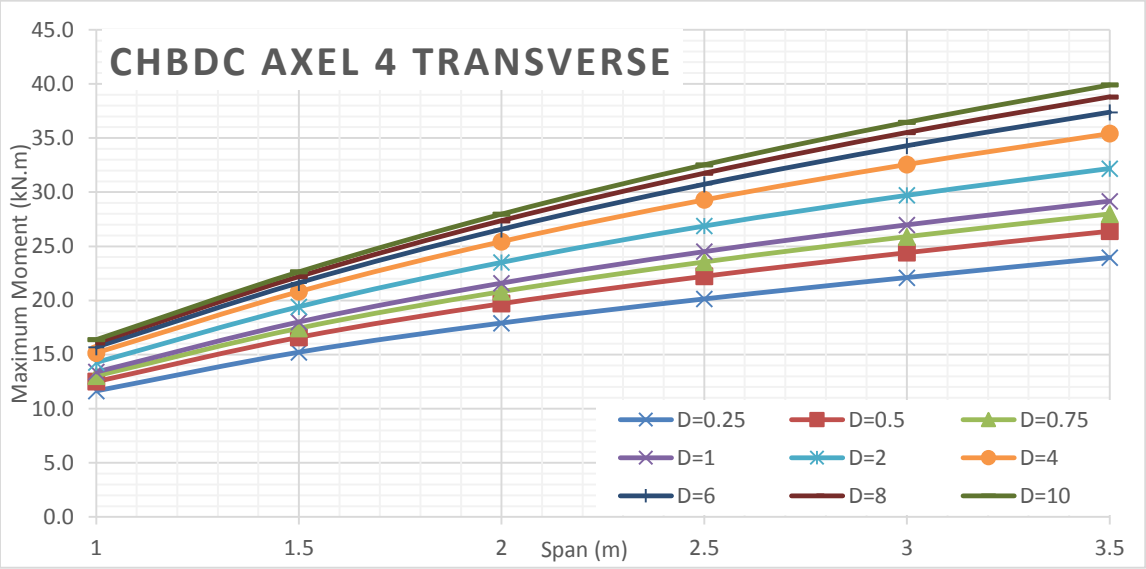


Figure 285 Maximum moment of deck slabs subjected to CHBDC axle 4 for different D values of alpha 8 Orthotropic analyses

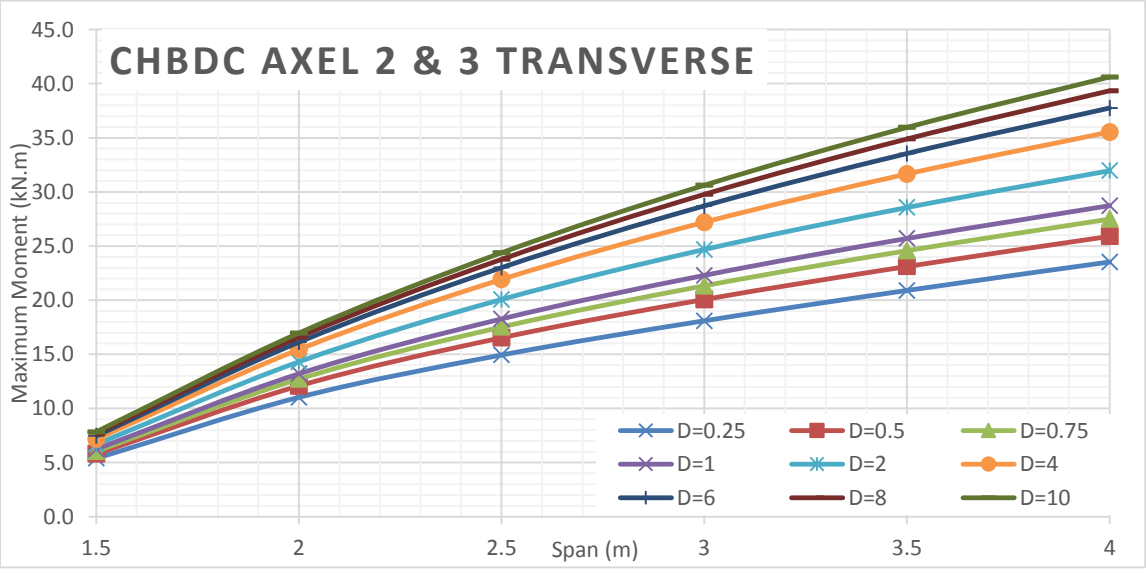


Figure 286 Maximum moment of deck slabs subjected to CHBDC axle 2 & 3 for different D values of alpha 8 Orthotropic analyses

Alpha 10 Bending Moment VS Span Length for Different D Values

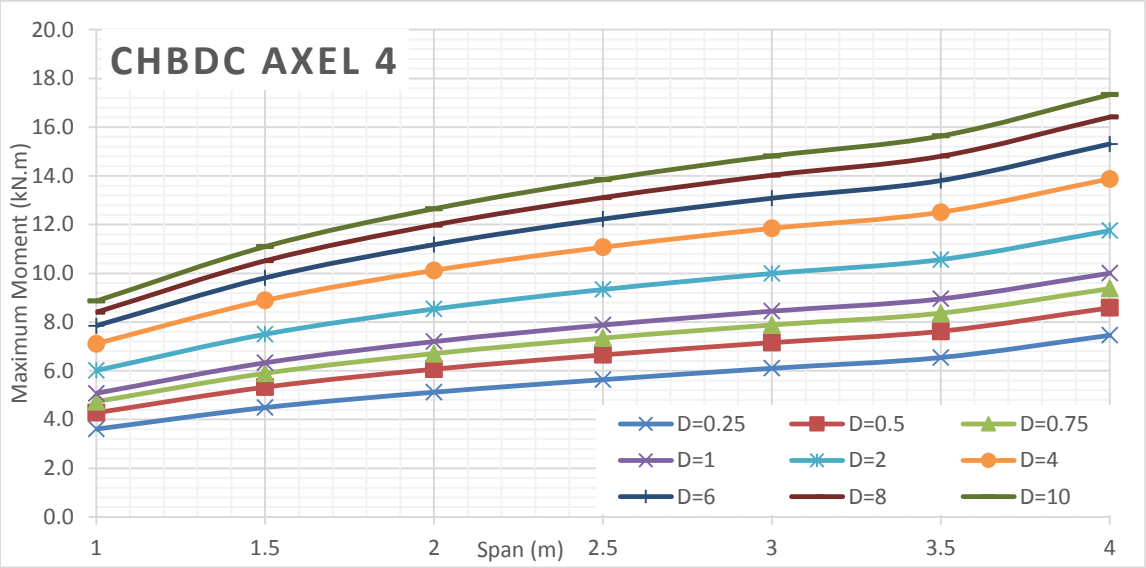


Figure 287 Maximum moment of deck slabs subjected to CHBDC axle 4 for different D values of alpha 10 Orthotropic analyses

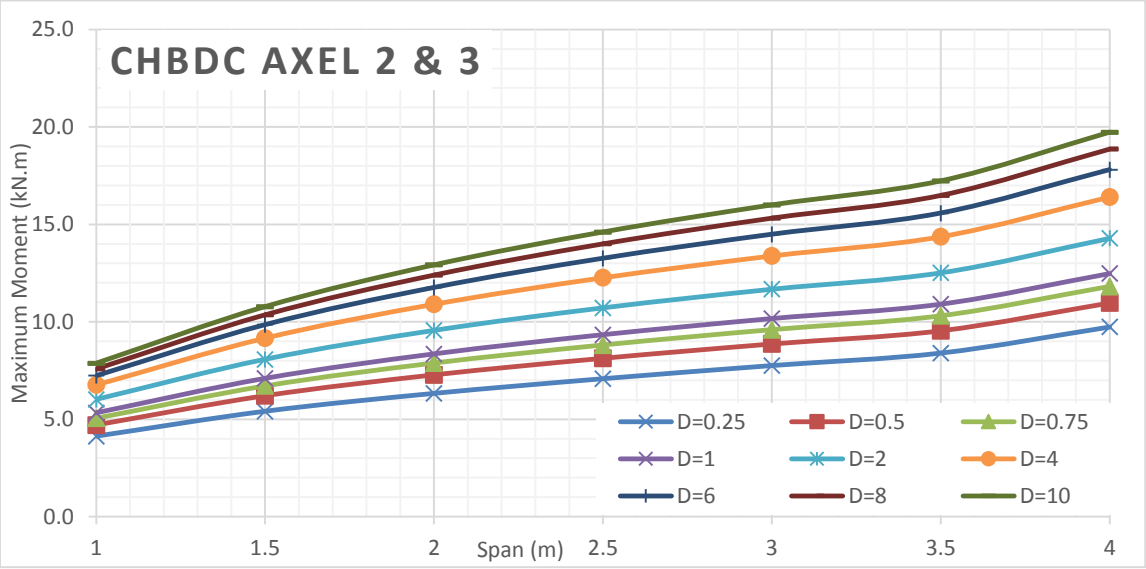


Figure 288 Maximum moment of deck slabs subjected to CHBDC axle 2 & 3 for different D values of alpha 10 Orthotropic analyses

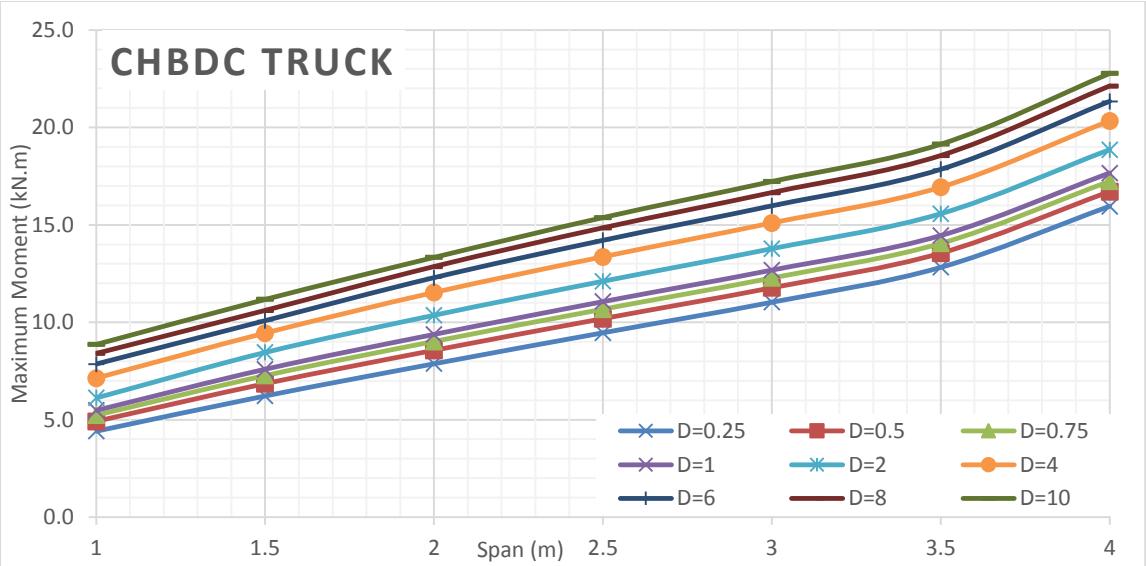


Figure 289 Maximum moment of deck slabs subjected to CHBDC truck for different D values of alpha 10 Orthotropic analyses

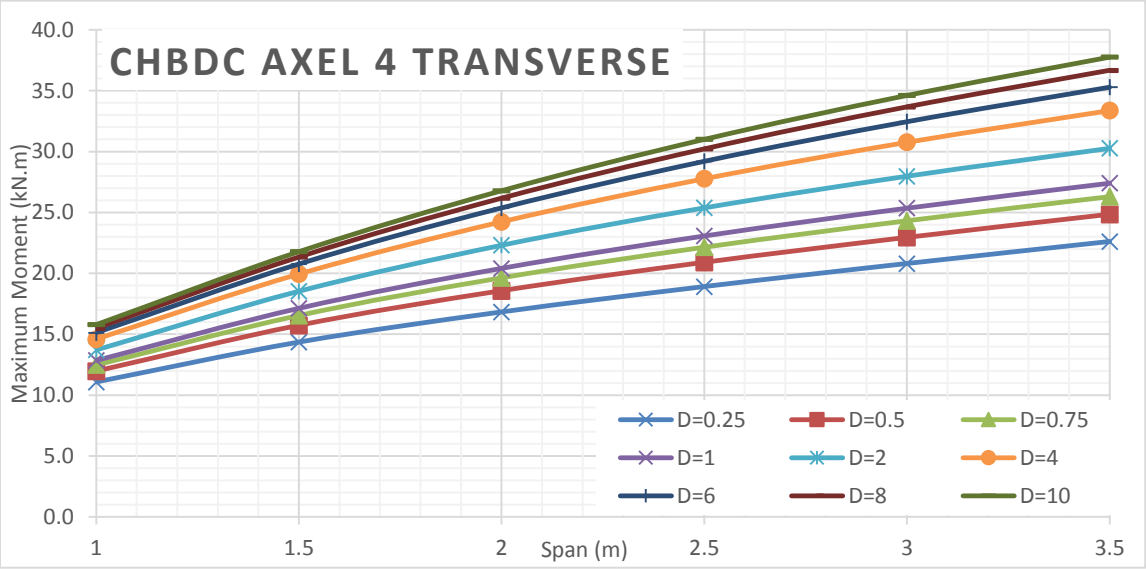


Figure 290 Maximum moment of deck slabs subjected to CHBDC axle 4 for different D values of alpha 10 Orthotropic analyses

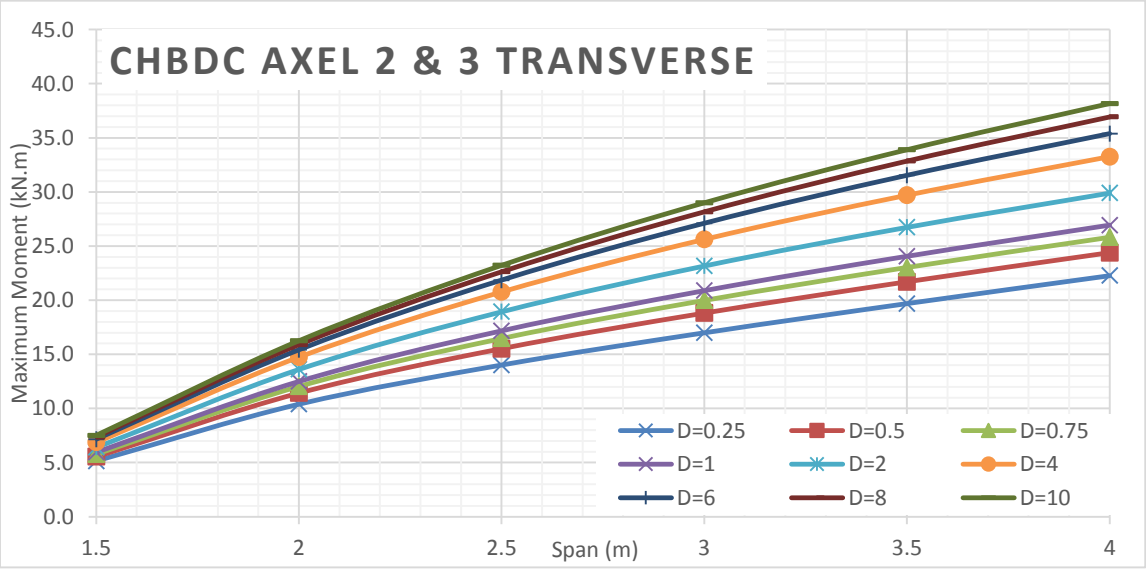


Figure 291 Maximum moment of deck slabs subjected to CHBDC axle 2 & 3 for different D values of alpha 10 Orthotropic analyses

C.1.3 MAXIMUM BENDING MOMENT VS FLEXURAL RIGIDITY

Alpha 0.25 Bending Moment VS Flexural Rigidity for Different Span Length

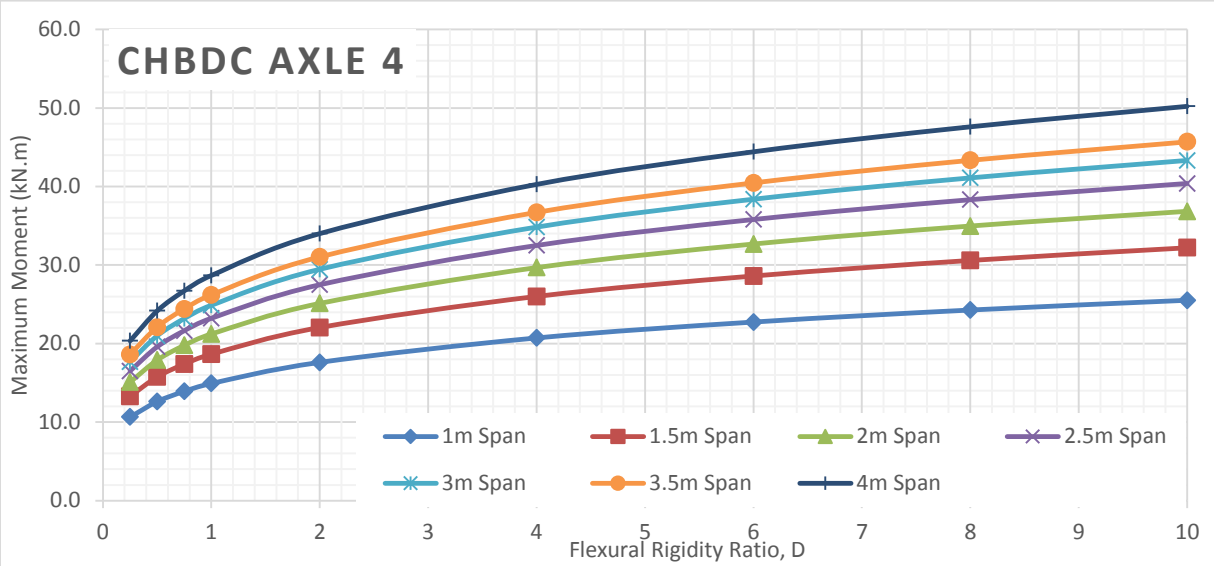


Figure 292 Maximum moment of deck slabs subjected to CHBDC axle 4 for different span values of alpha 0.25 Orthotropic analyses

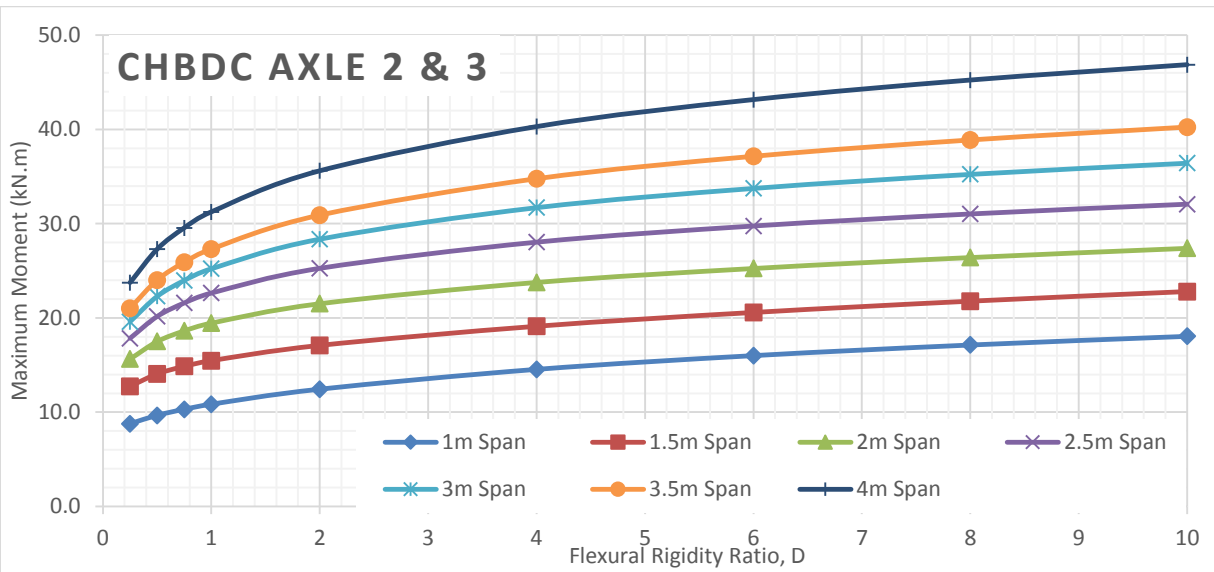


Figure 293 Maximum moment of deck slabs subjected to CHBDC axle 2 & 3 for different span values of alpha 0.25 Orthotropic analyses

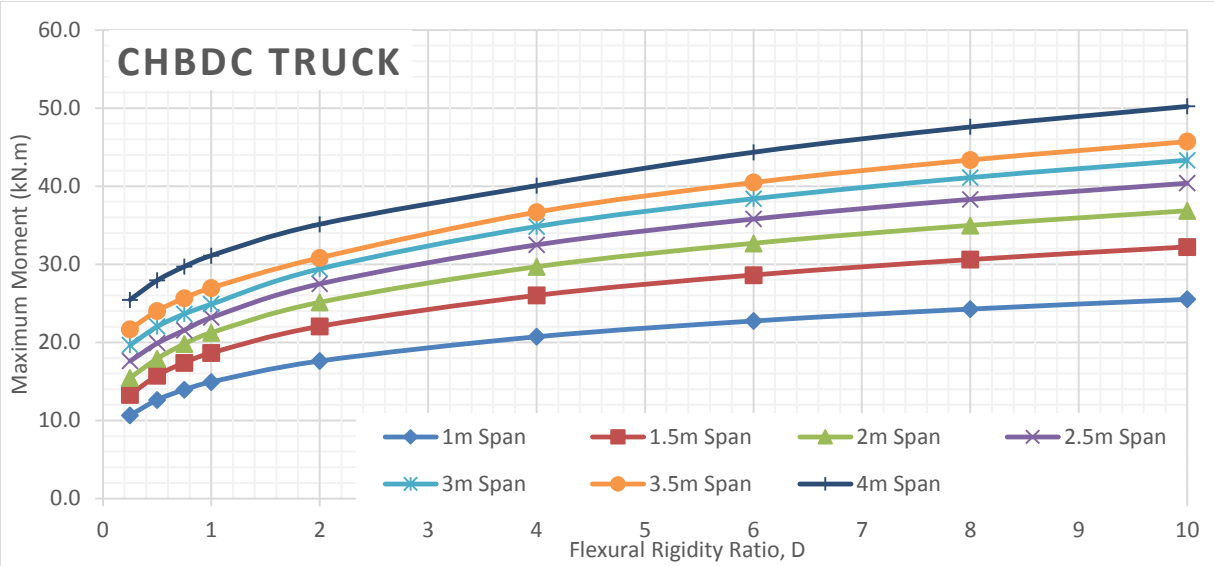


Figure 294 Maximum moment of deck slabs subjected to CHBDC truck for different span values of alpha 0.25 Orthotropic analyses

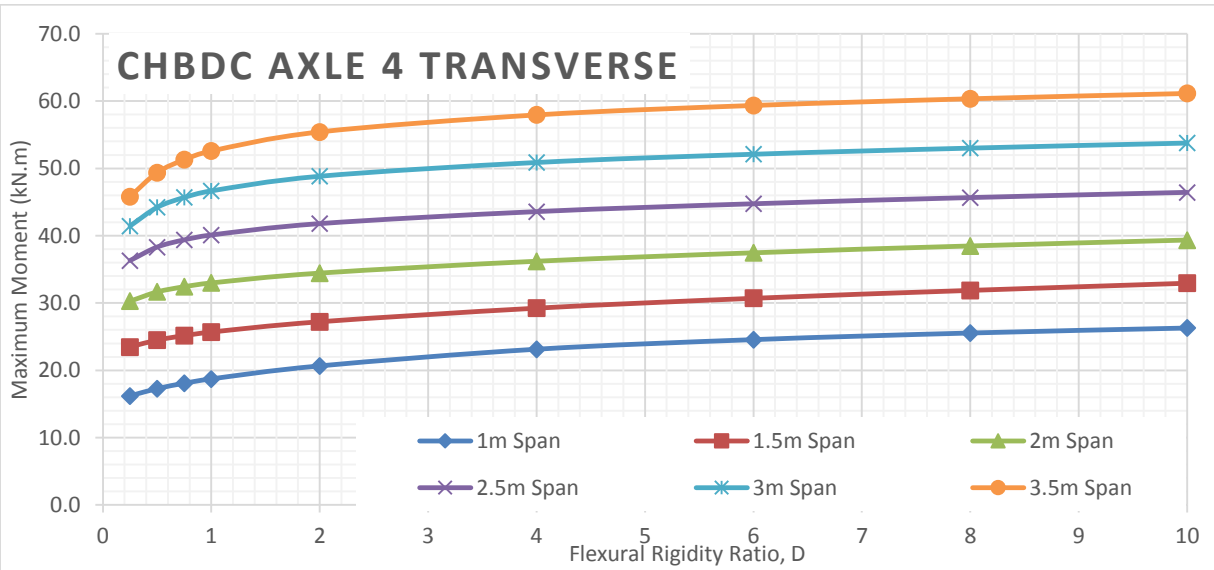


Figure 295 Maximum moment of deck slabs subjected to CHBDC axle 4 for different span values of alpha 0.25 Orthotropic analyses

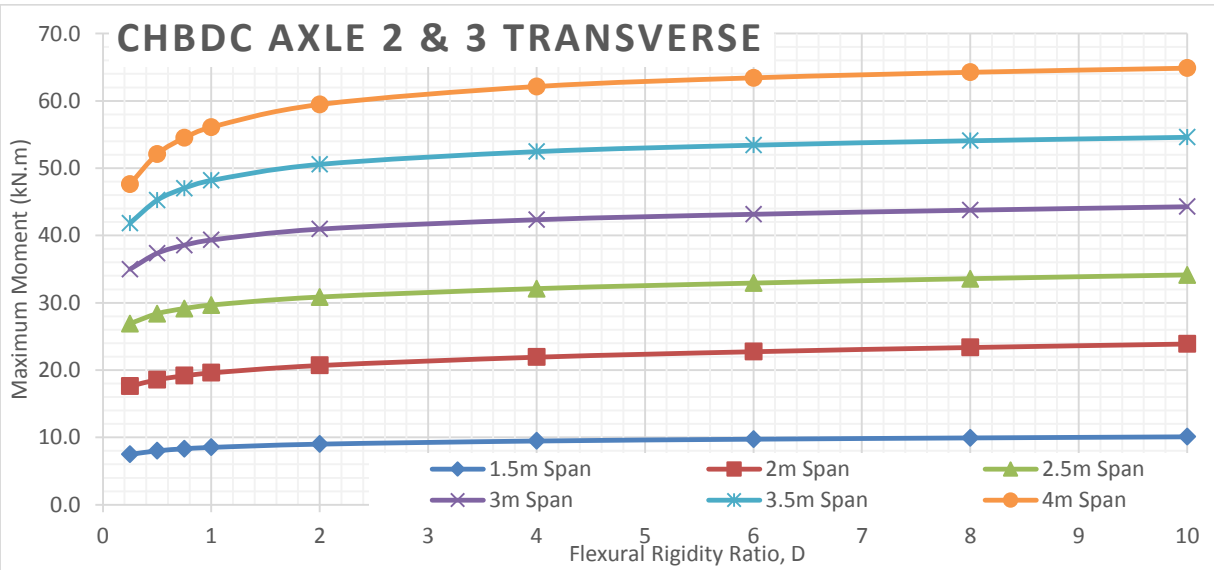


Figure 296 Maximum moment of deck slabs subjected to CHBDC axle 2 & 3 for different span values of alpha 0.25 Orthotropic analyses

Alpha 0.5 Bending Moment VS Flexural Rigidity for Different Span Length

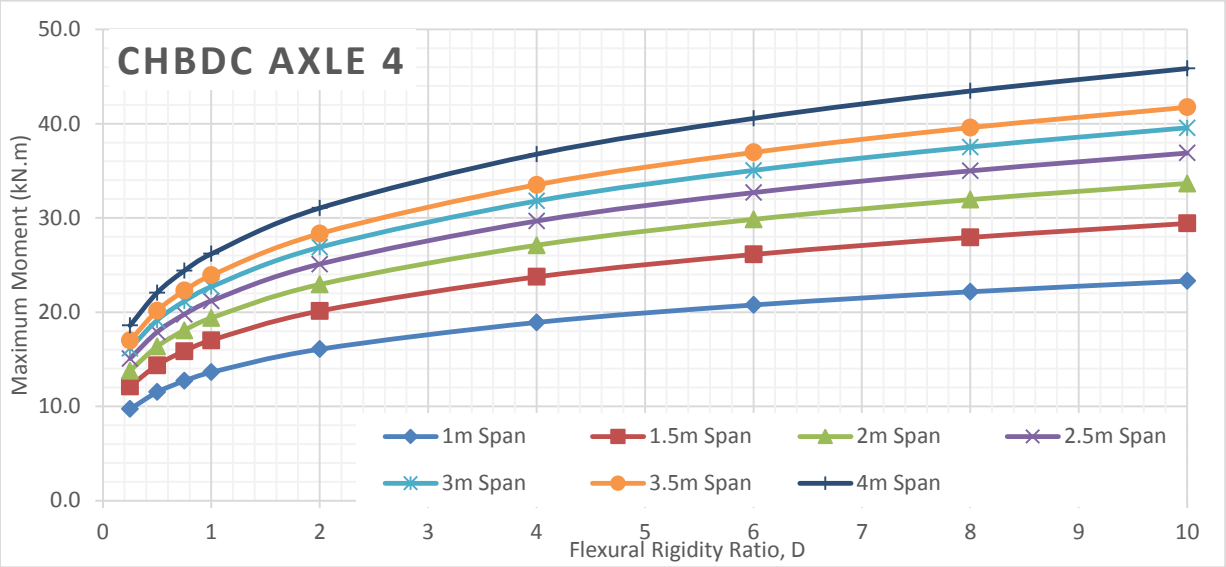


Figure 297 Maximum moment of deck slabs subjected to CHBDC axle 4 for different span values of alpha 0.5 Orthotropic analyses

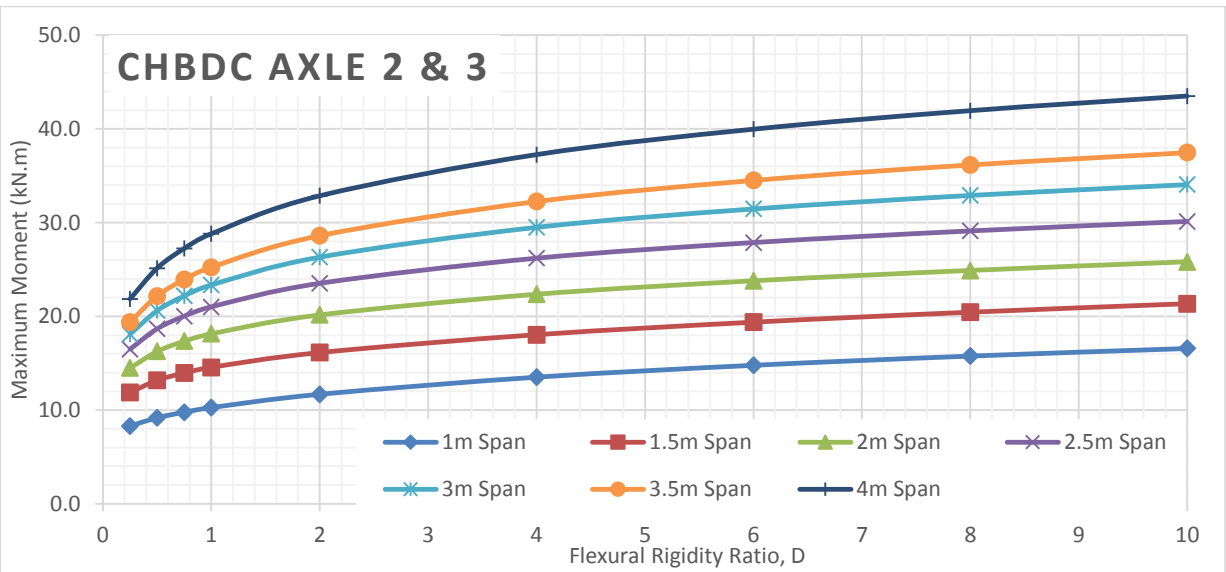


Figure 298 Maximum moment of deck slabs subjected to CHBDC axle 2 & 3 for different span values of alpha 0.5 Orthotropic analyses

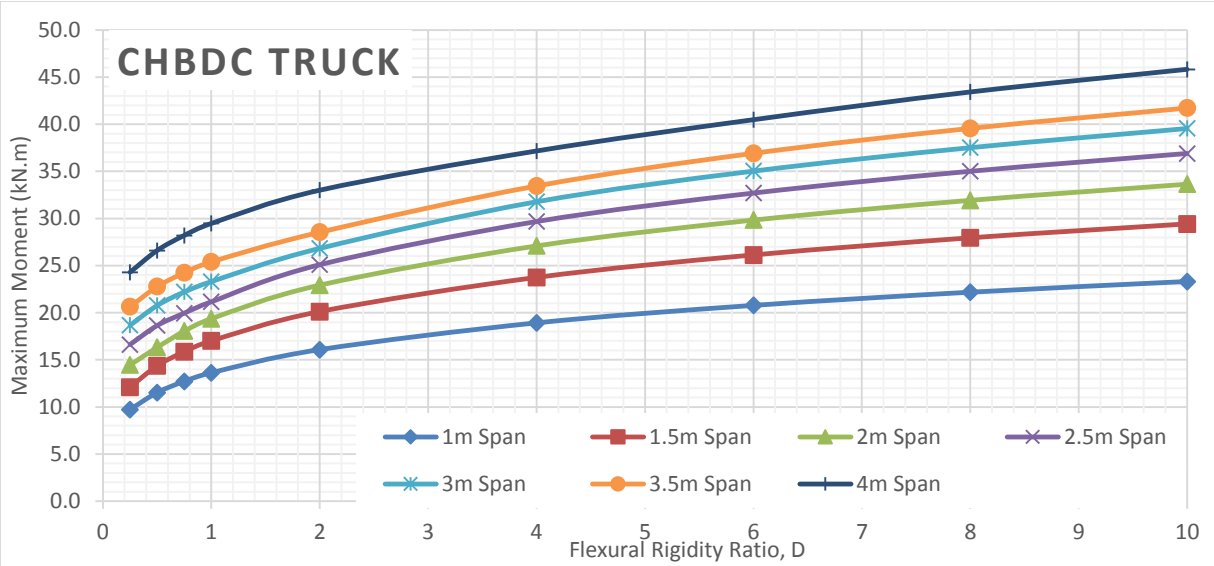


Figure 299 Maximum moment of deck slabs subjected to CHBDC truck for different span values of alpha 0.5 Orthotropic analyses

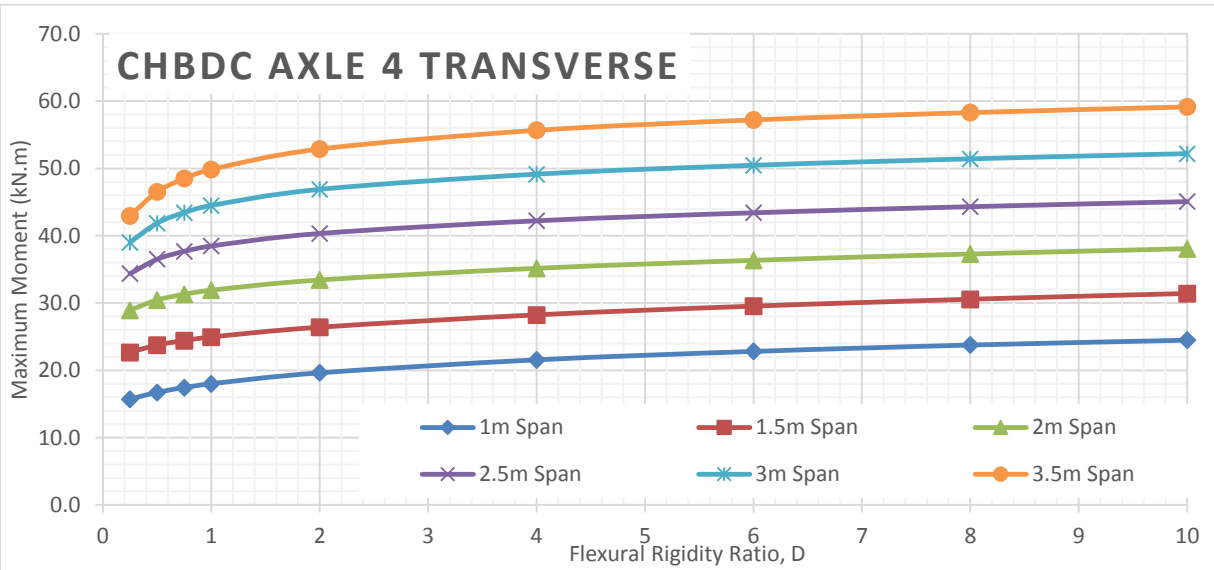


Figure 300 Maximum moment of deck slabs subjected to CHBDC axle 4 for different span values of alpha 0.5 Orthotropic analyses

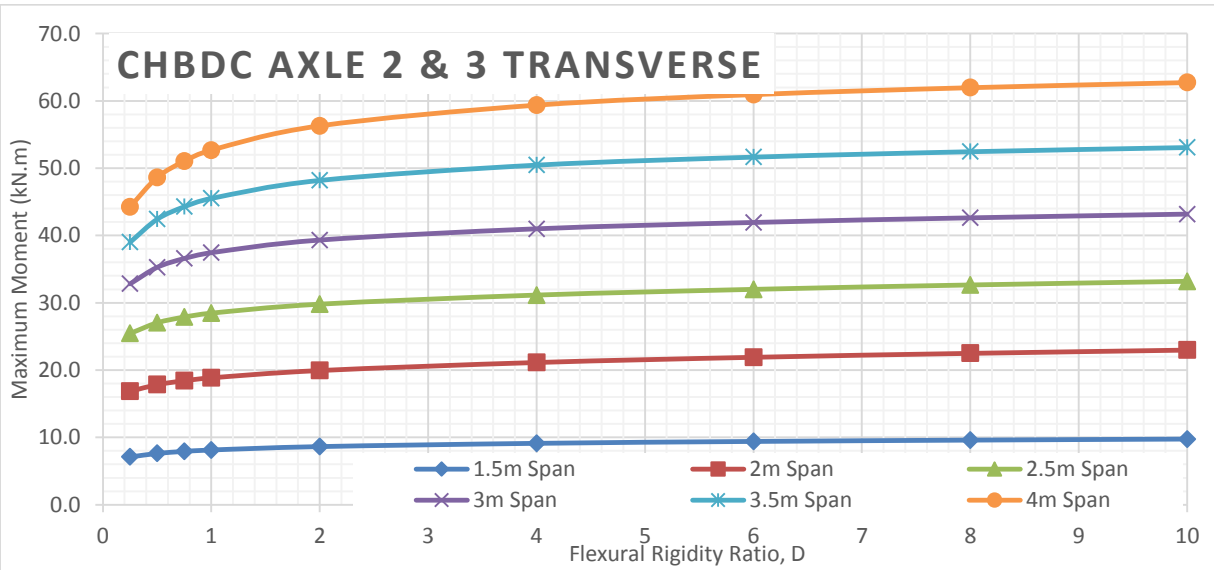


Figure 301 Maximum moment of deck slabs subjected to CHBDC axle 2 & 3 for different span values of alpha 0.5 Orthotropic analyses

Alpha 0.75 Bending Moment VS Flexural Rigidity for Different Span Length

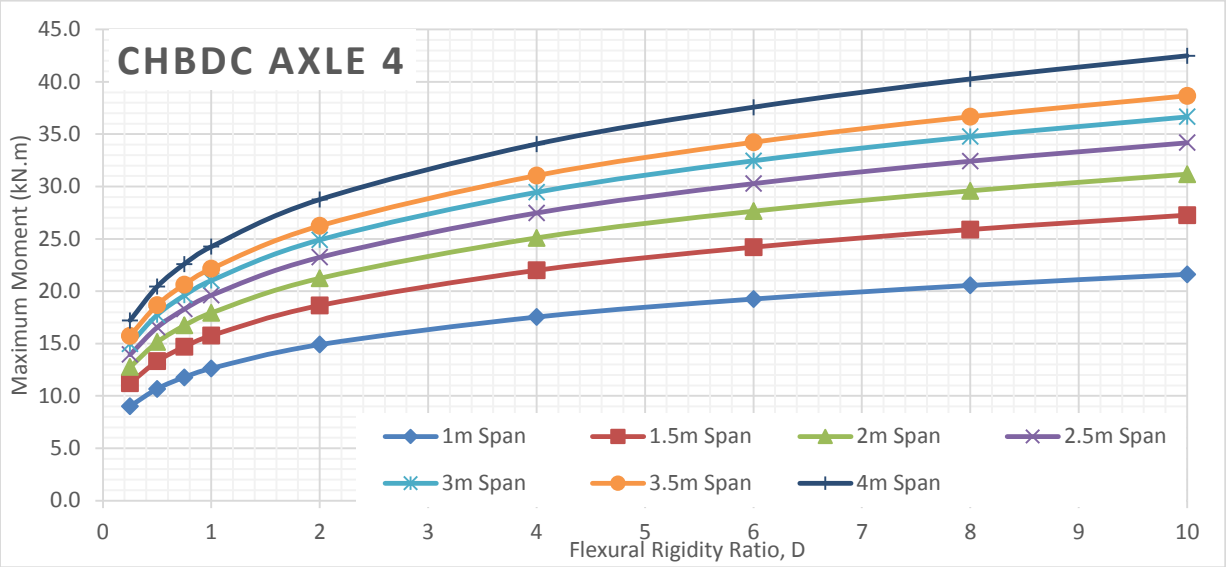


Figure 302 Maximum moment of deck slabs subjected to CHBDC axle 4 for different span values of alpha 0.75 Orthotropic analyses

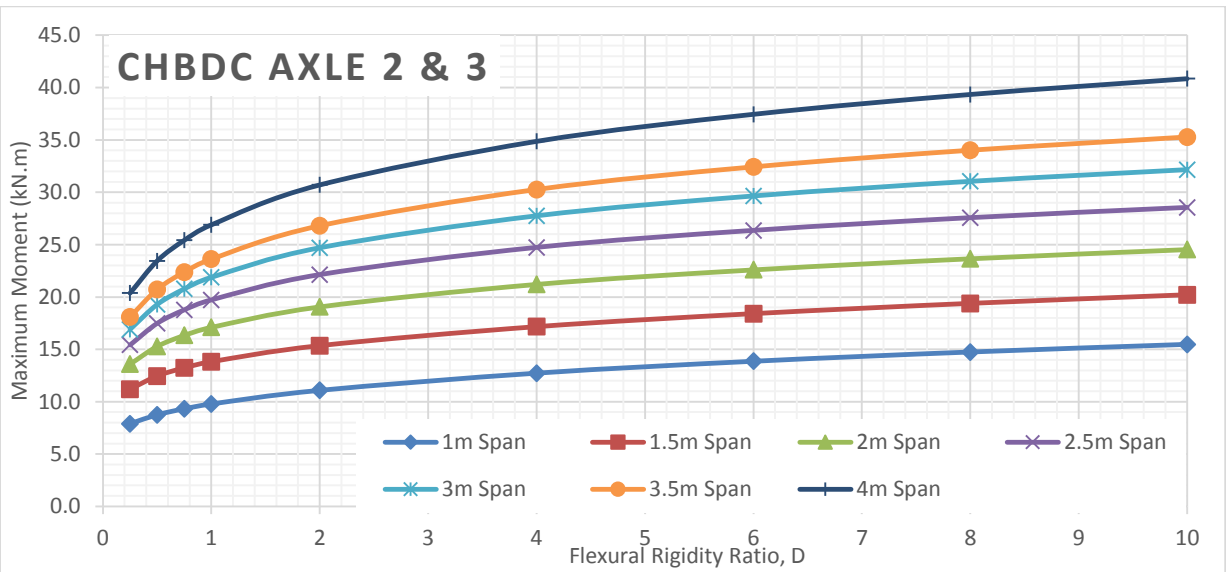


Figure 303 Maximum moment of deck slabs subjected to CHBDC axle 2 & 3 for different span values of alpha 0.75 Orthotropic analyses

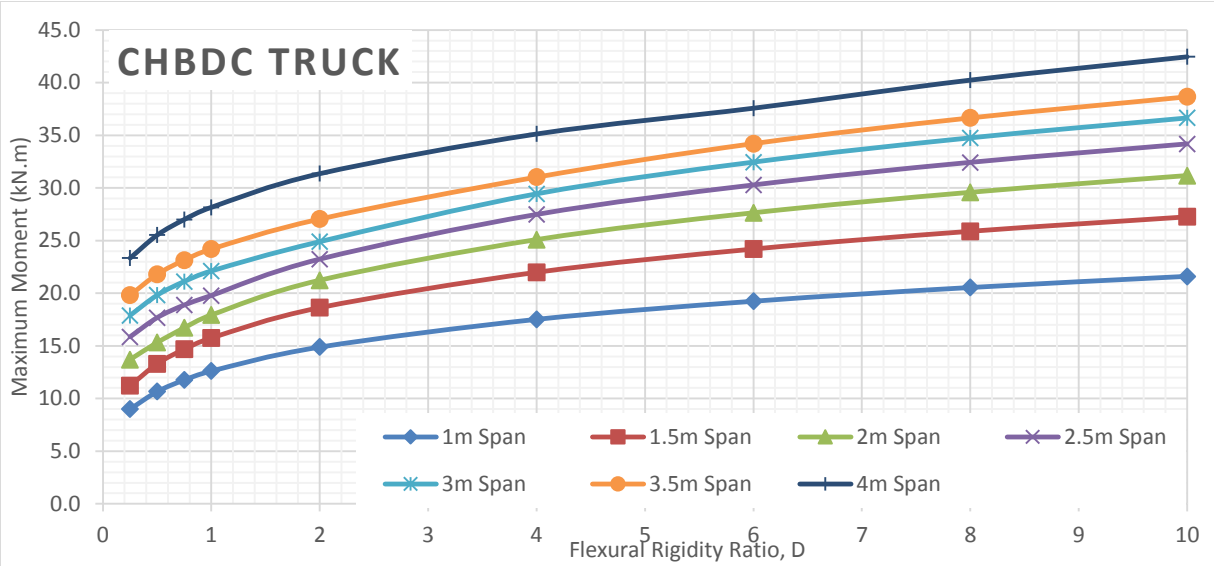


Figure 304 Maximum moment of deck slabs subjected to CHBDC truck for different span values of alpha 0.75 Orthotropic analyses

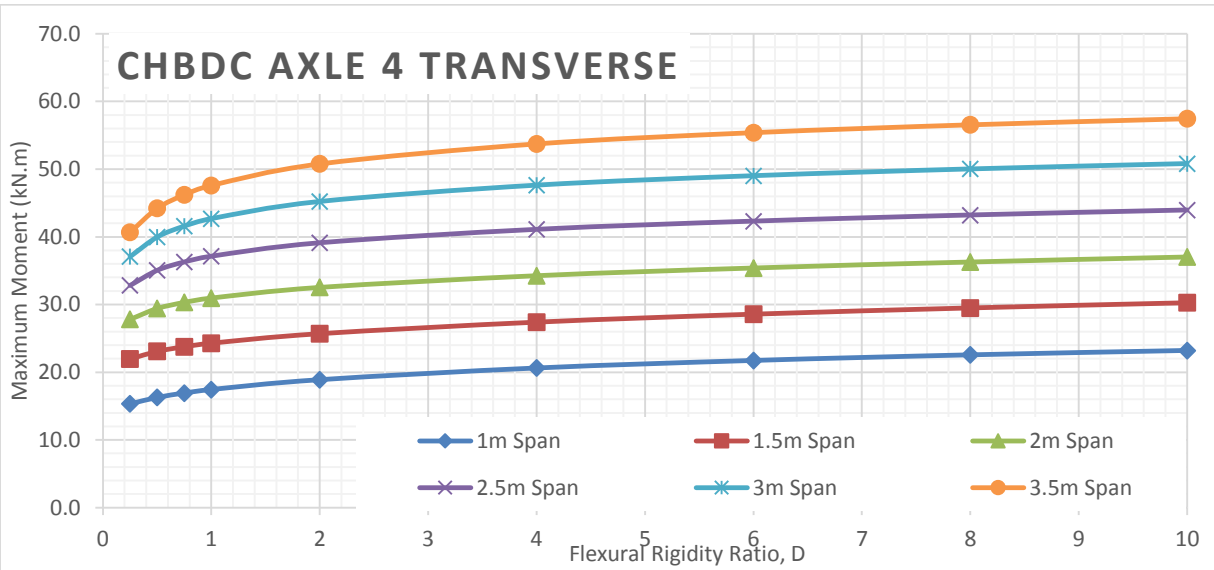


Figure 305 Maximum moment of deck slabs subjected to CHBDC axle 4 for different span values of alpha 0.75 Orthotropic analyses

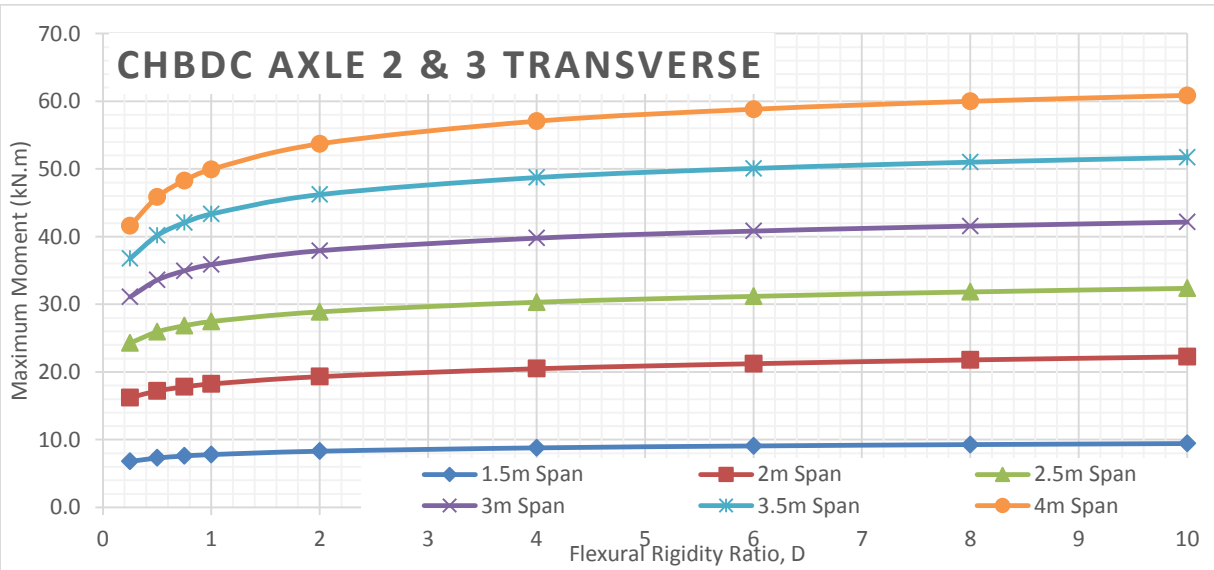


Figure 306 Maximum moment of deck slabs subjected to CHBDC axle 2 & 3 for different span values of alpha 0.75 Orthotropic analyses

Alpha 1 Bending Moment VS Flexural Rigidity for Different Span Length

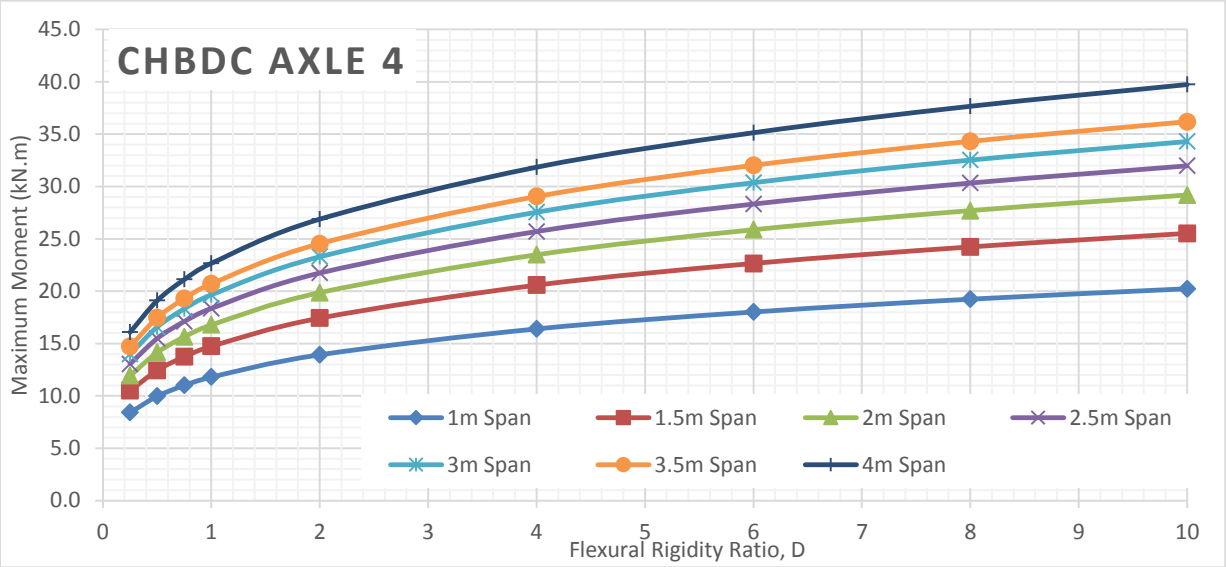


Figure 307 Maximum moment of deck slabs subjected to CHBDC axle 4 for different span values of alpha 1 Orthotropic analyses

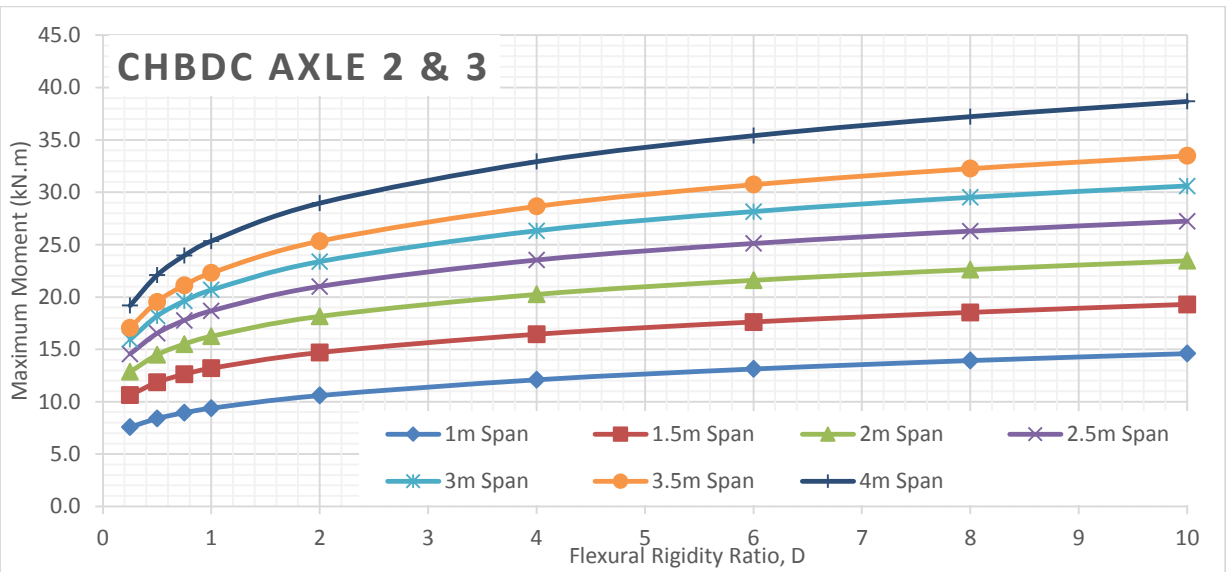


Figure 308 Maximum moment of deck slabs subjected to CHBDC axle 2 & 3 for different span values of alpha 1 Orthotropic analyses

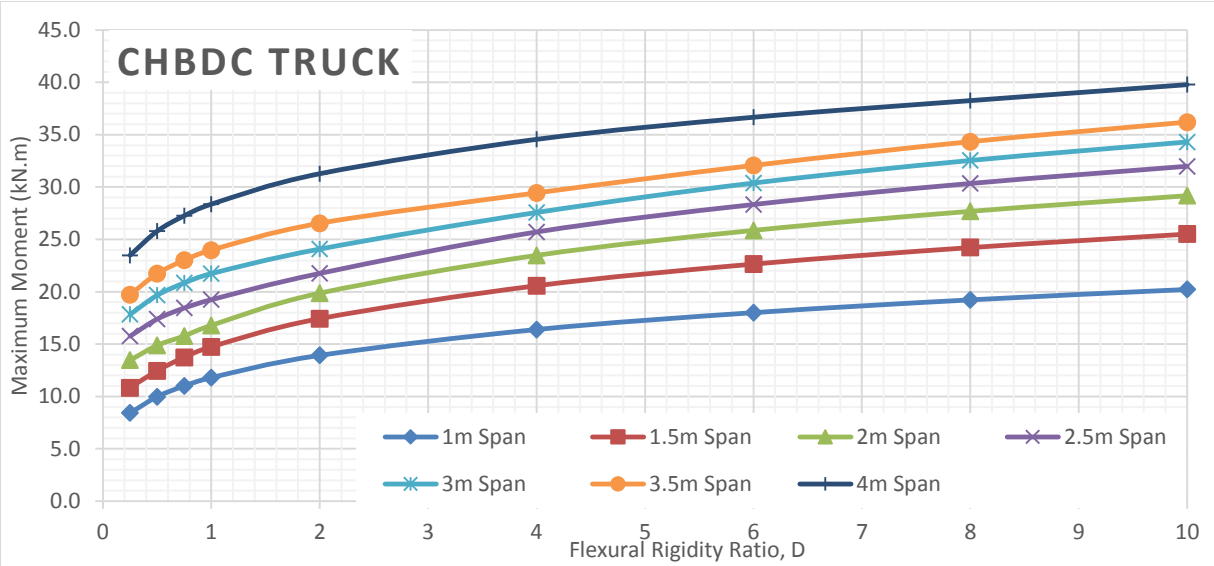


Figure 309 Maximum moment of deck slabs subjected to CHBDC truck for different span values of alpha 1 Orthotropic analyses

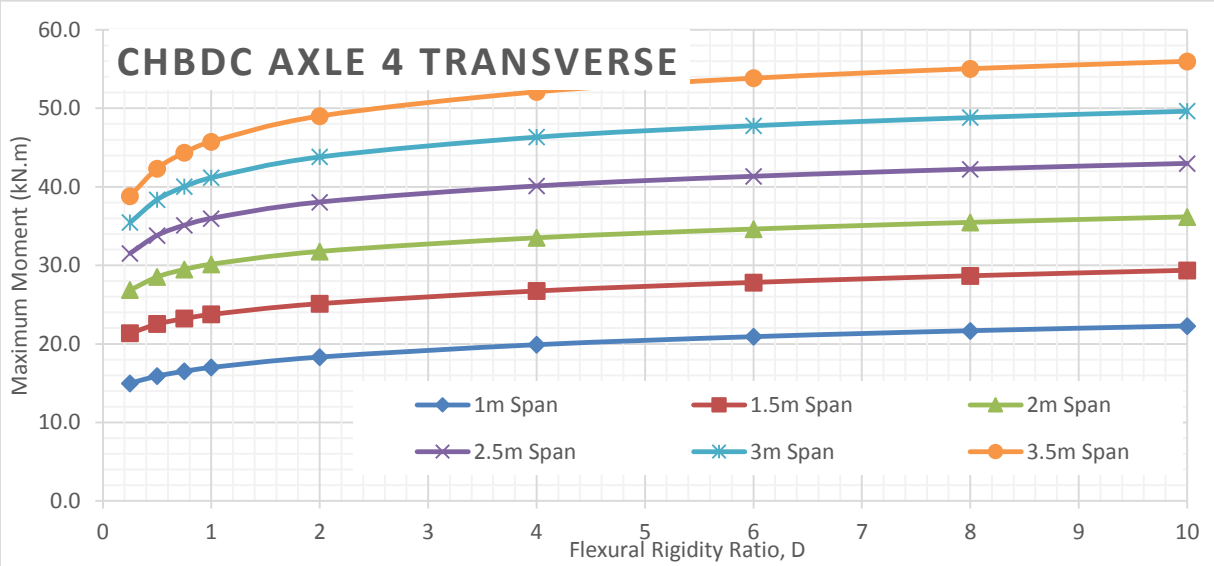


Figure 310 Maximum moment of deck slabs subjected to CHBDC axle 4 for different span values of alpha 1 Orthotropic analyses

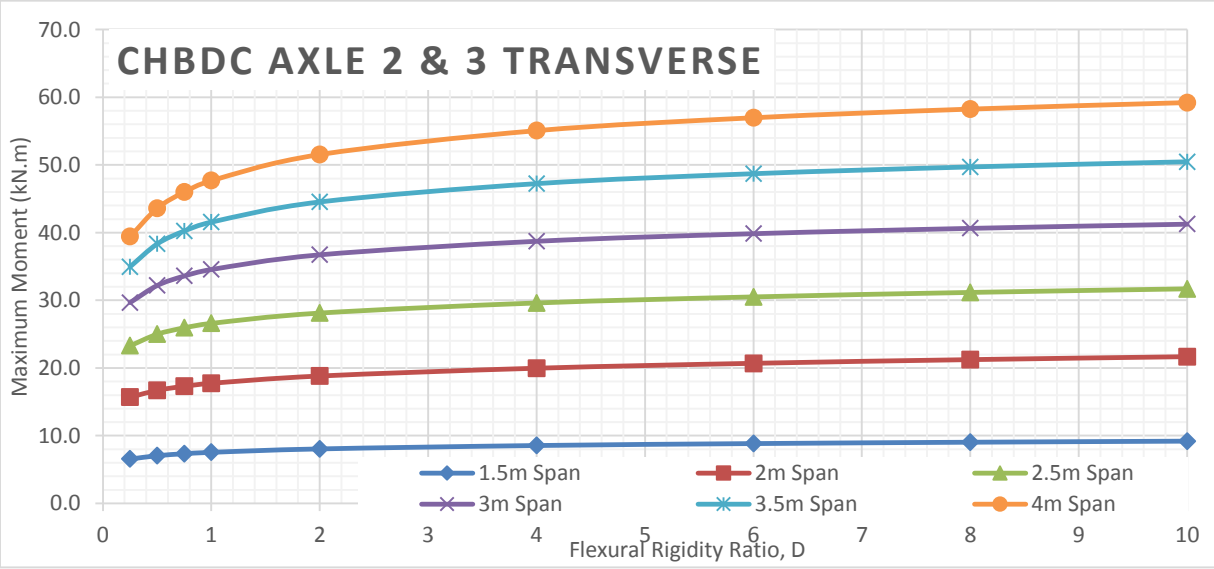


Figure 311 Maximum moment of deck slabs subjected to CHBDC axle 2 & 3 for different span values of alpha 1 Orthotropic analyses

Alpha 2 Bending Moment VS Flexural Rigidity for Different Span Length

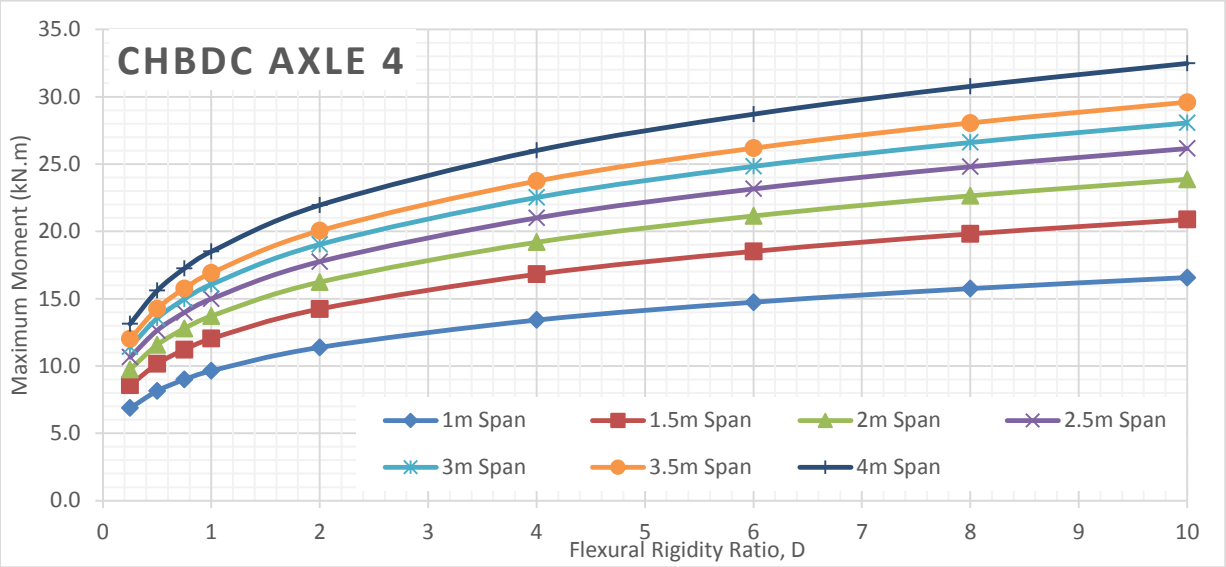


Figure 312 Maximum moment of deck slabs subjected to CHBDC axle 4 for different span values of alpha 2 Orthotropic analyses

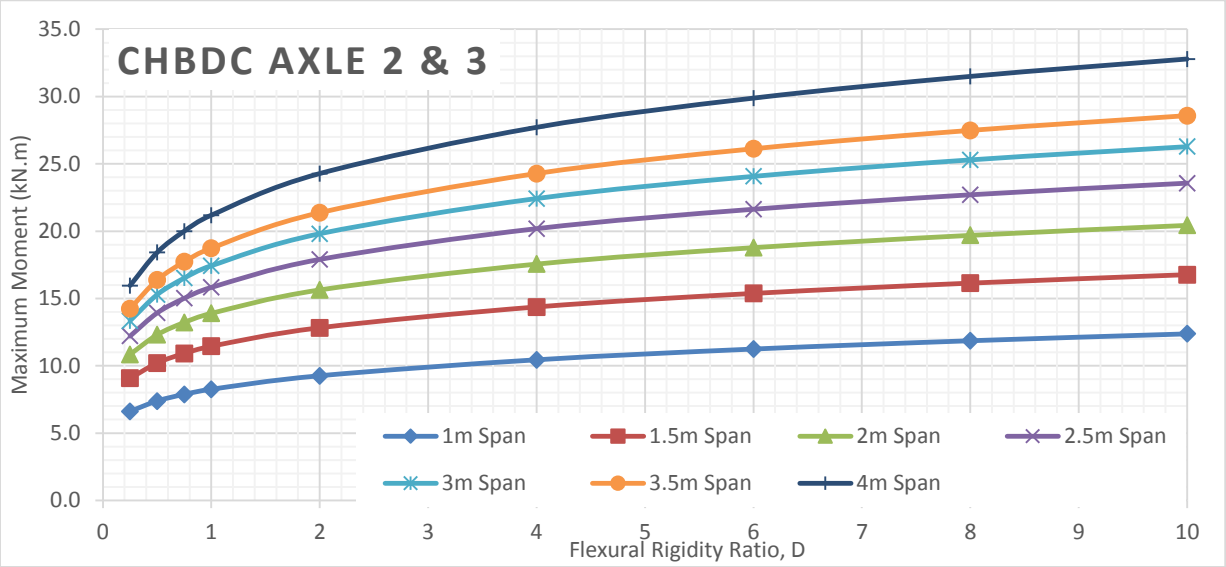


Figure 313 Maximum moment of deck slabs subjected to CHBDC axle 2 & 3 for different span values of alpha 2 Orthotropic analyses

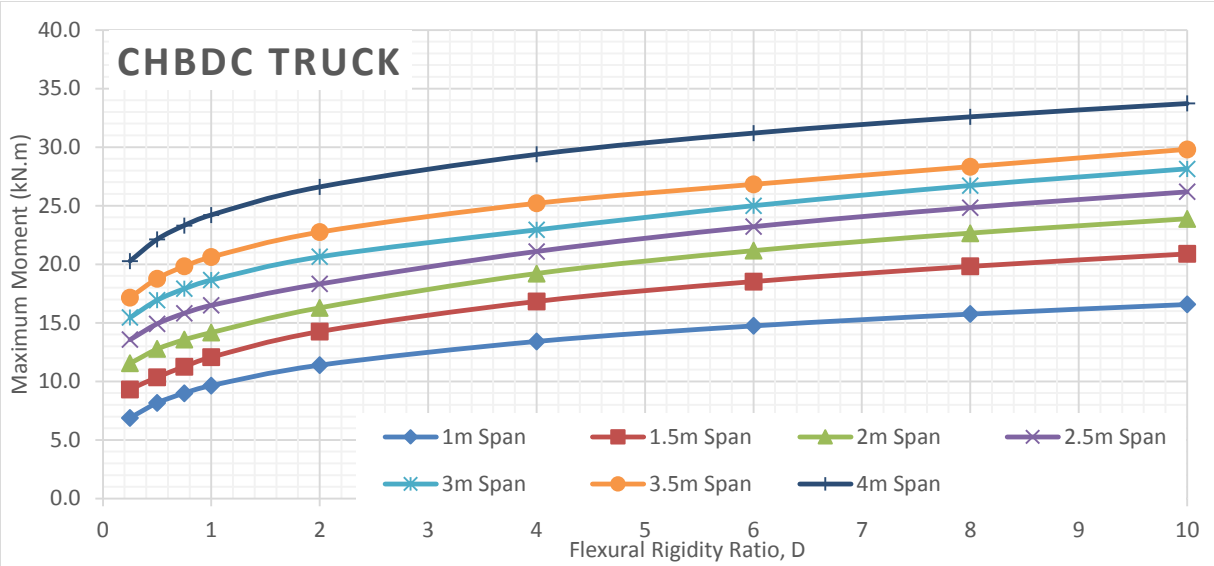


Figure 314 Maximum moment of deck slabs subjected to CHBDC truck for different span values of alpha 2 Orthotropic analyses

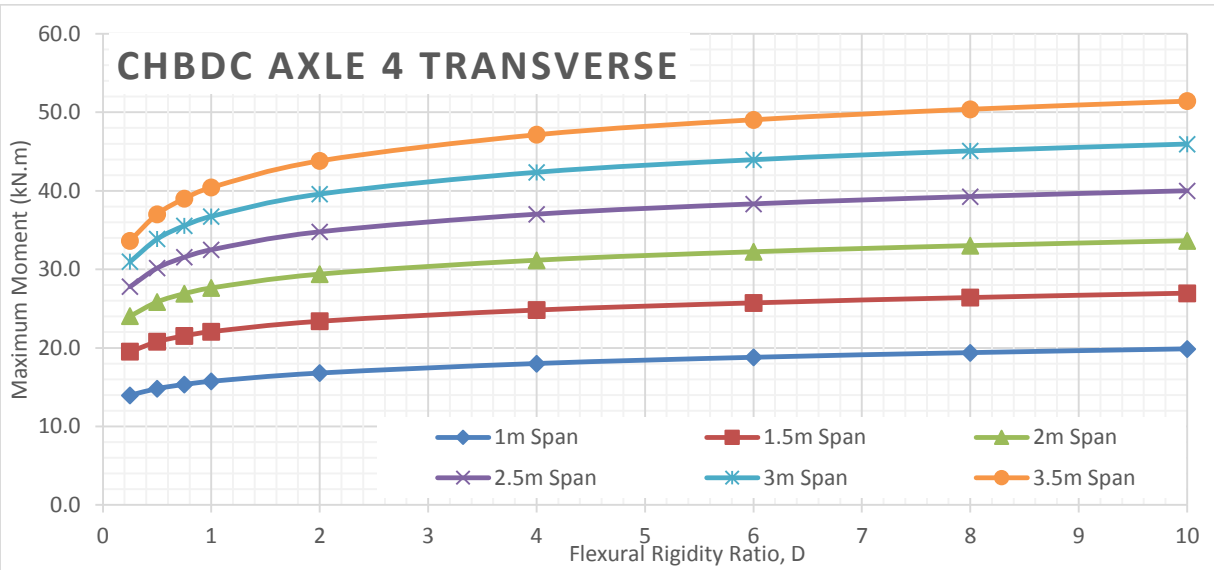


Figure 315 Maximum moment of deck slabs subjected to CHBDC axle 4 for different span values of alpha 2 Orthotropic analyses

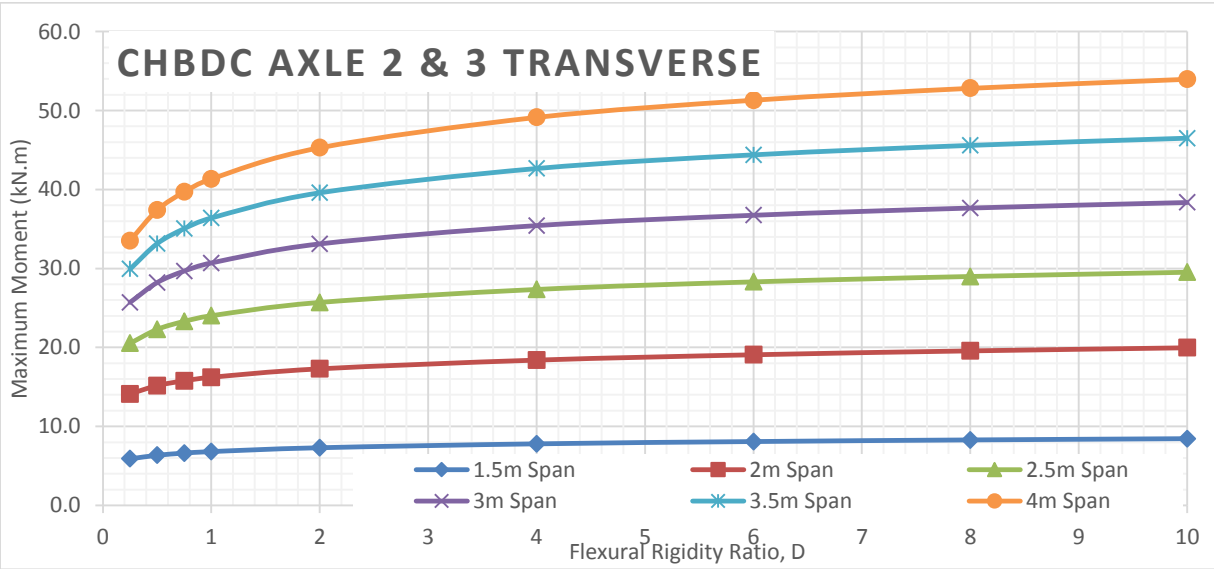


Figure 316 Maximum moment of deck slabs subjected to CHBDC axle 2 & 3 for different span values of alpha 2 Orthotropic analyses

Alpha 4 Bending Moment VS Flexural Rigidity for Different Span Length

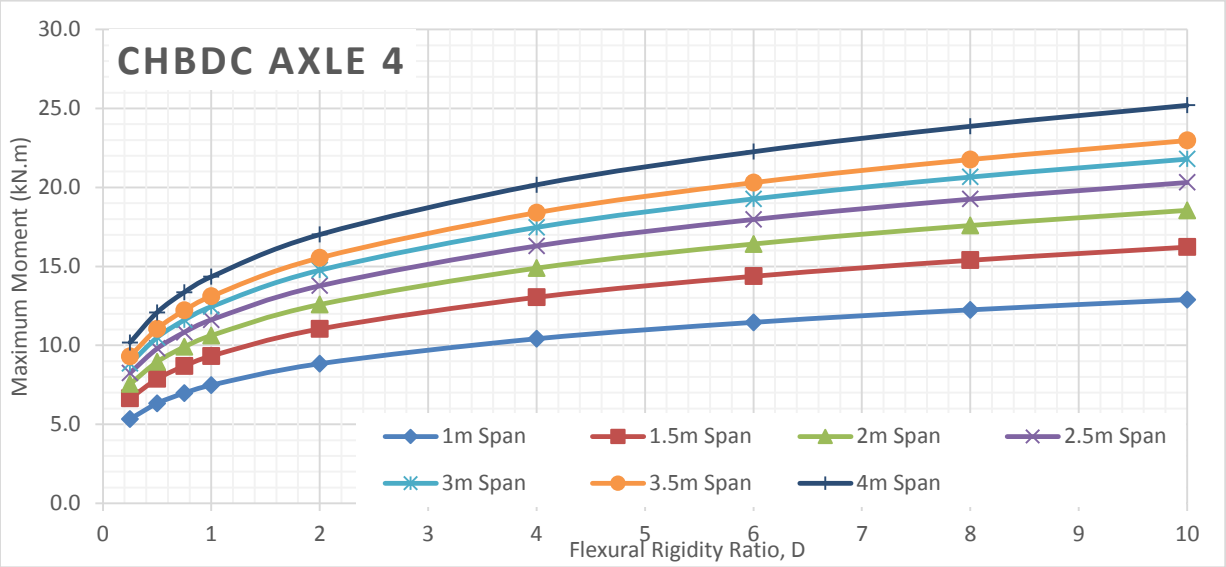


Figure 317 Maximum moment of deck slabs subjected to CHBDC axle 4 for different span values of alpha 4 Orthotropic analyses

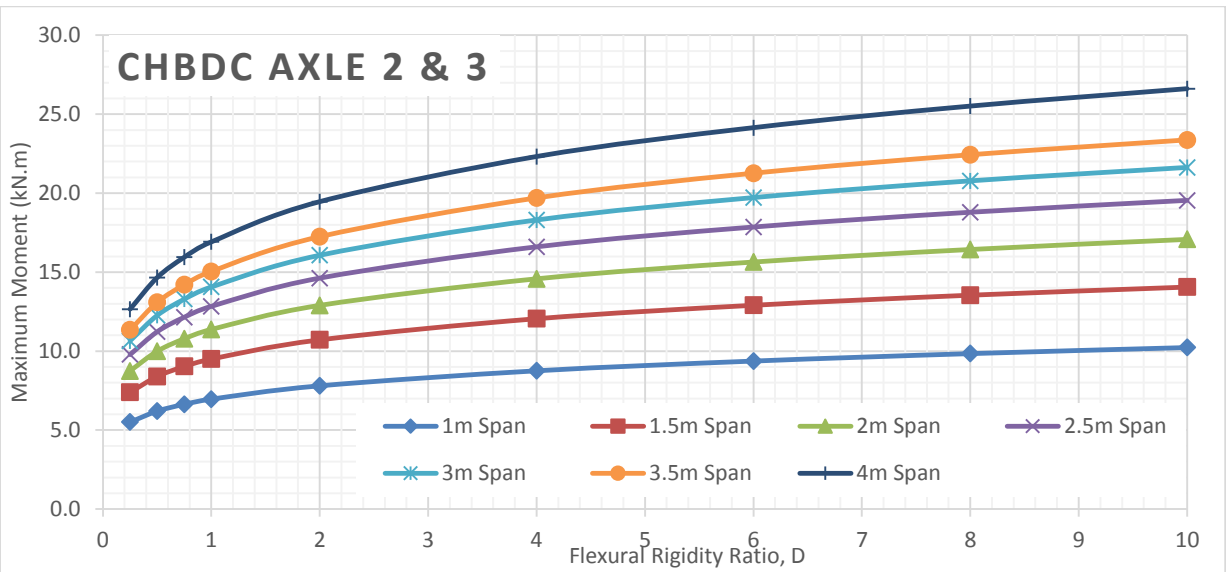


Figure 318 Maximum moment of deck slabs subjected to CHBDC axle 2 & 3 for different span values of alpha 4 Orthotropic analyses

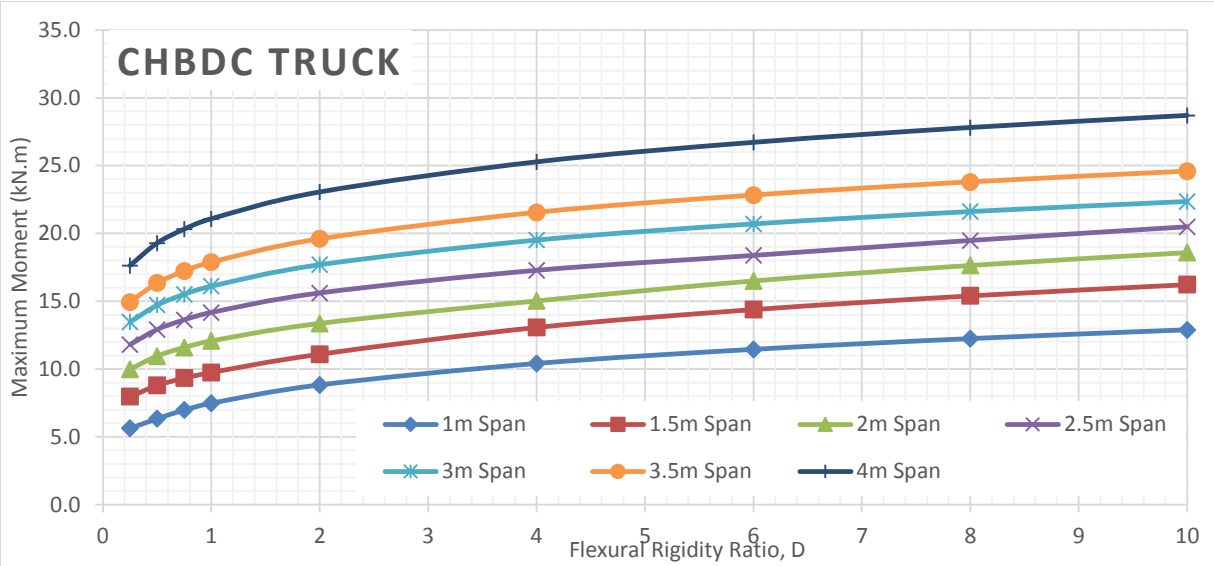


Figure 319 Maximum moment of deck slabs subjected to CHBDC truck for different span values of alpha 4 Orthotropic analyses

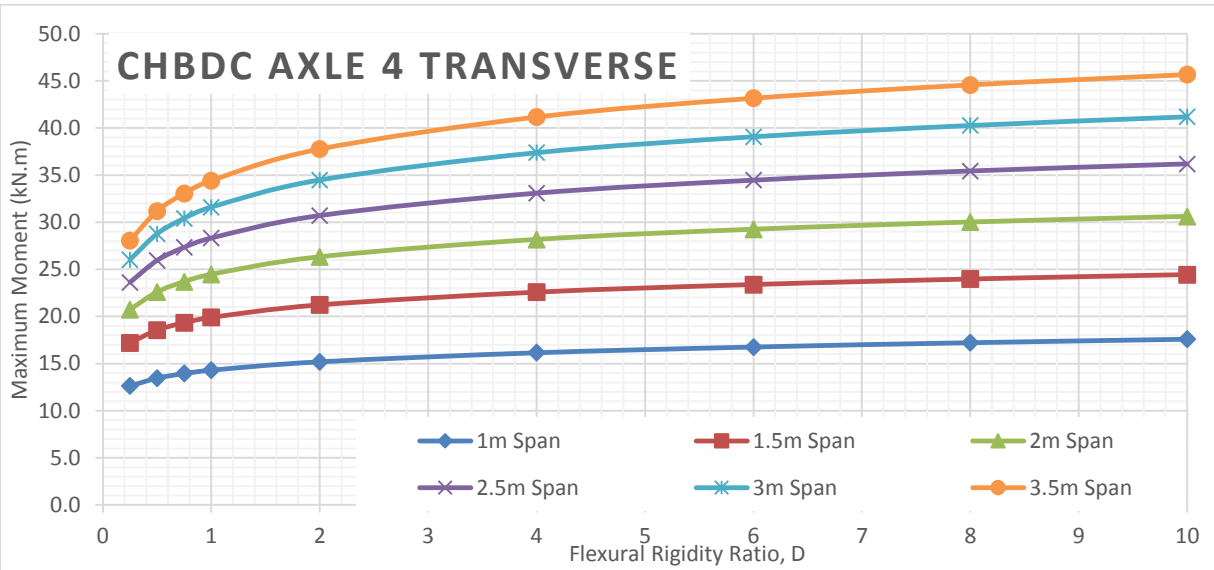


Figure 320 Maximum moment of deck slabs subjected to CHBDC axle 4 for different span values of alpha 4 Orthotropic analyses

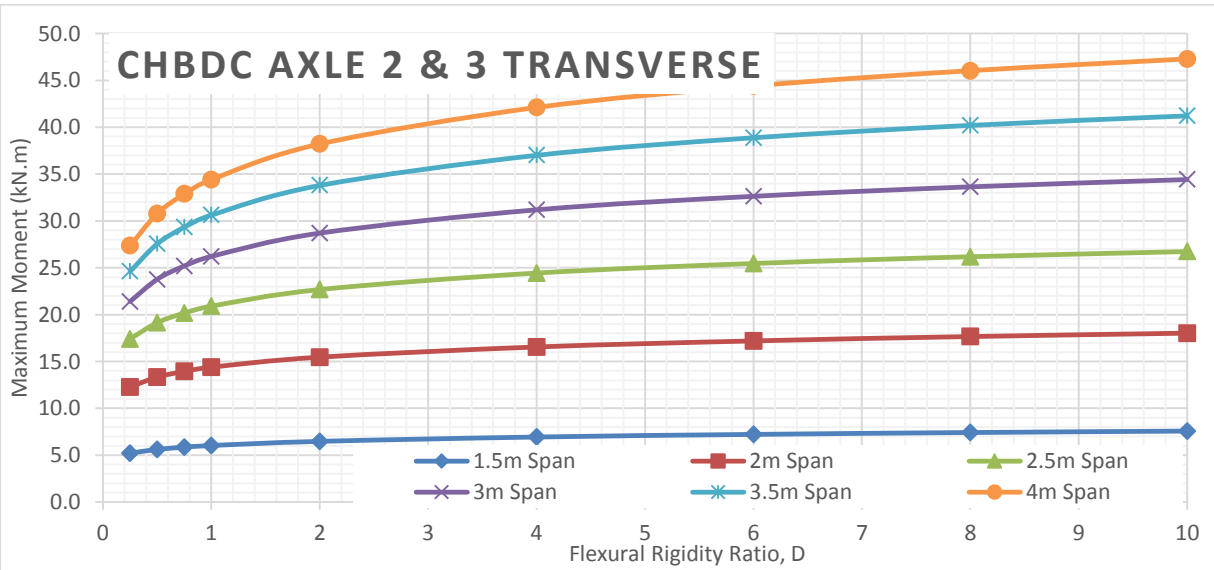


Figure 321 Maximum moment of deck slabs subjected to CHBDC axle 2 & 3 for different span values of alpha 4 Orthotropic analyses

Alpha 6 Bending Moment VS Flexural Rigidity for Different Span Length

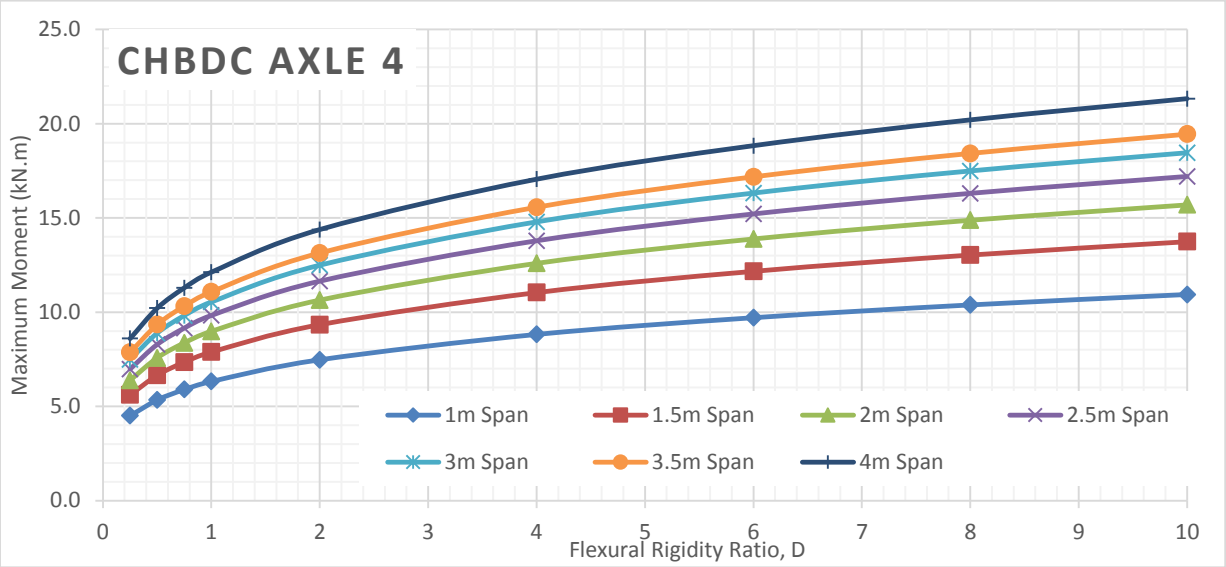


Figure 322 Maximum moment of deck slabs subjected to CHBDC axle 4 for different span values of alpha 6 Orthotropic analyses

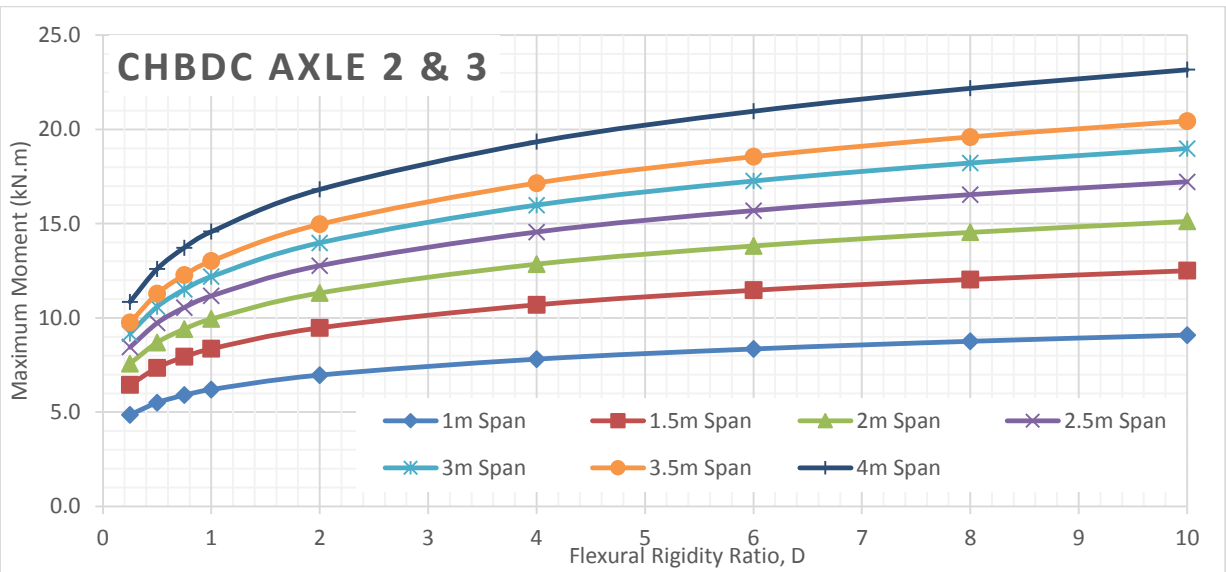


Figure 323 Maximum moment of deck slabs subjected to CHBDC axle 2 & 3 for different span values of alpha 6 Orthotropic analyses

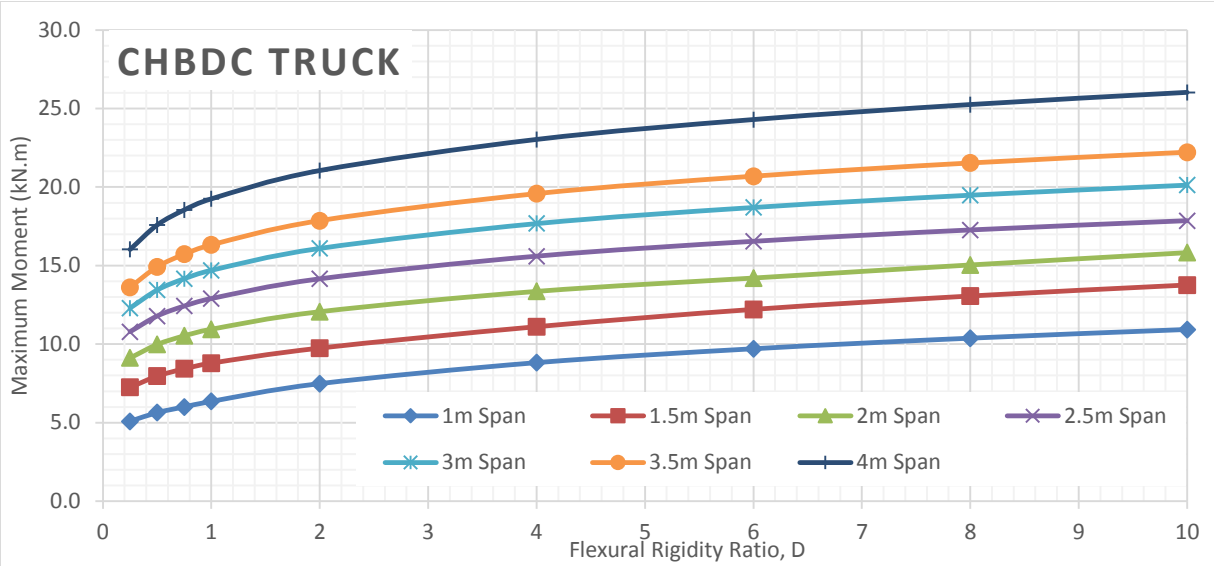


Figure 324 Maximum moment of deck slabs subjected to CHBDC truck for different span values of alpha 6 Orthotropic analyses

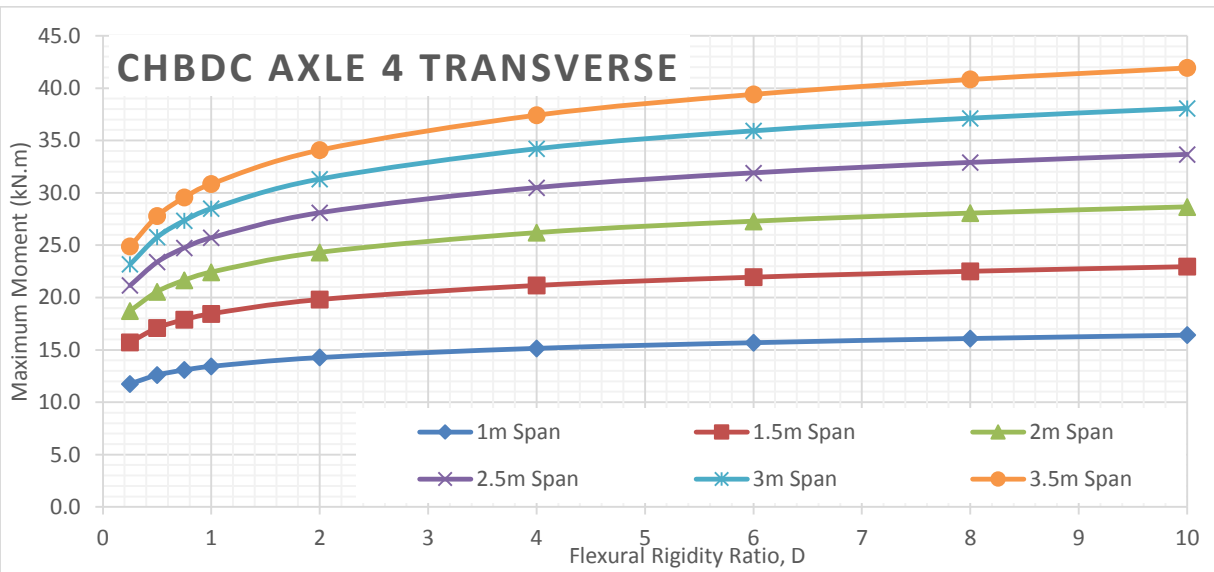


Figure 325 Maximum moment of deck slabs subjected to CHBDC axle 4 for different span values of alpha 6 Orthotropic analyses

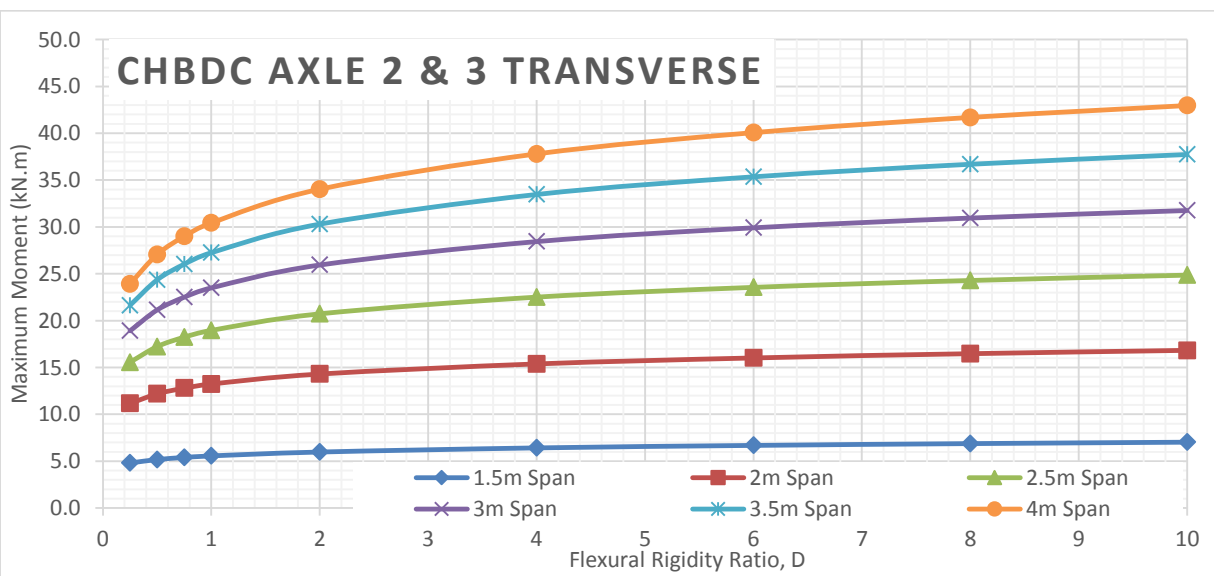


Figure 326 Maximum moment of deck slabs subjected to CHBDC axle 2 & 3 for different span values of alpha 6 Orthotropic analyses

Alpha 8 Bending Moment VS Flexural Rigidity for Different Span Length

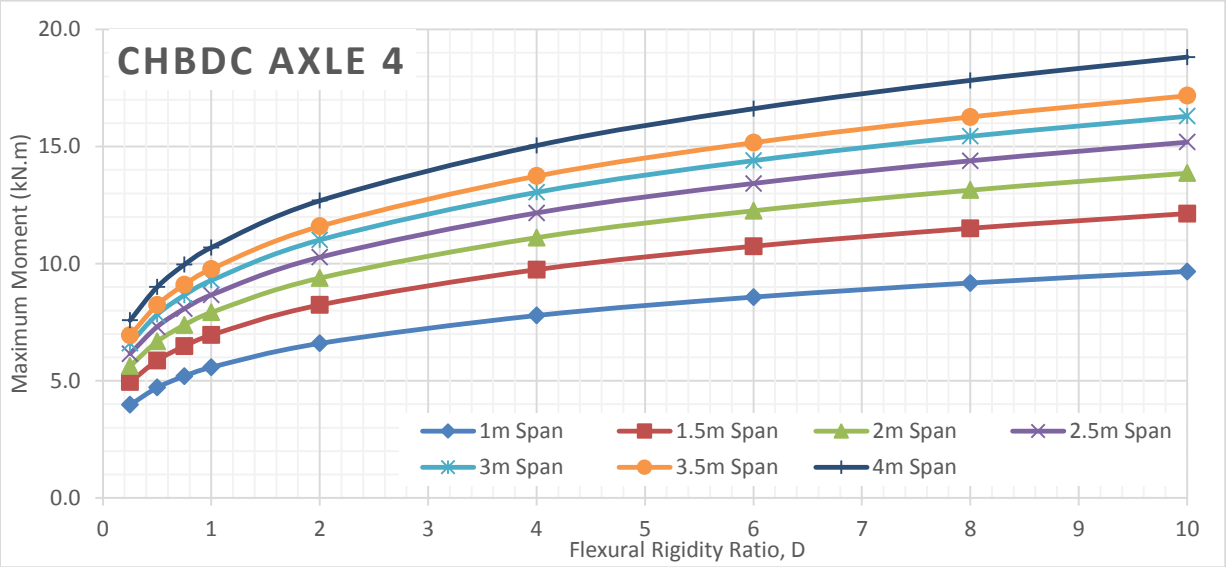


Figure 327 Maximum moment of deck slabs subjected to CHBDC axle 4 for different span values of alpha 8 Orthotropic analyses

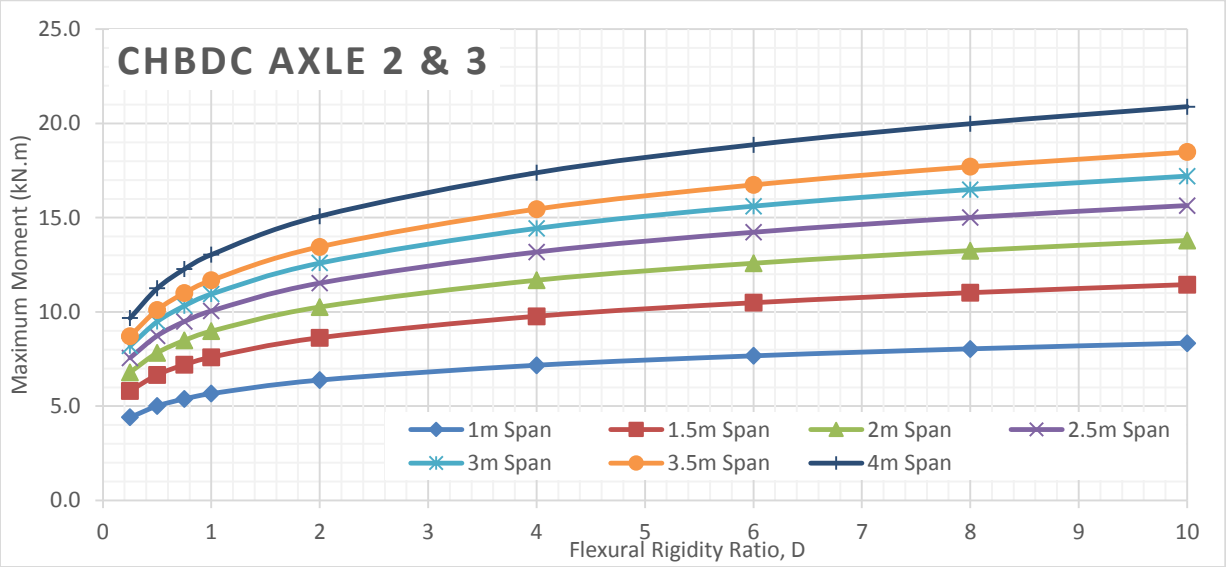


Figure 328 Maximum moment of deck slabs subjected to CHBDC axle 2 & 3 for different span values of alpha 8 Orthotropic analyses

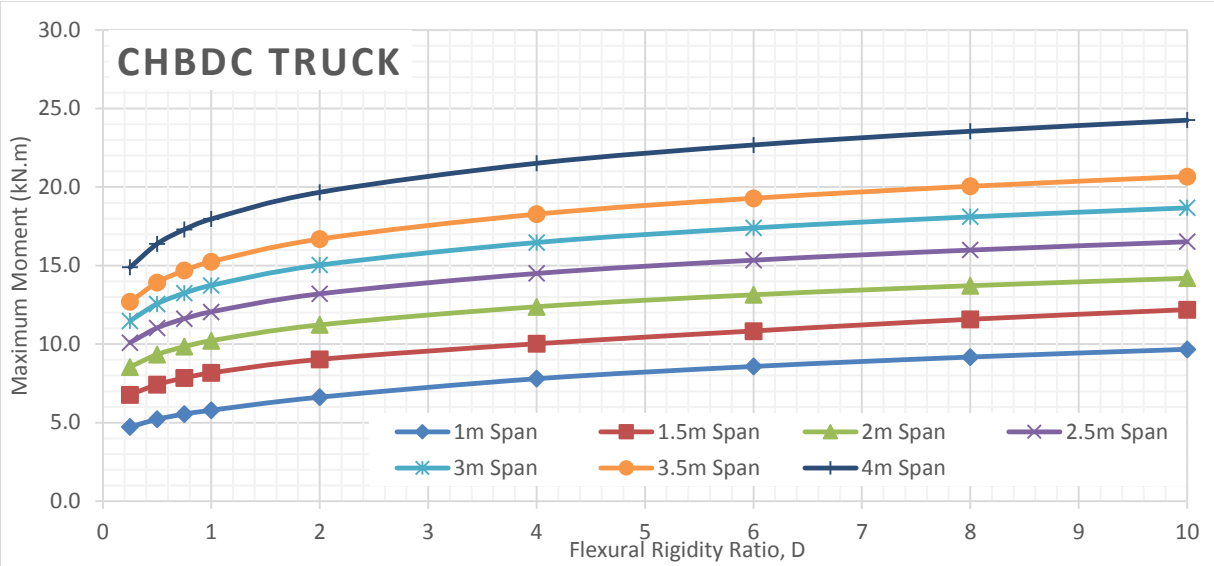


Figure 329 Maximum moment of deck slabs subjected to CHBDC truck for different span values of alpha 8 Orthotropic analyses

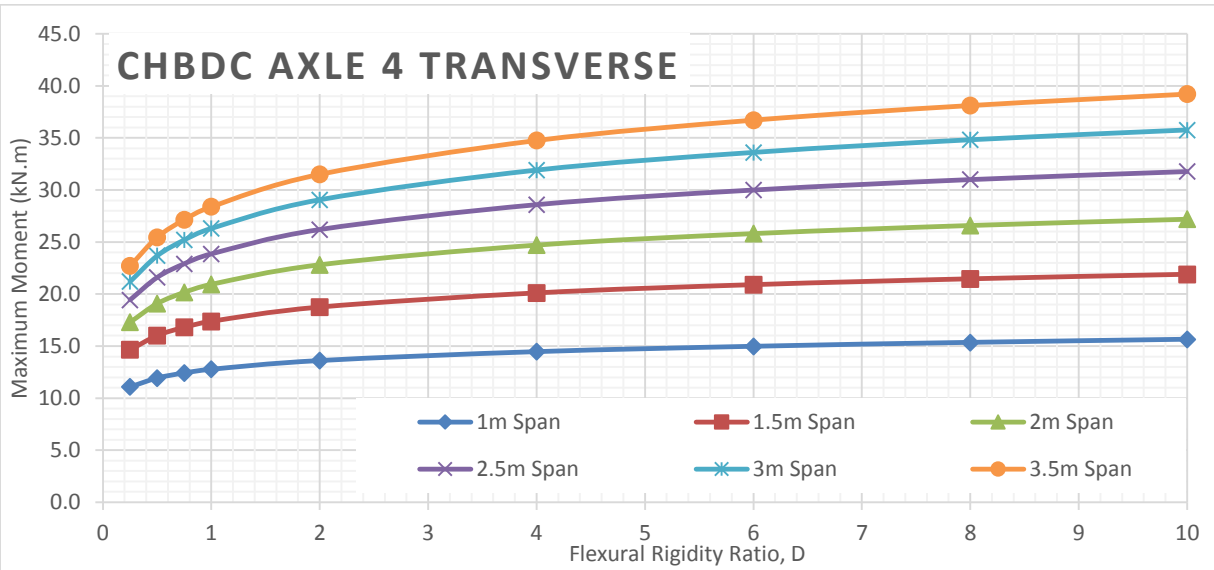


Figure 330 Maximum moment of deck slabs subjected to CHBDC axle 4 for different span values of alpha 8 Orthotropic analyses

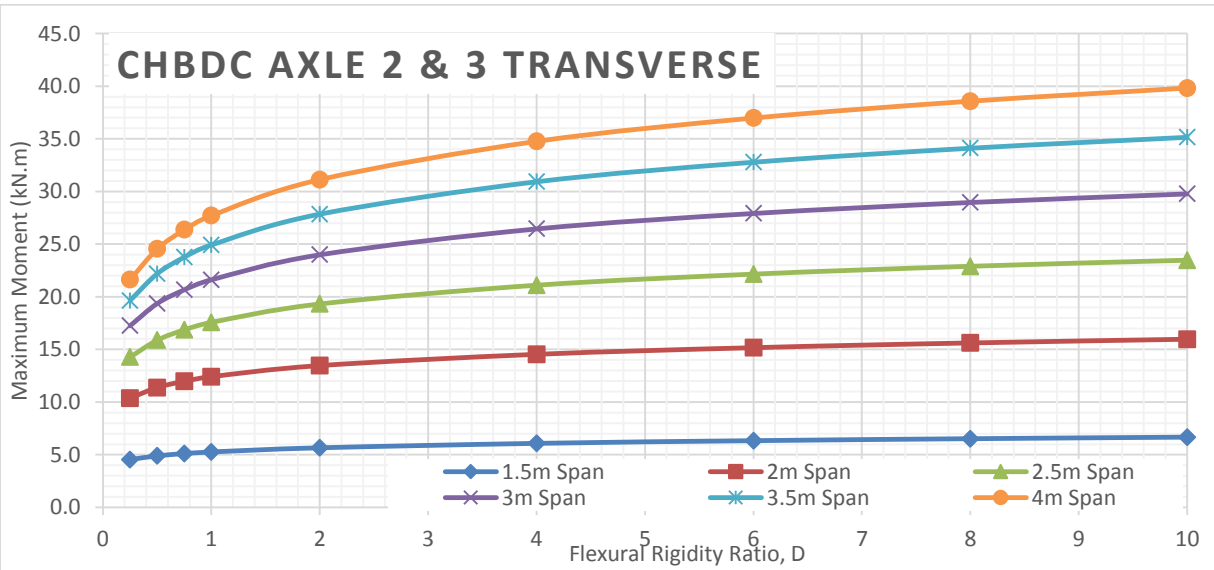


Figure 331 Maximum moment of deck slabs subjected to CHBDC axle 2 & 3 for different span values of alpha 8 Orthotropic analyses

Alpha 10 Bending Moment VS Flexural Rigidity for Different Span Length

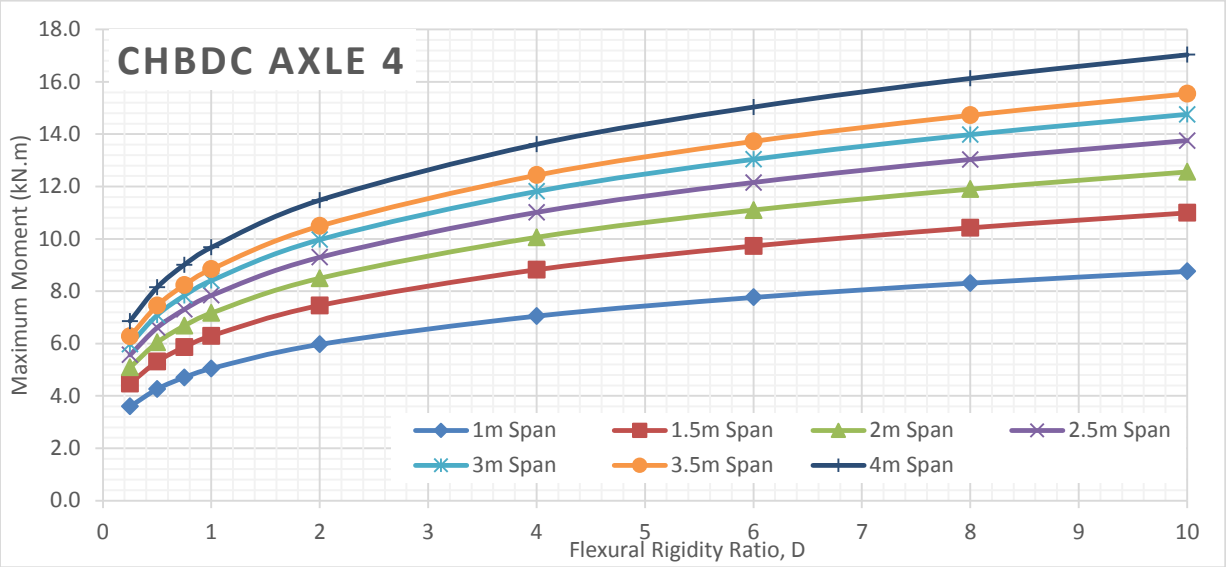


Figure 332 Maximum moment of deck slabs subjected to CHBDC axle 4 for different span values of alpha 10 Orthotropic analyses

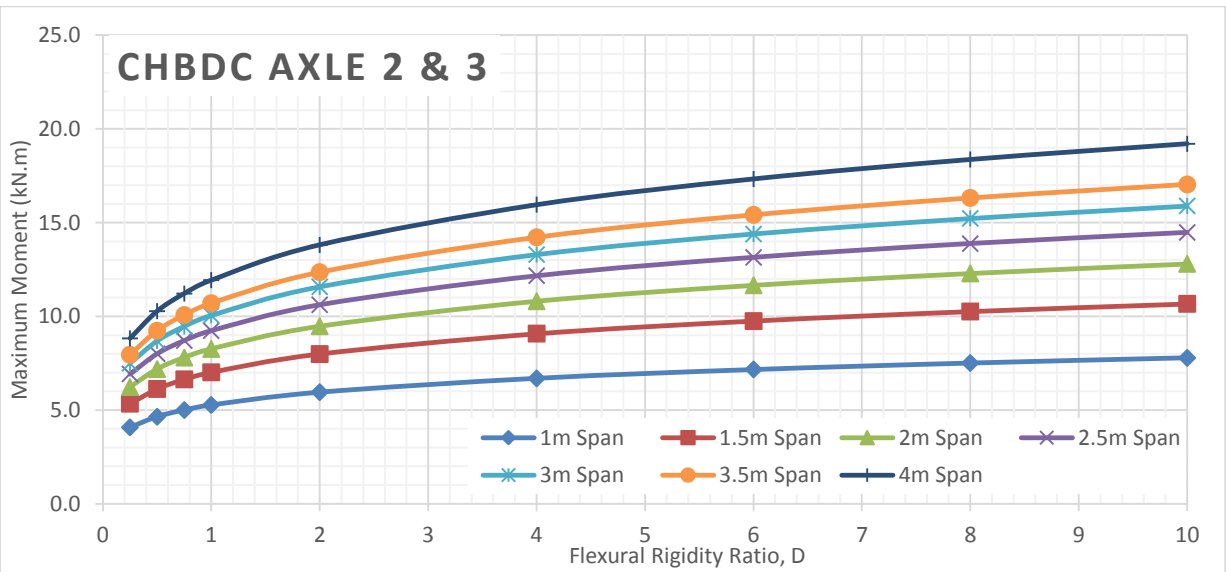


Figure 333 Maximum moment of deck slabs subjected to CHBDC axle 2 & 3 for different span values of alpha 10 Orthotropic analyses

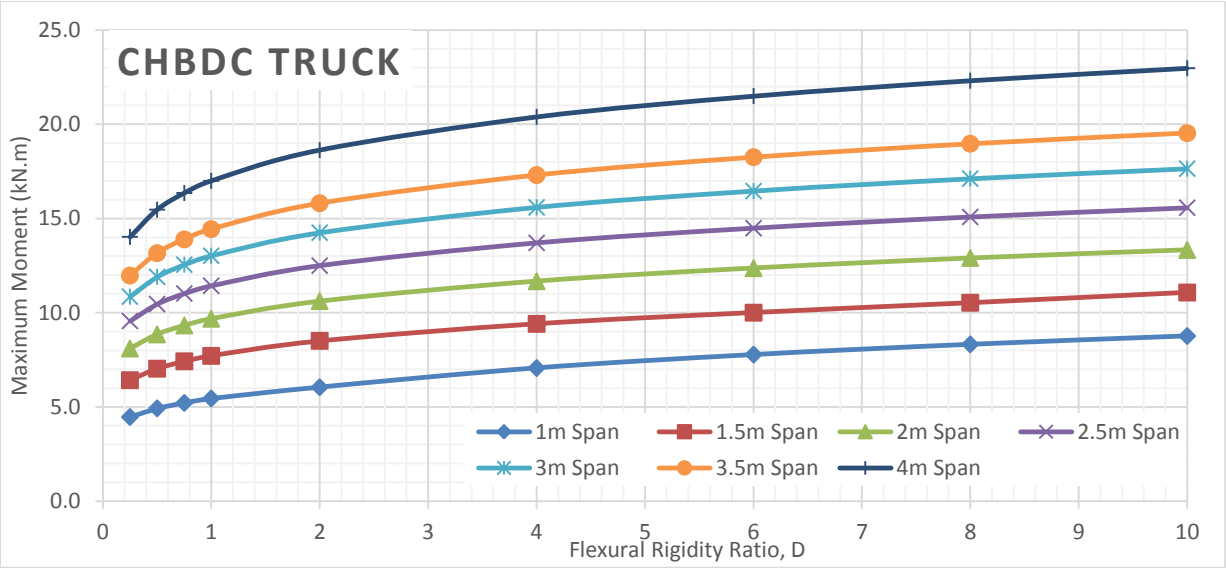


Figure 334 Maximum moment of deck slabs subjected to CHBDC truck for different span values of alpha 10 Orthotropic analyses

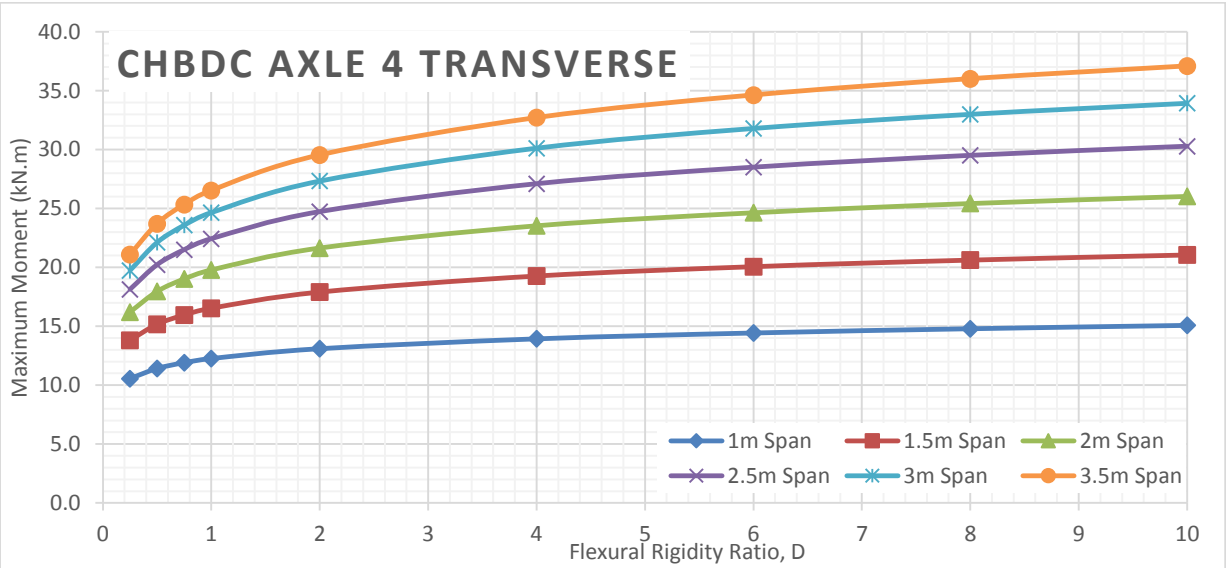


Figure 335 Maximum moment of deck slabs subjected to CHBDC axle 4 for different span values of alpha 10 Orthotropic analyses

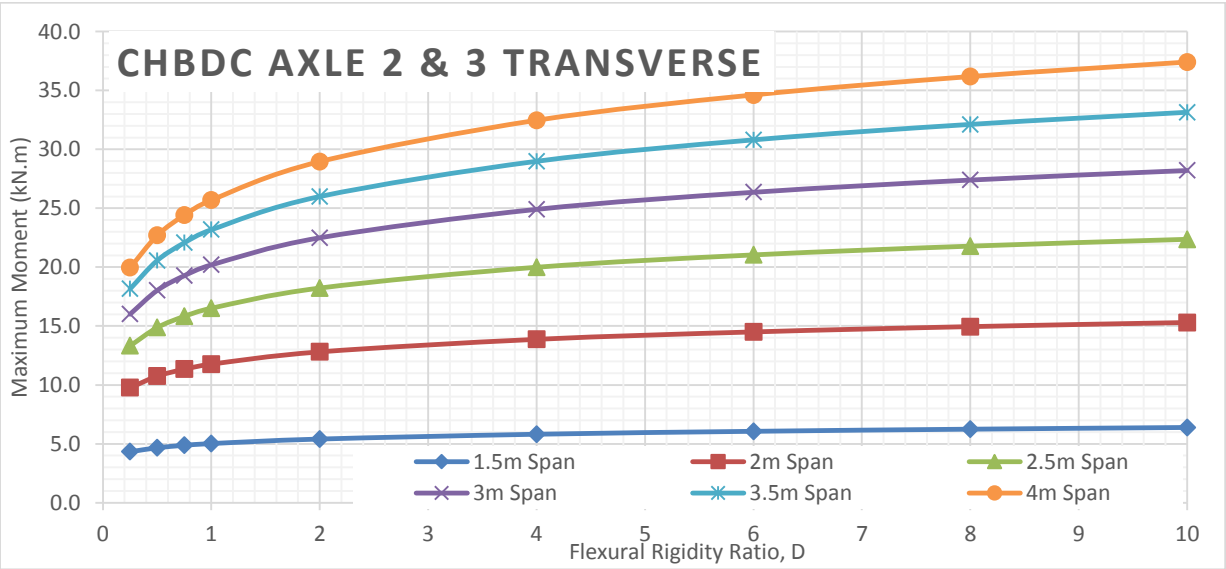


Figure 336 Maximum moment of deck slabs subjected to CHBDC axle 2 & 3 for different span values of alpha 10 Orthotropic analyses

C.1.4 MAXIMUM BENDING MOMENT VS TORSIONAL RIGIDITY

Axle 4 Bending Moment VS Torsional Rigidity for Different D Values at Different span length

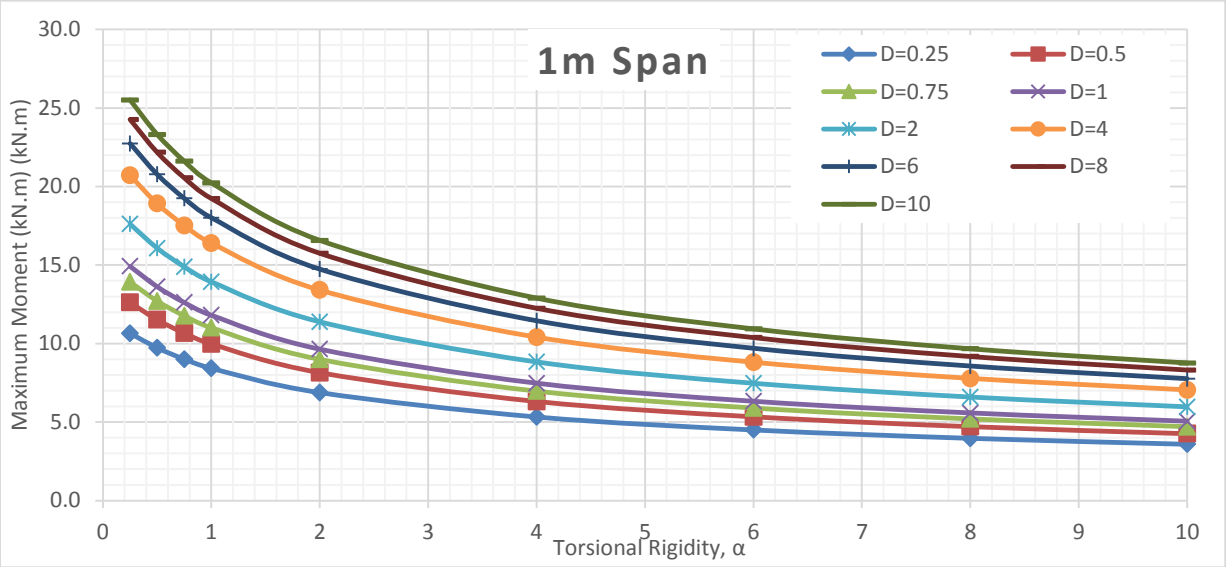


Figure 337 Maximum moment of 1 m span slab subjected to CHBDC axle 4 for different D values Orthotropic analyses

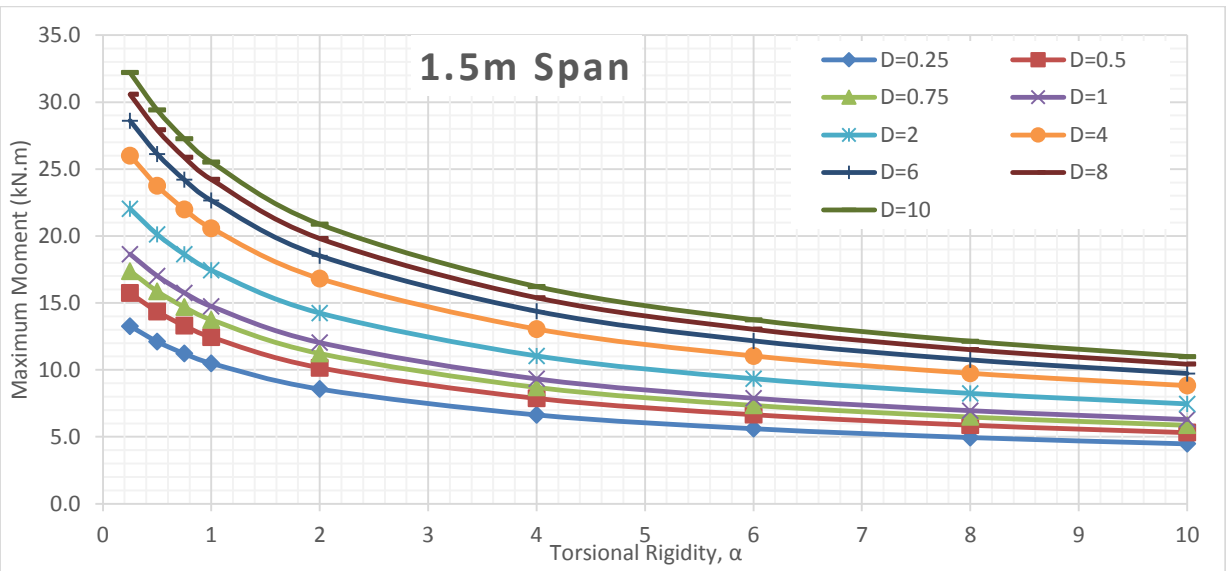


Figure 338 Maximum moment of 1.5 m span slab subjected to CHBDC axle 4 for different D values Orthotropic analyses

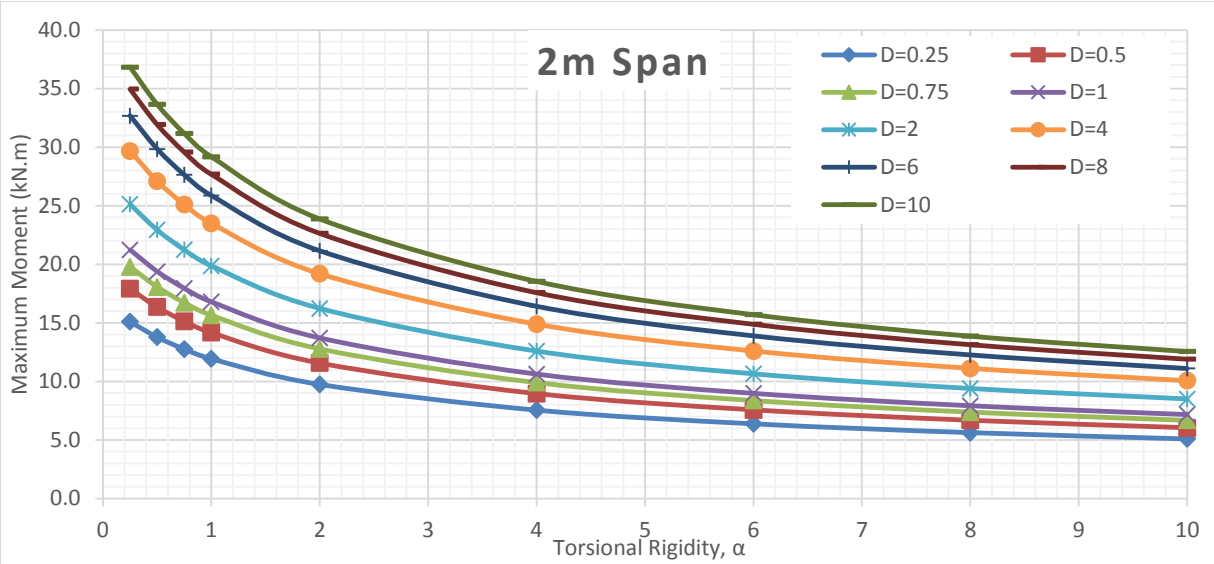


Figure 339 Maximum moment of 2 m span slab subjected to CHBDC axle 4 for different D values Orthotropic analyses

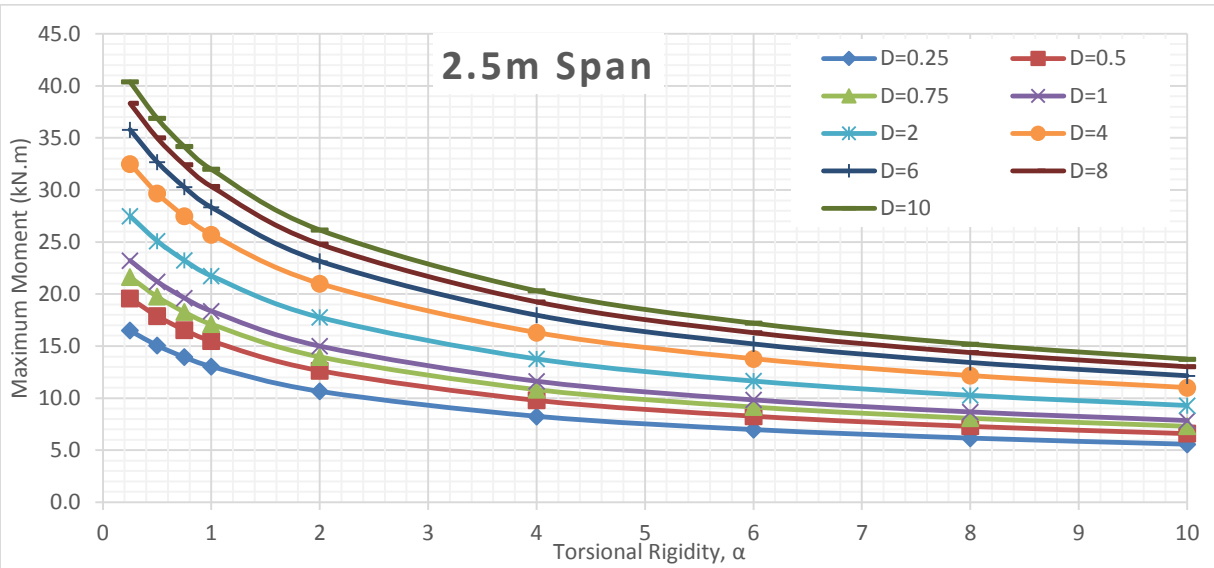


Figure 340 Maximum moment of 2.5 m span slab subjected to CHBDC axle 4 for different D values Orthotropic analyses

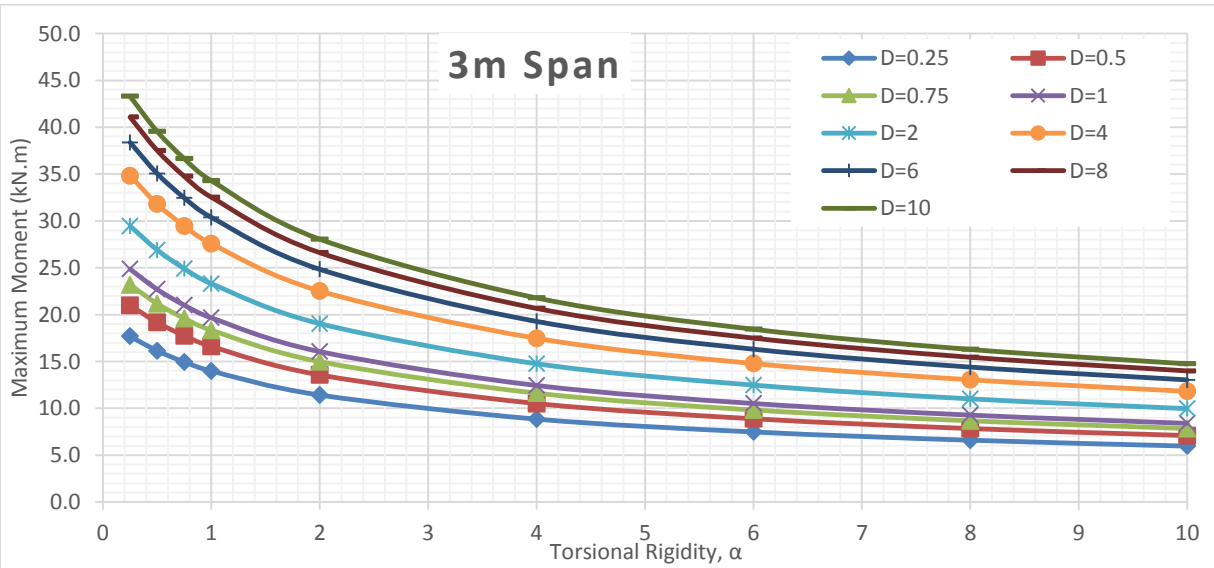


Figure 341 Maximum moment of 3 m span slab subjected to CHBDC axle 4 for different D values Orthotropic analyses

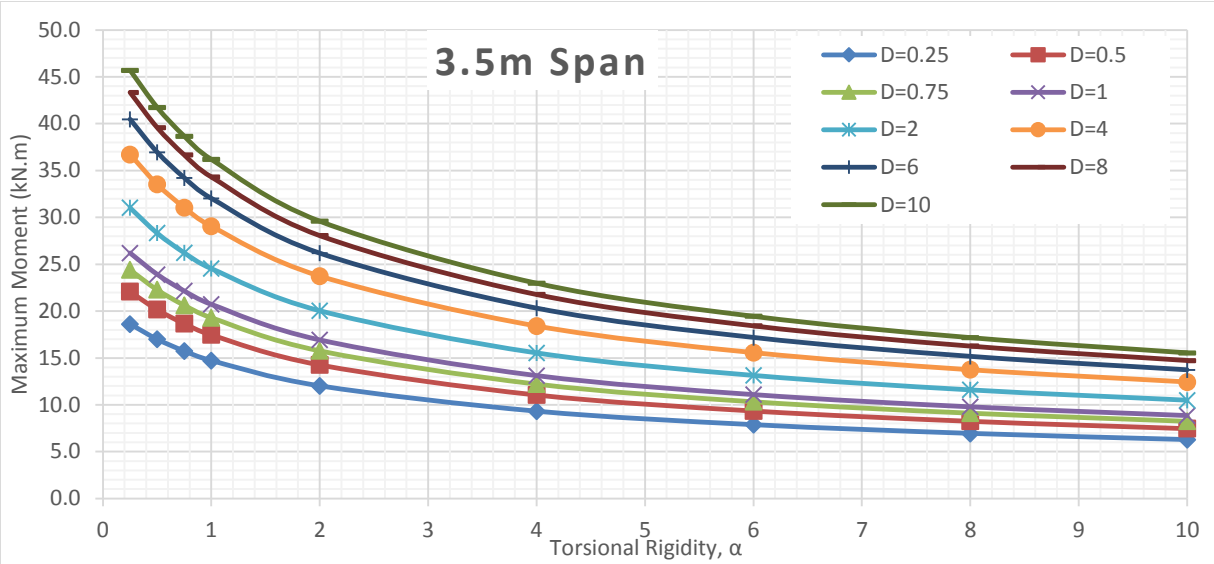


Figure 342 Maximum moment of 3.5 m span slab subjected to CHBDC axle 4 for different D values Orthotropic analyses

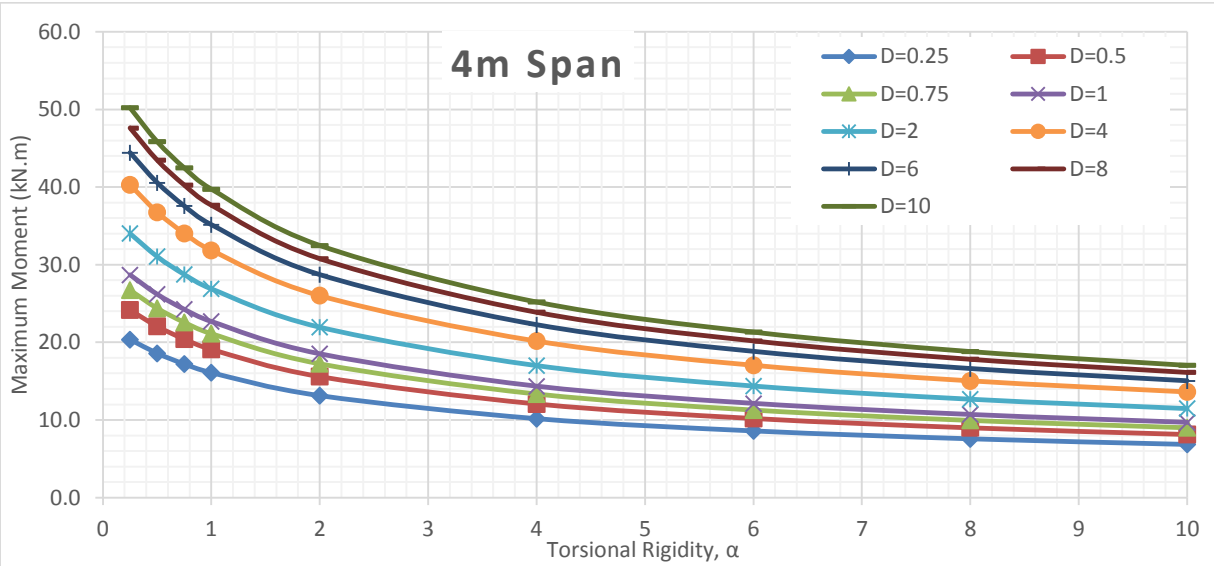


Figure 343 Maximum moment of 4 m span slab subjected to CHBDC axle 4 for different D values Orthotropic analyses

Axle 2 and 3 Bending Moment VS Torsional Rigidity for Different D Values at Different span length

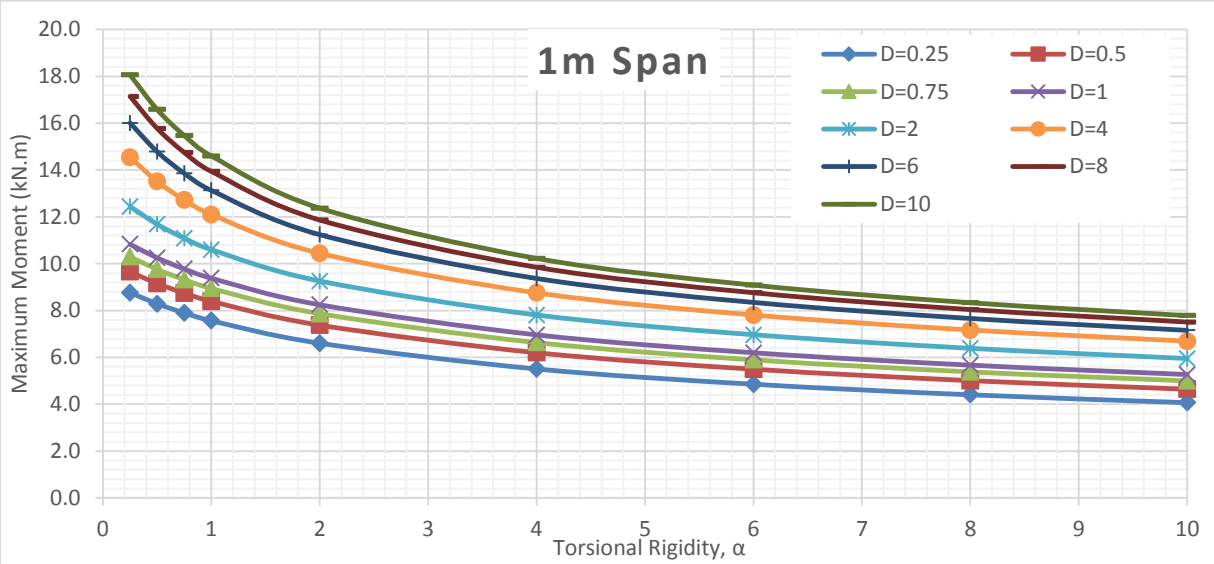


Figure 344 Maximum moment of 1 m span slab subjected to CHBDC axle 2 & 3 for different D values Orthotropic analyses

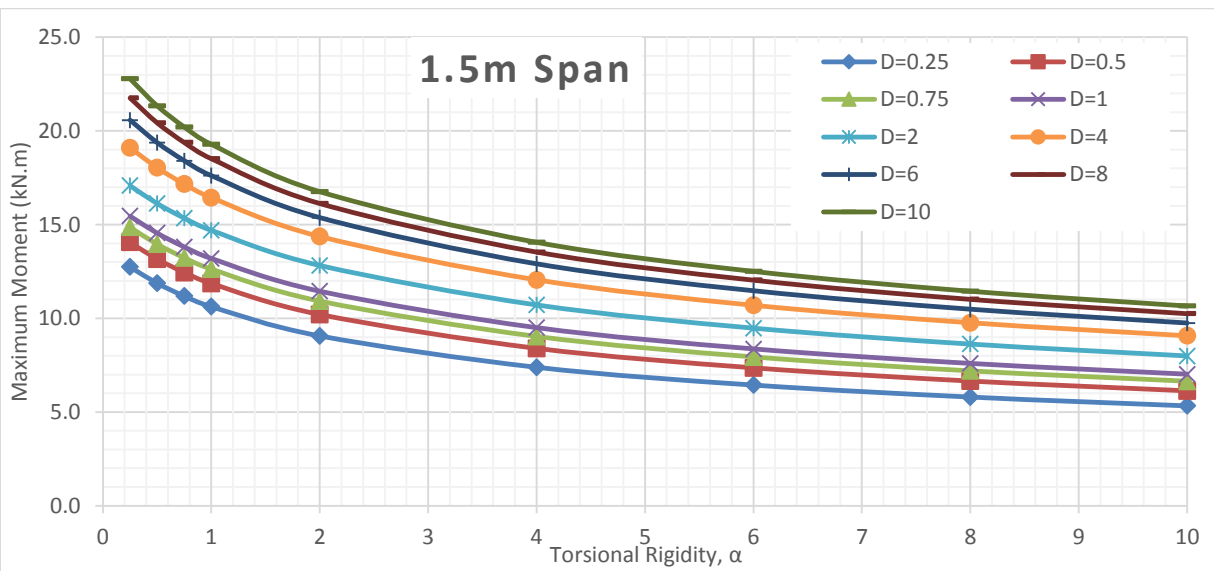


Figure 345 Maximum moment of 1.5 m span slab subjected to CHBDC axle 2 & 3 for different D values Orthotropic analyses

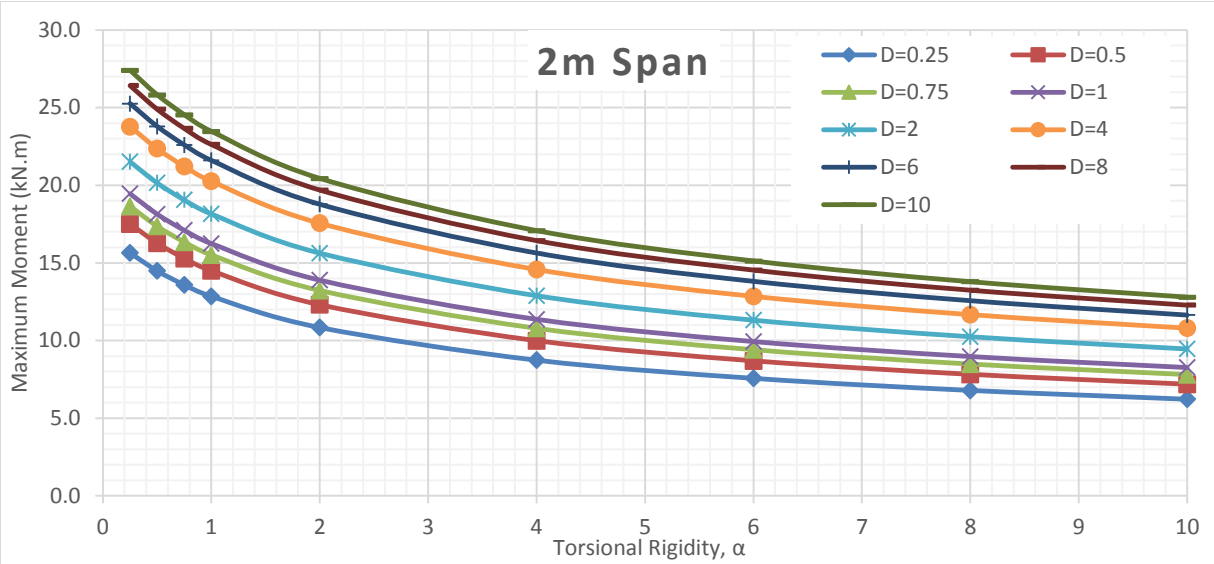


Figure 346 Maximum moment of 2 m span slab subjected to CHBDC axle 2 & 3 for different D values Orthotropic analyses

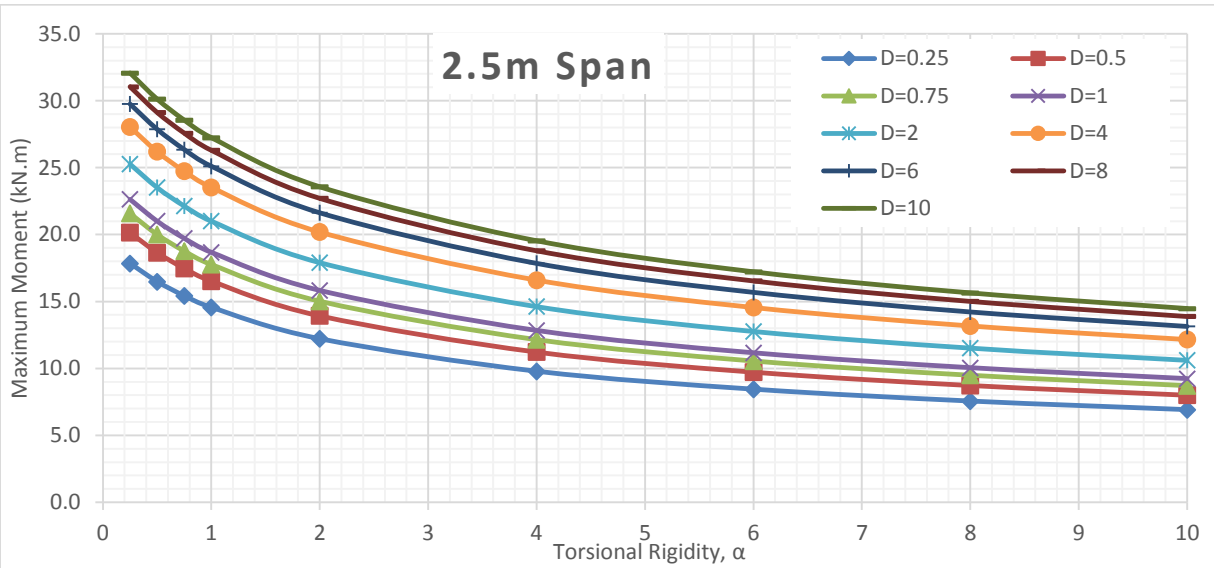


Figure 347 Maximum moment of 2.5 m span slab subjected to CHBDC axle 2 & 3 for different D values Orthotropic analyses

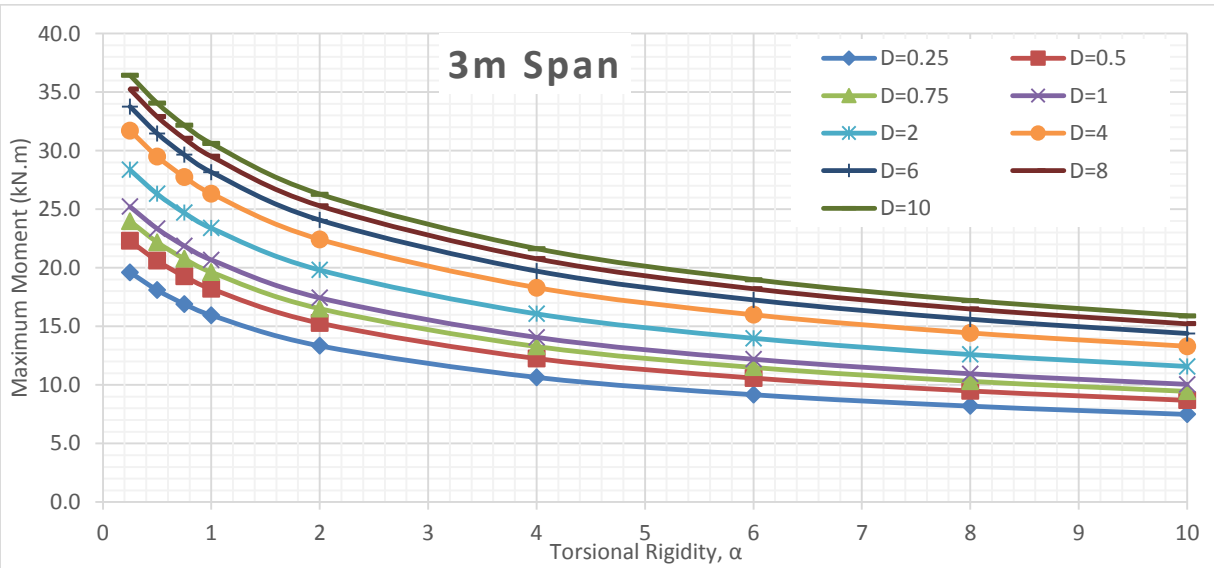


Figure 348 Maximum moment of 3 m span slab subjected to CHBDC axle 2 & 3 for different D values Orthotropic analyses

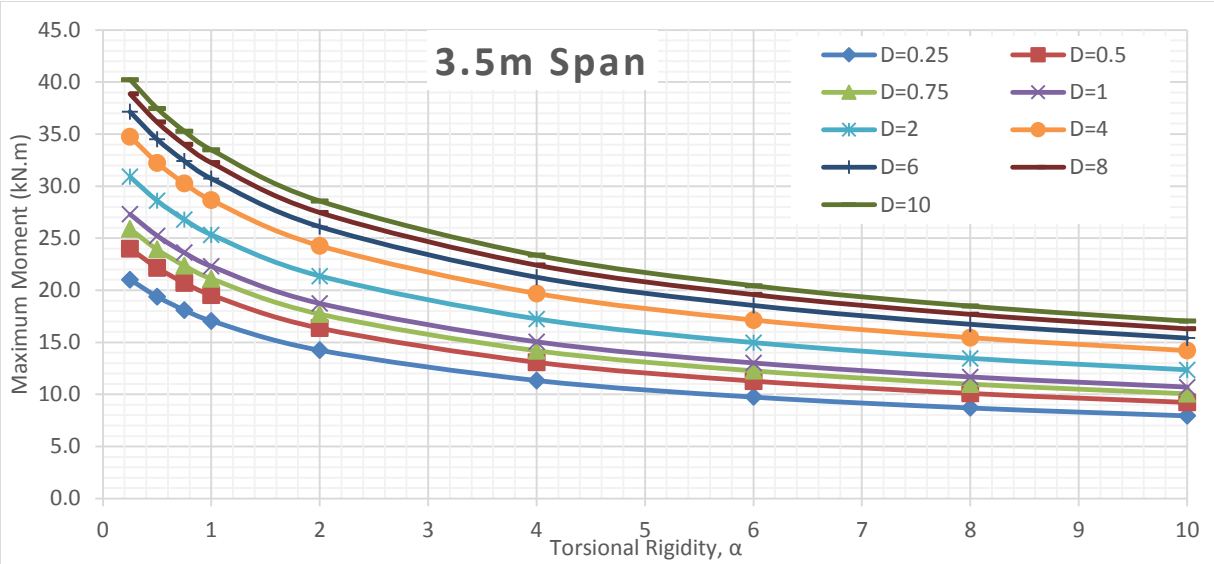


Figure 349 Maximum moment of 3.5 m span slab subjected to CHBDC axle 2 & 3 for different D values Orthotropic analyses

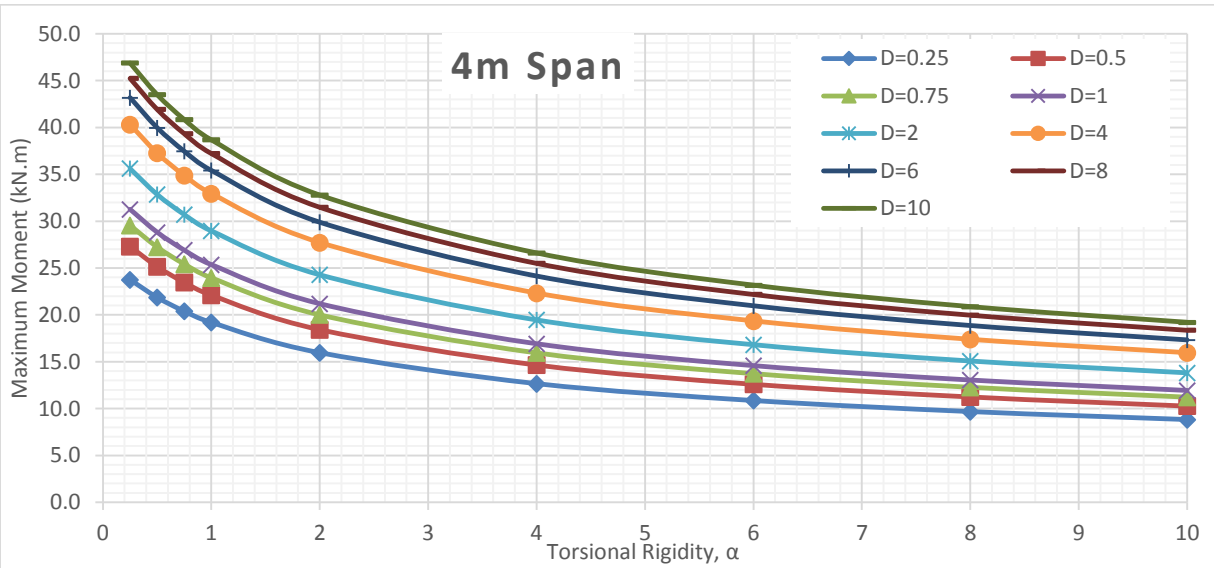


Figure 350 Maximum moment of 4 m span slab subjected to CHBDC axle 2 & 3 for different D values Orthotropic analyses

Truck Bending Moment VS Torsional Rigidity for Different D Values at Different span length

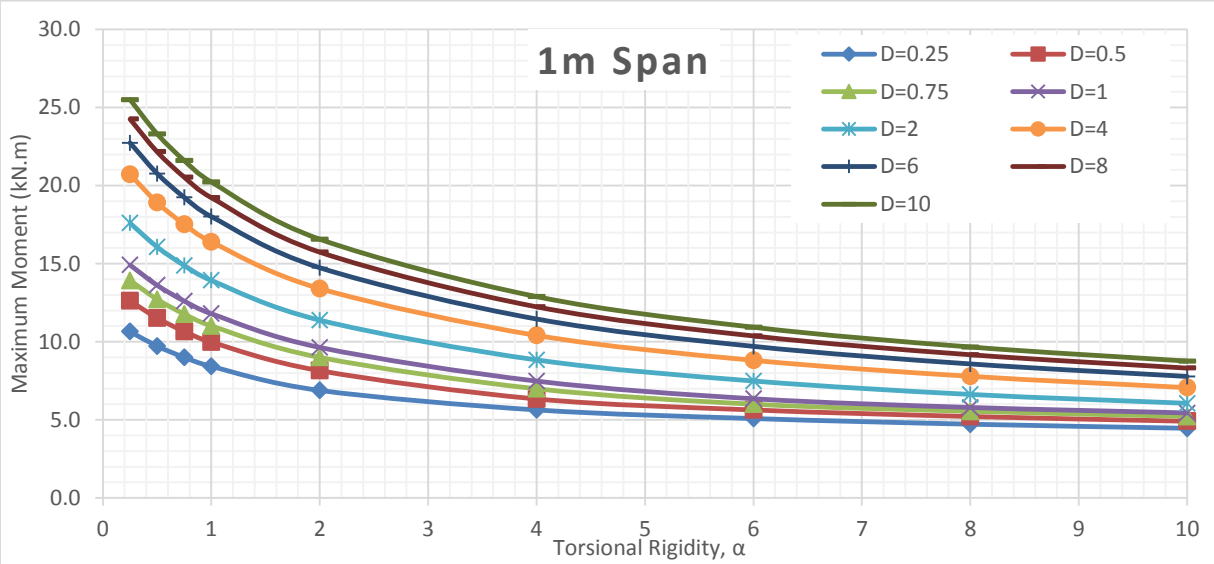


Figure 351 Maximum moment of 1 m span slab subjected to CHBDC truck for different D values Orthotropic analyses

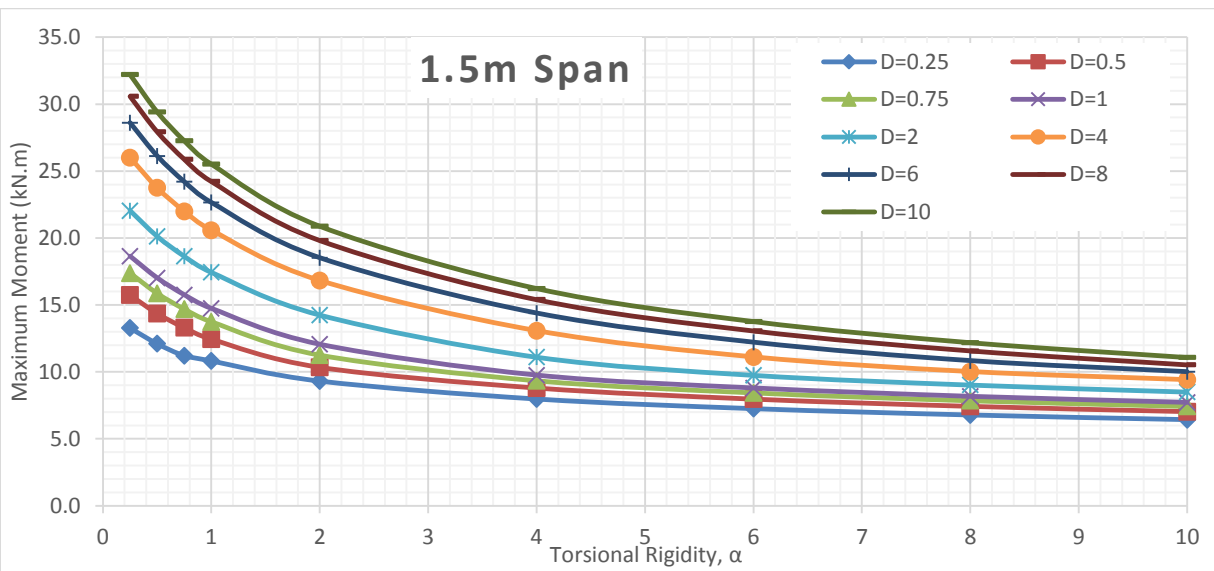


Figure 352 Maximum moment of 1.5 m span slab subjected to CHBDC truck for different D values Orthotropic analyses

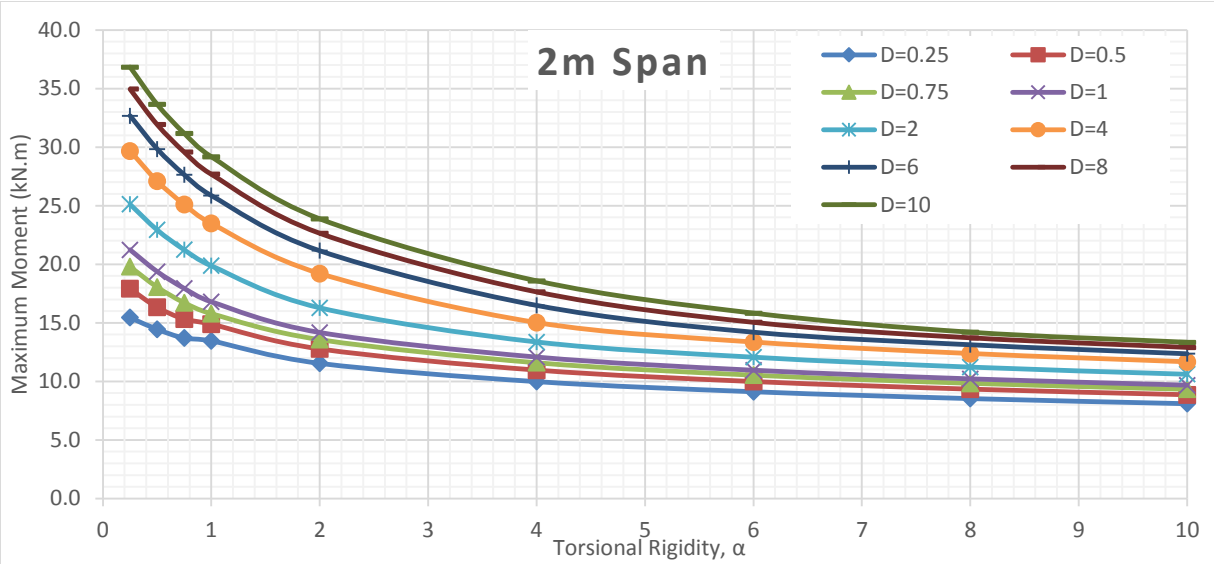


Figure 353 Maximum moment of 2 m span slab subjected to CHBDC truck for different D values Orthotropic analyses

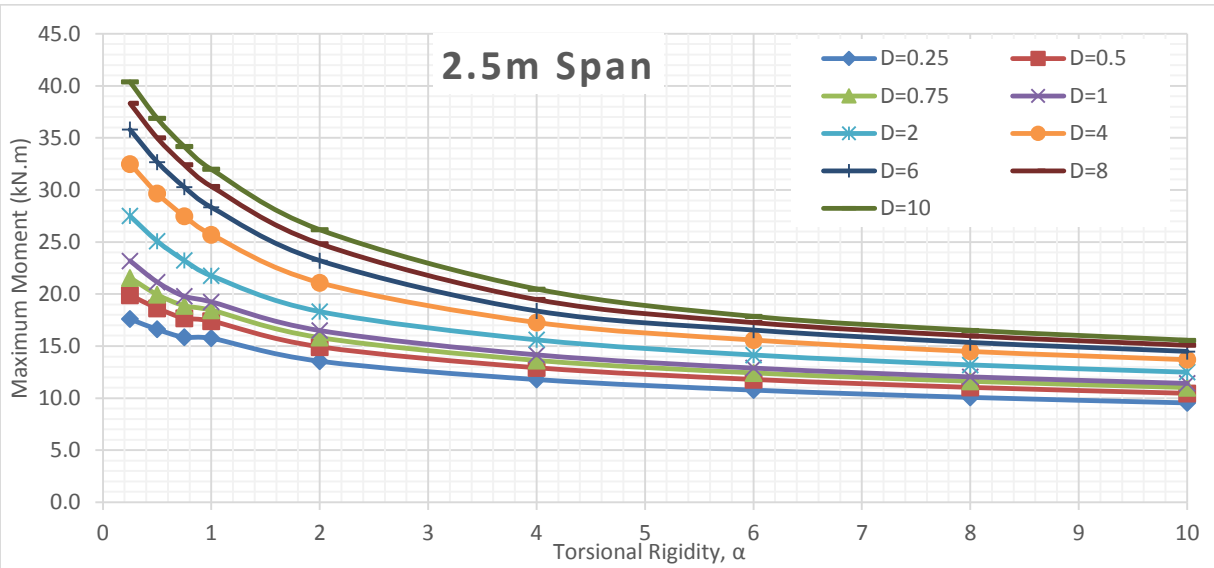


Figure 354 Maximum moment of 2.5 m span slab subjected to CHBDC truck for different D values Orthotropic analyses

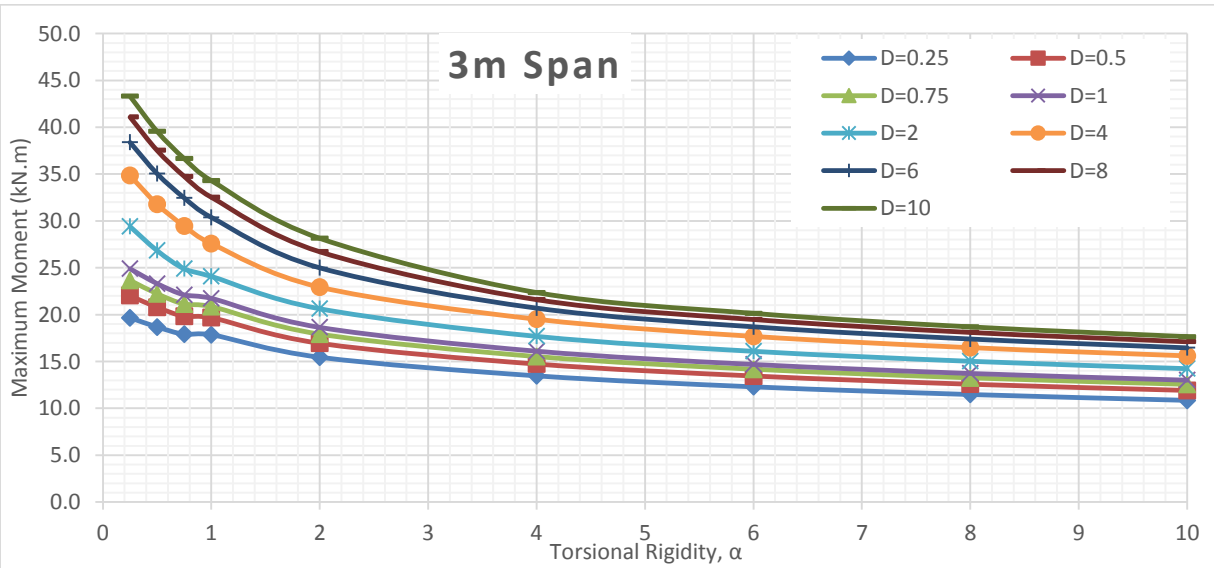


Figure 355 Maximum moment of 3 m span slab subjected to CHBDC truck for different D values Orthotropic analyses

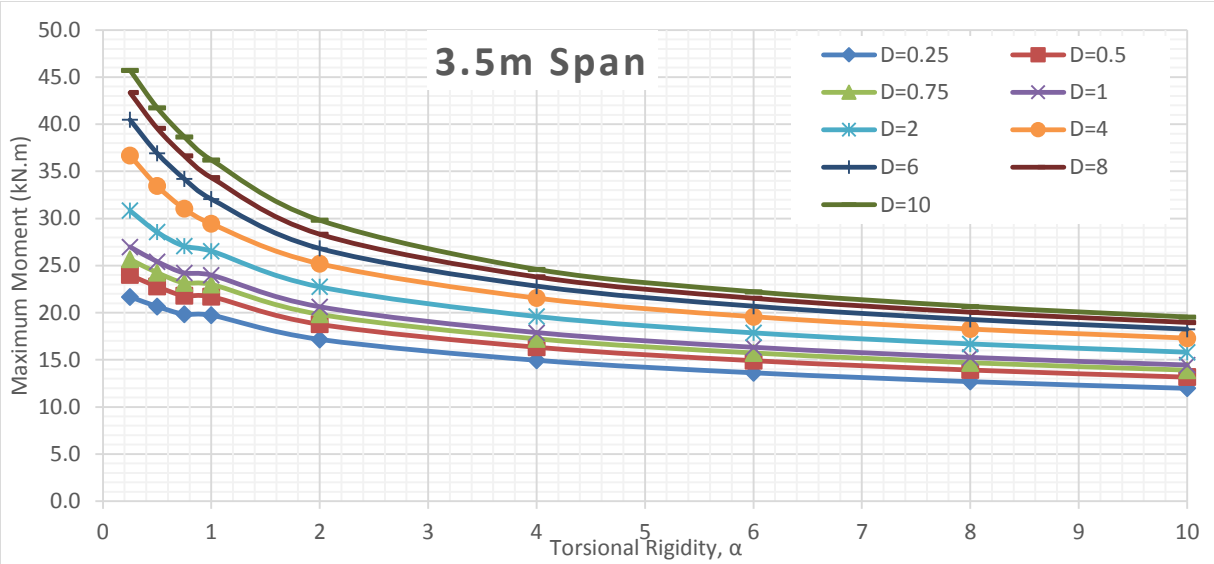


Figure 356 Maximum moment of 3.5 m span slab subjected to CHBDC truck for different D values Orthotropic analyses

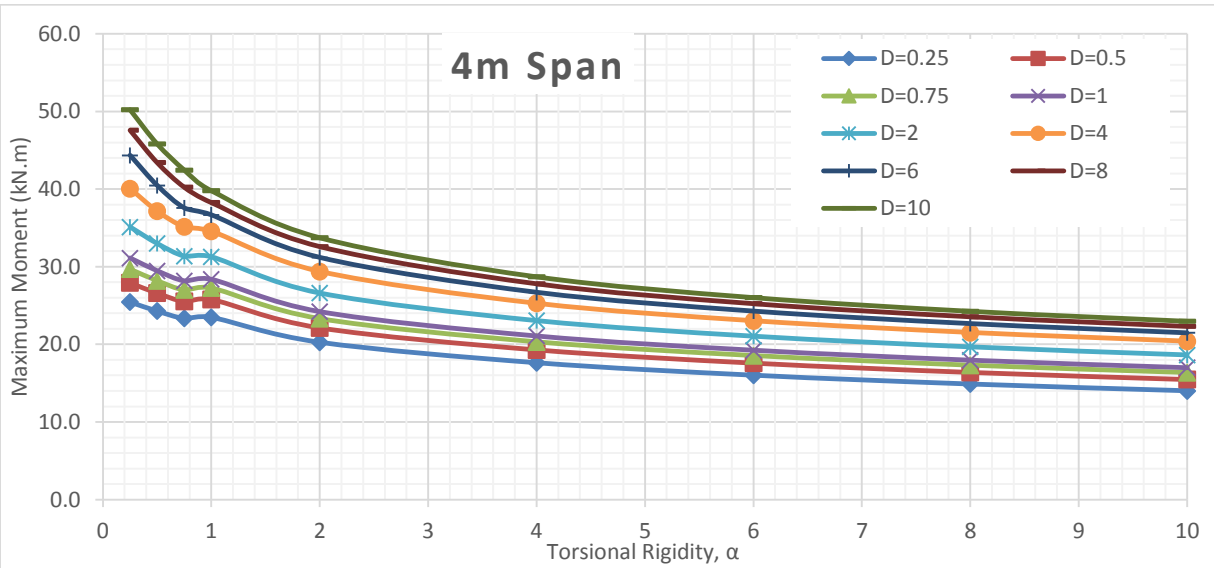


Figure 357 Maximum moment of 4 m span slab subjected to CHBDC truck for different D values Orthotropic analyses

Axle 4 Transverse Bending Moment VS Torsional Rigidity for Different D Values at Different span length

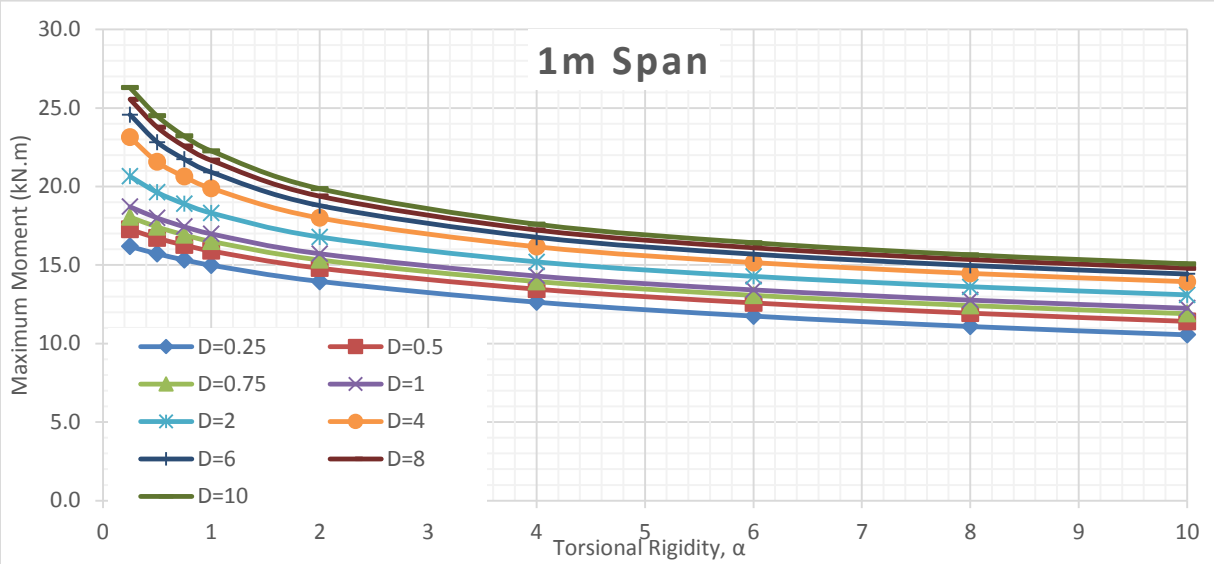


Figure 358 Maximum moment of 1 m span slab subjected to CHBDC axle 4 for different D values Orthotropic analyses

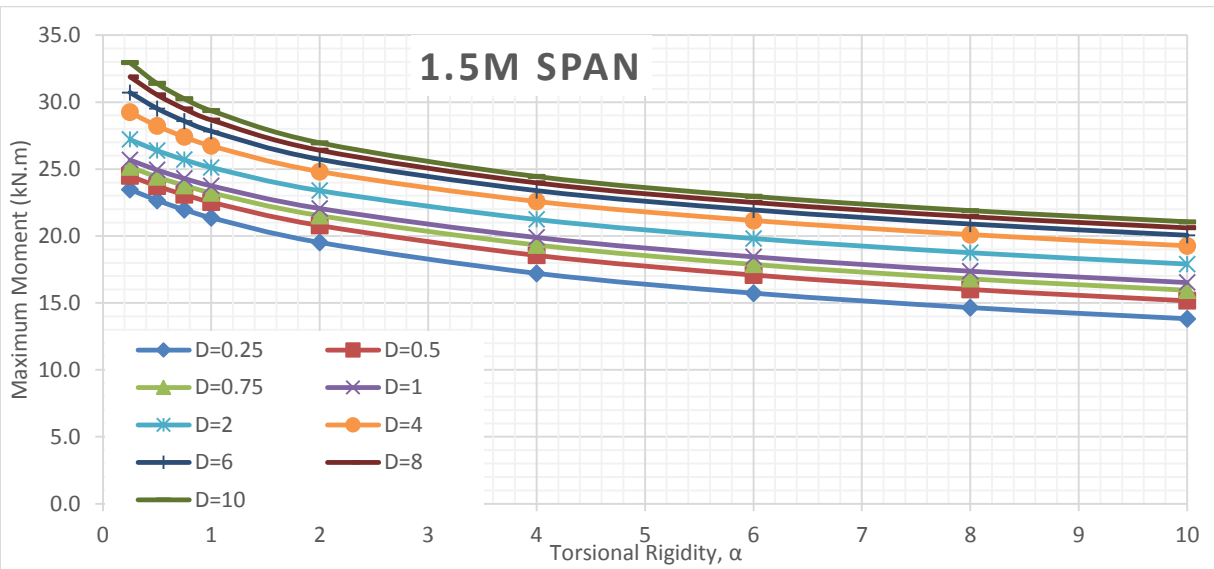


Figure 359 Maximum moment of 1.5 m span slab subjected to CHBDC axle 4 for different D values Orthotropic analyses

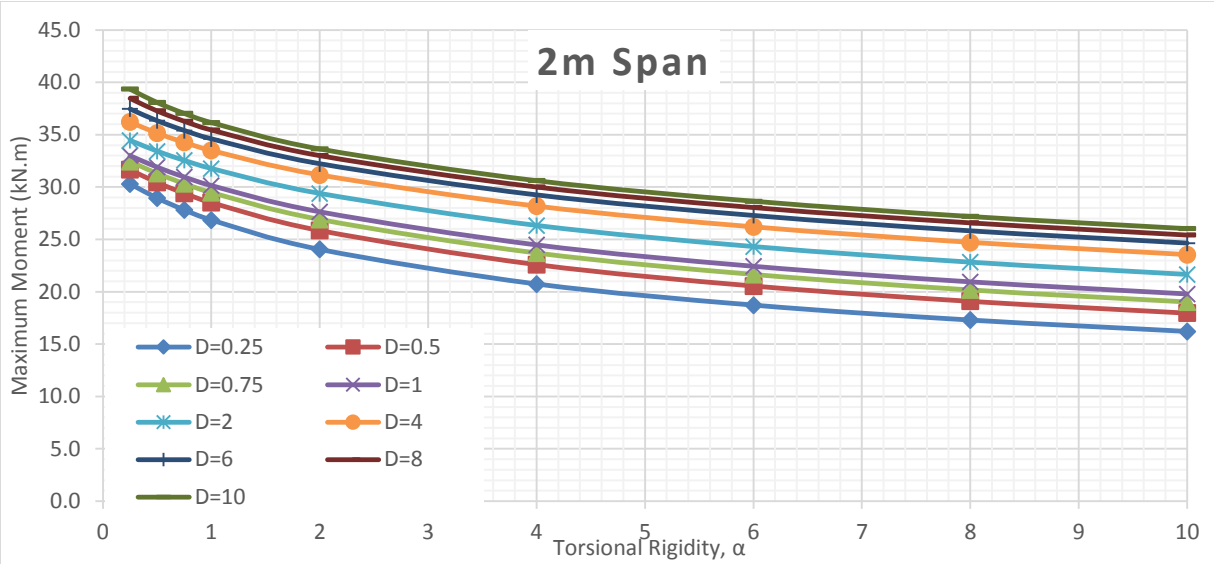


Figure 360 Maximum moment of 2 m span slab subjected to CHBDC axle 4 for different D values Orthotropic analyses

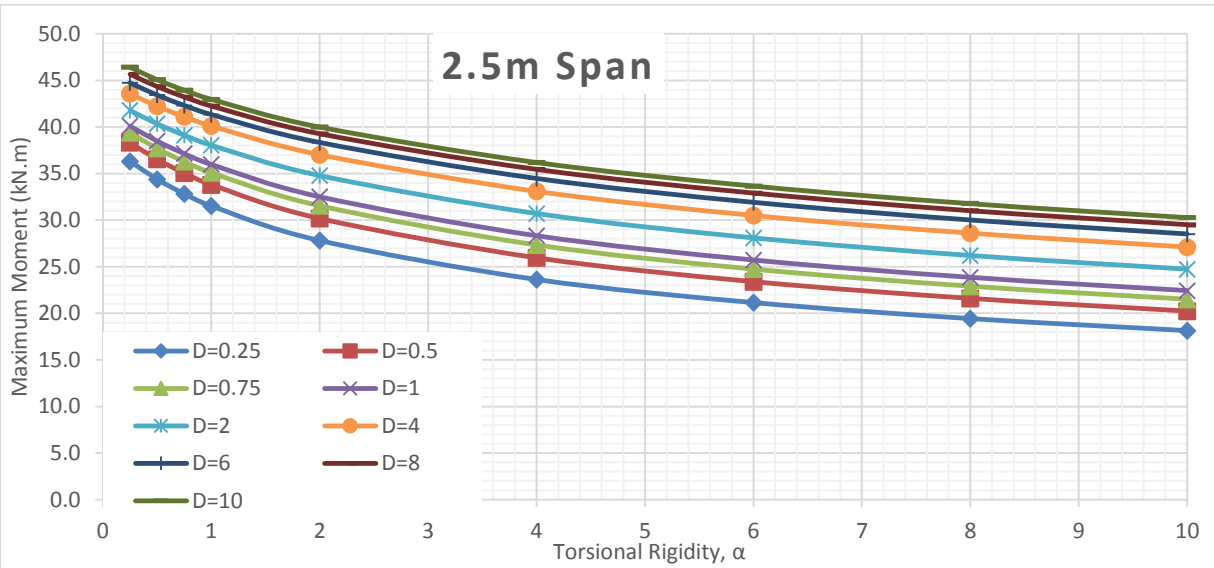


Figure 361 Maximum moment of 2.5 m span slab subjected to CHBDC axle 4 for different D values Orthotropic analyses

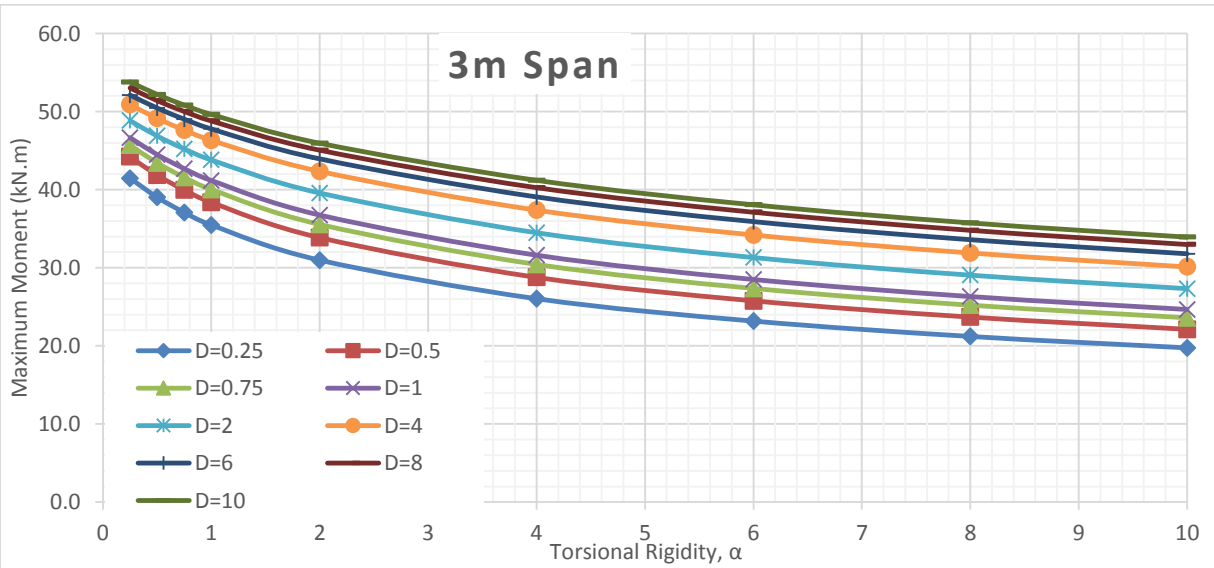


Figure 362 Maximum moment of 3 m span slab subjected to CHBDC axle 4 for different D values Orthotropic analyses

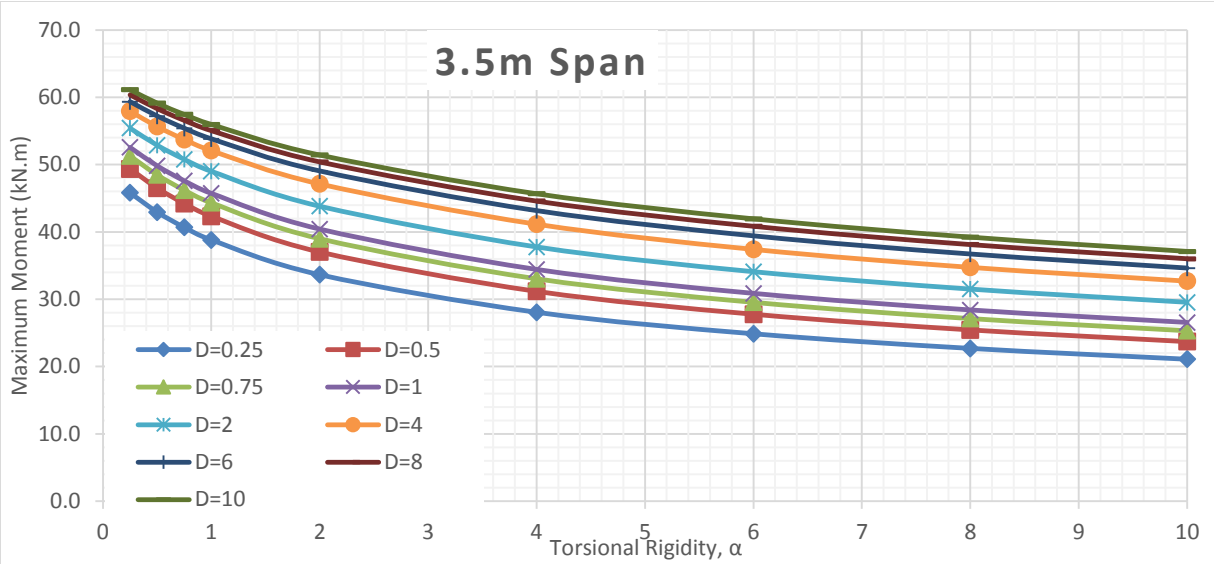


Figure 363 Maximum moment of 3.5 m span slab subjected to CHBDC axle 4 for different D values Orthotropic analyses

Axle 2 and 3 Transverse Bending Moment VS Torsional Rigidity for Different D Values at Different span length

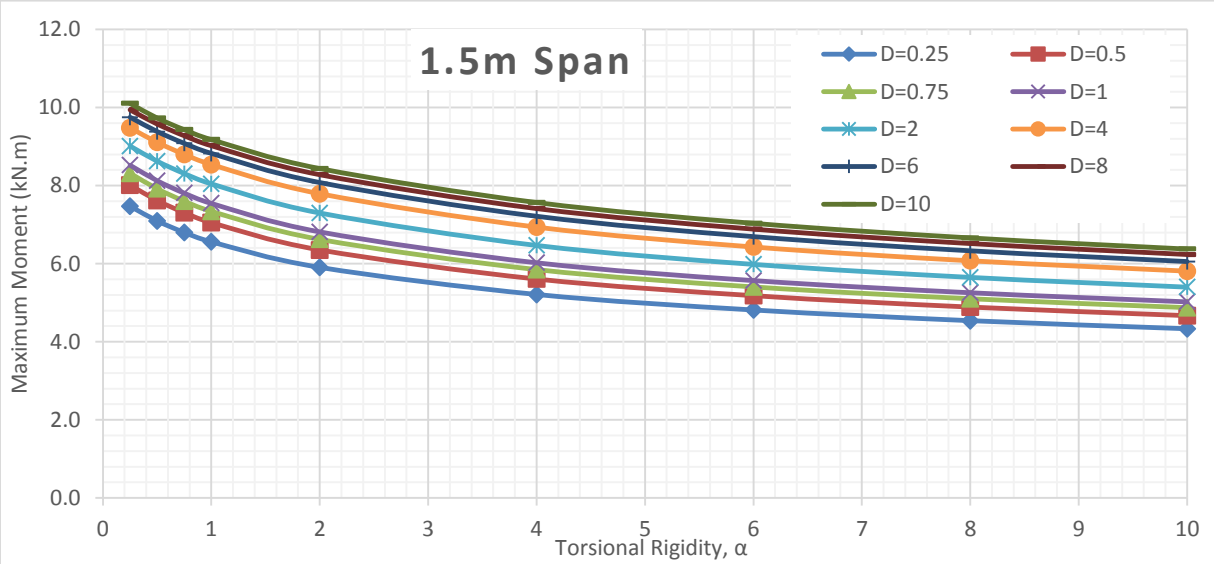


Figure 364 Maximum moment of 1.5 m span slab subjected to CHBDC axle 2 & 3 for different D values Orthotropic analyses

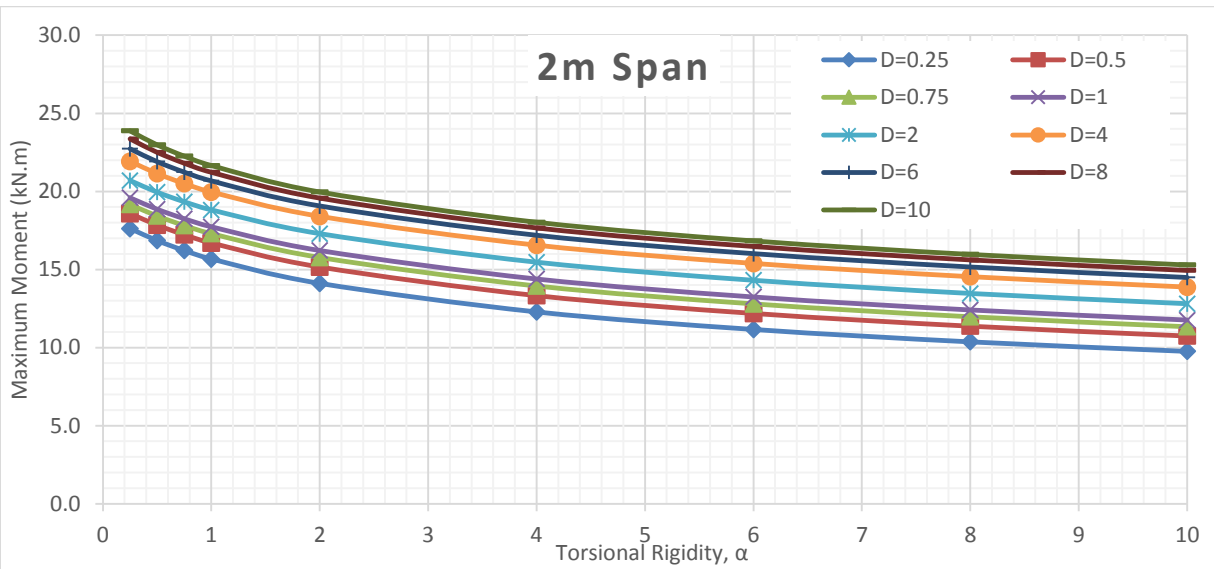


Figure 365 Maximum moment of 2 m span slab subjected to CHBDC axle 2 & 3 for different D values Orthotropic analyses

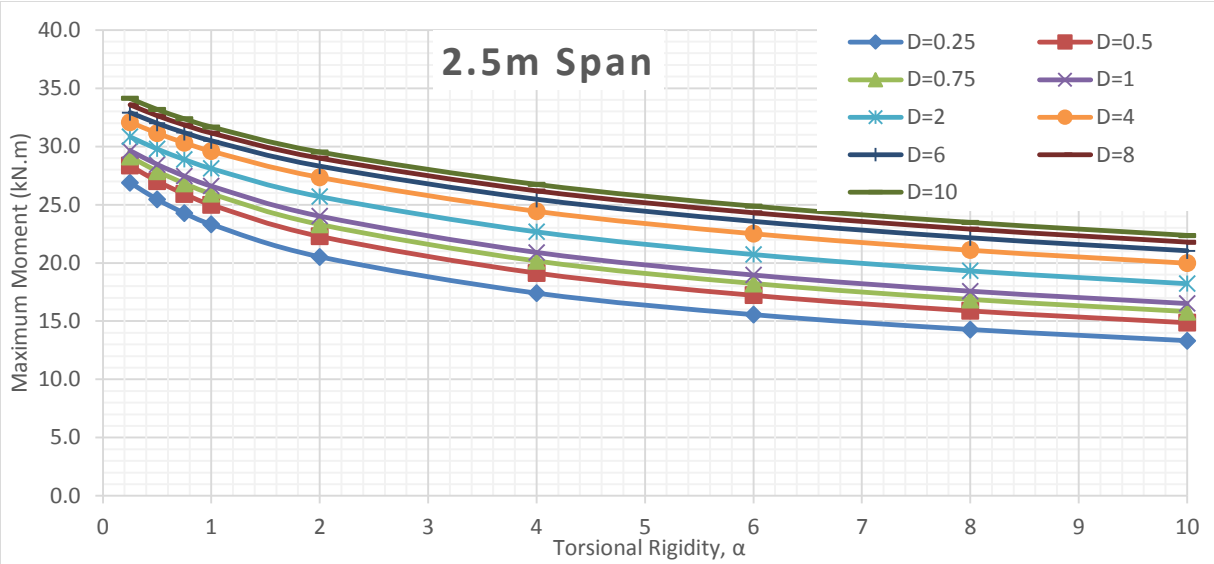


Figure 366 Maximum moment of 2.5 m span slab subjected to CHBDC axle 2 & 3 for different D values Orthotropic analyses

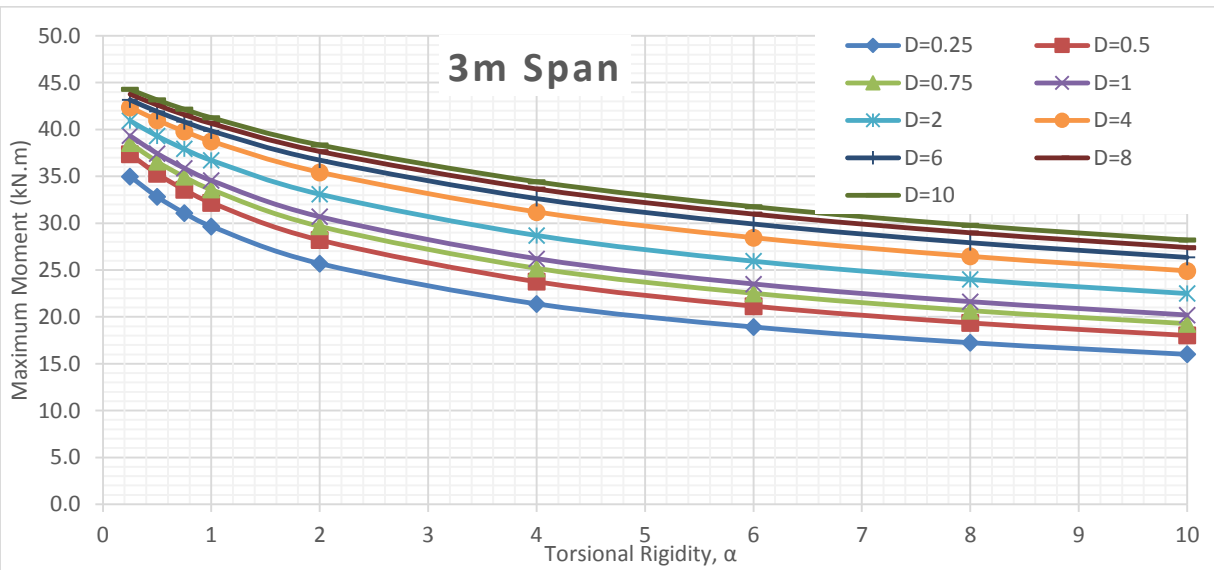


Figure 367 Maximum moment of 3 m span slab subjected to CHBDC axle 2 & 3 for different D values Orthotropic analyses

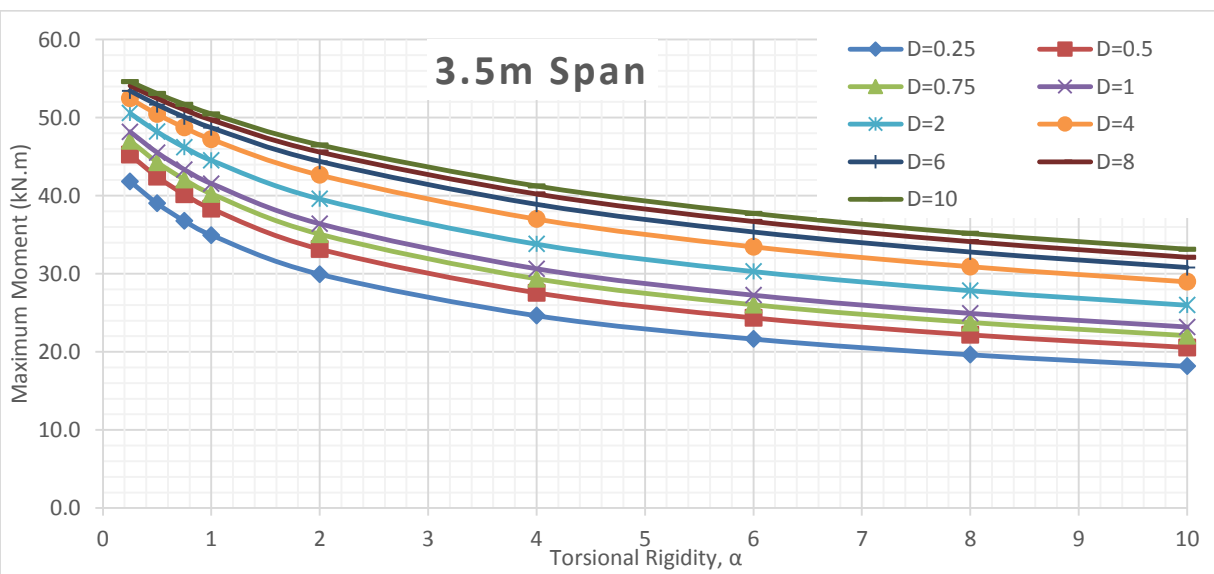


Figure 368 Maximum moment of 3.5 m span slab subjected to CHBDC axle 2 & 3 for different D values Orthotropic analyses

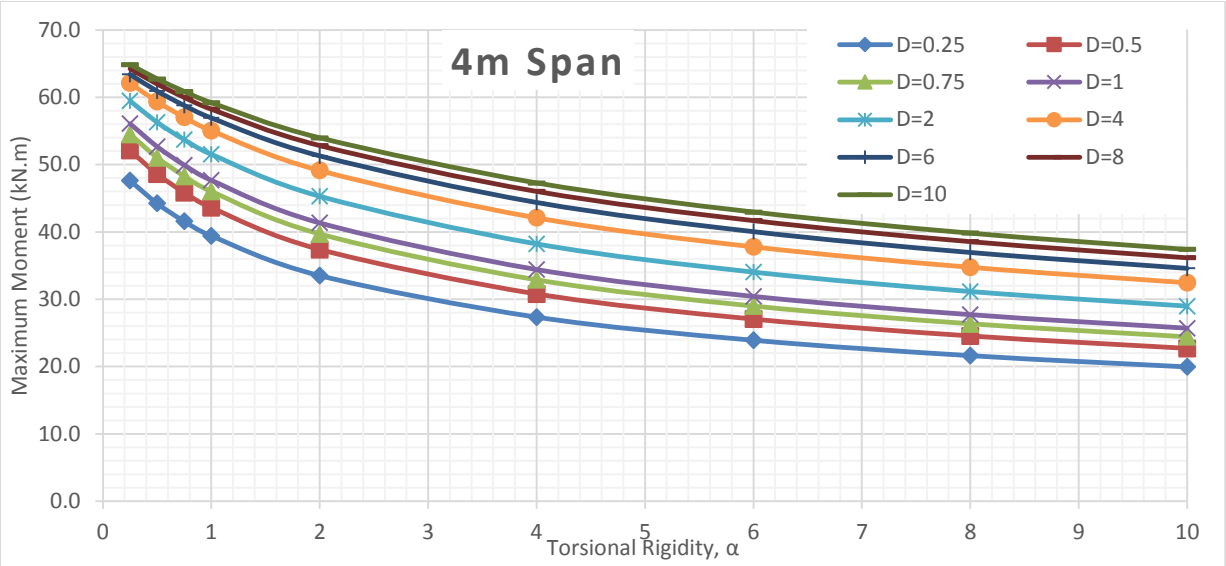


Figure 369 Maximum moment of 4 m span slab subjected to CHBDC axle 2 & 3 for different D values Orthotropic analyses

C.2 Orthotropic Plate Results (Deflection)

C.2.1 DEFLECTION RESULTS TABLES

Alpha 0.25 Deflection Results

Table 145 Maximum deflection results for alpha 0.25 for slabs subjected to CHBDC axle 4 loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4	1	6.54E-05	7.74E-05	8.53E-05	9.14E-05	1.08E-04	1.27E-04	1.39E-04	1.48E-04	1.56E-04
	1.5	1.64E-04	1.94E-04	2.15E-04	2.30E-04	2.73E-04	3.22E-04	3.55E-04	3.80E-04	4.01E-04
	2	3.03E-04	3.60E-04	3.98E-04	4.28E-04	5.07E-04	6.01E-04	6.63E-04	7.11E-04	7.50E-04
	2.5	4.84E-04	5.75E-04	6.36E-04	6.82E-04	8.10E-04	9.61E-04	1.06E-03	1.14E-03	1.20E-03
	3	7.58E-04	9.01E-04	9.97E-04	1.07E-03	1.27E-03	1.51E-03	1.67E-03	1.80E-03	1.90E-03
	3.5	1.23E-03	1.47E-03	1.62E-03	1.74E-03	2.07E-03	2.46E-03	2.72E-03	2.92E-03	3.09E-03
	4	1.79E-03	2.13E-03	2.36E-03	2.54E-03	3.02E-03	3.58E-03	3.96E-03	4.26E-03	4.50E-03

Table 146 Maximum deflection results for alpha 0.25 for slabs subjected to CHBDC axle 2 & 3 loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2and 3	1	5.38E-05	5.92E-05	6.32E-05	6.64E-05	7.62E-05	8.90E-05	9.79E-05	1.05E-04	1.10E-04
	1.5	1.75E-04	1.88E-04	1.94E-04	1.96E-04	2.13E-04	2.38E-04	2.56E-04	2.70E-04	2.83E-04
	2	3.60E-04	4.02E-04	4.25E-04	4.40E-04	4.68E-04	4.93E-04	5.21E-04	5.43E-04	5.62E-04
	2.5	6.07E-04	6.90E-04	7.40E-04	7.74E-04	8.51E-04	9.13E-04	9.37E-04	9.55E-04	9.83E-04
	3	1.02E-03	1.18E-03	1.28E-03	1.36E-03	1.53E-03	1.70E-03	1.79E-03	1.85E-03	1.88E-03
	3.5	1.68E-03	1.96E-03	2.14E-03	2.27E-03	2.59E-03	2.93E-03	3.11E-03	3.24E-03	3.33E-03
	4	2.47E-03	2.89E-03	3.16E-03	3.36E-03	3.88E-03	4.42E-03	4.74E-03	4.96E-03	5.13E-03

Table 147 Maximum deflection results for alpha 0.25 for slabs subjected to CHBDC truck loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
TRUCK	1	6.54E-05	7.74E-05	8.53E-05	9.14E-05	1.08E-04	1.27E-04	1.39E-04	1.48E-04	1.56E-04
	1.5	1.74E-04	1.94E-04	2.15E-04	2.30E-04	2.73E-04	3.22E-04	3.55E-04	3.80E-04	4.01E-04
	2	3.57E-04	3.98E-04	4.22E-04	4.37E-04	5.07E-04	6.01E-04	6.63E-04	7.11E-04	7.50E-04
	2.5	6.08E-04	6.84E-04	7.32E-04	7.66E-04	8.45E-04	9.61E-04	1.06E-03	1.14E-03	1.20E-03
	3	1.05E-03	1.18E-03	1.27E-03	1.34E-03	1.52E-03	1.69E-03	1.78E-03	1.84E-03	1.90E-03
	3.5	1.79E-03	2.01E-03	2.15E-03	2.27E-03	2.57E-03	2.90E-03	3.09E-03	3.22E-03	3.31E-03
	4	2.75E-03	3.05E-03	3.26E-03	3.42E-03	3.87E-03	4.38E-03	4.69E-03	4.91E-03	5.08E-03

Table 148 Maximum deflection results for alpha 0.25 for slabs subjected to CHBDC axle 4 loading (main bars parallel to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4 Transverse	1	8.43E-05	9.00E-05	9.45E-05	9.82E-05	1.10E-04	1.25E-04	1.34E-04	1.40E-04	1.45E-04
	1.5	2.65E-04	2.73E-04	2.79E-04	2.85E-04	3.02E-04	3.27E-04	3.46E-04	3.62E-04	3.76E-04
	2	6.00E-04	6.19E-04	6.30E-04	6.38E-04	6.60E-04	6.91E-04	7.16E-04	7.38E-04	7.57E-04
	2.5	1.11E-03	1.16E-03	1.19E-03	1.20E-03	1.24E-03	1.28E-03	1.31E-03	1.33E-03	1.36E-03
	3	1.81E-03	1.92E-03	1.97E-03	2.01E-03	2.08E-03	2.14E-03	2.18E-03	2.21E-03	2.24E-03
	3.5	2.68E-03	2.89E-03	3.00E-03	3.07E-03	3.21E-03	3.32E-03	3.37E-03	3.41E-03	3.45E-03

Table 149 Maximum deflection results for alpha 0.25 for slabs subjected to CHBDC axle 2 & 3 loading (main bars parallel to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2&3 Transverse	1.5	1.16E-04	1.20E-04	1.22E-04	1.24E-04	1.26E-04	1.34E-04	1.42E-04	1.49E-04	1.55E-04
	2	4.99E-04	5.17E-04	5.27E-04	5.35E-04	5.52E-04	5.67E-04	5.71E-04	5.83E-04	5.98E-04
	2.5	1.15E-03	1.21E-03	1.23E-03	1.25E-03	1.29E-03	1.33E-03	1.36E-03	1.37E-03	1.38E-03
	3	2.08E-03	2.22E-03	2.28E-03	2.33E-03	2.41E-03	2.49E-03	2.53E-03	2.57E-03	2.59E-03
	3.5	3.28E-03	3.55E-03	3.69E-03	3.78E-03	3.96E-03	4.10E-03	4.17E-03	4.23E-03	4.27E-03
	4	4.74E-03	5.20E-03	5.45E-03	5.61E-03	5.95E-03	6.21E-03	6.33E-03	6.42E-03	6.48E-03

Alpha 0.5 Deflection Results

Table 150 Maximum deflection results for alpha 0.5 for slabs subjected to CHBDC axle 4 loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4	1	5.97E-05	7.06E-05	7.79E-05	8.35E-05	9.85E-05	1.16E-04	1.27E-04	1.36E-04	1.43E-04
	1.5	1.50E-04	1.77E-04	1.96E-04	2.10E-04	2.49E-04	2.94E-04	3.24E-04	3.47E-04	3.66E-04
	2	2.77E-04	3.29E-04	3.64E-04	3.90E-04	4.63E-04	5.48E-04	6.05E-04	6.49E-04	6.85E-04
	2.5	4.42E-04	5.25E-04	5.80E-04	6.23E-04	7.40E-04	8.77E-04	9.69E-04	1.04E-03	1.10E-03
	3	6.92E-04	8.23E-04	9.10E-04	9.78E-04	1.16E-03	1.38E-03	1.53E-03	1.64E-03	1.73E-03
	3.5	1.13E-03	1.34E-03	1.48E-03	1.59E-03	1.89E-03	2.25E-03	2.48E-03	2.67E-03	2.82E-03
	4	1.64E-03	1.95E-03	2.16E-03	2.32E-03	2.75E-03	3.27E-03	3.62E-03	3.89E-03	4.11E-03

Table 151 Maximum deflection results for alpha 0.5 for slabs subjected to CHBDC axle 2 & 3 loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2and 3	1	5.09E-05	5.62E-05	5.99E-05	6.29E-05	7.15E-05	8.27E-05	9.05E-05	9.65E-05	1.01E-04
	1.5	1.62E-04	1.75E-04	1.81E-04	1.84E-04	2.02E-04	2.25E-04	2.42E-04	2.55E-04	2.66E-04
	2	3.31E-04	3.71E-04	3.93E-04	4.07E-04	4.37E-04	4.66E-04	4.94E-04	5.15E-04	5.33E-04
	2.5	5.57E-04	6.34E-04	6.80E-04	7.12E-04	7.87E-04	8.50E-04	8.78E-04	9.01E-04	9.30E-04
	3	9.30E-04	1.08E-03	1.17E-03	1.24E-03	1.41E-03	1.57E-03	1.65E-03	1.71E-03	1.75E-03
	3.5	1.53E-03	1.79E-03	1.95E-03	2.07E-03	2.38E-03	2.69E-03	2.86E-03	2.98E-03	3.07E-03
	4	2.25E-03	2.64E-03	2.89E-03	3.07E-03	3.55E-03	4.05E-03	4.35E-03	4.56E-03	4.72E-03

Table 152 Maximum deflection results for alpha 0.5 for slabs subjected to CHBDC truck loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
TRUCK	1	5.97E-05	7.06E-05	7.79E-05	8.35E-05	9.85E-05	1.16E-04	1.27E-04	1.36E-04	1.43E-04
	1.5	1.61E-04	1.77E-04	1.96E-04	2.10E-04	2.49E-04	2.94E-04	3.24E-04	3.47E-04	3.66E-04
	2	3.32E-04	3.70E-04	3.91E-04	4.06E-04	4.63E-04	5.48E-04	6.05E-04	6.49E-04	6.85E-04
	2.5	5.71E-04	6.38E-04	6.81E-04	7.12E-04	7.85E-04	8.77E-04	9.69E-04	1.04E-03	1.10E-03
	3	9.89E-04	1.11E-03	1.19E-03	1.25E-03	1.41E-03	1.56E-03	1.65E-03	1.71E-03	1.74E-03
	3.5	1.70E-03	1.89E-03	2.02E-03	2.12E-03	2.39E-03	2.68E-03	2.86E-03	2.98E-03	3.06E-03
	4	2.62E-03	2.89E-03	3.08E-03	3.22E-03	3.62E-03	4.07E-03	4.35E-03	4.55E-03	4.71E-03

Table 153 Maximum deflection results for alpha 0.5 for slabs subjected to CHBDC axle 4 loading (main bars parallel to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4 Transverse	1	8.24E-05	8.75E-05	9.14E-05	9.47E-05	1.04E-04	1.16E-04	1.23E-04	1.29E-04	1.34E-04
	1.5	2.57E-04	2.67E-04	2.73E-04	2.78E-04	2.94E-04	3.16E-04	3.33E-04	3.46E-04	3.57E-04
	2	5.74E-04	5.98E-04	6.11E-04	6.21E-04	6.45E-04	6.76E-04	6.98E-04	7.18E-04	7.35E-04
	2.5	1.05E-03	1.11E-03	1.14E-03	1.16E-03	1.20E-03	1.25E-03	1.28E-03	1.30E-03	1.33E-03
	3	1.69E-03	1.81E-03	1.87E-03	1.92E-03	2.00E-03	2.08E-03	2.12E-03	2.16E-03	2.19E-03
	3.5	2.49E-03	2.71E-03	2.82E-03	2.90E-03	3.06E-03	3.20E-03	3.27E-03	3.32E-03	3.36E-03

Table 154 Maximum deflection results for alpha 0.5 for slabs subjected to CHBDC axle 2 & 3 loading (main bars parallel to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2&3 Transverse	1.5	1.12E-04	1.16E-04	1.18E-04	1.20E-04	1.22E-04	1.30E-04	1.37E-04	1.43E-04	1.48E-04
	2	4.76E-04	4.98E-04	5.09E-04	5.17E-04	5.35E-04	5.49E-04	5.53E-04	5.68E-04	5.81E-04
	2.5	1.08E-03	1.15E-03	1.18E-03	1.20E-03	1.25E-03	1.29E-03	1.32E-03	1.33E-03	1.34E-03
	3	1.94E-03	2.09E-03	2.16E-03	2.21E-03	2.32E-03	2.41E-03	2.46E-03	2.49E-03	2.52E-03
	3.5	3.04E-03	3.32E-03	3.47E-03	3.56E-03	3.77E-03	3.94E-03	4.03E-03	4.09E-03	4.14E-03
	4	4.39E-03	4.84E-03	5.09E-03	5.26E-03	5.62E-03	5.93E-03	6.08E-03	6.18E-03	6.26E-03

Alpha 0.75 Deflection Results

Table 155 Maximum deflection results for alpha 0.75 for slabs subjected to CHBDC axle 4 loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4	1	5.53E-05	6.54E-05	7.22E-05	7.73E-05	9.12E-05	1.07E-04	1.18E-04	1.26E-04	1.32E-04
	1.5	1.38E-04	1.64E-04	1.81E-04	1.95E-04	2.31E-04	2.73E-04	3.00E-04	3.22E-04	3.39E-04
	2	2.56E-04	3.04E-04	3.37E-04	3.61E-04	4.29E-04	5.08E-04	5.60E-04	6.01E-04	6.34E-04
	2.5	4.09E-04	4.86E-04	5.37E-04	5.77E-04	6.85E-04	8.12E-04	8.97E-04	9.62E-04	1.02E-03
	3	6.41E-04	7.62E-04	8.43E-04	9.05E-04	1.08E-03	1.28E-03	1.41E-03	1.52E-03	1.60E-03
	3.5	1.04E-03	1.24E-03	1.37E-03	1.47E-03	1.75E-03	2.08E-03	2.30E-03	2.47E-03	2.61E-03
	4	1.52E-03	1.80E-03	2.00E-03	2.14E-03	2.55E-03	3.03E-03	3.35E-03	3.60E-03	3.80E-03

Table 156 Maximum deflection results for alpha 0.75 for slabs subjected to CHBDC axle 2 & 3 loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2and 3	1	4.85E-05	5.37E-05	5.72E-05	6.00E-05	6.79E-05	7.79E-05	8.48E-05	9.02E-05	9.47E-05
	1.5	1.51E-04	1.65E-04	1.71E-04	1.75E-04	1.93E-04	2.15E-04	2.30E-04	2.42E-04	2.52E-04
	2	3.08E-04	3.46E-04	3.67E-04	3.82E-04	4.12E-04	4.44E-04	4.71E-04	4.92E-04	5.09E-04
	2.5	5.17E-04	5.90E-04	6.34E-04	6.65E-04	7.37E-04	8.00E-04	8.30E-04	8.57E-04	8.85E-04
	3	8.62E-04	1.00E-03	1.09E-03	1.15E-03	1.31E-03	1.46E-03	1.55E-03	1.60E-03	1.64E-03
	3.5	1.42E-03	1.66E-03	1.81E-03	1.92E-03	2.21E-03	2.50E-03	2.67E-03	2.79E-03	2.87E-03
	4	2.09E-03	2.45E-03	2.68E-03	2.85E-03	3.29E-03	3.76E-03	4.05E-03	4.25E-03	4.40E-03

Table 157 Maximum deflection results for alpha 0.75 for slabs subjected to CHBDC truck loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
TRUCK	1	5.53E-05	6.54E-05	7.22E-05	7.73E-05	9.12E-05	1.07E-04	1.18E-04	1.26E-04	1.32E-04
	1.5	1.52E-04	1.65E-04	1.81E-04	1.95E-04	2.31E-04	2.73E-04	3.00E-04	3.22E-04	3.39E-04
	2	3.14E-04	3.48E-04	3.68E-04	3.82E-04	4.29E-04	5.08E-04	5.60E-04	6.01E-04	6.34E-04
	2.5	5.42E-04	6.03E-04	6.42E-04	6.71E-04	7.39E-04	8.12E-04	8.97E-04	9.62E-04	1.02E-03
	3	9.43E-04	1.05E-03	1.12E-03	1.18E-03	1.32E-03	1.47E-03	1.55E-03	1.60E-03	1.64E-03
	3.5	1.63E-03	1.80E-03	1.92E-03	2.01E-03	2.26E-03	2.52E-03	2.68E-03	2.79E-03	2.88E-03
	4	2.51E-03	2.76E-03	2.93E-03	3.07E-03	3.42E-03	3.83E-03	4.09E-03	4.27E-03	4.42E-03

Table 158 Maximum deflection results for alpha 0.75 for slabs subjected to CHBDC axle 4 loading (main bars parallel to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4 Transverse	1	8.08E-05	8.55E-05	8.90E-05	9.19E-05	1.00E-04	1.10E-04	1.17E-04	1.22E-04	1.26E-04
	1.5	2.50E-04	2.61E-04	2.68E-04	2.73E-04	2.88E-04	3.08E-04	3.22E-04	3.34E-04	3.44E-04
	2	5.52E-04	5.80E-04	5.95E-04	6.05E-04	6.32E-04	6.62E-04	6.84E-04	7.01E-04	7.16E-04
	2.5	1.00E-03	1.06E-03	1.10E-03	1.12E-03	1.17E-03	1.22E-03	1.25E-03	1.28E-03	1.30E-03
	3	1.60E-03	1.73E-03	1.79E-03	1.84E-03	1.94E-03	2.02E-03	2.07E-03	2.11E-03	2.14E-03
	3.5	2.35E-03	2.56E-03	2.68E-03	2.76E-03	2.94E-03	3.09E-03	3.18E-03	3.23E-03	3.28E-03

Table 159 Maximum deflection results for alpha 0.75 for slabs subjected to CHBDC axle 2 & 3 loading (main bars parallel to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2&3 Transverse	1.5	1.08E-04	1.13E-04	1.15E-04	1.17E-04	1.19E-04	1.27E-04	1.33E-04	1.38E-04	1.42E-04
	2	4.57E-04	4.81E-04	4.94E-04	5.02E-04	5.21E-04	5.35E-04	5.42E-04	5.56E-04	5.68E-04
	2.5	1.03E-03	1.10E-03	1.14E-03	1.16E-03	1.21E-03	1.26E-03	1.28E-03	1.30E-03	1.31E-03
	3	1.83E-03	1.98E-03	2.06E-03	2.12E-03	2.24E-03	2.34E-03	2.39E-03	2.43E-03	2.45E-03
	3.5	2.86E-03	3.13E-03	3.29E-03	3.39E-03	3.61E-03	3.81E-03	3.91E-03	3.97E-03	4.02E-03
	4	4.11E-03	4.55E-03	4.80E-03	4.97E-03	5.35E-03	5.69E-03	5.87E-03	5.98E-03	6.06E-03

Alpha 1 Deflection Results

Table 160 Maximum deflection results for alpha 1 for slabs subjected to CHBDC axle 4 loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4	1	5.17E-05	6.12E-05	6.75E-05	7.24E-05	8.54E-05	1.00E-04	1.10E-04	1.18E-04	1.24E-04
	1.5	1.30E-04	1.54E-04	1.70E-04	1.82E-04	2.16E-04	2.55E-04	2.81E-04	3.01E-04	3.17E-04
	2	2.40E-04	2.85E-04	3.15E-04	3.38E-04	4.01E-04	4.75E-04	5.24E-04	5.62E-04	5.93E-04
	2.5	3.82E-04	4.54E-04	5.02E-04	5.40E-04	6.41E-04	7.60E-04	8.39E-04	9.00E-04	9.51E-04
	3	5.99E-04	7.12E-04	7.88E-04	8.47E-04	1.01E-03	1.20E-03	1.32E-03	1.42E-03	1.50E-03
	3.5	9.74E-04	1.16E-03	1.28E-03	1.38E-03	1.64E-03	1.94E-03	2.15E-03	2.31E-03	2.44E-03
	4	1.42E-03	1.69E-03	1.87E-03	2.01E-03	2.38E-03	2.83E-03	3.13E-03	3.37E-03	3.56E-03

Table 161 Maximum deflection results for alpha 1 for slabs subjected to CHBDC axle 2 & 3 loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2and 3	1	4.65E-05	5.15E-05	5.49E-05	5.76E-05	6.49E-05	7.41E-05	8.04E-05	8.53E-05	8.94E-05
	1.5	1.43E-04	1.56E-04	1.63E-04	1.67E-04	1.85E-04	2.06E-04	2.21E-04	2.32E-04	2.41E-04
	2	2.90E-04	3.26E-04	3.47E-04	3.61E-04	3.91E-04	4.25E-04	4.52E-04	4.72E-04	4.89E-04
	2.5	4.85E-04	5.54E-04	5.96E-04	6.26E-04	6.96E-04	7.59E-04	7.91E-04	8.20E-04	8.48E-04
	3	8.07E-04	9.37E-04	1.02E-03	1.08E-03	1.23E-03	1.38E-03	1.46E-03	1.51E-03	1.55E-03
	3.5	1.33E-03	1.55E-03	1.69E-03	1.80E-03	2.07E-03	2.35E-03	2.51E-03	2.62E-03	2.71E-03
	4	1.95E-03	2.29E-03	2.50E-03	2.67E-03	3.08E-03	3.53E-03	3.80E-03	3.99E-03	4.14E-03

Table 162 Maximum deflection results for alpha 1 for slabs subjected to CHBDC truck loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
TRUCK	1	5.17E-05	6.12E-05	6.75E-05	7.24E-05	8.54E-05	1.00E-04	1.10E-04	1.18E-04	1.24E-04
	1.5	1.44E-04	1.57E-04	1.70E-04	1.82E-04	2.16E-04	2.55E-04	2.81E-04	3.01E-04	3.17E-04
	2	2.99E-04	3.31E-04	3.50E-04	3.63E-04	4.01E-04	4.75E-04	5.24E-04	5.62E-04	5.93E-04
	2.5	5.18E-04	5.75E-04	6.11E-04	6.38E-04	7.02E-04	7.62E-04	8.39E-04	9.00E-04	9.51E-04
	3	9.16E-04	1.01E-03	1.08E-03	1.13E-03	1.26E-03	1.39E-03	1.47E-03	1.52E-03	1.56E-03
	3.5	1.59E-03	1.75E-03	1.86E-03	1.94E-03	2.16E-03	2.40E-03	2.55E-03	2.65E-03	2.73E-03
	4	2.46E-03	2.69E-03	2.85E-03	2.97E-03	3.29E-03	3.66E-03	3.89E-03	4.06E-03	4.20E-03

Table 163 Maximum deflection results for alpha 1 for slabs subjected to CHBDC axle 4 loading (main bars parallel to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4 Transverse	1	7.93E-05	8.38E-05	8.71E-05	8.97E-05	9.71E-05	1.06E-04	1.12E-04	1.17E-04	1.20E-04
	1.5	2.44E-04	2.56E-04	2.63E-04	2.68E-04	2.82E-04	3.01E-04	3.14E-04	3.24E-04	3.33E-04
	2	5.33E-04	5.63E-04	5.80E-04	5.91E-04	6.19E-04	6.50E-04	6.71E-04	6.87E-04	7.01E-04
	2.5	9.58E-04	1.03E-03	1.06E-03	1.09E-03	1.14E-03	1.20E-03	1.23E-03	1.25E-03	1.28E-03
	3	1.52E-03	1.65E-03	1.72E-03	1.77E-03	1.88E-03	1.97E-03	2.03E-03	2.07E-03	2.10E-03
	3.5	2.23E-03	2.44E-03	2.56E-03	2.65E-03	2.83E-03	3.00E-03	3.09E-03	3.15E-03	3.20E-03

Table 164 Maximum deflection results for alpha 1 for slabs subjected to CHBDC axle 2 & 3 loading (main bars parallel to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2&3 Transverse	1.5	1.05E-04	1.10E-04	1.12E-04	1.14E-04	1.17E-04	1.24E-04	1.29E-04	1.34E-04	1.38E-04
	2	4.40E-04	4.66E-04	4.80E-04	4.89E-04	5.09E-04	5.23E-04	5.33E-04	5.46E-04	5.57E-04
	2.5	9.84E-04	1.06E-03	1.10E-03	1.12E-03	1.18E-03	1.23E-03	1.25E-03	1.27E-03	1.28E-03
	3	1.74E-03	1.89E-03	1.98E-03	2.04E-03	2.16E-03	2.27E-03	2.33E-03	2.37E-03	2.39E-03
	3.5	2.71E-03	2.98E-03	3.13E-03	3.24E-03	3.48E-03	3.69E-03	3.80E-03	3.87E-03	3.92E-03
	4	3.88E-03	4.31E-03	4.56E-03	4.73E-03	5.13E-03	5.49E-03	5.67E-03	5.80E-03	5.89E-03

Alpha 2 Deflection Results

Table 165 Maximum deflection results for alpha 2 for slabs subjected to CHBDC axle 4 loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4	1	4.22E-05	5.00E-05	5.52E-05	5.91E-05	6.98E-05	8.22E-05	9.03E-05	9.64E-05	1.01E-04
	1.5	1.06E-04	1.25E-04	1.39E-04	1.49E-04	1.76E-04	2.08E-04	2.30E-04	2.46E-04	2.60E-04
	2	1.96E-04	2.33E-04	2.57E-04	2.76E-04	3.27E-04	3.88E-04	4.28E-04	4.59E-04	4.85E-04
	2.5	3.12E-04	3.71E-04	4.10E-04	4.41E-04	5.23E-04	6.21E-04	6.86E-04	7.36E-04	7.77E-04
	3	4.89E-04	5.82E-04	6.44E-04	6.91E-04	8.22E-04	9.76E-04	1.08E-03	1.16E-03	1.22E-03
	3.5	7.96E-04	9.46E-04	1.05E-03	1.12E-03	1.34E-03	1.59E-03	1.76E-03	1.89E-03	1.99E-03
	4	1.16E-03	1.38E-03	1.52E-03	1.64E-03	1.95E-03	2.31E-03	2.56E-03	2.75E-03	2.91E-03

Table 166 Maximum deflection results for alpha 2 for slabs subjected to CHBDC axle 2 & 3 loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2and 3	1	4.06E-05	4.53E-05	4.83E-05	5.06E-05	5.68E-05	6.40E-05	6.89E-05	7.27E-05	7.58E-05
	1.5	1.20E-04	1.33E-04	1.40E-04	1.45E-04	1.62E-04	1.81E-04	1.94E-04	2.03E-04	2.11E-04
	2	2.40E-04	2.72E-04	2.91E-04	3.04E-04	3.35E-04	3.71E-04	3.96E-04	4.14E-04	4.29E-04
	2.5	4.00E-04	4.59E-04	4.95E-04	5.21E-04	5.85E-04	6.47E-04	6.81E-04	7.14E-04	7.40E-04
	3	6.60E-04	7.68E-04	8.37E-04	8.87E-04	1.02E-03	1.15E-03	1.22E-03	1.28E-03	1.32E-03
	3.5	1.09E-03	1.27E-03	1.39E-03	1.48E-03	1.70E-03	1.94E-03	2.09E-03	2.19E-03	2.27E-03
	4	1.60E-03	1.87E-03	2.05E-03	2.18E-03	2.53E-03	2.91E-03	3.15E-03	3.31E-03	3.45E-03

Table 167 Maximum deflection results for alpha 2 for slabs subjected to CHBDC truck loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
TRUCK	1	4.23E-05	5.00E-05	5.52E-05	5.91E-05	6.98E-05	8.22E-05	9.03E-05	9.64E-05	1.01E-04
	1.5	1.24E-04	1.35E-04	1.42E-04	1.49E-04	1.76E-04	2.08E-04	2.30E-04	2.46E-04	2.60E-04
	2	2.60E-04	2.86E-04	3.02E-04	3.14E-04	3.41E-04	3.89E-04	4.29E-04	4.60E-04	4.85E-04
	2.5	4.56E-04	5.02E-04	5.31E-04	5.53E-04	6.06E-04	6.60E-04	6.90E-04	7.37E-04	7.78E-04
	3	8.03E-04	8.85E-04	9.38E-04	9.78E-04	1.08E-03	1.19E-03	1.26E-03	1.31E-03	1.34E-03
	3.5	1.40E-03	1.53E-03	1.62E-03	1.69E-03	1.87E-03	2.06E-03	2.18E-03	2.27E-03	2.34E-03
	4	2.16E-03	2.37E-03	2.50E-03	2.60E-03	2.87E-03	3.17E-03	3.35E-03	3.49E-03	3.60E-03

Table 168 Maximum deflection results for alpha 2 for slabs subjected to CHBDC axle 4 loading (main bars parallel to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4 Transverse	1	7.45E-05	7.88E-05	8.15E-05	8.35E-05	8.91E-05	9.58E-05	1.00E-04	1.04E-04	1.06E-04
	1.5	2.24E-04	2.38E-04	2.46E-04	2.51E-04	2.65E-04	2.81E-04	2.91E-04	2.99E-04	3.06E-04
	2	4.76E-04	5.12E-04	5.32E-04	5.46E-04	5.78E-04	6.11E-04	6.31E-04	6.45E-04	6.57E-04
	2.5	8.37E-04	9.12E-04	9.54E-04	9.83E-04	1.05E-03	1.11E-03	1.15E-03	1.18E-03	1.20E-03
	3	1.31E-03	1.44E-03	1.52E-03	1.57E-03	1.69E-03	1.81E-03	1.88E-03	1.92E-03	1.96E-03
	3.5	1.89E-03	2.10E-03	2.23E-03	2.31E-03	2.52E-03	2.72E-03	2.82E-03	2.90E-03	2.96E-03

Table 169 Maximum deflection results for alpha 2 for slabs subjected to CHBDC axle 2 & 3 loading (main bars parallel to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2&3 Transverse	1.5	9.58E-05	1.01E-04	1.04E-04	1.06E-04	1.10E-04	1.16E-04	1.21E-04	1.24E-04	1.27E-04
	2	3.90E-04	4.20E-04	4.36E-04	4.47E-04	4.71E-04	4.89E-04	5.03E-04	5.14E-04	5.24E-04
	2.5	8.54E-04	9.33E-04	9.78E-04	1.01E-03	1.08E-03	1.14E-03	1.17E-03	1.18E-03	1.20E-03
	3	1.49E-03	1.64E-03	1.73E-03	1.80E-03	1.94E-03	2.07E-03	2.14E-03	2.19E-03	2.22E-03
	3.5	2.29E-03	2.55E-03	2.71E-03	2.82E-03	3.07E-03	3.32E-03	3.45E-03	3.53E-03	3.60E-03
	4	3.25E-03	3.66E-03	3.90E-03	4.07E-03	4.48E-03	4.87E-03	5.09E-03	5.24E-03	5.35E-03

Alpha 4 Deflection Results

Table 170 Maximum deflection results for alpha 4 for slabs subjected to CHBDC axle 4 loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4	1	3.27E-05	3.88E-05	4.28E-05	4.59E-05	5.42E-05	6.38E-05	7.02E-05	7.50E-05	7.90E-05
	1.5	8.19E-05	9.72E-05	1.07E-04	1.15E-04	1.37E-04	1.62E-04	1.78E-04	1.91E-04	2.01E-04
	2	1.52E-04	1.80E-04	1.99E-04	2.14E-04	2.54E-04	3.01E-04	3.32E-04	3.56E-04	3.76E-04
	2.5	2.42E-04	2.87E-04	3.18E-04	3.41E-04	4.05E-04	4.81E-04	5.31E-04	5.70E-04	6.02E-04
	3	3.79E-04	4.51E-04	4.99E-04	5.36E-04	6.36E-04	7.56E-04	8.36E-04	8.98E-04	9.49E-04
	3.5	6.16E-04	7.33E-04	8.11E-04	8.71E-04	1.04E-03	1.23E-03	1.36E-03	1.46E-03	1.54E-03
	4	8.97E-04	1.07E-03	1.18E-03	1.27E-03	1.51E-03	1.79E-03	1.98E-03	2.13E-03	2.25E-03

Table 171 Maximum deflection results for alpha 4 for slabs subjected to CHBDC axle 2 & 3 loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2and 3	1	3.38E-05	3.81E-05	4.07E-05	4.27E-05	4.79E-05	5.37E-05	5.75E-05	6.04E-05	6.27E-05
	1.5	9.60E-05	1.08E-04	1.15E-04	1.21E-04	1.36E-04	1.53E-04	1.64E-04	1.71E-04	1.78E-04
	2	1.90E-04	2.17E-04	2.33E-04	2.45E-04	2.75E-04	3.09E-04	3.31E-04	3.48E-04	3.61E-04
	2.5	3.13E-04	3.62E-04	3.92E-04	4.14E-04	4.70E-04	5.28E-04	5.64E-04	5.93E-04	6.17E-04
	3	5.13E-04	5.99E-04	6.54E-04	6.95E-04	8.00E-04	9.13E-04	9.82E-04	1.03E-03	1.07E-03
	3.5	8.44E-04	9.89E-04	1.08E-03	1.15E-03	1.33E-03	1.53E-03	1.66E-03	1.75E-03	1.82E-03
	4	1.24E-03	1.45E-03	1.60E-03	1.70E-03	1.98E-03	2.29E-03	2.48E-03	2.62E-03	2.74E-03

Table 172 Maximum deflection results for alpha 4 for slabs subjected to CHBDC truck loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
TRUCK	1	3.45E-05	3.89E-05	4.29E-05	4.59E-05	5.42E-05	6.38E-05	7.02E-05	7.50E-05	7.90E-05
	1.5	1.05E-04	1.15E-04	1.20E-04	1.24E-04	1.37E-04	1.62E-04	1.78E-04	1.91E-04	2.02E-04
	2	2.22E-04	2.43E-04	2.56E-04	2.65E-04	2.89E-04	3.13E-04	3.34E-04	3.58E-04	3.77E-04
	2.5	3.93E-04	4.29E-04	4.53E-04	4.70E-04	5.13E-04	5.59E-04	5.87E-04	6.07E-04	6.22E-04
	3	6.93E-04	7.60E-04	8.02E-04	8.33E-04	9.14E-04	1.00E-03	1.06E-03	1.10E-03	1.13E-03
	3.5	1.21E-03	1.32E-03	1.40E-03	1.45E-03	1.59E-03	1.74E-03	1.84E-03	1.91E-03	1.97E-03
	4	1.86E-03	2.04E-03	2.16E-03	2.24E-03	2.46E-03	2.69E-03	2.84E-03	2.95E-03	3.04E-03

Table 173 Maximum deflection results for alpha 4 for slabs subjected to CHBDC axle 4 loading (main bars parallel to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4 Transverse	1	6.79E-05	7.22E-05	7.47E-05	7.66E-05	8.11E-05	8.61E-05	8.93E-05	9.18E-05	9.38E-05
	1.5	1.97E-04	2.13E-04	2.22E-04	2.28E-04	2.43E-04	2.58E-04	2.67E-04	2.73E-04	2.78E-04
	2	4.07E-04	4.46E-04	4.68E-04	4.84E-04	5.21E-04	5.57E-04	5.77E-04	5.92E-04	6.03E-04
	2.5	6.99E-04	7.75E-04	8.20E-04	8.51E-04	9.26E-04	1.00E-03	1.04E-03	1.07E-03	1.09E-03
	3	1.08E-03	1.20E-03	1.28E-03	1.33E-03	1.47E-03	1.60E-03	1.67E-03	1.72E-03	1.76E-03
	3.5	1.54E-03	1.73E-03	1.85E-03	1.94E-03	2.14E-03	2.35E-03	2.48E-03	2.56E-03	2.63E-03

Table 174 Maximum deflection results for alpha 4 for slabs subjected to CHBDC axle 2 & 3 loading (main bars parallel to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2&3 Transverse	1.5	8.36E-05	9.00E-05	9.34E-05	9.57E-05	1.01E-04	1.07E-04	1.11E-04	1.13E-04	1.16E-04
	2	3.30E-04	3.62E-04	3.80E-04	3.93E-04	4.21E-04	4.46E-04	4.62E-04	4.73E-04	4.82E-04
	2.5	7.08E-04	7.87E-04	8.33E-04	8.65E-04	9.41E-04	1.01E-03	1.05E-03	1.07E-03	1.09E-03
	3	1.21E-03	1.36E-03	1.45E-03	1.51E-03	1.67E-03	1.81E-03	1.89E-03	1.95E-03	1.99E-03
	3.5	1.85E-03	2.09E-03	2.24E-03	2.34E-03	2.60E-03	2.85E-03	3.00E-03	3.10E-03	3.17E-03
	4	2.61E-03	2.96E-03	3.18E-03	3.34E-03	3.74E-03	4.14E-03	4.37E-03	4.53E-03	4.65E-03

Alpha 6 Deflection Results

Table 175 Maximum deflection results for alpha 6 for slabs subjected to CHBDC axle 4 loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4	1	2.77E-05	3.28E-05	3.62E-05	3.88E-05	4.58E-05	5.41E-05	5.95E-05	6.36E-05	6.70E-05
	1.5	6.93E-05	8.22E-05	9.08E-05	9.75E-05	1.16E-04	1.37E-04	1.51E-04	1.62E-04	1.71E-04
	2	1.28E-04	1.52E-04	1.68E-04	1.81E-04	2.15E-04	2.54E-04	2.81E-04	3.01E-04	3.18E-04
	2.5	2.04E-04	2.43E-04	2.69E-04	2.89E-04	3.43E-04	4.07E-04	4.49E-04	4.82E-04	5.09E-04
	3	3.20E-04	3.81E-04	4.21E-04	4.53E-04	5.38E-04	6.39E-04	7.07E-04	7.59E-04	8.02E-04
	3.5	5.21E-04	6.19E-04	6.85E-04	7.36E-04	8.75E-04	1.04E-03	1.15E-03	1.24E-03	1.31E-03
	4	7.59E-04	9.02E-04	9.98E-04	1.07E-03	1.27E-03	1.51E-03	1.68E-03	1.80E-03	1.90E-03

Table 176 Maximum deflection results for alpha 6 for slabs subjected to CHBDC axle 2 & 3 loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2and 3	1	2.98E-05	3.37E-05	3.62E-05	3.80E-05	4.27E-05	4.79E-05	5.12E-05	5.37E-05	5.57E-05
	1.5	8.29E-05	9.40E-05	1.01E-04	1.06E-04	1.20E-04	1.36E-04	1.46E-04	1.53E-04	1.59E-04
	2	1.62E-04	1.86E-04	2.01E-04	2.13E-04	2.40E-04	2.72E-04	2.93E-04	3.08E-04	3.21E-04
	2.5	2.67E-04	3.09E-04	3.36E-04	3.56E-04	4.07E-04	4.61E-04	4.95E-04	5.22E-04	5.44E-04
	3	4.35E-04	5.09E-04	5.56E-04	5.91E-04	6.84E-04	7.85E-04	8.48E-04	8.94E-04	9.30E-04
	3.5	7.15E-04	8.38E-04	9.18E-04	9.79E-04	1.14E-03	1.31E-03	1.42E-03	1.51E-03	1.57E-03
	4	1.05E-03	1.23E-03	1.35E-03	1.44E-03	1.68E-03	1.95E-03	2.12E-03	2.25E-03	2.35E-03

Table 177 Maximum deflection results for alpha 6 for slabs subjected to CHBDC truck loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
TRUCK	1	3.13E-05	3.39E-05	3.64E-05	3.90E-05	4.59E-05	5.41E-05	5.95E-05	6.36E-05	6.70E-05
	1.5	9.49E-05	1.04E-04	1.09E-04	1.13E-04	1.22E-04	1.38E-04	1.51E-04	1.62E-04	1.71E-04
	2	2.01E-04	2.20E-04	2.31E-04	2.40E-04	2.61E-04	2.84E-04	2.97E-04	3.07E-04	3.21E-04
	2.5	3.57E-04	3.90E-04	4.10E-04	4.25E-04	4.64E-04	5.06E-04	5.31E-04	5.50E-04	5.64E-04
	3	6.28E-04	6.89E-04	7.27E-04	7.55E-04	8.26E-04	9.03E-04	9.52E-04	9.87E-04	1.02E-03
	3.5	1.09E-03	1.20E-03	1.27E-03	1.32E-03	1.44E-03	1.58E-03	1.66E-03	1.72E-03	1.77E-03
	4	1.68E-03	1.85E-03	1.96E-03	2.04E-03	2.23E-03	2.44E-03	2.57E-03	2.67E-03	2.74E-03

Table 178 Maximum deflection results for alpha 6 for slabs subjected to CHBDC axle 4 loading (main bars parallel to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4 Transverse	1	6.33E-05	6.77E-05	7.03E-05	7.21E-05	7.64E-05	8.10E-05	8.38E-05	8.59E-05	8.76E-05
	1.5	1.80E-04	1.96E-04	2.05E-04	2.12E-04	2.27E-04	2.43E-04	2.51E-04	2.57E-04	2.62E-04
	2	3.64E-04	4.03E-04	4.26E-04	4.42E-04	4.81E-04	5.18E-04	5.40E-04	5.55E-04	5.67E-04
	2.5	6.18E-04	6.91E-04	7.35E-04	7.67E-04	8.44E-04	9.20E-04	9.64E-04	9.94E-04	1.02E-03
	3	9.42E-04	1.06E-03	1.14E-03	1.19E-03	1.32E-03	1.45E-03	1.53E-03	1.59E-03	1.63E-03
	3.5	1.34E-03	1.52E-03	1.63E-03	1.71E-03	1.91E-03	2.12E-03	2.25E-03	2.33E-03	2.40E-03

Table 179 Maximum deflection results for alpha 6 for slabs subjected to CHBDC axle 2 & 3 loading (main bars parallel to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2&3 Transverse	1.5	7.56E-05	8.24E-05	8.62E-05	8.87E-05	9.48E-05	1.01E-04	1.05E-04	1.07E-04	1.09E-04
	2	2.93E-04	3.25E-04	3.44E-04	3.57E-04	3.87E-04	4.15E-04	4.32E-04	4.44E-04	4.53E-04
	2.5	6.22E-04	6.98E-04	7.43E-04	7.76E-04	8.53E-04	9.28E-04	9.69E-04	9.97E-04	1.02E-03
	3	1.06E-03	1.20E-03	1.28E-03	1.34E-03	1.49E-03	1.64E-03	1.73E-03	1.79E-03	1.83E-03
	3.5	1.60E-03	1.82E-03	1.96E-03	2.06E-03	2.31E-03	2.56E-03	2.71E-03	2.81E-03	2.89E-03
	4	2.25E-03	2.57E-03	2.77E-03	2.92E-03	3.30E-03	3.69E-03	3.92E-03	4.08E-03	4.20E-03

Alpha 8 Deflection Results

Table 180 Maximum deflection results for alpha 8 for slabs subjected to CHBDC axle 4 loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4	1	2.44E-05	2.89E-05	3.19E-05	3.42E-05	4.05E-05	4.78E-05	5.26E-05	5.62E-05	5.93E-05
	1.5	6.11E-05	7.25E-05	8.01E-05	8.60E-05	1.02E-04	1.21E-04	1.33E-04	1.43E-04	1.51E-04
	2	1.13E-04	1.34E-04	1.49E-04	1.60E-04	1.89E-04	2.24E-04	2.48E-04	2.66E-04	2.81E-04
	2.5	1.80E-04	2.14E-04	2.37E-04	2.55E-04	3.02E-04	3.59E-04	3.96E-04	4.25E-04	4.49E-04
	3	2.83E-04	3.36E-04	3.72E-04	3.99E-04	4.74E-04	5.64E-04	6.23E-04	6.69E-04	7.07E-04
	3.5	4.59E-04	5.46E-04	6.04E-04	6.49E-04	7.72E-04	9.17E-04	1.01E-03	1.09E-03	1.15E-03
	4	6.69E-04	7.95E-04	8.80E-04	9.46E-04	1.12E-03	1.34E-03	1.48E-03	1.59E-03	1.68E-03

Table 181 Maximum deflection results for alpha 8 for slabs subjected to CHBDC axle 2 & 3 loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2and 3	1	2.71E-05	3.07E-05	3.31E-05	3.48E-05	3.92E-05	4.40E-05	4.70E-05	4.93E-05	5.12E-05
	1.5	7.43E-05	8.47E-05	9.11E-05	9.63E-05	1.10E-04	1.24E-04	1.33E-04	1.40E-04	1.45E-04
	2	1.44E-04	1.67E-04	1.80E-04	1.91E-04	2.17E-04	2.47E-04	2.67E-04	2.81E-04	2.92E-04
	2.5	2.37E-04	2.75E-04	3.00E-04	3.18E-04	3.65E-04	4.15E-04	4.48E-04	4.73E-04	4.93E-04
	3	3.85E-04	4.50E-04	4.93E-04	5.25E-04	6.08E-04	7.01E-04	7.60E-04	8.03E-04	8.37E-04
	3.5	6.32E-04	7.41E-04	8.13E-04	8.67E-04	1.01E-03	1.17E-03	1.27E-03	1.35E-03	1.41E-03
	4	9.26E-04	1.09E-03	1.20E-03	1.28E-03	1.49E-03	1.73E-03	1.89E-03	2.01E-03	2.10E-03

Table 182 Maximum deflection results for alpha 8 for slabs subjected to CHBDC truck loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
TRUCK	1	2.91E-05	3.16E-05	3.31E-05	3.46E-05	4.06E-05	4.78E-05	5.26E-05	5.63E-05	5.93E-05
	1.5	8.84E-05	9.63E-05	1.01E-04	1.05E-04	1.14E-04	1.23E-04	1.34E-04	1.44E-04	1.51E-04
	2	1.88E-04	2.05E-04	2.15E-04	2.23E-04	2.43E-04	2.64E-04	2.77E-04	2.87E-04	2.94E-04
	2.5	3.32E-04	3.63E-04	3.82E-04	3.96E-04	4.32E-04	4.71E-04	4.94E-04	5.12E-04	5.26E-04
	3	5.84E-04	6.41E-04	6.76E-04	7.02E-04	7.68E-04	8.39E-04	8.84E-04	9.16E-04	9.43E-04
	3.5	1.01E-03	1.12E-03	1.18E-03	1.22E-03	1.34E-03	1.47E-03	1.54E-03	1.60E-03	1.65E-03
	4	1.56E-03	1.72E-03	1.82E-03	1.89E-03	2.08E-03	2.27E-03	2.39E-03	2.48E-03	2.55E-03

Table 183 Maximum deflection results for alpha 8 for slabs subjected to CHBDC axle 4 loading (main bars parallel to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4 Transverse	1	5.97E-05	6.43E-05	6.69E-05	6.87E-05	7.31E-05	7.75E-05	8.01E-05	8.20E-05	8.36E-05
	1.5	1.67E-04	1.83E-04	1.93E-04	1.99E-04	2.15E-04	2.31E-04	2.40E-04	2.46E-04	2.51E-04
	2	3.33E-04	3.72E-04	3.94E-04	4.11E-04	4.50E-04	4.89E-04	5.11E-04	5.27E-04	5.38E-04
	2.5	5.62E-04	6.32E-04	6.75E-04	7.06E-04	7.83E-04	8.60E-04	9.04E-04	9.36E-04	9.60E-04
	3	8.51E-04	9.66E-04	1.04E-03	1.09E-03	1.22E-03	1.35E-03	1.43E-03	1.48E-03	1.52E-03
	3.5	1.20E-03	1.37E-03	1.48E-03	1.56E-03	1.75E-03	1.96E-03	2.08E-03	2.17E-03	2.23E-03

Table 184 Maximum deflection results for alpha 8 for slabs subjected to CHBDC axle 2 & 3 loading (main bars parallel to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2&3 Transverse	1.5	6.98E-05	7.67E-05	8.07E-05	8.34E-05	8.98E-05	9.63E-05	9.99E-05	1.02E-04	1.04E-04
	2	2.68E-04	2.99E-04	3.18E-04	3.31E-04	3.62E-04	3.92E-04	4.09E-04	4.21E-04	4.31E-04
	2.5	5.63E-04	6.36E-04	6.80E-04	7.12E-04	7.89E-04	8.66E-04	9.09E-04	9.39E-04	9.61E-04
	3	9.53E-04	1.08E-03	1.17E-03	1.22E-03	1.37E-03	1.52E-03	1.61E-03	1.67E-03	1.71E-03
	3.5	1.44E-03	1.64E-03	1.77E-03	1.87E-03	2.11E-03	2.35E-03	2.50E-03	2.60E-03	2.69E-03
	4	2.01E-03	2.31E-03	2.50E-03	2.64E-03	2.99E-03	3.37E-03	3.59E-03	3.75E-03	3.88E-03

Alpha 10 Deflection Results

Table 185 Maximum deflection results for alpha 10 for slabs subjected to CHBDC axle 4 loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4	1	2.21E-05	2.62E-05	2.89E-05	3.10E-05	3.66E-05	4.33E-05	4.76E-05	5.10E-05	5.37E-05
	1.5	5.53E-05	6.56E-05	7.25E-05	7.78E-05	9.23E-05	1.09E-04	1.21E-04	1.29E-04	1.36E-04
	2	1.02E-04	1.22E-04	1.34E-04	1.44E-04	1.71E-04	2.03E-04	2.24E-04	2.41E-04	2.54E-04
	2.5	1.63E-04	1.94E-04	2.14E-04	2.30E-04	2.73E-04	3.24E-04	3.59E-04	3.85E-04	4.07E-04
	3	2.56E-04	3.04E-04	3.36E-04	3.61E-04	4.29E-04	5.10E-04	5.64E-04	6.05E-04	6.40E-04
	3.5	4.16E-04	4.94E-04	5.47E-04	5.87E-04	6.98E-04	8.29E-04	9.17E-04	9.85E-04	1.04E-03
	4	6.05E-04	7.19E-04	7.96E-04	8.55E-04	1.02E-03	1.21E-03	1.34E-03	1.44E-03	1.52E-03

Table 186 Maximum deflection results for alpha 10 for slabs subjected to CHBDC axle 2 & 3 loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2and 3	1	2.50E-05	2.85E-05	3.07E-05	3.23E-05	3.65E-05	4.11E-05	4.39E-05	4.61E-05	4.78E-05
	1.5	6.80E-05	7.79E-05	8.40E-05	8.88E-05	1.01E-04	1.15E-04	1.24E-04	1.30E-04	1.35E-04
	2	1.32E-04	1.52E-04	1.65E-04	1.75E-04	2.00E-04	2.28E-04	2.47E-04	2.60E-04	2.71E-04
	2.5	2.15E-04	2.51E-04	2.73E-04	2.90E-04	3.34E-04	3.82E-04	4.13E-04	4.37E-04	4.56E-04
	3	3.49E-04	4.08E-04	4.47E-04	4.77E-04	5.54E-04	6.41E-04	6.95E-04	7.36E-04	7.69E-04
	3.5	5.72E-04	6.72E-04	7.37E-04	7.87E-04	9.18E-04	1.07E-03	1.16E-03	1.23E-03	1.29E-03
	4	8.38E-04	9.87E-04	1.08E-03	1.16E-03	1.35E-03	1.58E-03	1.72E-03	1.83E-03	1.92E-03

Table 187 Maximum deflection results for alpha 10 for slabs subjected to CHBDC truck loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
TRUCK	1	2.75E-05	2.99E-05	3.14E-05	3.25E-05	3.69E-05	4.34E-05	4.77E-05	5.10E-05	5.37E-05
	1.5	8.36E-05	9.10E-05	9.57E-05	9.91E-05	1.08E-04	1.17E-04	1.23E-04	1.31E-04	1.37E-04
	2	1.77E-04	1.94E-04	2.04E-04	2.11E-04	2.30E-04	2.50E-04	2.63E-04	2.72E-04	2.79E-04
	2.5	3.14E-04	3.44E-04	3.62E-04	3.75E-04	4.09E-04	4.45E-04	4.68E-04	4.84E-04	4.98E-04
	3	5.50E-04	6.05E-04	6.39E-04	6.63E-04	7.26E-04	7.93E-04	8.35E-04	8.65E-04	8.90E-04
	3.5	9.52E-04	1.05E-03	1.11E-03	1.16E-03	1.27E-03	1.39E-03	1.46E-03	1.51E-03	1.56E-03
	4	1.46E-03	1.62E-03	1.71E-03	1.78E-03	1.96E-03	2.15E-03	2.26E-03	2.34E-03	2.41E-03

Table 188 Maximum deflection results for alpha 10 for slabs subjected to CHBDC axle 4 loading (main bars parallel to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4 Transverse	1	5.67E-05	6.14E-05	6.41E-05	6.60E-05	7.04E-05	7.48E-05	7.73E-05	7.92E-05	8.06E-05
	1.5	1.56E-04	1.73E-04	1.82E-04	1.89E-04	2.06E-04	2.21E-04	2.30E-04	2.37E-04	2.42E-04
	2	3.10E-04	3.48E-04	3.70E-04	3.86E-04	4.26E-04	4.65E-04	4.88E-04	5.03E-04	5.16E-04
	2.5	5.19E-04	5.87E-04	6.29E-04	6.60E-04	7.35E-04	8.12E-04	8.57E-04	8.89E-04	9.13E-04
	3	7.84E-04	8.93E-04	9.61E-04	1.01E-03	1.14E-03	1.26E-03	1.34E-03	1.40E-03	1.44E-03
	3.5	1.10E-03	1.27E-03	1.37E-03	1.44E-03	1.63E-03	1.83E-03	1.95E-03	2.03E-03	2.10E-03

Table 189 Maximum deflection results for alpha 10 for slabs subjected to CHBDC axle 2 & 3 loading (main bars parallel to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2&3 Transverse	1.5	6.53E-05	7.23E-05	7.63E-05	7.91E-05	8.57E-05	9.23E-05	9.61E-05	9.87E-05	1.01E-04
	2	2.48E-04	2.79E-04	2.97E-04	3.10E-04	3.42E-04	3.72E-04	3.90E-04	4.03E-04	4.13E-04
	2.5	5.19E-04	5.89E-04	6.32E-04	6.63E-04	7.39E-04	8.16E-04	8.60E-04	8.91E-04	9.15E-04
	3	8.75E-04	1.00E-03	1.08E-03	1.13E-03	1.28E-03	1.42E-03	1.51E-03	1.57E-03	1.62E-03
	3.5	1.32E-03	1.51E-03	1.63E-03	1.72E-03	1.95E-03	2.19E-03	2.34E-03	2.44E-03	2.52E-03
	4	1.84E-03	2.12E-03	2.30E-03	2.43E-03	2.77E-03	3.13E-03	3.35E-03	3.50E-03	3.63E-03

C.2.2 MAXIMUM Deflection VS SPAN LENGTH

Alpha 0.25 Deflection VS Span Length for Different D Values

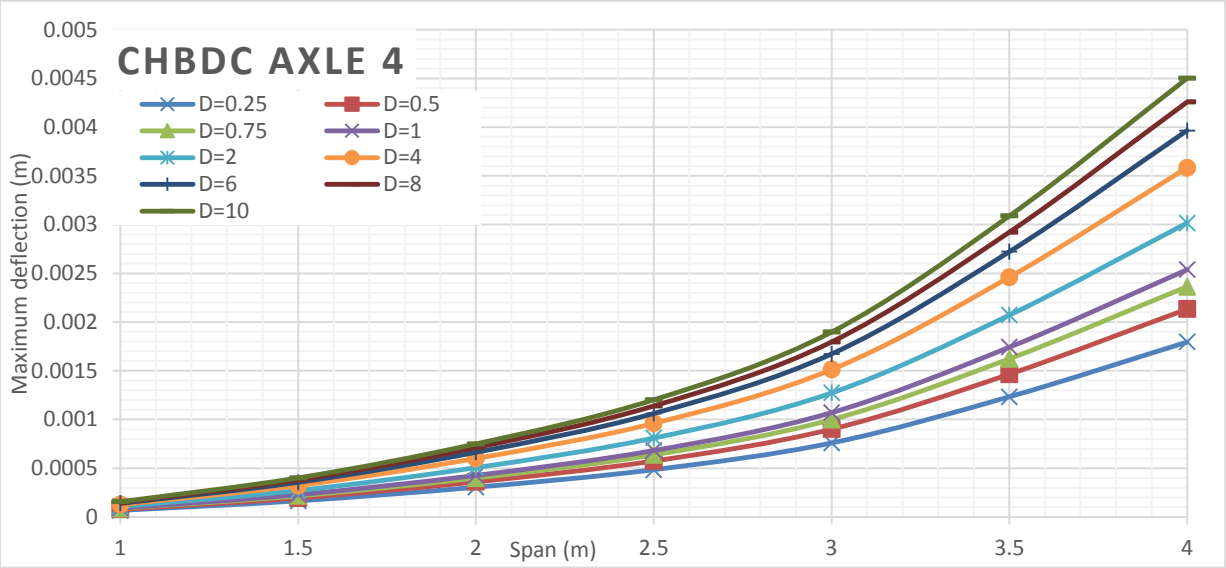


Figure 370 Maximum deflection of deck slabs subjected to CHBDC axle 4 for different D values of alpha 0.25 Orthotropic analyses

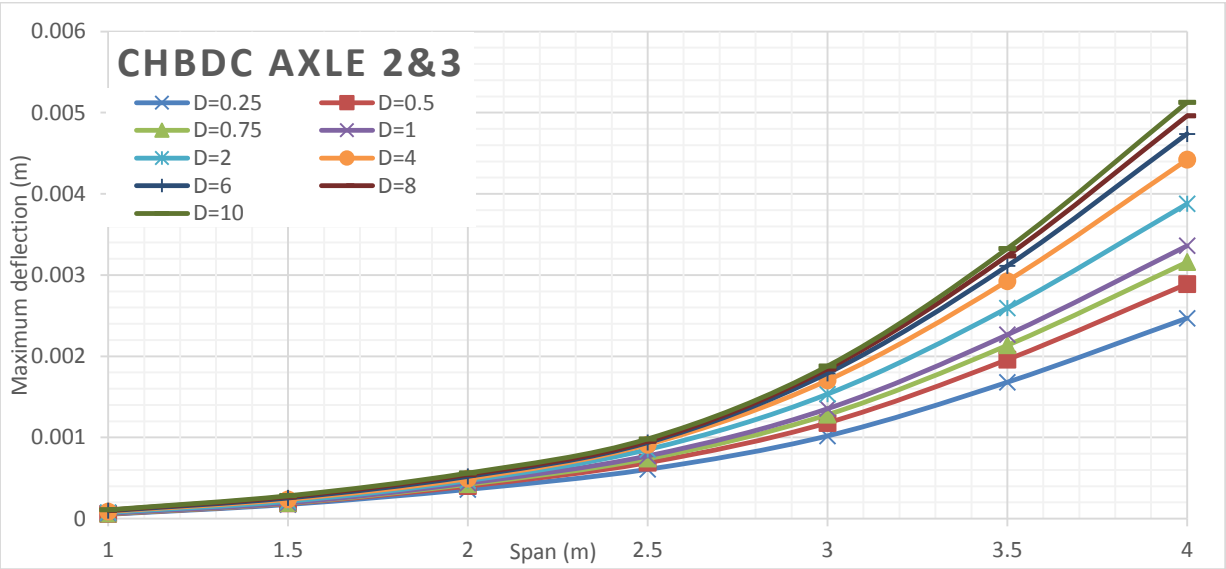


Figure 371 Maximum deflection of deck slabs subjected to CHBDC axle 2 & 3 for different D values of alpha 0.25 Orthotropic analyses

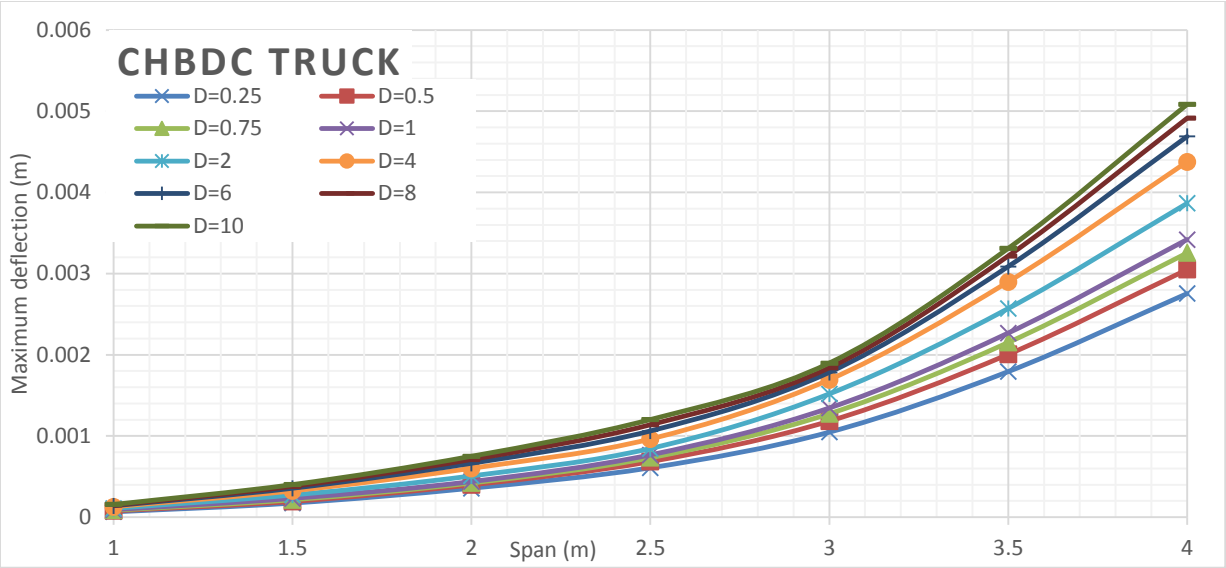


Figure 372 Maximum deflection of deck slabs subjected to CHBDC truck for different D values of alpha 0.25 Orthotropic analyses

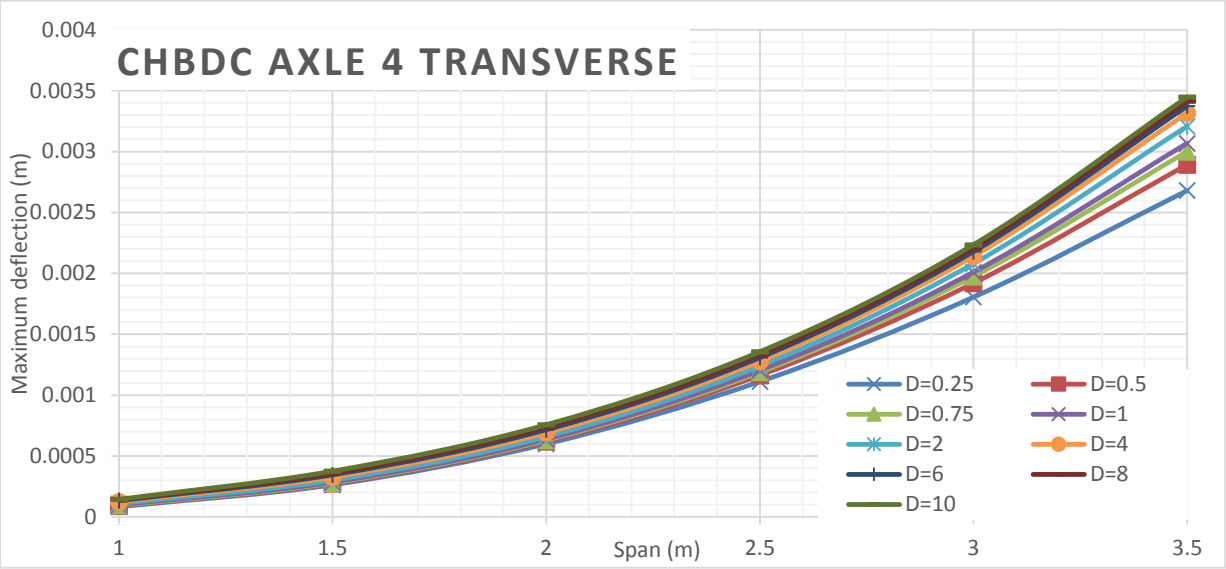


Figure 373 Maximum deflection of deck slabs subjected to CHBDC axle 4 for different D values of alpha 0.25 Orthotropic analyses

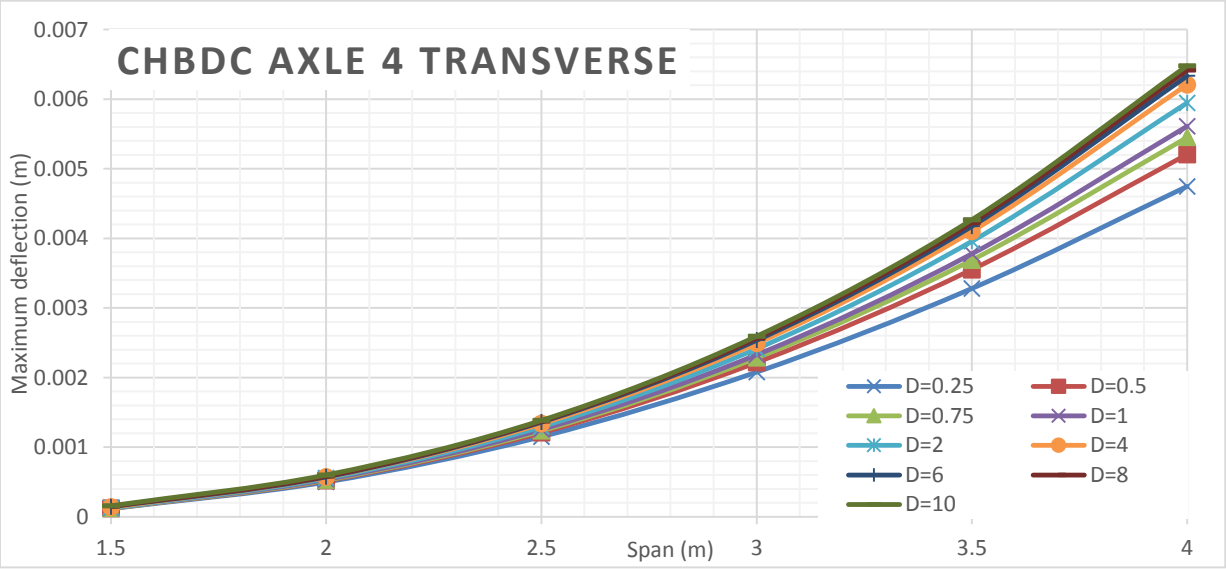


Figure 374 Maximum deflection of deck slabs subjected to CHBDC axle 2 & 3 for different D values of alpha 0.25 Orthotropic analyses

Alpha 0.5 Deflection VS Span Length for Different D Values

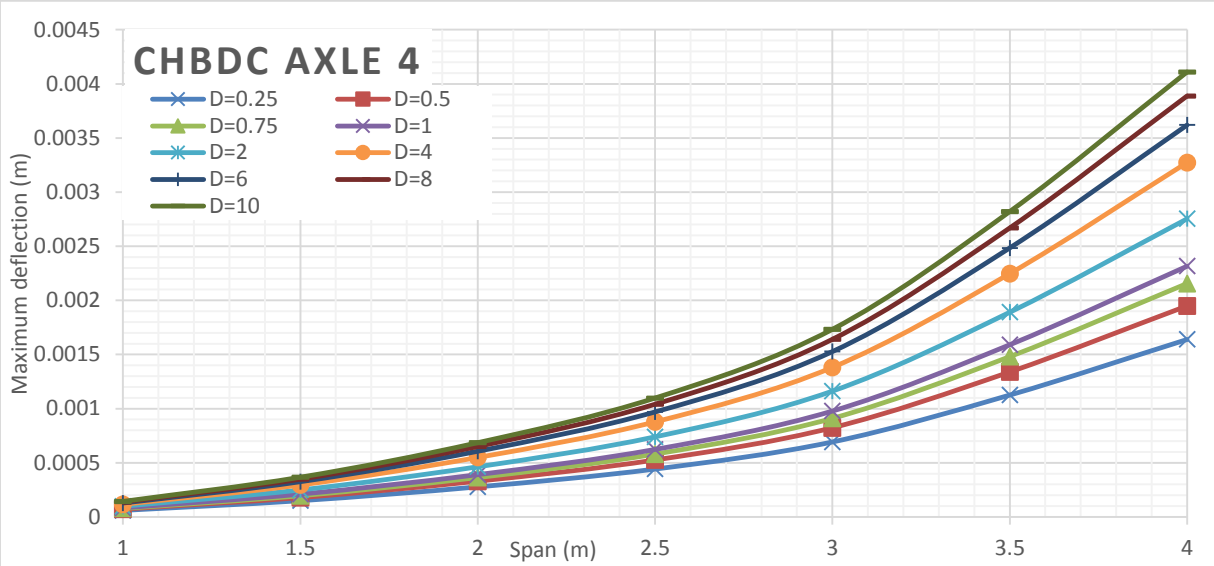


Figure 375 Maximum deflection of deck slabs subjected to CHBDC axle 4 for different D values of alpha 0.5 Orthotropic analyses

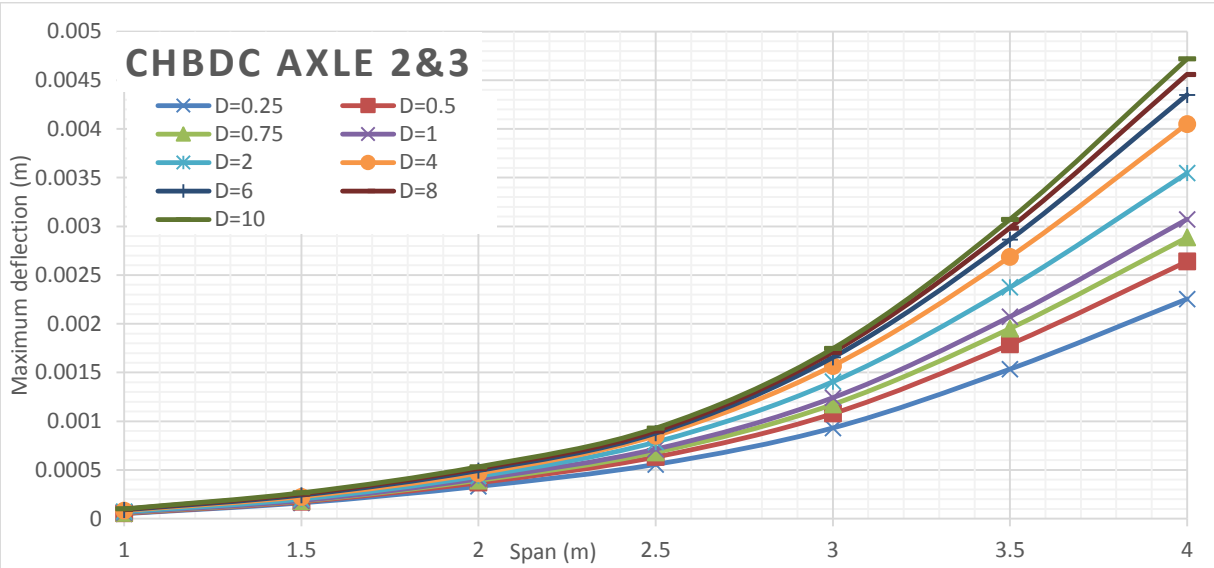


Figure 376 Maximum deflection of deck slabs subjected to CHBDC axle 2 & 3 for different D values of alpha 0.5 Orthotropic analyses

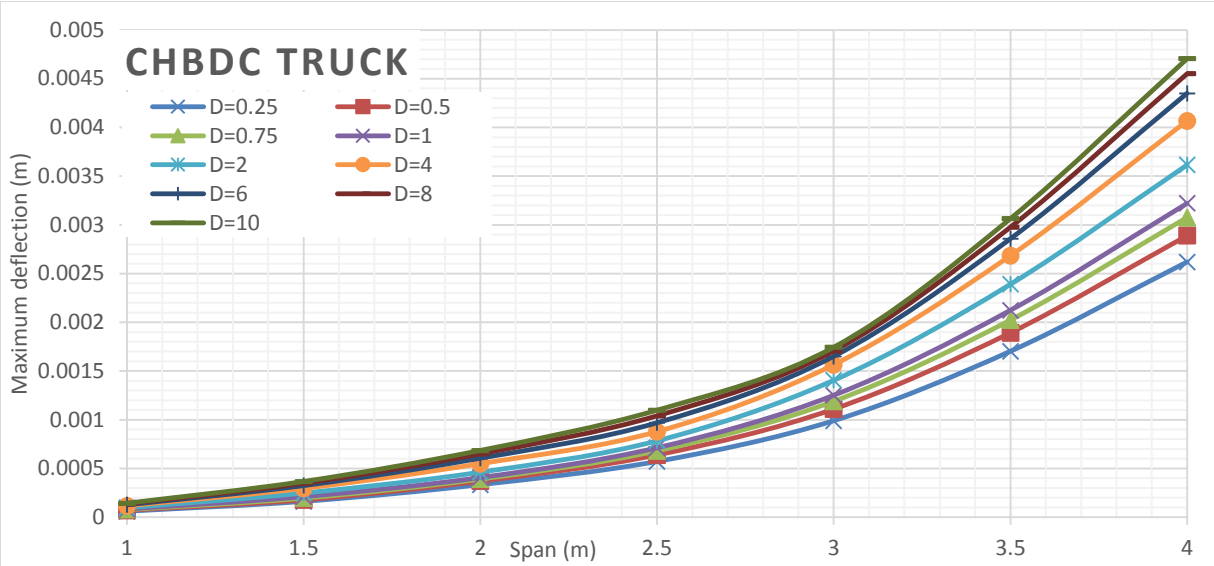


Figure 377 Maximum deflection of deck slabs subjected to CHBDC truck for different D values of alpha 0.5 Orthotropic analyses

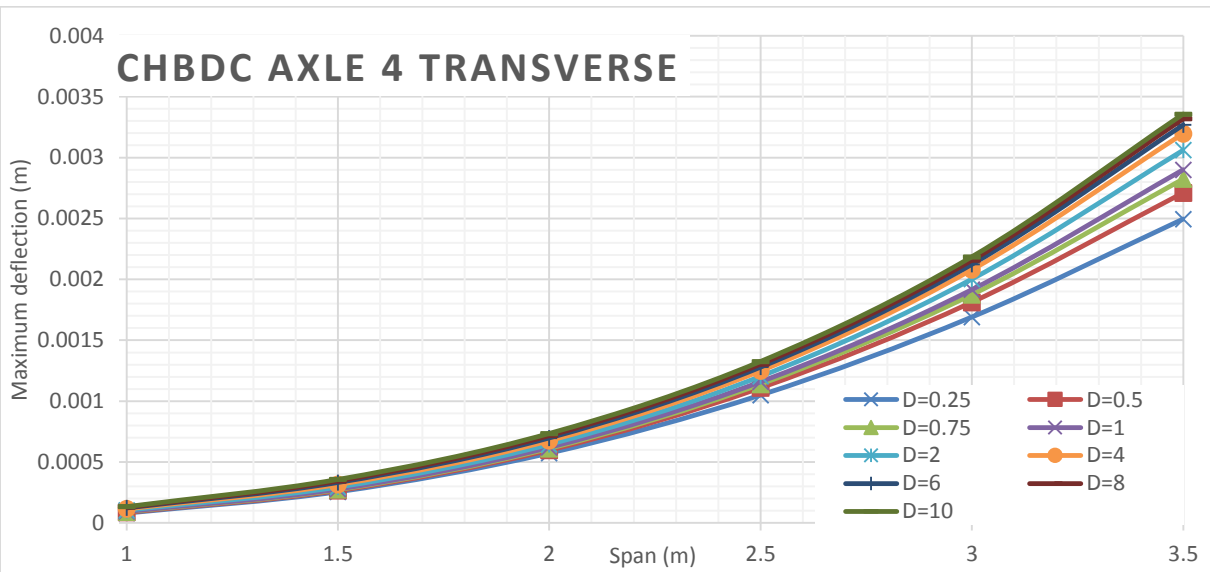


Figure 378 Maximum deflection of deck slabs subjected to CHBDC axle 4 for different D values of alpha 0.5 Orthotropic analyses

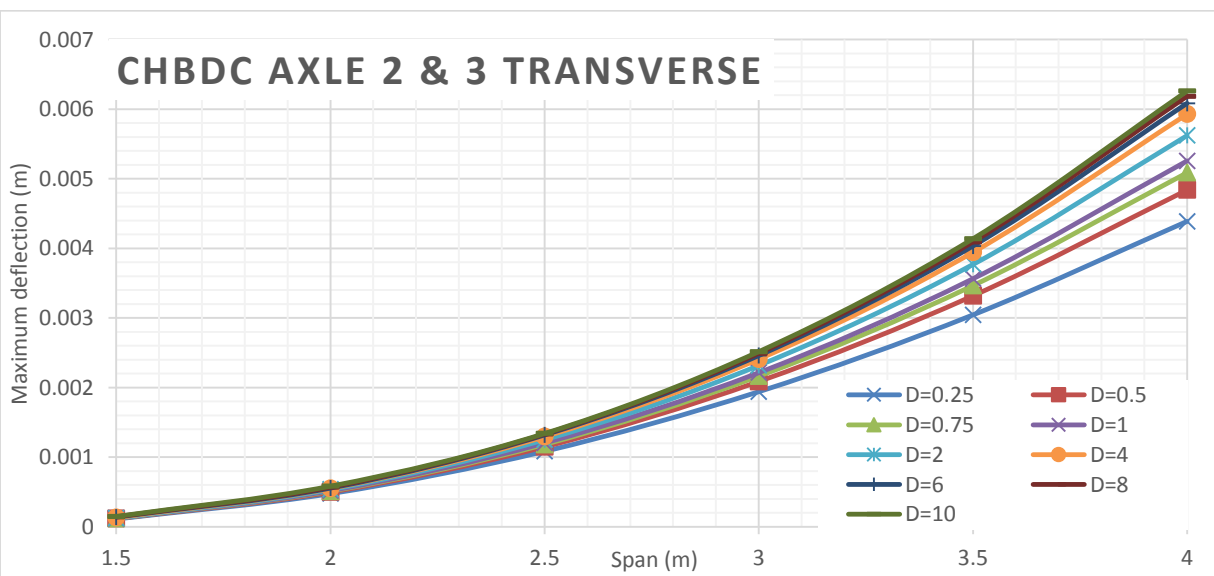


Figure 379 Maximum deflection of deck slabs subjected to CHBDC axle 2 & 3 for different D values of alpha 0.5 Orthotropic analyses

Alpha 0.75 Deflection VS Span Length for Different D Values

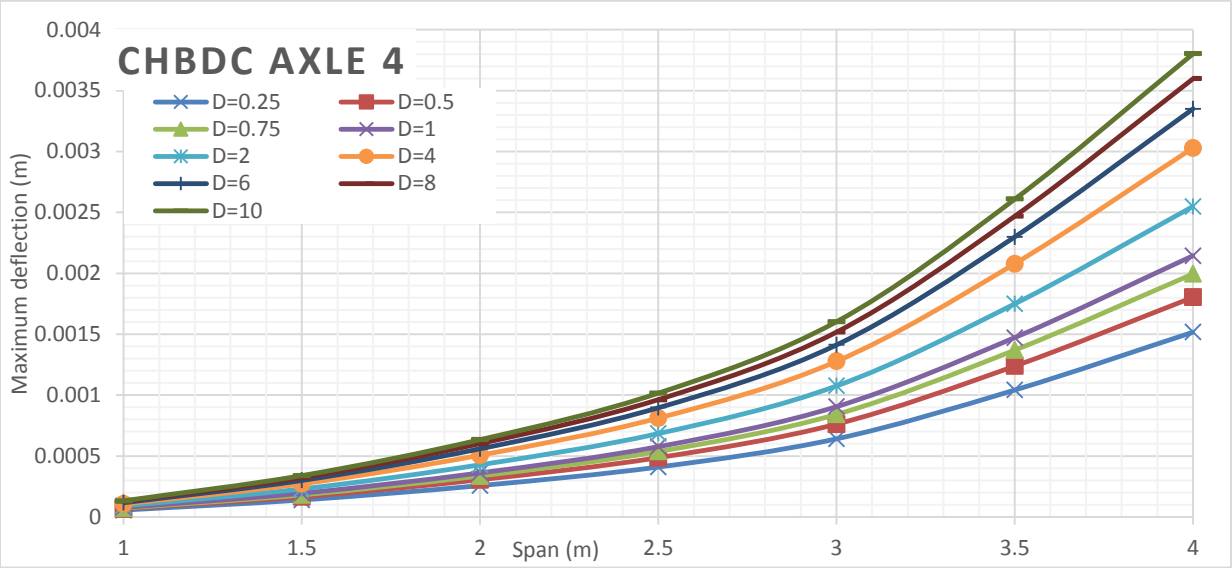


Figure 380 Maximum deflection of deck slabs subjected to CHBDC axle 4 for different D values of alpha 0.75 Orthotropic analyses

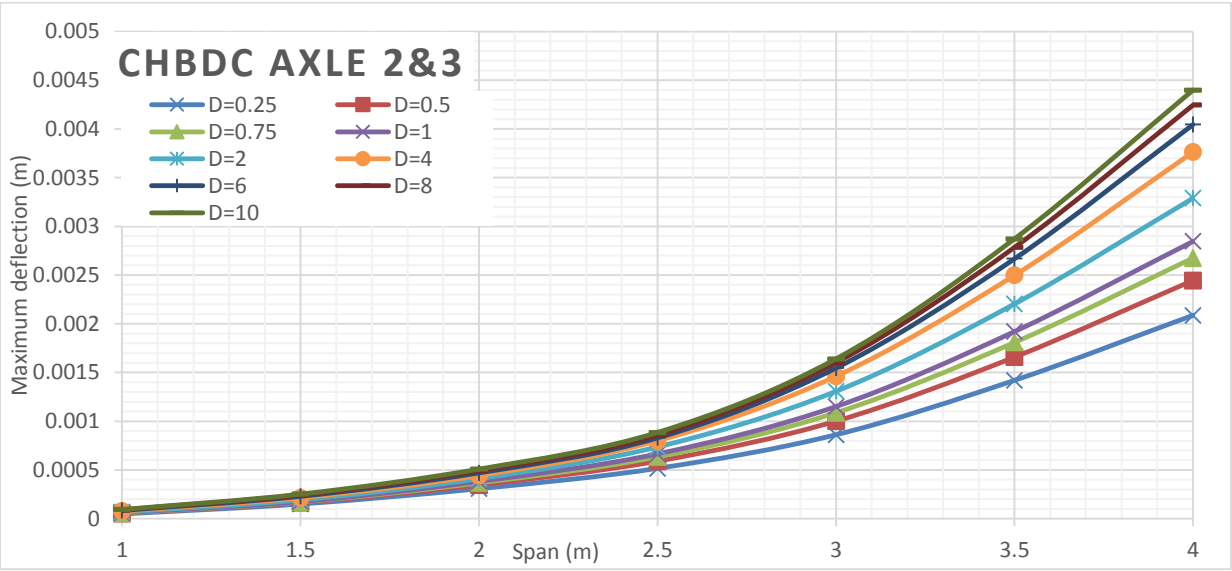


Figure 381 Maximum deflection of deck slabs subjected to CHBDC axle 2 & 3 for different D values of alpha 0.75 Orthotropic analyses

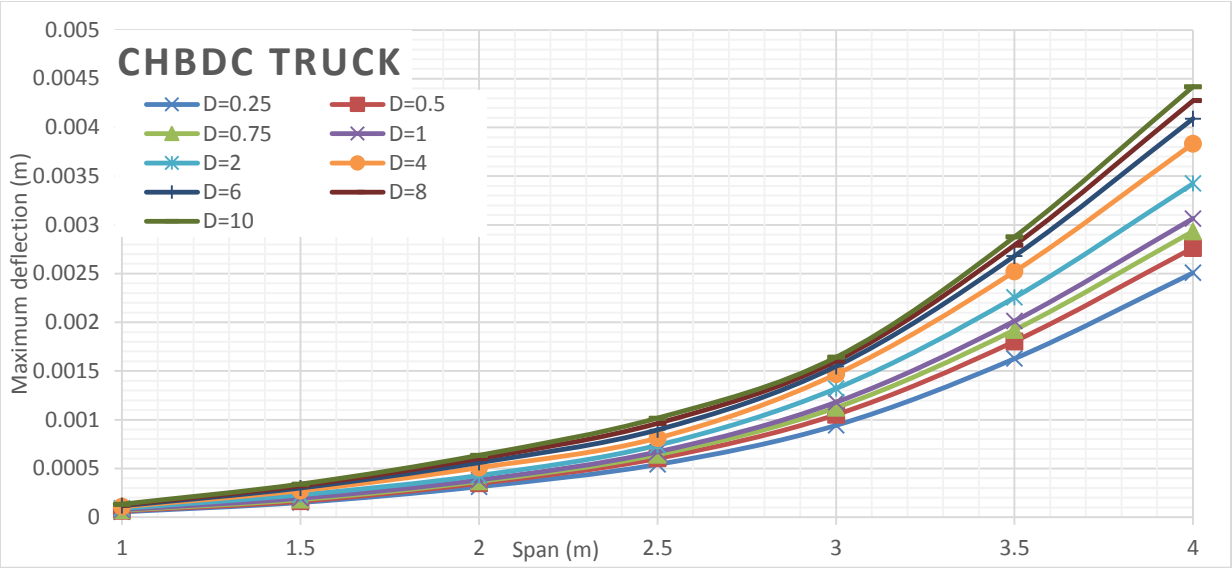


Figure 382 Maximum deflection of deck slabs subjected to CHBDC truck for different D values of alpha 0.75 Orthotropic analyses

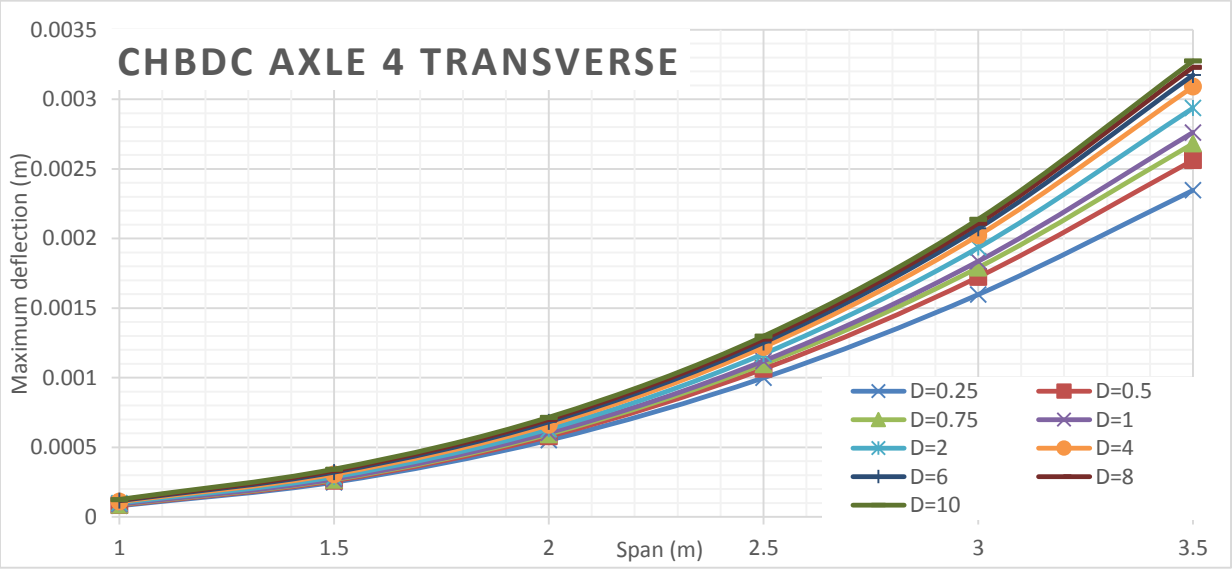


Figure 383 Maximum deflection of deck slabs subjected to CHBDC axle 4 for different D values of alpha 0.75 Orthotropic analyses

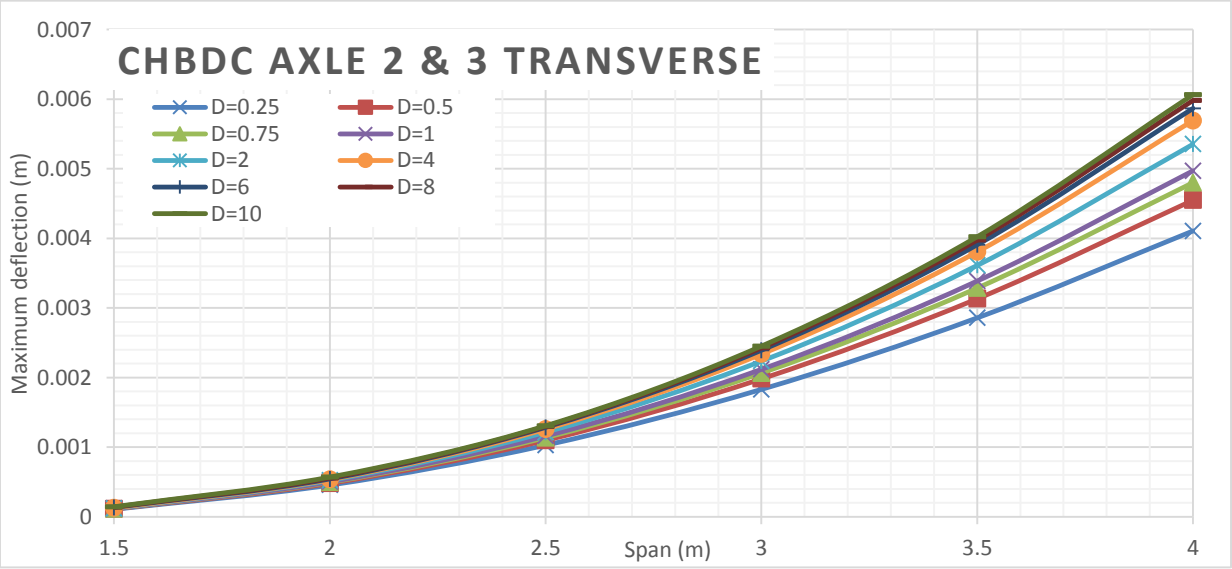


Figure 384 Maximum deflection of deck slabs subjected to CHBDC axle 2 & 3 for different D values of alpha 0.75 Orthotropic analyses

Alpha 1 Deflection VS Span Length for Different D Values

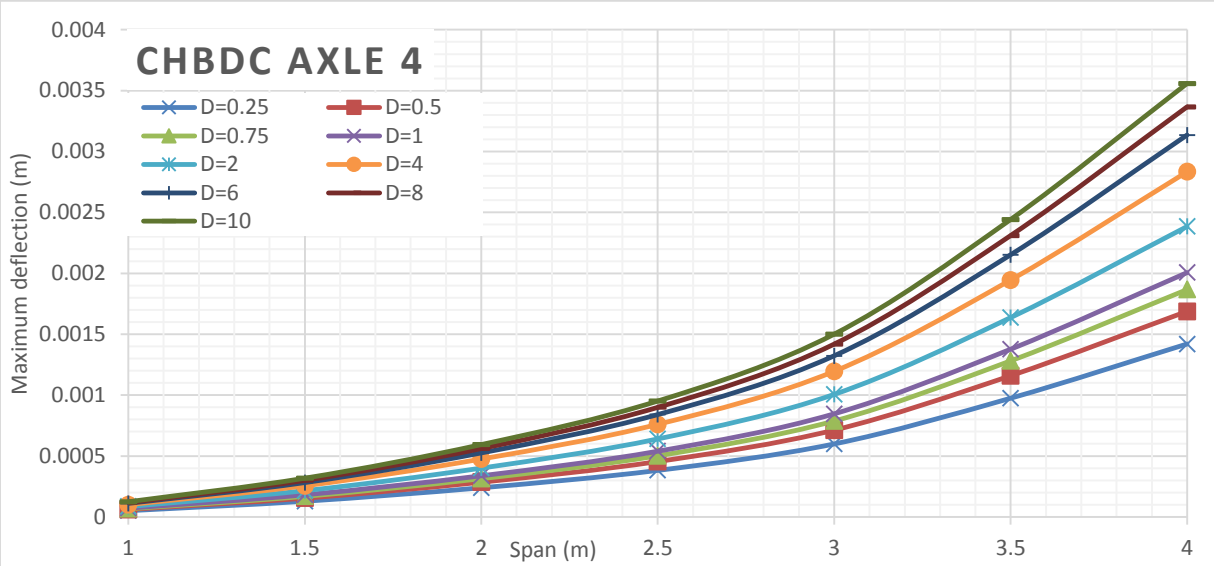


Figure 385 Maximum deflection of deck slabs subjected to CHBDC axle 4 for different D values of alpha 1 Orthotropic analyses

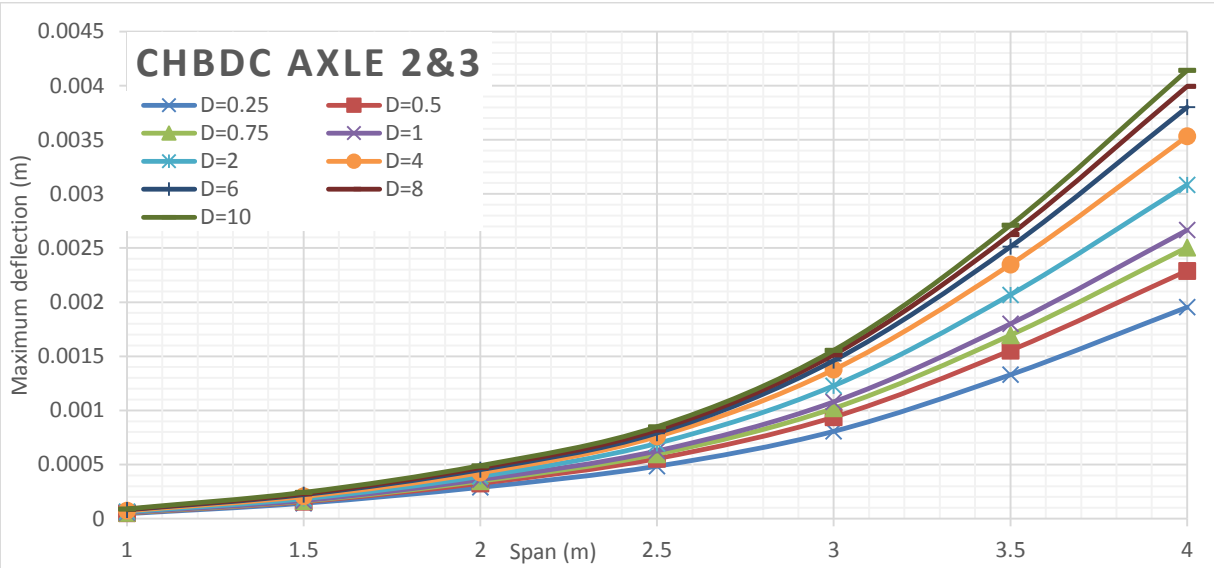


Figure 386 Maximum deflection of deck slabs subjected to CHBDC axle 2 & 3 for different D values of alpha 1 Orthotropic analyses

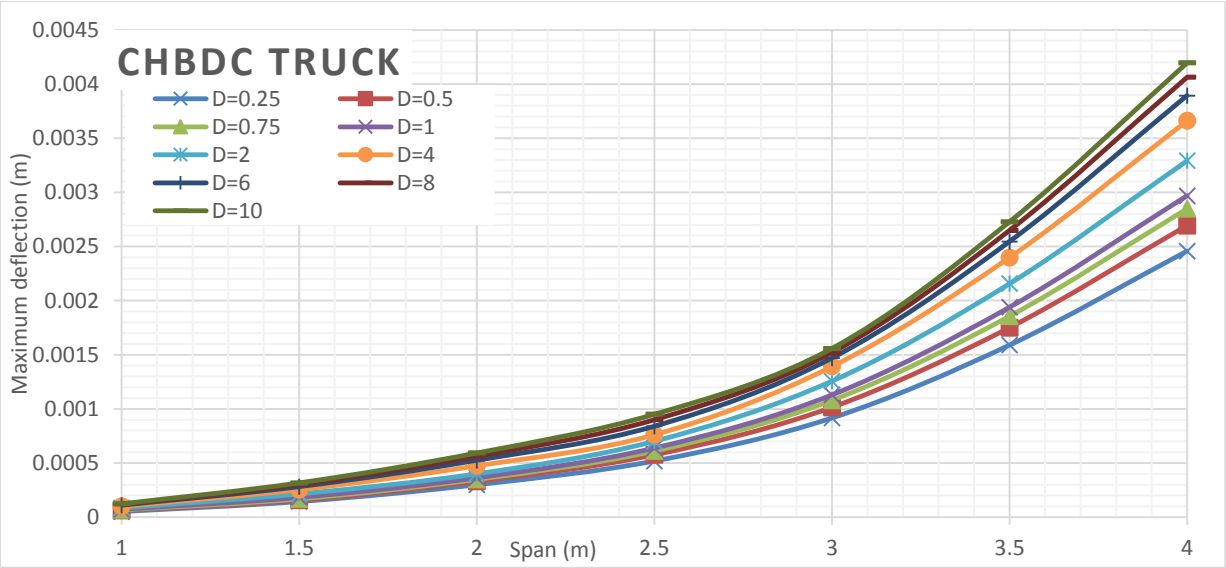


Figure 387 Maximum deflection of deck slabs subjected to CHBDC truck for different D values of alpha 1 Orthotropic analyses

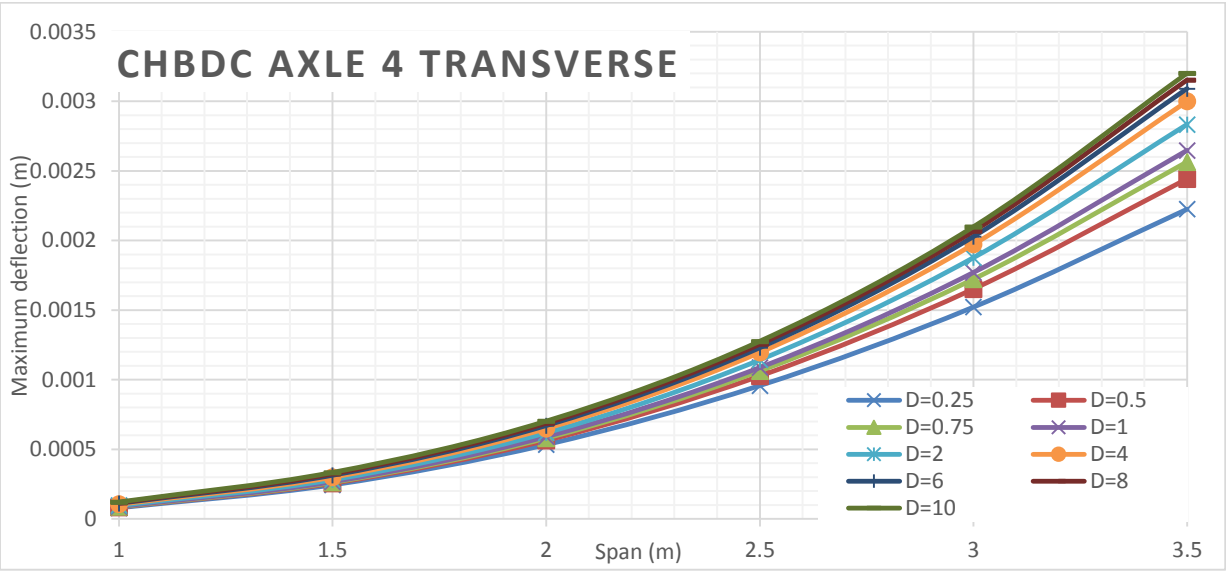


Figure 388 Maximum deflection of deck slabs subjected to CHBDC axle 4 for different D values of alpha 1 Orthotropic analyses

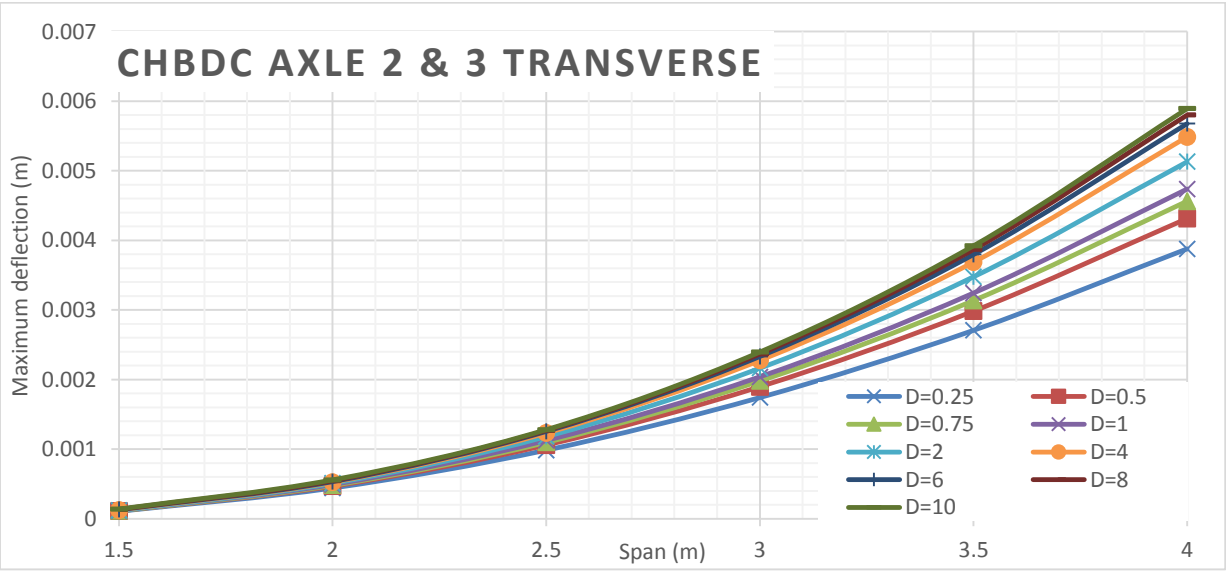


Figure 389 Maximum deflection of deck slabs subjected to CHBDC axle 2 & 3 for different D values of alpha 1 Orthotropic analyses

Alpha 2 Deflection VS Span Length for Different D Values

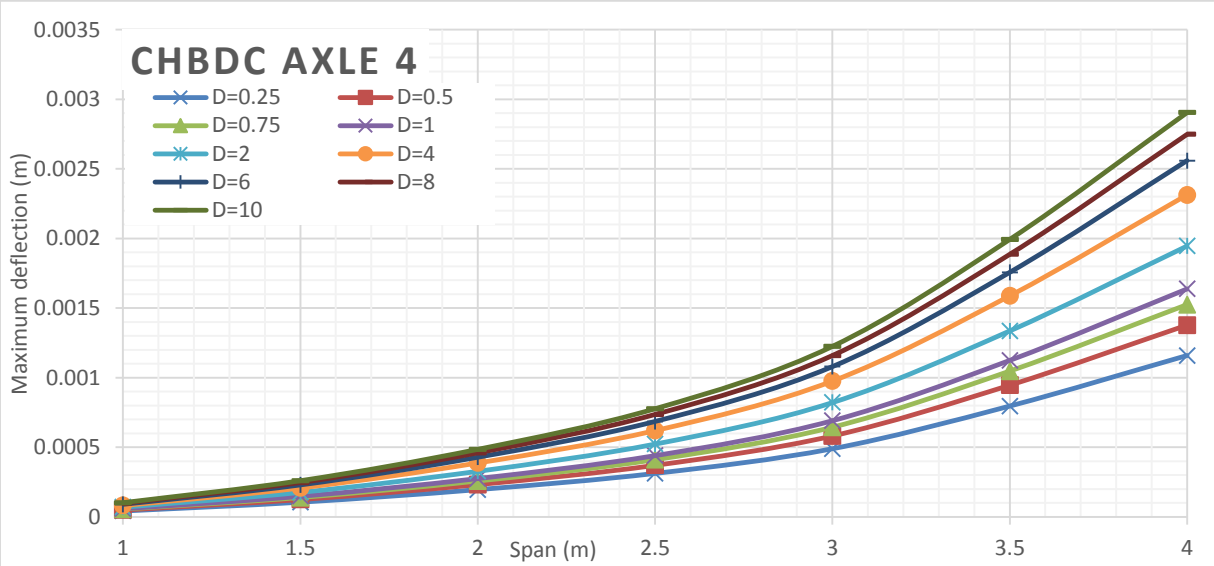


Figure 390 Maximum deflection of deck slabs subjected to CHBDC axle 4 for different D values of alpha 2 Orthotropic analyses

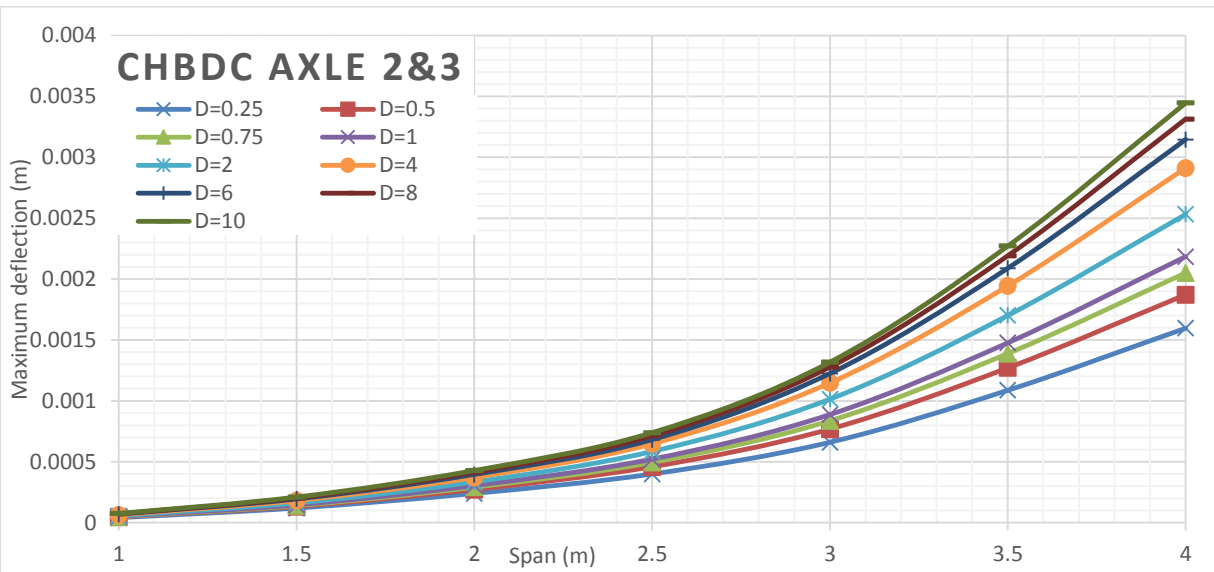


Figure 391 Maximum deflection of deck slabs subjected to CHBDC axle 2 & 3 for different D values of alpha 2 Orthotropic analyses

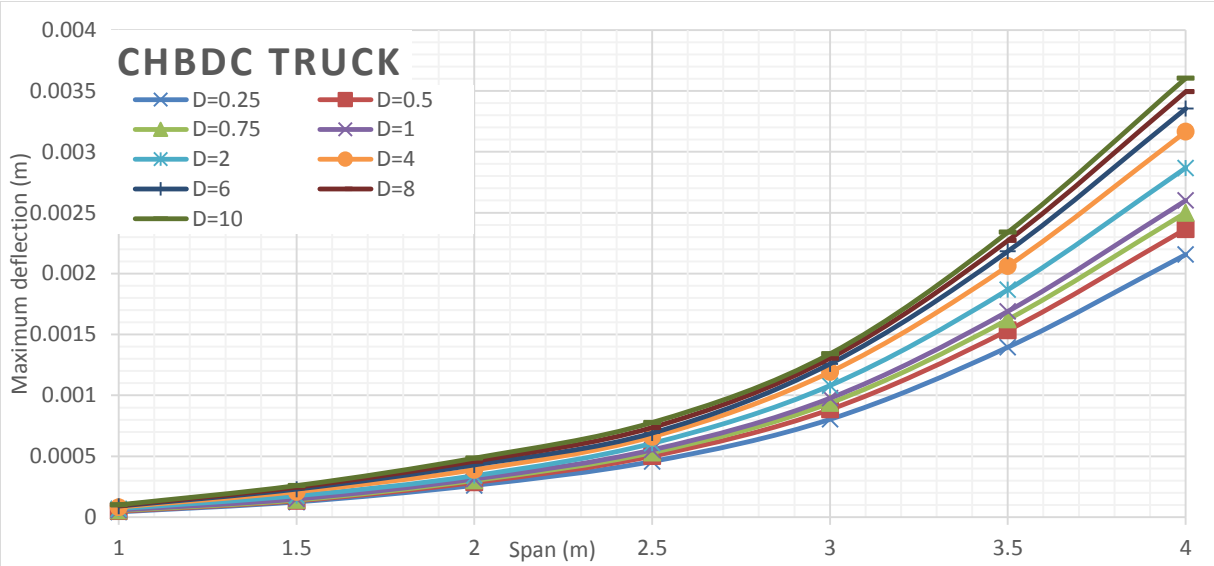


Figure 392 Maximum deflection of deck slabs subjected to CHBDC truck for different D values of alpha 2 Orthotropic analyses

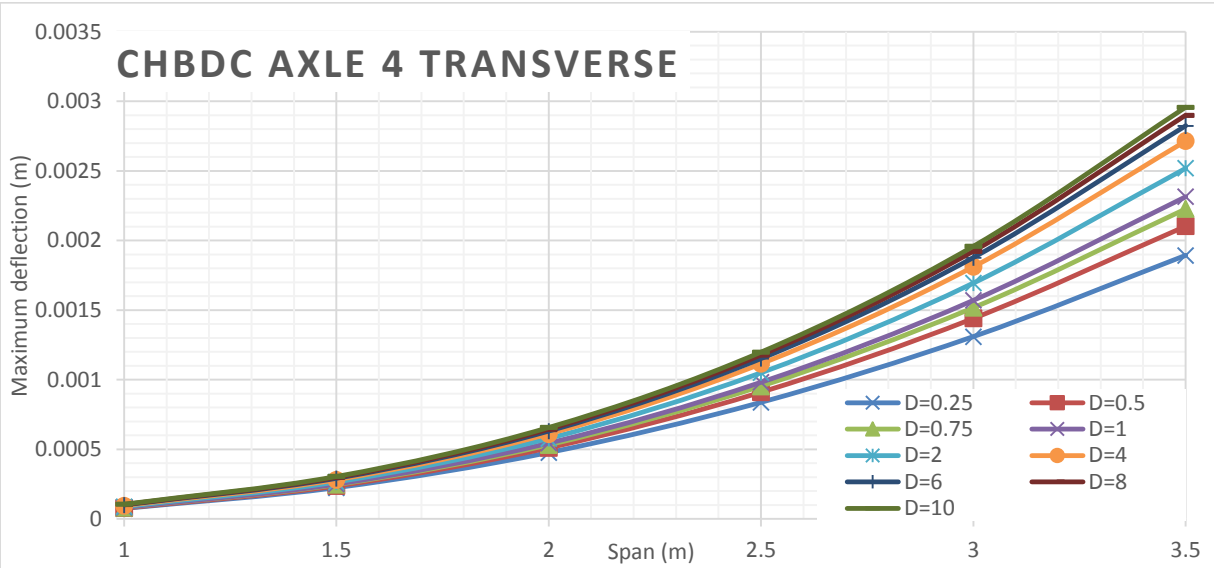


Figure 393 Maximum deflection of deck slabs subjected to CHBDC axle 4 for different D values of alpha 2 Orthotropic analyses

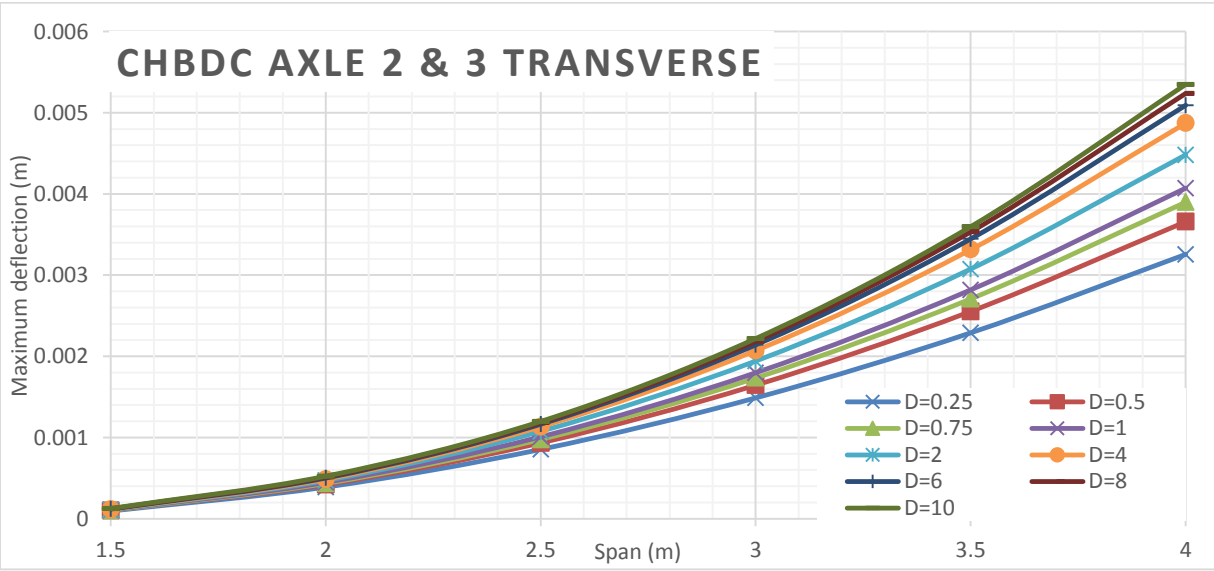


Figure 394 Maximum deflection of deck slabs subjected to CHBDC axle 2 & 3 for different D values of alpha 2 Orthotropic analyses

Alpha 4 Deflection VS Span Length for Different D Values

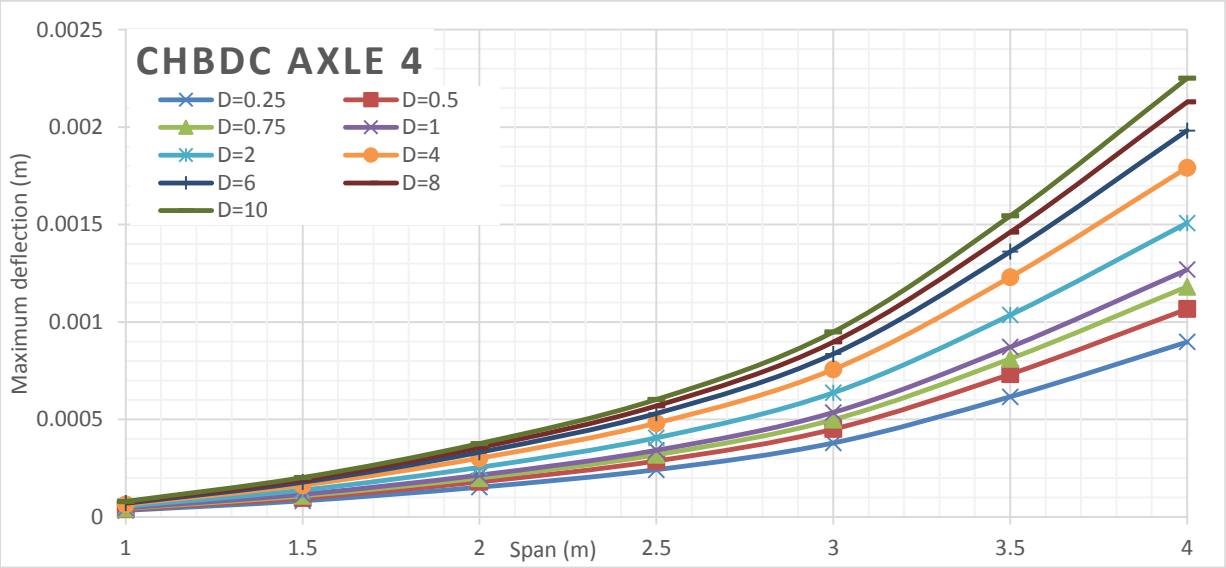


Figure 395 Maximum deflection of deck slabs subjected to CHBDC axle 4 for different D values of alpha 4 Orthotropic analyses

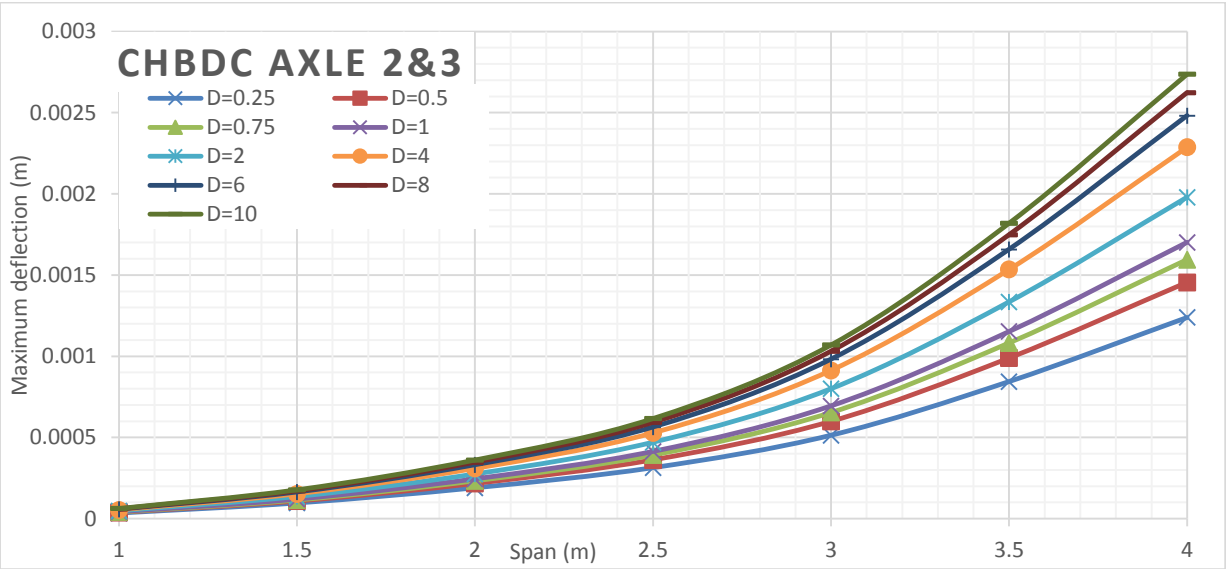


Figure 396 Maximum deflection of deck slabs subjected to CHBDC axle 2 & 3 for different D values of alpha 4 Orthotropic analyses

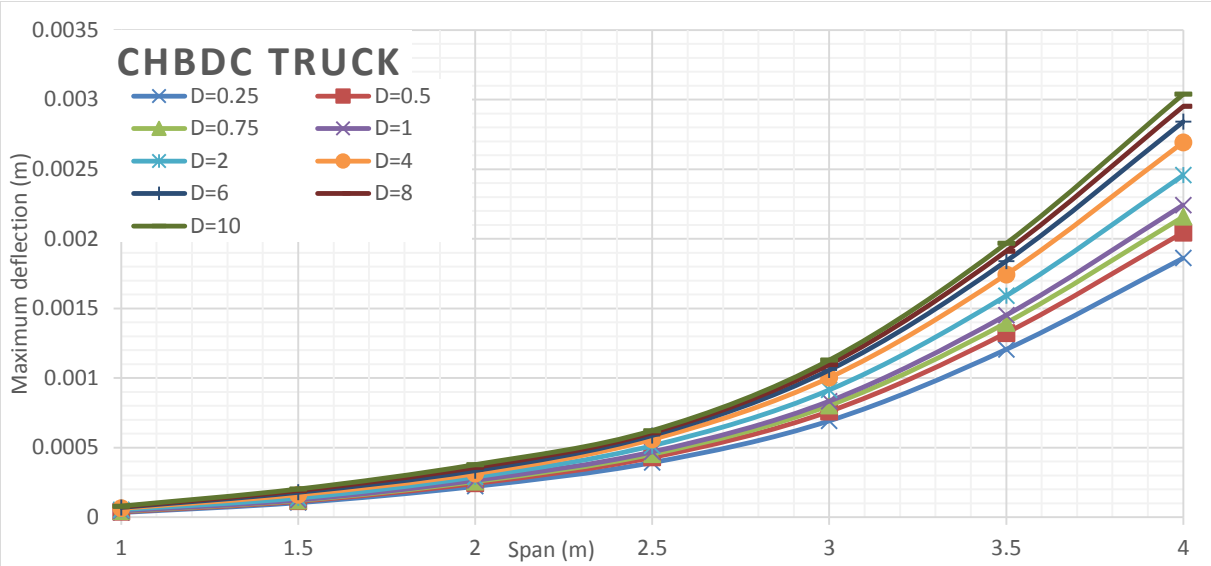


Figure 397 Maximum deflection of deck slabs subjected to CHBDC truck for different D values of alpha 4 Orthotropic analyses

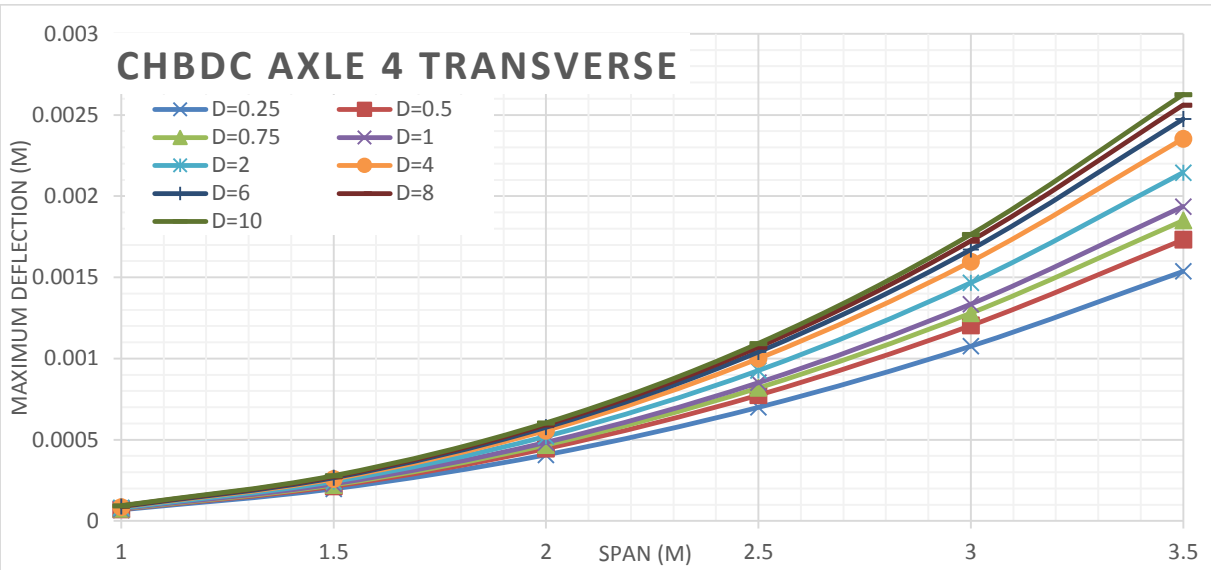


Figure 398 Maximum deflection of deck slabs subjected to CHBDC axle 4 for different D values of alpha 4 Orthotropic analyses

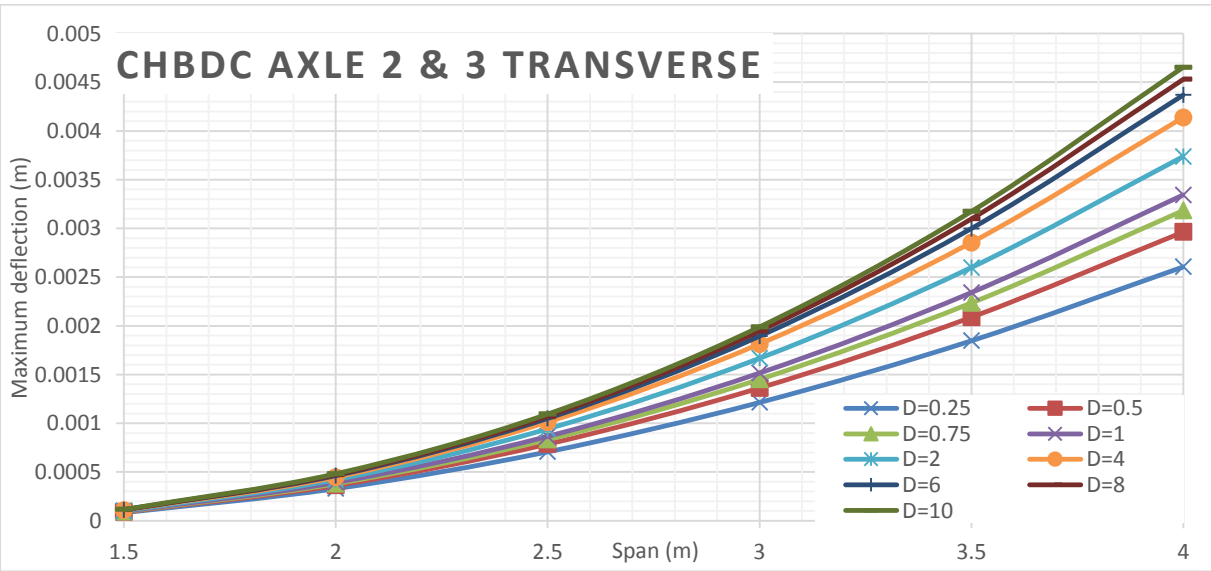


Figure 399 Maximum deflection of deck slabs subjected to CHBDC axle 2 & 3 for different D values of alpha 4 Orthotropic analyses

Alpha 6 Deflection VS Span Length for Different D Values

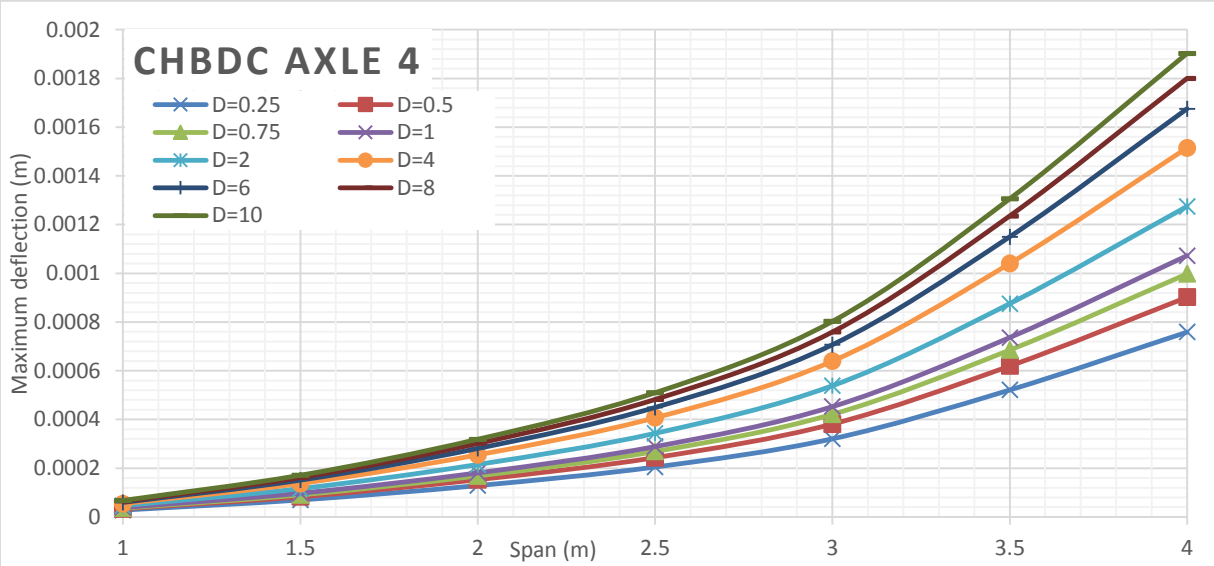


Figure 400 Maximum deflection of deck slabs subjected to CHBDC axle 4 for different D values of alpha 6 Orthotropic analyses

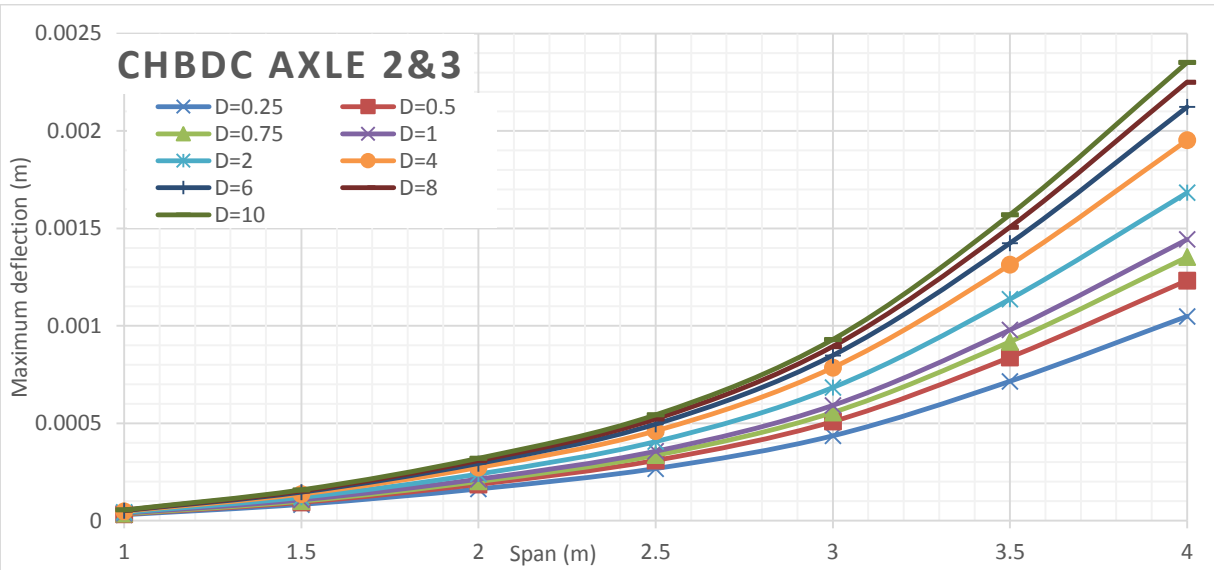


Figure 401 Maximum deflection of deck slabs subjected to CHBDC axle 2 & 3 for different D values of alpha 6 Orthotropic analyses

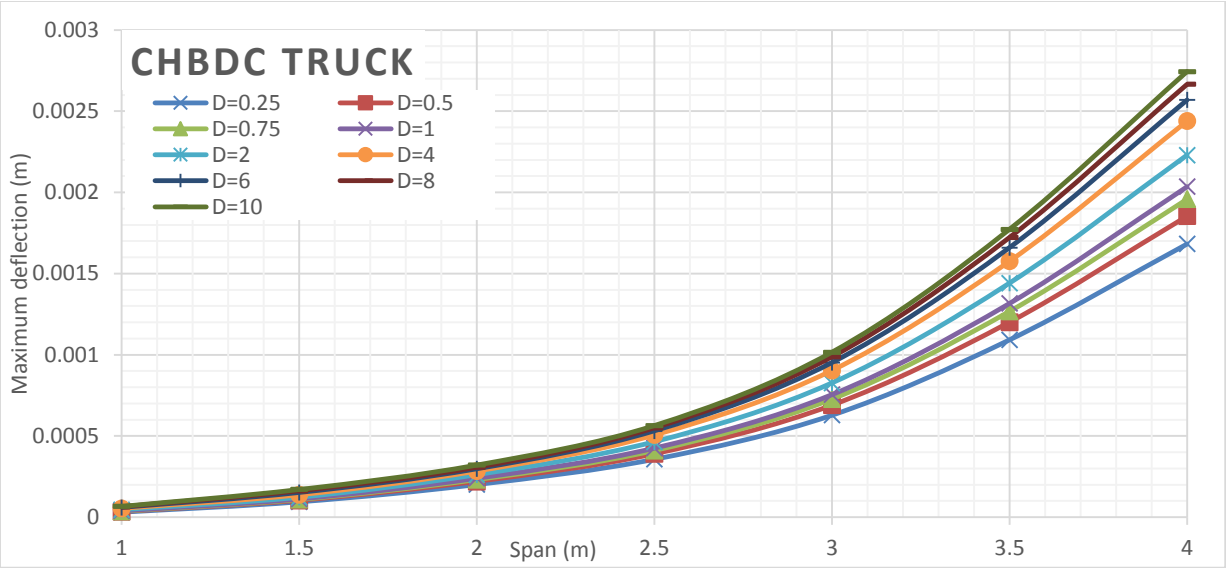


Figure 402 Maximum deflection of deck slabs subjected to CHBDC truck for different D values of alpha 6 Orthotropic analyses

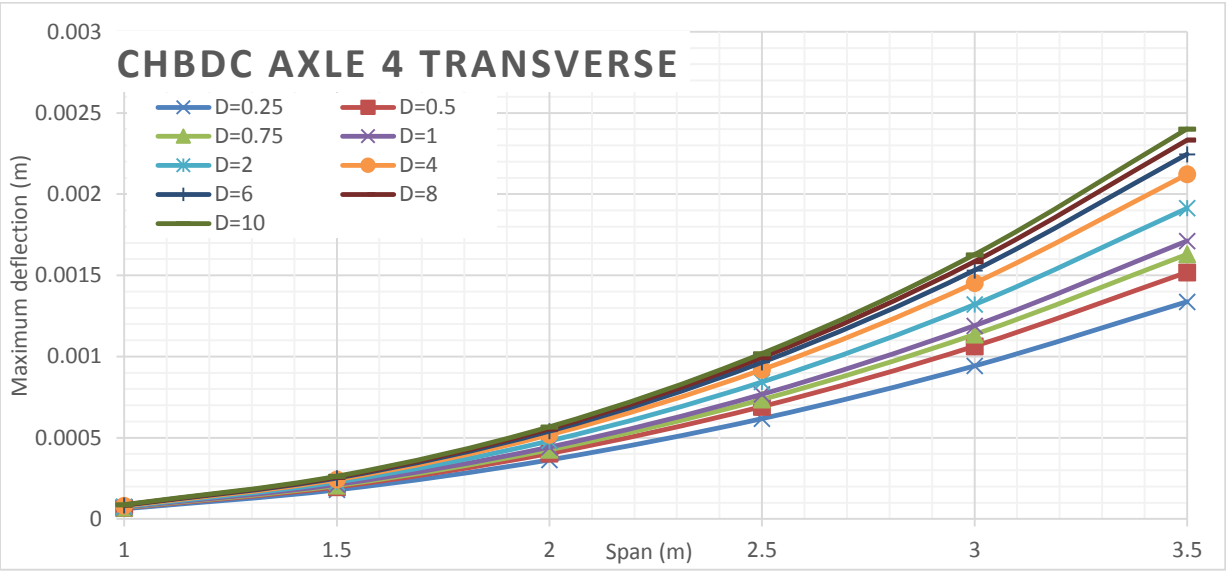


Figure 403 Maximum deflection of deck slabs subjected to CHBDC axle 4 for different D values of alpha 6 Orthotropic analyses

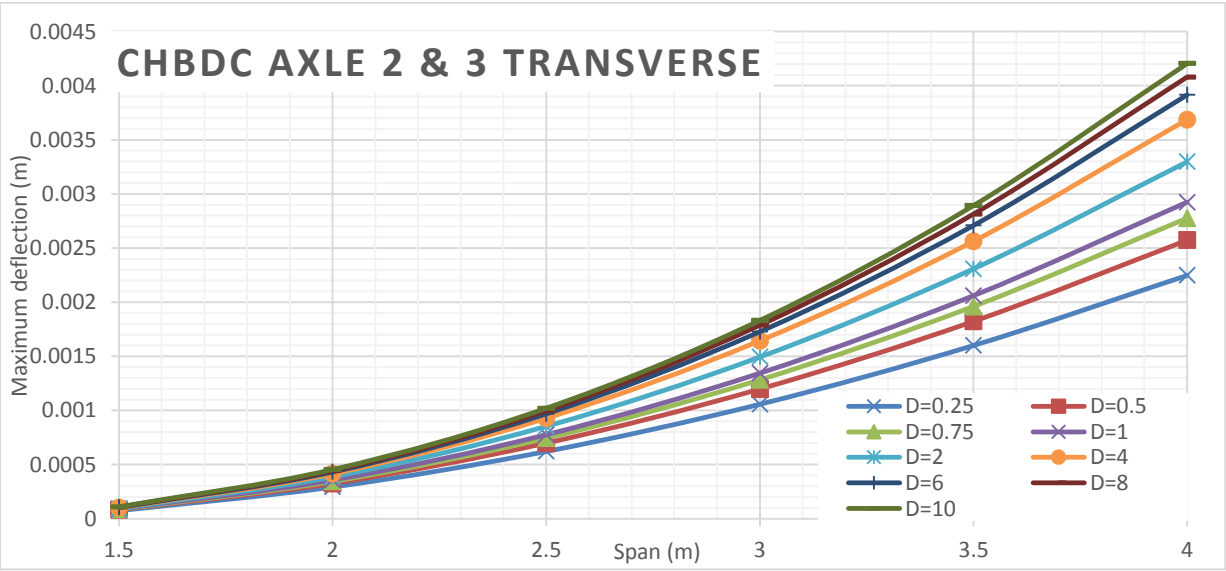


Figure 404 Maximum deflection of deck slabs subjected to CHBDC axle 2 & 3 for different D values of alpha 6 Orthotropic analyses

Alpha 8 Deflection VS Span Length for Different D Values

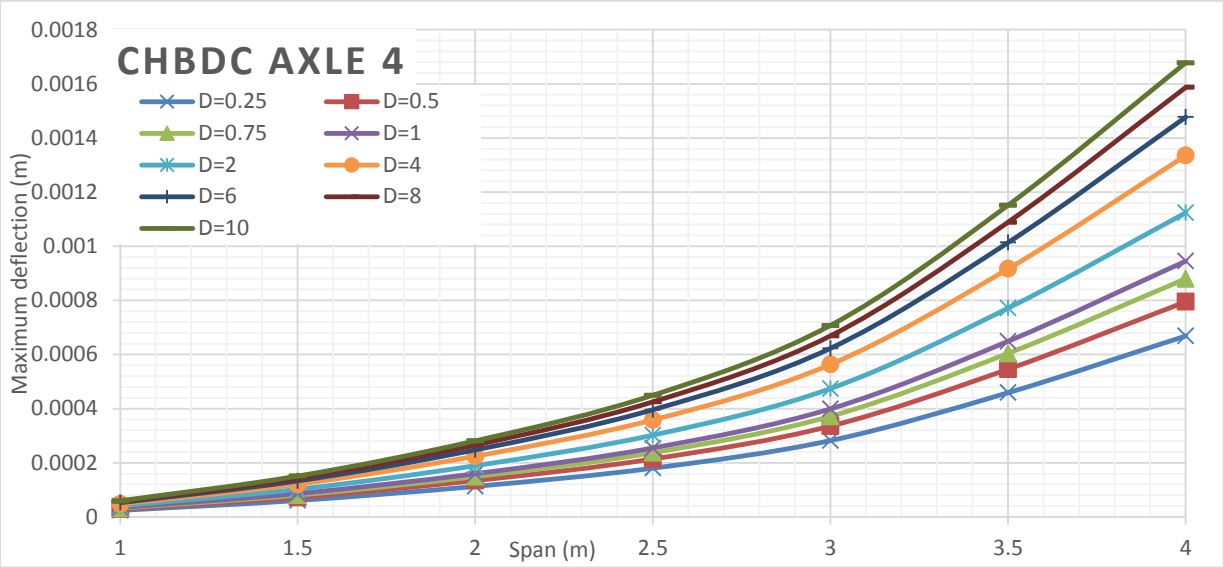


Figure 405 Maximum deflection of deck slabs subjected to CHBDC axle 4 for different D values of alpha 8 Orthotropic analyses

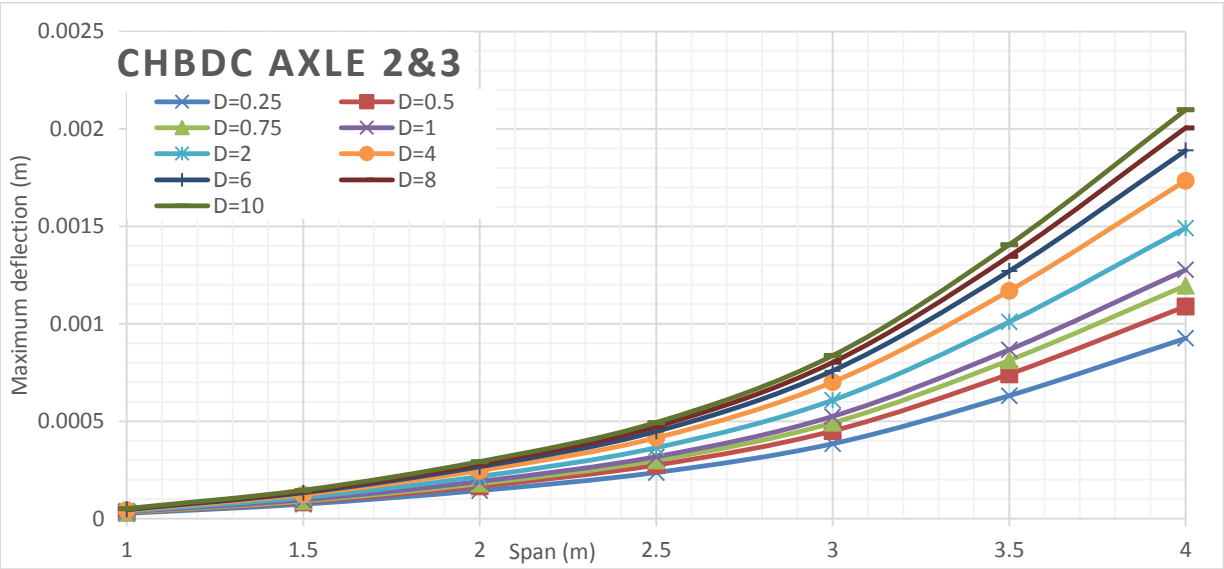


Figure 406 Maximum deflection of deck slabs subjected to CHBDC axle 2 & 3 for different D values of alpha 8 Orthotropic analyses

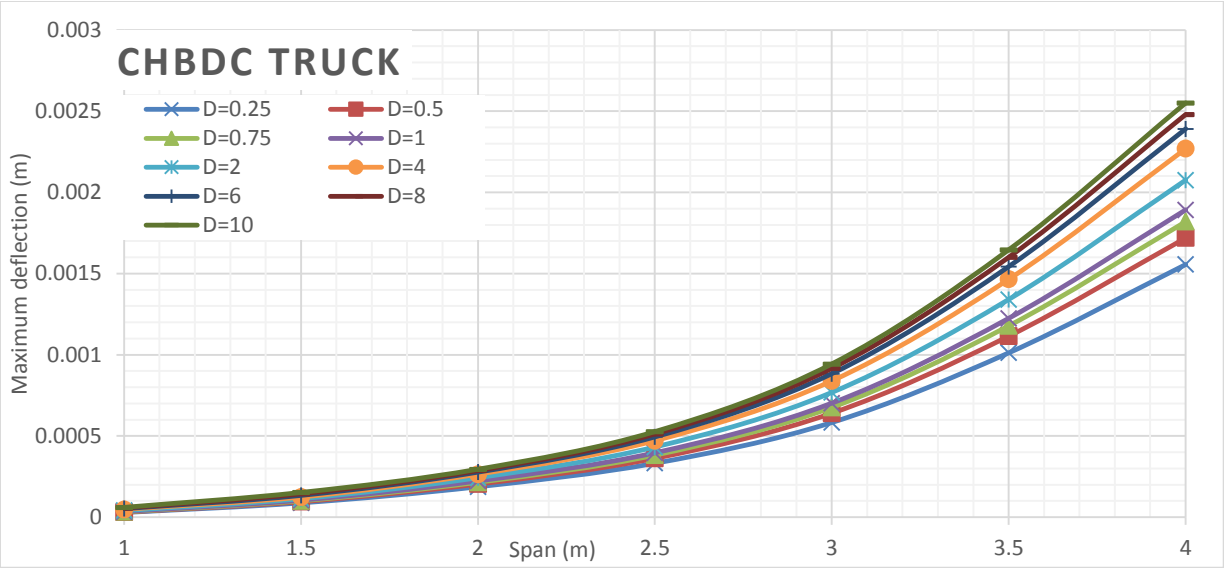


Figure 407 Maximum deflection of deck slabs subjected to CHBDC truck for different D values of alpha 8 Orthotropic analyses

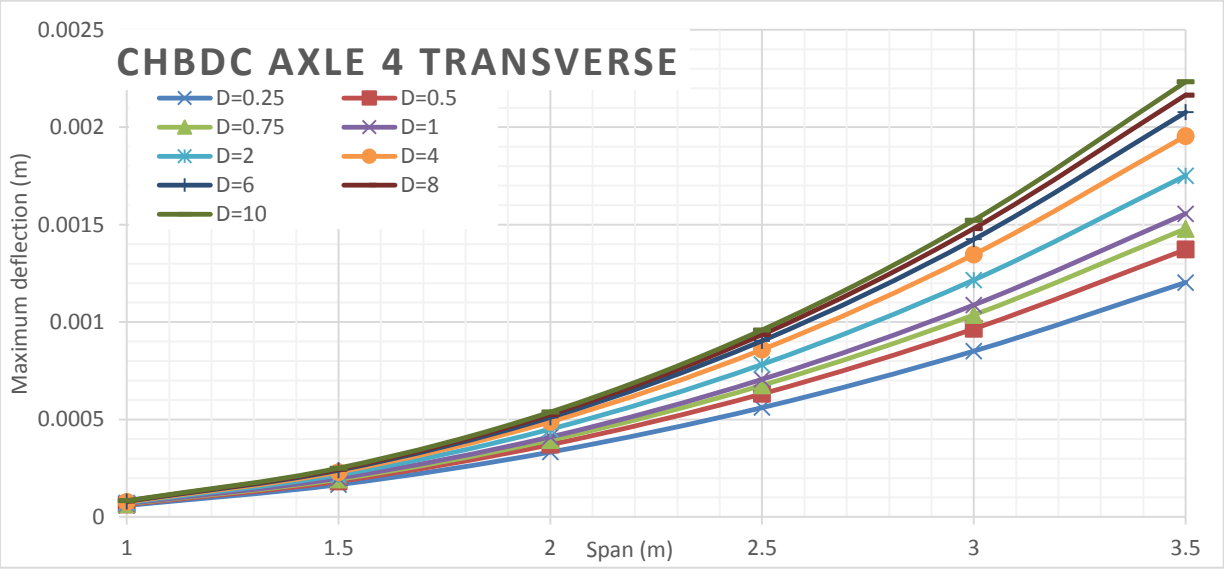


Figure 408 Maximum deflection of deck slabs subjected to CHBDC axle 4 for different D values of alpha 8 Orthotropic analyses

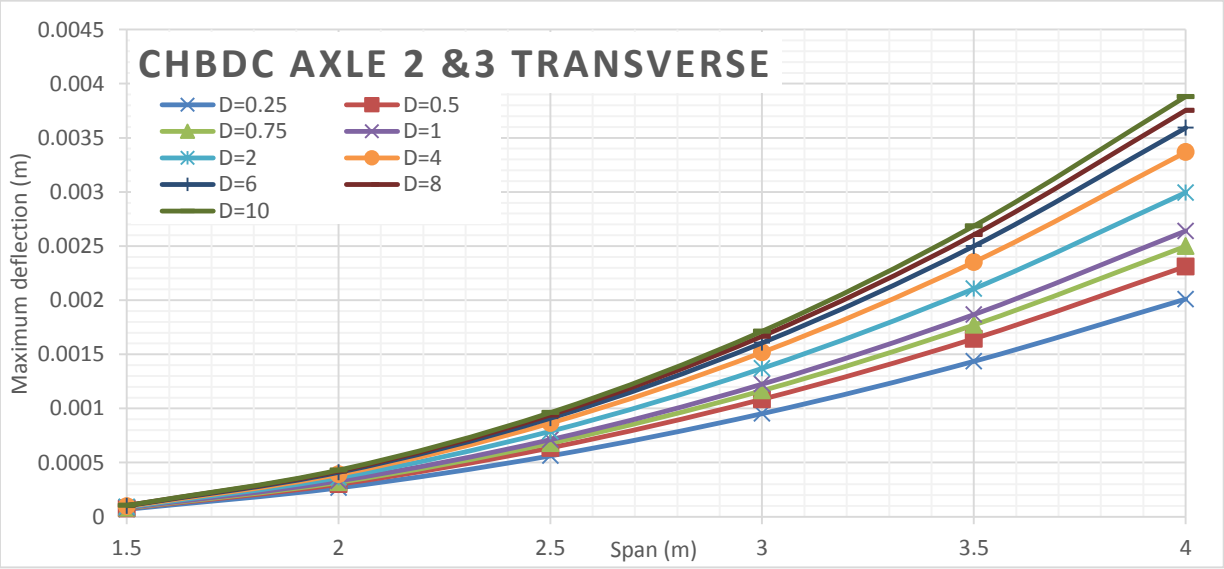


Figure 409 Maximum deflection of deck slabs subjected to CHBDC axle 2 & 3 for different D values of alpha 8 Orthotropic analyses

Alpha 10 Deflection VS Span Length for Different D Values

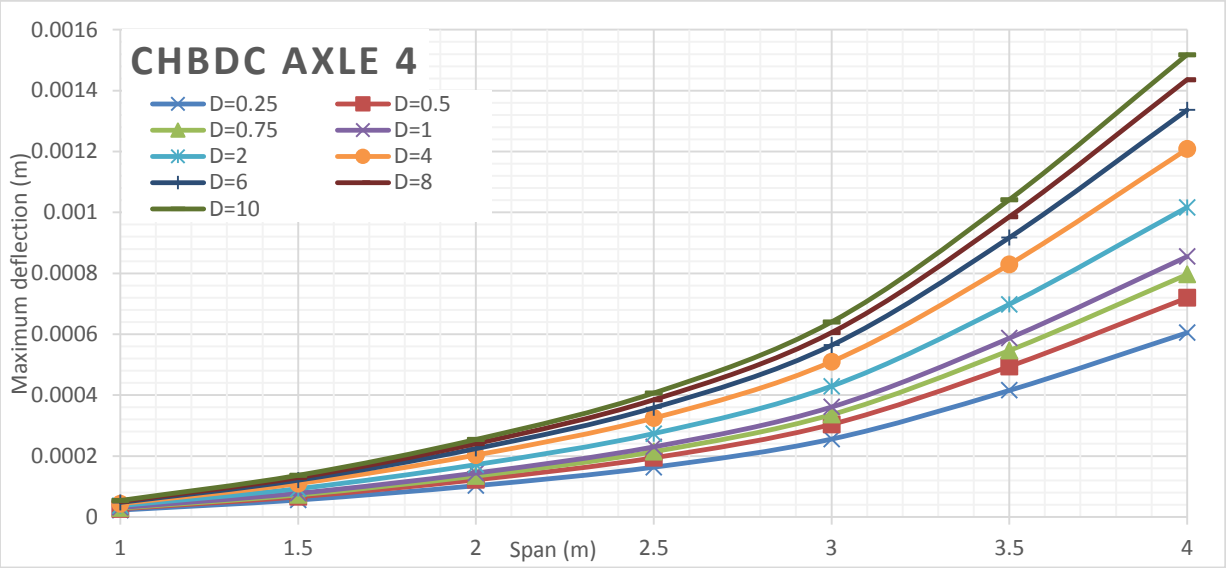


Figure 410 Maximum deflection of deck slabs subjected to CHBDC axle 4 for different D values of alpha 10 Orthotropic analyses

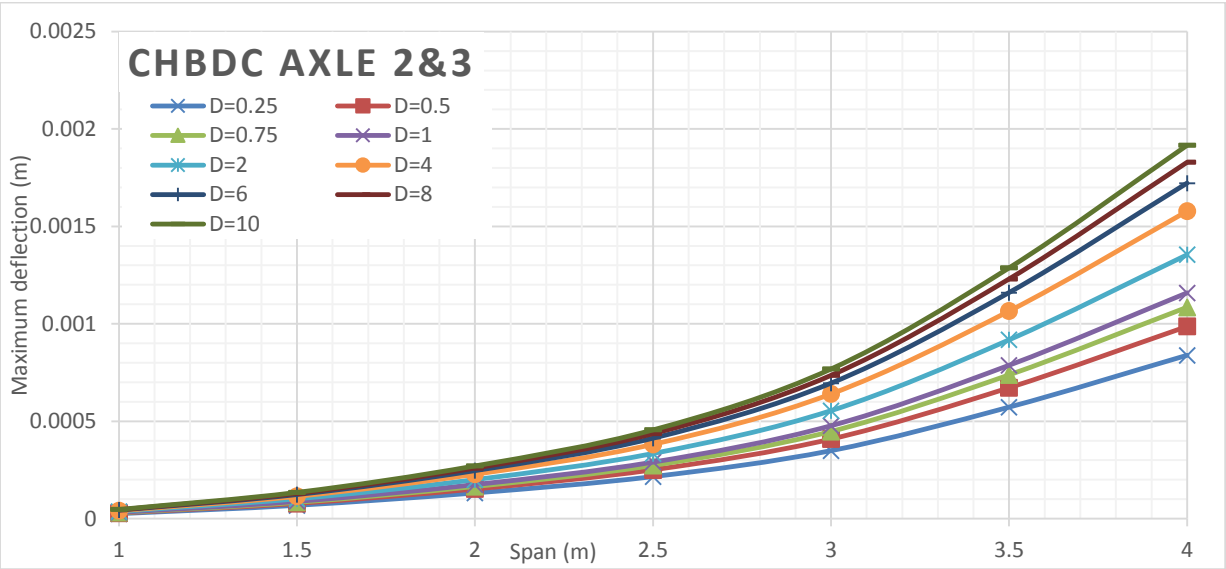


Figure 411 Maximum deflection of deck slabs subjected to CHBDC axle 2 & 3 for different D values of alpha 10 Orthotropic analyses

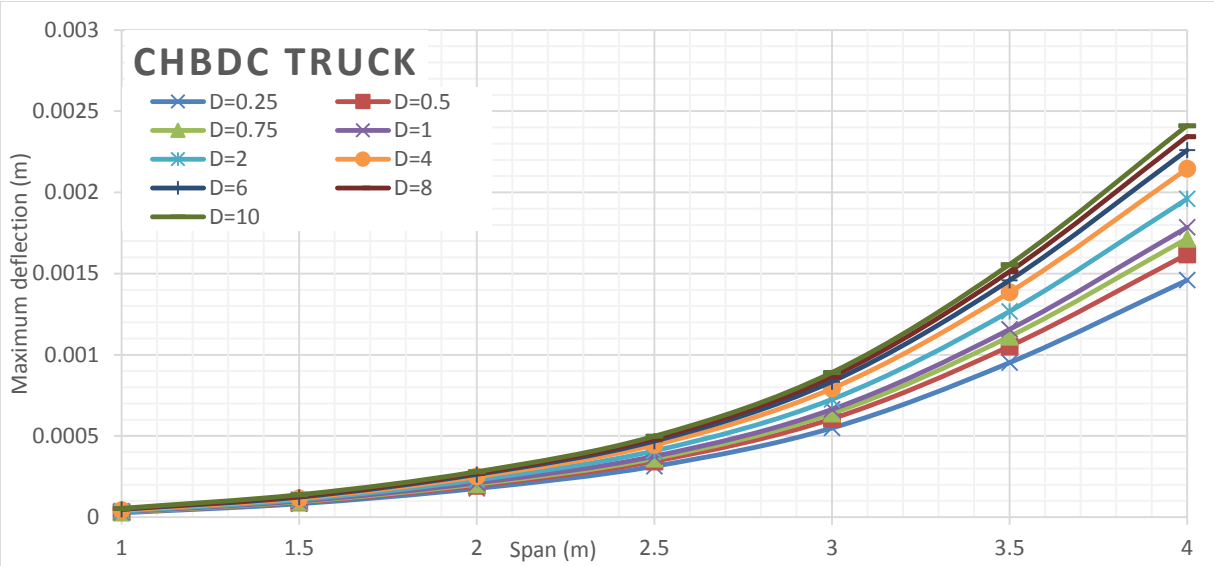


Figure 412 Maximum deflection of deck slabs subjected to CHBDC truck for different D values of alpha 10 Orthotropic analyses

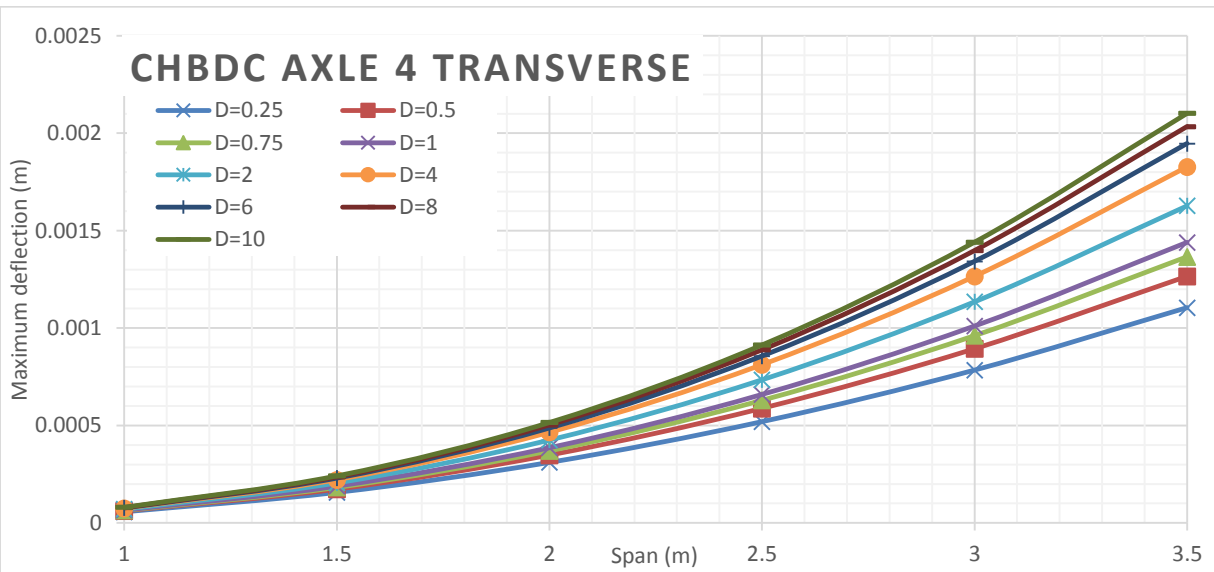


Figure 413 Maximum deflection of deck slabs subjected to CHBDC axle 4 for different D values of alpha 10 Orthotropic analyses

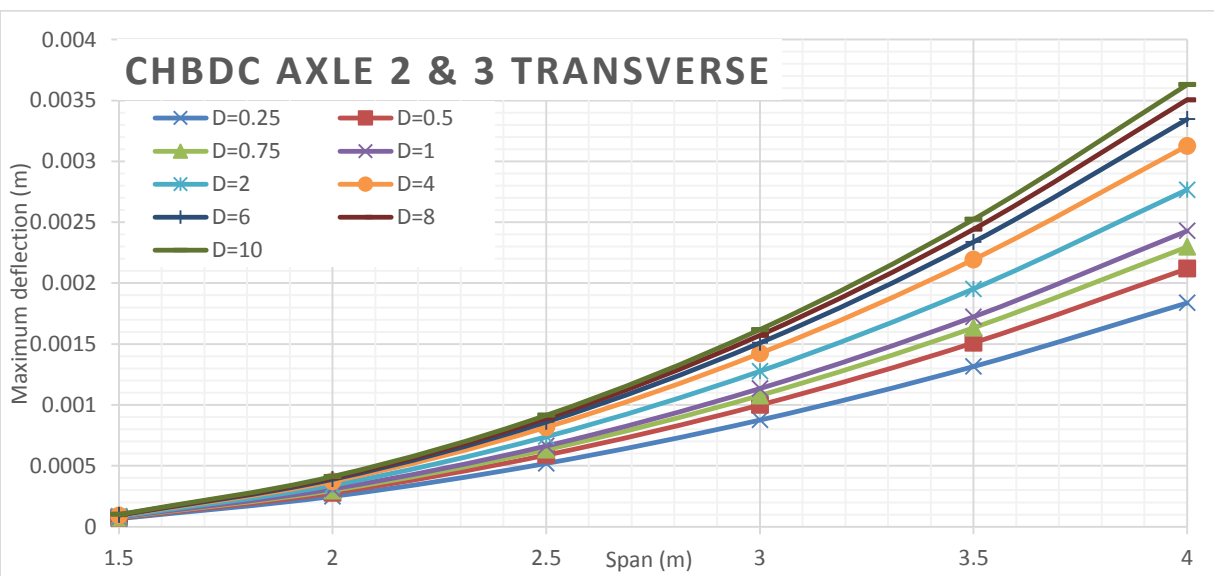


Figure 414 Maximum deflection of deck slabs subjected to CHBDC axle 2 & 3 for different D values of alpha 10 Orthotropic analyses

C.2.3 DEFLECTION VS FLEXURAL RIGIDITY

Alpha 0.25 Deflection VS Flexural Rigidity for Different Span Length

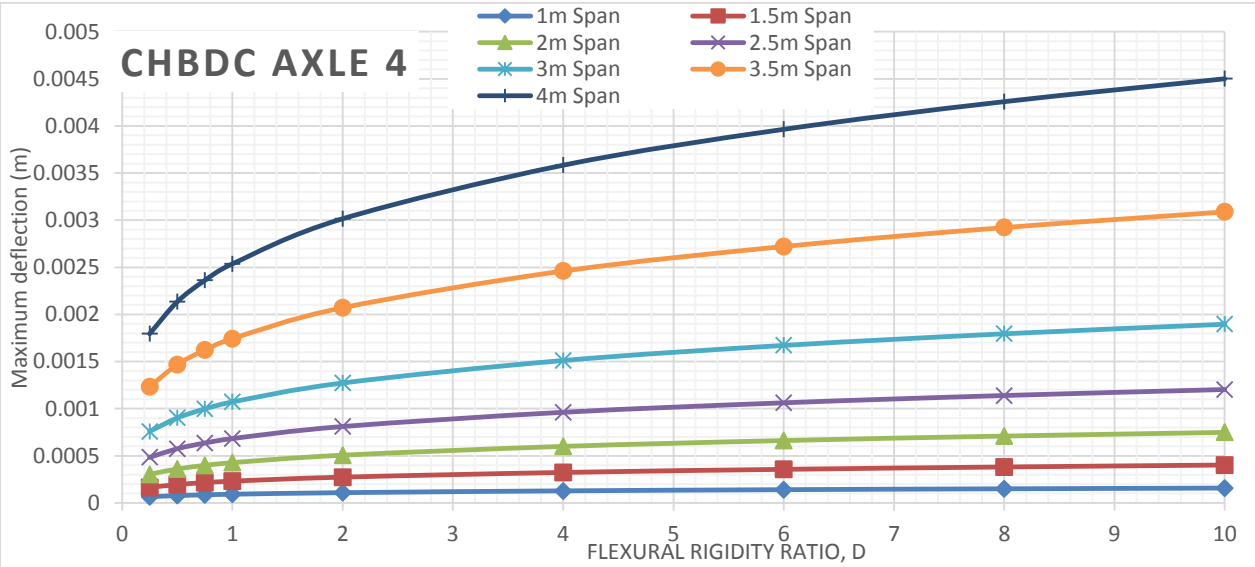


Figure 415 Maximum deflection of deck slabs subjected to CHBDC axle 4 for different span values of alpha 0.25 Orthotropic analyses

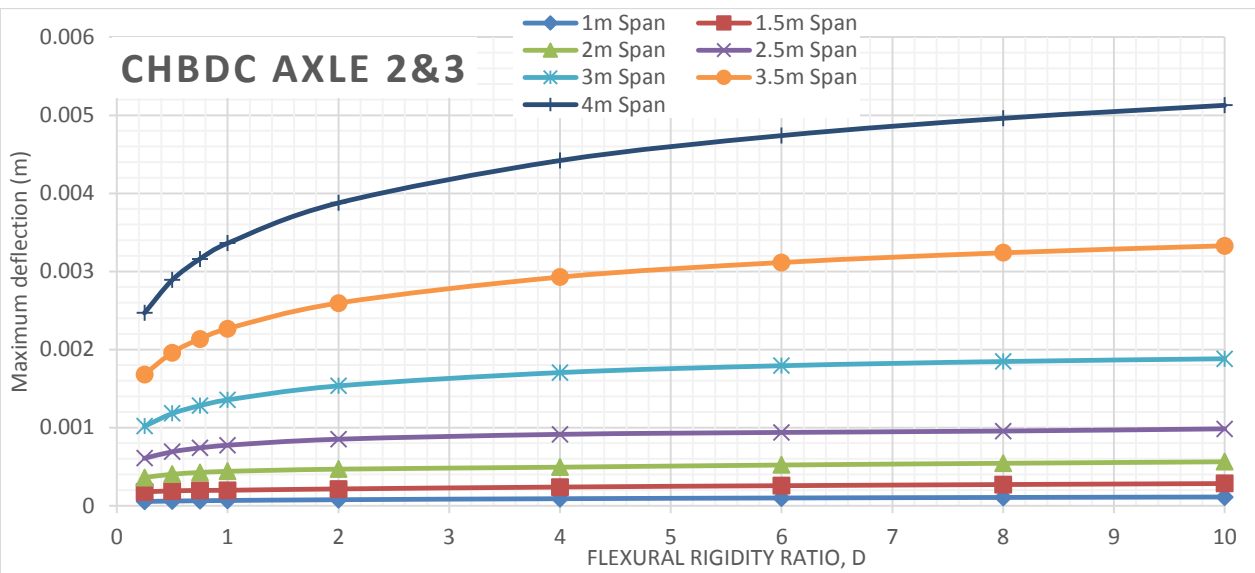


Figure 416 Maximum deflection of deck slabs subjected to CHBDC axle 2 & 3 for different span values of alpha 0.25 Orthotropic analyses

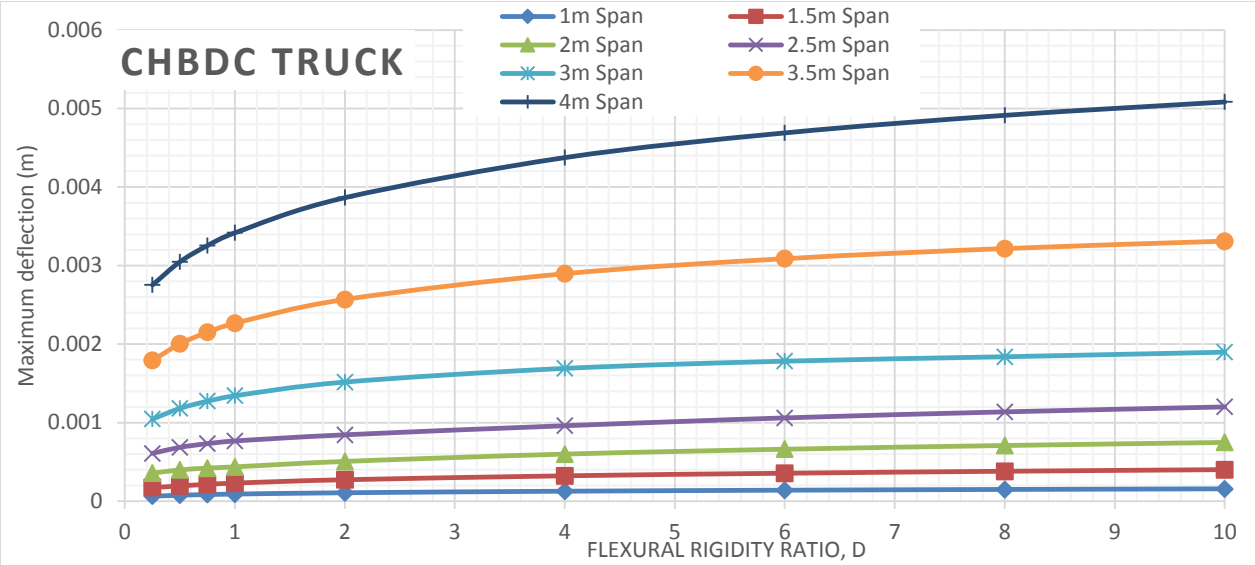


Figure 417 Maximum deflection of deck slabs subjected to CHBDC truck for different span values of alpha 0.25 Orthotropic analyses

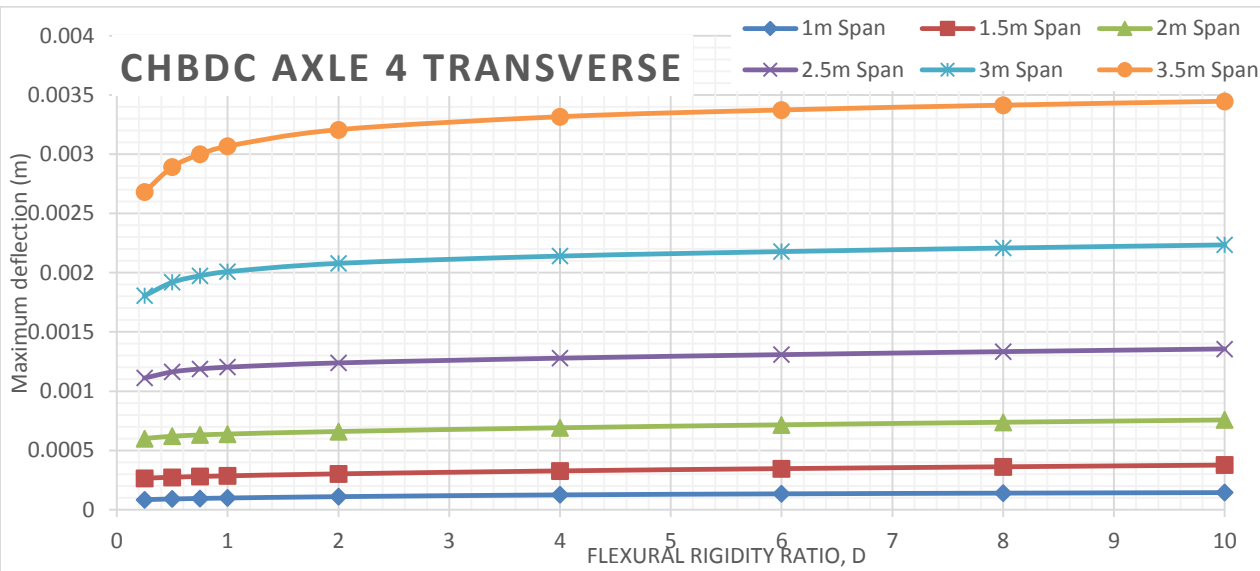


Figure 418 Maximum deflection of deck slabs subjected to CHBDC axle 4 for different span values of alpha 0.25 Orthotropic analyses

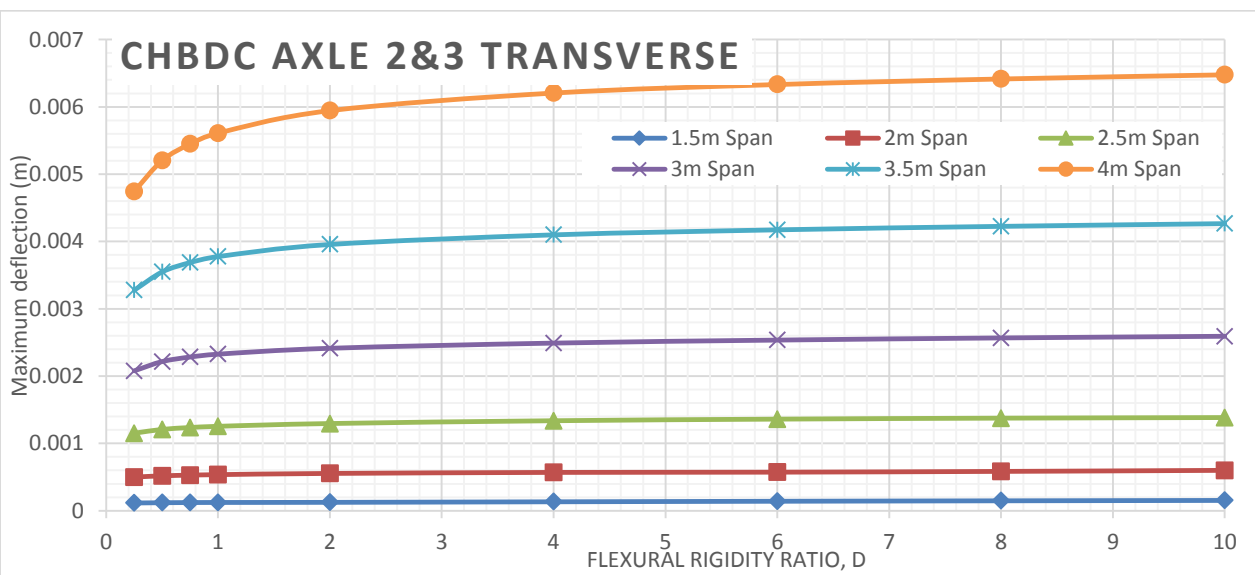


Figure 419 Maximum deflection of deck slabs subjected to CHBDC axle 2 & 3 for different span values of alpha 0.25 Orthotropic analyses

Alpha 0.5 Deflection VS Flexural Rigidity for Different Span Length

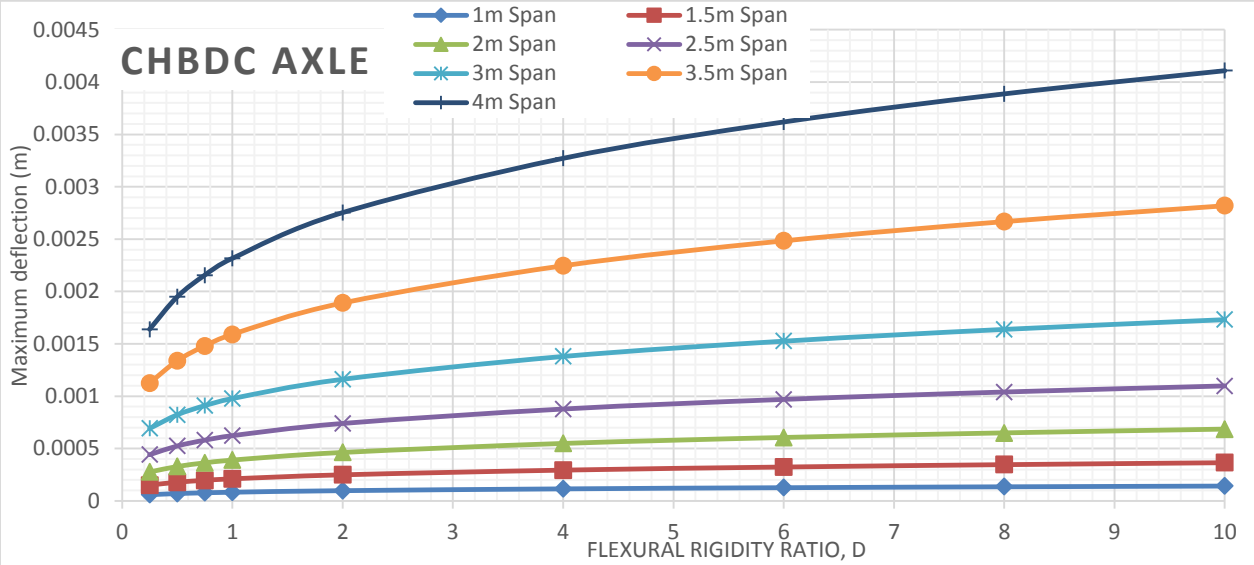


Figure 420 Maximum deflection of deck slabs subjected to CHBDC axle 4 for different span values of alpha 0.5 Orthotropic analyses

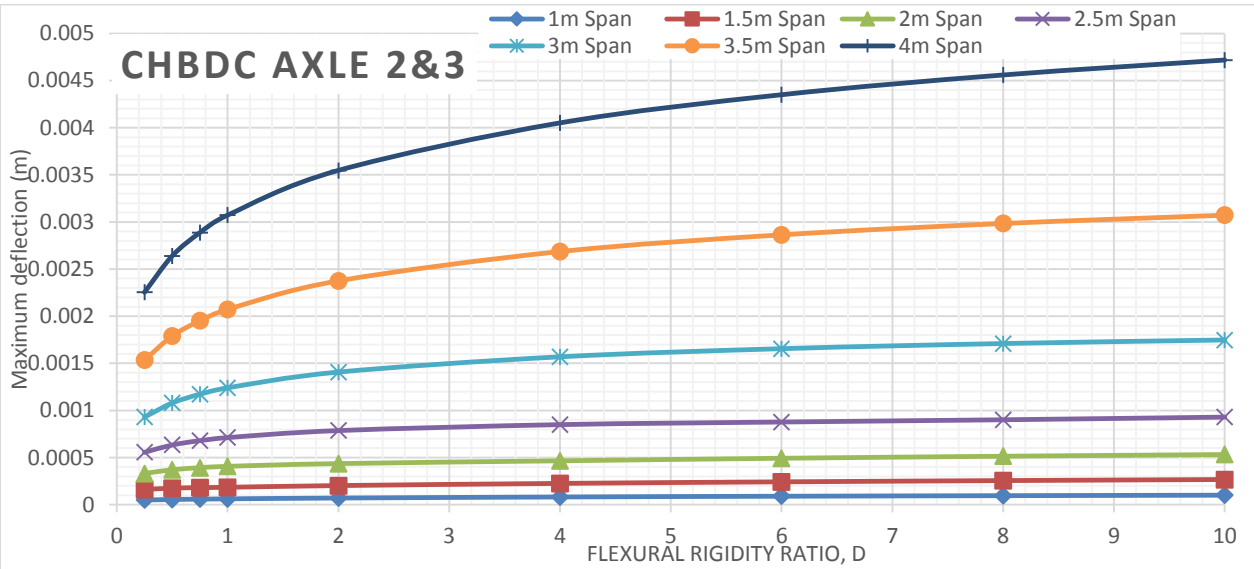


Figure 421 Maximum deflection of deck slabs subjected to CHBDC axle 2 & 3 for different span values of alpha 0.5 Orthotropic analyses

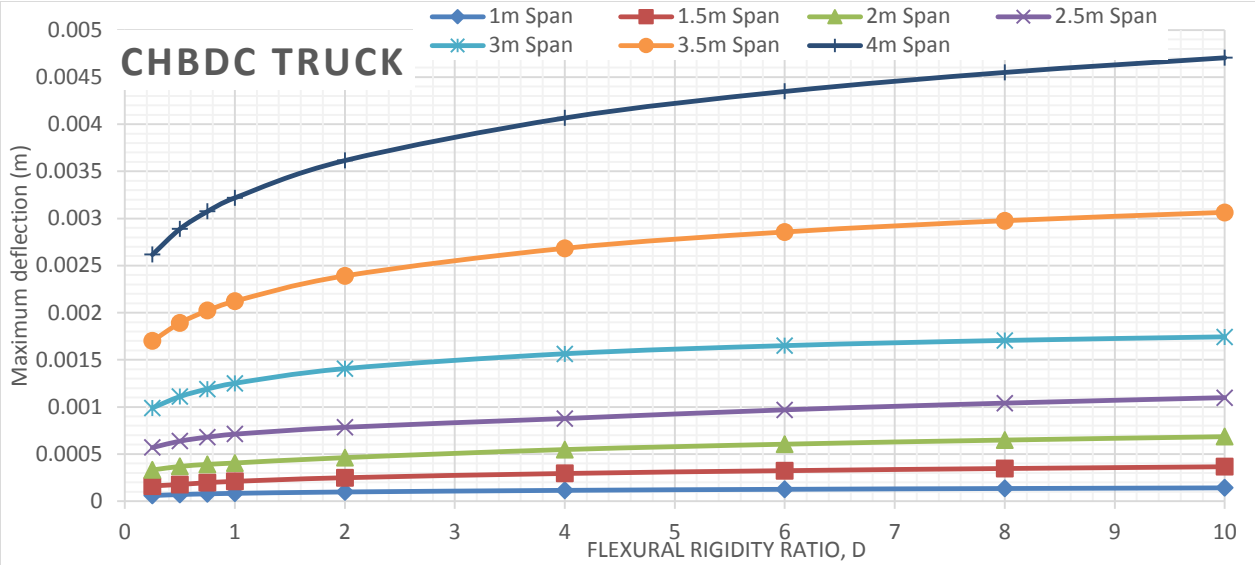


Figure 422 Maximum deflection of deck slabs subjected to CHBDC truck for different span values of alpha 0.5 Orthotropic analyses

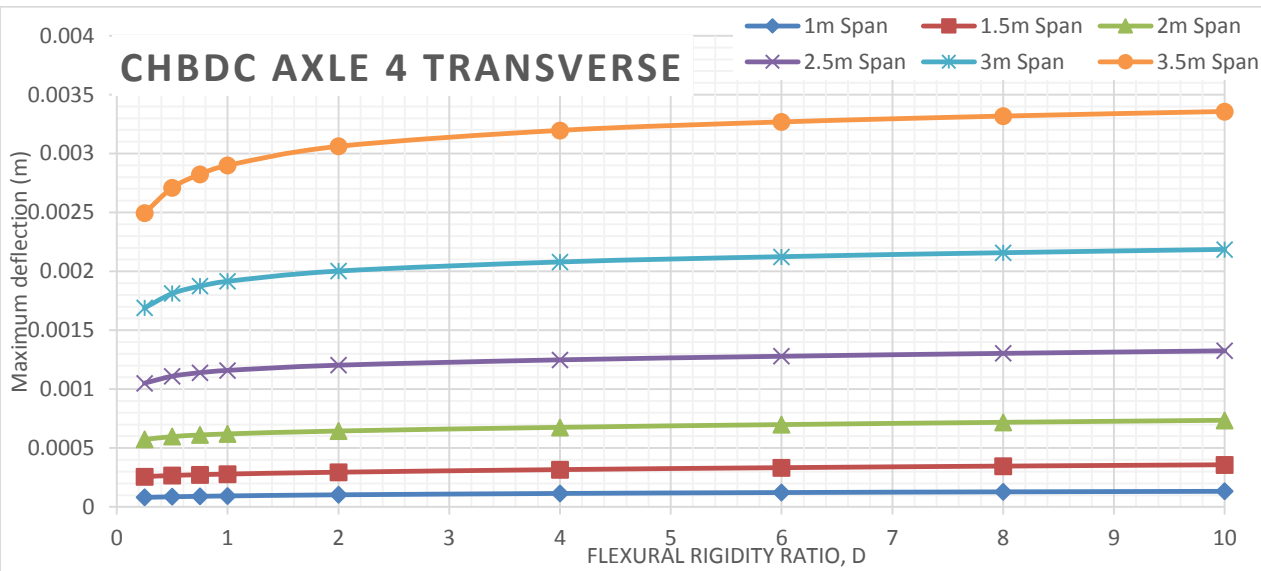


Figure 423 Maximum deflection of deck slabs subjected to CHBDC axle 4 for different span values of alpha 0.5 Orthotropic analyses

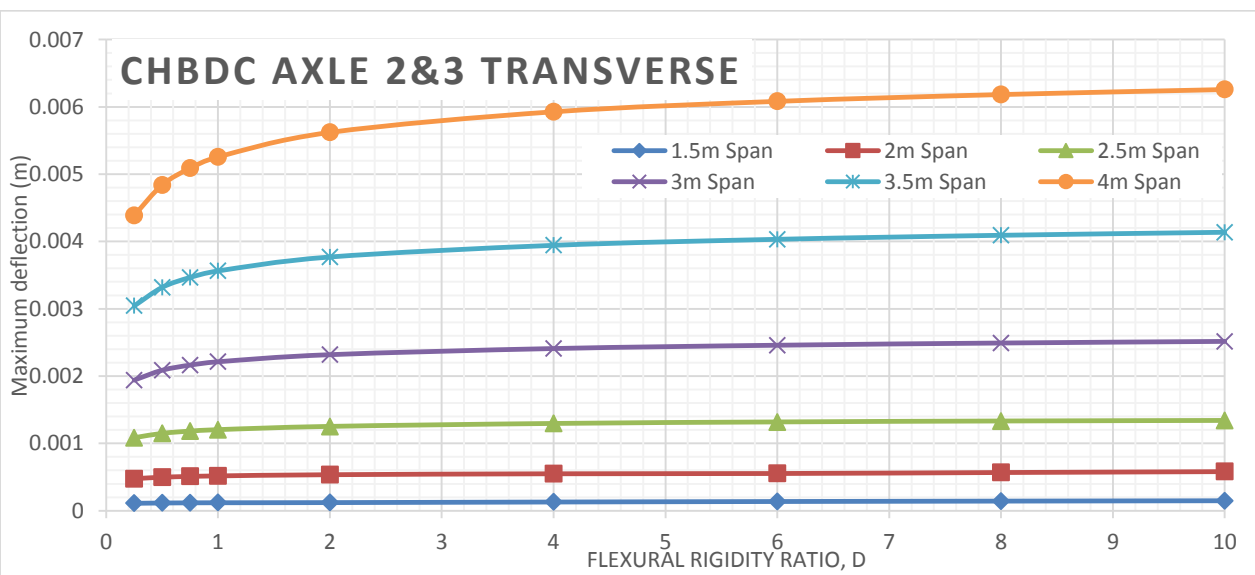


Figure 424 Maximum deflection of deck slabs subjected to CHBDC axle 2 & 3 for different span values of alpha 0.5 Orthotropic analyses

Alpha 0.75 Deflection VS Flexural Rigidity for Different Span Length

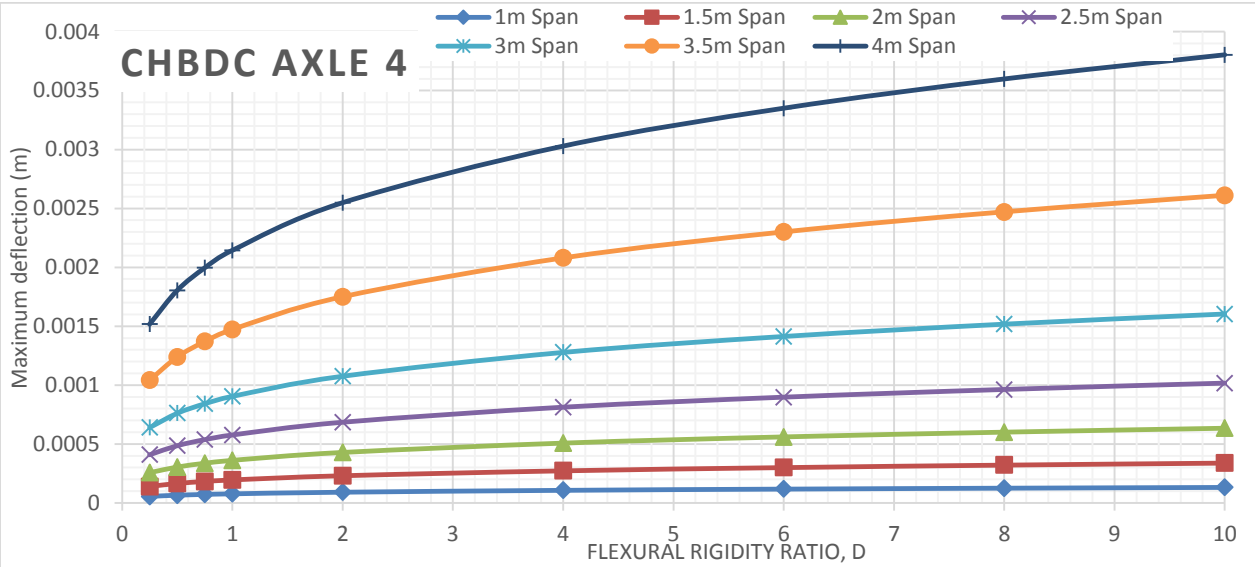


Figure 425 Maximum deflection of deck slabs subjected to CHBDC axle 4 for different span values of alpha 0.75 Orthotropic analyses

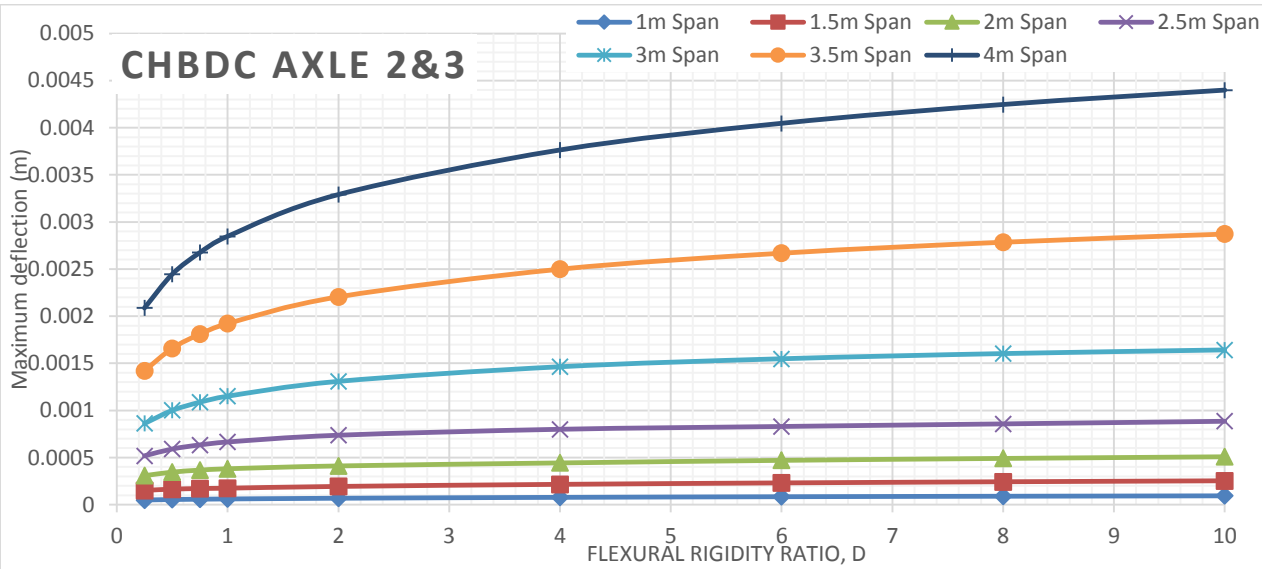


Figure 426 Maximum deflection of deck slabs subjected to CHBDC axle 2 & 3 for different span values of alpha 0.75 Orthotropic analyses

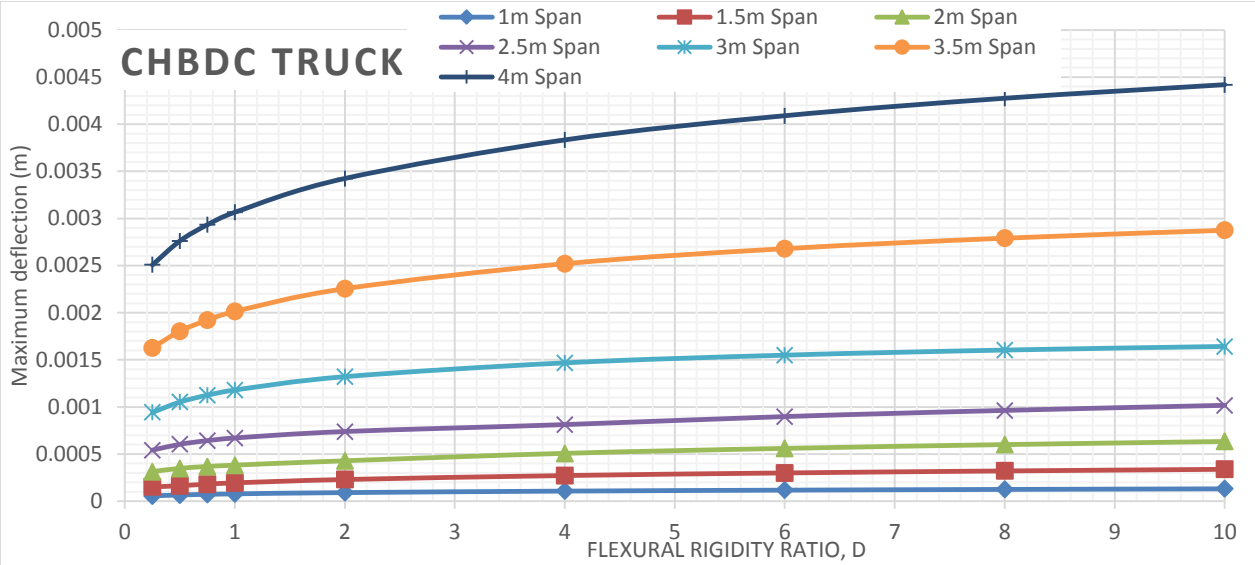


Figure 427 Maximum deflection of deck slabs subjected to CHBDC truck for different span values of alpha 0.75 Orthotropic analyses

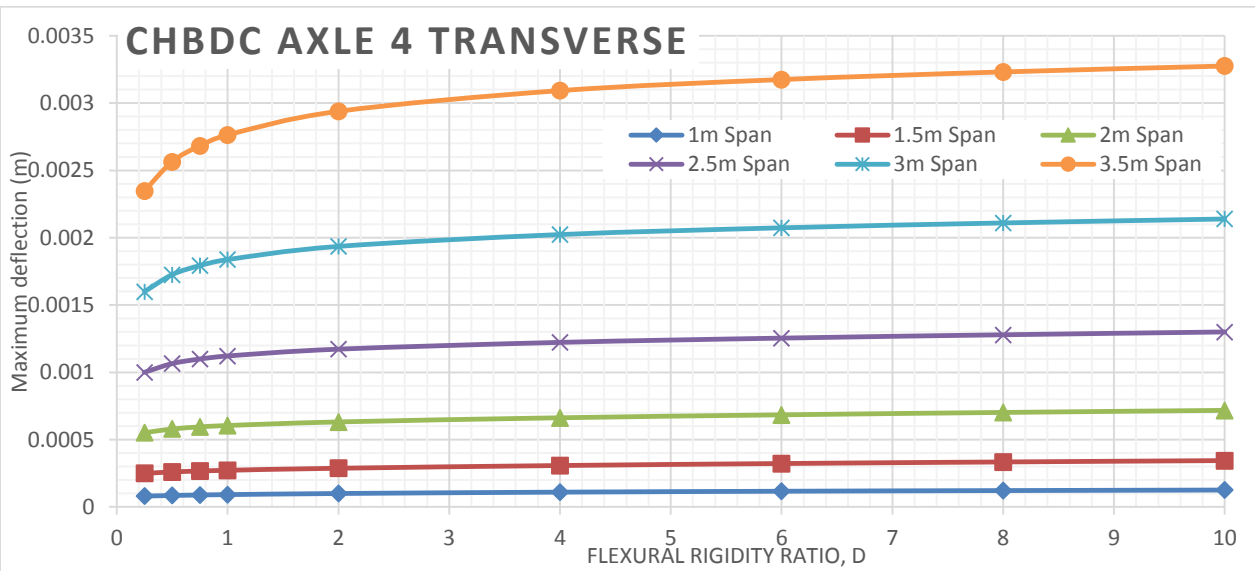


Figure 428 Maximum deflection of deck slabs subjected to CHBDC axle 4 for different span values of alpha 0.75 Orthotropic analyses

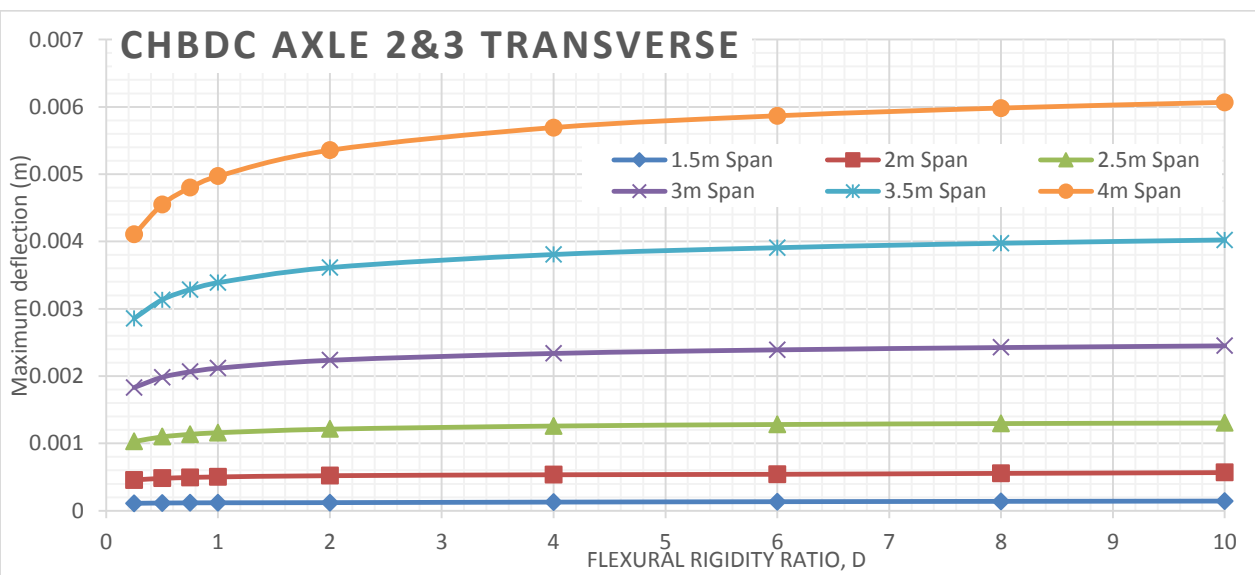


Figure 429 Maximum deflection of deck slabs subjected to CHBDC axle 2 & 3 for different span values of alpha 0.75 Orthotropic analyses

Alpha 1 Deflection VS Flexural Rigidity for Different Span Length

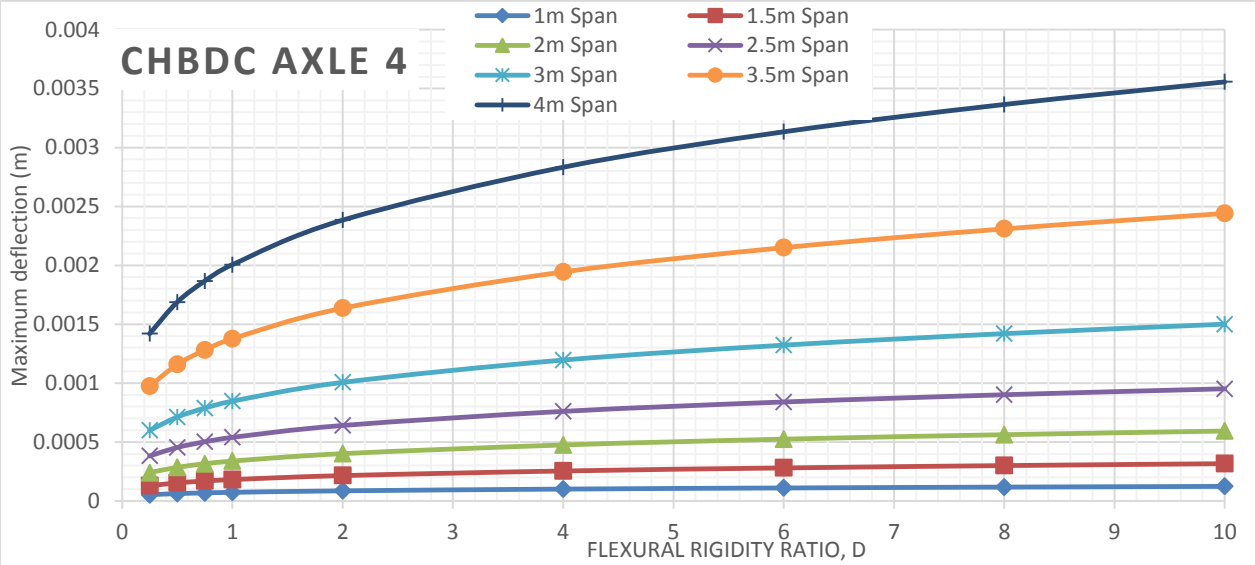


Figure 430 Maximum deflection of deck slabs subjected to CHBDC axle 4 for different span values of alpha 1 Orthotropic analyses

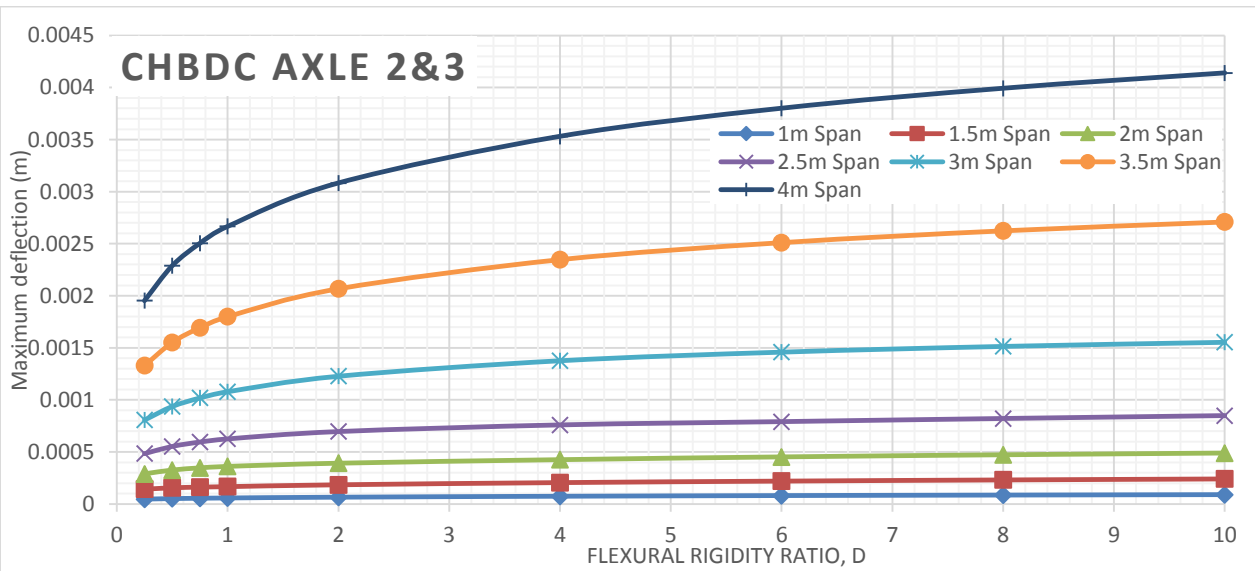


Figure 431 Maximum deflection of deck slabs subjected to CHBDC axle 2 & 3 for different span values of alpha 1 Orthotropic analyses

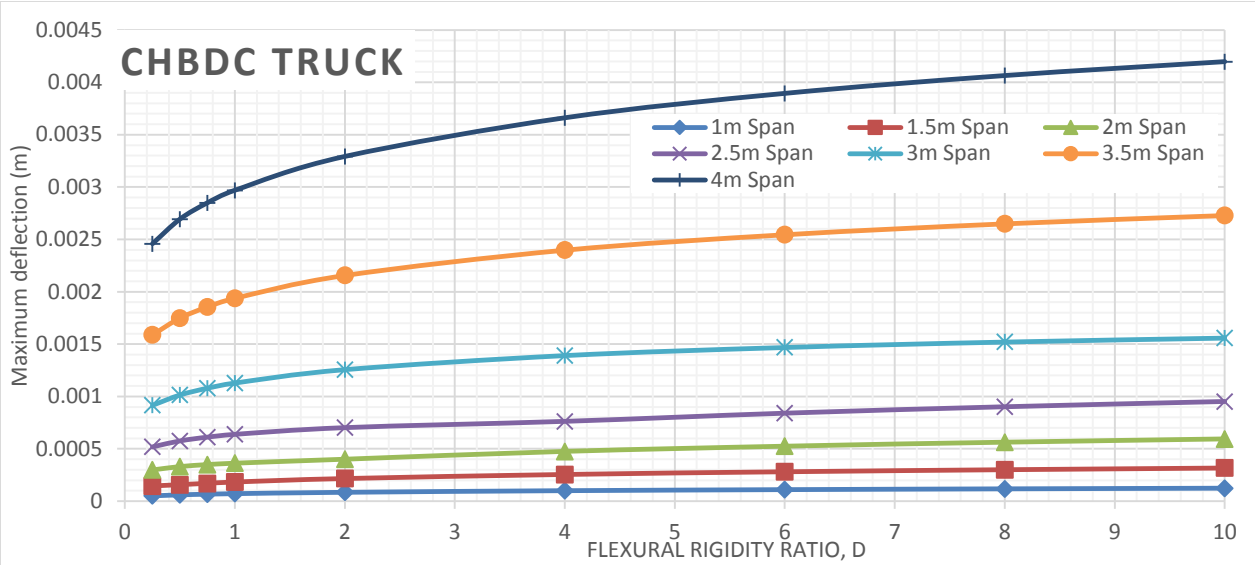


Figure 432 Maximum deflection of deck slabs subjected to CHBDC truck for different span values of alpha 1 Orthotropic analyses

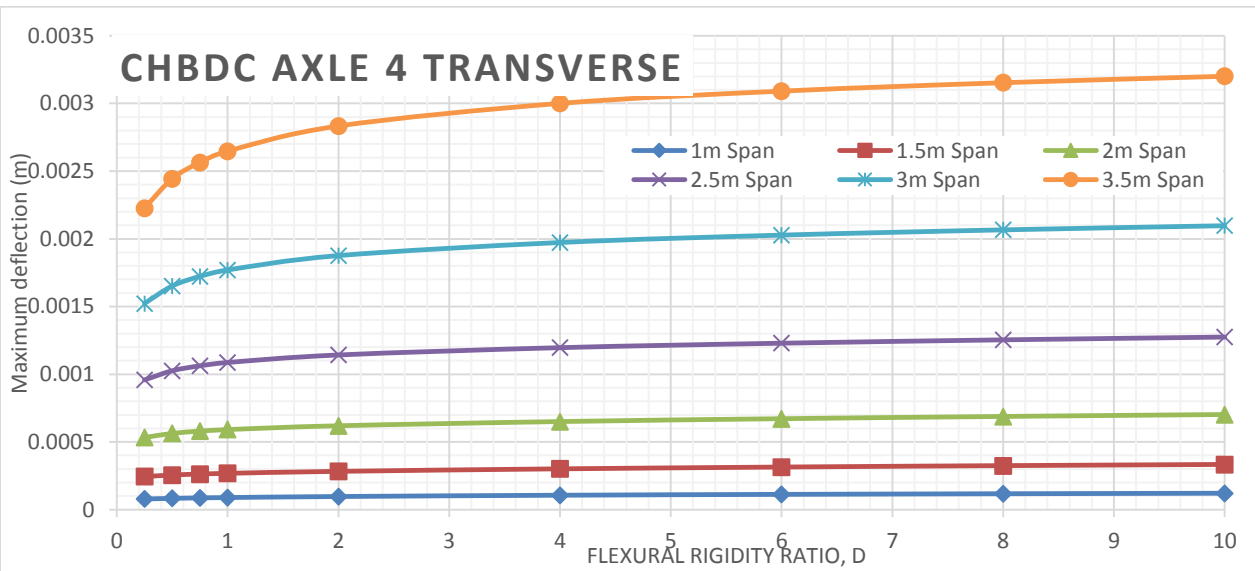


Figure 433 Maximum deflection of deck slabs subjected to CHBDC axle 4 for different span values of alpha 1 Orthotropic analyses

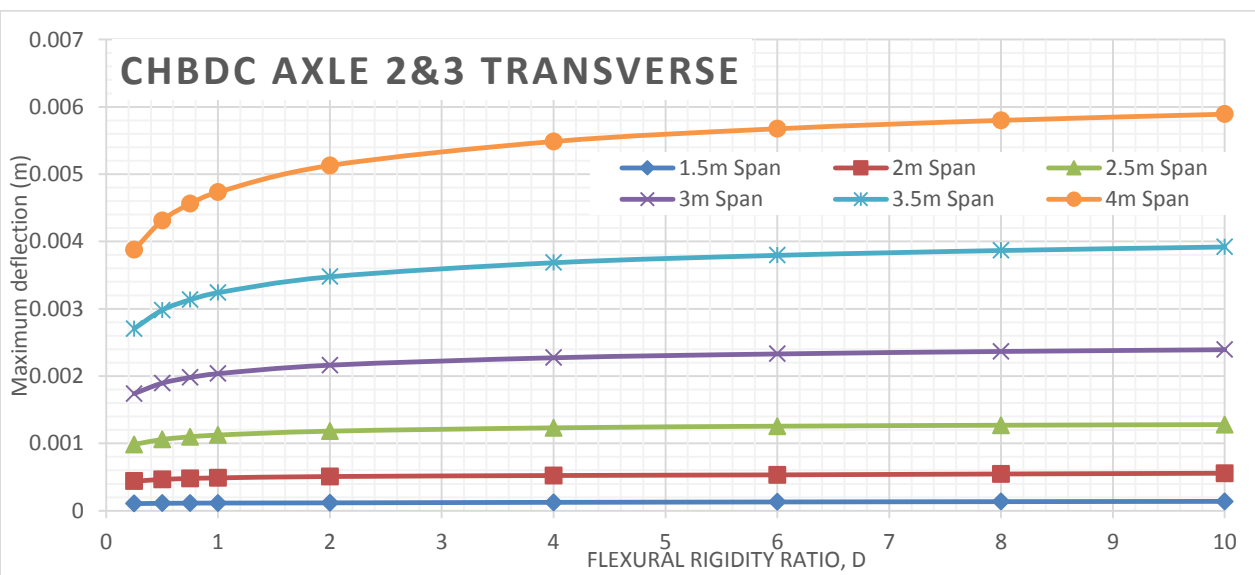


Figure 434 Maximum deflection of deck slabs subjected to CHBDC axle 2 & 3 for different span values of alpha 1 Orthotropic analyses

Alpha 2 Deflection VS Flexural Rigidity for Different Span Length

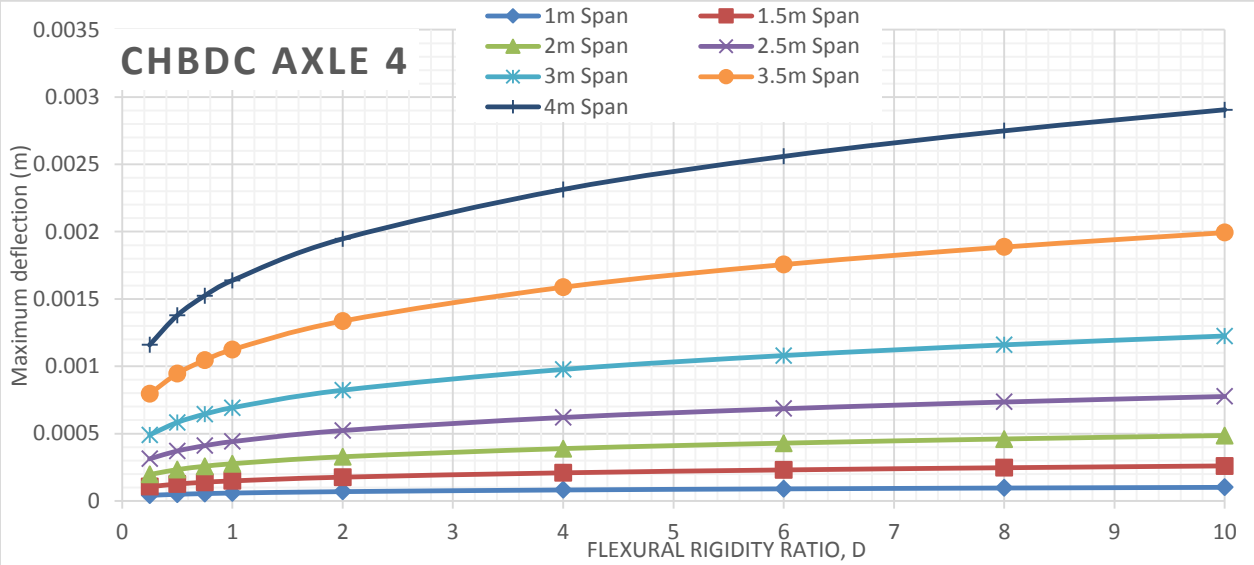


Figure 435 Maximum deflection of deck slabs subjected to CHBDC axle 4 for different span values of alpha 2 Orthotropic analyses

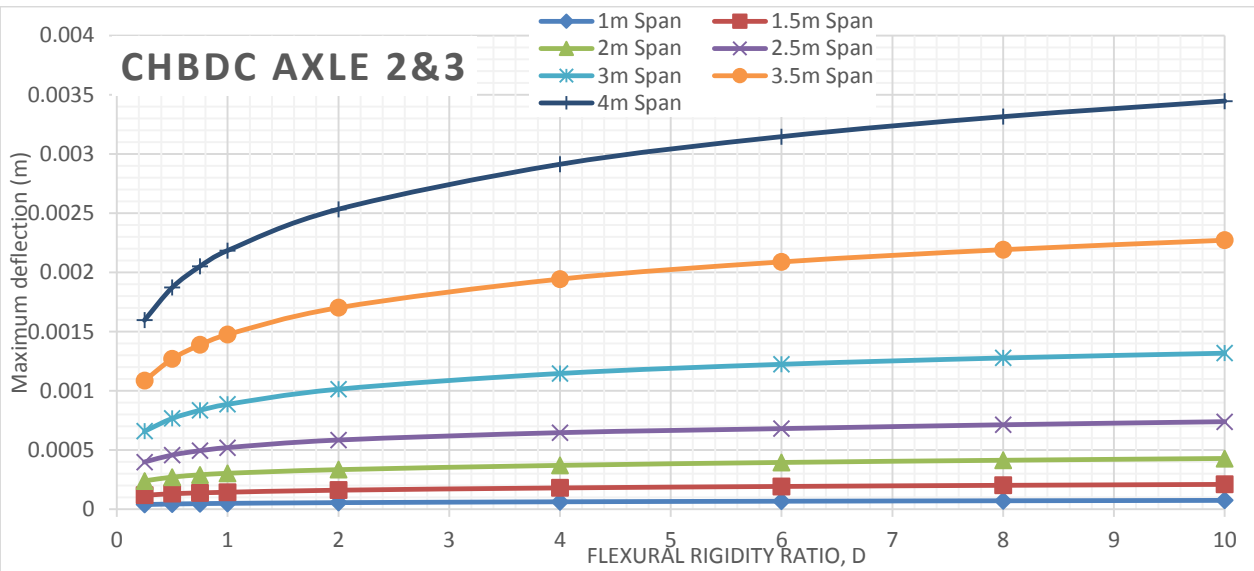


Figure 436 Maximum deflection of deck slabs subjected to CHBDC axle 2 & 3 for different span values of alpha 2 Orthotropic analyses

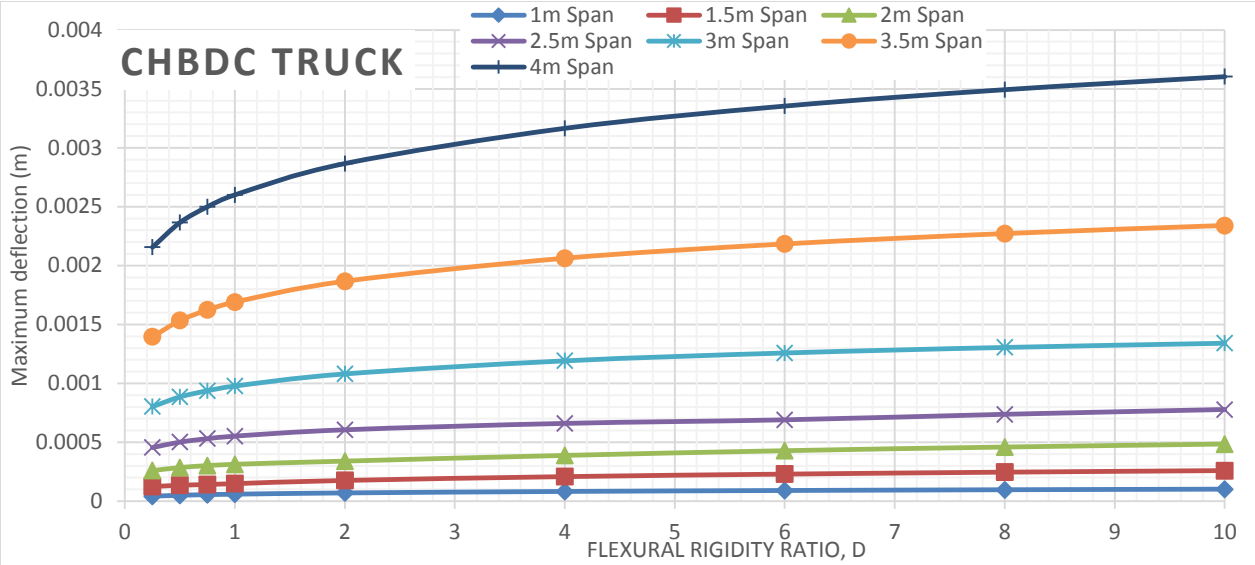


Figure 437 Maximum deflection of deck slabs subjected to CHBDC truck for different span values of alpha 2 Orthotropic analyses

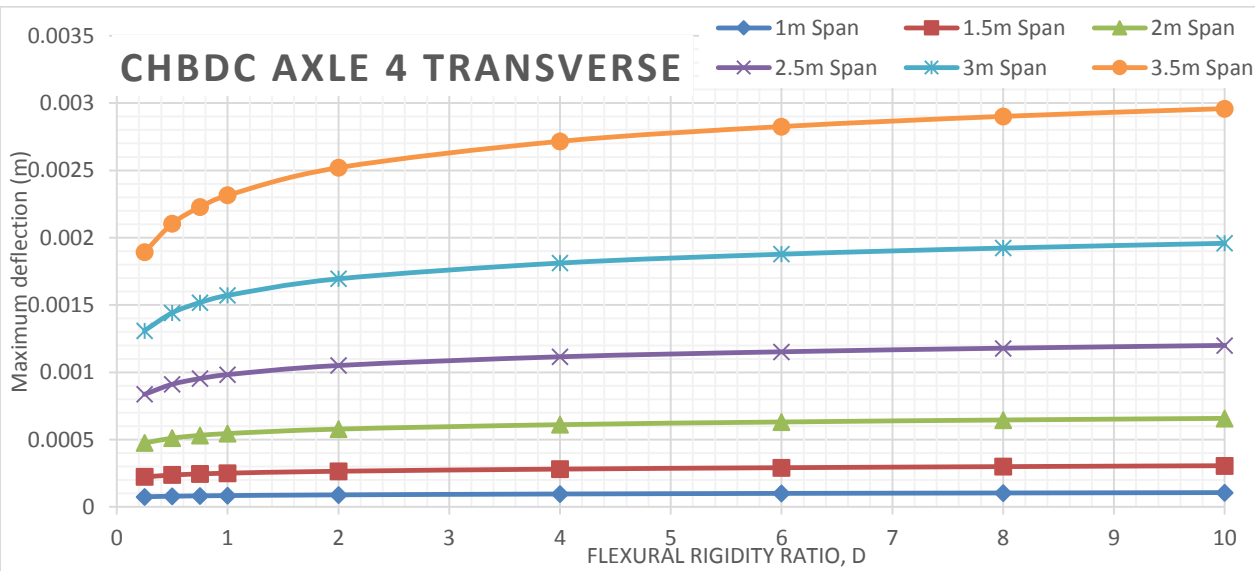


Figure 438 Maximum deflection of deck slabs subjected to CHBDC axle 4 for different span values of alpha 2 Orthotropic analyses

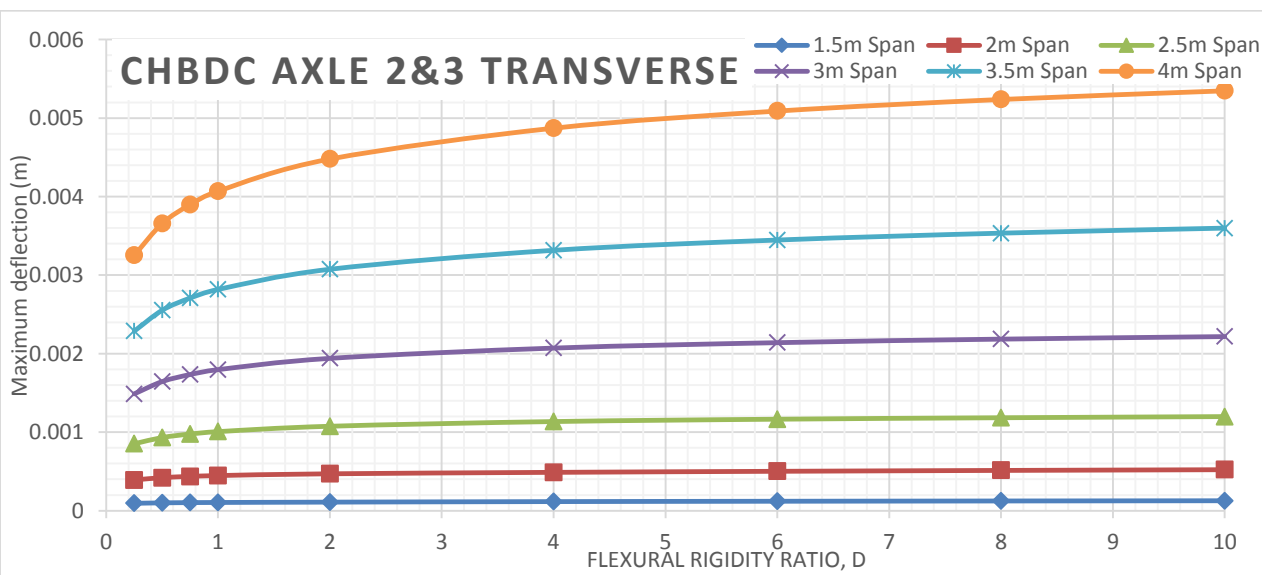


Figure 439 Maximum deflection of deck slabs subjected to CHBDC axle 2 & 3 for different span values of alpha 2 Orthotropic analyses

Alpha 4 Deflection VS Flexural Rigidity for Different Span Length

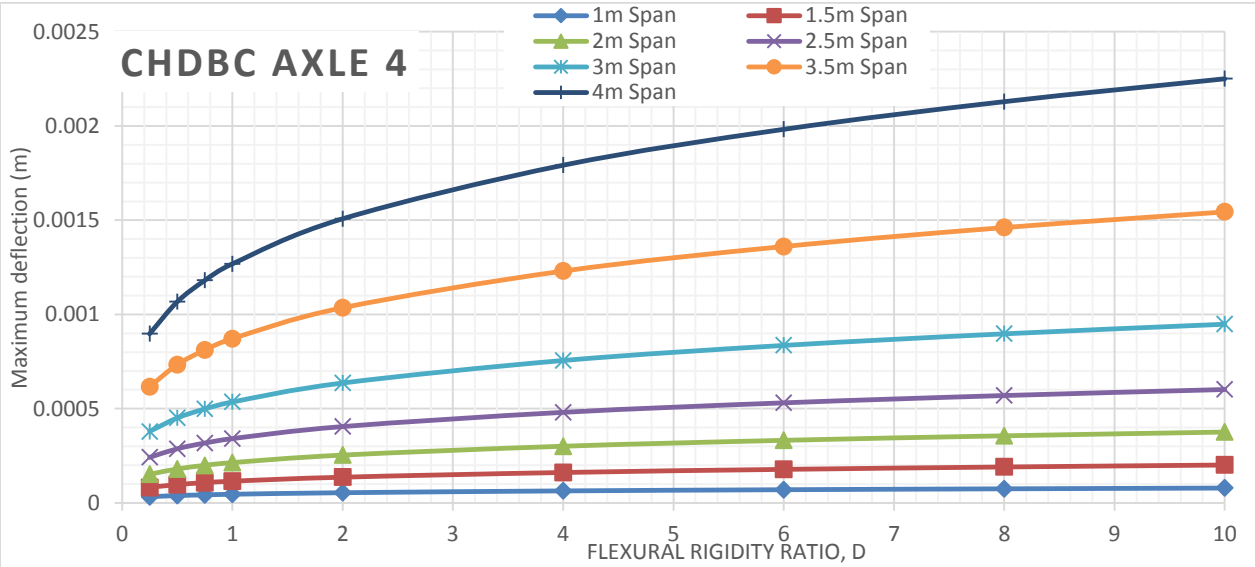


Figure 440 Maximum deflection of deck slabs subjected to CHBDC axle 4 for different span values of alpha 4 Orthotropic analyses

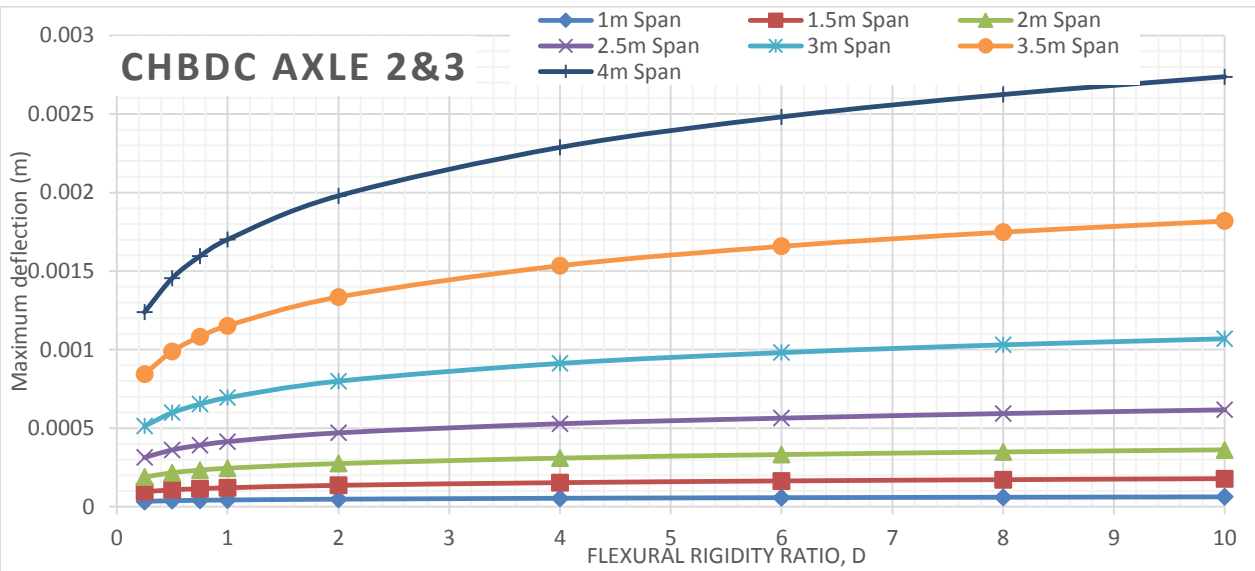


Figure 441 Maximum deflection of deck slabs subjected to CHBDC axle 2 & 3 for different span values of alpha 4 Orthotropic analyses

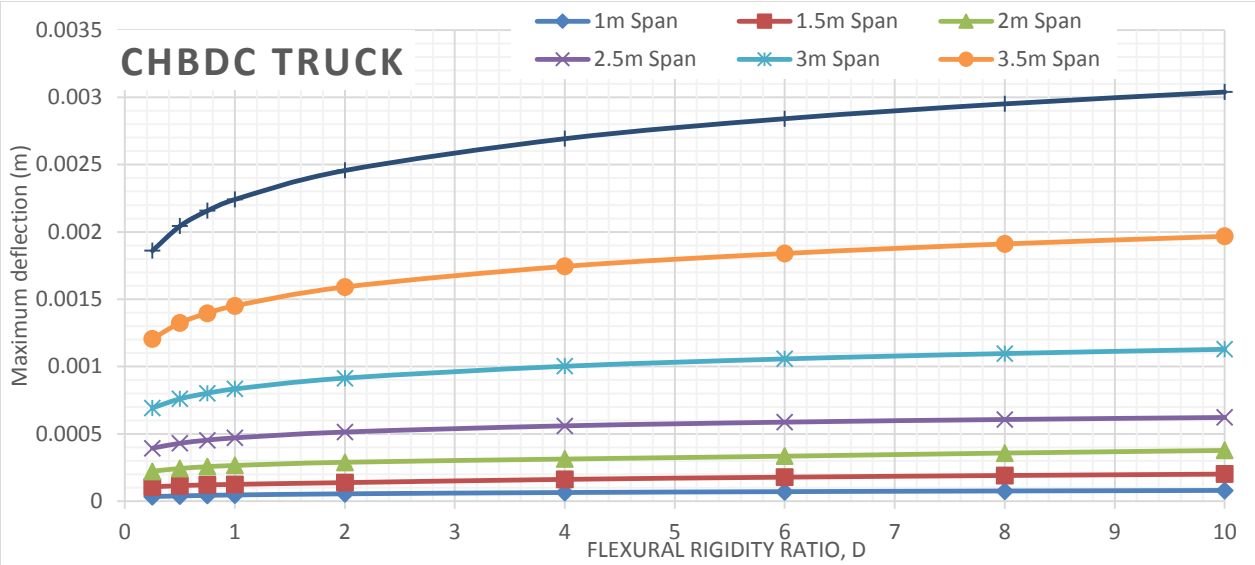


Figure 442 Maximum deflection of deck slabs subjected to CHBDC truck for different span values of alpha 4 Orthotropic analyses

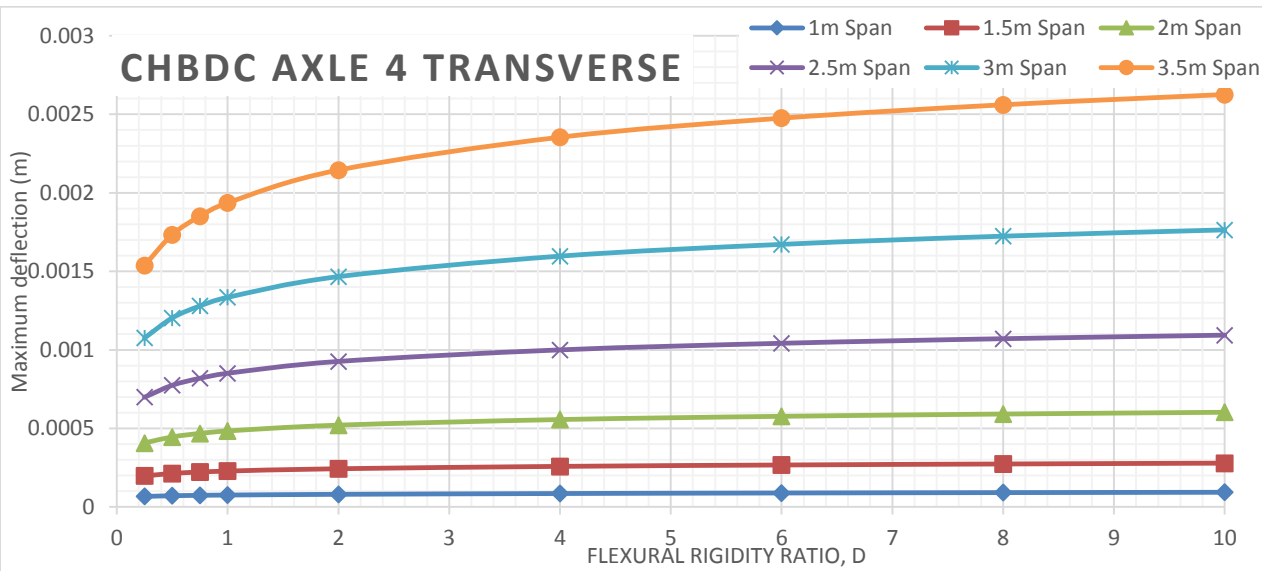


Figure 443 Maximum deflection of deck slabs subjected to CHBDC axle 4 for different span values of alpha 4 Orthotropic analyses

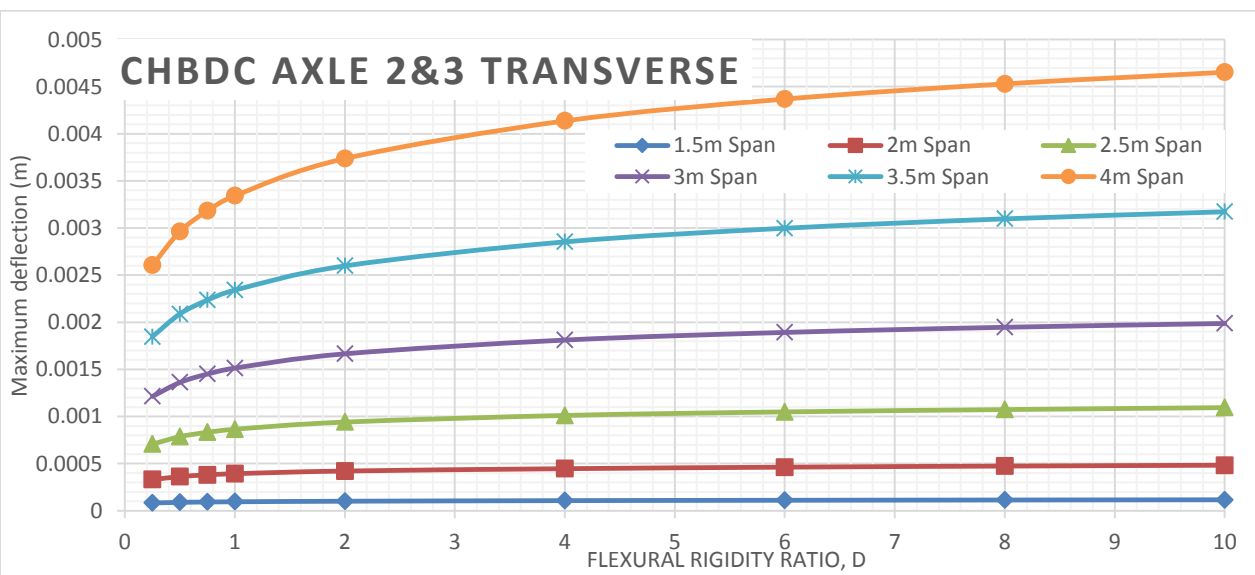


Figure 444 Maximum deflection of deck slabs subjected to CHBDC axle 2 & 3 for different span values of alpha 4 Orthotropic analyses

Alpha 6 Deflection VS Flexural Rigidity for Different Span Length

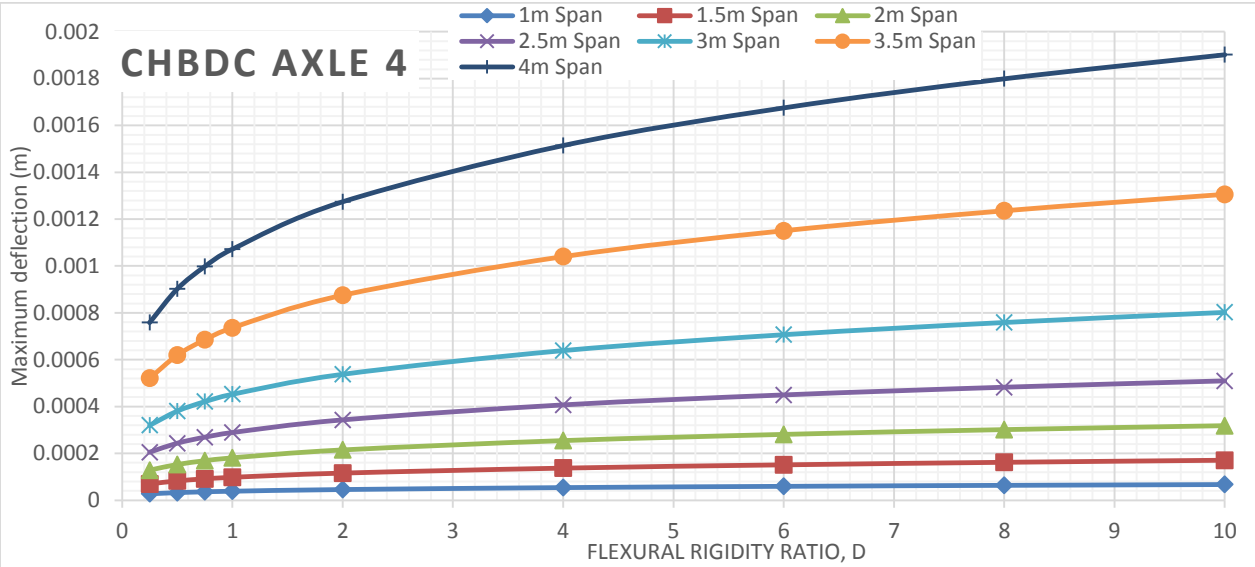


Figure 445 Maximum deflection of deck slabs subjected to CHBDC axle 4 for different span values of alpha 6 Orthotropic analyses

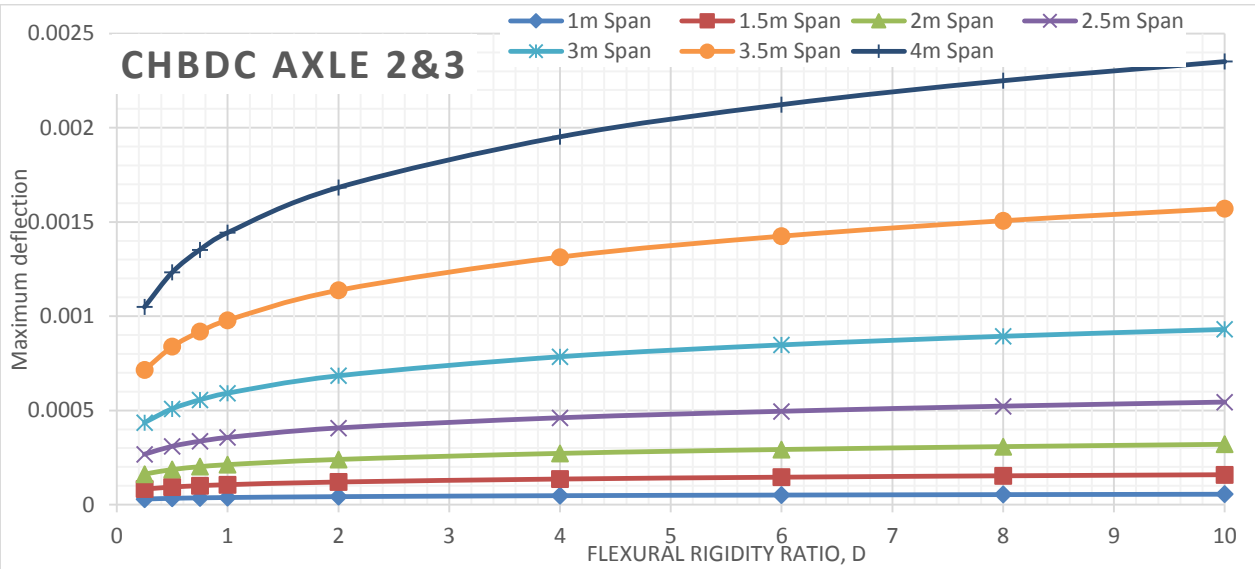


Figure 446 Maximum deflection of deck slabs subjected to CHBDC axle 2 & 3 for different span values of alpha 6 Orthotropic analyses

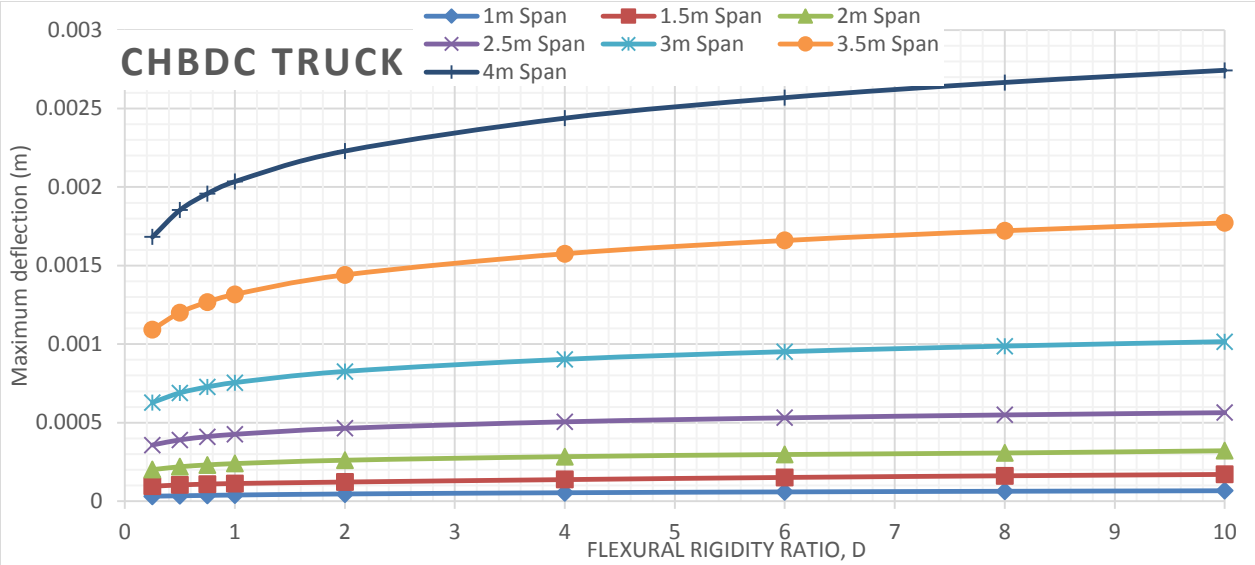


Figure 447 Maximum deflection of deck slabs subjected to CHBDC truck for different span values of alpha 6 Orthotropic analyses

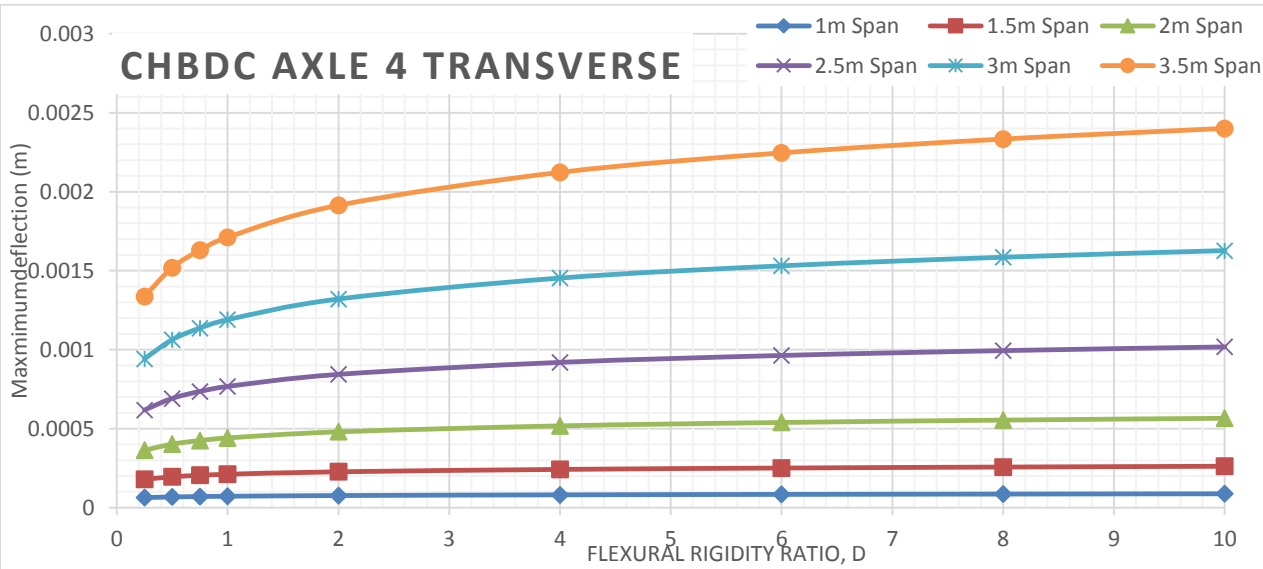


Figure 448 Maximum deflection of deck slabs subjected to CHBDC axle 4 for different span values of alpha 6 Orthotropic analyses

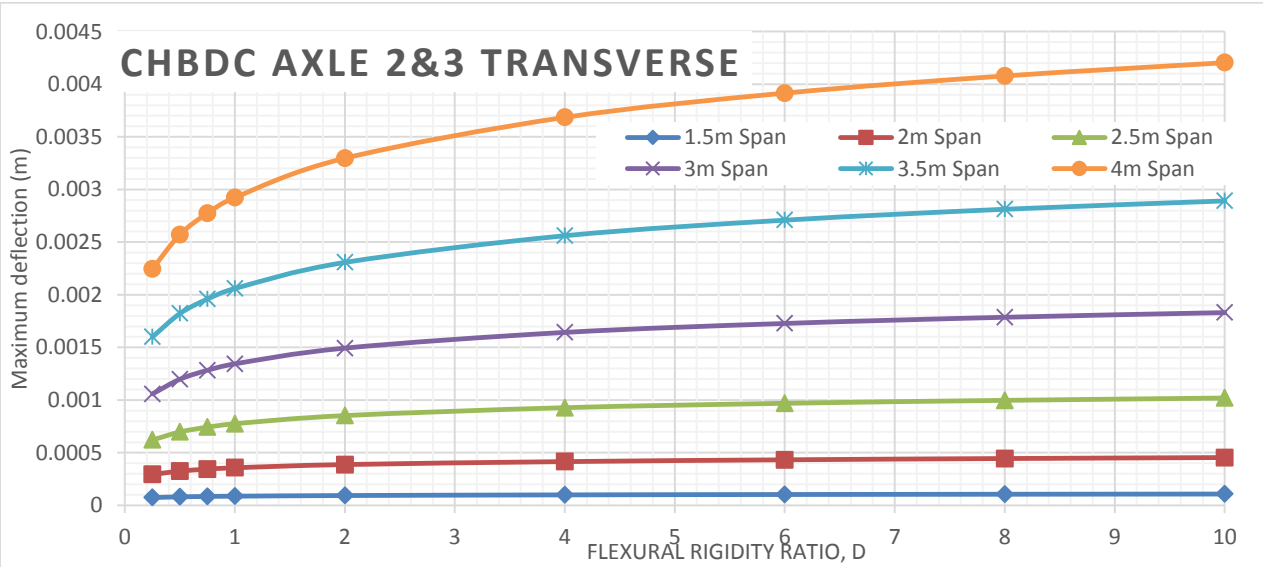


Figure 449 Maximum deflection of deck slabs subjected to CHBDC axle 2 & 3 for different span values of alpha 6 Orthotropic analyses

Alpha 8 Deflection VS Flexural Rigidity for Different Span Length

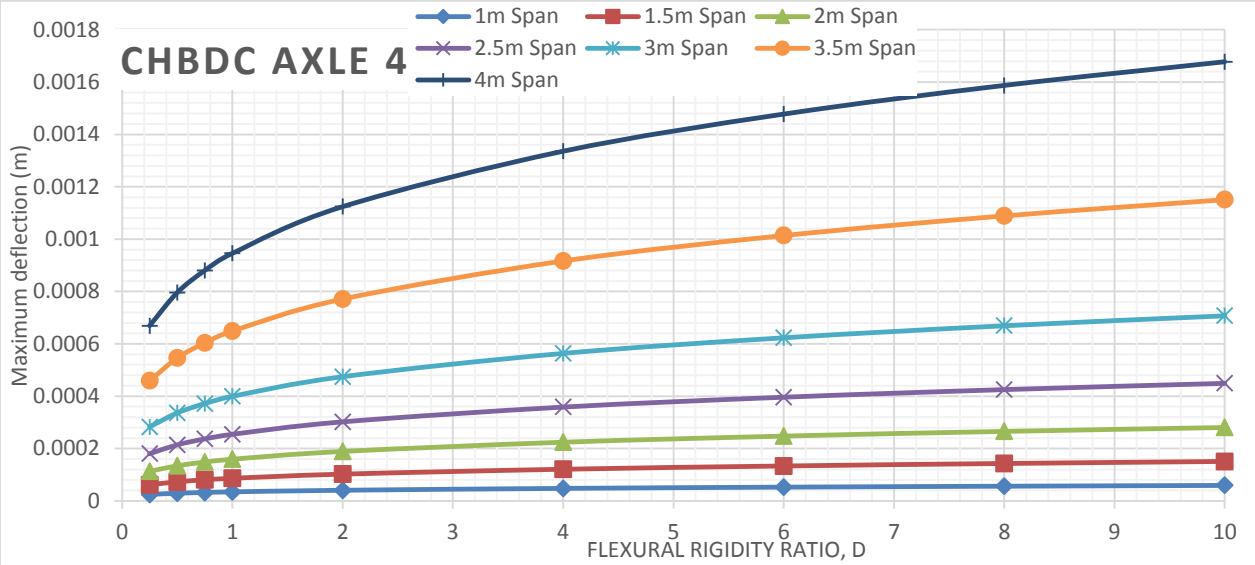


Figure 450 Maximum deflection of deck slabs subjected to CHBDC axle 4 for different span values of alpha 8 Orthotropic analyses

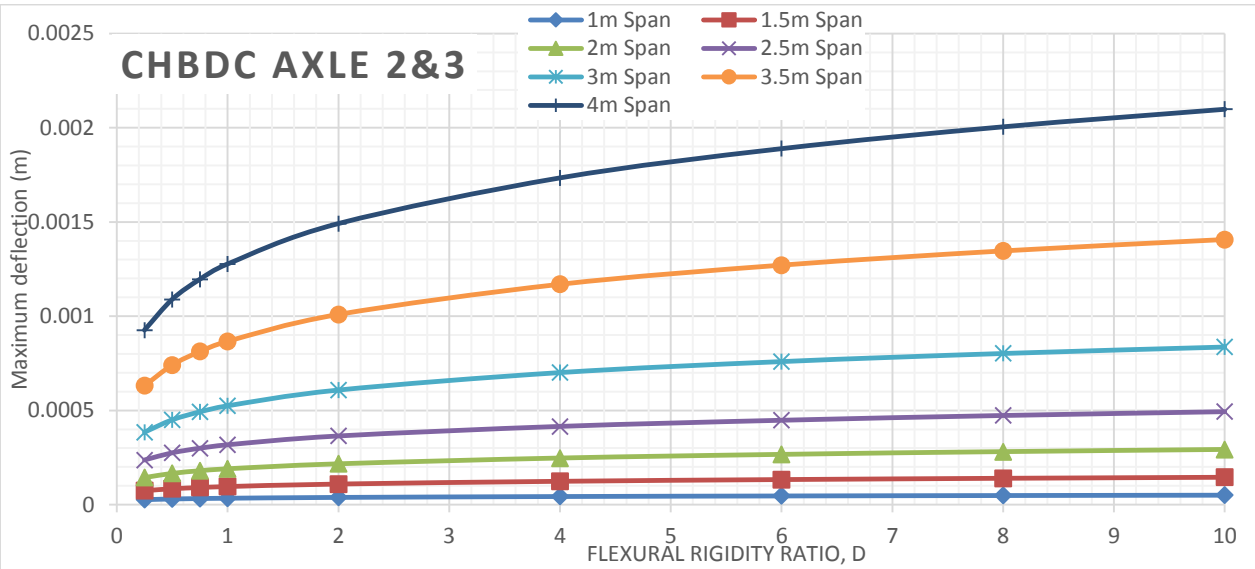


Figure 451 Maximum deflection of deck slabs subjected to CHBDC axle 2 & 3 for different span values of alpha 8 Orthotropic analyses

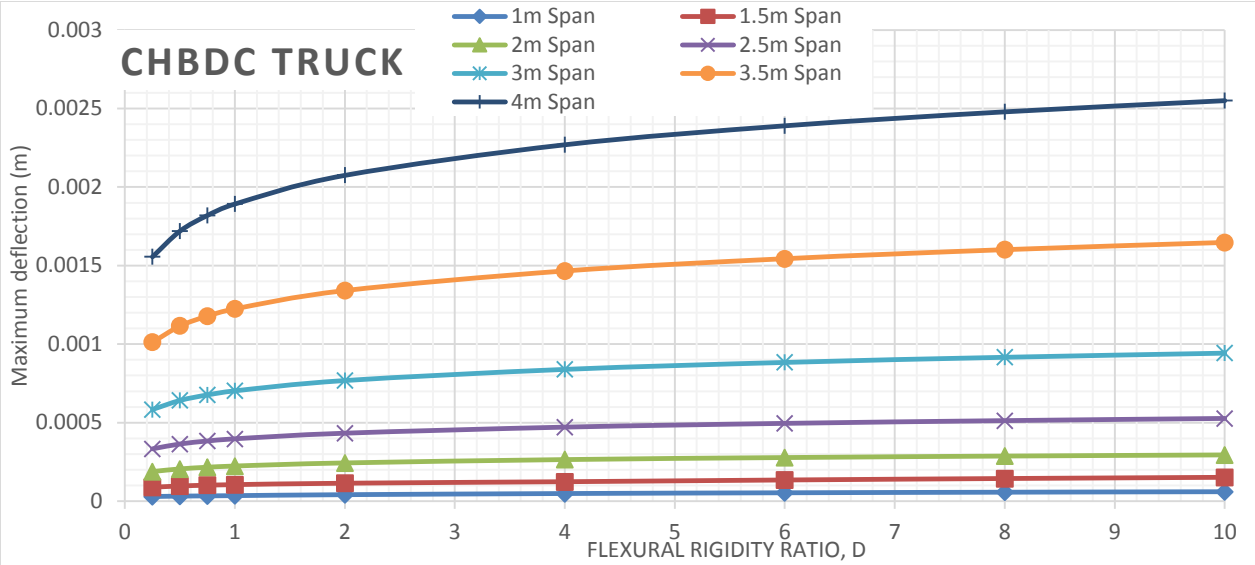


Figure 452 Maximum deflection of deck slabs subjected to CHBDC truck for different span values of alpha 8 Orthotropic analyses

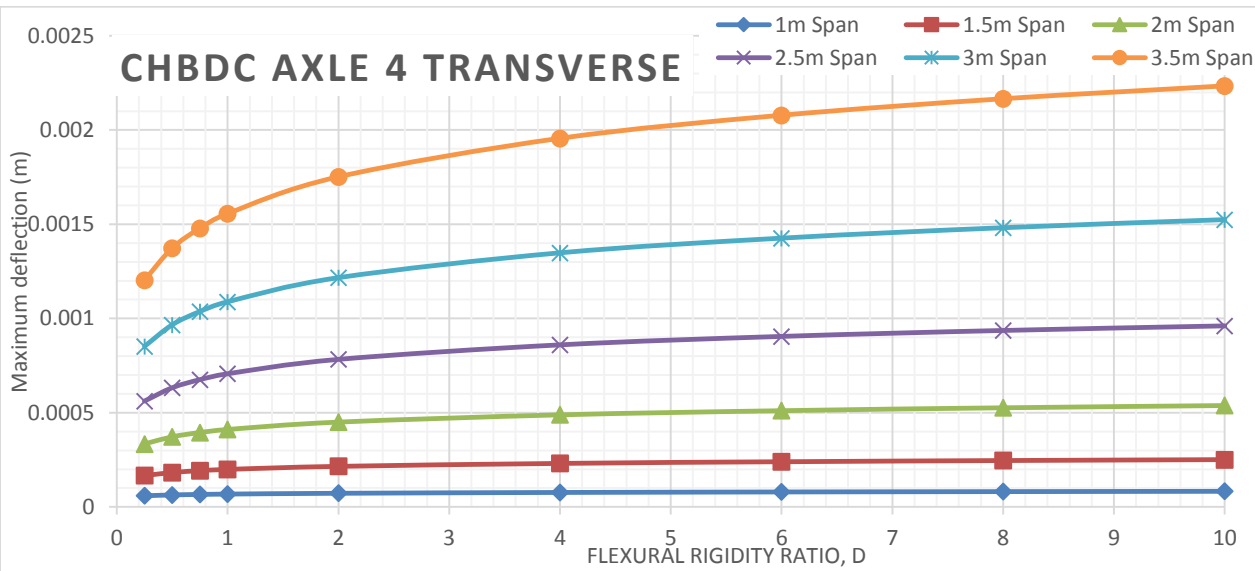


Figure 453 Maximum deflection of deck slabs subjected to CHBDC axle 4 for different span values of alpha 8 Orthotropic analyses

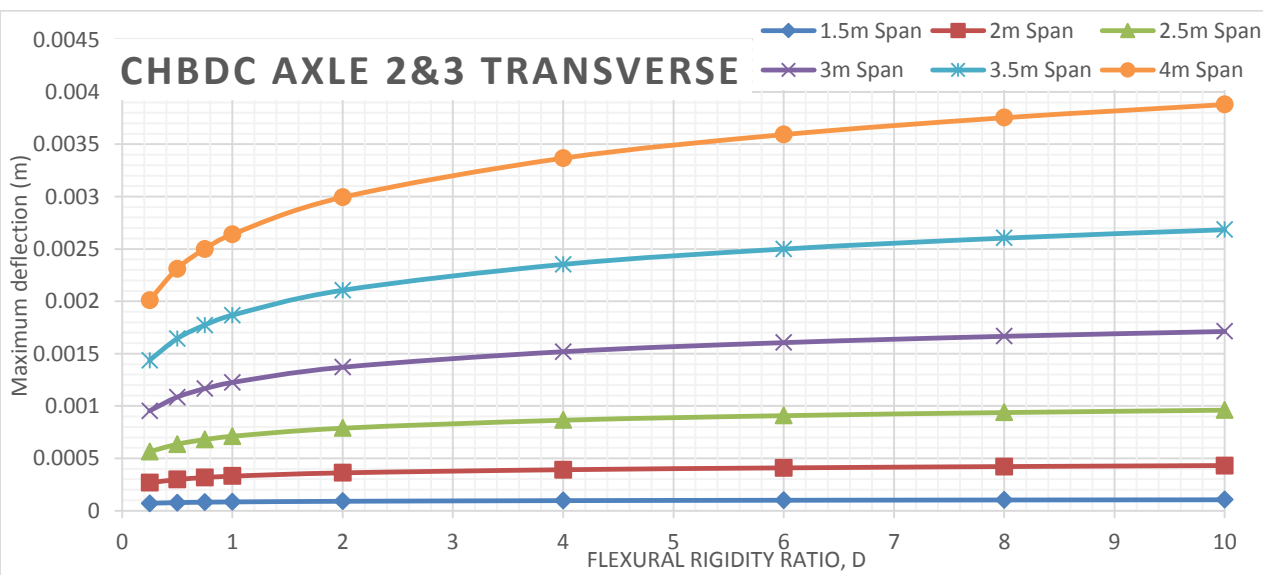


Figure 454 Maximum deflection of deck slabs subjected to CHBDC axle 2 & 3 for different span values of alpha 8 Orthotropic analyses

Alpha 10 Deflection VS Flexural Rigidity for Different Span Length

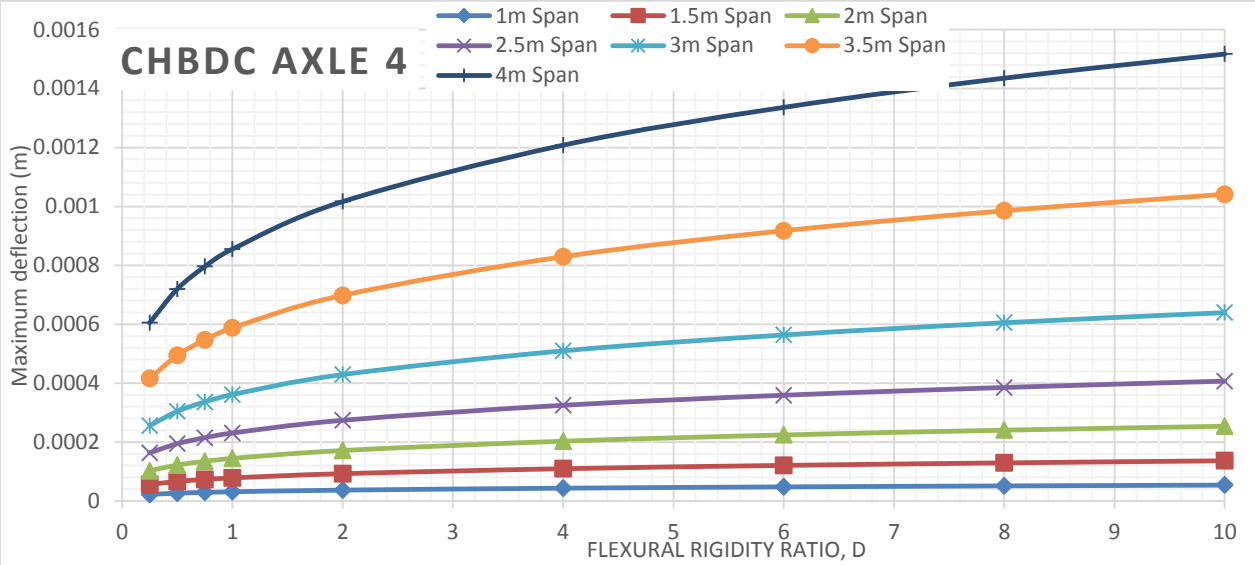


Figure 455 Maximum deflection of deck slabs subjected to CHBDC axle 4 for different span values of alpha 10 Orthotropic analyses

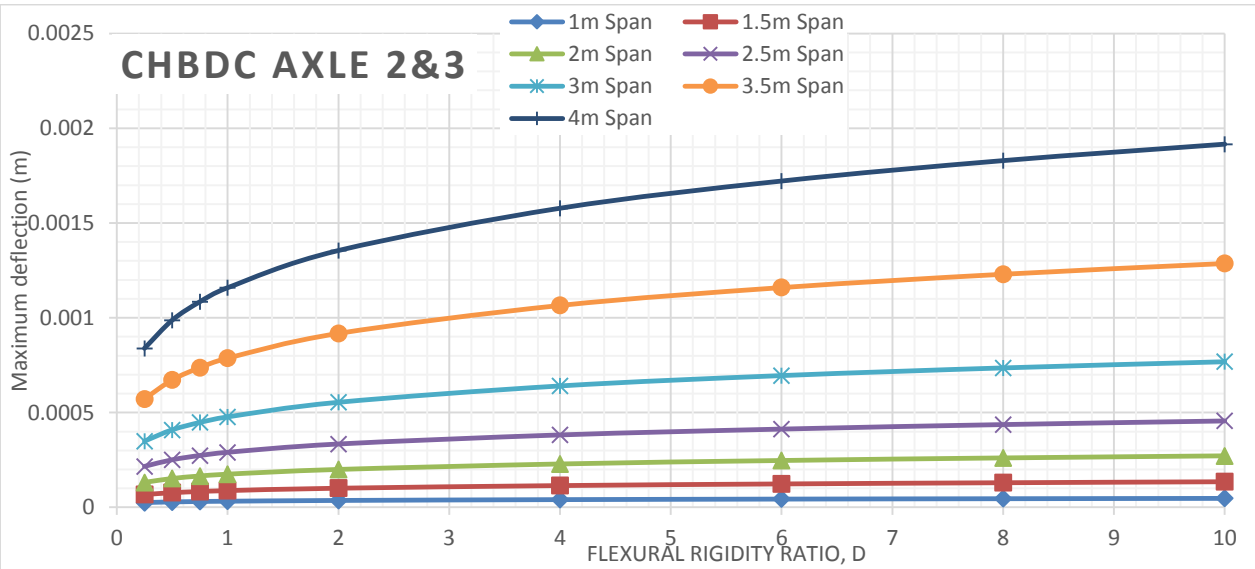


Figure 456 Maximum deflection of deck slabs subjected to CHBDC axle 2 & 3 for different span values of alpha 10 Orthotropic analyses

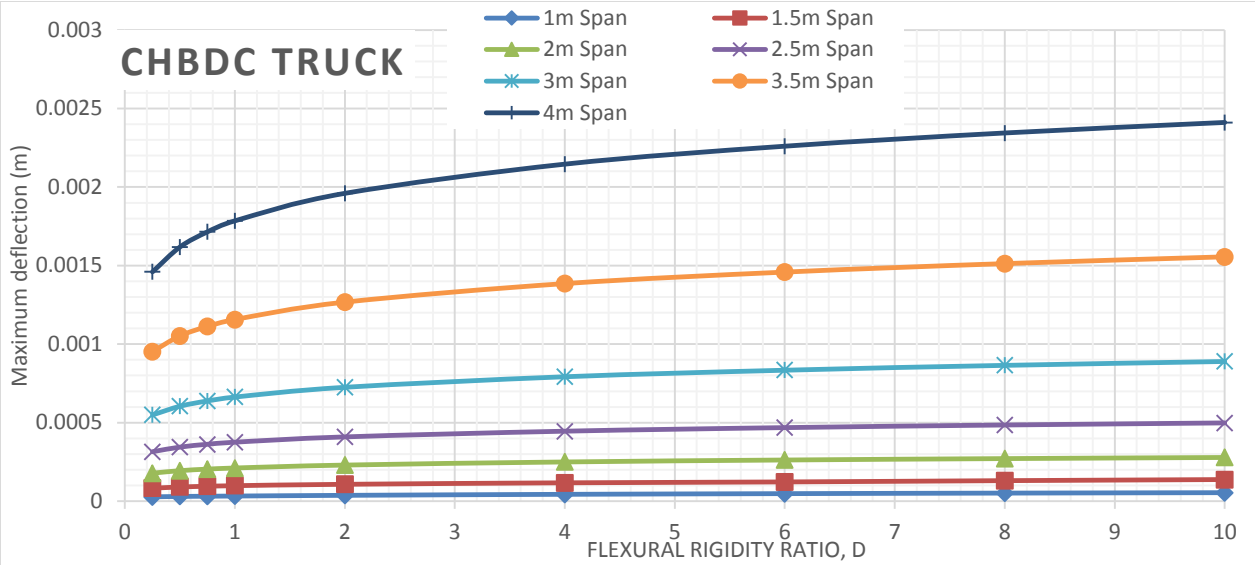


Figure 457 Maximum deflection of deck slabs subjected to CHBDC truck for different span values of alpha 10 Orthotropic analyses

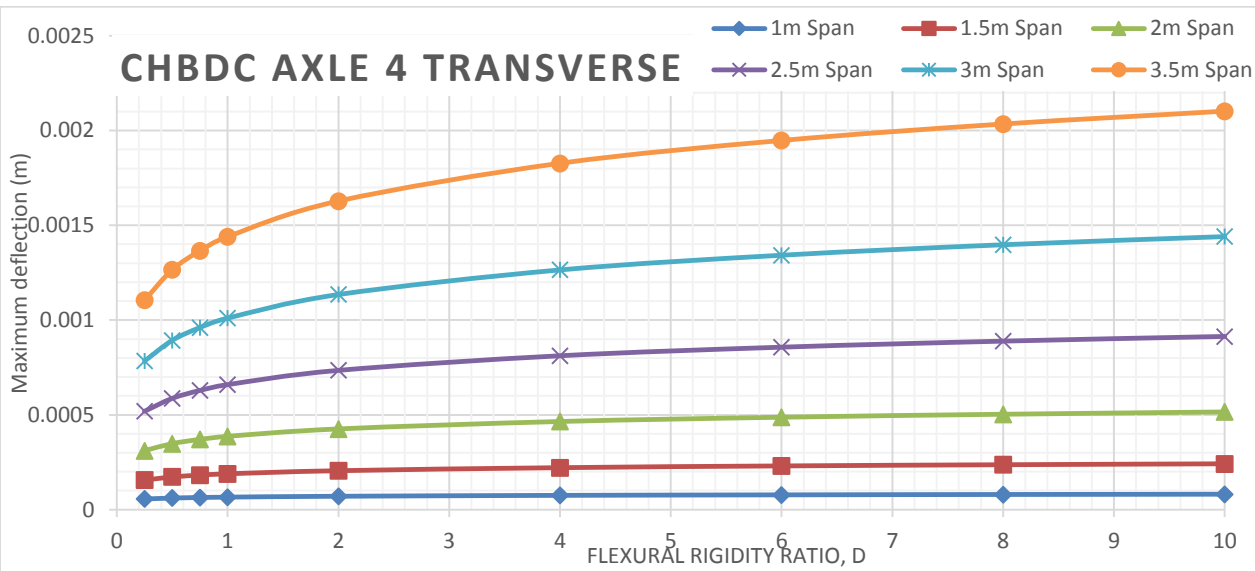


Figure 458 Maximum deflection of deck slabs subjected to CHBDC axle 4 for different span values of alpha 10 Orthotropic analyses

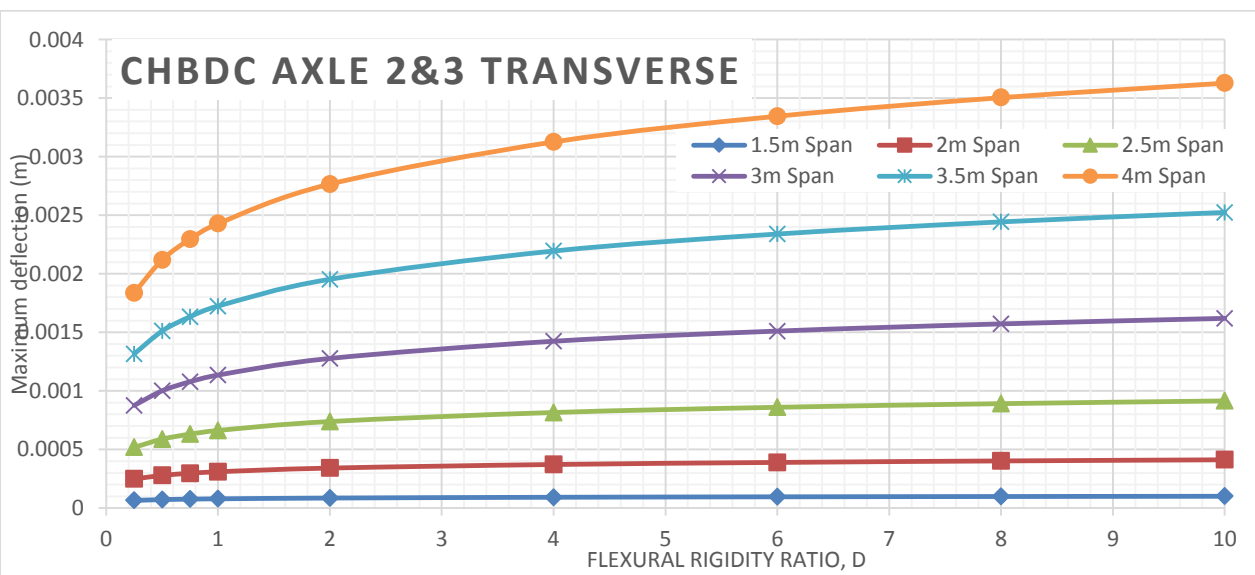


Figure 459 Maximum deflection of deck slabs subjected to CHBDC axle 2 & 3 for different span values of alpha 10 Orthotropic analyses

C.2.4 MAXIMUM DEFLECTION.VS TORSIONAL RIGIDITY

Axle 4 Deflection VS Torsional Rigidity for Different D Values at Different span length

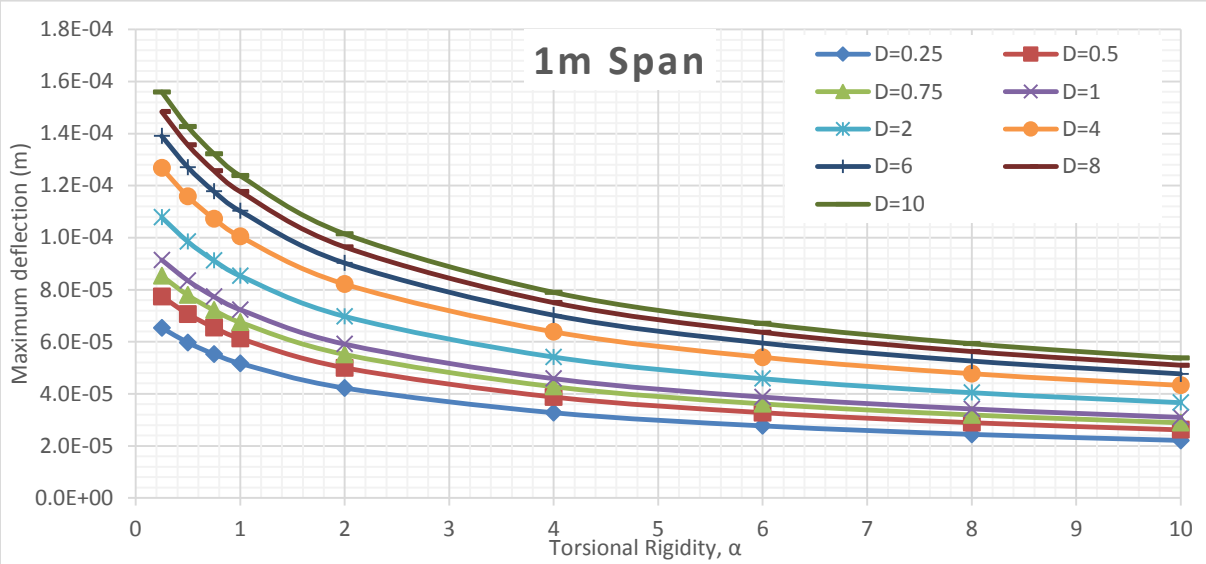


Figure 460 Maximum deflection of 1 m span slab subjected to CHBDC axle 4 for different D values Orthotropic analyses

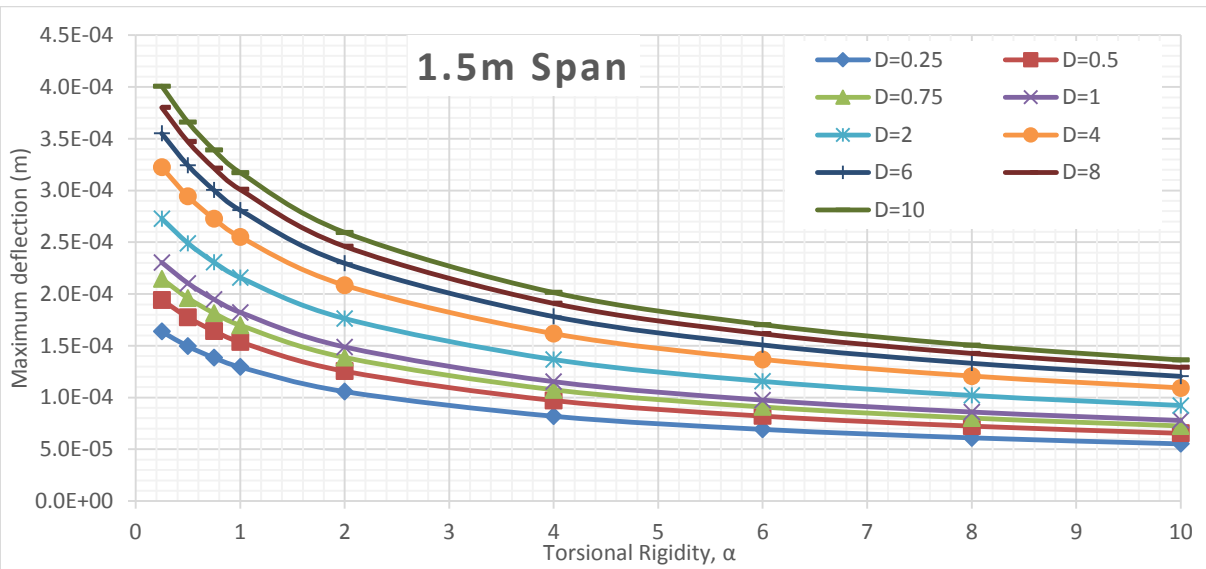


Figure 461 Maximum deflection of 1.5 m span slab subjected to CHBDC axle 4 for different D values Orthotropic analyses

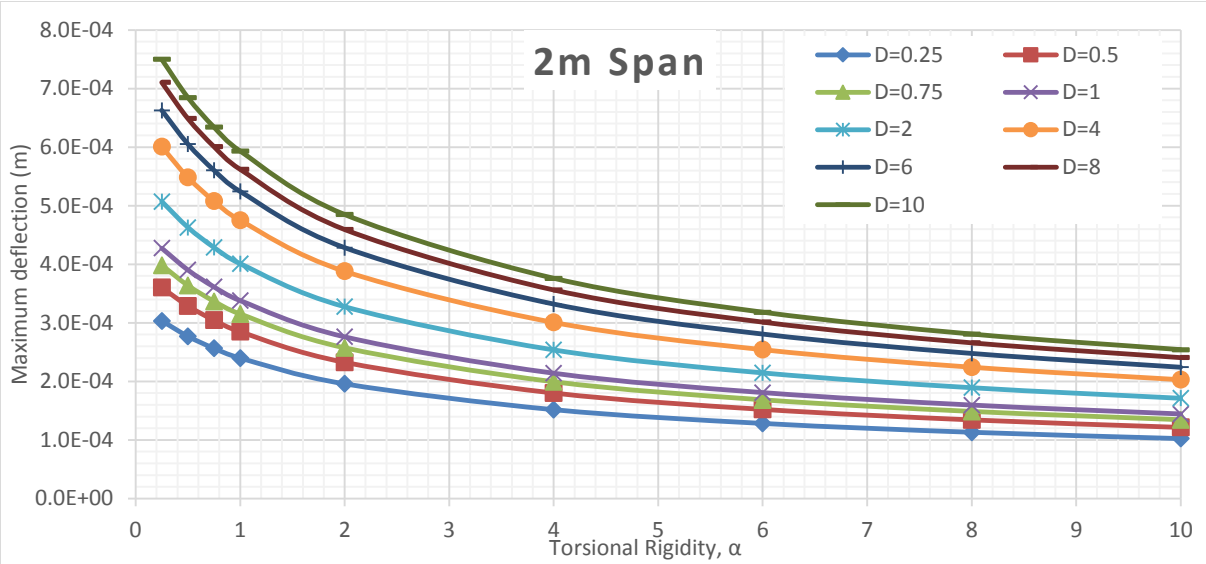


Figure 462 Maximum deflection of 2 m span slab subjected to CHBDC axle 4 for different D values Orthotropic analyses

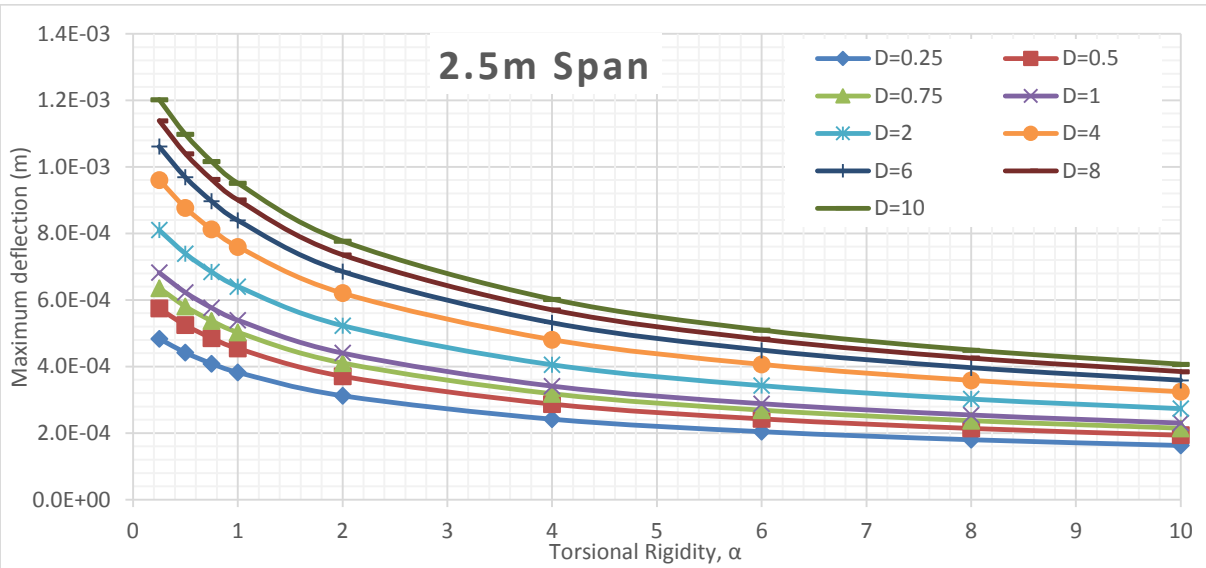


Figure 463 Maximum deflection of 2.5 m span slab subjected to CHBDC axle 4 for different D values Orthotropic analyses

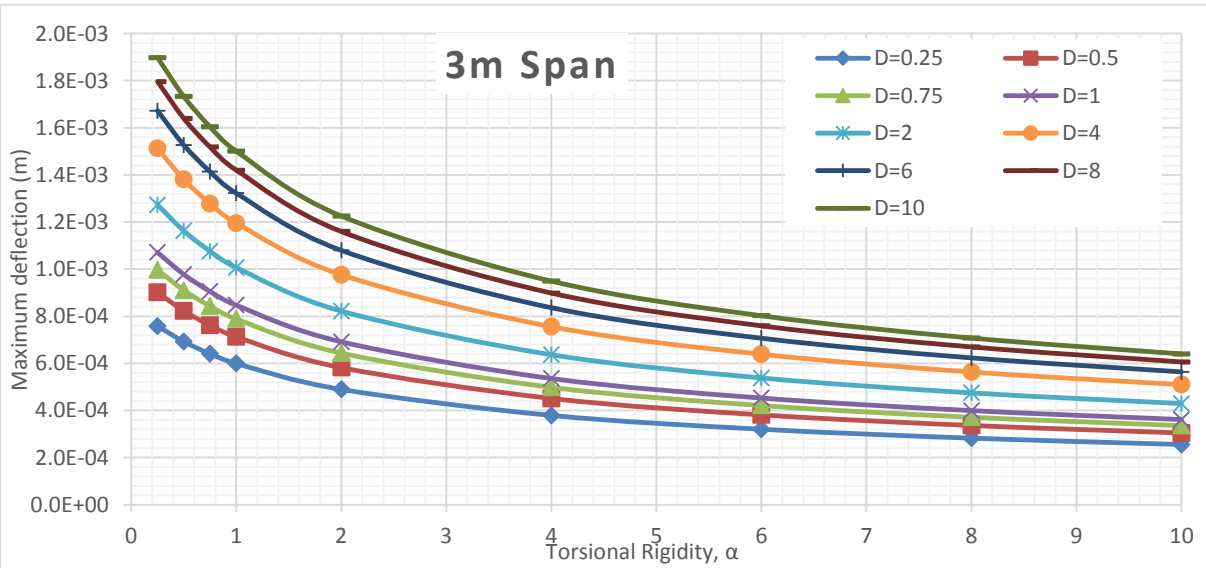


Figure 464 Maximum deflection of 3 m span slab subjected to CHBDC axle 4 for different D values Orthotropic analyses

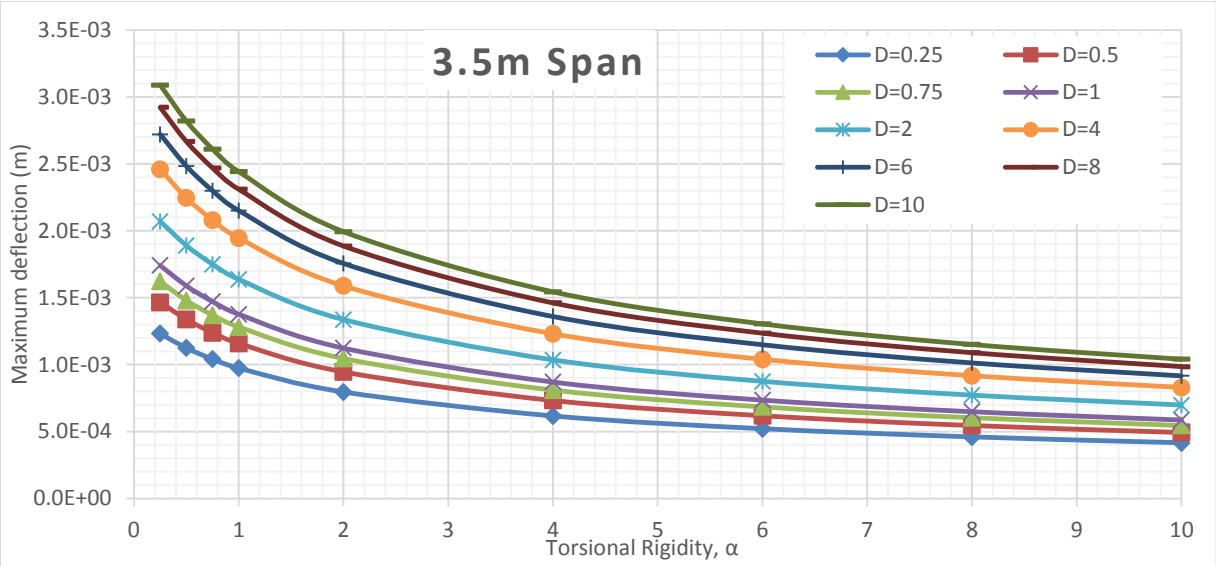


Figure 465 Maximum deflection of 3.5 m span slab subjected to CHBDC axle 4 for different D values Orthotropic analyses

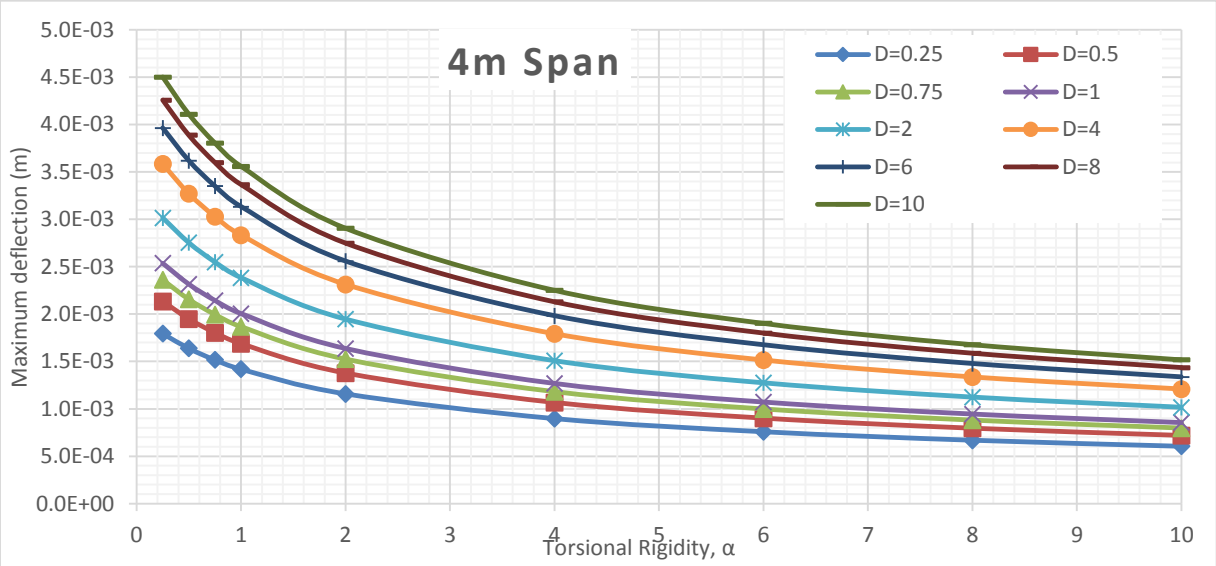


Figure 466 Maximum deflection of 4 m span slab subjected to CHBDC axle 4 for different D values Orthotropic analyses

Axle 2 & 3 Deflection VS Torsional Rigidity for Different D Values at Different span length

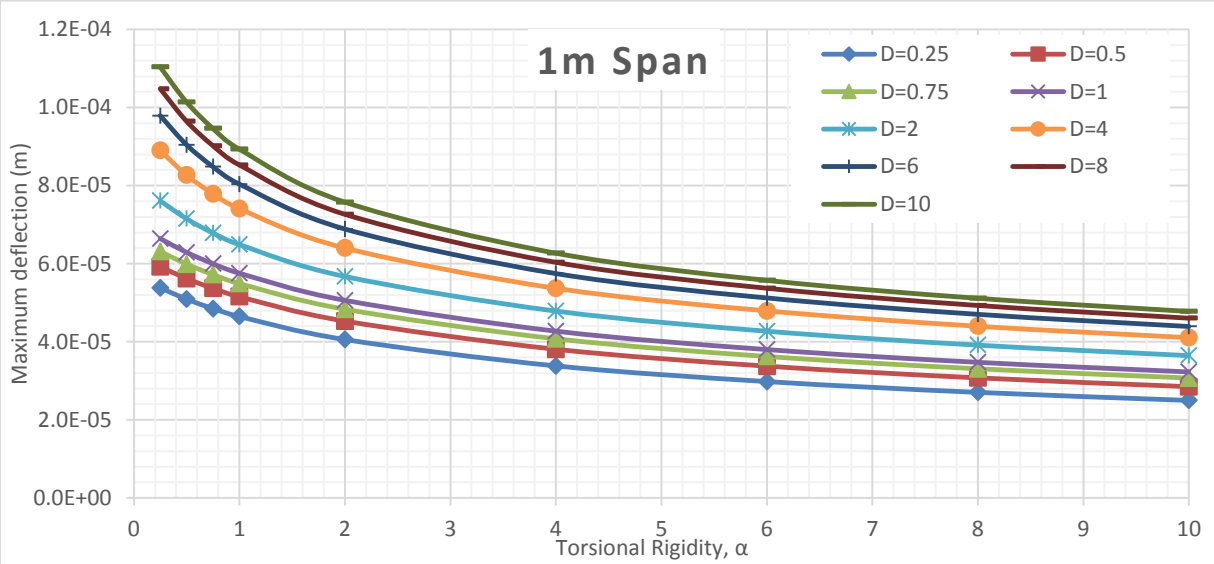


Figure 467 Maximum deflection of 1 m span slab subjected to CHBDC axle 2 & 3 for different D values Orthotropic analyses

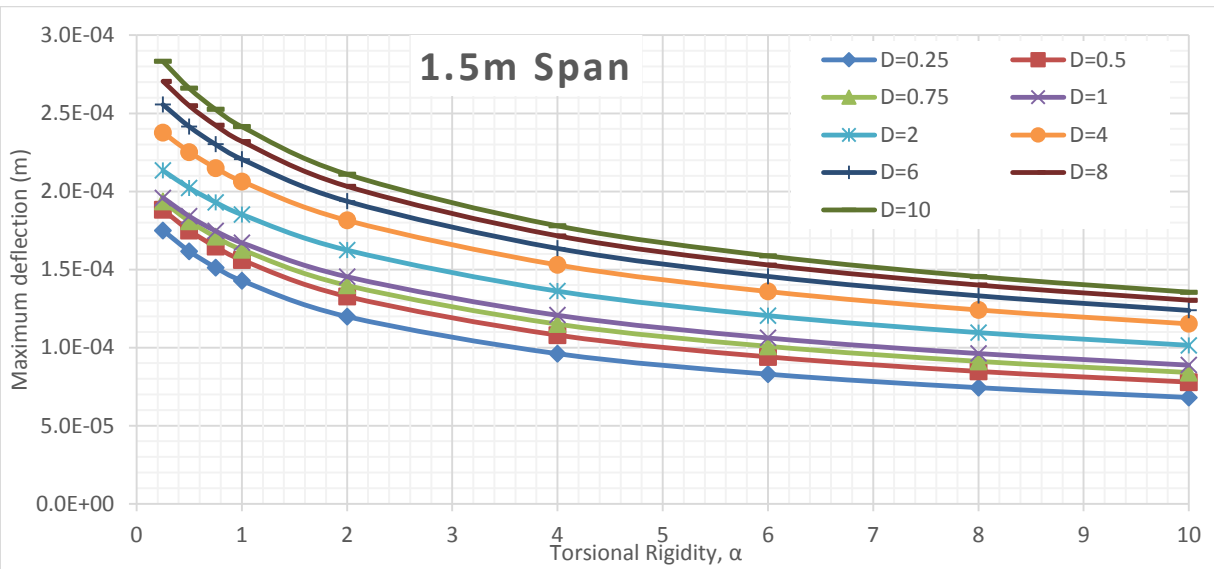


Figure 468 Maximum deflection of 1.5 m span slab subjected to CHBDC axle 2 & 3 for different D values Orthotropic analyses

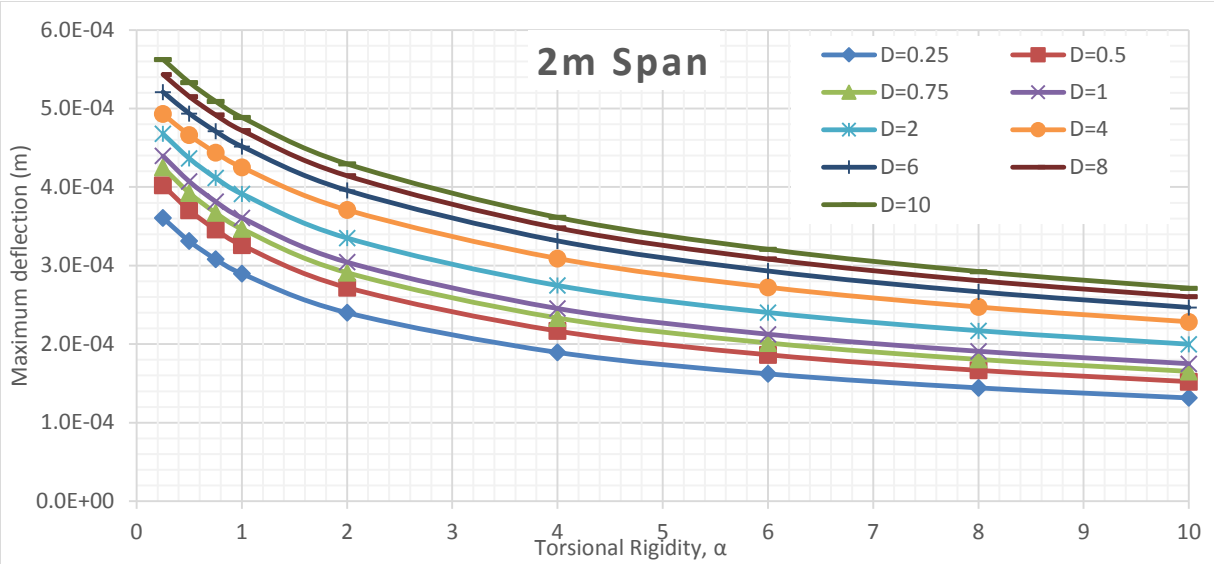


Figure 469 Maximum deflection of 2 m span slab subjected to CHBDC axle 2 & 3 for different D values Orthotropic analyses

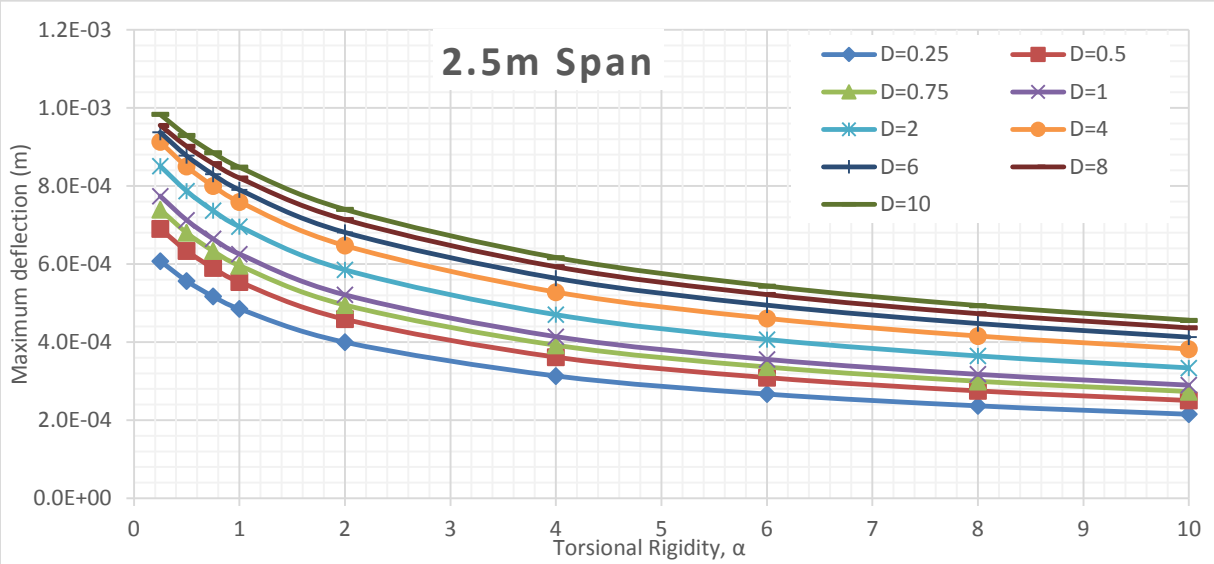


Figure 470 Maximum deflection of 2.5 m span slab subjected to CHBDC axle 2 & 3 for different D values Orthotropic analyses

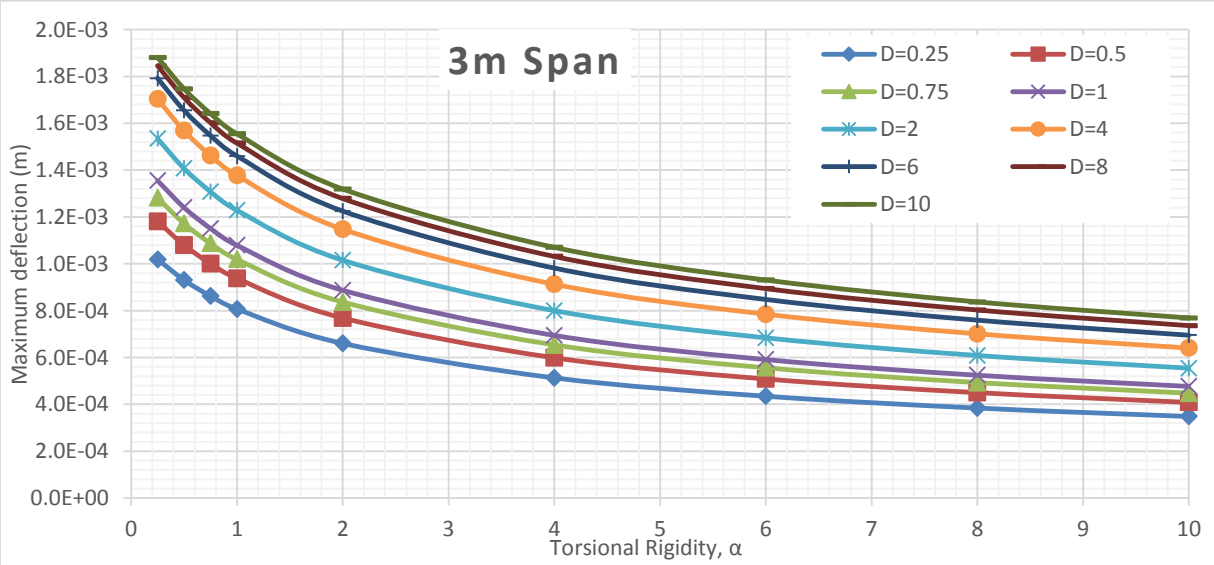


Figure 471 Maximum deflection of 3 m span slab subjected to CHBDC axle 2 & 3 for different D values Orthotropic analyses

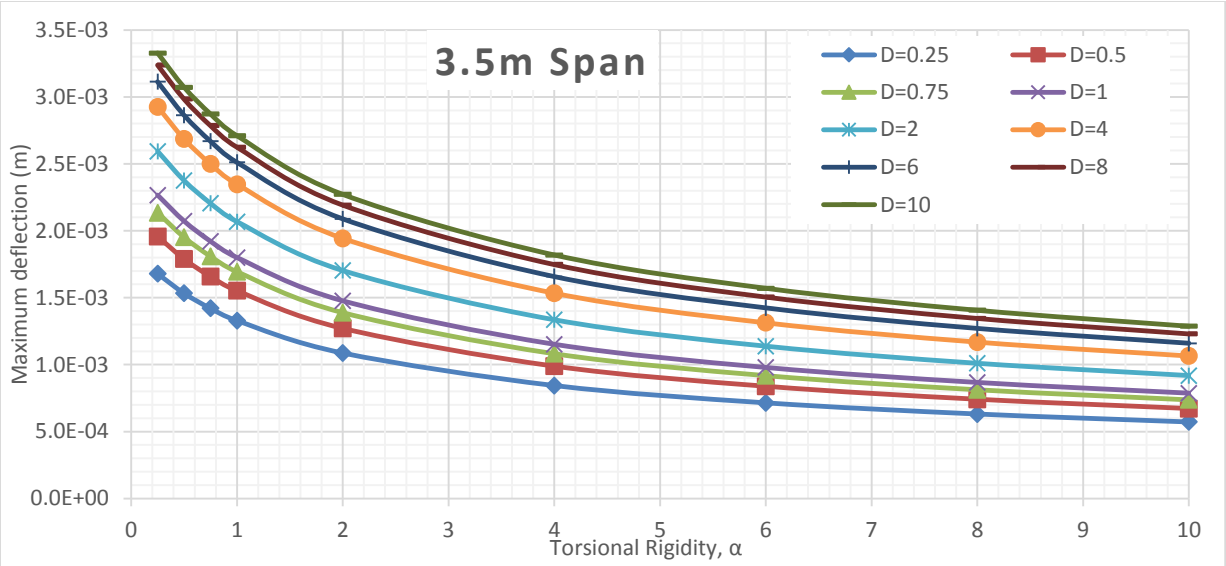


Figure 472 Maximum deflection of 3.5 m span slab subjected to CHBDC axle 2 & 3 for different D values Orthotropic analyses

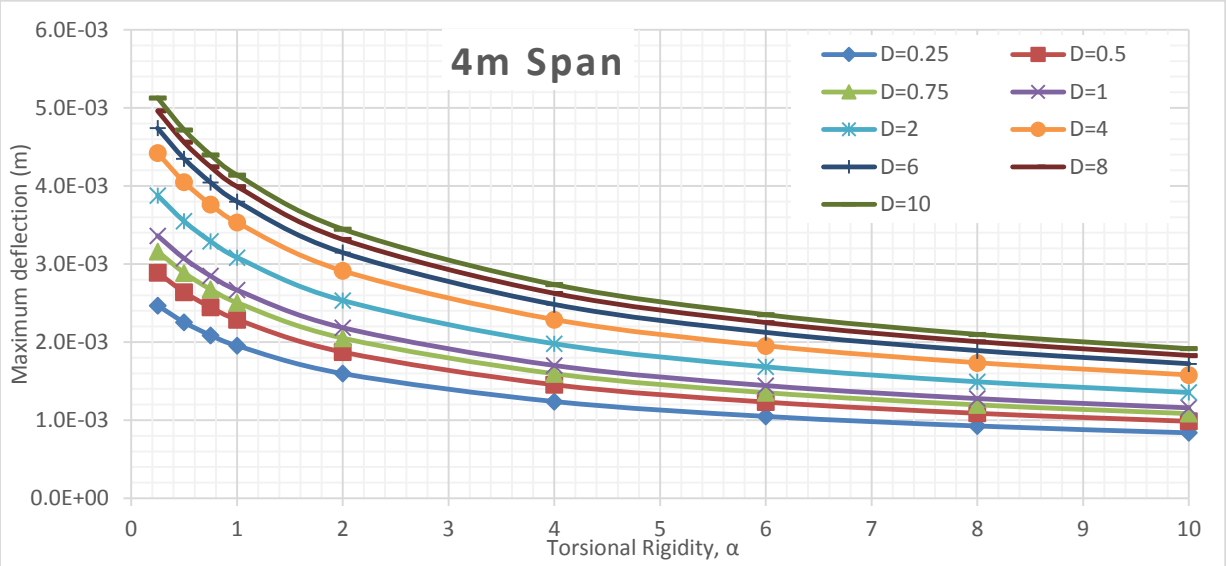


Figure 473 Maximum deflection of 4 m span slab subjected to CHBDC axle 2 & 3 for different D values Orthotropic analyses

Truck Deflection VS Torsional Rigidity for Different D Values at Different span length

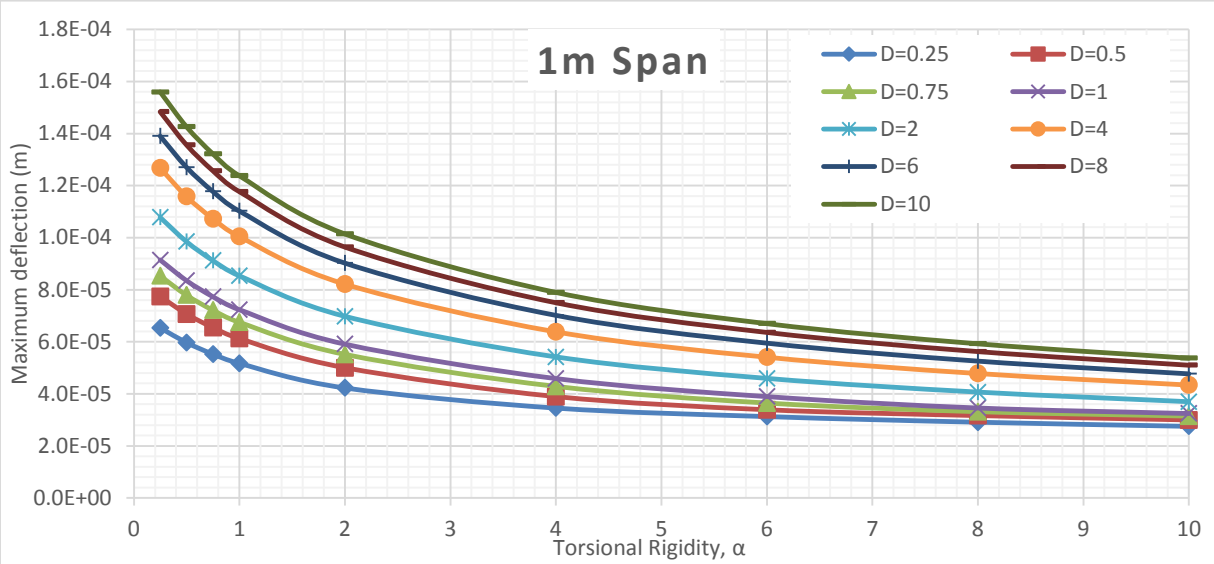


Figure 474 Maximum deflection of 1 m span slab subjected to CHBDC truck for different D values Orthotropic analyses

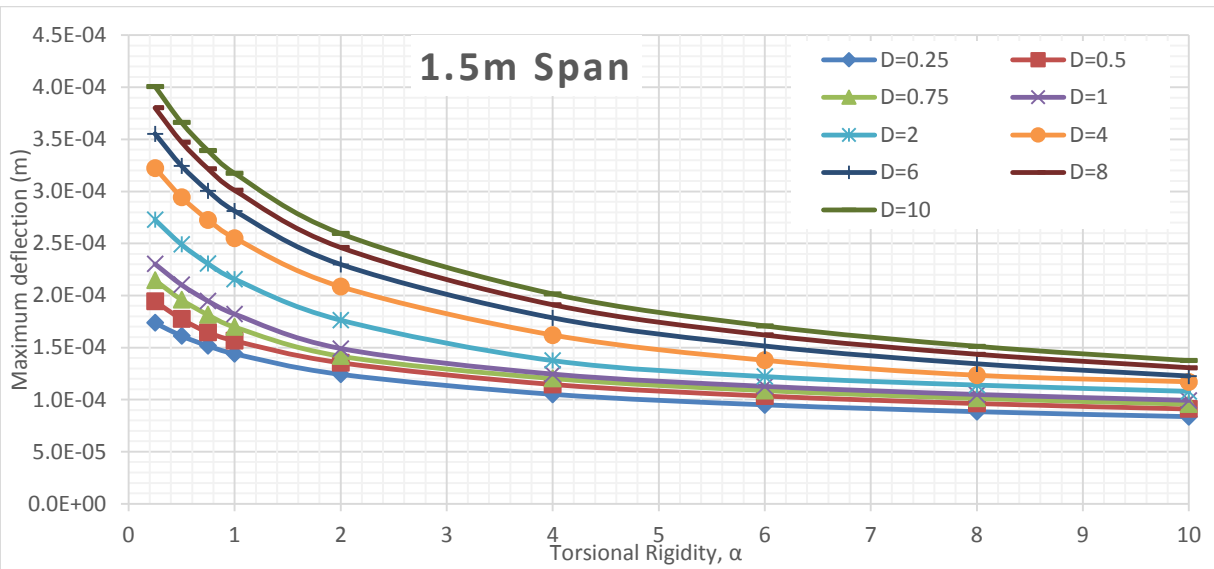


Figure 475 Maximum deflection of 1.5 m span slab subjected to CHBDC truck for different D values Orthotropic analyses

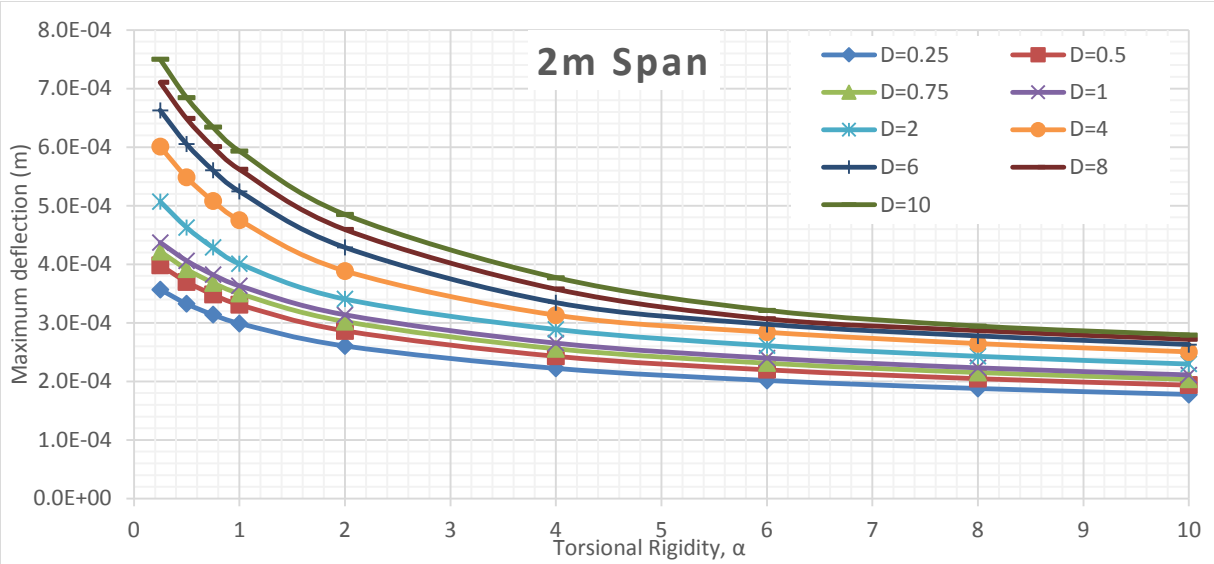


Figure 476 Maximum deflection of 2 m span slab subjected to CHBDC truck for different D values Orthotropic analyses

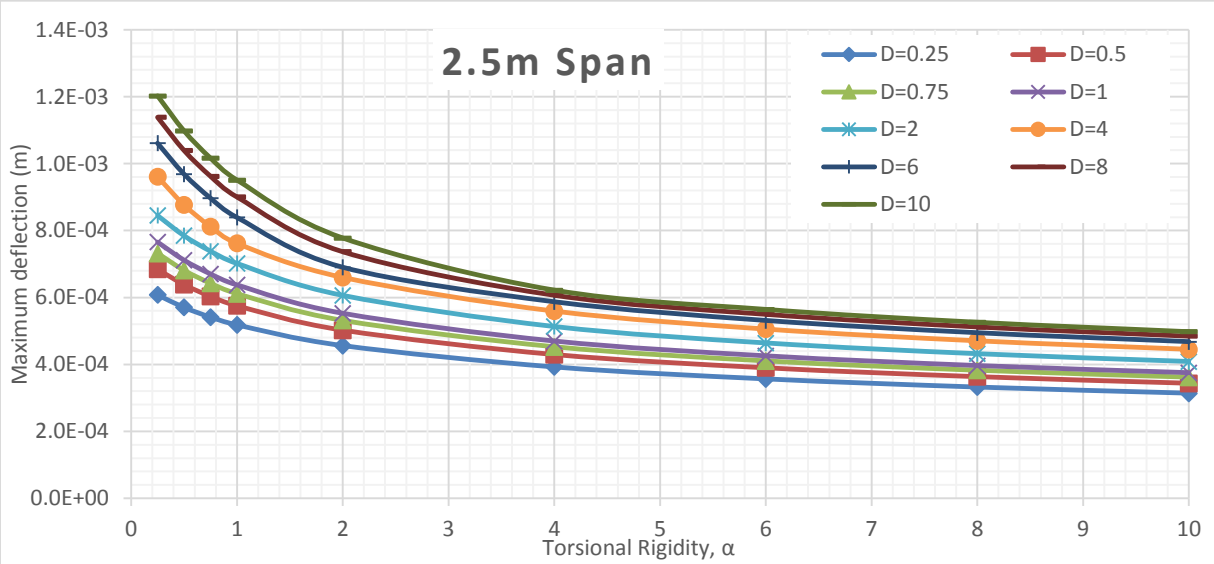


Figure 477 Maximum deflection of 2.5 m span slab subjected to CHBDC truck for different D values Orthotropic analyses

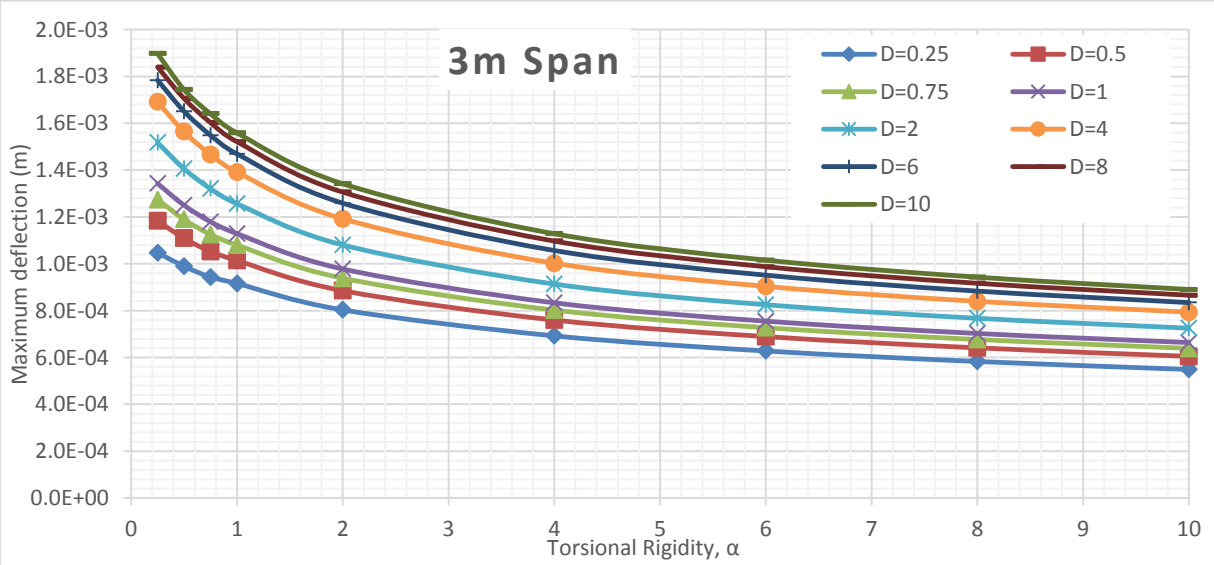


Figure 478 Maximum deflection of 3 m span slab subjected to CHBDC truck for different D values Orthotropic analyses

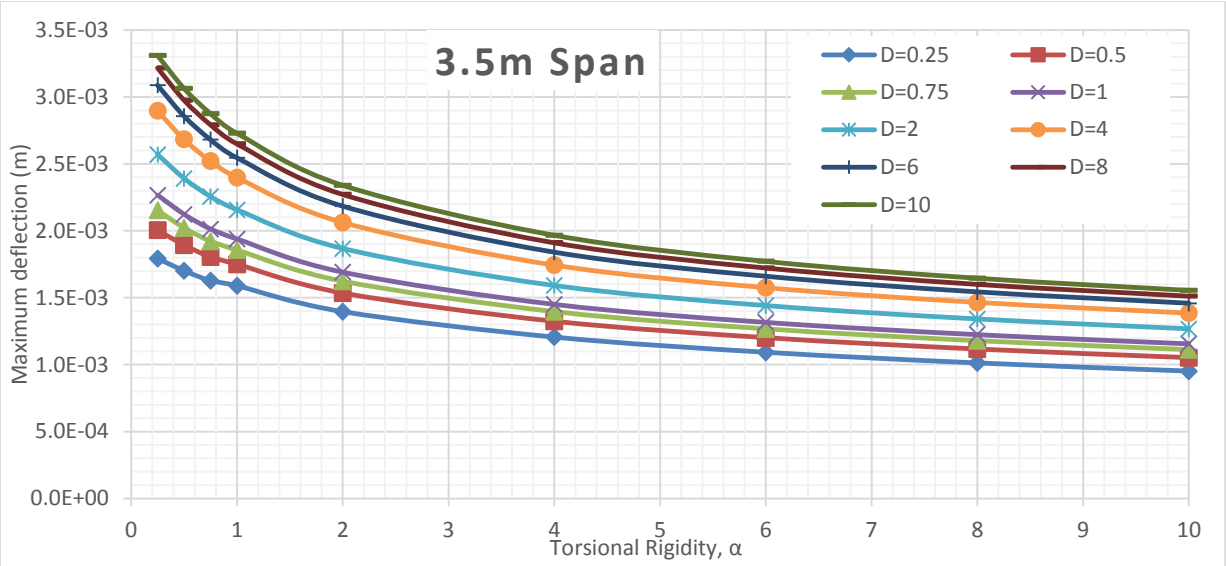


Figure 479 Maximum deflection of 3.5 m span slab subjected to CHBDC truck for different D values Orthotropic analyses

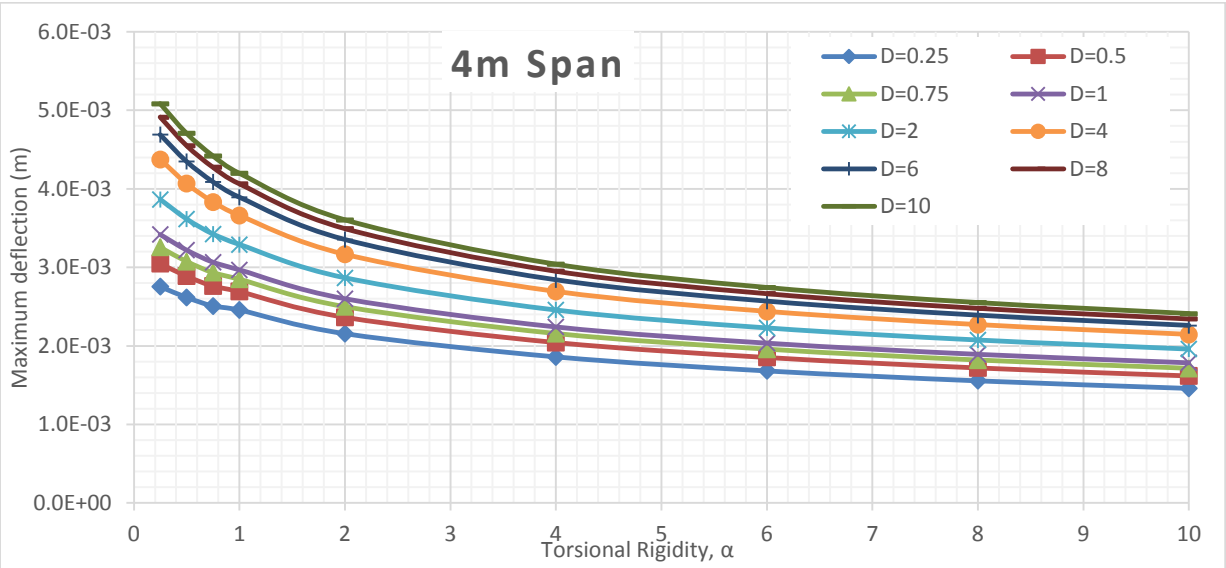


Figure 480 Maximum deflection of 4 m span slab subjected to CHBDC truck for different D values Orthotropic analyses

Axle 4 Transverse Deflection VS Torsional Rigidity for Different D Values at Different span length

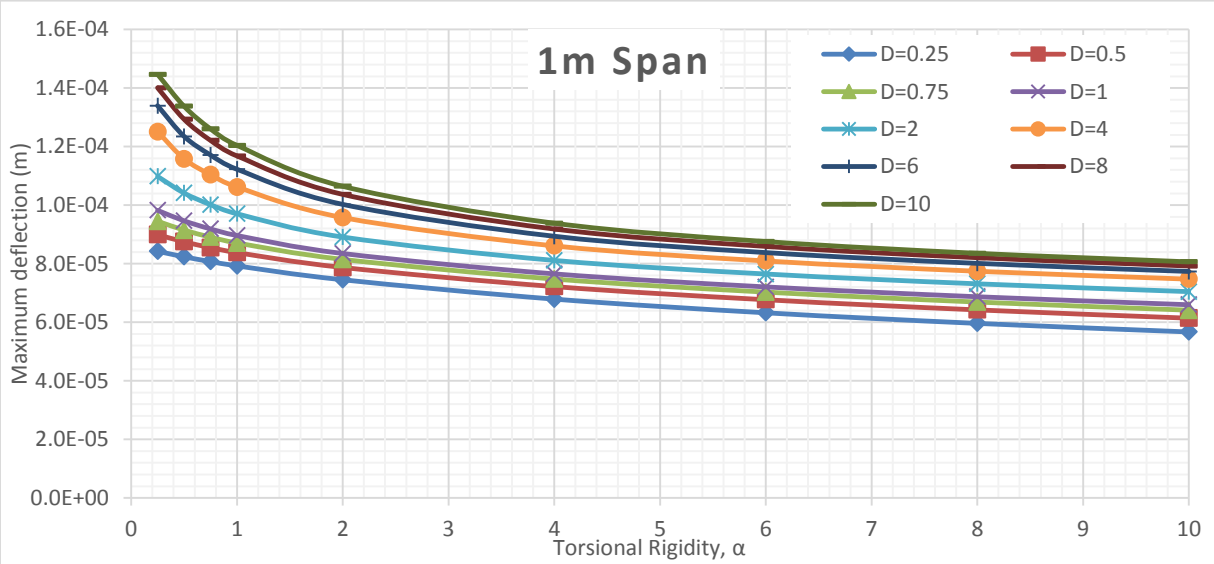


Figure 481 Maximum deflection of 1 m span slab subjected to CHBDC axle 4 for different D values Orthotropic analyses

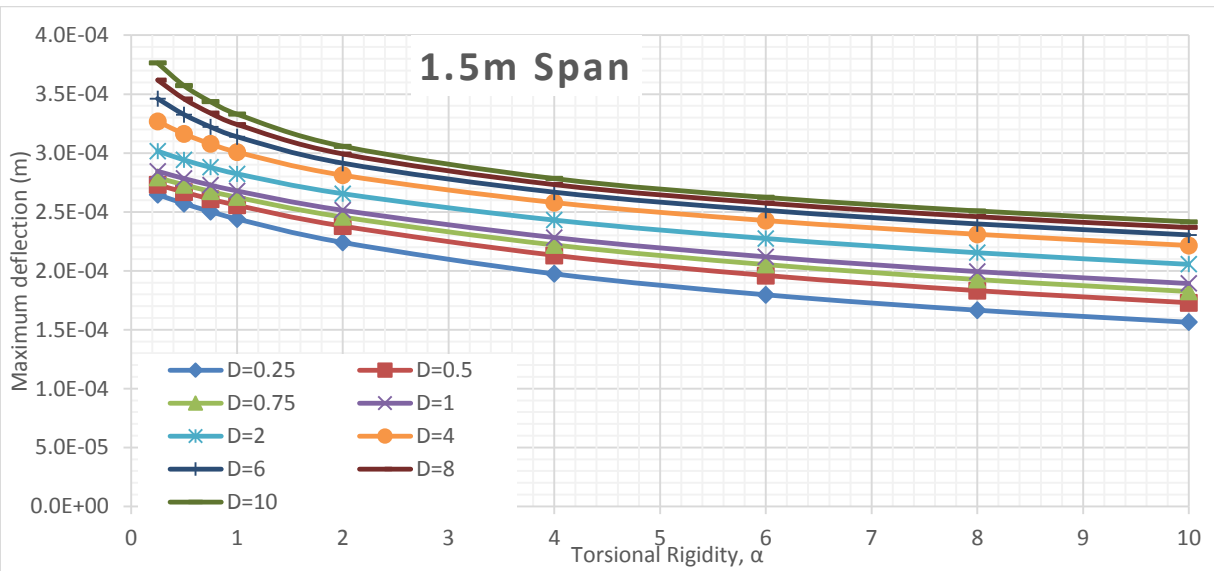


Figure 482 Maximum deflection of 1.5 m span slab subjected to CHBDC axle 4 for different D values Orthotropic analyses

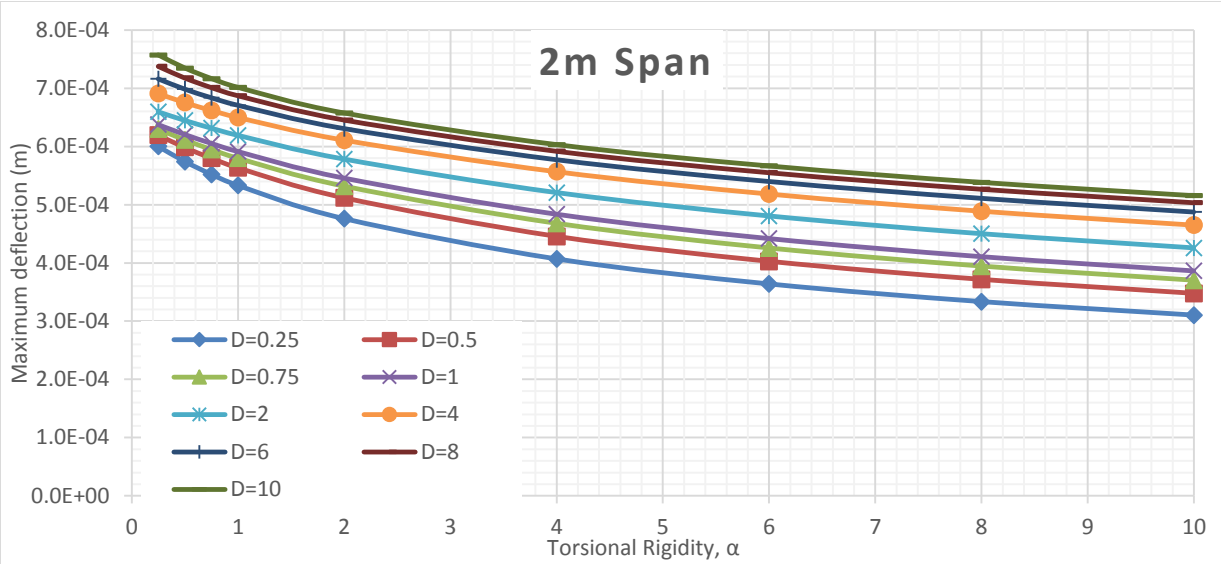


Figure 483 Maximum deflection of 2 m span slab subjected to CHBDC axle 4 for different D values Orthotropic analyses

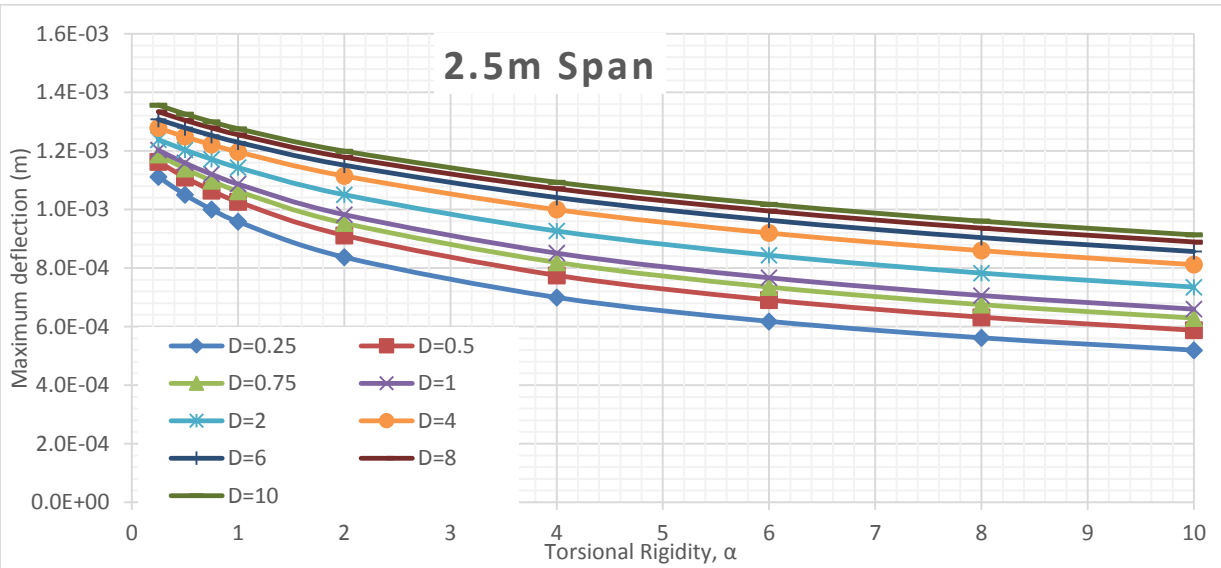


Figure 484 Maximum deflection of 2.5 m span slab subjected to CHBDC axle 4 for different D values Orthotropic analyses

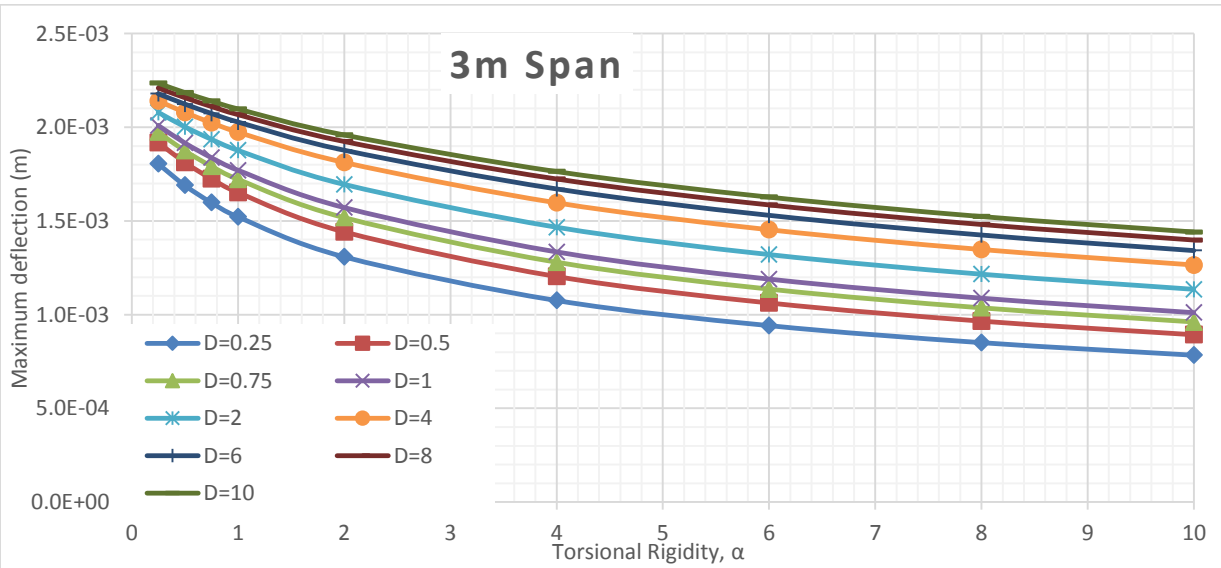


Figure 485 Maximum deflection of 3 m span slab subjected to CHBDC axle 4 for different D values Orthotropic analyses

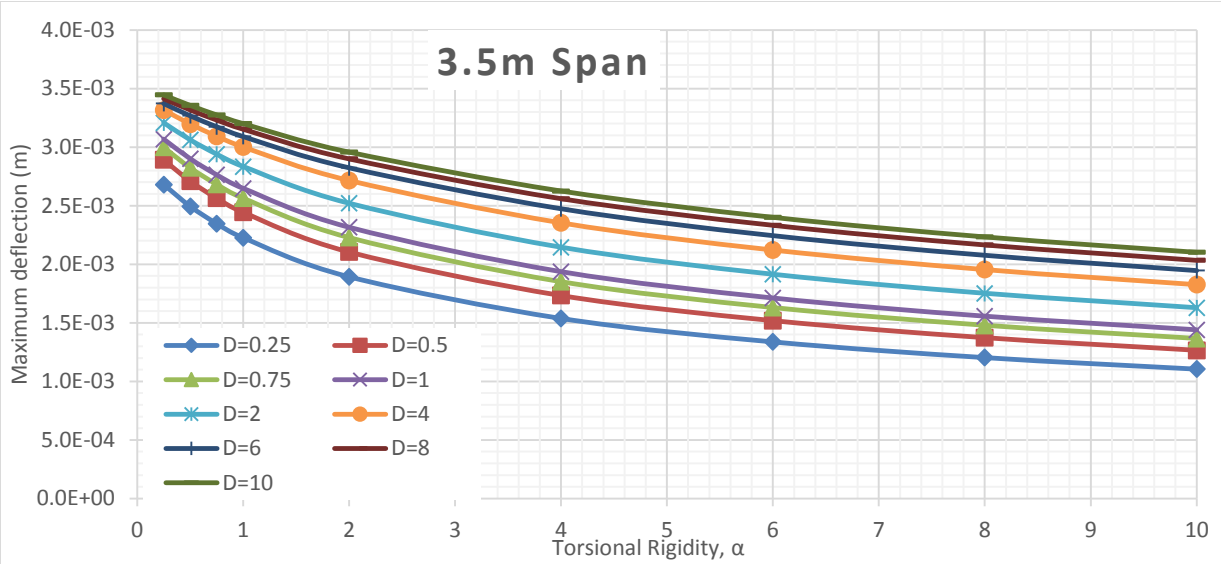


Figure 486 Maximum deflection of 3.5 m span slab subjected to CHBDC axle 4 for different D values Orthotropic analyses

Axle 2 & 3 Transverse Deflection VS Torsional Rigidity for Different D Values at Different span length

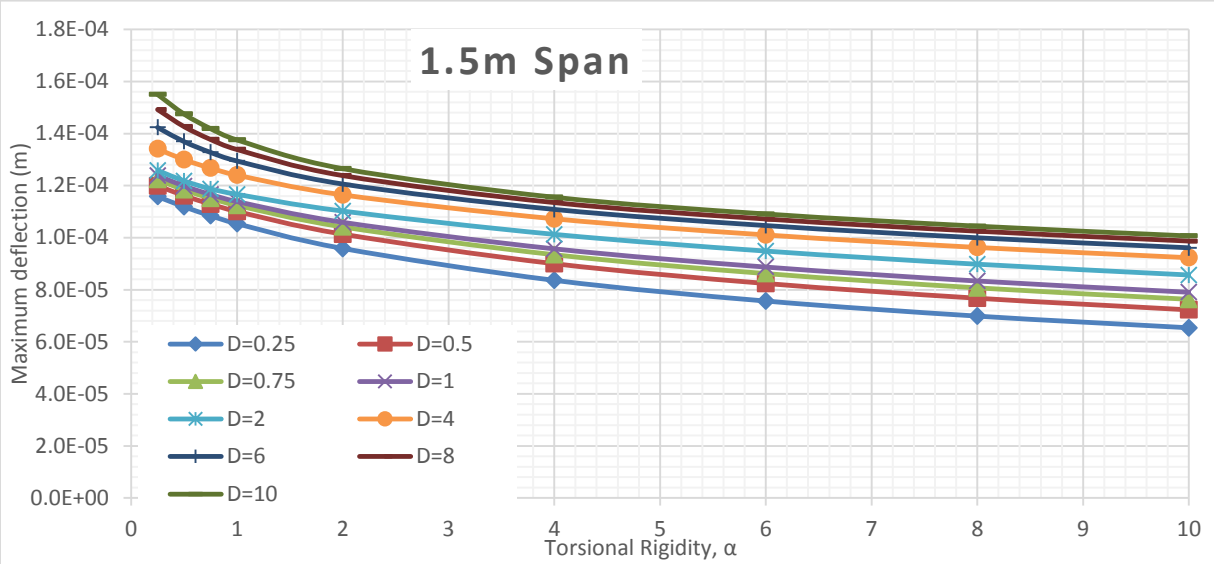


Figure 487 Maximum deflection of 1.5 m span slab subjected to CHBDC axle 2 & 3 for different D values Orthotropic analyses

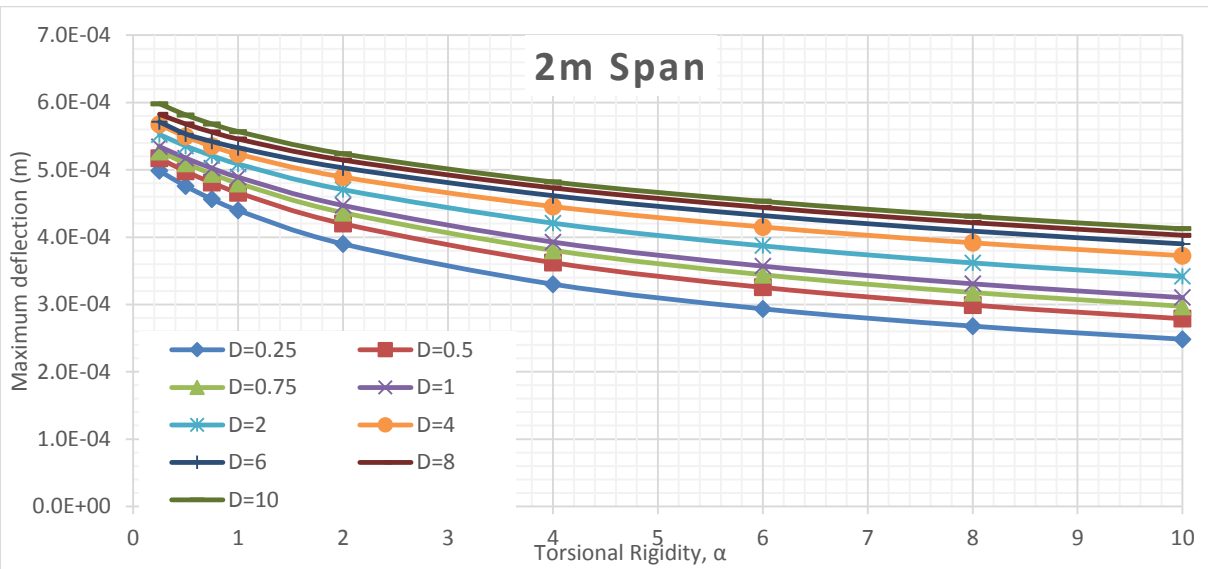


Figure 488 Maximum deflection of 2 m span slab subjected to CHBDC axle 2 & 3 for different D values Orthotropic analyses

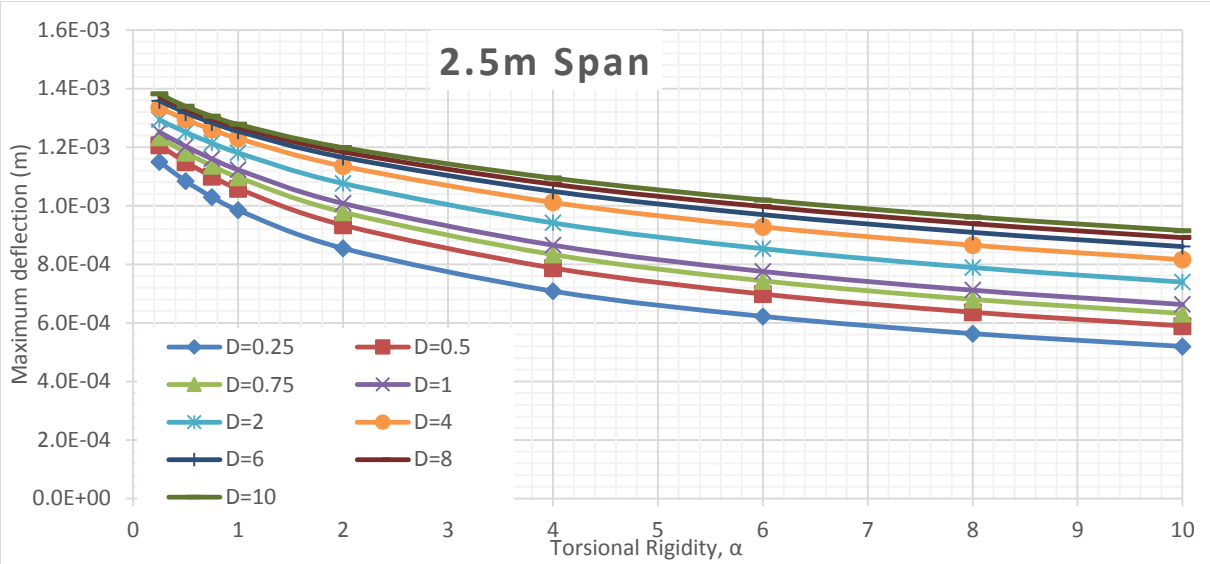


Figure 489 Maximum deflection of 2.5 m span slab subjected to CHBDC axle 2 & 3 for different D values Orthotropic analyses

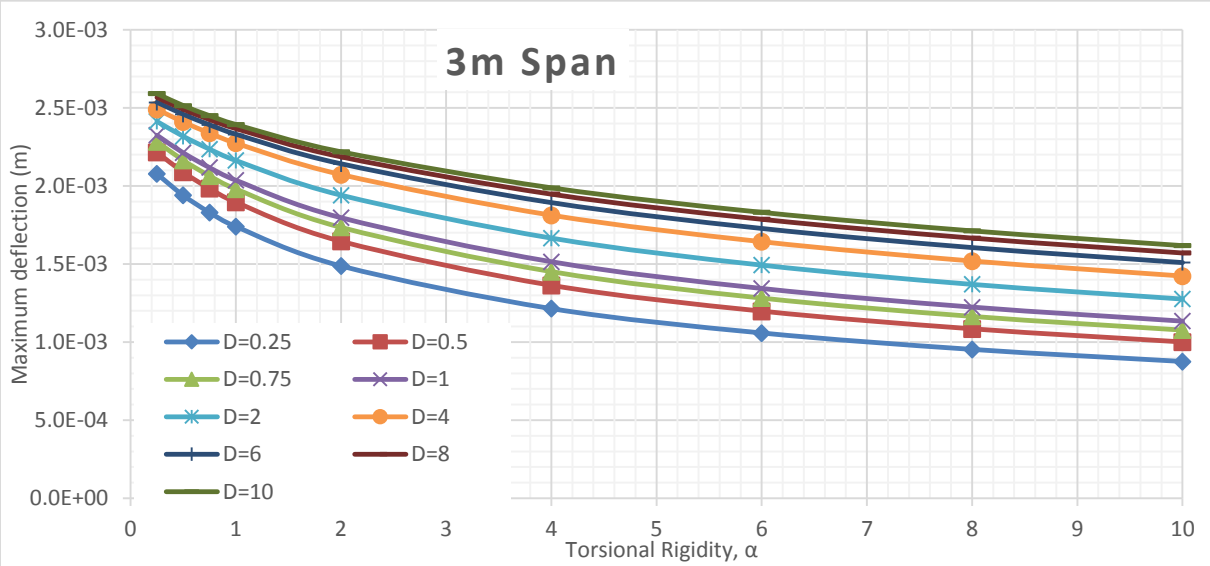


Figure 490 Maximum deflection of 3 m span slab subjected to CHBDC axle 2 & 3 for different D values Orthotropic analyses

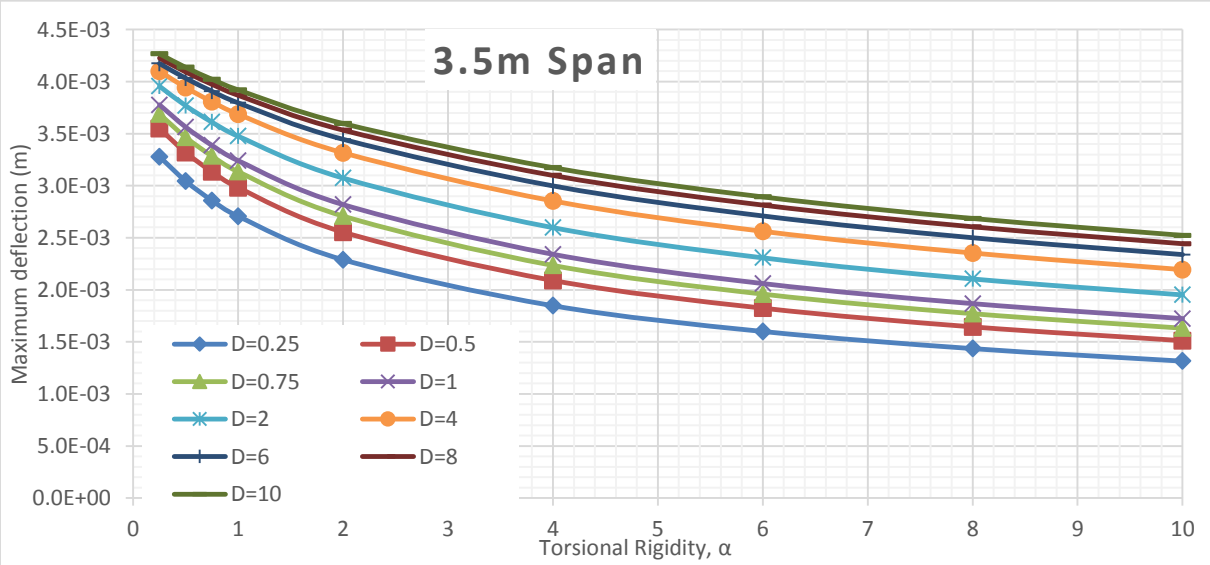


Figure 491 Maximum deflection of 3.5 m span slab subjected to CHBDC axle 2 & 3 for different D values Orthotropic analyses

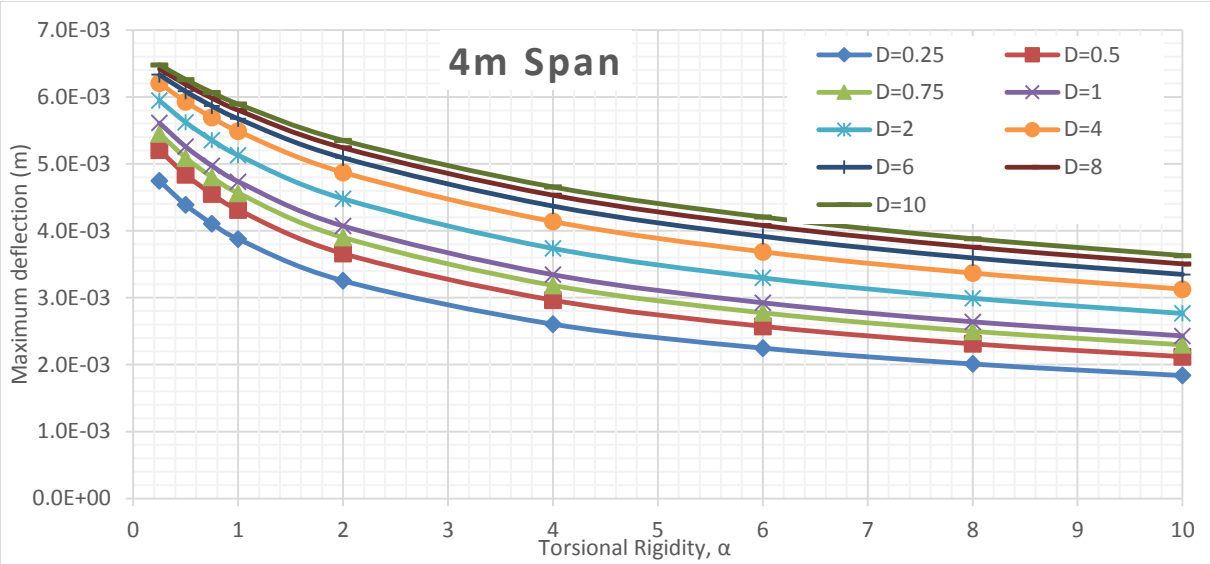


Figure 492 Maximum deflection of 4 m span slab subjected to CHBDC axle 2 & 3 for different D values Orthotropic analyses

D.1 Results Comparison (Bending Moment)

D.1.1 BENDING MOMENT COMPARISON RESULTS TABLES

Alpha 0.25 Bending Moment Comparison

Table 190 Maximum moment results comparison for alpha 0.25 for slabs subjected to CHBDC axle 4 loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4	1	0.372%	0.504%	0.604%	0.688%	0.945%	1.303%	1.574%	1.799%	1.996%
	1.5	0.325%	0.414%	0.482%	0.541%	0.723%	0.976%	1.169%	1.328%	1.467%
	2	0.259%	0.338%	0.397%	0.448%	0.604%	0.821%	0.984%	1.118%	1.235%
	2.5	0.232%	0.302%	0.356%	0.402%	0.543%	0.738%	0.884%	1.005%	1.109%
	3	0.002%	0.094%	0.162%	0.215%	0.371%	0.573%	0.718%	0.837%	0.938%
	3.5	0.215%	0.279%	0.327%	0.367%	0.489%	0.657%	0.783%	0.887%	0.977%
	4	1.393%	1.404%	1.420%	1.436%	1.499%	1.608%	1.698%	1.777%	1.848%

Table 191 Maximum moment results comparison for alpha 0.25 for slabs subjected to CHBDC axle 2 & 3 loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2and 3	1	3.337%	1.553%	1.060%	0.771%	0.866%	1.277%	1.574%	1.812%	2.015%
	1.5	3.846%	2.914%	2.346%	2.026%	1.364%	0.858%	1.072%	1.250%	1.405%
	2	2.914%	2.439%	2.144%	2.021%	1.550%	1.386%	1.190%	1.005%	1.108%
	2.5	2.359%	1.981%	1.764%	1.712%	1.456%	1.418%	1.374%	1.308%	1.235%
	3	1.879%	1.548%	1.389%	1.347%	1.161%	1.211%	1.235%	1.235%	1.222%
	3.5	2.184%	2.186%	2.232%	2.231%	2.148%	2.037%	3.174%	4.121%	4.512%
	4	3.474%	3.427%	3.467%	3.485%	3.539%	3.572%	3.829%	5.088%	5.830%

Table 192 Maximum moment results comparison for alpha 0.25 for slabs subjected to CHBDC truck loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
TRUCK	1	0.372%	0.504%	0.604%	0.688%	0.945%	1.303%	1.574%	1.799%	1.996%
	1.5	0.326%	0.413%	0.483%	0.541%	0.723%	0.976%	1.169%	1.328%	1.467%
	2	3.995%	0.339%	0.398%	0.448%	0.604%	0.821%	0.983%	1.118%	1.235%
	2.5	4.085%	3.295%	1.677%	0.404%	0.543%	0.738%	0.884%	1.005%	1.109%
	3	2.912%	3.299%	3.047%	2.704%	0.373%	0.573%	0.718%	0.837%	0.938%
	3.5	1.965%	3.665%	4.068%	4.072%	2.468%	0.659%	0.783%	0.887%	0.977%
	4	1.374%	3.790%	4.820%	5.314%	5.519%	4.134%	1.696%	1.778%	1.849%

Table 193 Maximum moment results comparison for alpha 0.25 for slabs subjected to CHBDC axle 4 loading (main bars parallel to traffic)

Maximum Moment (kN.m)

Axle 4 Transverse	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
	1	5.526%	5.352%	5.080%	4.807%	4.072%	3.731%	3.569%	3.472%	3.404%
	1.5	3.695%	3.770%	3.825%	3.852%	3.802%	3.463%	3.113%	2.812%	2.665%
	2	2.937%	2.908%	2.913%	2.929%	3.008%	3.071%	3.040%	2.965%	2.870%
	2.5	2.397%	2.347%	2.321%	2.308%	2.312%	2.381%	2.439%	2.473%	2.488%
	3	2.003%	1.960%	1.934%	1.914%	1.877%	1.883%	1.917%	1.955%	1.990%
	3.5	1.759%	1.715%	1.693%	1.676%	1.633%	1.602%	1.603%	1.617%	1.637%

Table 194 Maximum moment results comparison for alpha 0.25 for slabs subjected to CHBDC axle 2 & 3 loading (main bars parallel to traffic)

		Maximum Moment (kN.m)								
Axle 2&3 Transverse	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
	1.5	16.487%	16.554%	16.695%	16.833%	17.266%	17.804%	18.148%	18.401%	18.640%
	2	6.481%	6.061%	5.808%	5.646%	5.361%	5.230%	5.191%	5.165%	5.139%
	2.5	4.105%	4.004%	3.934%	3.881%	3.771%	3.721%	3.767%	3.804%	3.815%
	3	2.916%	2.847%	2.823%	2.807%	2.788%	2.880%	3.019%	3.408%	3.629%
	3.5	2.314%	2.257%	2.226%	2.216%	2.208%	2.293%	2.414%	2.532%	2.721%
	4	1.959%	1.918%	1.897%	1.885%	1.881%	1.939%	2.020%	2.104%	2.188%

Alpha 0.5 Bending Moment Comparison

Table 195 Maximum moment results comparison for alpha 0.5 for slabs subjected to CHBDC axle 4 loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4	1	0.365%	0.495%	0.594%	0.675%	0.926%	1.272%	1.532%	1.747%	1.933%
	1.5	0.324%	0.411%	0.479%	0.536%	0.712%	0.956%	1.140%	1.292%	1.423%
	2	0.256%	0.334%	0.392%	0.442%	0.593%	0.802%	0.958%	1.086%	1.197%
	2.5	0.230%	0.299%	0.352%	0.396%	0.533%	0.721%	0.861%	0.976%	1.074%
	3	0.013%	0.080%	3.406%	0.199%	0.351%	0.547%	0.687%	0.801%	0.897%
	3.5	0.210%	0.273%	0.321%	0.360%	0.480%	0.642%	0.763%	0.862%	0.947%
	4	1.398%	1.411%	1.428%	1.445%	1.507%	1.612%	1.698%	1.772%	1.839%

Table 196 Maximum moment results comparison for alpha 0.5 for slabs subjected to CHBDC axle 2 & 3 loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2and 3	1	3.050%	1.582%	1.141%	0.915%	0.827%	1.216%	1.500%	1.729%	1.924%
	1.5	3.517%	2.656%	2.164%	1.881%	1.339%	0.911%	1.021%	1.187%	1.331%
	2	2.758%	2.291%	1.997%	1.885%	1.456%	1.323%	1.171%	1.029%	1.048%
	2.5	2.261%	1.899%	1.686%	1.631%	1.373%	1.338%	1.299%	1.246%	1.188%
	3	1.803%	1.492%	1.764%	1.293%	1.109%	1.143%	1.161%	1.160%	1.149%
	3.5	2.064%	2.007%	2.063%	2.071%	2.003%	1.942%	1.834%	1.726%	1.662%
	4	3.368%	3.333%	3.376%	3.394%	3.395%	3.462%	3.478%	3.470%	3.452%

Table 197 Maximum moment results comparison for alpha 0.5 for slabs subjected to CHBDC truck loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
TRUCK	1	0.365%	0.495%	0.594%	0.675%	0.926%	1.272%	1.532%	1.747%	1.933%
	1.5	1.468%	0.411%	0.478%	0.536%	0.711%	0.956%	1.140%	1.292%	1.423%
	2	3.496%	1.991%	0.393%	0.442%	0.593%	0.802%	0.958%	1.086%	1.197%
	2.5	2.845%	2.726%	2.395%	1.123%	0.533%	0.721%	0.861%	0.975%	1.074%
	3	1.307%	2.115%	0.545%	2.159%	0.352%	0.547%	0.687%	0.801%	0.897%
	3.5	0.341%	2.080%	2.701%	2.931%	2.945%	0.643%	0.763%	0.862%	0.947%
	4	0.126%	2.059%	3.122%	3.709%	4.472%	4.361%	2.461%	1.771%	1.838%

Table 198 Maximum moment results comparison for alpha 0.5 for slabs subjected to CHBDC axle 4 loading (main bars parallel to traffic)

Maximum Moment (kN.m)

	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4 Transverse	1	5.369%	5.232%	5.031%	4.832%	4.192%	3.869%	3.743%	3.639%	3.565%
	1.5	3.689%	3.732%	3.757%	3.764%	3.699%	3.439%	3.180%	2.956%	2.765%
	2	2.959%	2.936%	2.935%	2.942%	2.974%	2.986%	2.946%	2.883%	2.809%
	2.5	2.413%	2.373%	2.352%	2.341%	2.336%	2.367%	2.391%	2.402%	2.402%
	3	2.025%	1.977%	0.088%	1.939%	1.910%	1.908%	1.924%	1.943%	1.959%
	3.5	1.779%	1.728%	1.708%	1.693%	1.658%	1.634%	1.632%	1.639%	1.649%

Table 199 Maximum moment results comparison for alpha 0.5 for slabs subjected to CHBDC axle 2 & 3 loading (main bars parallel to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2&3 Transverse	1.5	16.750%	16.711%	16.781%	16.866%	17.182%	17.620%	17.915%	18.137%	18.315%
	2	6.503%	6.196%	5.997%	5.860%	5.577%	5.385%	5.305%	5.256%	5.219%
	2.5	4.093%	4.002%	3.955%	3.918%	3.832%	3.772%	3.751%	3.737%	3.725%
	3	2.901%	2.852%	0.681%	2.819%	2.810%	2.887%	2.975%	3.051%	3.111%
	3.5	2.298%	2.267%	2.248%	2.237%	2.240%	2.314%	2.403%	2.487%	2.563%
	4	1.948%	1.925%	1.913%	1.906%	1.910%	1.962%	2.027%	2.093%	2.157%

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Alpha 0.75 Bending Moment Comparison

Table 200 Maximum moment results comparison for alpha 0.75 for slabs subjected to CHBDC axle 4 loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4	1	0.360%	0.488%	0.584%	0.665%	0.909%	1.245%	1.495%	1.702%	1.880%
	1.5	0.324%	0.410%	0.475%	0.531%	0.702%	0.938%	1.115%	1.260%	1.385%
	2	0.254%	0.330%	0.388%	0.436%	0.584%	0.786%	0.936%	1.058%	1.164%
	2.5	0.229%	0.296%	0.349%	0.392%	0.525%	0.706%	0.841%	0.950%	1.044%
	3	0.023%	0.069%	0.133%	0.185%	0.334%	0.524%	0.660%	0.769%	0.862%
	3.5	0.207%	0.269%	0.316%	0.355%	0.471%	0.629%	0.745%	0.840%	0.921%
	4	1.402%	1.417%	1.435%	1.452%	1.514%	1.615%	1.697%	1.768%	1.830%

Table 201 Maximum moment results comparison for alpha 0.75 for slabs subjected to CHBDC axle 2 & 3 loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2and 3	1	2.837%	1.597%	1.192%	1.011%	0.795%	1.165%	1.437%	1.658%	1.846%
	1.5	3.253%	2.462%	2.030%	1.778%	1.318%	0.979%	0.979%	1.135%	1.271%
	2	2.622%	2.167%	1.881%	1.779%	1.385%	1.279%	1.157%	1.045%	0.999%
	2.5	2.174%	1.828%	1.620%	1.564%	1.311%	1.278%	1.245%	1.202%	1.156%
	3	1.736%	1.442%	1.285%	1.246%	1.066%	1.089%	1.105%	1.104%	1.095%
	3.5	1.958%	1.858%	1.917%	1.933%	1.881%	1.859%	1.783%	1.701%	1.636%
	4	3.274%	3.258%	3.296%	3.316%	3.304%	3.379%	3.402%	3.402%	3.391%

Table 202 Maximum moment results comparison for alpha 0.75 for slabs subjected to CHBDC truck loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
TRUCK	1	0.359%	0.488%	0.584%	0.665%	0.909%	1.245%	1.495%	1.702%	1.880%
	1.5	3.317%	0.410%	0.475%	0.531%	0.702%	0.938%	1.115%	1.260%	1.385%
	2	2.913%	2.509%	0.388%	0.437%	0.584%	0.786%	0.936%	1.058%	1.164%
	2.5	1.800%	2.113%	2.044%	1.963%	0.525%	0.706%	0.840%	0.950%	1.045%
	3	0.112%	1.125%	1.458%	1.574%	0.968%	0.524%	0.660%	0.769%	0.862%
	3.5	0.758%	0.885%	1.608%	1.967%	2.392%	0.629%	0.745%	0.840%	0.921%
	4	1.023%	0.849%	1.874%	2.488%	3.548%	3.899%	3.891%	1.767%	1.830%

Table 203 Maximum moment results comparison for alpha 0.75 for slabs subjected to CHBDC axle 4 loading (main bars parallel to traffic)

Maximum Moment (kN.m)

Axle 4 Transverse	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
	1	5.261%	5.152%	4.999%	4.847%	4.348%	3.969%	3.833%	3.741%	3.673%
	1.5	3.679%	3.704%	3.712%	3.709%	3.639%	3.429%	3.228%	3.053%	2.902%
	2	2.975%	2.955%	2.950%	2.949%	2.955%	2.938%	2.894%	2.838%	2.778%
	2.5	2.435%	2.392%	2.374%	2.364%	2.353%	2.359%	2.364%	2.362%	2.354%
	3	2.045%	1.991%	1.971%	1.958%	1.932%	1.924%	1.929%	1.936%	1.941%
	3.5	1.797%	1.740%	1.721%	1.708%	1.677%	1.656%	1.651%	1.653%	1.657%

Table 204 Maximum moment results comparison for alpha 0.75 for slabs subjected to CHBDC axle 2 & 3 loading (main bars parallel to traffic)

		Maximum Moment (kN.m)								
Axle 2&3 Transverse	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
	1.5	16.971%	16.860%	16.877%	16.924%	17.145%	17.497%	17.750%	17.944%	18.102%
	2	6.506%	6.278%	6.119%	6.003%	5.738%	5.520%	5.417%	5.354%	5.308%
	2.5	4.076%	4.006%	3.963%	3.937%	3.870%	3.807%	3.775%	3.751%	3.731%
	3	2.884%	2.861%	2.844%	2.835%	2.837%	2.889%	2.945%	2.990%	3.026%
	3.5	2.282%	2.270%	2.262%	2.257%	2.267%	2.326%	2.392%	2.452%	2.506%
	4	1.937%	1.927%	1.922%	1.920%	1.928%	1.975%	2.029%	2.081%	2.130%

Alpha 1 Bending Moment Comparison

Table 205 Maximum moment results comparison for alpha 1 for slabs subjected to CHBDC axle 4 loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4	1	0.354%	0.481%	0.576%	0.656%	0.895%	1.221%	1.463%	1.661%	1.833%
	1.5	0.325%	0.408%	0.472%	0.527%	0.694%	0.923%	1.093%	1.232%	1.353%
	2	0.252%	0.327%	0.384%	0.432%	0.576%	0.772%	0.916%	1.034%	1.135%
	2.5	0.227%	0.294%	0.345%	0.388%	0.518%	0.693%	0.823%	0.928%	1.018%
	3	0.030%	0.059%	0.123%	0.173%	0.319%	0.504%	0.636%	0.742%	0.831%
	3.5	0.205%	0.266%	0.312%	0.350%	0.464%	0.617%	0.729%	0.820%	0.898%
	4	1.411%	1.423%	1.441%	1.458%	1.519%	1.617%	1.696%	1.764%	1.823%

Table 206 Maximum moment results comparison for alpha 1 for slabs subjected to CHBDC axle 2 & 3 loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2and 3	1	2.670%	1.602%	1.223%	1.077%	0.767%	1.122%	1.382%	1.595%	1.776%
	1.5	3.036%	2.309%	1.927%	1.700%	1.300%	1.026%	0.943%	1.090%	1.219%
	2	2.503%	2.064%	1.790%	1.695%	1.330%	1.244%	1.147%	1.056%	0.975%
	2.5	2.096%	1.765%	1.563%	1.508%	1.261%	1.230%	1.204%	1.169%	1.132%
	3	1.674%	1.397%	1.243%	1.204%	1.031%	1.044%	1.060%	1.060%	1.053%
	3.5	1.865%	1.779%	1.788%	1.811%	1.775%	1.784%	1.734%	1.672%	1.611%
	4	3.203%	3.192%	3.224%	3.246%	3.239%	3.309%	3.338%	3.344%	3.339%

Table 207 Maximum moment results comparison for alpha 1 for slabs subjected to CHBDC truck loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
TRUCK	1	0.354%	0.481%	0.576%	0.656%	0.895%	1.221%	1.463%	1.661%	1.833%
	1.5	1.798%	0.407%	0.473%	0.527%	0.694%	0.923%	1.093%	1.232%	1.353%
	2	0.433%	0.375%	0.664%	0.431%	0.576%	0.772%	0.916%	1.034%	1.135%
	2.5	2.476%	1.315%	0.722%	0.326%	0.517%	0.693%	0.823%	0.928%	1.019%
	3	4.161%	2.976%	2.244%	1.741%	0.759%	0.504%	0.636%	0.741%	0.831%
	3.5	4.500%	3.333%	2.555%	2.012%	0.762%	0.252%	0.728%	0.819%	0.898%
	4	5.368%	4.439%	3.597%	2.945%	1.256%	0.315%	1.107%	1.582%	1.824%

Table 208 Maximum moment results comparison for alpha 1 for slabs subjected to CHBDC axle 4 loading (main bars parallel to traffic)

Maximum Moment (kN.m)

Axle 4 Transverse	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
	1	5.182%	5.095%	4.975%	4.856%	4.457%	4.048%	3.922%	3.834%	3.768%
	1.5	3.669%	3.682%	3.681%	3.673%	3.602%	3.427%	3.264%	3.123%	2.999%
	2	2.988%	2.967%	2.959%	2.955%	2.943%	2.910%	2.864%	2.814%	2.763%
	2.5	2.460%	2.408%	2.392%	2.382%	2.365%	2.356%	2.349%	2.339%	2.326%
	3	2.064%	2.003%	1.985%	1.973%	1.949%	1.936%	1.933%	1.932%	1.932%
	3.5	1.816%	1.755%	1.733%	1.721%	1.693%	1.672%	1.665%	1.663%	1.662%

Table 209 Maximum moment results comparison for alpha 1 for slabs subjected to CHBDC axle 2 & 3 loading (main bars parallel to traffic)

		Maximum Moment (kN.m)								
Axle 2&3 Transverse	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
	1.5	17.247%	16.999%	16.976%	16.992%	17.137%	17.417%	17.630%	17.800%	17.940%
	2	6.520%	6.328%	6.201%	6.102%	5.861%	5.636%	5.521%	5.448%	5.396%
	2.5	4.056%	4.013%	3.975%	3.946%	3.893%	3.833%	3.796%	3.768%	3.744%
	3	2.867%	2.862%	2.856%	2.852%	2.856%	2.889%	2.923%	2.949%	2.969%
	3.5	2.270%	2.270%	2.268%	2.269%	2.283%	2.331%	2.381%	2.425%	2.464%
	4	1.937%	1.928%	1.927%	1.928%	1.941%	1.983%	2.028%	2.069%	2.108%

Alpha 2 Bending Moment Comparison

Table 210 Maximum moment results comparison for alpha 2 for slabs subjected to CHBDC axle 4 loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4	1	0.339%	0.461%	0.552%	0.626%	0.848%	1.144%	1.359%	1.535%	1.684%
	1.5	0.325%	0.404%	0.463%	0.514%	0.667%	0.873%	1.024%	1.147%	1.252%
	2	0.246%	0.318%	0.372%	0.416%	0.549%	0.726%	0.854%	0.958%	1.046%
	2.5	0.227%	0.288%	0.335%	0.375%	0.494%	0.652%	0.767%	0.859%	0.937%
	3	0.040%	0.033%	0.090%	0.137%	0.271%	0.441%	0.560%	0.654%	0.733%
	3.5	0.247%	0.266%	0.302%	0.336%	0.440%	0.579%	0.679%	0.759%	0.827%
	4	1.575%	1.479%	1.474%	1.483%	1.534%	1.621%	1.690%	1.748%	1.799%

Table 211 Maximum moment results comparison for alpha 2 for slabs subjected to CHBDC axle 2 & 3 loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2and 3	1	2.237%	1.573%	1.259%	1.188%	0.961%	0.990%	1.216%	1.402%	1.560%
	1.5	2.469%	1.925%	1.672%	1.514%	1.245%	1.116%	1.008%	0.958%	1.065%
	2	2.136%	1.772%	1.552%	1.474%	1.188%	1.158%	1.115%	1.073%	1.033%
	2.5	1.851%	1.572%	1.398%	1.345%	1.136%	1.111%	1.103%	1.089%	1.073%
	3	1.495%	1.253%	1.112%	1.079%	0.930%	0.924%	0.941%	0.947%	0.948%
	3.5	1.636%	1.540%	1.513%	1.517%	1.455%	1.543%	1.558%	1.551%	1.534%
	4	3.141%	3.021%	3.012%	3.031%	3.039%	3.100%	3.146%	3.168%	3.180%

Table 212 Maximum moment results comparison for alpha 2 for slabs subjected to CHBDC truck loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
TRUCK	1	0.337%	0.460%	0.551%	0.626%	0.848%	1.144%	1.359%	1.535%	1.684%
	1.5	1.943%	1.877%	0.461%	0.513%	0.666%	0.873%	1.024%	1.147%	1.251%
	2	0.234%	0.876%	1.109%	1.236%	0.546%	0.725%	0.854%	0.958%	1.046%
	2.5	1.430%	0.487%	0.001%	0.318%	0.786%	0.648%	0.764%	0.857%	0.937%
	3	2.792%	1.894%	1.312%	0.891%	0.089%	0.595%	0.554%	0.650%	0.730%
	3.5	2.418%	2.006%	1.427%	0.999%	0.010%	0.881%	1.231%	0.748%	0.818%
	4	1.143%	1.162%	0.899%	0.590%	0.509%	1.630%	2.187%	2.517%	2.730%

Table 213 Maximum moment results comparison for alpha 2 for slabs subjected to CHBDC axle 4 loading (main bars parallel to traffic)

Maximum Moment (kN.m)

Axle 4 Transverse	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
	1	5.002%	4.970%	4.919%	4.866%	4.674%	4.392%	4.190%	4.077%	4.022%
	1.5	3.675%	3.631%	3.619%	3.605%	3.547%	3.442%	3.353%	3.277%	3.211%
	2	3.075%	3.004%	2.981%	2.969%	2.932%	2.879%	2.835%	2.797%	2.763%
	2.5	2.541%	2.472%	2.434%	2.422%	2.393%	2.360%	2.336%	2.315%	2.297%
	3	2.149%	2.071%	2.034%	2.014%	1.988%	1.964%	1.948%	1.935%	1.925%
	3.5	1.955%	1.835%	1.790%	1.763%	1.734%	1.710%	1.697%	1.687%	1.680%

Table 214 Maximum moment results comparison for alpha 2 for slabs subjected to CHBDC axle 2 & 3 loading (main bars parallel to traffic)

		Maximum Moment (kN.m)								
Axle 2&3 Transverse	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
	1.5	17.961%	17.600%	17.418%	17.307%	17.235%	17.307%	17.404%	17.497%	17.583%
	2	6.491%	6.386%	6.335%	6.288%	6.136%	5.949%	5.833%	5.751%	5.689%
	2.5	3.979%	3.994%	3.989%	3.979%	3.933%	3.883%	3.851%	3.824%	3.800%
	3	2.829%	2.841%	2.852%	2.860%	2.873%	2.878%	2.876%	2.870%	2.864%
	3.5	2.323%	2.274%	2.274%	2.279%	2.300%	2.328%	2.346%	2.359%	2.369%
	4	2.164%	1.993%	1.961%	1.953%	1.961%	1.989%	2.012%	2.030%	2.046%

Alpha 4 Bending Moment Comparison

Table 215 Maximum moment results comparison for alpha 4 for slabs subjected to CHBDC axle 4 loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4	1	0.320%	0.432%	0.516%	0.584%	0.780%	1.037%	1.219%	1.364%	1.488%
	1.5	0.325%	0.397%	0.451%	0.496%	0.630%	0.806%	0.933%	1.035%	1.121%
	2	0.248%	0.307%	0.354%	0.394%	0.511%	0.663%	0.771%	0.858%	0.931%
	2.5	0.282%	0.292%	0.326%	0.359%	0.461%	0.596%	0.692%	0.769%	0.834%
	3	0.135%	0.056%	0.074%	0.103%	0.211%	0.357%	0.459%	0.539%	0.606%
	3.5	0.720%	0.424%	0.370%	0.363%	0.418%	0.528%	0.611%	0.678%	0.734%
	4	2.627%	1.923%	1.724%	1.645%	1.585%	1.628%	1.681%	1.726%	1.767%

Table 216 Maximum moment results comparison for alpha 4 for slabs subjected to CHBDC axle 2 & 3 loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2and 3	1	1.801%	1.463%	1.240%	1.198%	1.126%	0.993%	1.013%	1.160%	1.287%
	1.5	1.898%	1.564%	1.429%	1.339%	1.163%	1.139%	1.106%	1.073%	1.042%
	2	1.712%	1.453%	1.306%	1.256%	1.054%	1.066%	1.065%	1.058%	1.049%
	2.5	1.606%	1.346%	1.209%	1.167%	1.019%	0.996%	1.007%	1.011%	1.012%
	3	1.476%	1.131%	0.987%	0.940%	0.822%	0.798%	0.821%	0.835%	0.845%
	3.5	1.905%	1.432%	1.311%	1.285%	1.233%	1.283%	1.331%	1.360%	1.378%
	4	4.047%	3.237%	2.994%	2.915%	2.827%	2.850%	2.910%	2.949%	2.976%

Table 217 Maximum moment results comparison for alpha 4 for slabs subjected to CHBDC truck loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
TRUCK	1	1.593%	0.463%	0.512%	0.581%	0.780%	1.037%	1.219%	1.364%	1.487%
	1.5	0.322%	0.411%	0.769%	0.930%	0.624%	0.803%	0.931%	1.034%	1.121%
	2	2.203%	1.338%	0.795%	0.422%	0.284%	0.653%	0.765%	0.853%	0.928%
	2.5	2.966%	2.639%	2.173%	1.775%	0.875%	0.038%	0.445%	0.755%	0.823%
	3	3.000%	3.211%	3.075%	2.876%	2.059%	1.031%	0.477%	0.132%	0.103%
	3.5	1.025%	2.016%	2.213%	2.225%	1.928%	1.027%	0.455%	0.068%	0.210%
	4	1.997%	0.073%	0.551%	0.808%	0.920%	0.459%	0.120%	0.556%	0.900%

Table 218 Maximum moment results comparison for alpha 4 for slabs subjected to CHBDC axle 4 loading (main bars parallel to traffic)

Maximum Moment (kN.m)

	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4 Transverse	1	4.892%	4.864%	4.857%	4.846%	4.787%	4.675%	4.580%	4.498%	4.427%
	1.5	3.703%	3.628%	3.583%	3.572%	3.536%	3.480%	3.436%	3.399%	3.366%
	2	3.181%	3.093%	3.042%	3.004%	2.951%	2.900%	2.865%	2.837%	2.814%
	2.5	2.731%	2.590%	2.535%	2.500%	2.429%	2.388%	2.361%	2.340%	2.322%
	3	2.539%	2.257%	2.166%	2.120%	2.035%	1.996%	1.975%	1.959%	1.947%
	3.5	2.722%	2.186%	2.015%	1.932%	1.809%	1.752%	1.732%	1.718%	1.707%

Table 219 Maximum moment results comparison for alpha 4 for slabs subjected to CHBDC axle 2 & 3 loading (main bars parallel to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2&3 Transverse	1.5	18.514%	18.269%	18.097%	17.969%	17.670%	17.424%	17.399%	17.401%	17.416%
	2	6.353%	6.373%	6.358%	6.333%	6.296%	6.209%	6.135%	6.074%	6.024%
	2.5	3.943%	3.924%	3.932%	3.937%	3.932%	3.891%	3.882%	3.870%	3.859%
	3	3.088%	2.881%	2.844%	2.836%	2.840%	2.843%	2.836%	2.826%	2.815%
	3.5	3.098%	2.551%	2.404%	2.347%	2.297%	2.297%	2.300%	2.300%	2.299%
	4	3.681%	2.657%	2.337%	2.193%	2.025%	1.985%	1.983%	1.985%	1.987%

Alpha 6 Bending Moment Comparison

Table 220 Maximum moment results comparison for alpha 6 for slabs subjected to CHBDC axle 4 loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4	1	0.304%	0.411%	0.488%	0.551%	0.730%	0.960%	1.120%	1.248%	1.355%
	1.5	0.328%	0.391%	0.441%	0.482%	0.603%	0.759%	0.871%	0.961%	1.035%
	2	0.288%	0.308%	0.345%	0.379%	0.484%	0.619%	0.715%	0.791%	0.855%
	2.5	0.474%	0.348%	0.344%	0.360%	0.440%	0.557%	0.642%	0.709%	0.766%
	3	0.612%	0.227%	0.149%	0.134%	0.184%	0.303%	0.392%	0.463%	0.522%
	3.5	1.650%	0.844%	0.610%	0.515%	0.446%	0.503%	0.569%	0.625%	0.674%
	4	4.334%	2.805%	2.285%	2.039%	1.732%	1.667%	1.688%	1.718%	1.748%

Table 221 Maximum moment results comparison for alpha 6 for slabs subjected to CHBDC axle 2 & 3 loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2and 3	1	1.558%	1.358%	1.221%	1.153%	1.149%	1.097%	1.042%	1.009%	1.116%
	1.5	1.601%	1.376%	1.296%	1.239%	1.100%	1.117%	1.114%	1.106%	1.094%
	2	1.515%	1.285%	1.174%	1.139%	1.000%	1.007%	1.022%	1.029%	1.032%
	2.5	1.635%	1.273%	1.125%	1.079%	0.960%	0.930%	0.950%	0.963%	0.970%
	3	1.880%	1.236%	1.010%	0.919%	0.775%	0.729%	0.754%	0.772%	0.785%
	3.5	2.834%	1.752%	1.428%	1.304%	1.143%	1.149%	1.203%	1.241%	1.269%
	4	5.805%	4.074%	3.463%	3.193%	2.833%	2.735%	2.775%	2.812%	2.843%

Table 222 Maximum moment results comparison for alpha 6 for slabs subjected to CHBDC truck loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
TRUCK	1	0.651%	1.145%	1.226%	0.545%	0.729%	0.959%	1.120%	1.248%	1.355%
	1.5	1.816%	0.870%	0.317%	0.012%	0.662%	0.752%	0.866%	0.957%	1.033%
	2	3.034%	2.627%	2.116%	1.711%	0.778%	0.127%	0.524%	0.778%	0.844%
	2.5	2.832%	3.139%	3.036%	2.858%	2.084%	1.047%	0.477%	0.116%	0.132%
	3	1.846%	2.980%	3.242%	3.280%	3.035%	2.218%	1.614%	1.191%	0.876%
	3.5	1.463%	0.750%	1.538%	1.907%	2.250%	1.977%	1.574%	1.188%	0.879%
	4	5.922%	2.477%	1.089%	0.351%	0.695%	0.887%	0.726%	0.525%	0.289%

Table 223 Maximum moment results comparison for alpha 6 for slabs subjected to CHBDC axle 4 loading (main bars parallel to traffic)

Maximum Moment (kN.m)

	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4 Transverse	1	4.884%	4.815%	4.817%	4.819%	4.805%	4.757%	4.707%	4.661%	4.618%
	1.5	3.736%	3.660%	3.611%	3.574%	3.541%	3.504%	3.476%	3.452%	3.431%
	2	3.314%	3.168%	3.106%	3.065%	2.975%	2.928%	2.898%	2.875%	2.857%
	2.5	3.076%	2.749%	2.641%	2.584%	2.478%	2.415%	2.389%	2.369%	2.354%
	3	3.266%	2.602%	2.383%	2.276%	2.115%	2.027%	2.001%	1.984%	1.971%
	3.5	3.988%	2.845%	2.443%	2.242%	1.949%	1.803%	1.766%	1.746%	1.733%

Table 224 Maximum moment results comparison for alpha 6 for slabs subjected to CHBDC axle 2 & 3 loading (main bars parallel to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2&3 Transverse	1.5	18.655%	18.540%	18.424%	18.323%	18.044%	17.751%	17.596%	17.499%	17.461%
	2	6.269%	6.301%	6.318%	6.322%	6.305%	6.286%	6.250%	6.213%	6.179%
	2.5	4.144%	3.944%	3.909%	3.901%	3.902%	3.891%	3.871%	3.873%	3.871%
	3	3.807%	3.156%	2.973%	2.899%	2.826%	2.814%	2.811%	2.805%	2.799%
	3.5	4.552%	3.251%	2.821%	2.621%	2.369%	2.292%	2.278%	2.273%	2.270%
	4	6.024%	3.933%	3.174%	2.792%	2.254%	2.043%	1.995%	1.977%	1.969%

Alpha 8 Bending Moment Comparison

Table 225 Maximum moment results comparison for alpha 8 for slabs subjected to CHBDC axle 4 loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4	1	0.294%	0.395%	0.467%	0.524%	0.691%	0.899%	1.046%	1.159%	1.255%
	1.5	0.340%	0.389%	0.433%	0.471%	0.581%	0.724%	0.824%	0.905%	0.972%
	2	0.390%	0.329%	0.347%	0.373%	0.463%	0.586%	0.672%	0.741%	0.799%
	2.5	0.818%	0.474%	0.405%	0.391%	0.432%	0.529%	0.605%	0.665%	0.716%
	3	1.331%	0.550%	0.329%	0.244%	0.195%	0.271%	0.346%	0.408%	0.461%
	3.5	2.875%	1.484%	1.017%	0.798%	0.540%	0.511%	0.550%	0.593%	0.633%
	4	6.440%	3.988%	3.099%	2.646%	1.998%	1.760%	1.727%	1.732%	1.748%

Table 226 Maximum moment results comparison for alpha 8 for slabs subjected to CHBDC axle 2 & 3 loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2and 3	1	1.392%	1.271%	1.180%	1.104%	1.134%	1.130%	1.107%	1.080%	1.054%
	1.5	1.423%	1.254%	1.205%	1.167%	1.049%	1.087%	1.100%	1.104%	1.105%
	2	1.471%	1.202%	1.097%	1.066%	0.962%	0.961%	0.985%	0.999%	1.008%
	2.5	1.893%	1.327%	1.126%	1.056%	0.928%	0.886%	0.909%	0.925%	0.937%
	3	2.590%	1.540%	1.173%	1.009%	0.781%	0.691%	0.711%	0.728%	0.743%
	3.5	4.111%	2.418%	1.798%	1.534%	1.170%	1.080%	1.118%	1.154%	1.184%
	4	7.979%	5.303%	4.283%	3.774%	3.031%	2.732%	2.718%	2.735%	2.758%

Table 227 Maximum moment results comparison for alpha 8 for slabs subjected to CHBDC truck loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
TRUCK	1	0.214%	0.579%	0.853%	1.033%	0.686%	0.898%	1.045%	1.159%	1.255%
	1.5	2.734%	1.852%	1.247%	0.841%	0.044%	0.740%	0.815%	0.897%	0.967%
	2	3.118%	3.150%	2.911%	2.590%	1.665%	0.611%	0.077%	0.245%	0.459%
	2.5	2.059%	3.031%	3.204%	3.191%	2.849%	1.910%	1.294%	0.872%	0.562%
	3	0.187%	2.173%	2.832%	3.118%	3.319%	2.941%	2.442%	2.027%	1.697%
	3.5	4.245%	0.982%	0.334%	1.037%	2.032%	2.215%	2.063%	1.873%	1.643%
	4	9.910%	5.210%	3.173%	2.014%	0.103%	0.750%	0.875%	0.832%	0.738%

Table 228 Maximum moment results comparison for alpha 8 for slabs subjected to CHBDC axle 4 loading (main bars parallel to traffic)

Maximum Moment (kN.m)

	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4 Transverse	1	4.891%	4.835%	4.795%	4.796%	4.800%	4.783%	4.757%	4.731%	4.704%
	1.5	3.787%	3.693%	3.646%	3.612%	3.547%	3.520%	3.499%	3.481%	3.466%
	2	3.517%	3.263%	3.174%	3.123%	3.018%	2.953%	2.925%	2.905%	2.888%
	2.5	3.586%	2.991%	2.794%	2.696%	2.541%	2.443%	2.414%	2.395%	2.380%
	3	4.236%	3.111%	2.715%	2.517%	2.225%	2.075%	2.029%	2.009%	1.994%
	3.5	5.523%	3.735%	3.057%	2.703%	2.165%	1.902%	1.816%	1.783%	1.763%

Table 229 Maximum moment results comparison for alpha 8 for slabs subjected to CHBDC axle 2 & 3 loading (main bars parallel to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2&3 Transverse	1.5	18.684%	18.643%	18.580%	18.513%	18.288%	18.006%	17.836%	17.720%	17.635%
	2	6.278%	6.251%	6.269%	6.283%	6.296%	6.299%	6.290%	6.272%	6.253%
	2.5	4.562%	4.083%	3.961%	3.915%	3.881%	3.878%	3.870%	3.859%	3.863%
	3	4.856%	3.655%	3.266%	3.086%	2.868%	2.805%	2.795%	2.791%	2.788%
	3.5	6.388%	4.267%	3.495%	3.105%	2.554%	2.337%	2.288%	2.269%	2.261%
	4	8.726%	5.578%	4.342%	3.683%	2.667%	2.196%	2.067%	2.014%	1.987%

Alpha 10 Bending Moment Comparison

Table 230 Maximum moment results comparison for alpha 10 for slabs subjected to CHBDC axle 4 loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4	1	0.284%	0.380%	0.447%	0.502%	0.659%	0.852%	0.984%	1.089%	1.176%
	1.5	0.367%	0.390%	0.427%	0.462%	0.564%	0.695%	0.787%	0.862%	0.923%
	2	0.558%	0.383%	0.366%	0.376%	0.448%	0.559%	0.639%	0.702%	0.755%
	2.5	1.290%	0.679%	0.517%	0.458%	0.439%	0.511%	0.577%	0.631%	0.677%
	3	2.221%	1.001%	0.607%	0.431%	0.247%	0.260%	0.316%	0.368%	0.415%
	3.5	4.273%	2.284%	1.560%	1.197%	0.703%	0.553%	0.555%	0.580%	0.610%
	4	8.720%	5.390%	4.091%	3.415%	2.376%	1.913%	1.805%	1.775%	1.771%

Table 231 Maximum moment results comparison for alpha 10 for slabs subjected to CHBDC axle 2 & 3 loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2and 3	1	1.272%	1.196%	1.138%	1.075%	1.109%	1.134%	1.132%	1.121%	1.109%
	1.5	1.322%	1.173%	1.137%	1.111%	1.007%	1.058%	1.080%	1.092%	1.099%
	2	1.549%	1.183%	1.062%	1.025%	0.933%	0.924%	0.952%	0.971%	0.984%
	2.5	2.329%	1.493%	1.205%	1.093%	0.922%	0.855%	0.878%	0.896%	0.909%
	3	3.508%	2.002%	1.459%	1.200%	0.836%	0.680%	0.686%	0.699%	0.712%
	3.5	5.587%	3.273%	2.378%	1.929%	1.302%	1.073%	1.074%	1.097%	1.122%
	4	10.351%	6.768%	5.330%	4.570%	3.387%	2.830%	2.733%	2.713%	2.717%

Table 232 Maximum moment results comparison for alpha 10 for slabs subjected to CHBDC truck loading (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
TRUCK	1	0.968%	0.006%	0.411%	0.677%	1.155%	0.847%	0.982%	1.087%	1.174%
	1.5	3.153%	2.564%	1.988%	1.565%	0.565%	0.324%	0.704%	0.848%	0.913%
	2	2.812%	3.287%	3.222%	3.075%	2.343%	1.272%	0.667%	0.275%	0.001%
	2.5	0.971%	2.574%	3.037%	3.200%	3.162%	2.552%	1.961%	1.526%	1.191%
	3	1.672%	1.076%	2.113%	2.638%	3.298%	3.231%	2.957%	2.644%	2.336%
	3.5	7.077%	2.899%	1.112%	0.107%	1.507%	2.159%	2.207%	2.127%	2.011%
	4	13.792%	8.018%	5.417%	3.888%	1.192%	0.292%	0.708%	0.838%	0.857%

Table 233 Maximum moment results comparison for alpha 10 for slabs subjected to CHBDC axle 4 loading (main bars parallel to traffic)

Maximum Moment (kN.m)

Axle 4 Transverse	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
	1	4.904%	4.852%	4.819%	4.793%	4.790%	4.790%	4.778%	4.763%	4.746%
	1.5	3.861%	3.732%	3.679%	3.645%	3.564%	3.530%	3.514%	3.500%	3.488%
	2	3.794%	3.393%	3.259%	3.190%	3.067%	2.975%	2.948%	2.928%	2.913%
	2.5	4.227%	3.317%	3.004%	2.849%	2.617%	2.485%	2.439%	2.418%	2.403%
	3	5.359%	3.750%	3.152%	2.843%	2.378%	2.149%	2.068%	2.037%	2.018%
	3.5	7.191%	4.773%	3.809%	3.288%	2.459%	2.038%	1.901%	1.834%	1.802%

Table 234 Maximum moment results comparison for alpha 10 for slabs subjected to CHBDC axle 2 & 3 loading (main bars parallel to traffic)

		Maximum Moment (kN.m)								
Axle 2&3 Transverse	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
	1.5	18.687%	18.665%	18.648%	18.611%	18.446%	18.197%	18.031%	17.909%	17.816%
	2	6.377%	6.243%	6.237%	6.248%	6.279%	6.284%	6.296%	6.293%	6.285%
	2.5	5.152%	4.334%	4.092%	3.989%	3.883%	3.866%	3.864%	3.860%	3.854%
	3	6.116%	4.329%	3.701%	3.391%	2.972%	2.823%	2.794%	2.785%	2.780%
	3.5	8.419%	5.492%	4.359%	3.760%	2.850%	2.442%	2.334%	2.291%	2.270%
	4	11.561%	7.424%	5.719%	4.775%	3.236%	2.446%	2.206%	2.100%	2.043%

D.1.2 MAXIMUM BENDING MOMENT VS SPAN LENGTH

Alpha 0.25 Bending Moment VS Span Length for Different D Values (Main bars perpendicular to traffic)

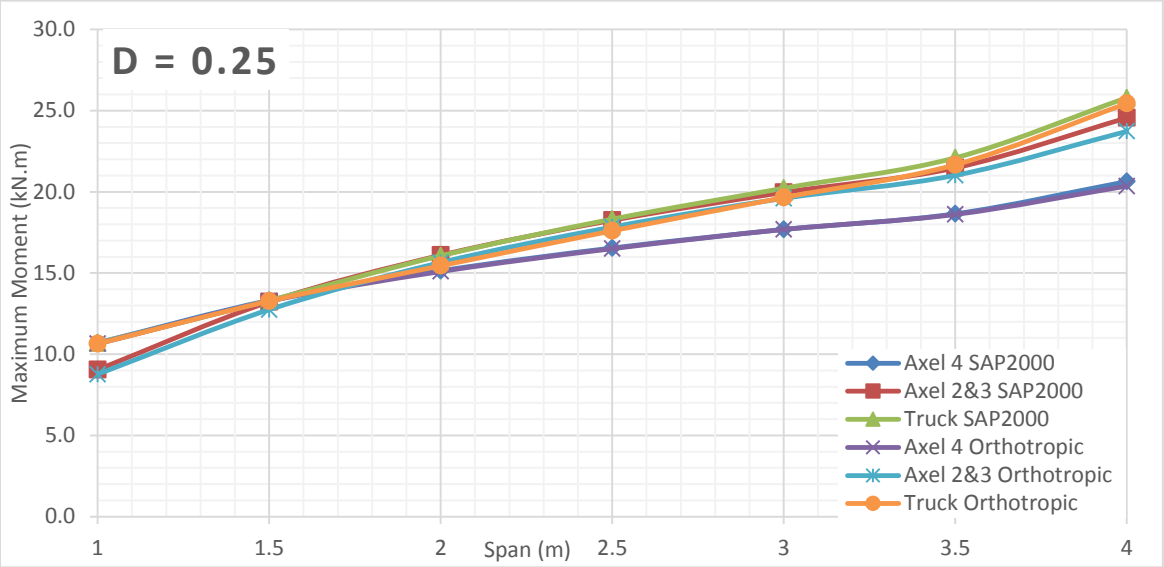

Figure 493 Moment comparison between FEA and Orthotropic Plate Theory for D = 0.25 of alpha 0.25 (main bars perpendicular traffic)

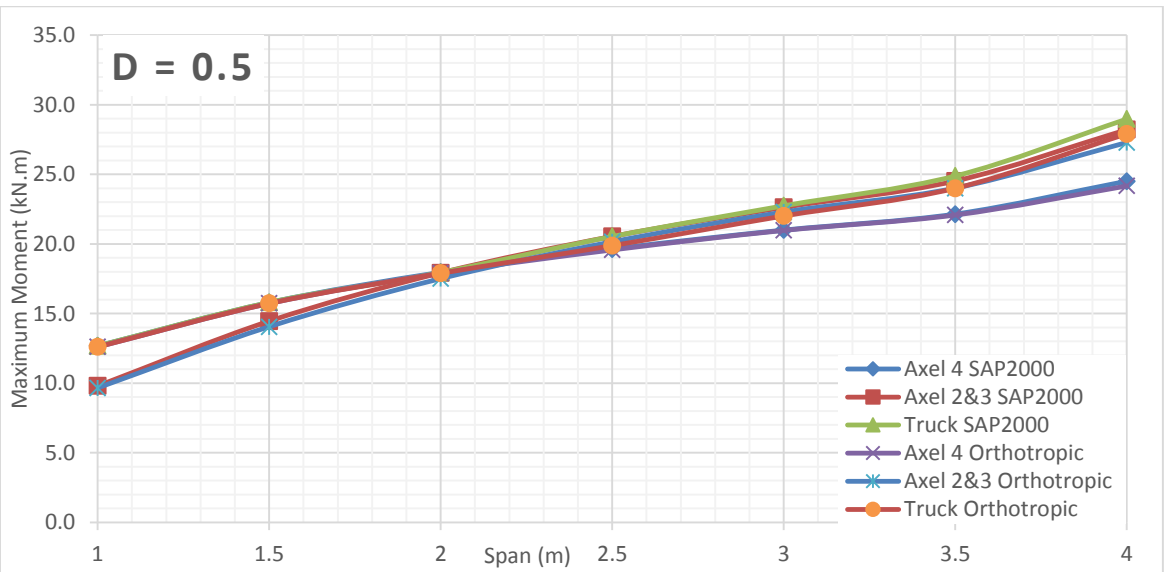

Figure 494 Moment comparison between FEA and Orthotropic Plate Theory for D = 0.5 of alpha 0.25 (main bars perpendicular traffic)

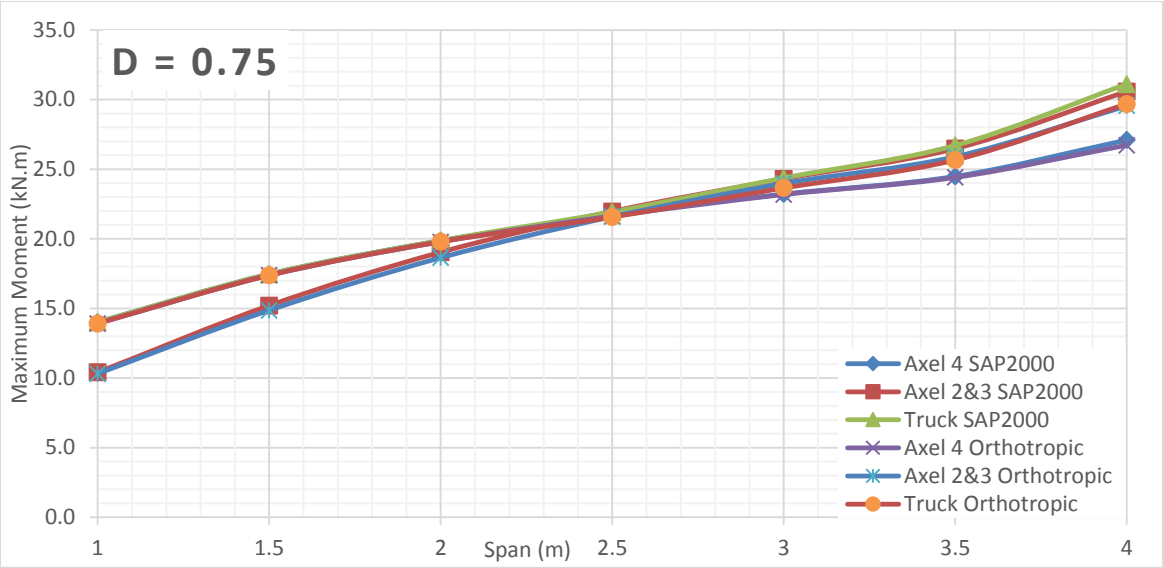

Figure 495 Moment comparison between FEA and Orthotropic Plate Theory for D = 0.75 of alpha 0.25 (main bars perpendicular traffic)

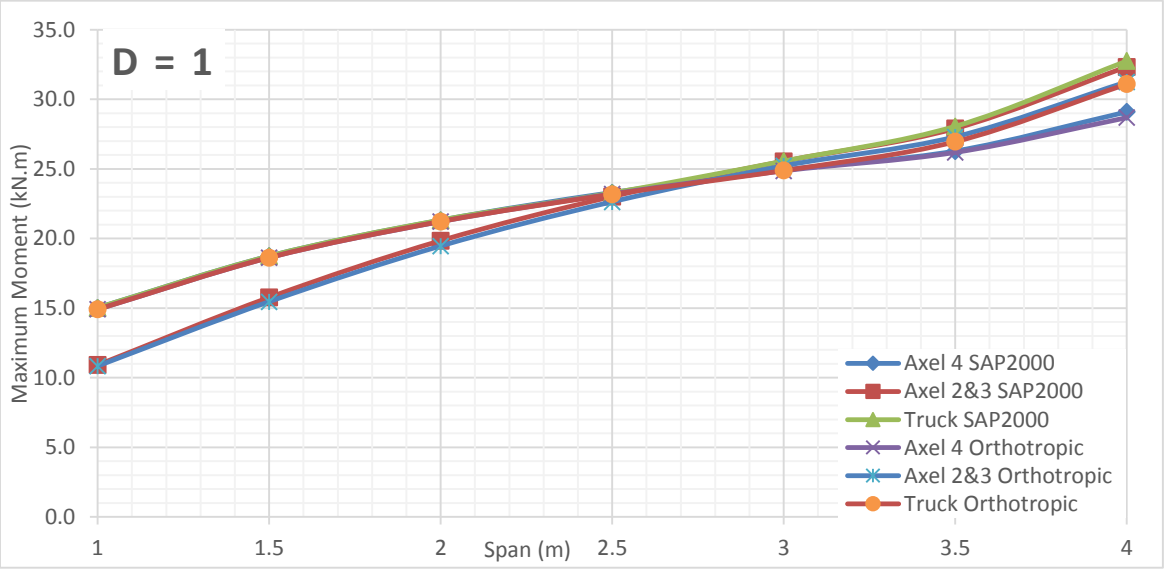

Figure 496 Moment comparison between FEA and Orthotropic Plate Theory for D = 1 of alpha 0.25 (main bars perpendicular traffic)

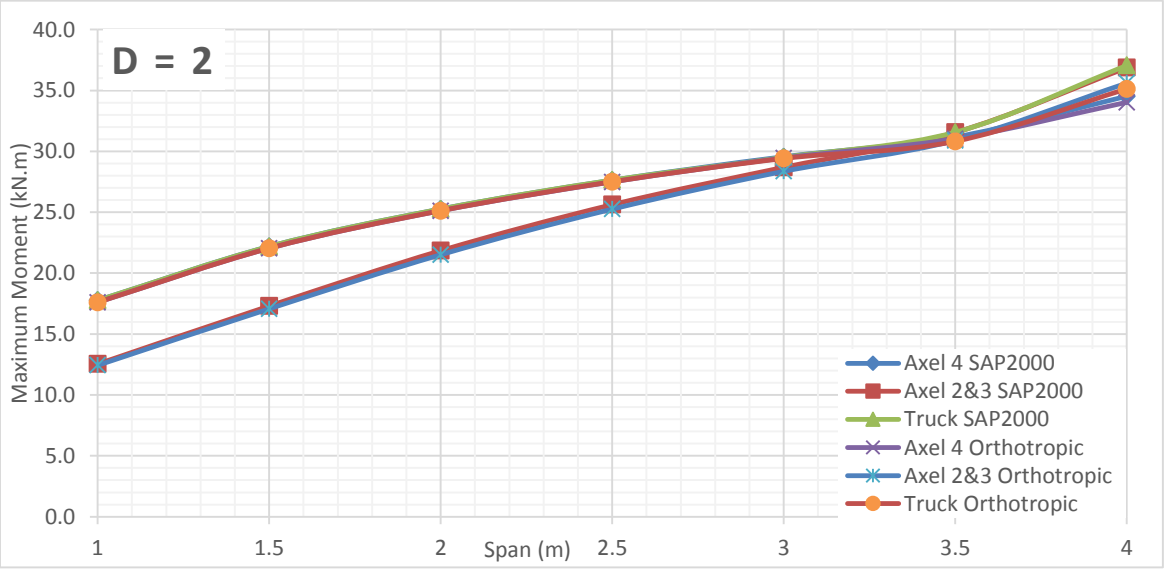

Figure 497 Moment comparison between FEA and Orthotropic Plate Theory for D = 2 of alpha 0.25 (main bars perpendicular traffic)

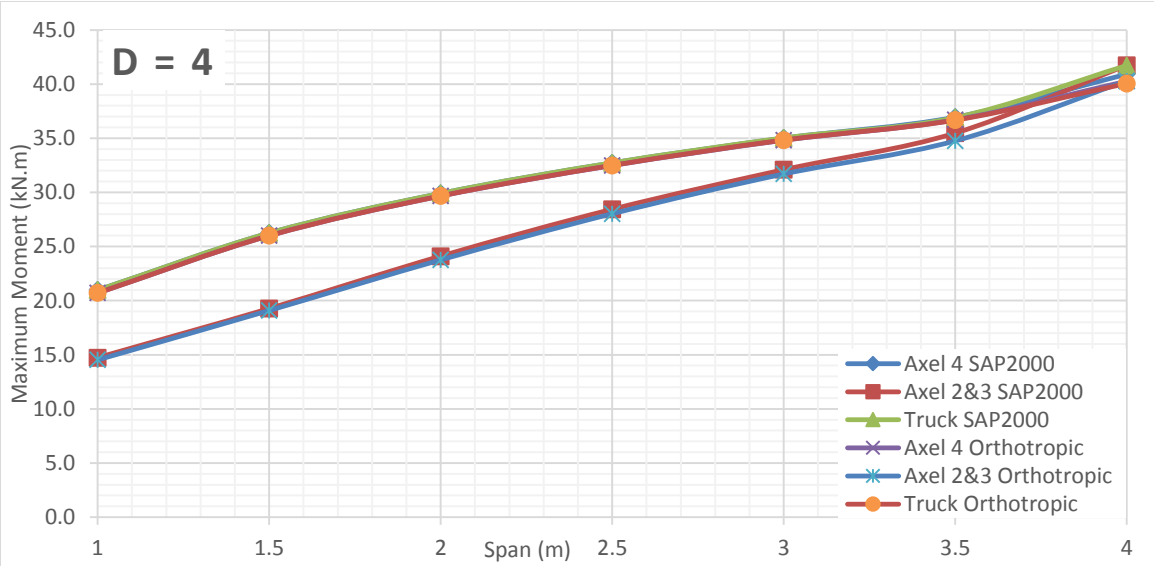

Figure 498 Moment comparison between FEA and Orthotropic Plate Theory for D = 4 of alpha 0.25 (main bars perpendicular traffic)

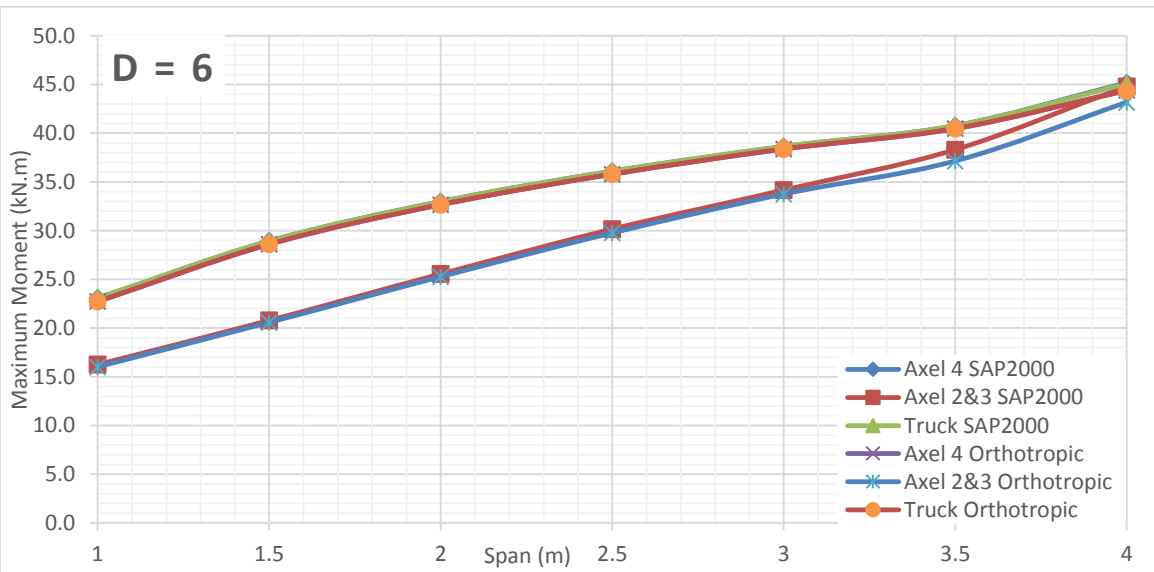

Figure 499 Moment comparison between FEA and Orthotropic Plate Theory for D = 6 of alpha 0.25 (main bars perpendicular traffic)

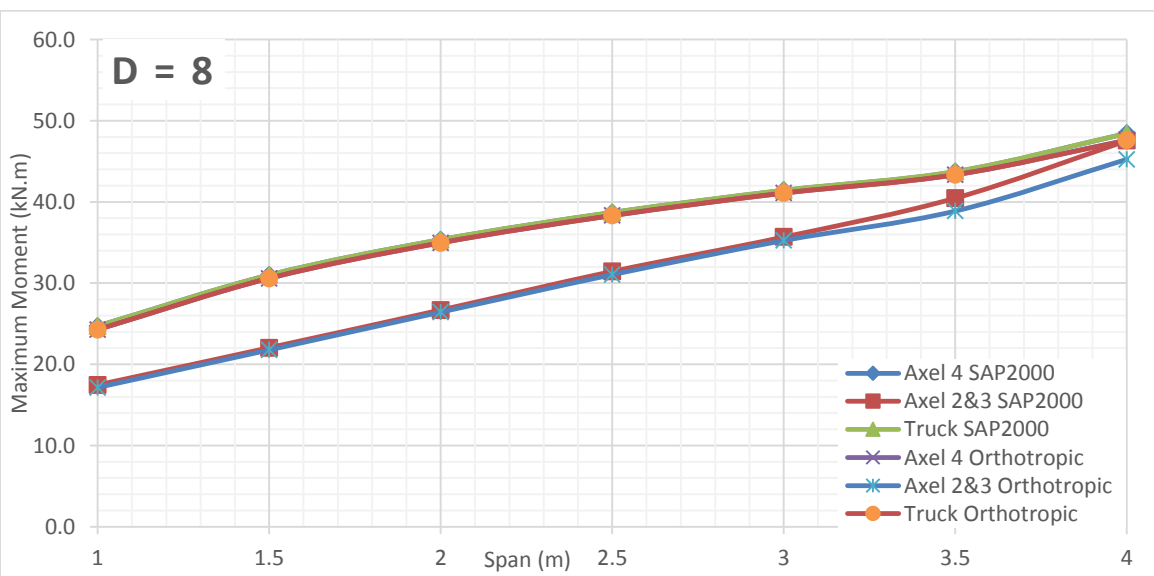

Figure 500 Moment comparison between FEA and Orthotropic Plate Theory for D = 8 of alpha 0.25 (main bars perpendicular traffic)

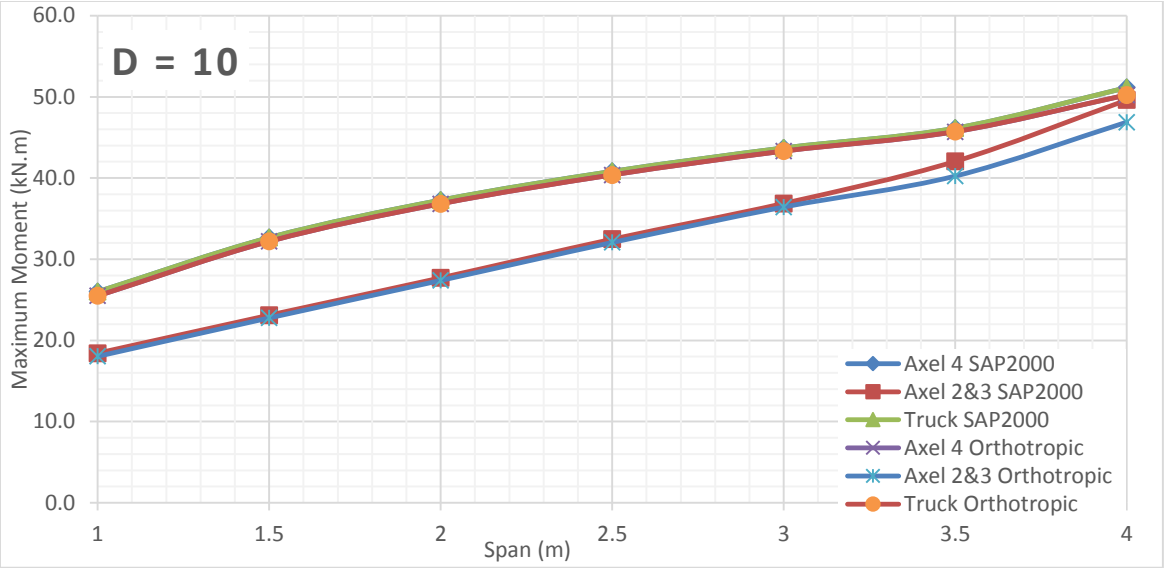

Figure 501 Moment comparison between FEA and Orthotropic Plate Theory for D = 10 of alpha 0.25 (main bars perpendicular traffic)

Alpha 0.25 Bending Moment VS Span Length for Different D Values (Main bars parallel to traffic)

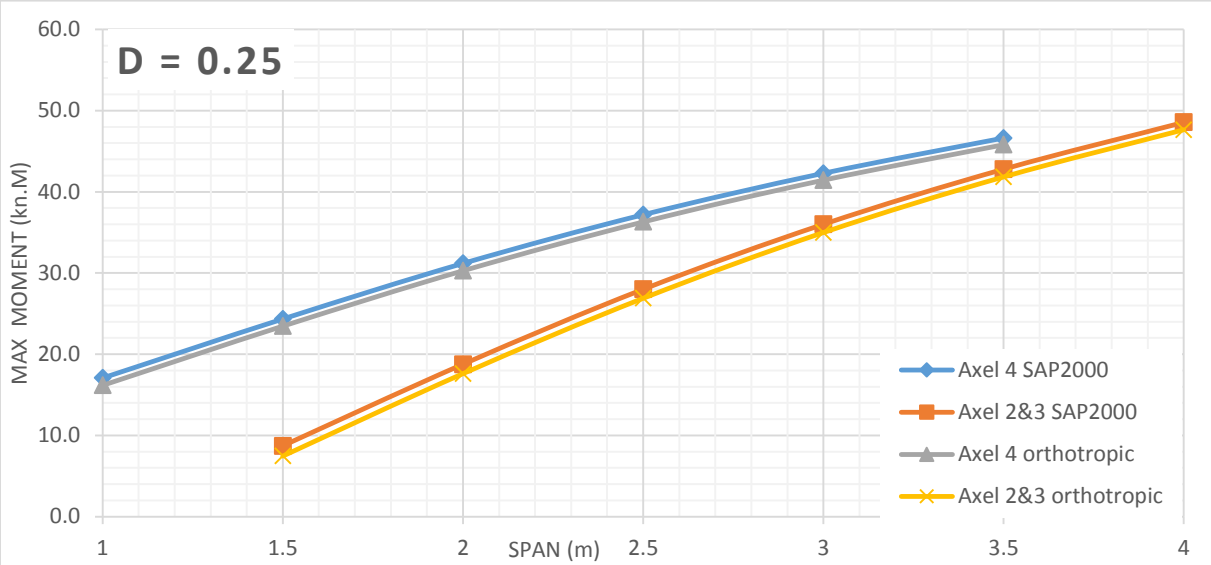

Figure 502 Moment comparison between FEA and Orthotropic Plate Theory for D = 0.25 of alpha 0.25 (main bars parallel traffic)

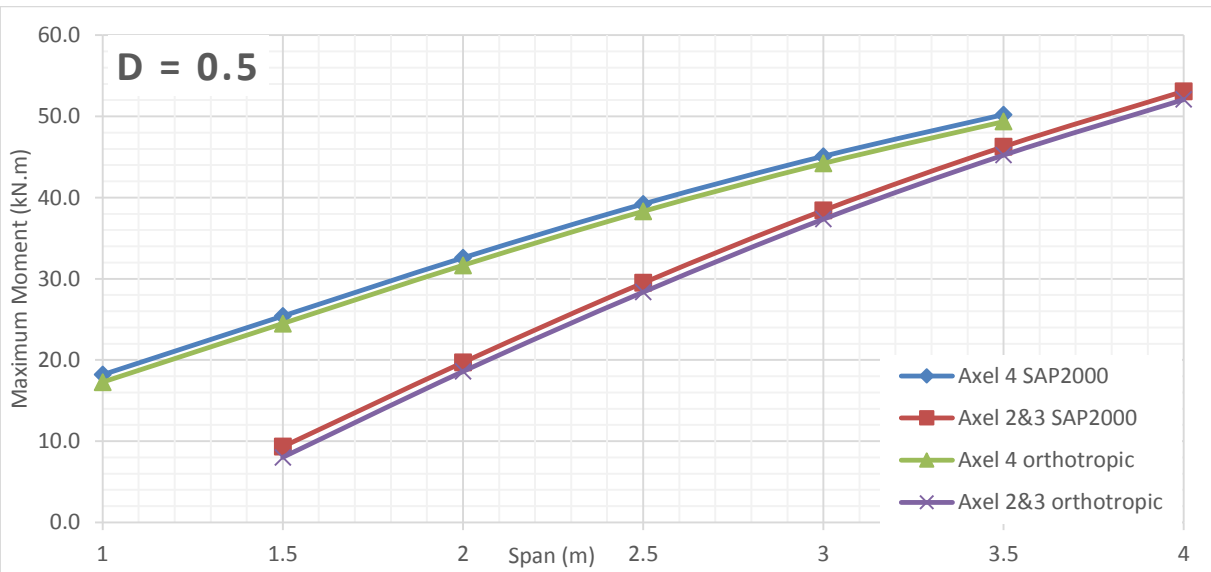

Figure 503 Moment comparison between FEA and Orthotropic Plate Theory for D = 0.5 of alpha 0.25 (main bars parallel traffic)

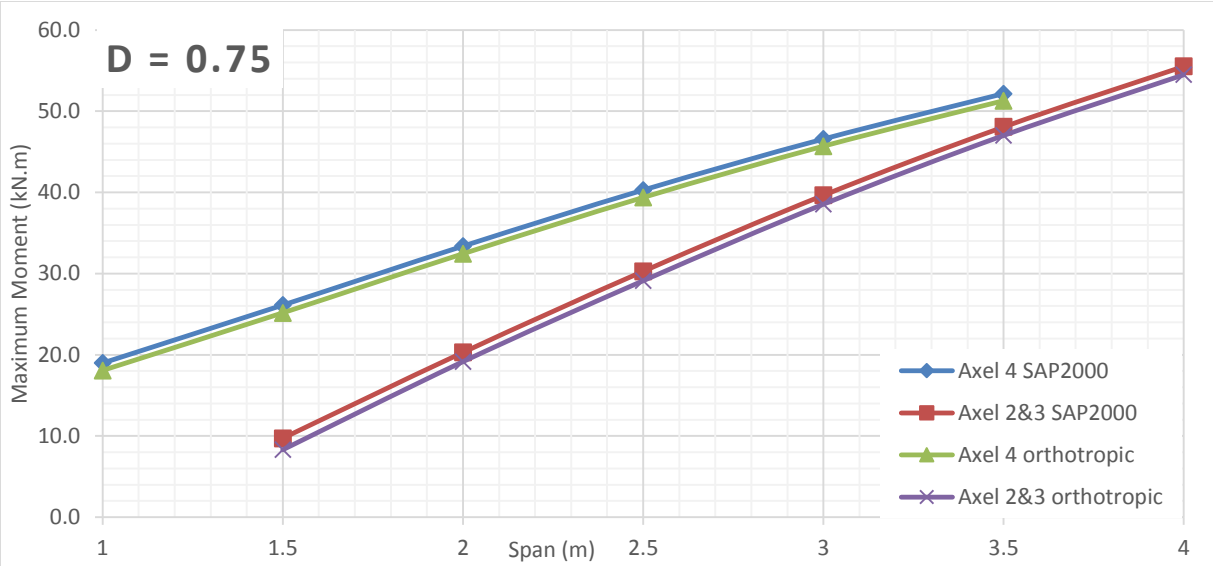

Figure 504 Moment comparison between FEA and Orthotropic Plate Theory for D = 0.75 of alpha 0.25 (main bars parallel traffic)

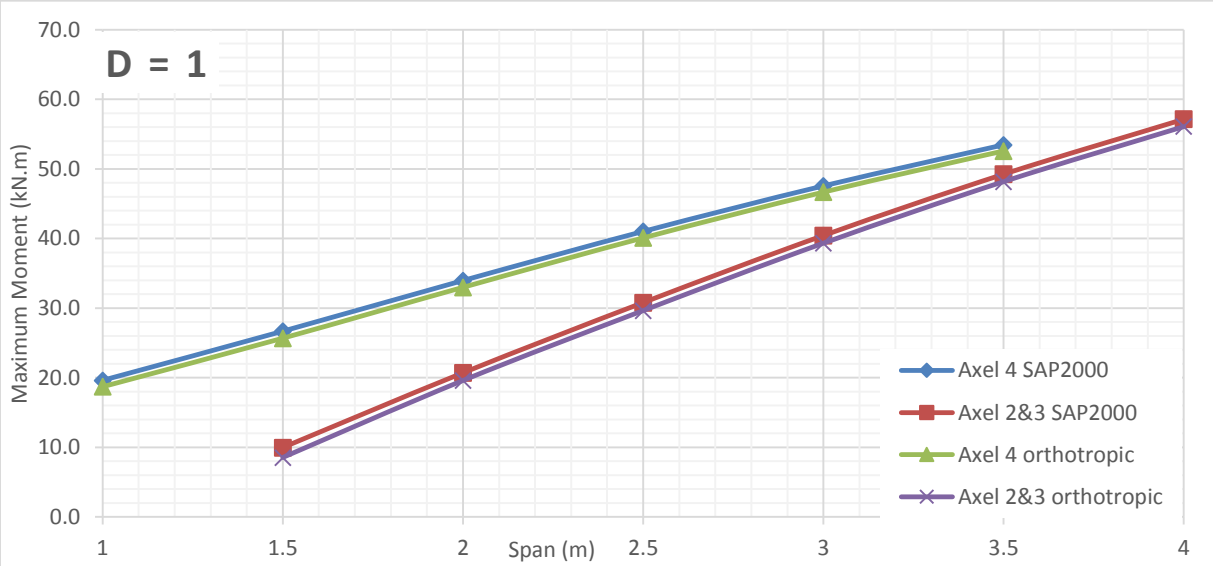

Figure 505 Moment comparison between FEA and Orthotropic Plate Theory for D = 1 of alpha 0.25 (main bars parallel traffic)

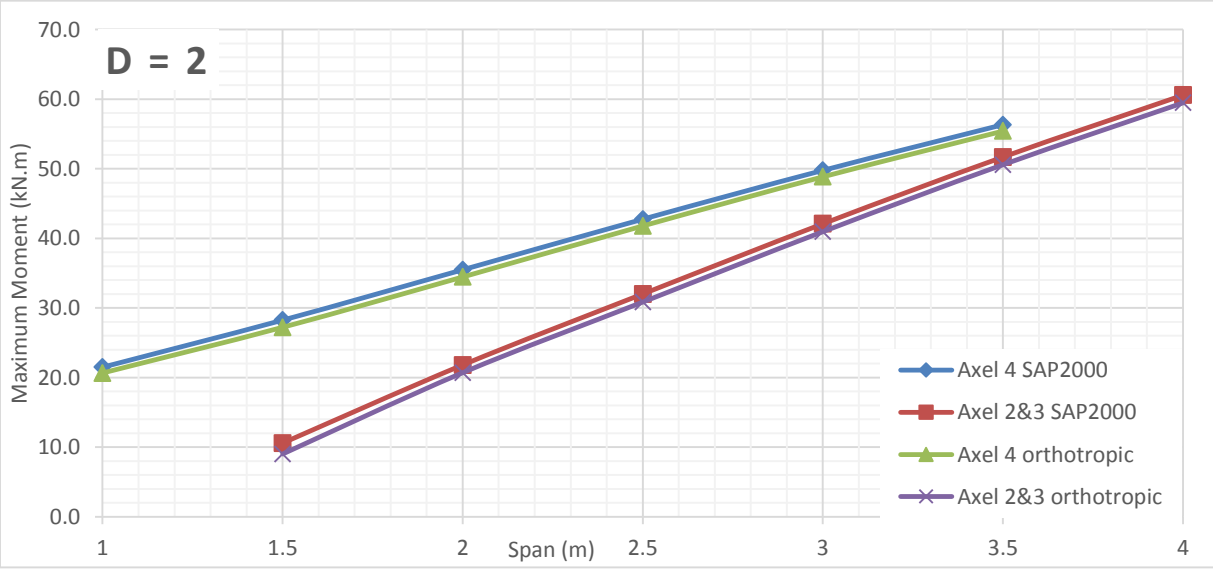

Figure 506 Moment comparison between FEA and Orthotropic Plate Theory for D = 2 of alpha 0.25 (main bars parallel traffic)

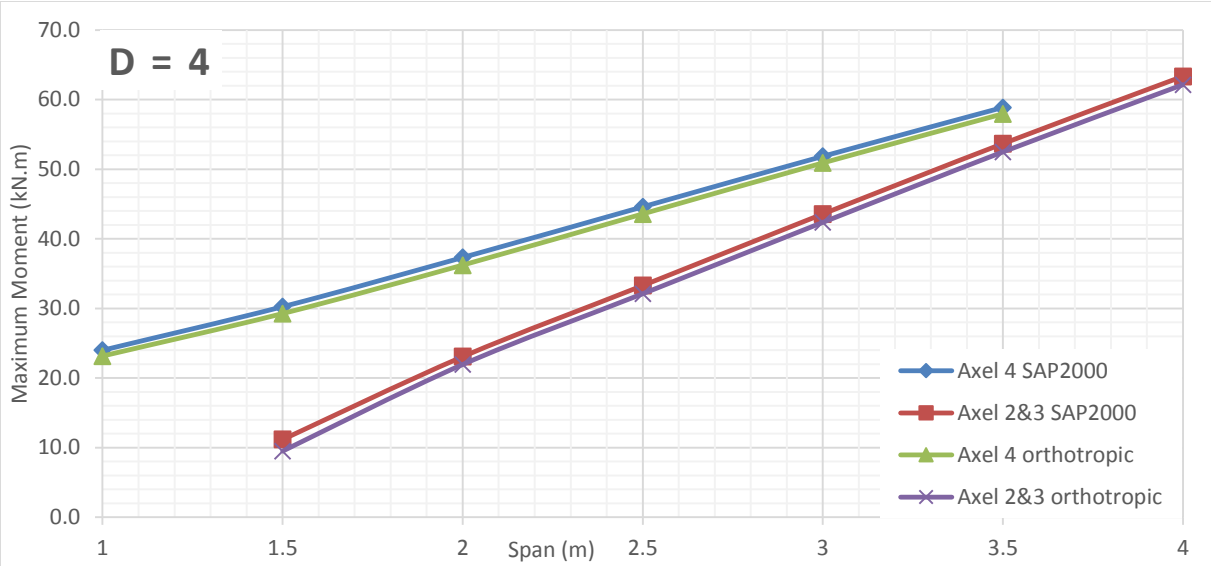

Figure 507 Moment comparison between FEA and Orthotropic Plate Theory for D = 4 of alpha 0.25 (main bars parallel traffic)

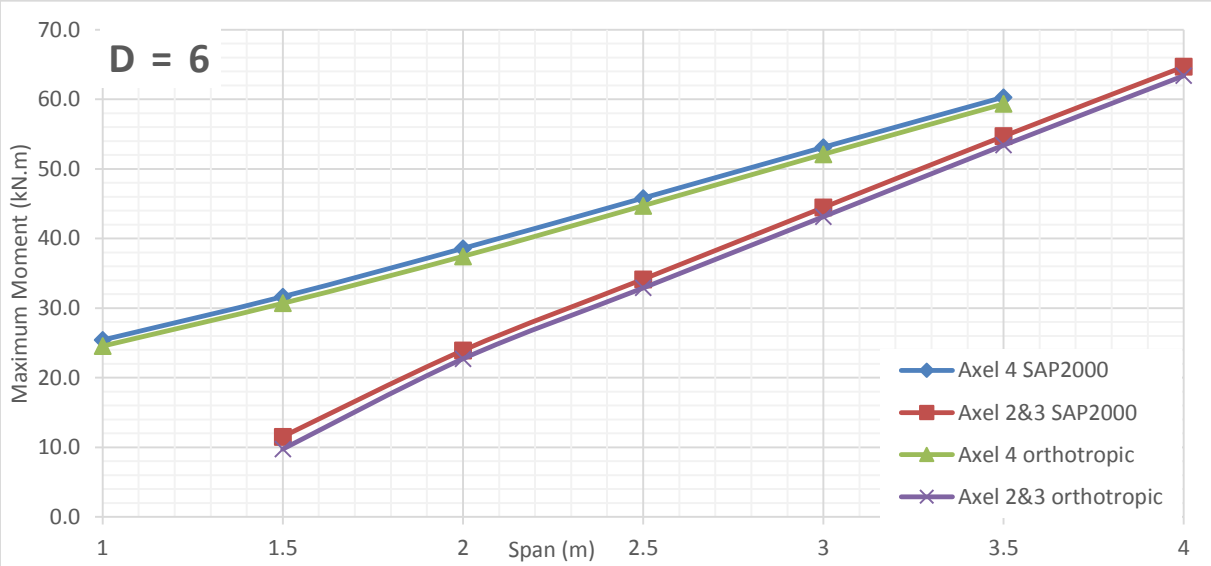

Figure 508 Moment comparison between FEA and Orthotropic Plate Theory for D = 6 of alpha 0.25 (main bars parallel traffic)

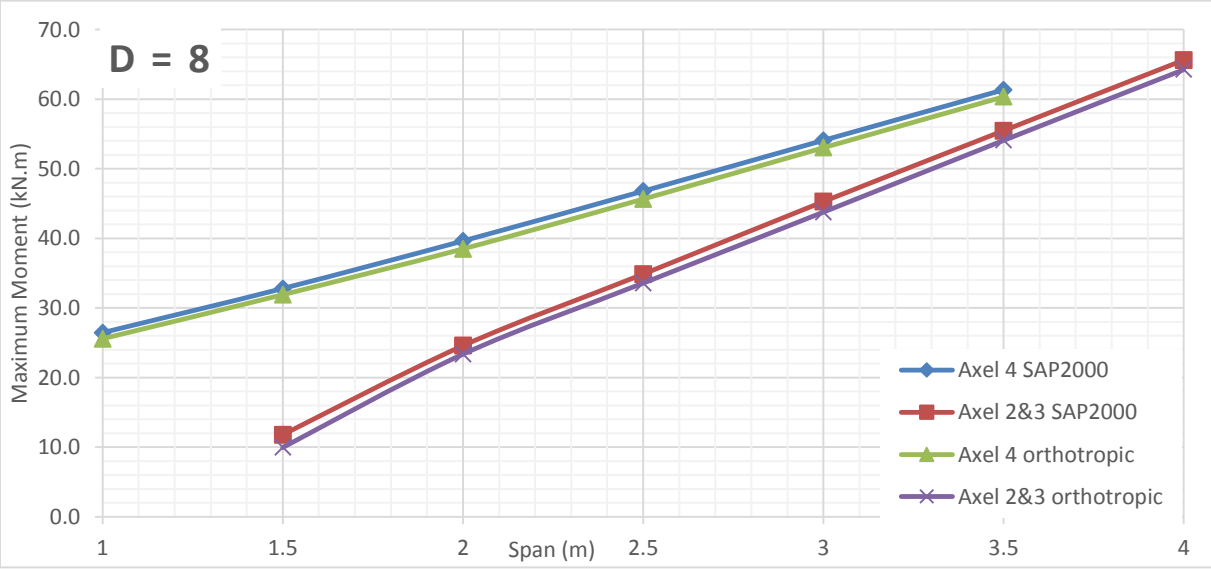

Figure 509 Moment comparison between FEA and Orthotropic Plate Theory for D = 8 of alpha 0.25 (main bars parallel traffic)

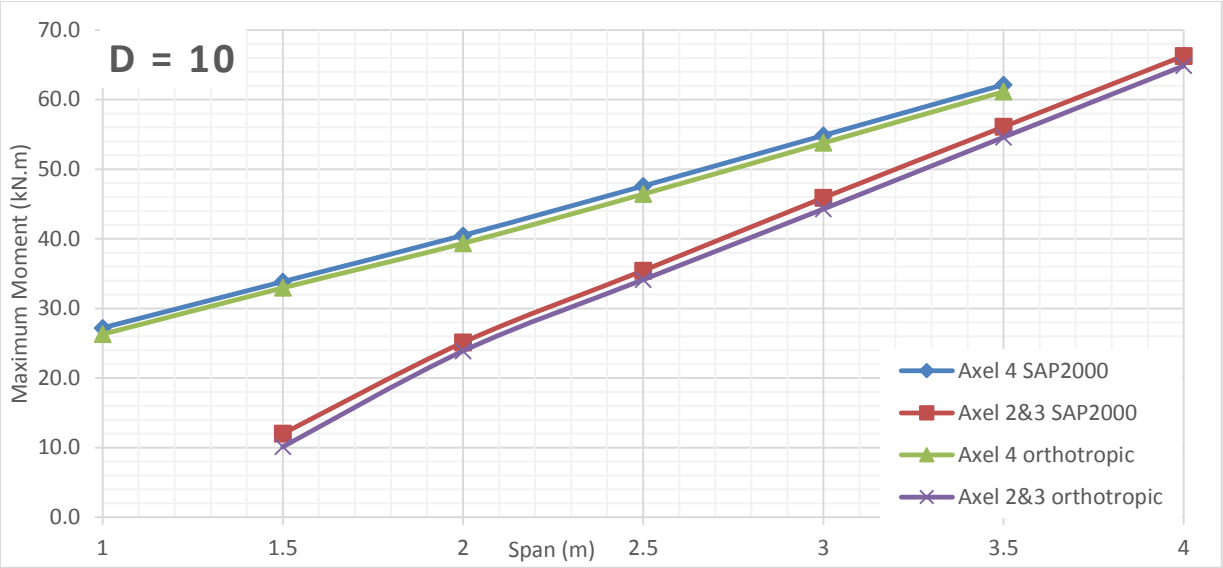

Figure 510 Moment comparison between FEA and Orthotropic Plate Theory for D = 10 of alpha 0.25 (main bars parallel traffic)

Alpha 0.5 Bending Moment VS Span Length for Different D Values (Main bars perpendicular to traffic)

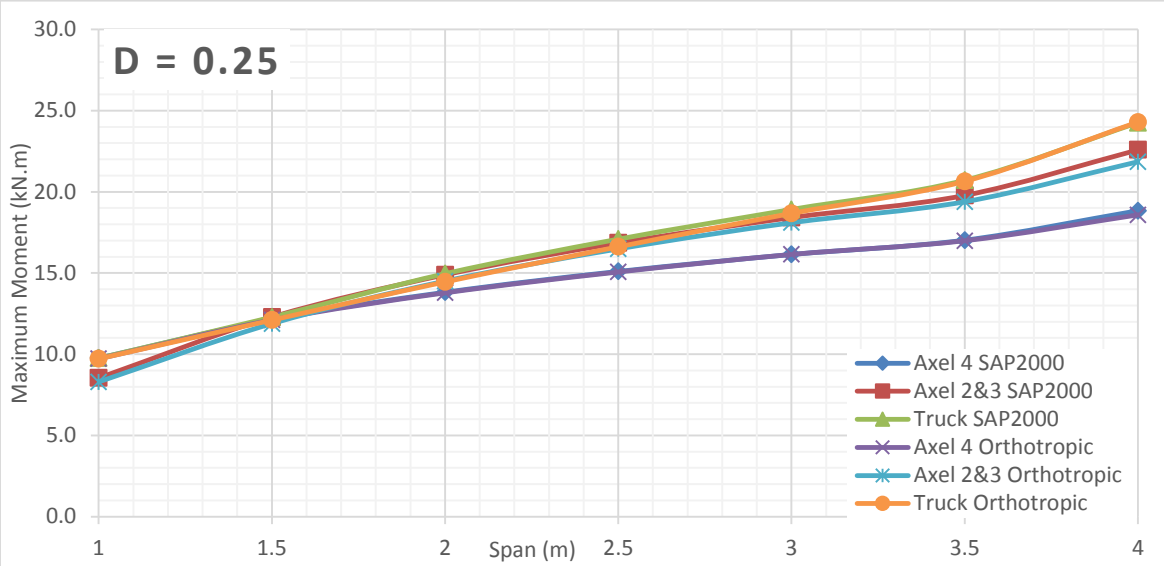

Figure 511 Moment comparison between FEA and Orthotropic Plate Theory for D = 0.25 of alpha 0.5 (main bars perpendicular traffic)

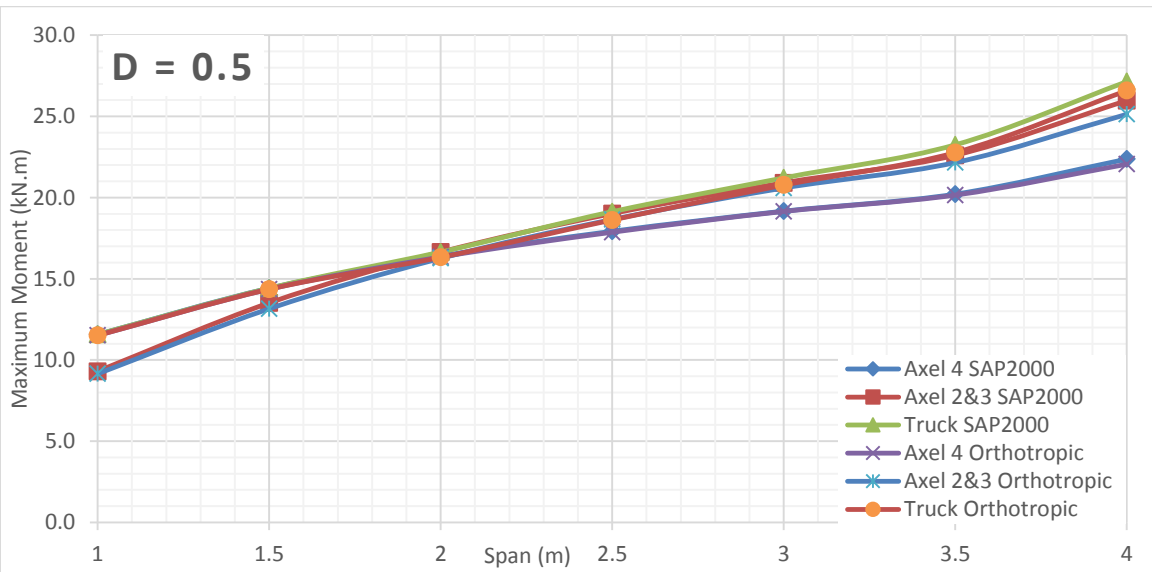

Figure 512 Moment comparison between FEA and Orthotropic Plate Theory for D = 0.5 of alpha 0.5 (main bars perpendicular traffic)

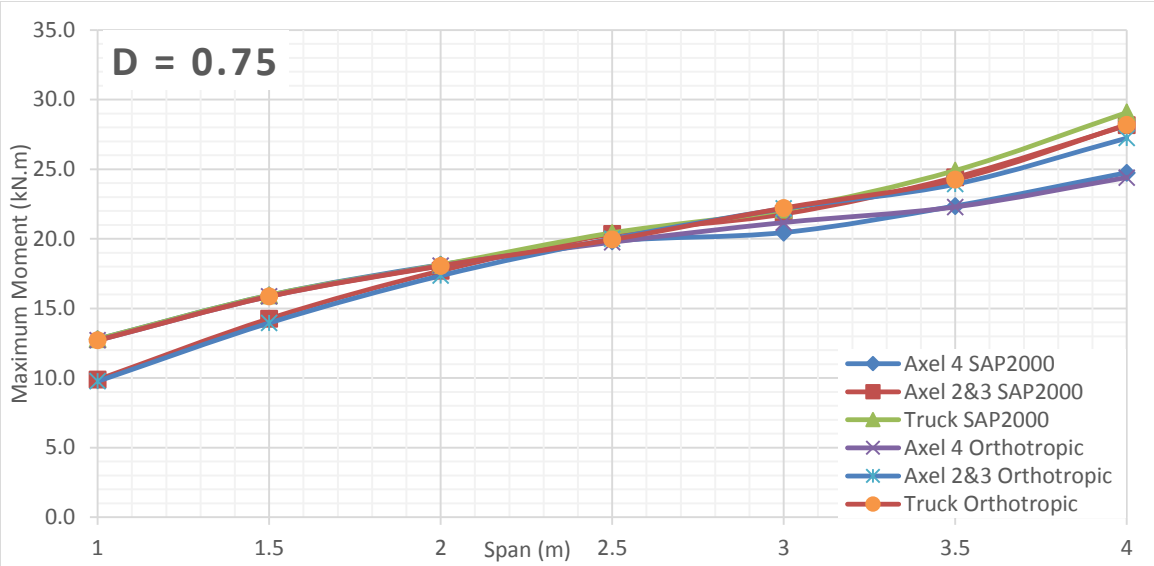

Figure 513 Moment comparison between FEA and Orthotropic Plate Theory for D = 0.75 of alpha 0.5 (main bars perpendicular traffic)

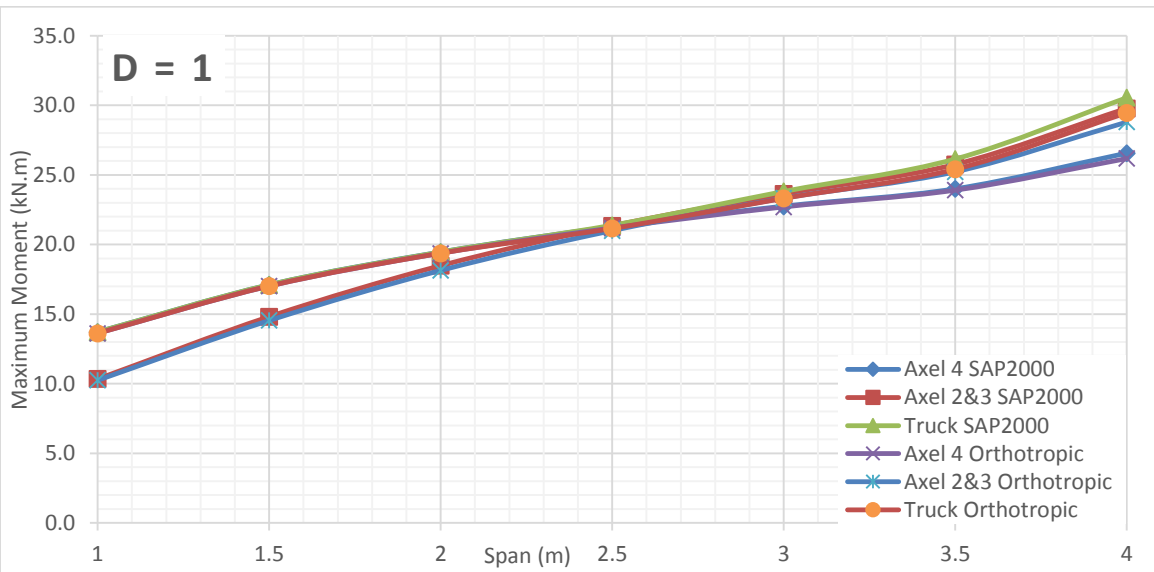

Figure 514 Moment comparison between FEA and Orthotropic Plate Theory for D = 1 of alpha 0.5 (main bars perpendicular traffic)

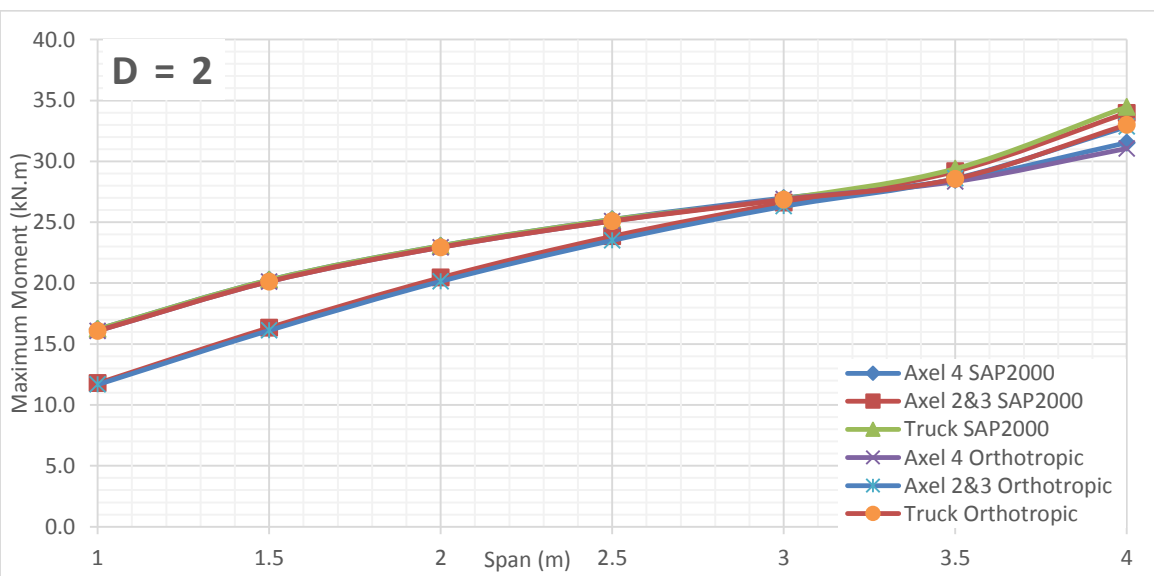

Figure 515 Moment comparison between FEA and Orthotropic Plate Theory for D = 2 of alpha 0.5 (main bars perpendicular traffic)

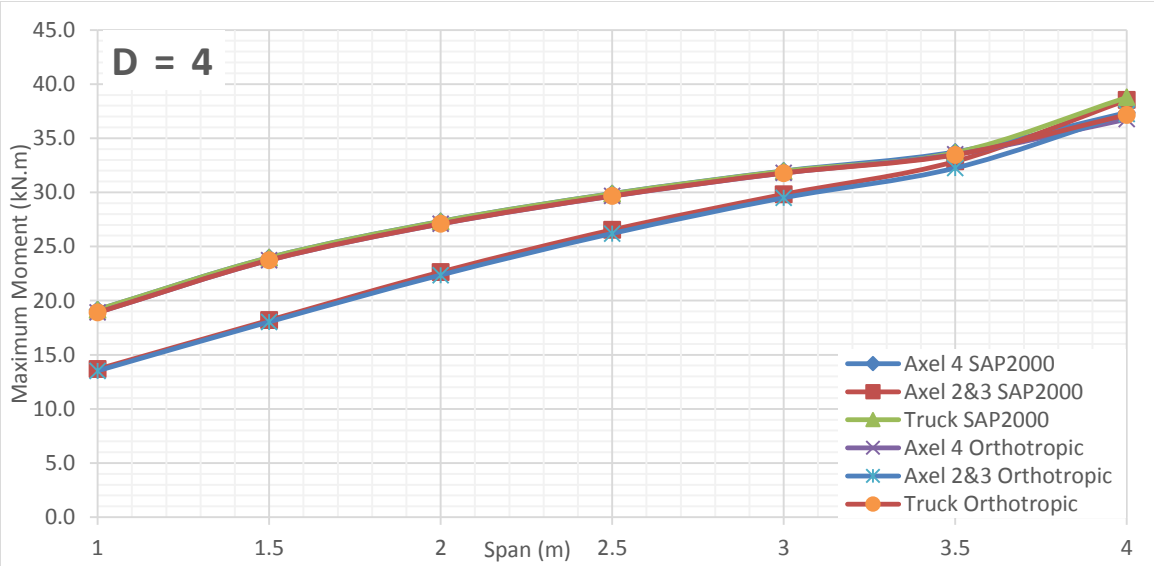

Figure 516 Moment comparison between FEA and Orthotropic Plate Theory for D = 4 of alpha 0.5 (main bars perpendicular traffic)

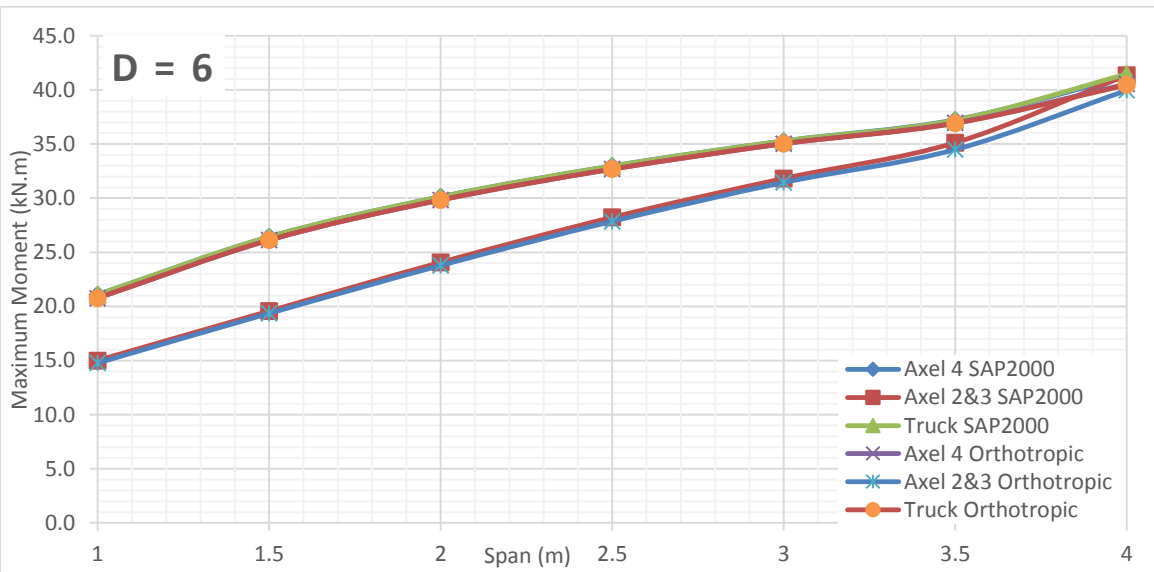

Figure 517 Moment comparison between FEA and Orthotropic Plate Theory for D = 6 of alpha 0.5 (main bars perpendicular traffic)

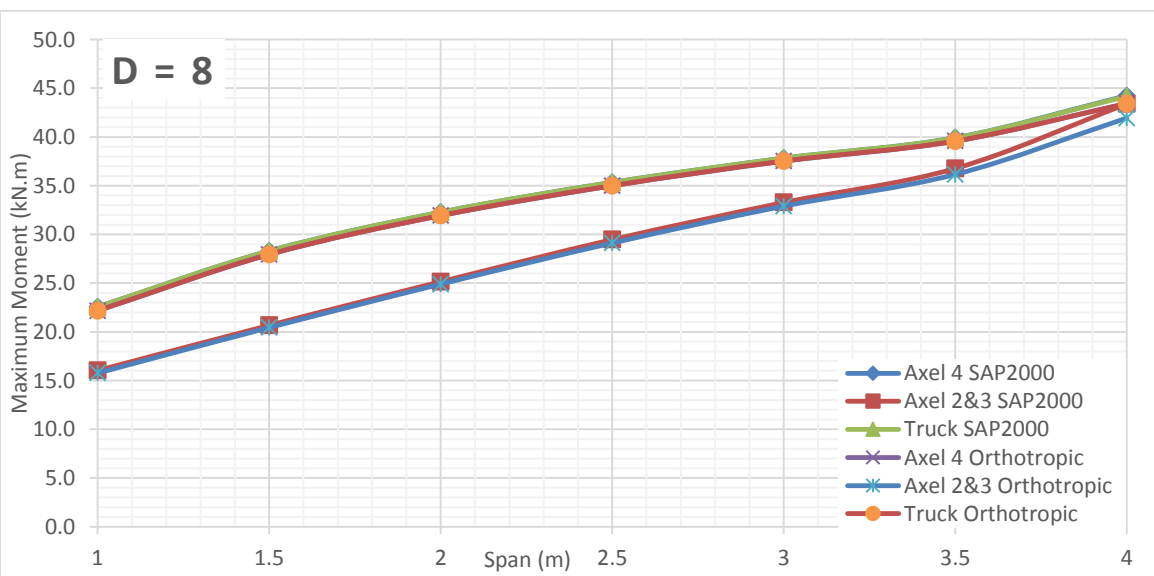

Figure 518 Moment comparison between FEA and Orthotropic Plate Theory for D = 8 of alpha 0.5 (main bars perpendicular traffic)

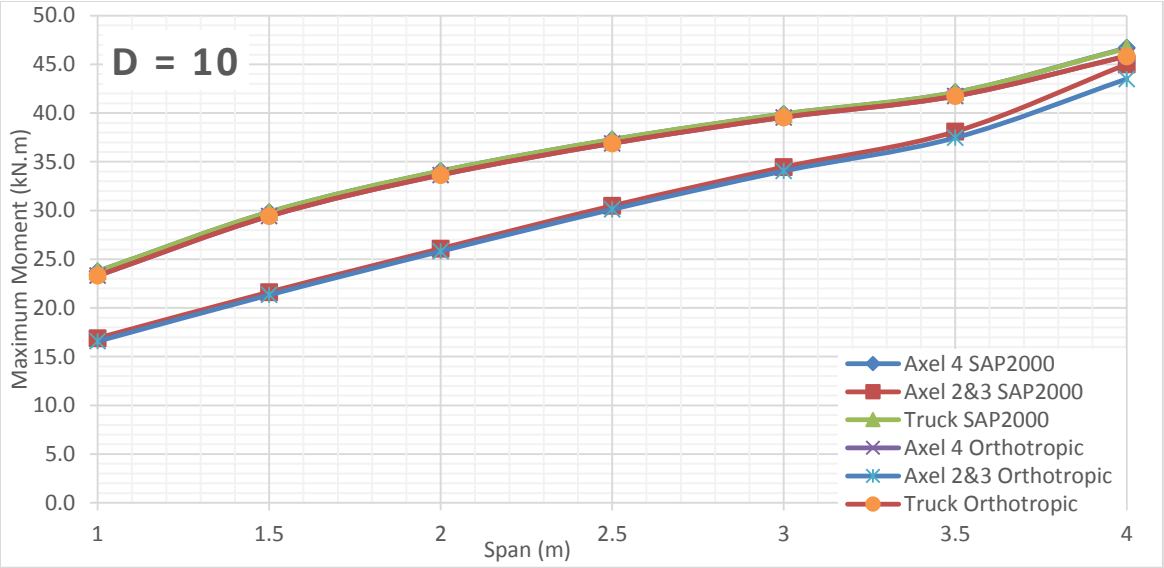

Figure 519 Moment comparison between FEA and Orthotropic Plate Theory for D = 10 of alpha 0.5 (main bars perpendicular traffic)

Alpha 0.5 Bending Moment VS Span Length for Different D Values (Main bars parallel to traffic)

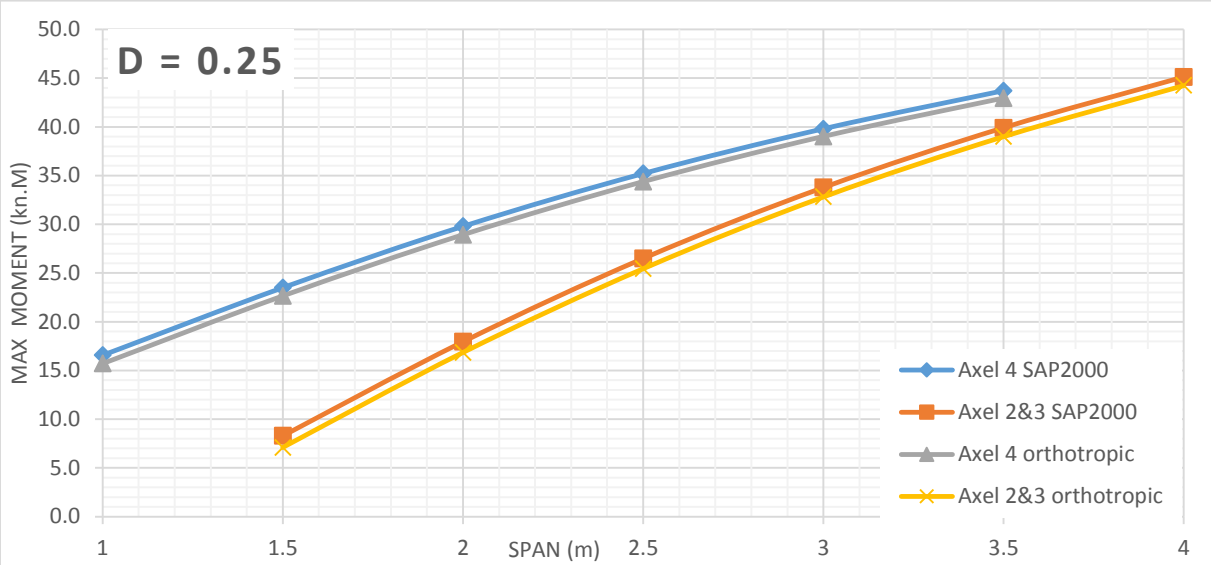

Figure 520 Moment comparison between FEA and Orthotropic Plate Theory for D = 0.25 of alpha 0.5 (main bars parallel traffic)

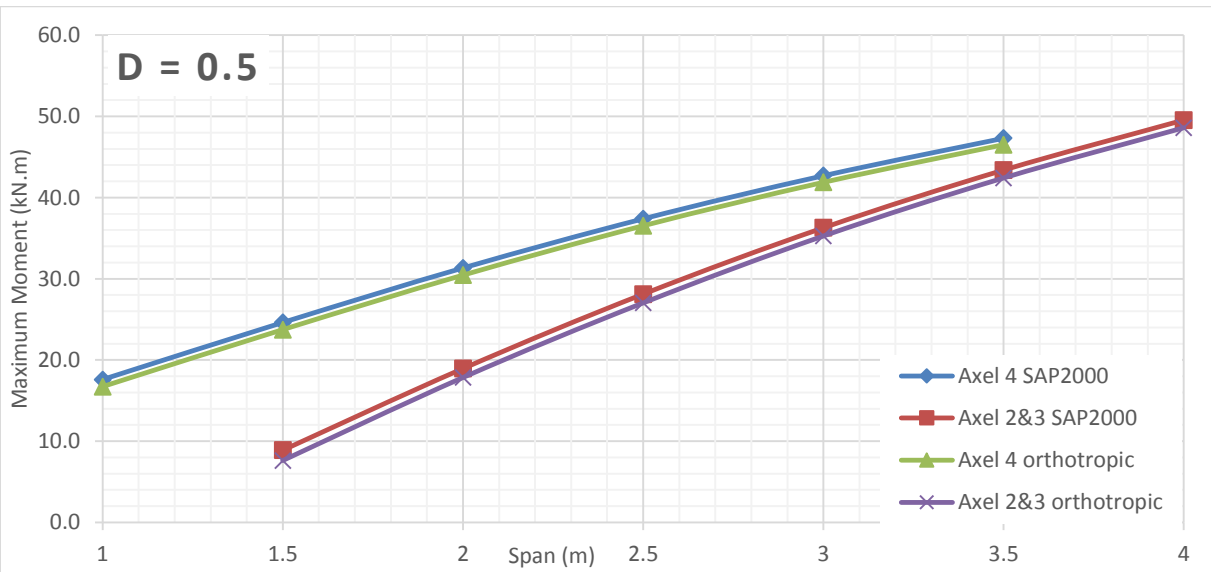

Figure 521 Moment comparison between FEA and Orthotropic Plate Theory for D = 0.5 of alpha 0.5 (main bars parallel traffic)

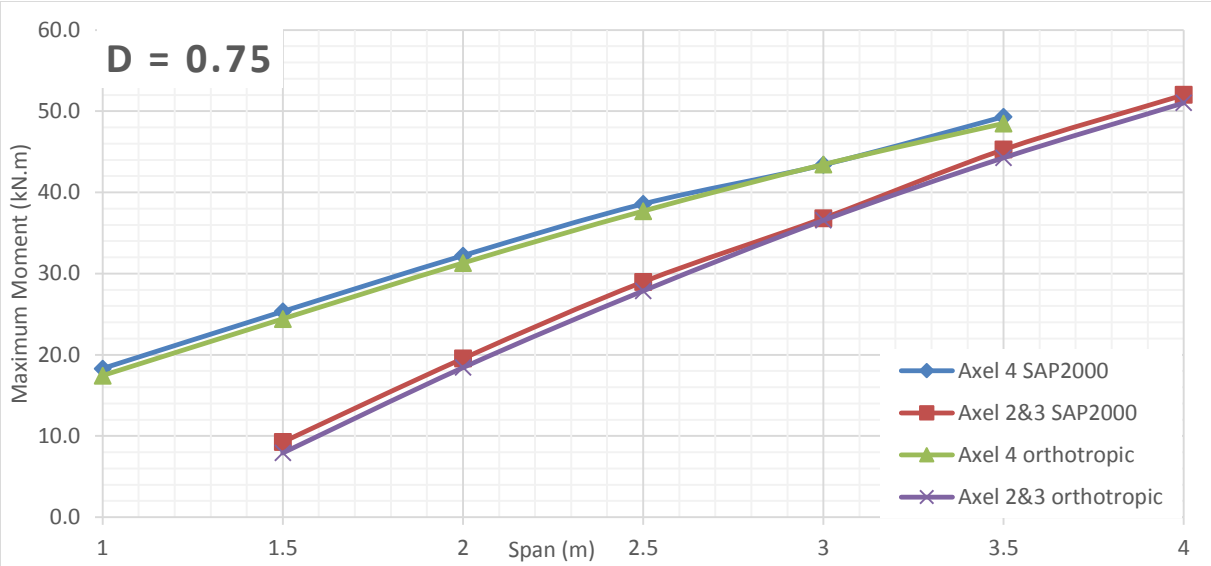

Figure 522 Moment comparison between FEA and Orthotropic Plate Theory for D = 0.75 of alpha 0.5 (main bars parallel traffic)

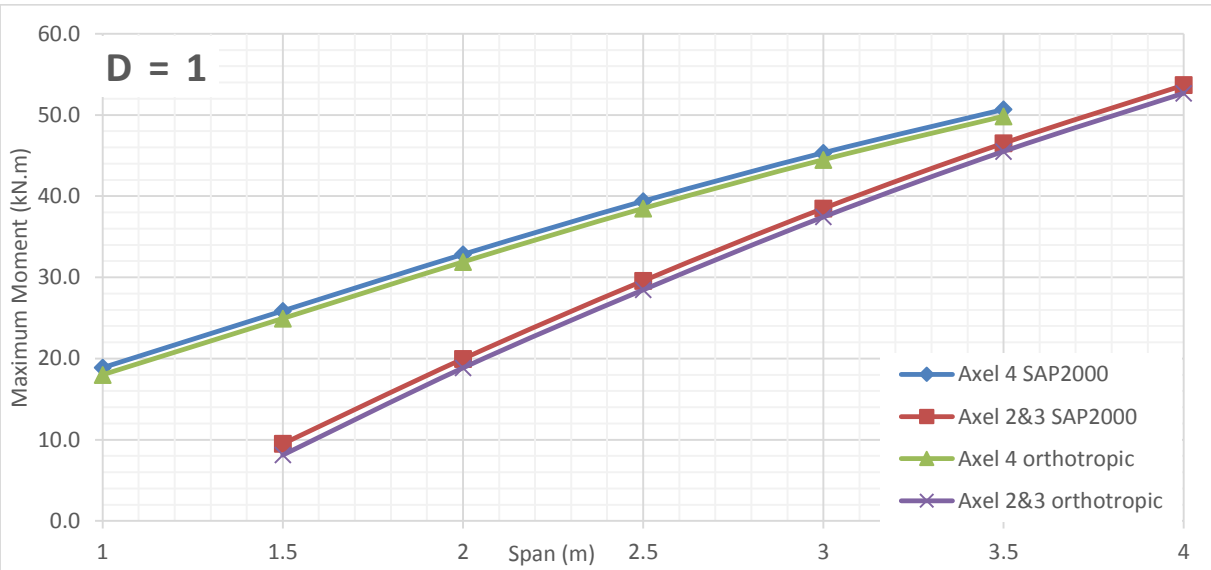

Figure 523 Moment comparison between FEA and Orthotropic Plate Theory for D = 1 of alpha 0.5 (main bars parallel traffic)

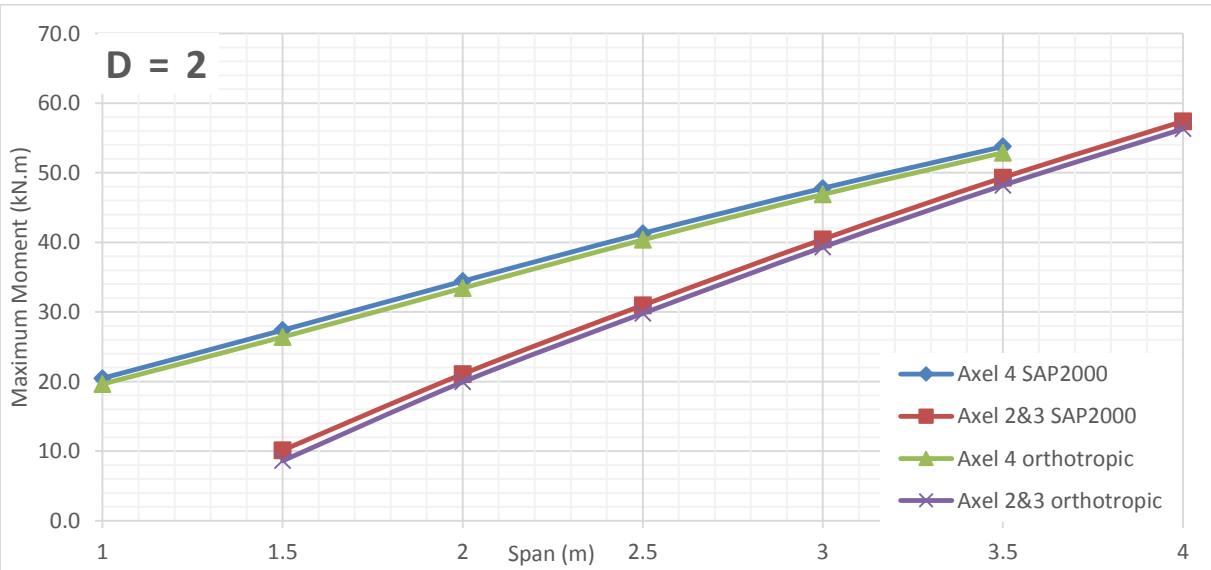

Figure 524 Moment comparison between FEA and Orthotropic Plate Theory for D = 2 of alpha 0.5 (main bars parallel traffic)

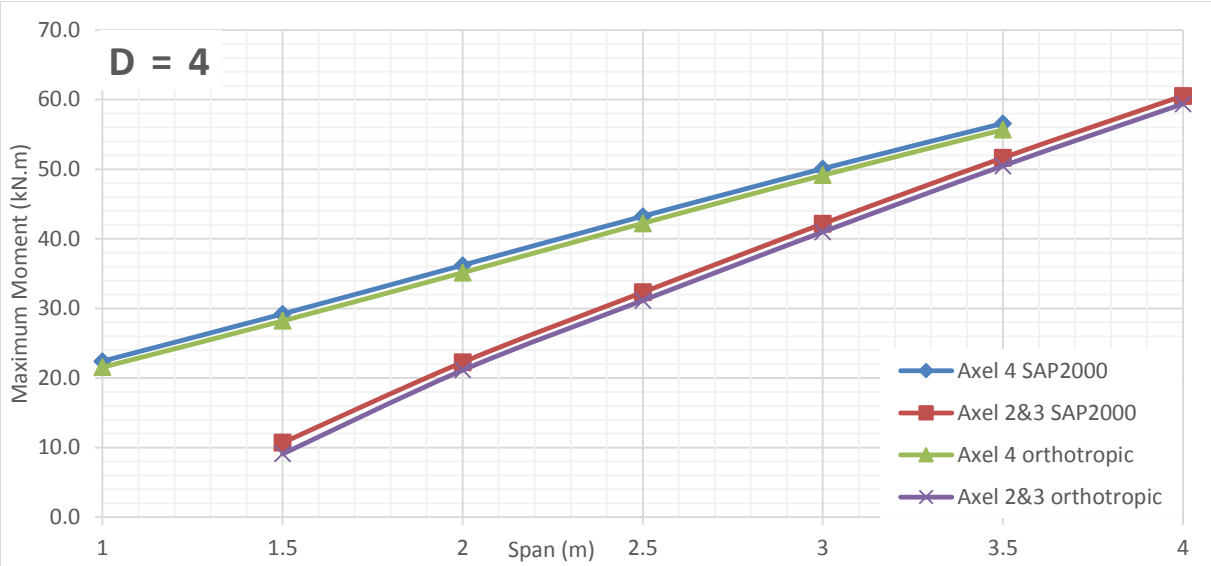

Figure 525 Moment comparison between FEA and Orthotropic Plate Theory for D = 4 of alpha 0.5 (main bars parallel traffic)

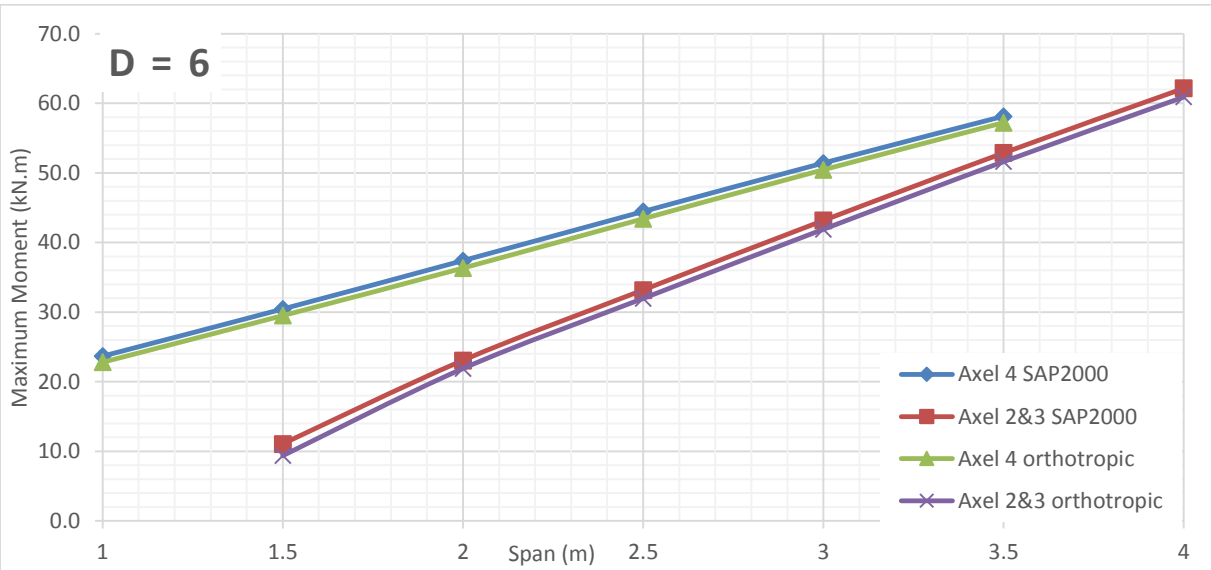

Figure 526 Moment comparison between FEA and Orthotropic Plate Theory for D = 6 of alpha 0.5 (main bars parallel traffic)

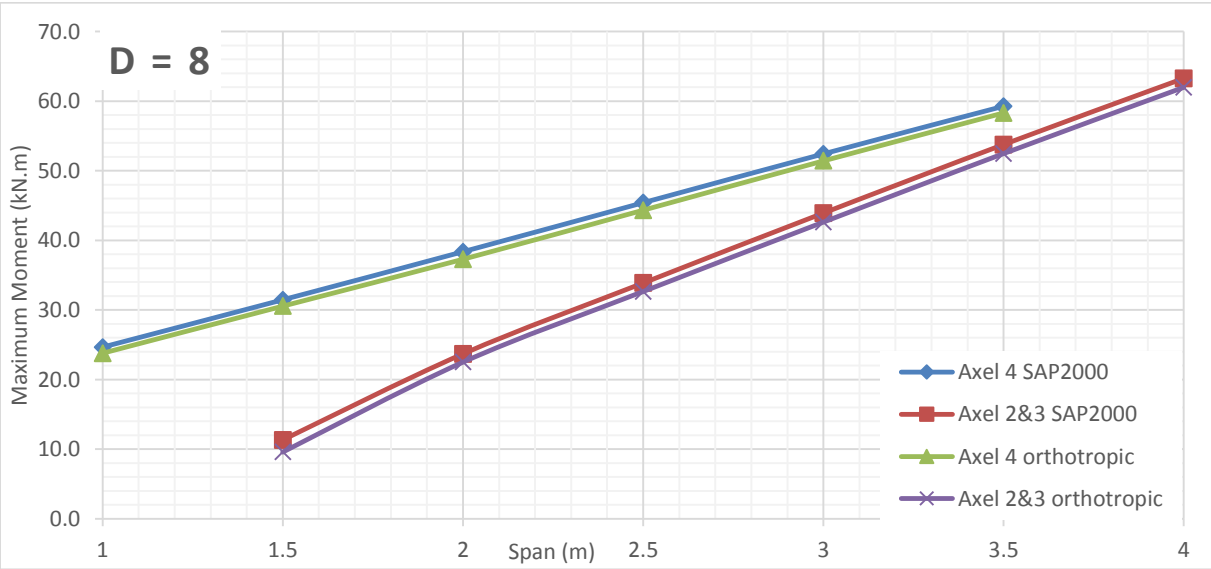

Figure 527 Moment comparison between FEA and Orthotropic Plate Theory for D = 8 of alpha 0.5 (main bars parallel traffic)

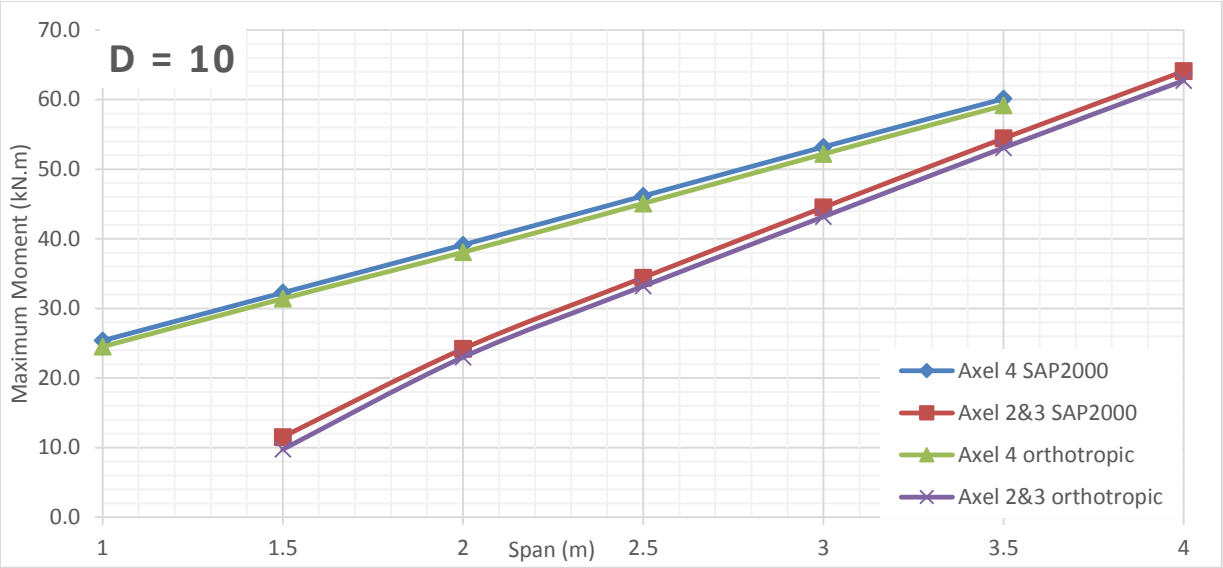

Figure 528 Moment comparison between FEA and Orthotropic Plate Theory for D = 10 of alpha 0.5 (main bars parallel traffic)

Alpha 0.75 Bending Moment VS Span Length for Different D Values (Main bars perpendicular to traffic)

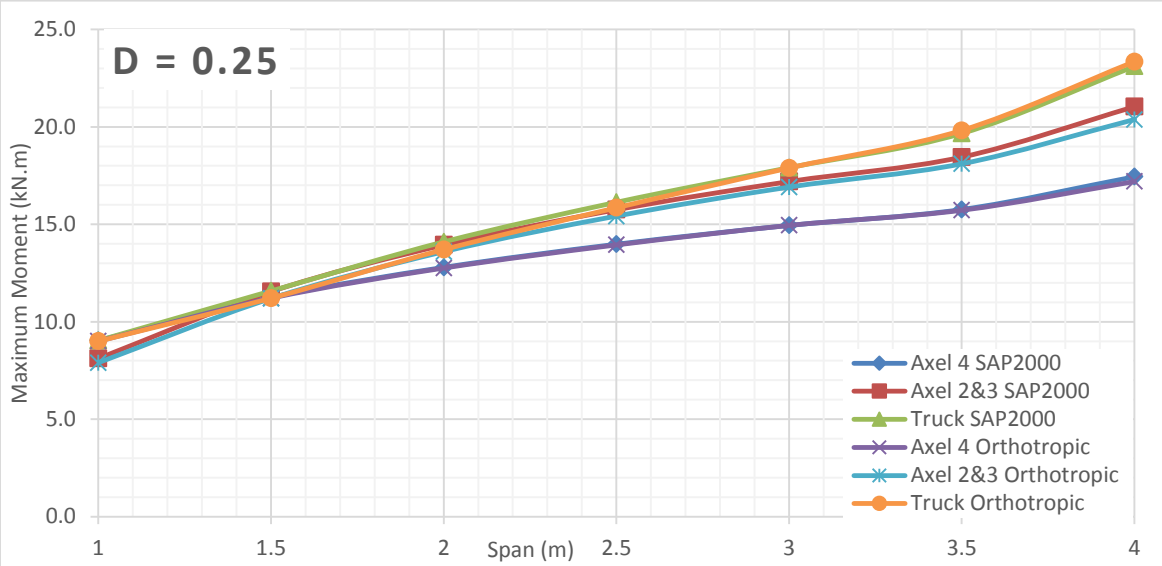

Figure 529 Moment comparison between FEA and Orthotropic Plate Theory for D = 0.25 of alpha 0.75 (main bars perpendicular traffic)

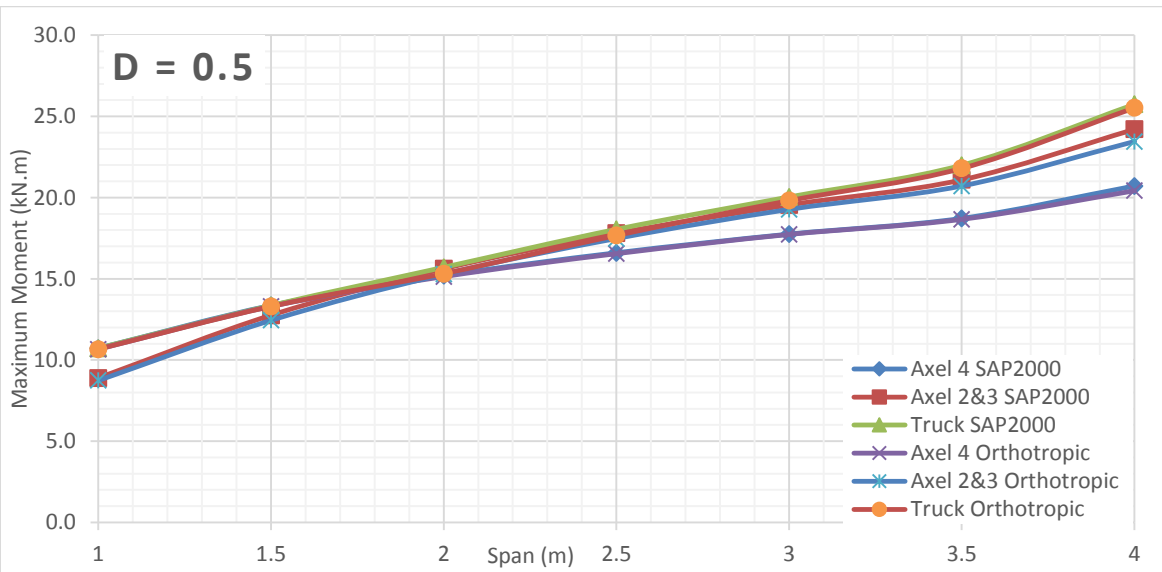

Figure 530 Moment comparison between FEA and Orthotropic Plate Theory for D = 0.5 of alpha 0.75 (main bars perpendicular traffic)

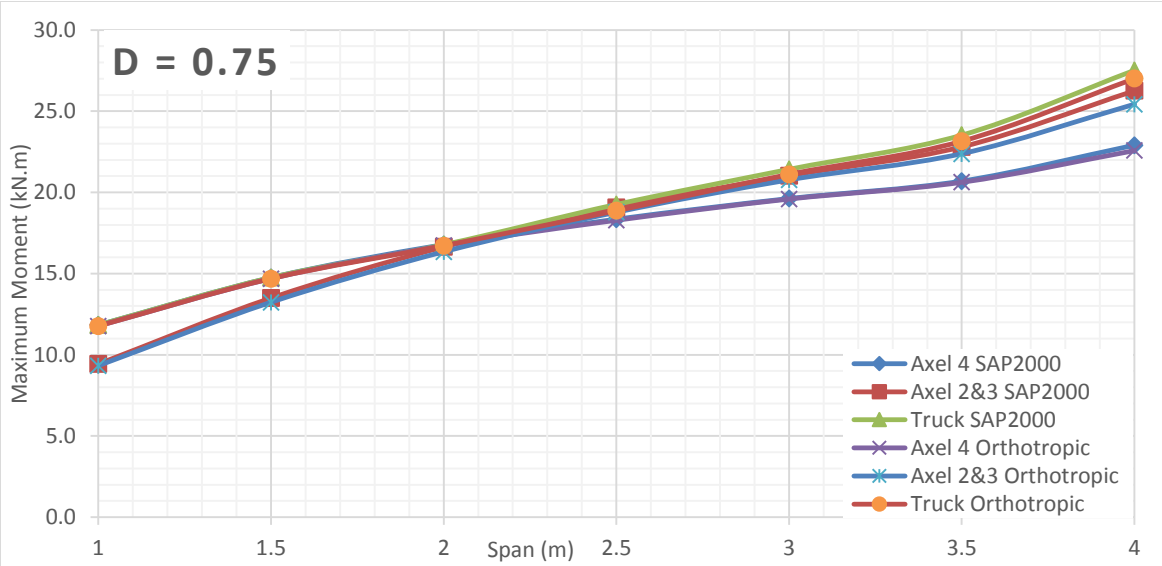

Figure 531 Moment comparison between FEA and Orthotropic Plate Theory for D = 0.75 of alpha 0.75 (main bars perpendicular traffic)

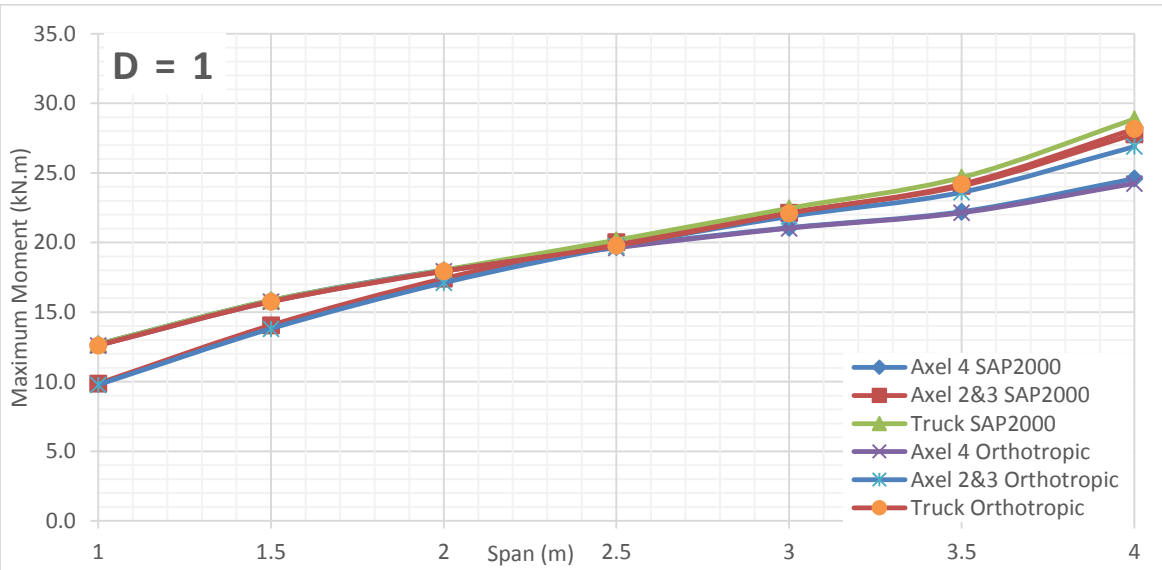

Figure 532 Moment comparison between FEA and Orthotropic Plate Theory for D = 1 of alpha 0.75 (main bars perpendicular traffic)

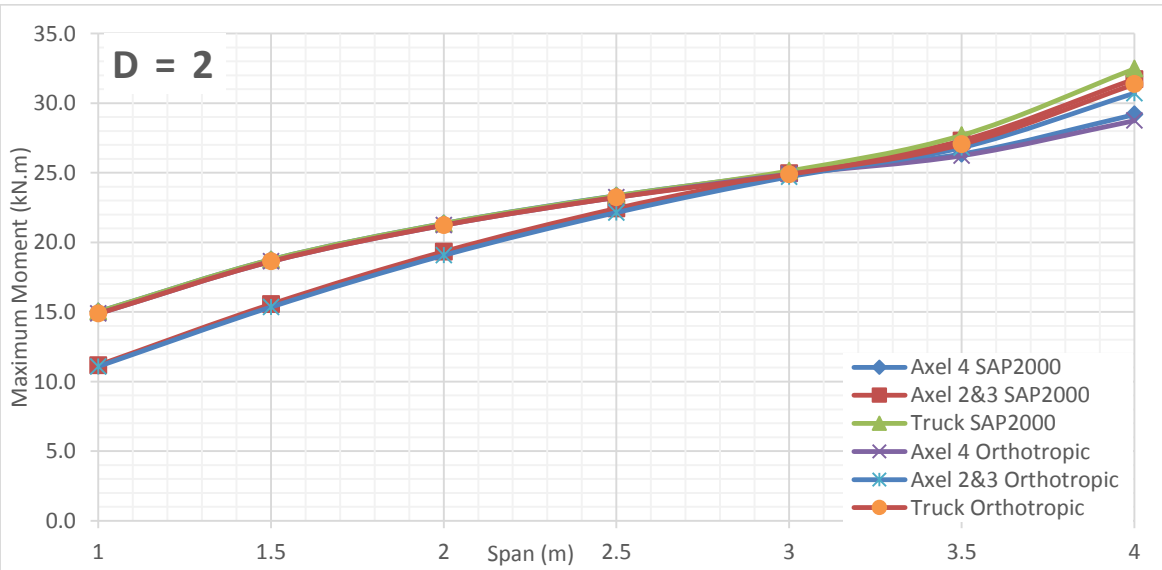

Figure 533 Moment comparison between FEA and Orthotropic Plate Theory for D = 2 of alpha 0.75 (main bars perpendicular traffic)

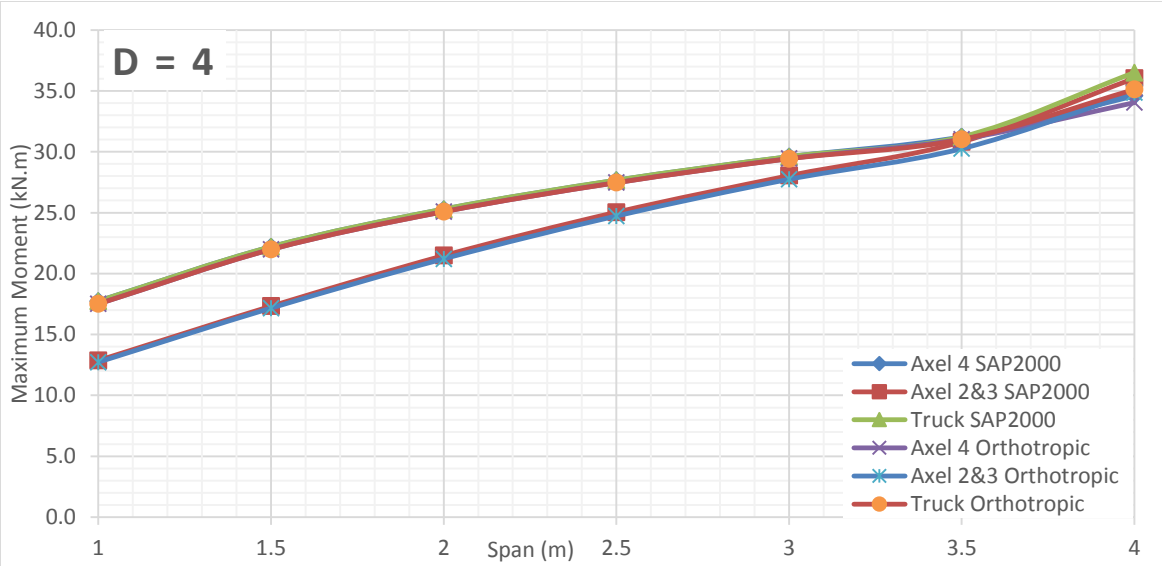

Figure 534 Moment comparison between FEA and Orthotropic Plate Theory for D = 4 of alpha 0.75 (main bars perpendicular traffic)

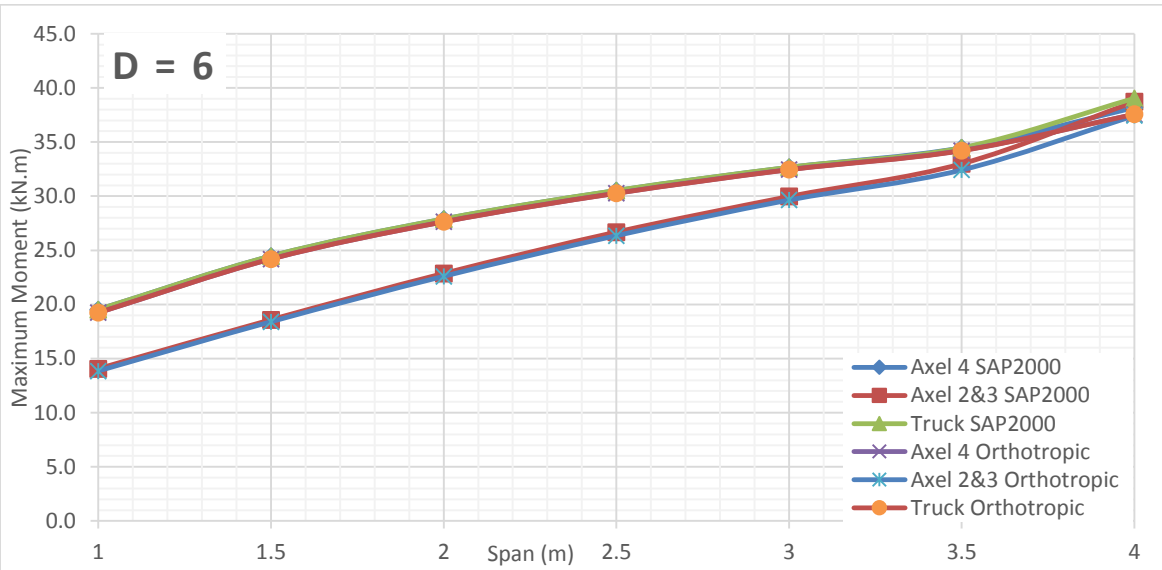

Figure 535 Moment comparison between FEA and Orthotropic Plate Theory for D = 6 of alpha 0.75 (main bars perpendicular traffic)

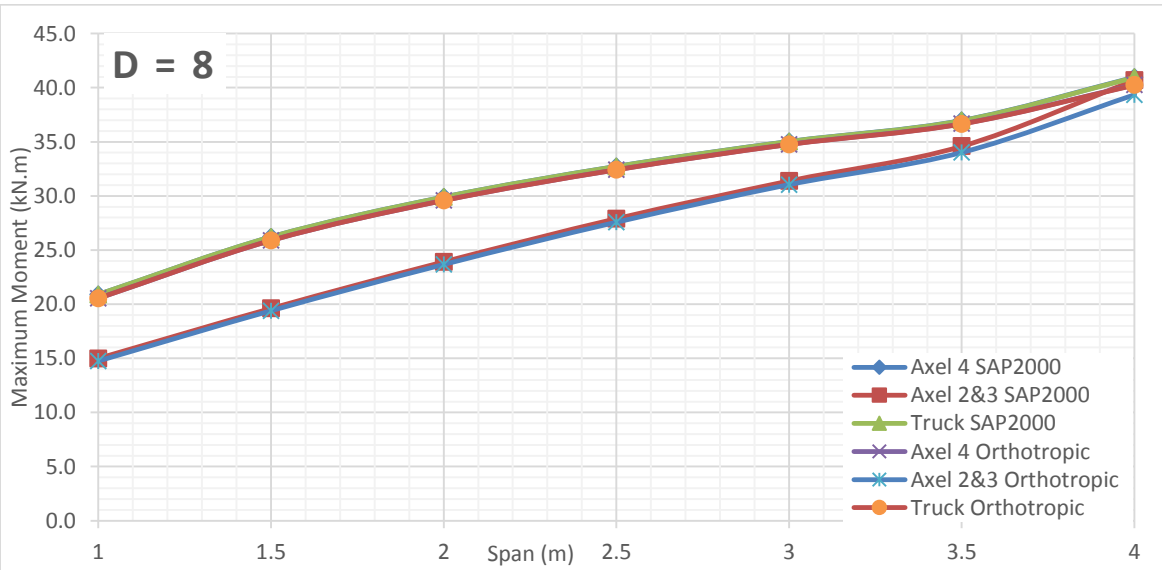

Figure 536 Moment comparison between FEA and Orthotropic Plate Theory for D = 8 of alpha 0.75 (main bars perpendicular traffic)

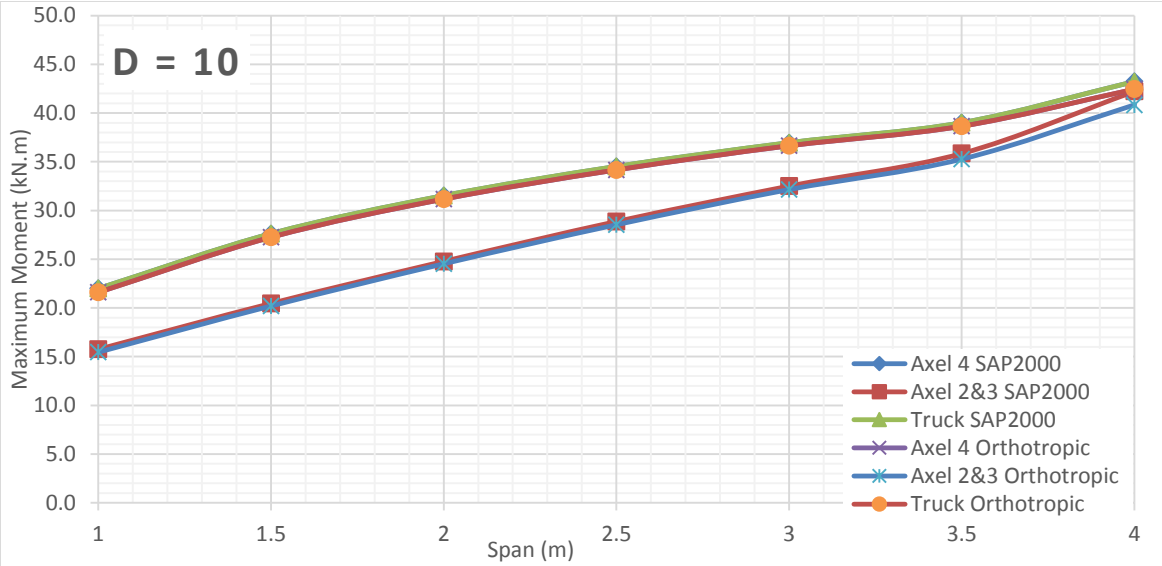

Figure 537 Moment comparison between FEA and Orthotropic Plate Theory for D = 10 of alpha 0.75 (main bars perpendicular traffic)

Alpha 0.75 Bending Moment VS Span Length for Different D Values (Main bars parallel to traffic)

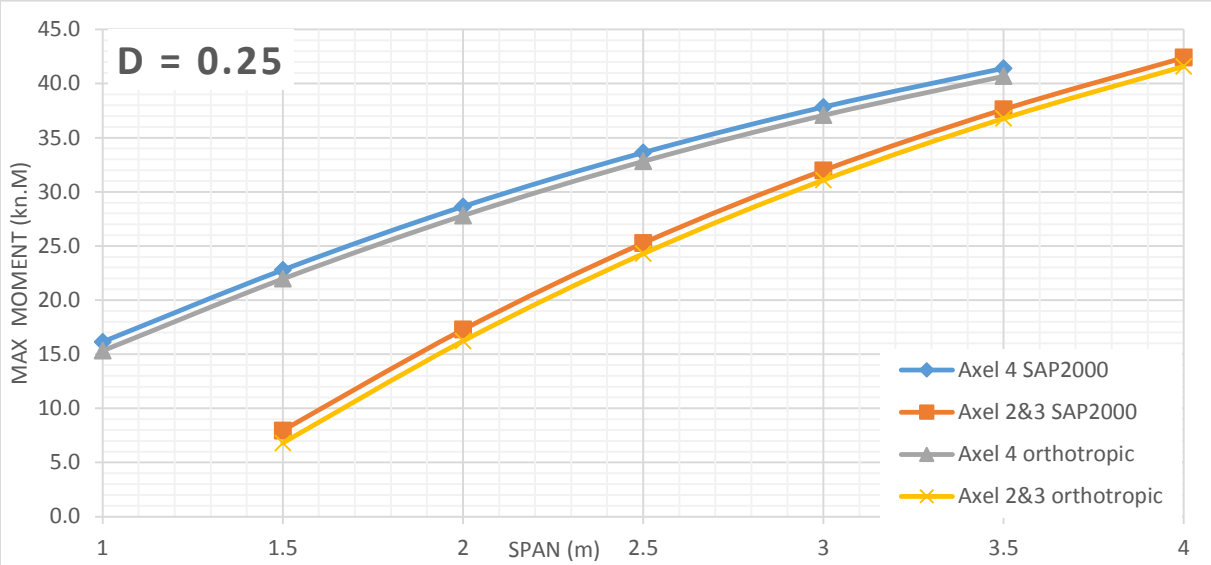

Figure 538 Moment comparison between FEA and Orthotropic Plate Theory for D = 0.25 of alpha 0.75 (main bars parallel traffic)

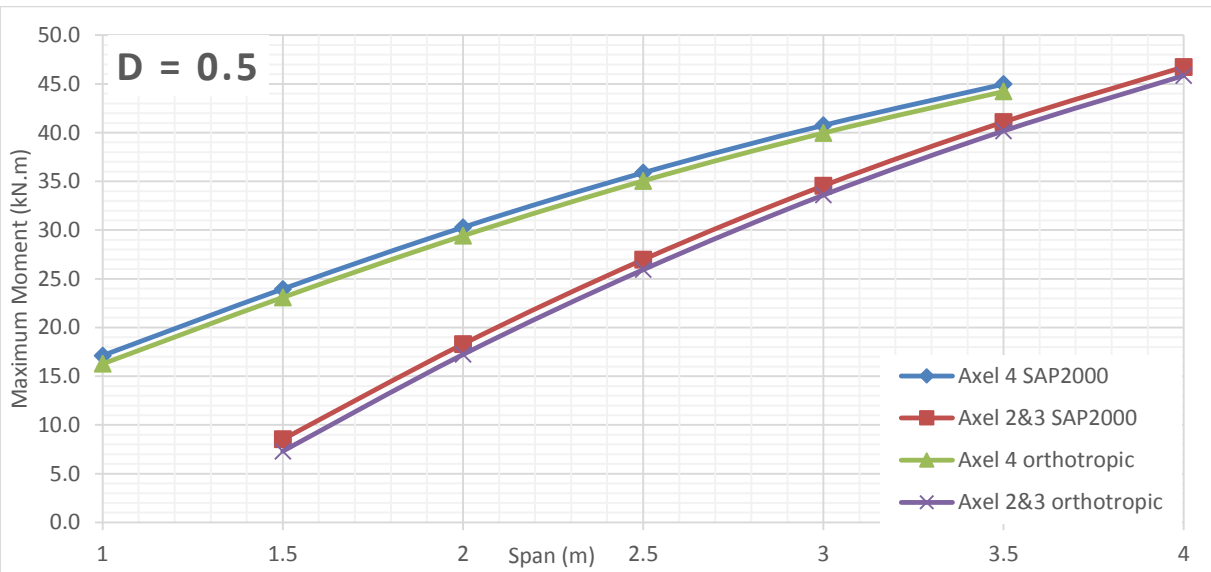

Figure 539 Moment comparison between FEA and Orthotropic Plate Theory for D = 0.5 of alpha 0.75 (main bars parallel traffic)

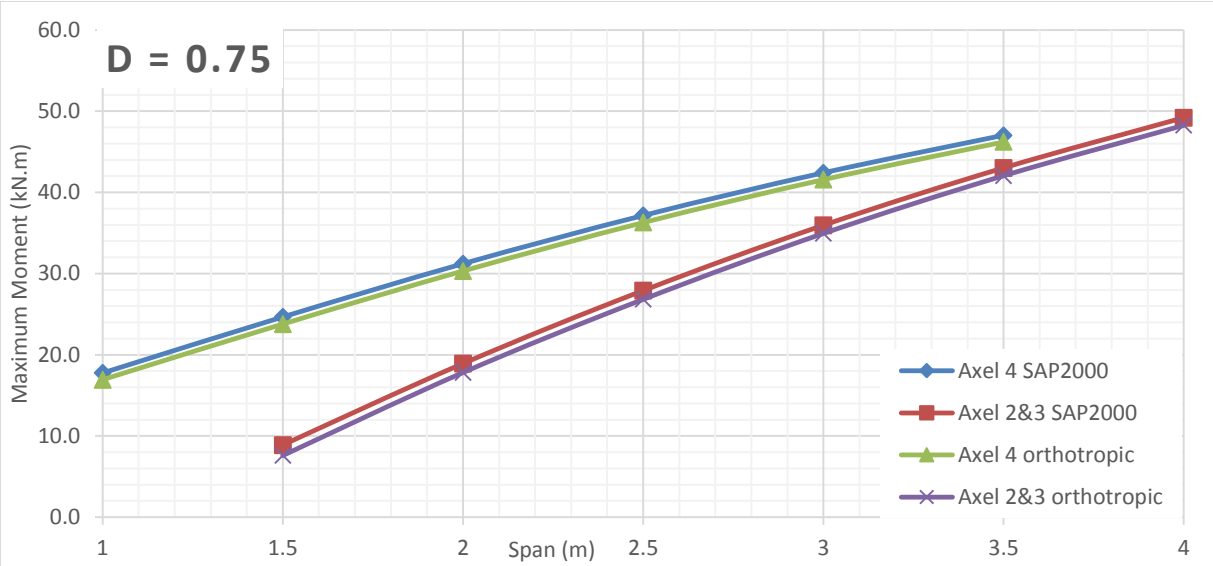

Figure 540 Moment comparison between FEA and Orthotropic Plate Theory for D = 0.75 of alpha 0.75 (main bars parallel traffic)

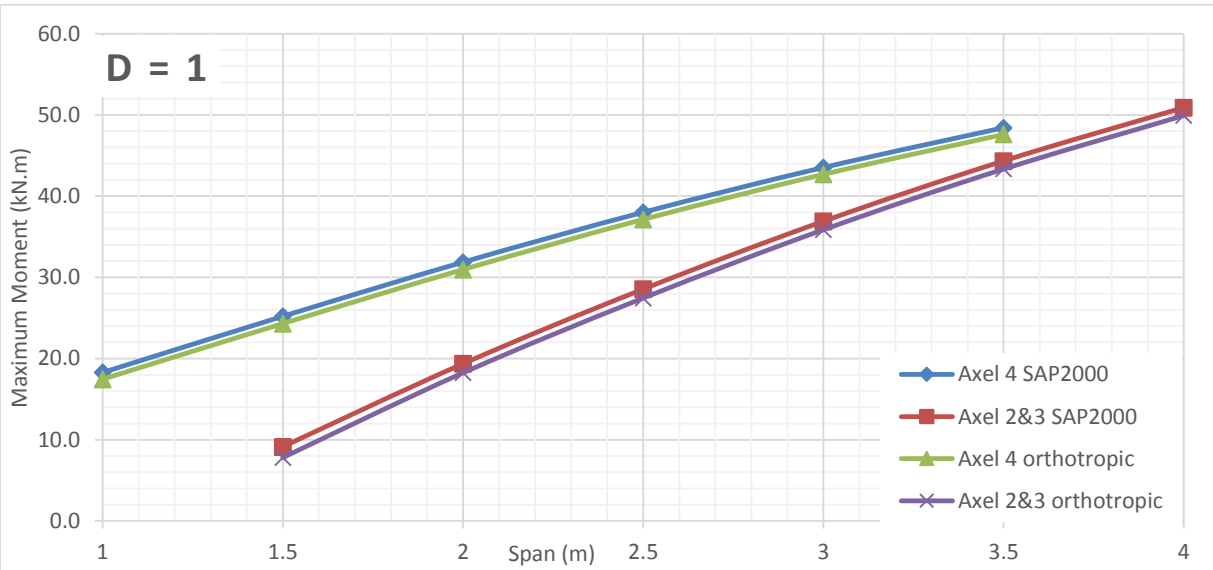

Figure 541 Moment comparison between FEA and Orthotropic Plate Theory for D = 1 of alpha 0.75 (main bars parallel traffic)

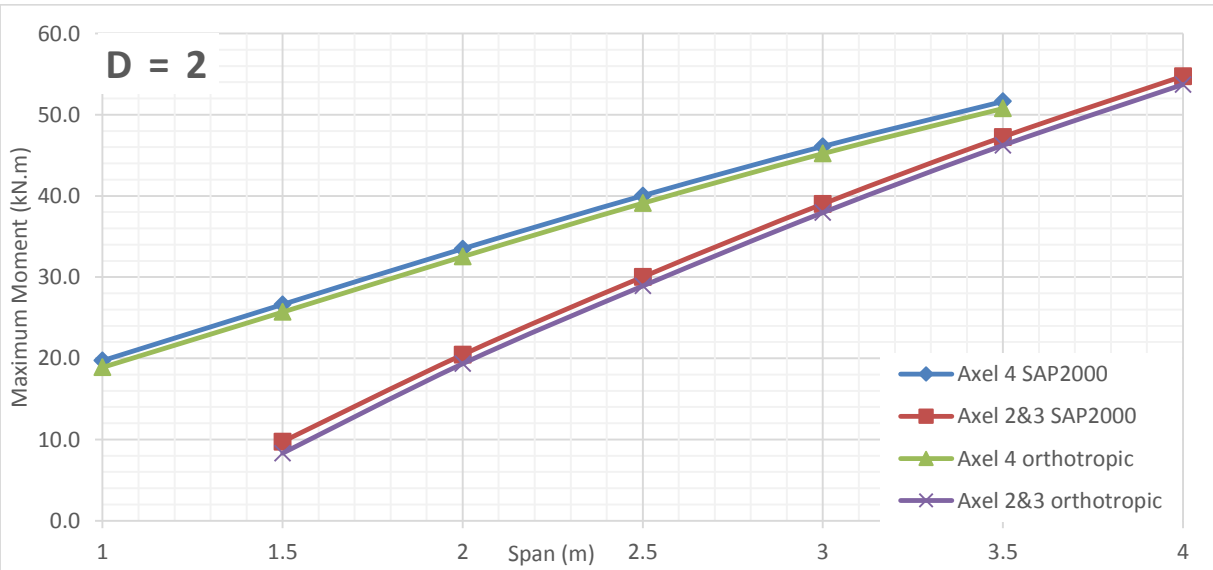

Figure 542 Moment comparison between FEA and Orthotropic Plate Theory for D = 2 of alpha 0.75 (main bars parallel traffic)

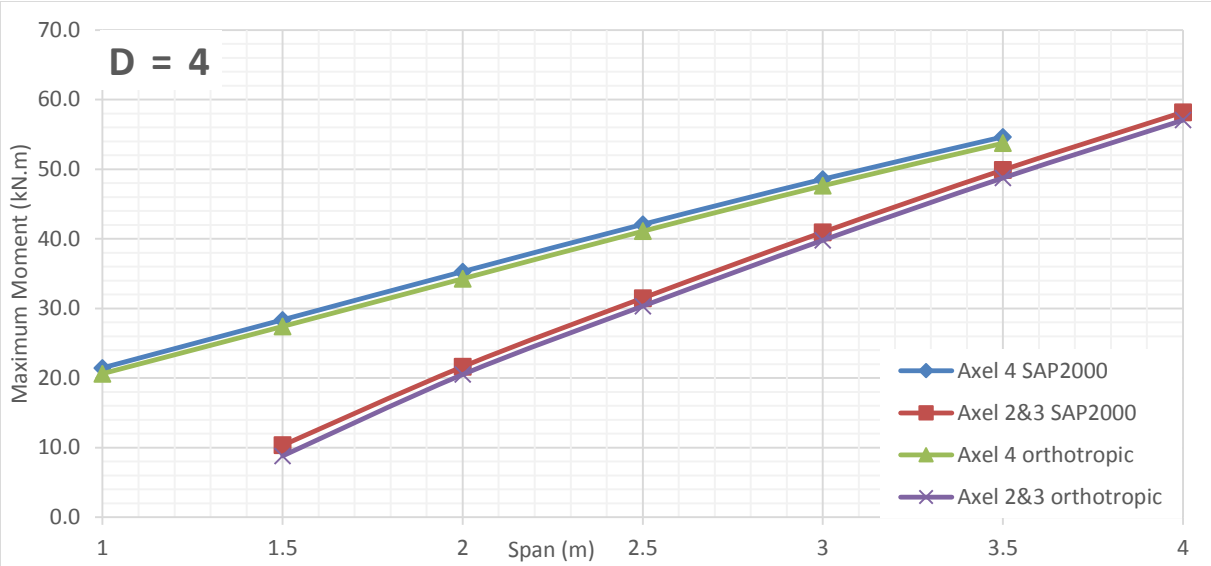

Figure 543 Moment comparison between FEA and Orthotropic Plate Theory for D = 4 of alpha 0.75 (main bars parallel traffic)

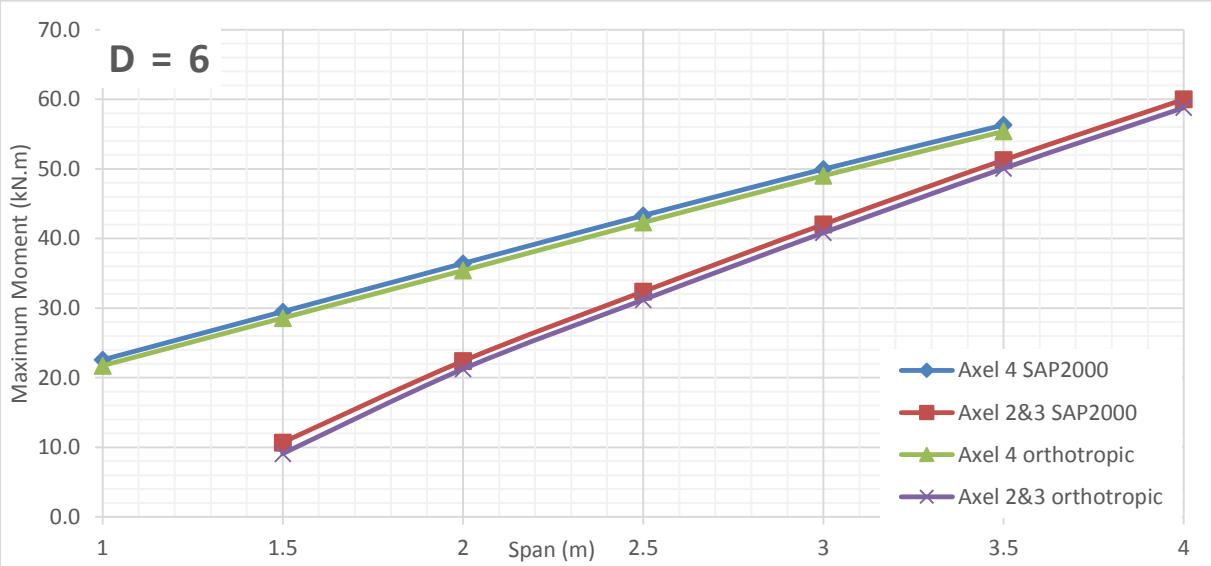

Figure 544 Moment comparison between FEA and Orthotropic Plate Theory for D = 6 of alpha 0.75 (main bars parallel traffic)

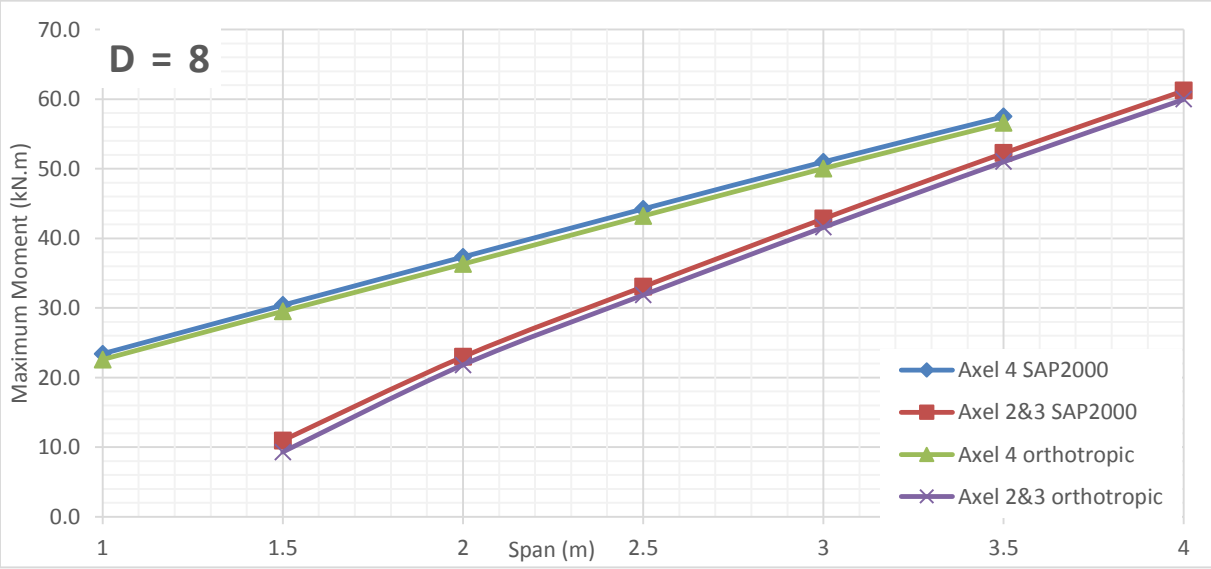

Figure 545 Moment comparison between FEA and Orthotropic Plate Theory for D = 8 of alpha 0.75 (main bars parallel traffic)

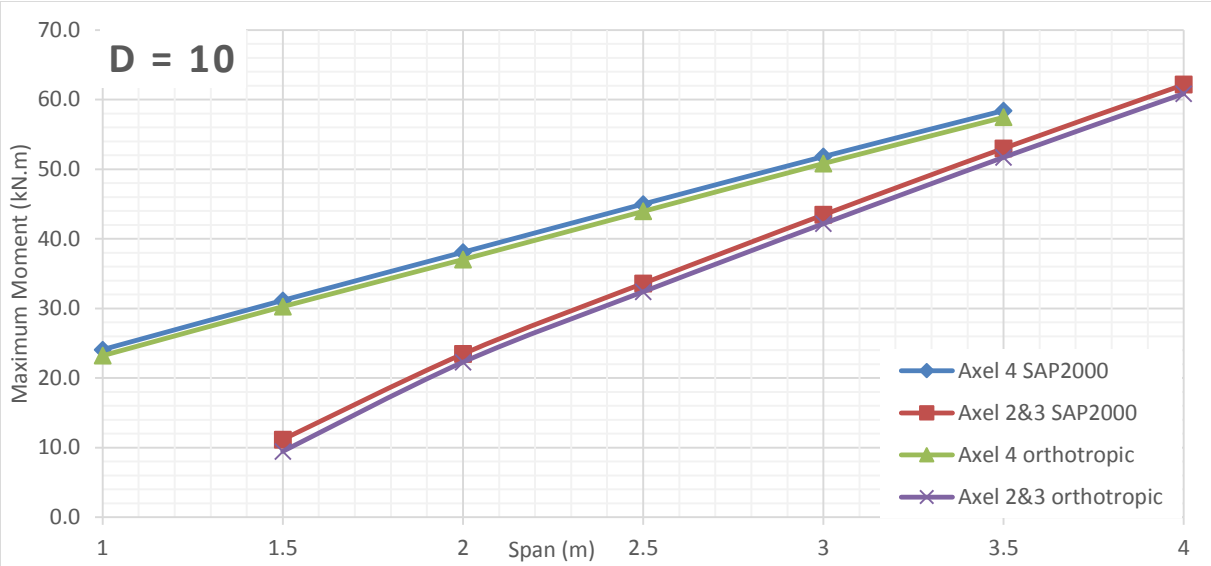

Figure 546 Moment comparison between FEA and Orthotropic Plate Theory for D = 10 of alpha 0.75 (main bars parallel traffic)

Alpha 1 Bending Moment VS Span Length for Different D Values (Main bars perpendicular to traffic)

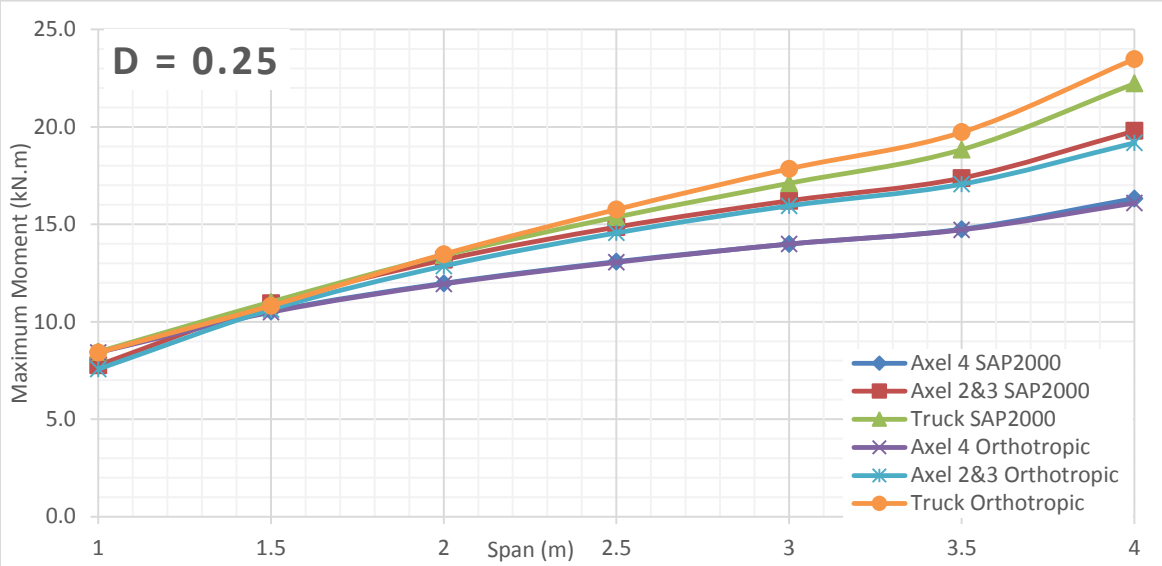

Figure 547 Moment comparison between FEA and Orthotropic Plate Theory for D = 0.25 of alpha 1 (main bars perpendicular traffic)

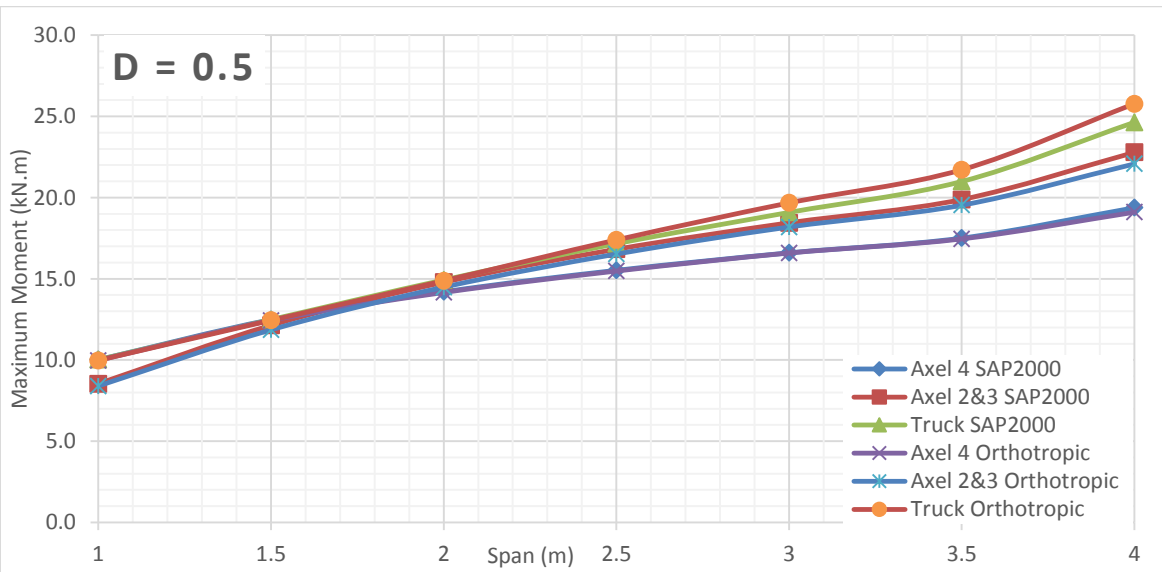

Figure 548 Moment comparison between FEA and Orthotropic Plate Theory for D = 0.5 of alpha 1 (main bars perpendicular traffic)

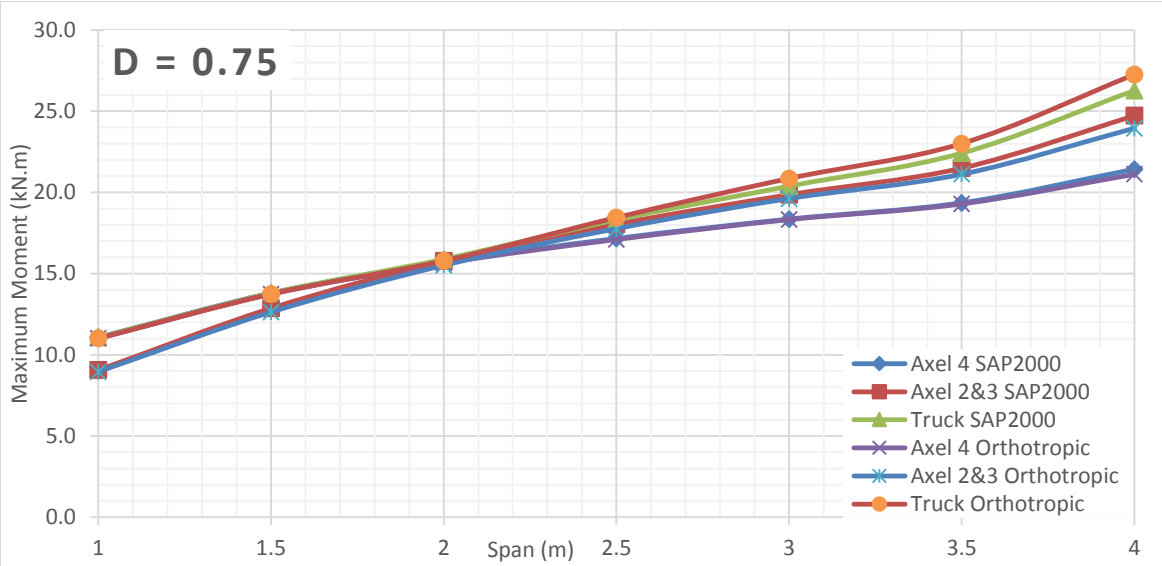

Figure 549 Moment comparison between FEA and Orthotropic Plate Theory for D = 0.75 of alpha 1 (main bars perpendicular traffic)

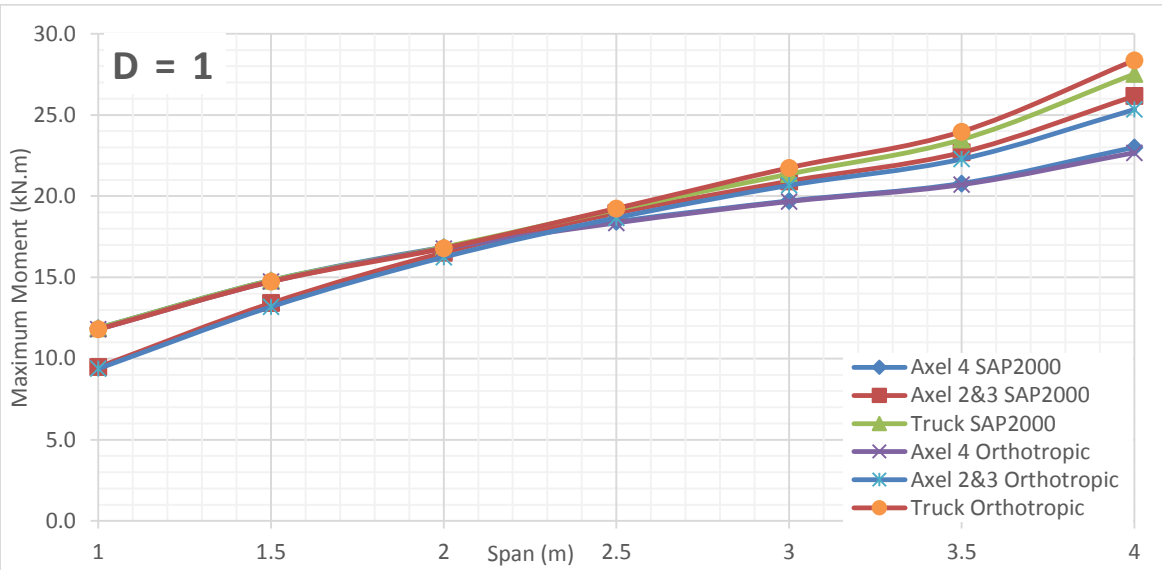

Figure 550 Moment comparison between FEA and Orthotropic Plate Theory for D = 1 of alpha 1 (main bars perpendicular traffic)

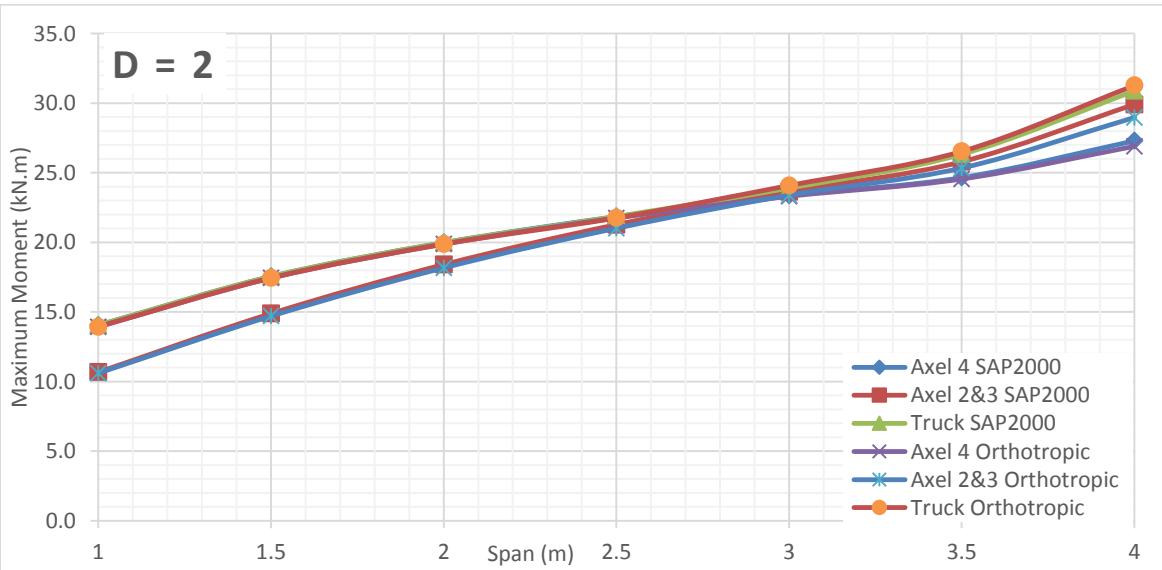

Figure 551 Moment comparison between FEA and Orthotropic Plate Theory for D = 2 of alpha 1 (main bars perpendicular traffic)

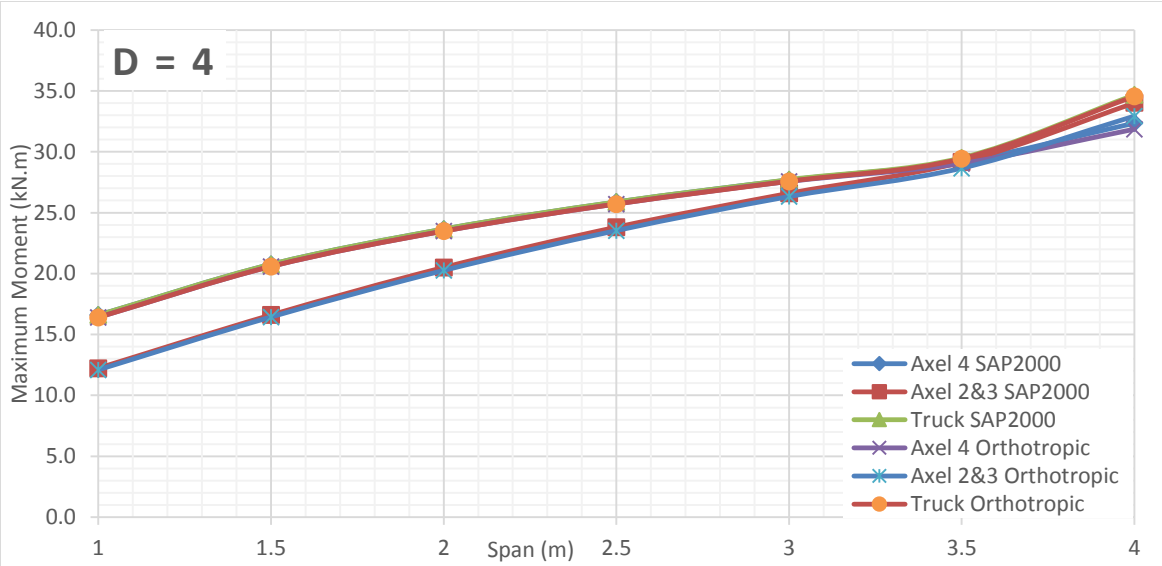

Figure 552 Moment comparison between FEA and Orthotropic Plate Theory for D = 4 of alpha 1 (main bars perpendicular traffic)

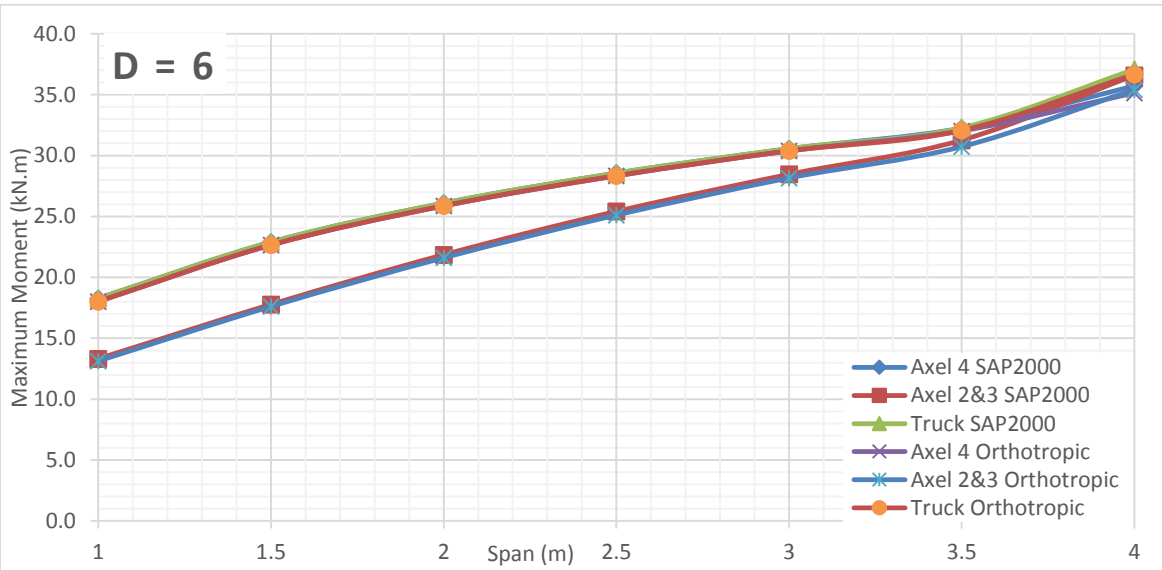

Figure 553 Moment comparison between FEA and Orthotropic Plate Theory for D = 6 of alpha 1 (main bars perpendicular traffic)

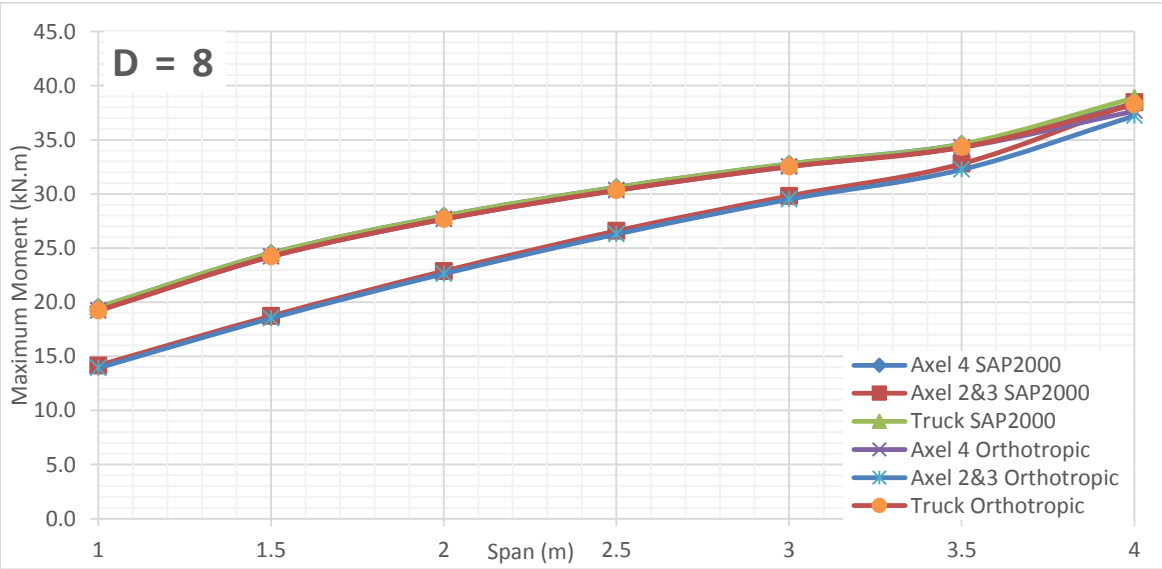

Figure 554 Moment comparison between FEA and Orthotropic Plate Theory for D = 8 of alpha 1 (main bars perpendicular traffic)

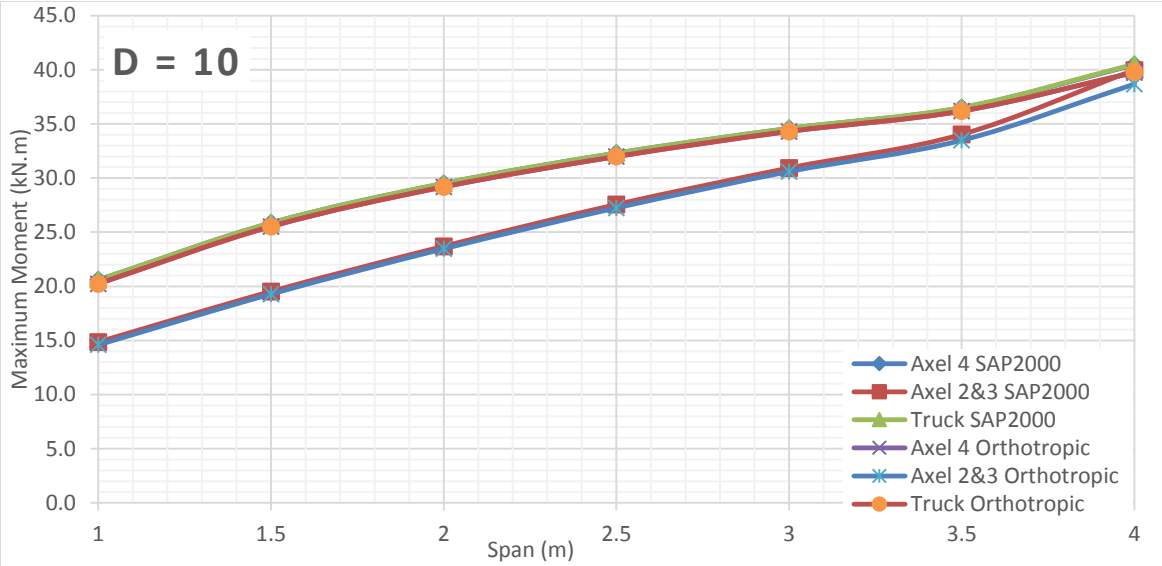

Figure 555 Moment comparison between FEA and Orthotropic Plate Theory for D = 10 of alpha 1 (main bars perpendicular traffic)

Alpha 1 Bending Moment VS Span Length for Different D Values (Main bars parallel to traffic)

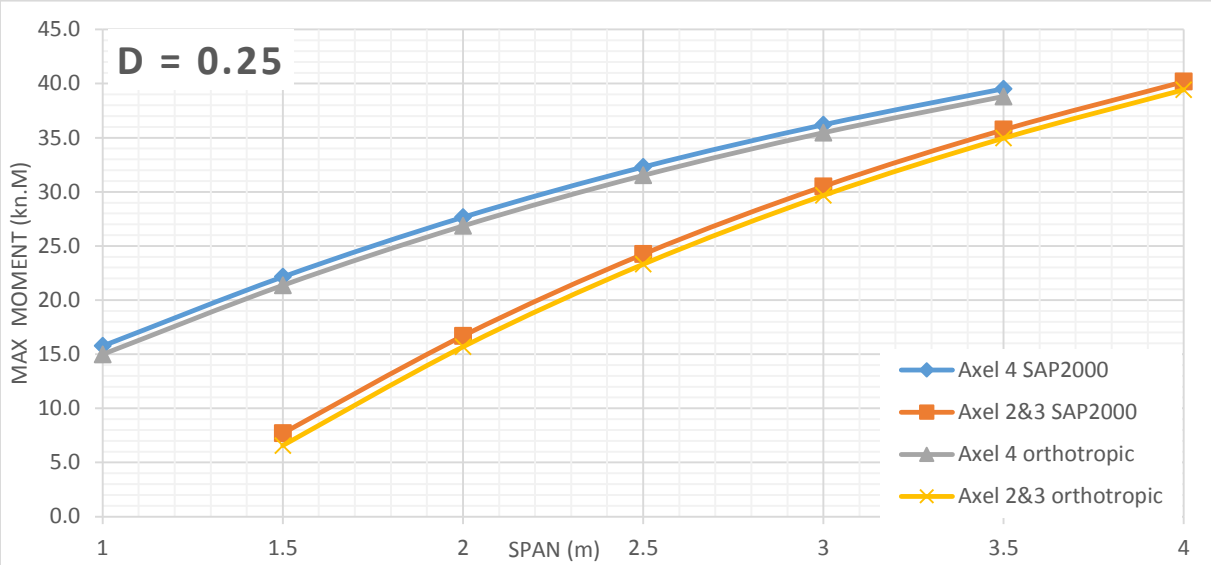

Figure 556 Moment comparison between FEA and Orthotropic Plate Theory for D = 0.25 of alpha 1 (main bars parallel traffic)

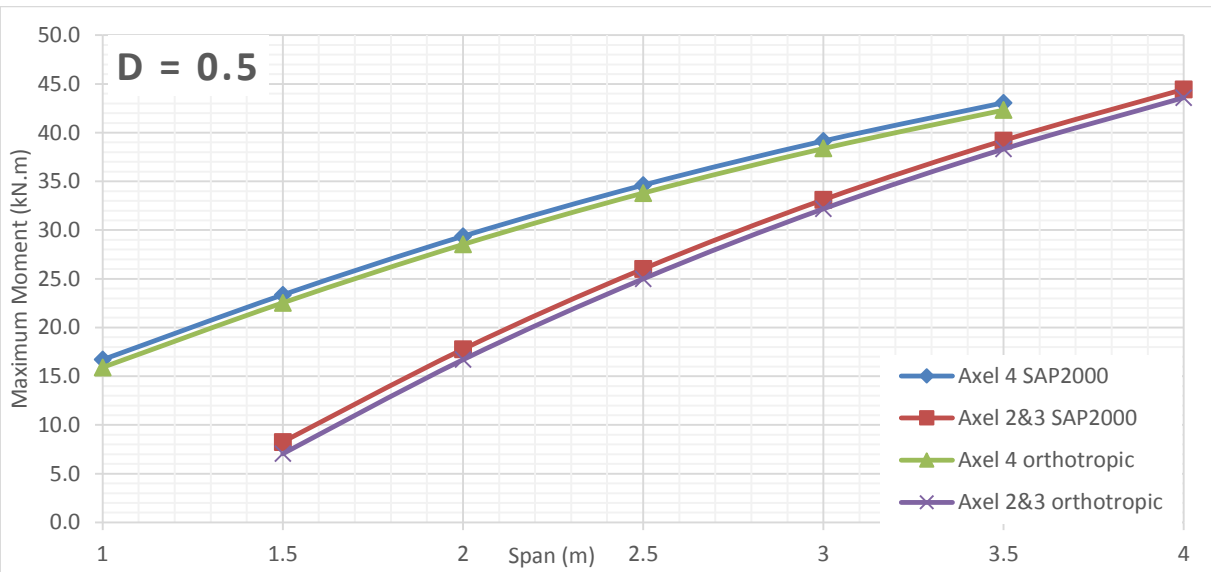

Figure 557 Moment comparison between FEA and Orthotropic Plate Theory for D = 0.5 of alpha 1 (main bars parallel traffic)

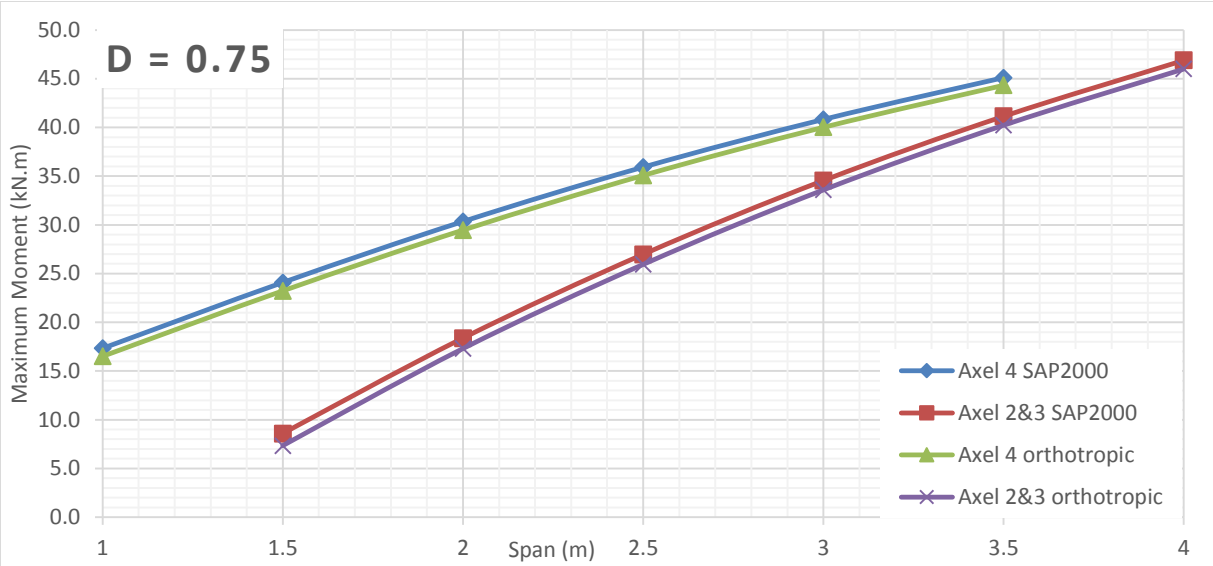

Figure 558 Moment comparison between FEA and Orthotropic Plate Theory for D = 0.75 of alpha 1 (main bars parallel traffic)

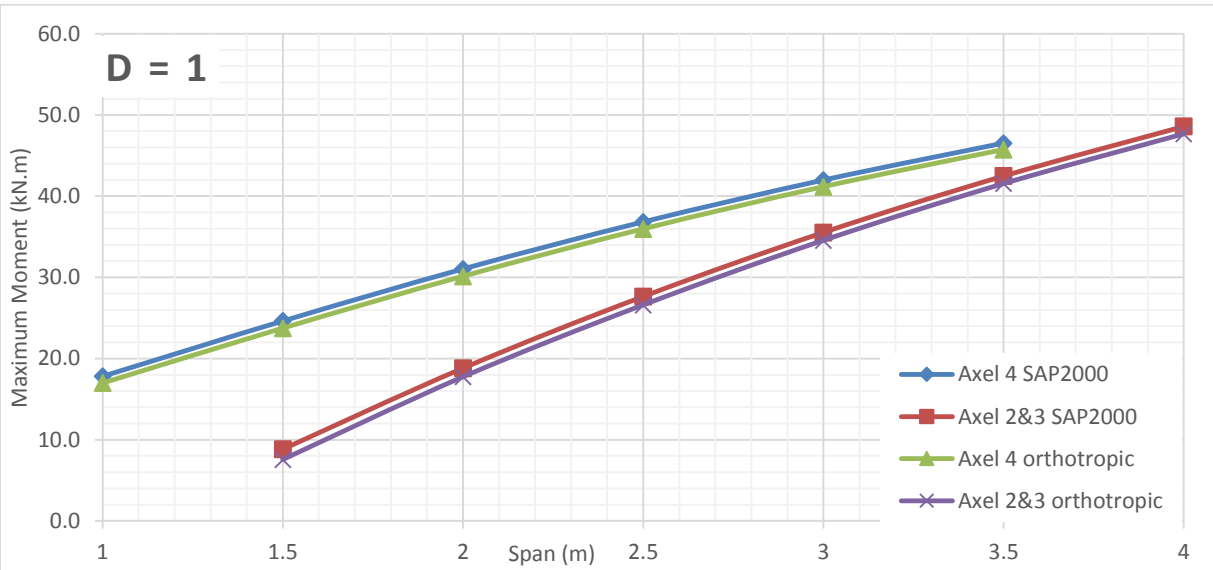

Figure 559 Moment comparison between FEA and Orthotropic Plate Theory for D = 1 of alpha 1 (main bars parallel traffic)

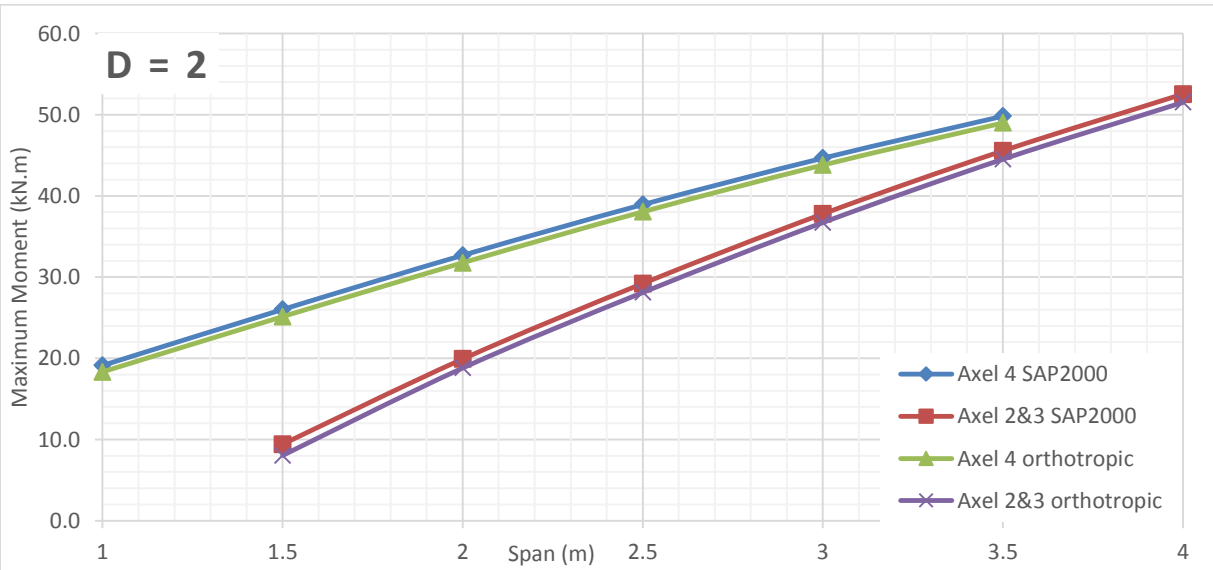

Figure 560 Moment comparison between FEA and Orthotropic Plate Theory for D = 2 of alpha 1 (main bars parallel traffic)

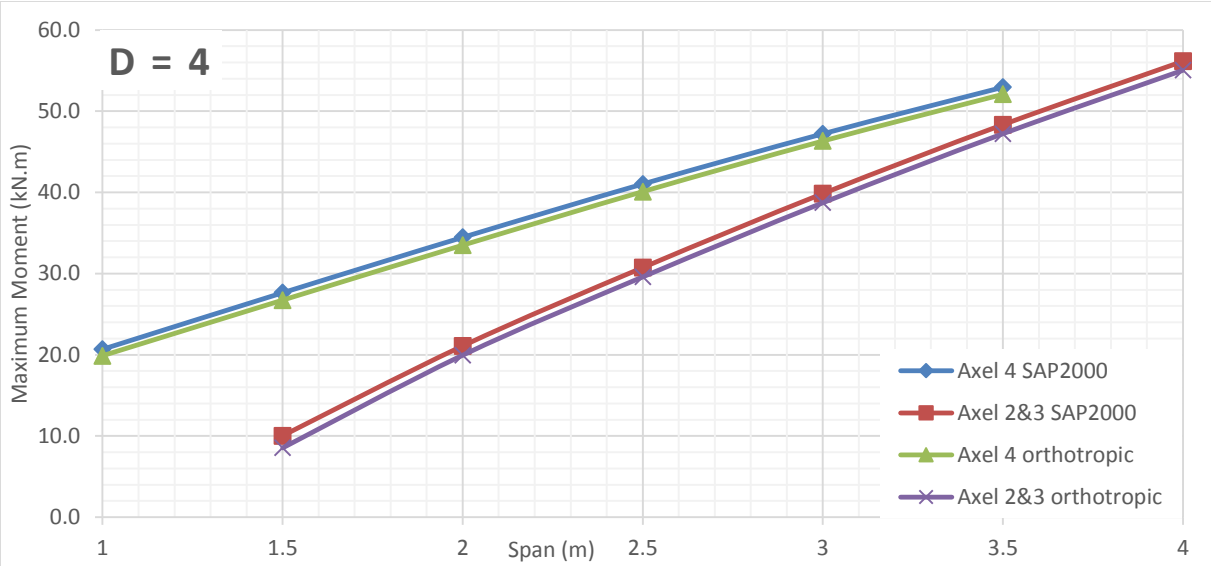

Figure 561 Moment comparison between FEA and Orthotropic Plate Theory for D = 4 of alpha 1 (main bars parallel traffic)

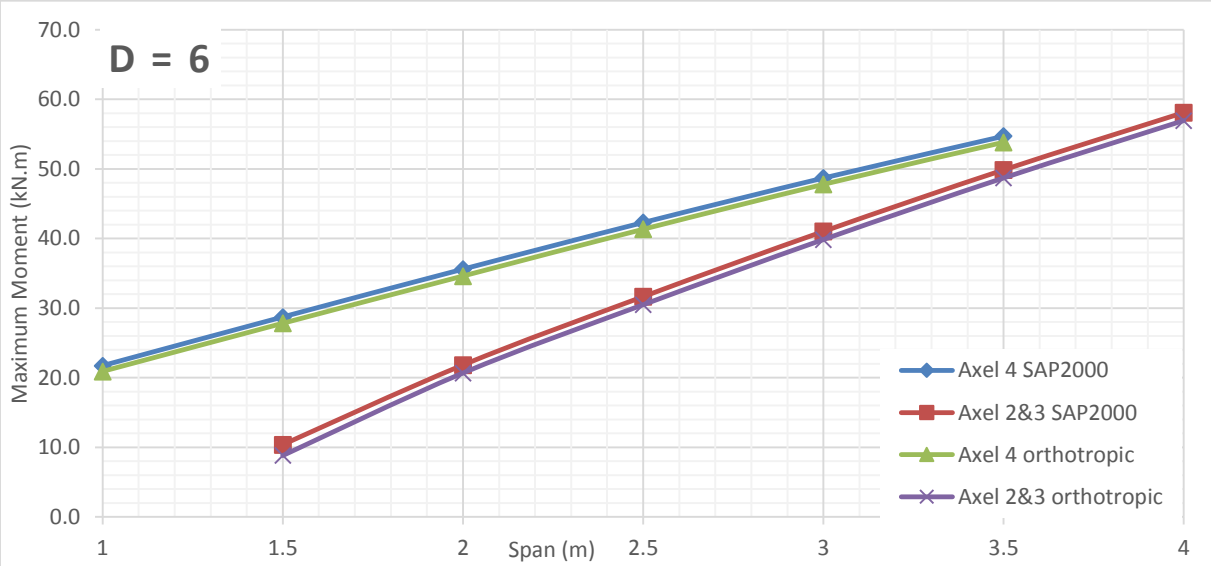

Figure 562 Moment comparison between FEA and Orthotropic Plate Theory for D = 6 of alpha 1 (main bars parallel traffic)

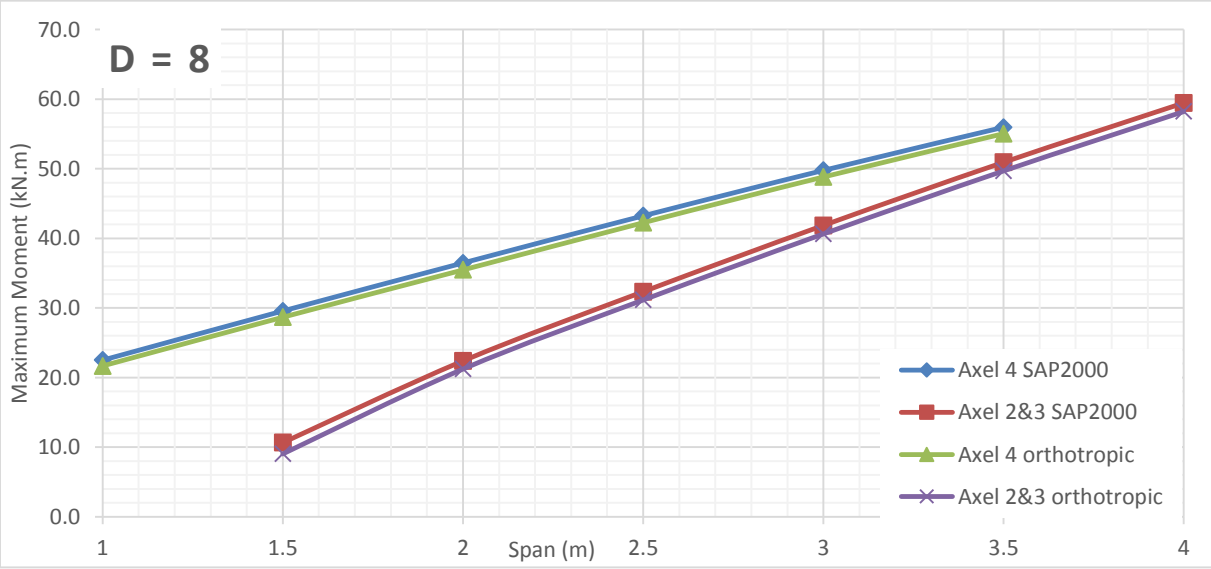

Figure 563 Moment comparison between FEA and Orthotropic Plate Theory for D = 8 of alpha 1 (main bars parallel traffic)

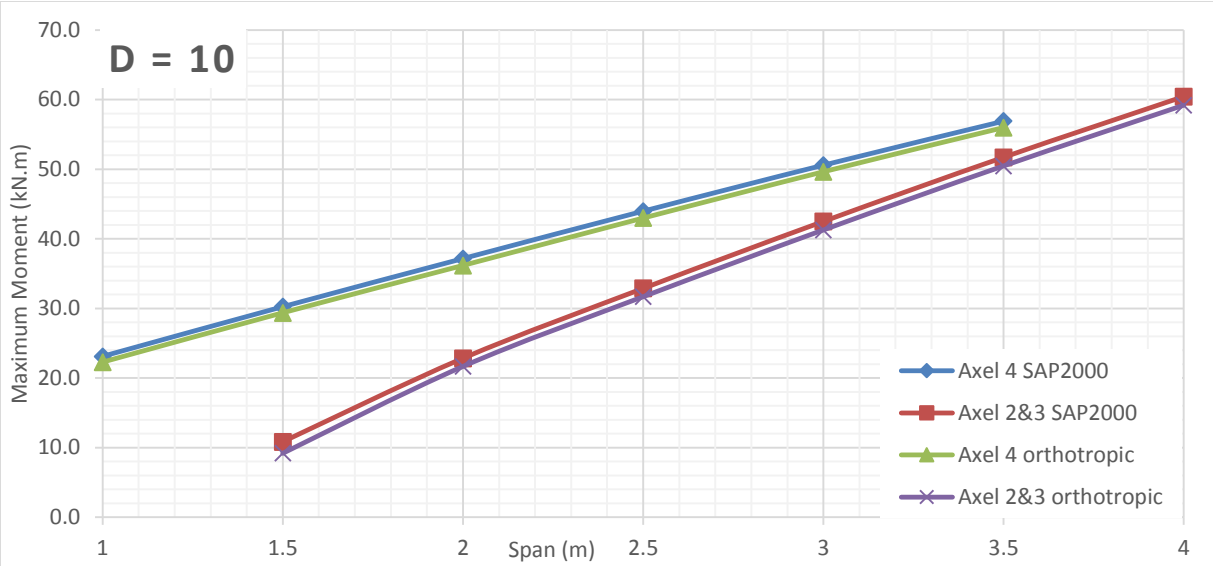

Figure 564 Moment comparison between FEA and Orthotropic Plate Theory for D = 10 of alpha 1 (main bars parallel traffic)

Alpha 2 Bending Moment VS Span Length for Different D Values (Main bars perpendicular to traffic)

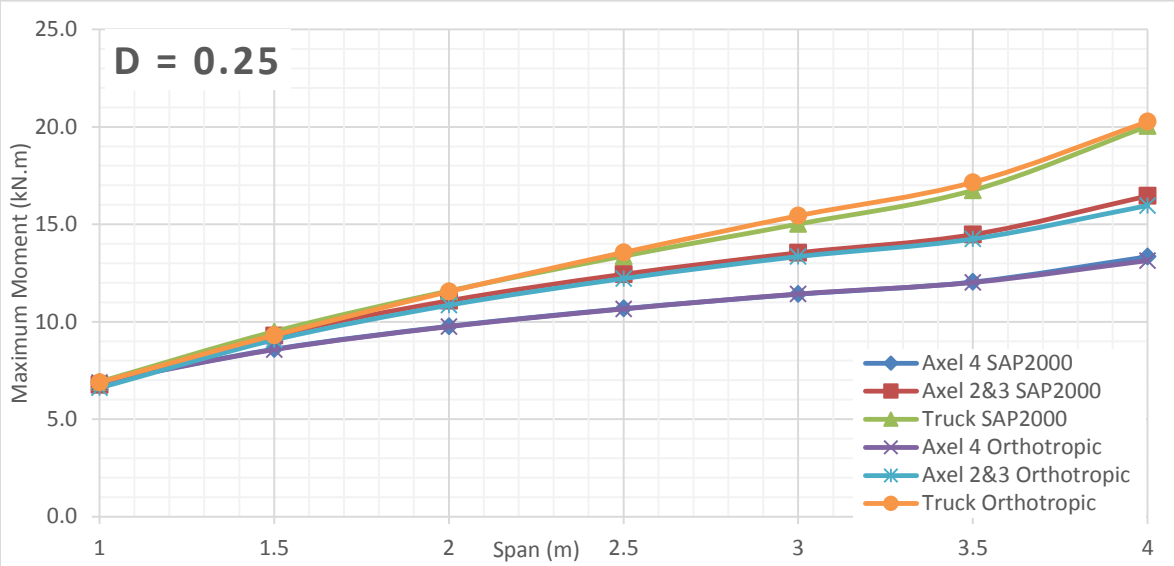

Figure 565 Moment comparison between FEA and Orthotropic Plate Theory for D = 0.25 of alpha 2 (main bars perpendicular traffic)

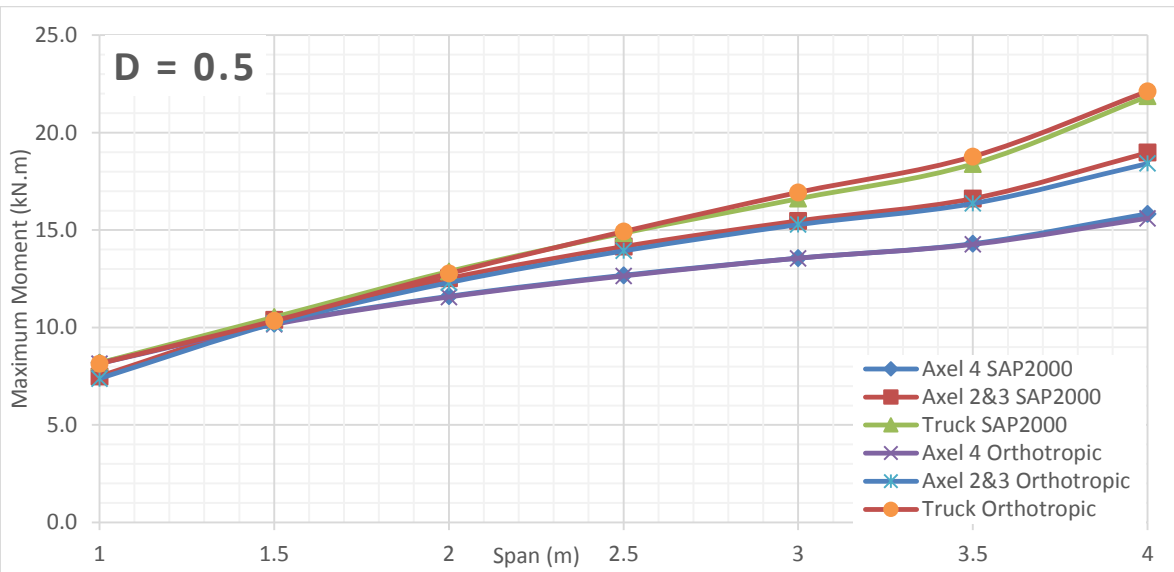

Figure 566 Moment comparison between FEA and Orthotropic Plate Theory for D = 0.5 of alpha 2 (main bars perpendicular traffic)

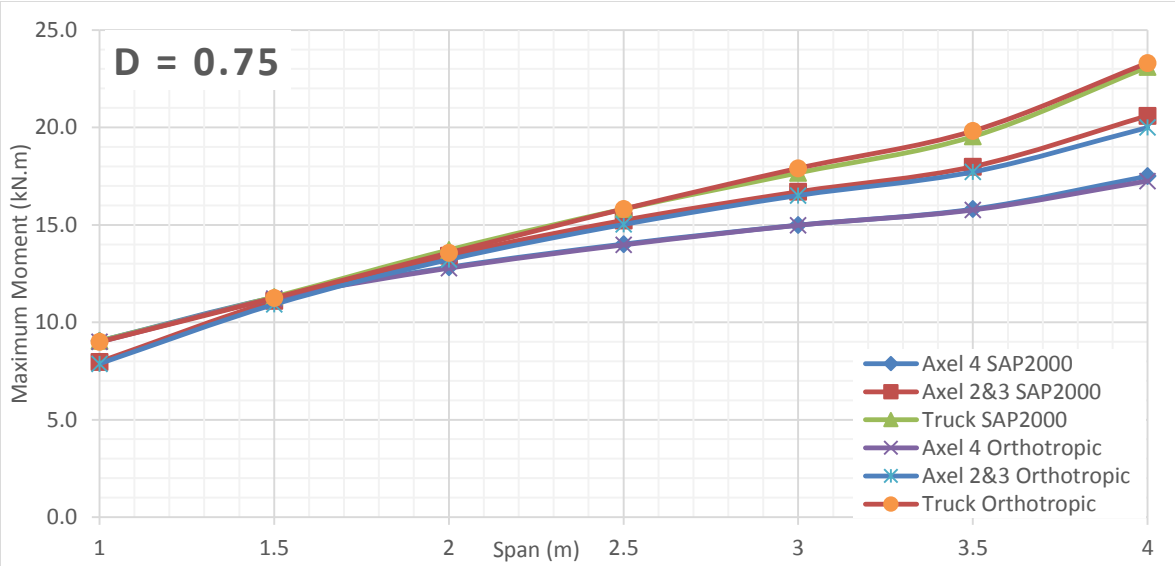

Figure 567 Moment comparison between FEA and Orthotropic Plate Theory for D = 0.75 of alpha 2 (main bars perpendicular traffic)

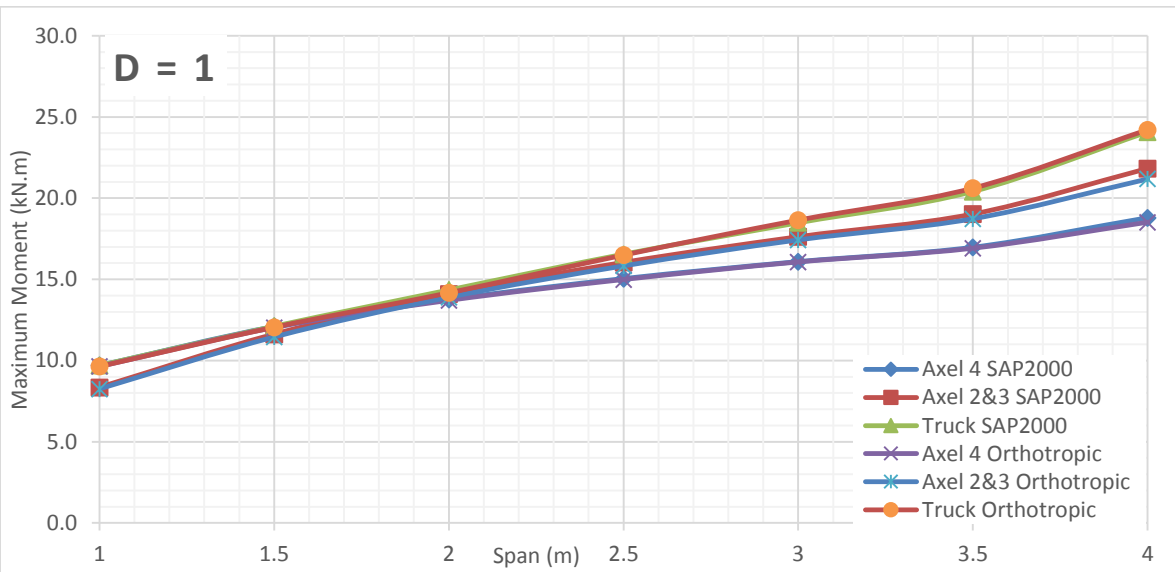

Figure 568 Moment comparison between FEA and Orthotropic Plate Theory for D = 1 of alpha 2 (main bars perpendicular traffic)

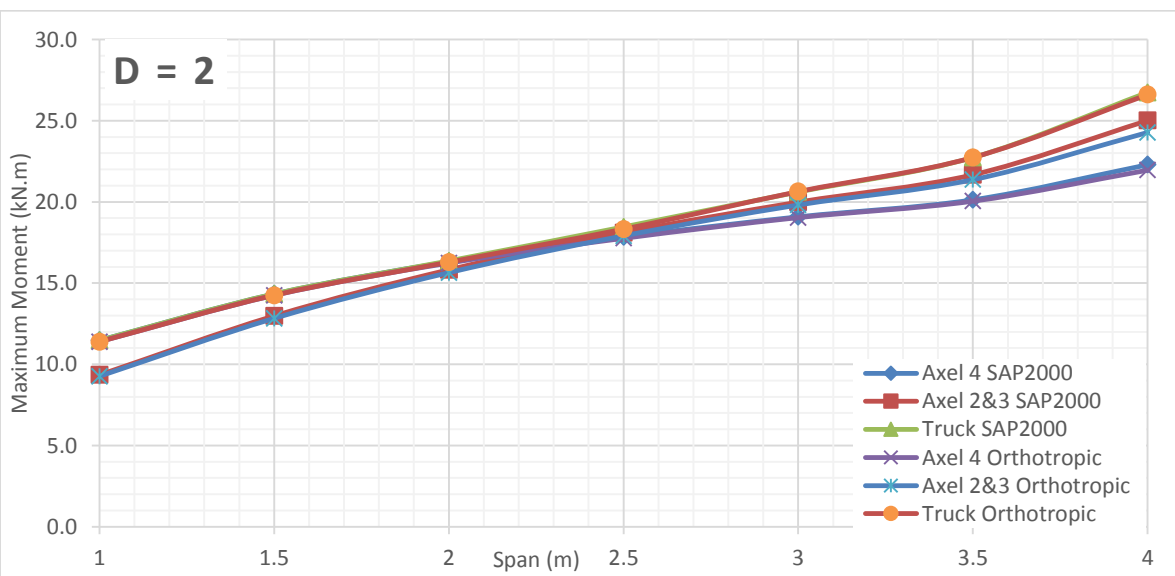

Figure 569 Moment comparison between FEA and Orthotropic Plate Theory for D = 2 of alpha 2 (main bars perpendicular traffic)

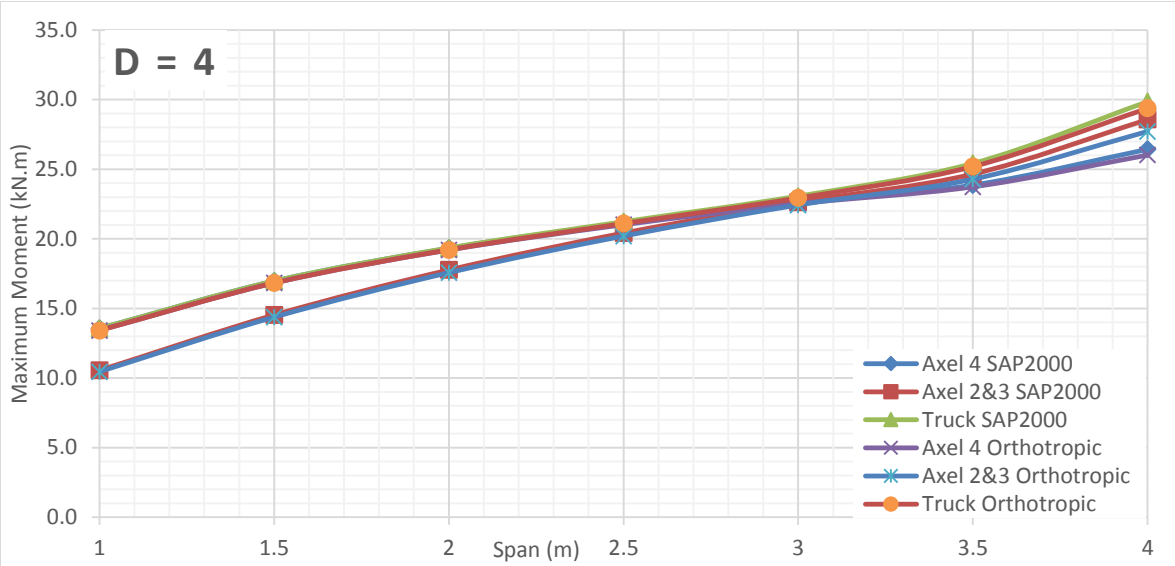

Figure 570 Moment comparison between FEA and Orthotropic Plate Theory for D = 4 of alpha 2 (main bars perpendicular traffic)

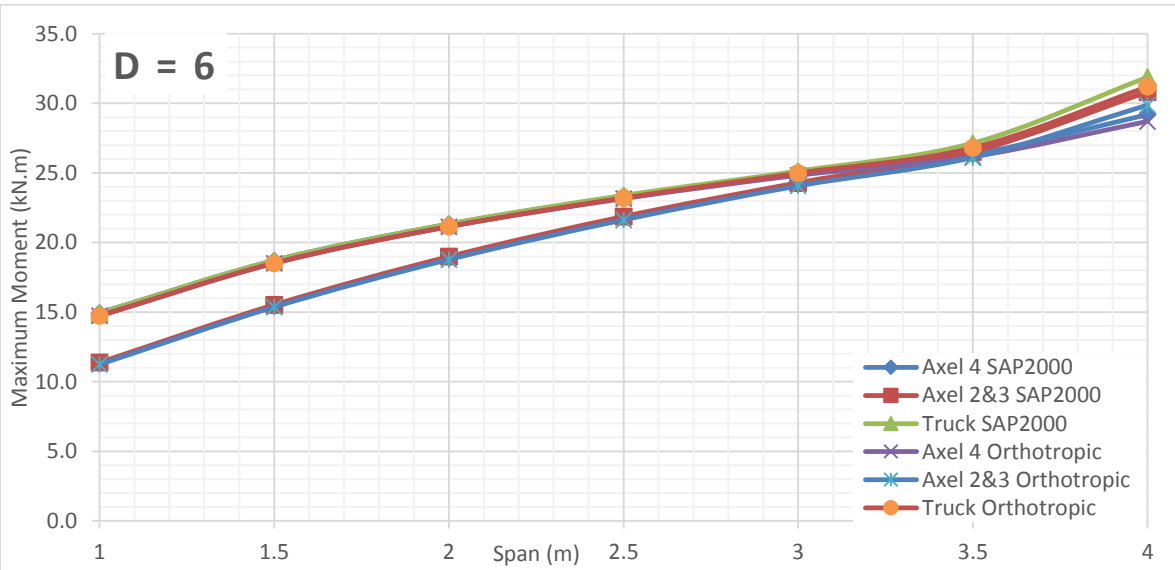

Figure 571 Moment comparison between FEA and Orthotropic Plate Theory for D = 6 of alpha 2 (main bars perpendicular traffic)

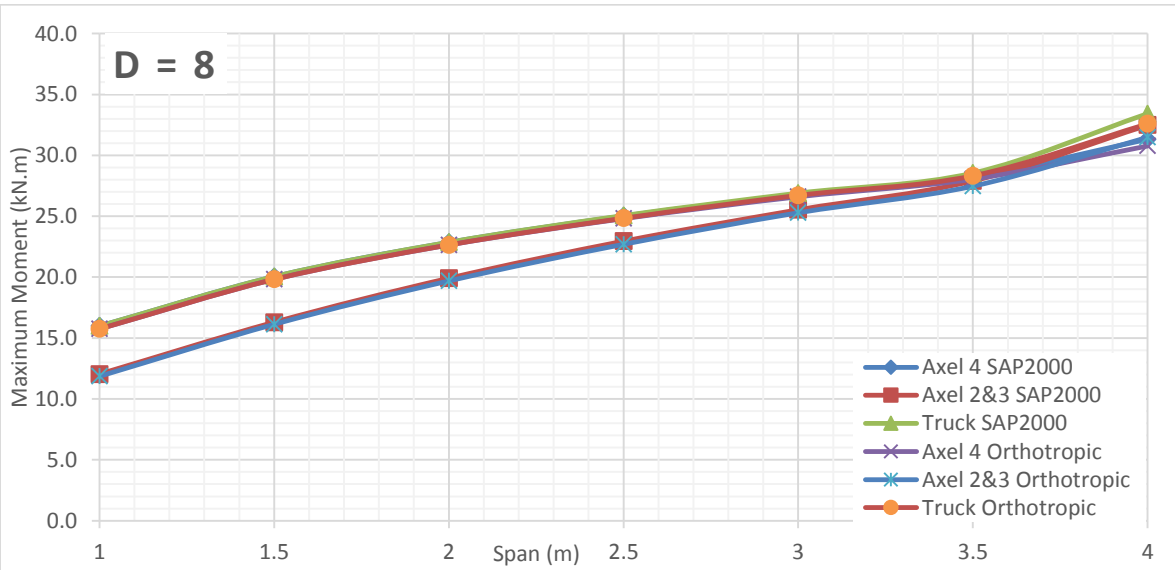

Figure 572 Moment comparison between FEA and Orthotropic Plate Theory for D = 8 of alpha 2 (main bars perpendicular traffic)

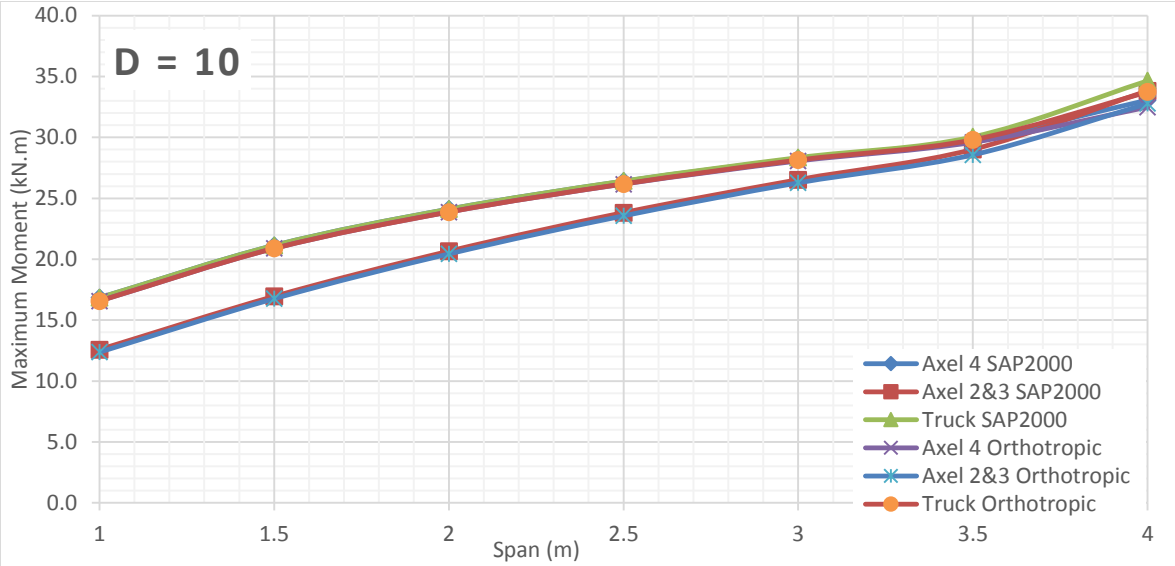

Figure 573 Moment comparison between FEA and Orthotropic Plate Theory for D = 10 of alpha 2 (main bars perpendicular traffic)

Alpha 2 Bending Moment VS Span Length for Different D Values (Main bars parallel to traffic)

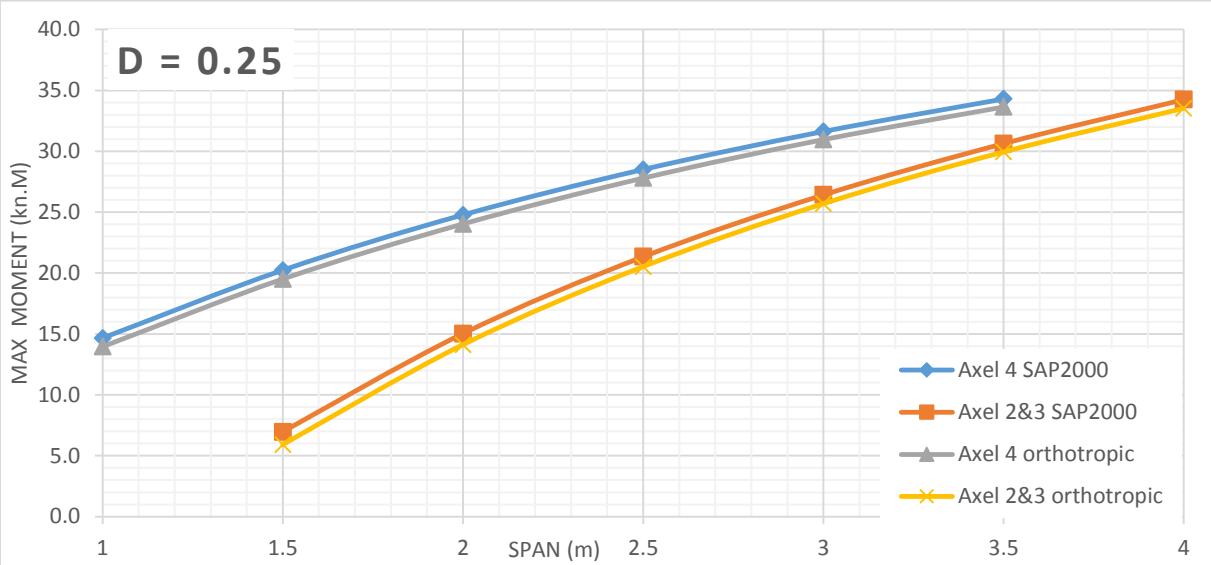

Figure 574 Moment comparison between FEA and Orthotropic Plate Theory for D = 0.25 of alpha 2 (main bars parallel traffic)

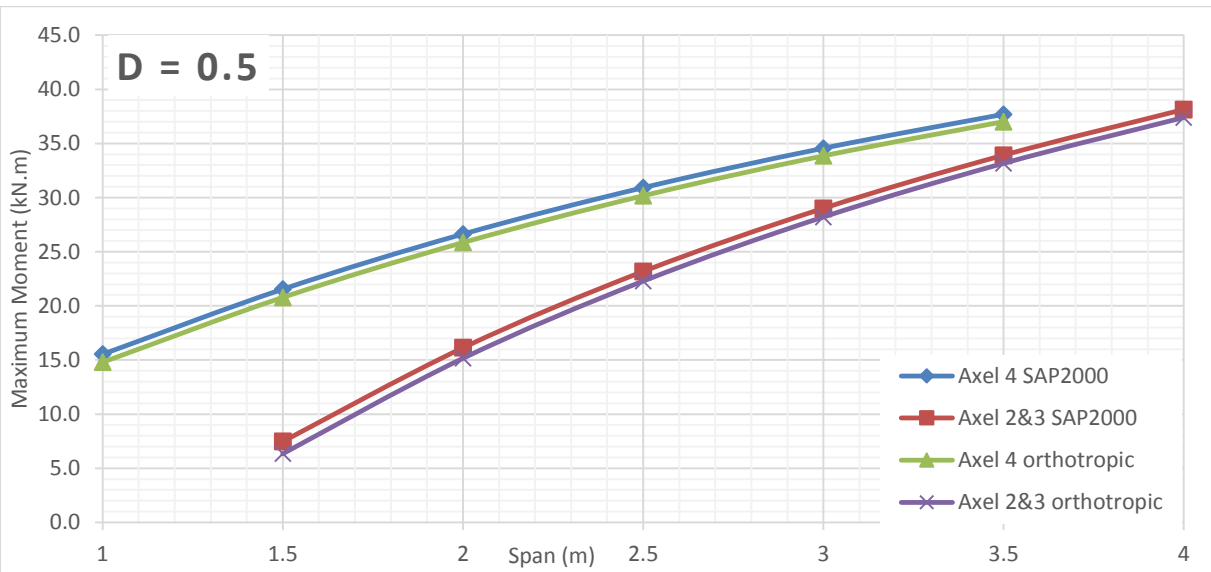

Figure 575 Moment comparison between FEA and Orthotropic Plate Theory for D = 0.5 of alpha 2 (main bars parallel traffic)

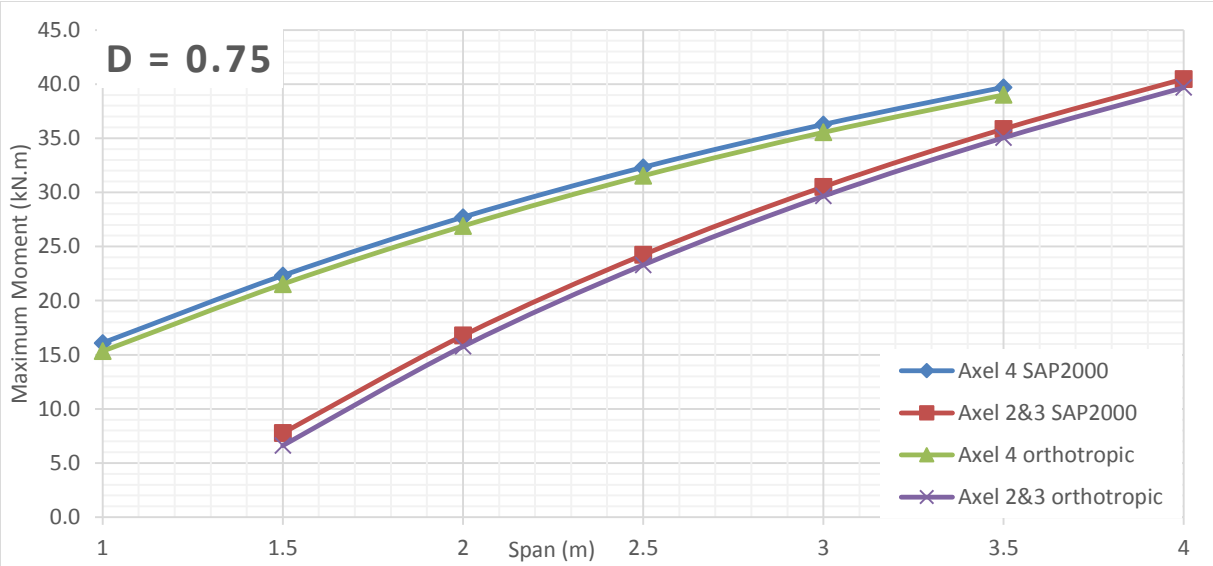

Figure 576 Moment comparison between FEA and Orthotropic Plate Theory for D = 0.75 of alpha 2 (main bars parallel traffic)

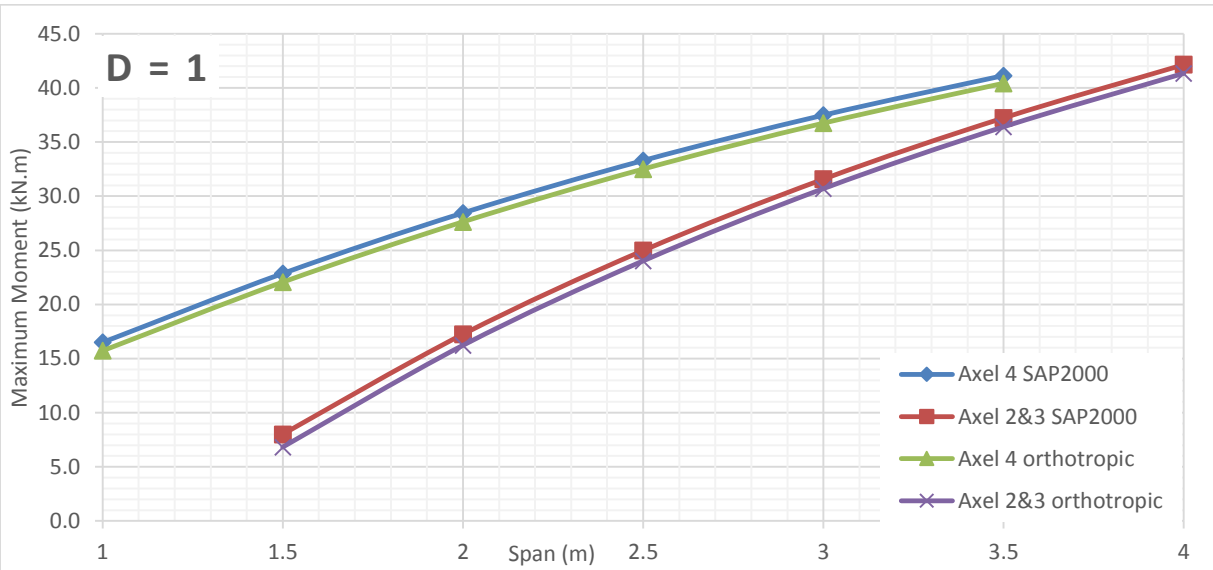

Figure 577 Moment comparison between FEA and Orthotropic Plate Theory for D = 1 of alpha 2 (main bars parallel traffic)

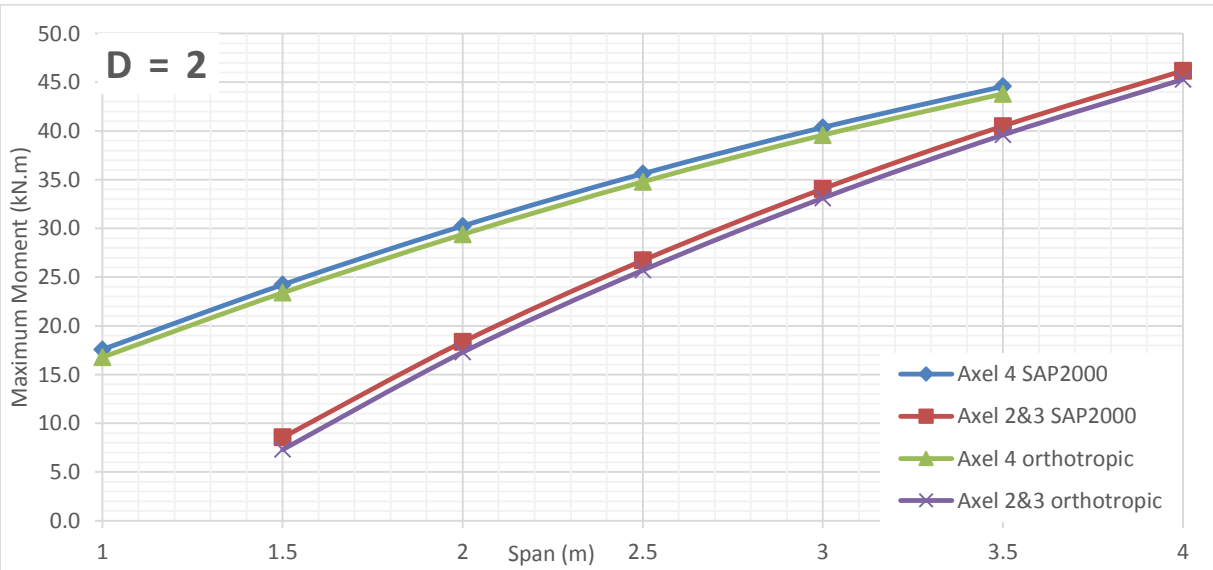

Figure 578 Moment comparison between FEA and Orthotropic Plate Theory for D = 2 of alpha 2 (main bars parallel traffic)

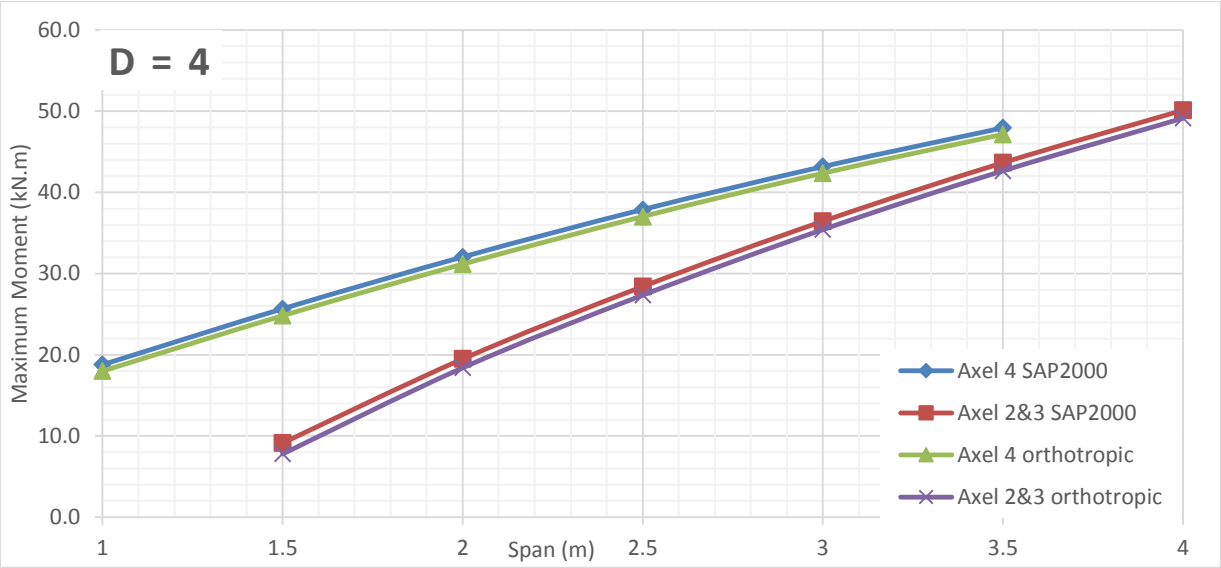

Figure 579 Moment comparison between FEA and Orthotropic Plate Theory for D = 4 of alpha 2 (main bars parallel traffic)

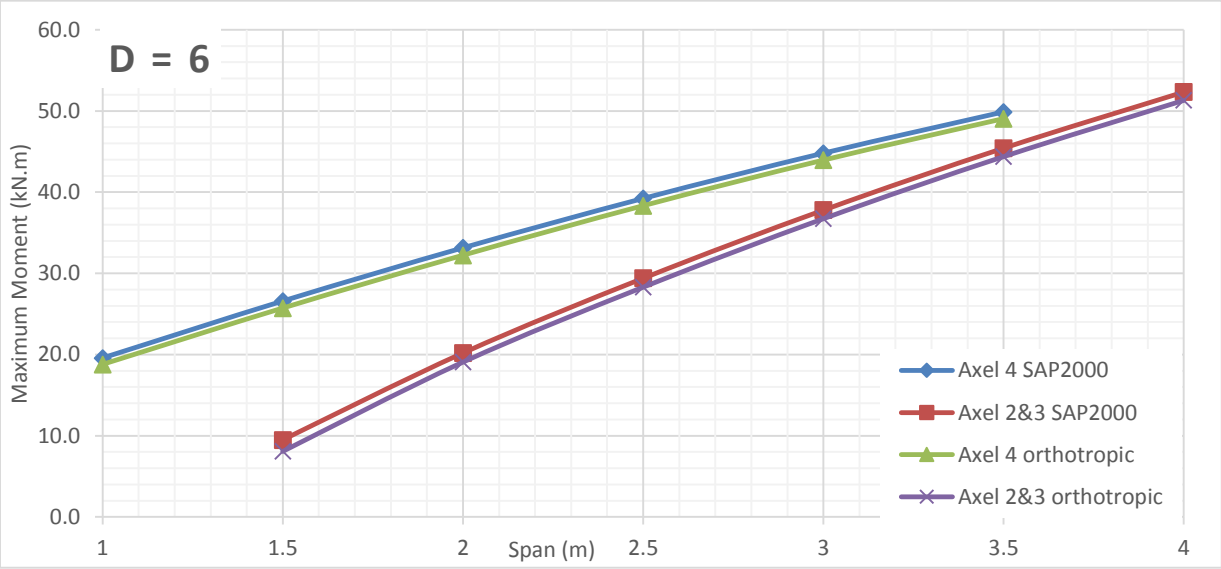

Figure 580 Moment comparison between FEA and Orthotropic Plate Theory for D = 6 of alpha 2 (main bars parallel traffic)

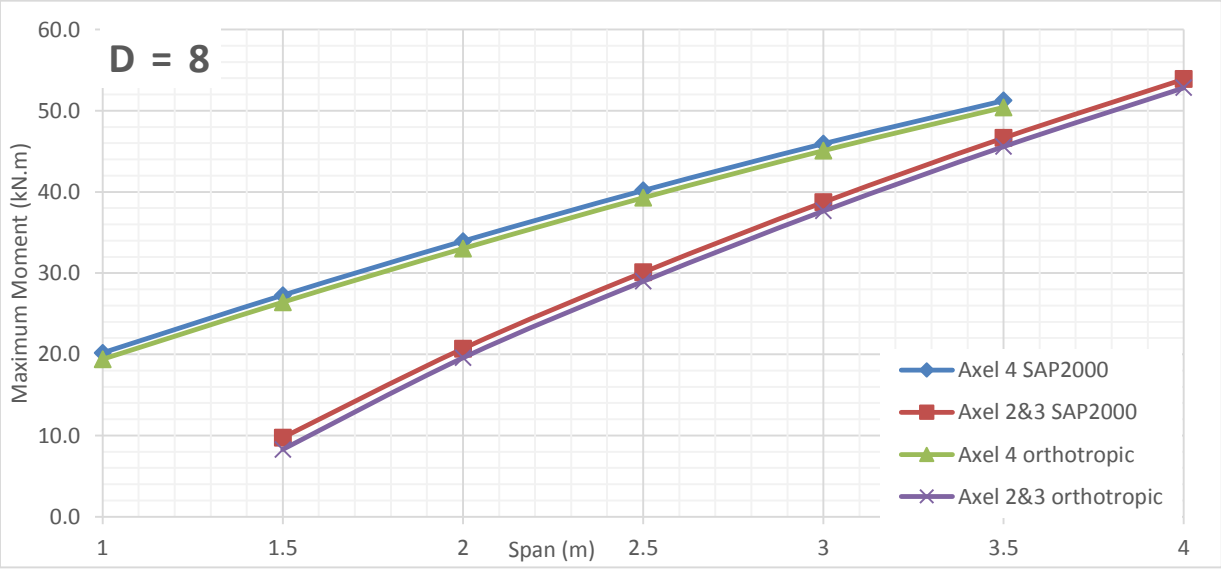

Figure 581 Moment comparison between FEA and Orthotropic Plate Theory for D = 8 of alpha 2 (main bars parallel traffic)

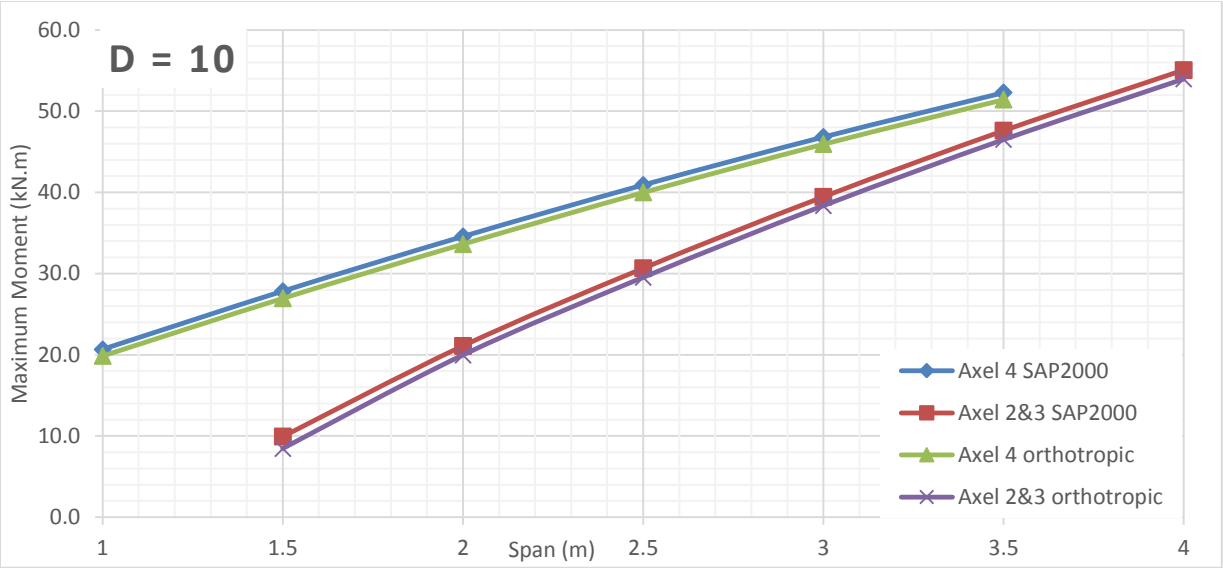

Figure 582 Moment comparison between FEA and Orthotropic Plate Theory for D = 10 of alpha 2 (main bars parallel traffic)

Alpha 4 Bending Moment VS Span Length for Different D Values (Main bars perpendicular to traffic)

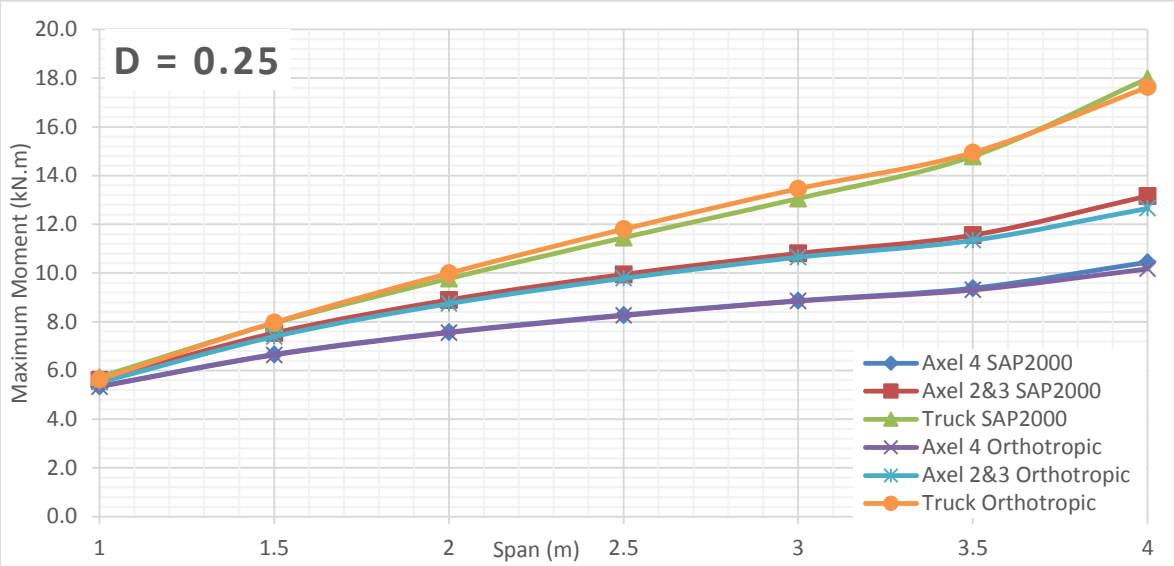

Figure 583 Moment comparison between FEA and Orthotropic Plate Theory for D = 0.25 of alpha 4 (main bars perpendicular traffic)

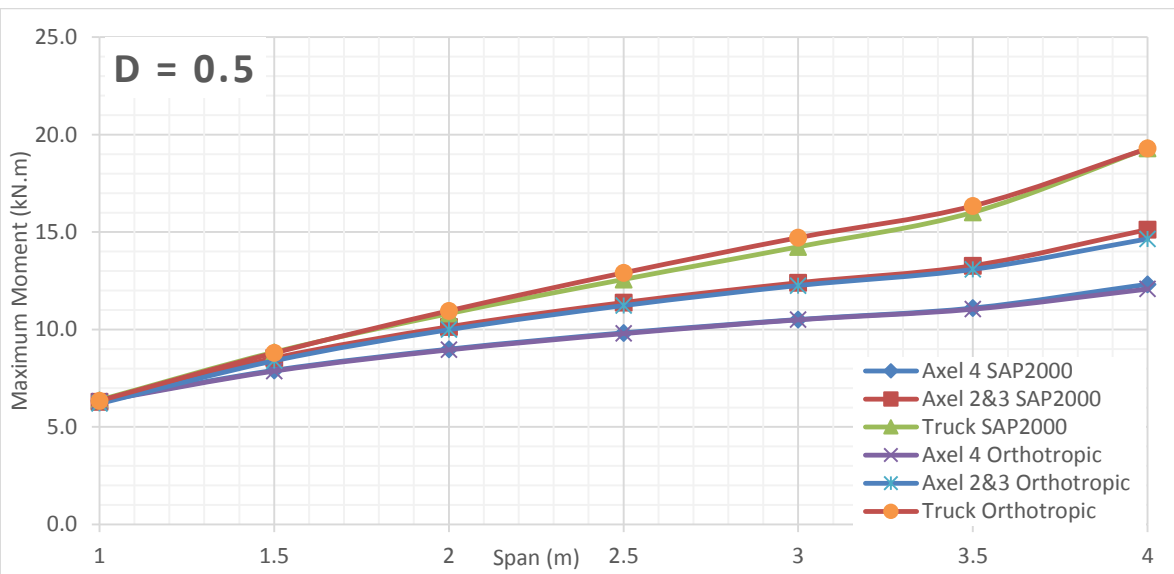

Figure 584 Moment comparison between FEA and Orthotropic Plate Theory for D = 0.5 of alpha 4 (main bars perpendicular traffic)

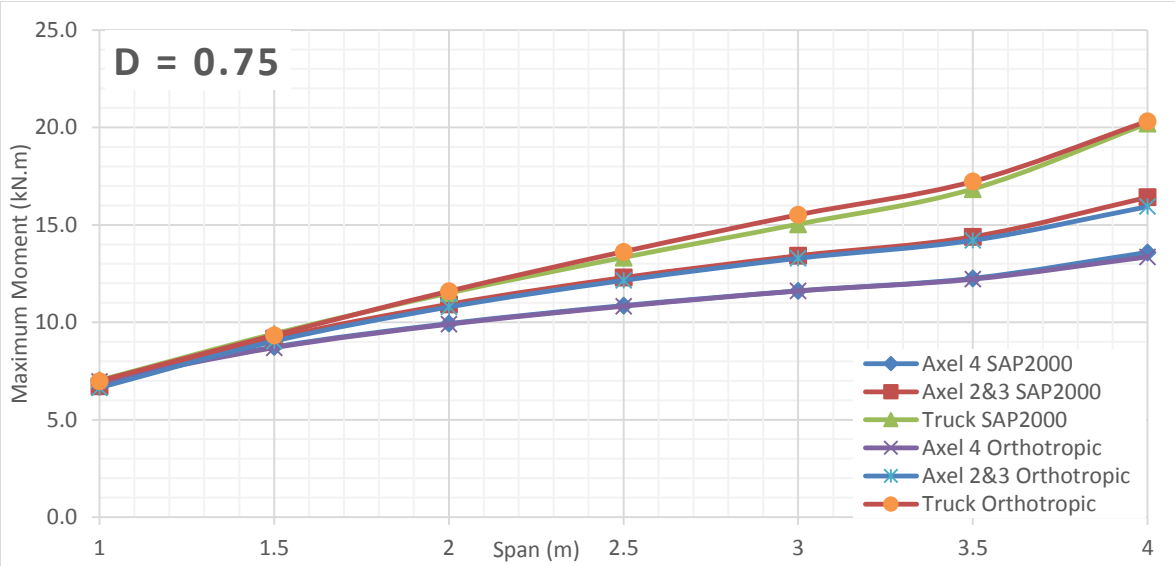

Figure 585 Moment comparison between FEA and Orthotropic Plate Theory for D = 0.75 of alpha 4 (main bars perpendicular traffic)

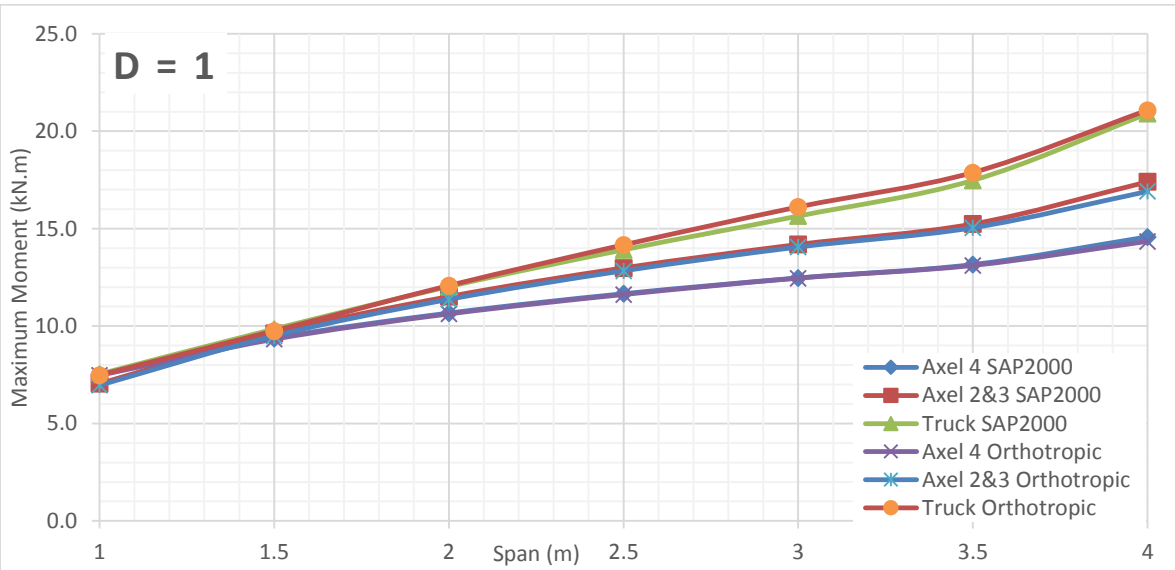

Figure 586 Moment comparison between FEA and Orthotropic Plate Theory for D = 1 of alpha 4 (main bars perpendicular traffic)

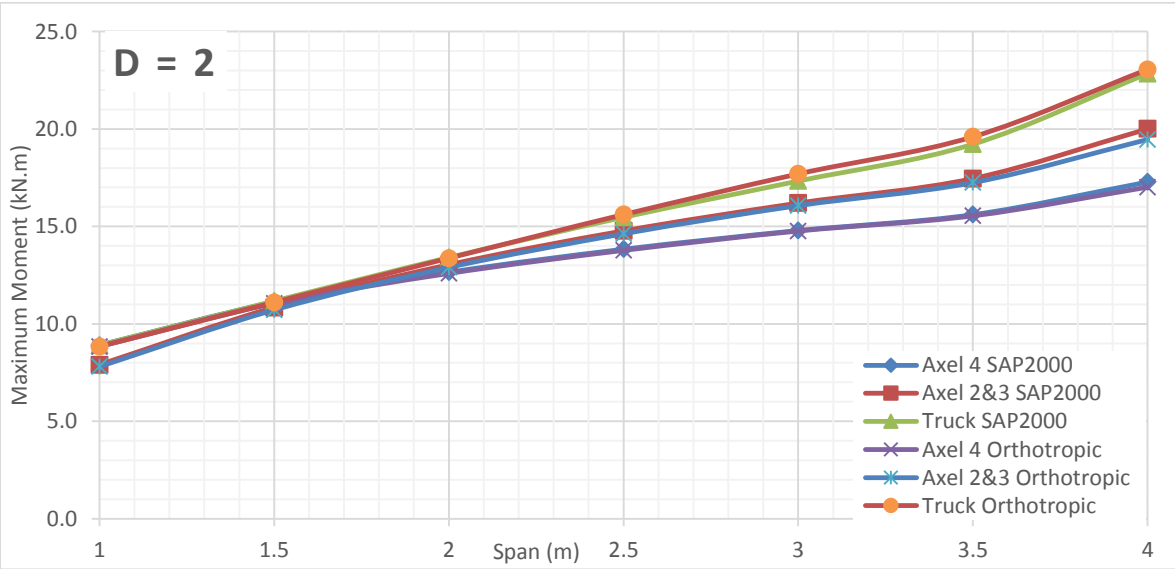

Figure 587 Moment comparison between FEA and Orthotropic Plate Theory for D = 2 of alpha 4 (main bars perpendicular traffic)

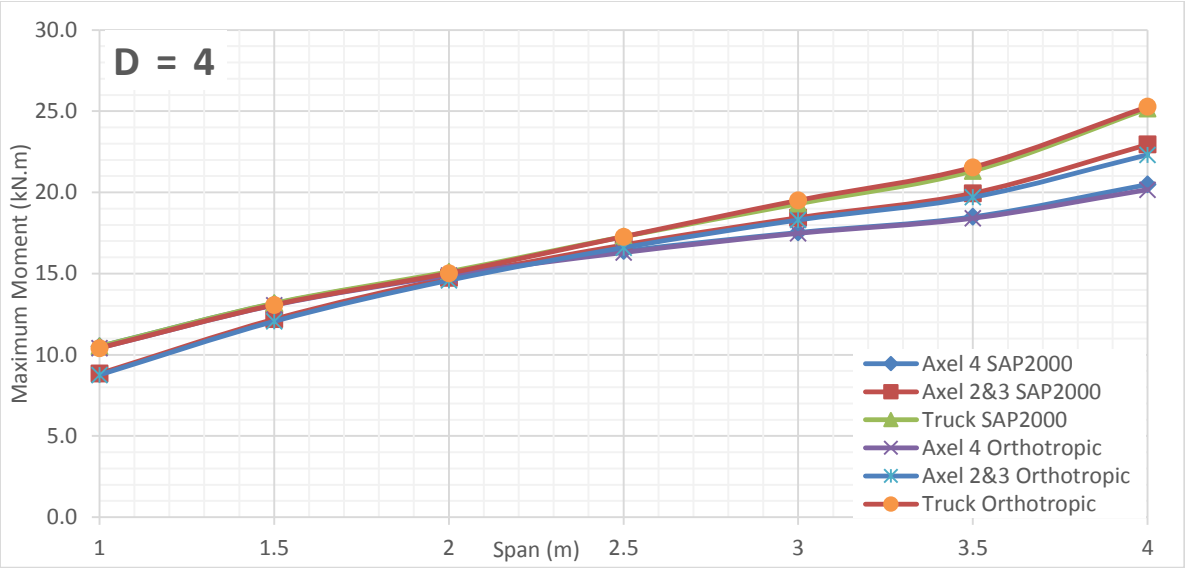

Figure 588 Moment comparison between FEA and Orthotropic Plate Theory for D = 4 of alpha 4 (main bars perpendicular traffic)

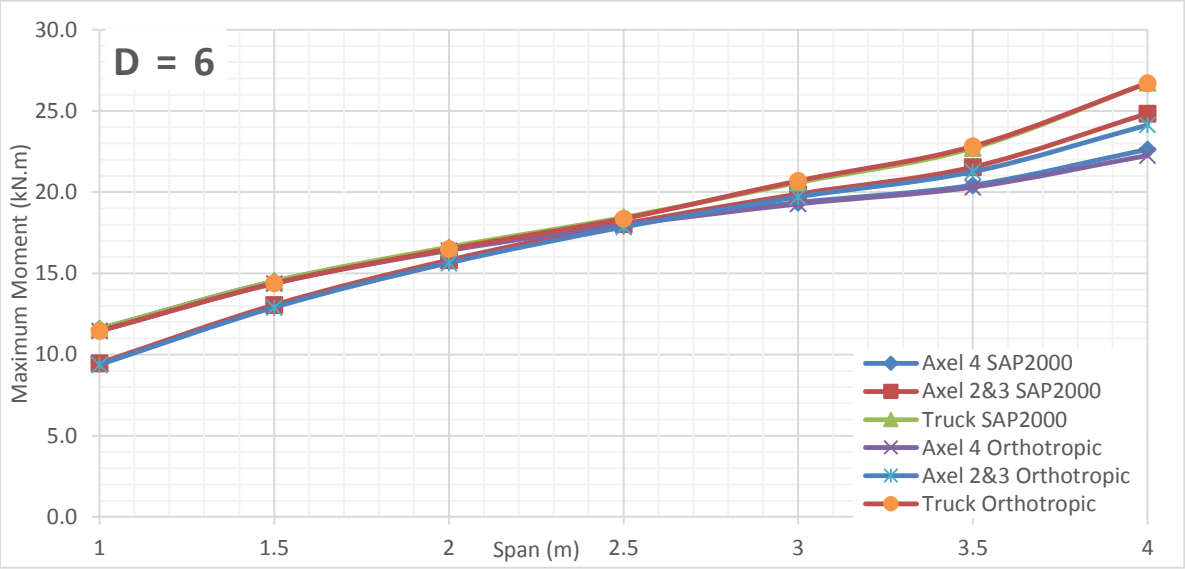

Figure 589 Moment comparison between FEA and Orthotropic Plate Theory for D = 6 of alpha 4 (main bars perpendicular traffic)

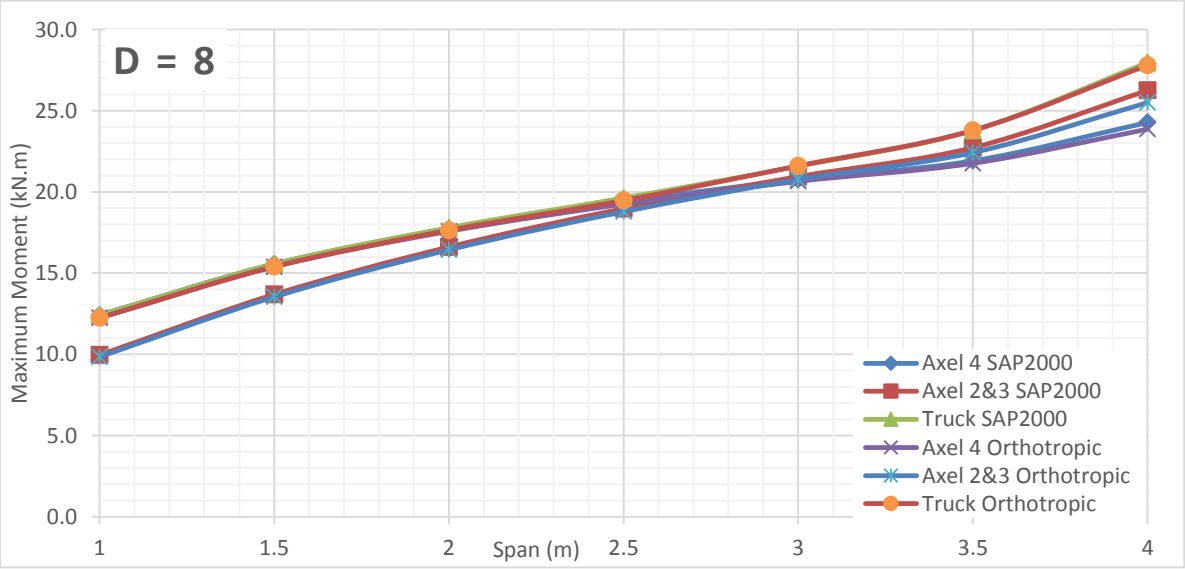

Figure 590 Moment comparison between FEA and Orthotropic Plate Theory for D = 8 of alpha 4 (main bars perpendicular traffic)

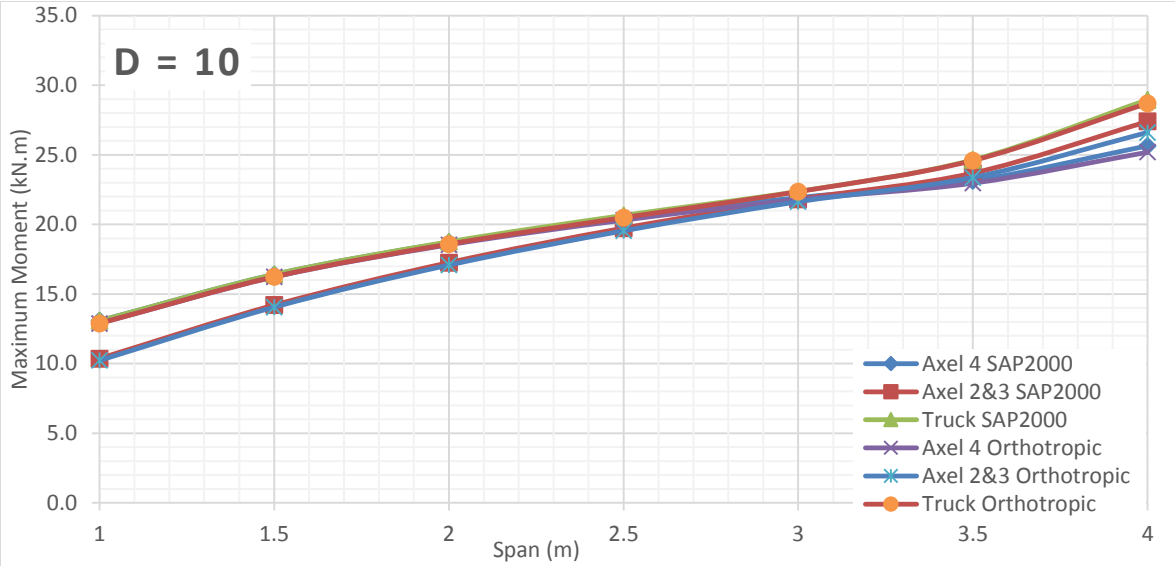

Figure 591 Moment comparison between FEA and Orthotropic Plate Theory for D = 10 of alpha 4 (main bars perpendicular traffic)

Alpha 4 Bending Moment VS Span Length for Different D Values (Main bars parallel to traffic)

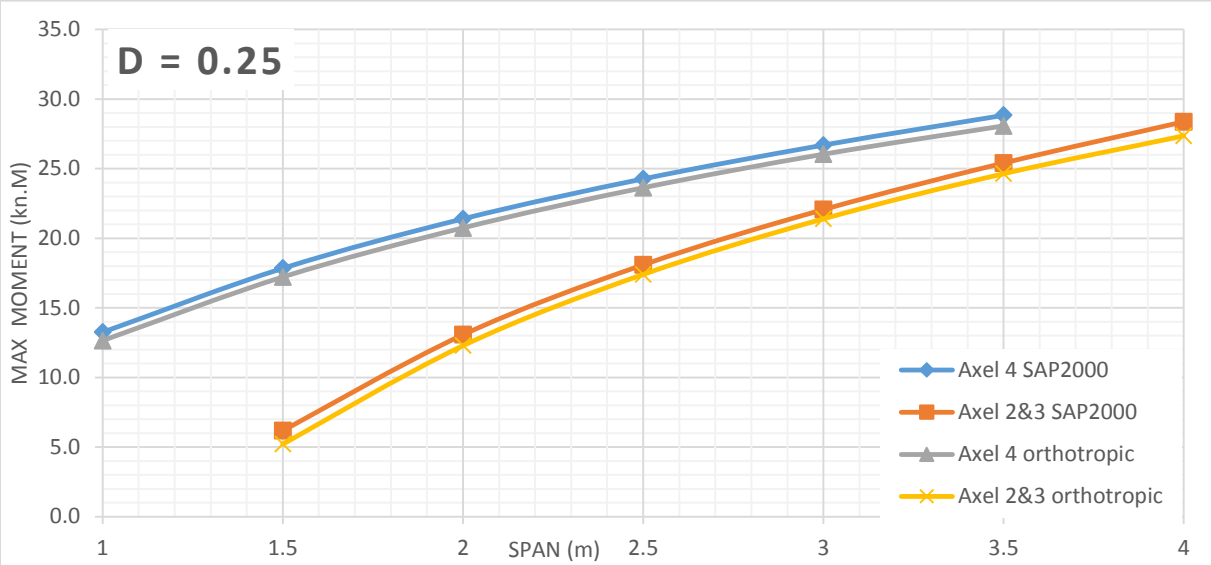

Figure 592 Moment comparison between FEA and Orthotropic Plate Theory for D = 0.25 of alpha 4 (main bars parallel traffic)

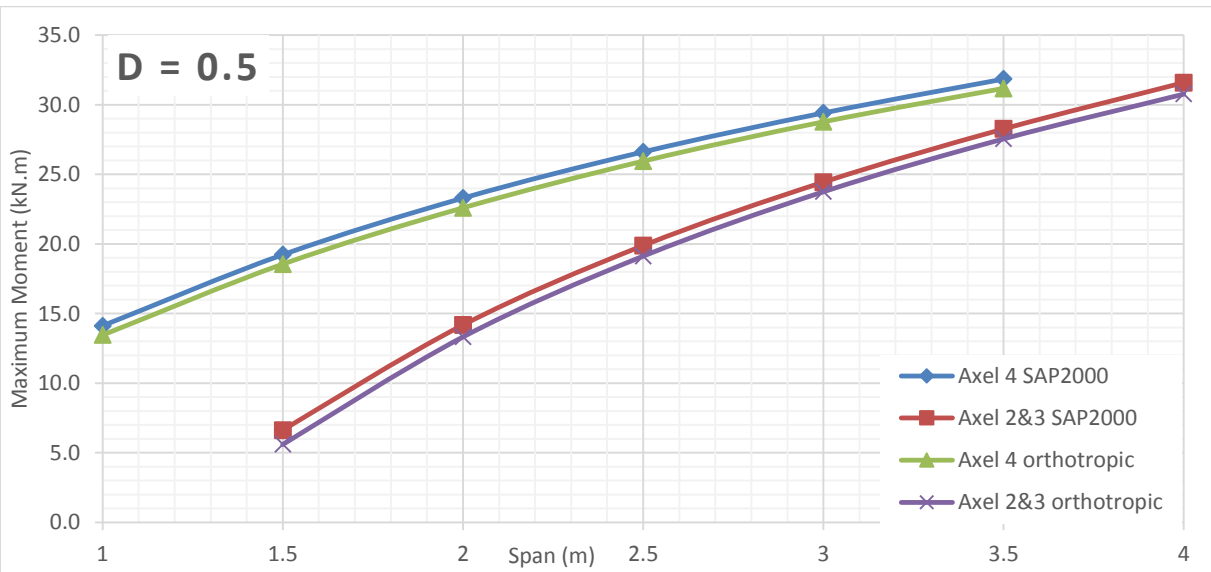

Figure 593 Moment comparison between FEA and Orthotropic Plate Theory for D = 0.5 of alpha 4 (main bars parallel traffic)

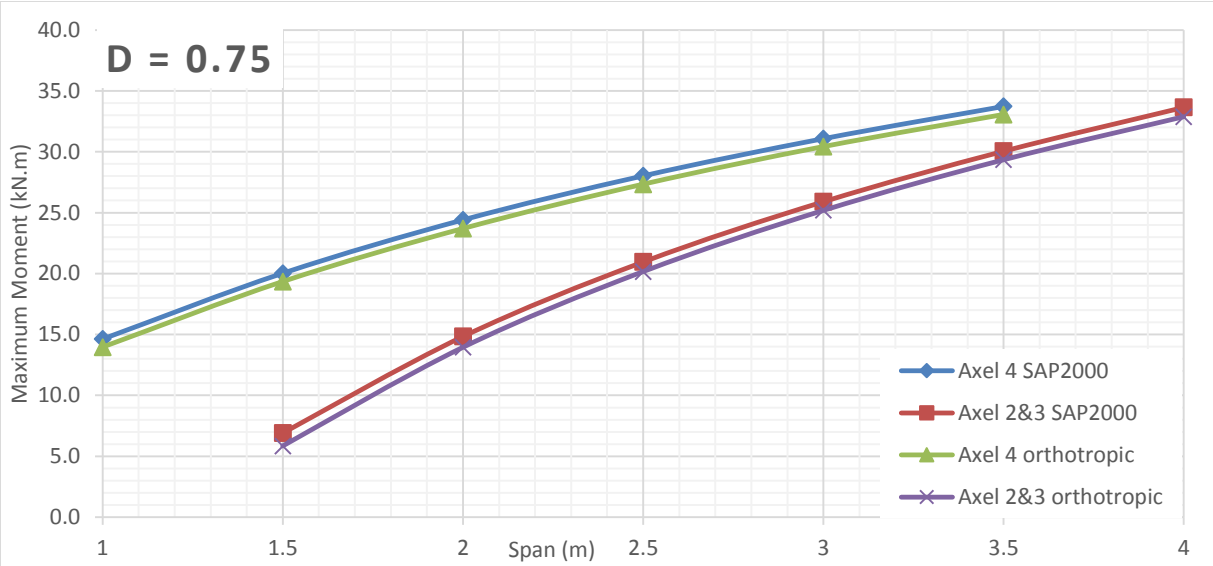

Figure 594 Moment comparison between FEA and Orthotropic Plate Theory for D = 0.75 of alpha 4 (main bars parallel traffic)

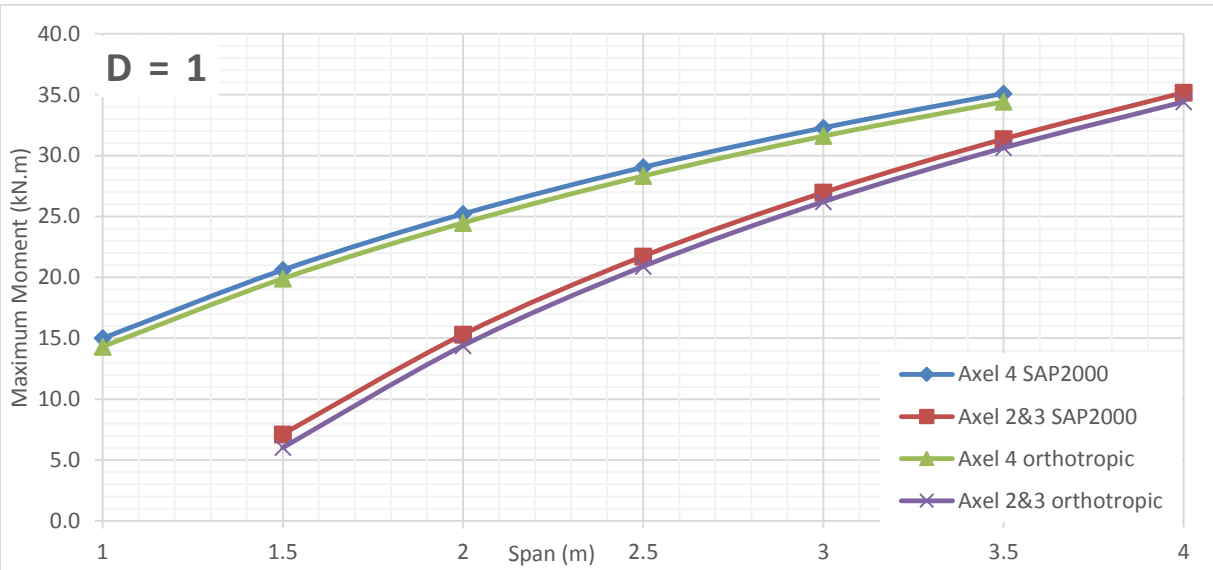

Figure 595 Moment comparison between FEA and Orthotropic Plate Theory for D = 1 of alpha 4 (main bars parallel traffic)

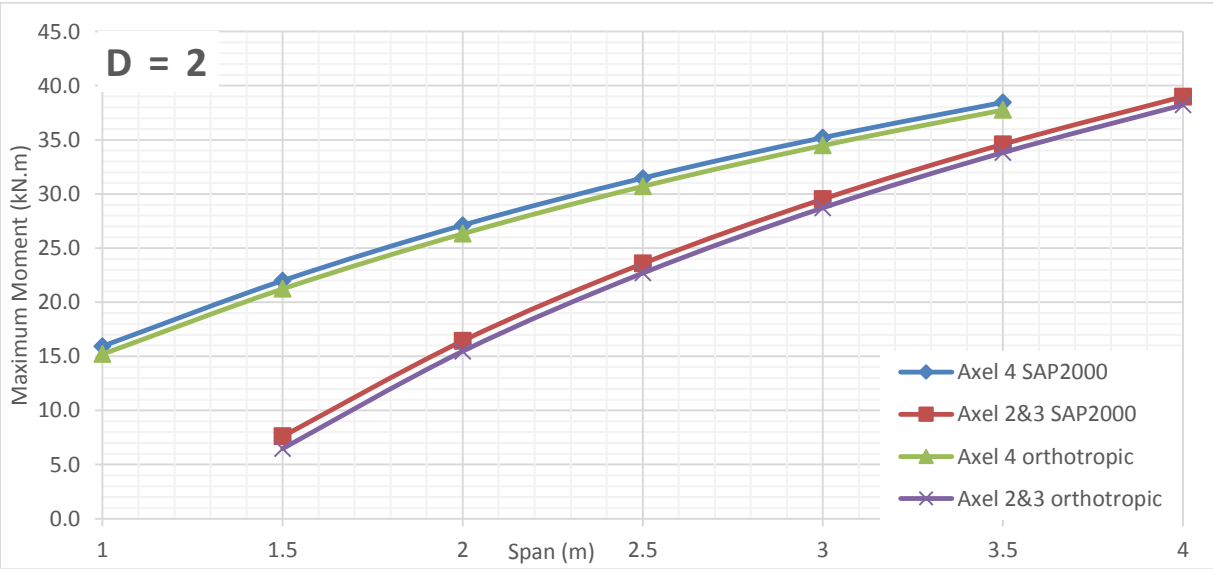

Figure 596 Moment comparison between FEA and Orthotropic Plate Theory for D = 2 of alpha 4 (main bars parallel traffic)

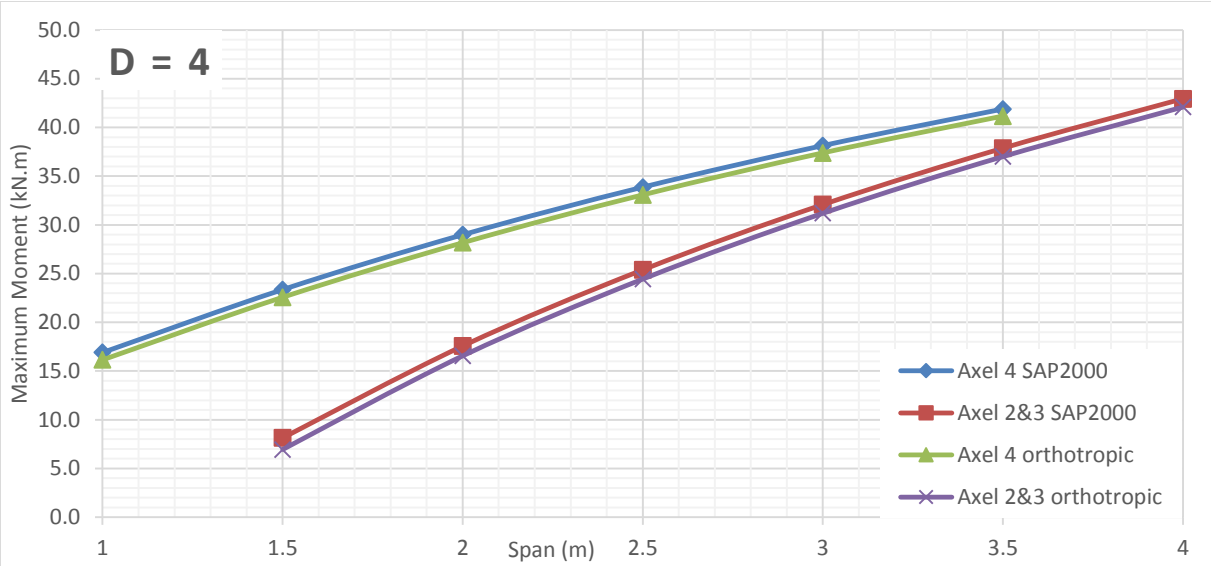

Figure 597 Moment comparison between FEA and Orthotropic Plate Theory for D = 4 of alpha 4 (main bars parallel traffic)

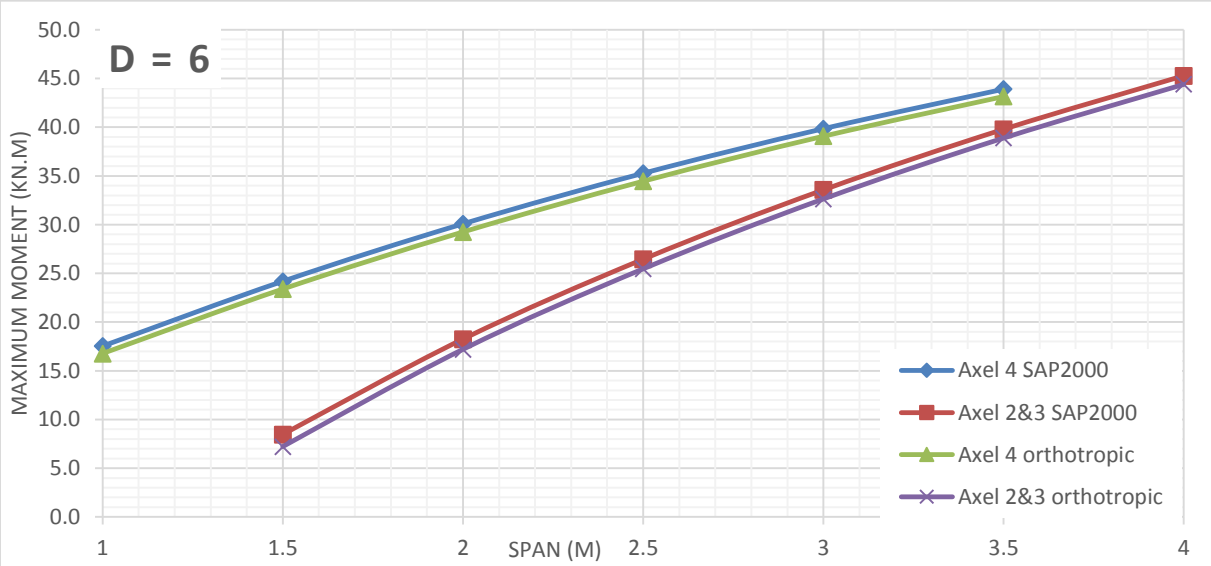

Figure 598 Moment comparison between FEA and Orthotropic Plate Theory for D = 6 of alpha 4 (main bars parallel traffic)

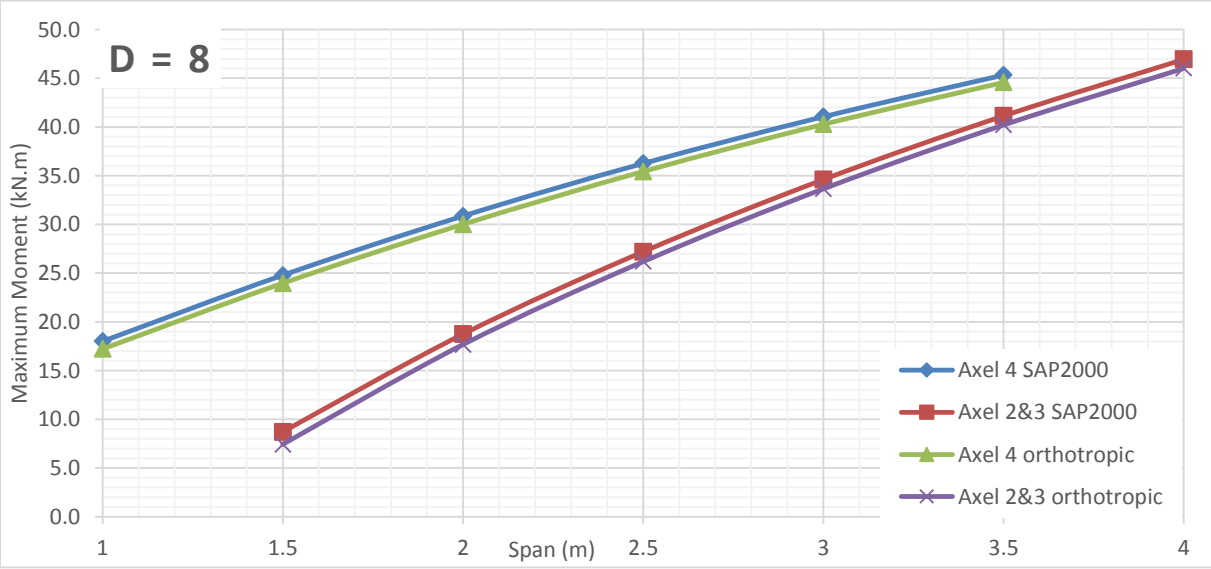

Figure 599 Moment comparison between FEA and Orthotropic Plate Theory for D = 8 of alpha 4 (main bars parallel traffic)

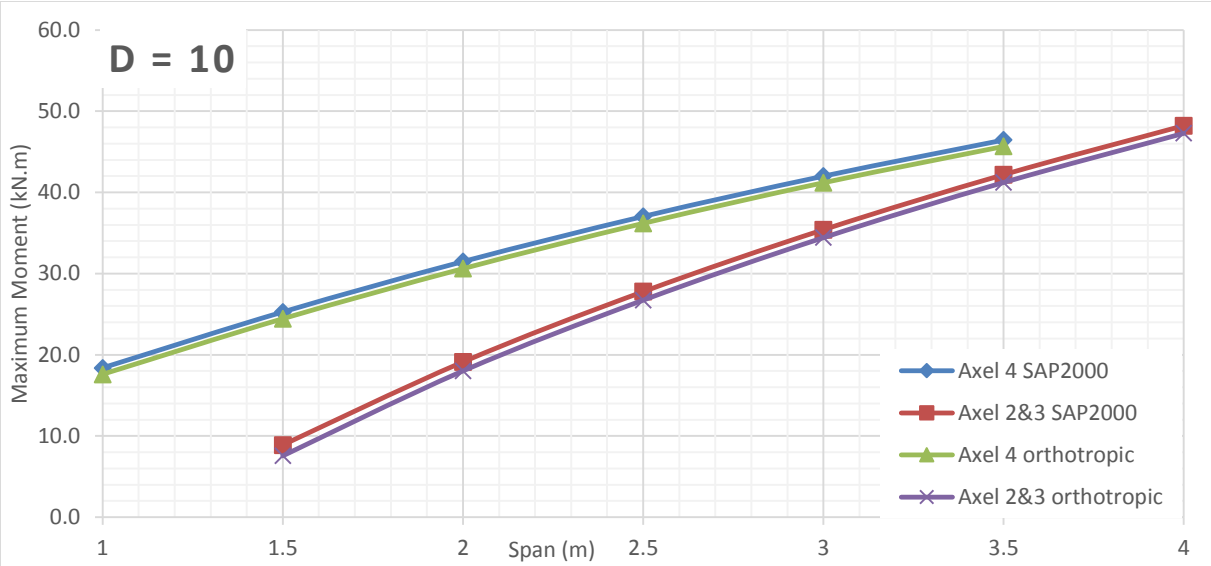

Figure 600 Moment comparison between FEA and Orthotropic Plate Theory for D = 10 of alpha 4 (main bars parallel traffic)

Alpha 6 Bending Moment VS Span Length for Different D Values (Main bars perpendicular to traffic)

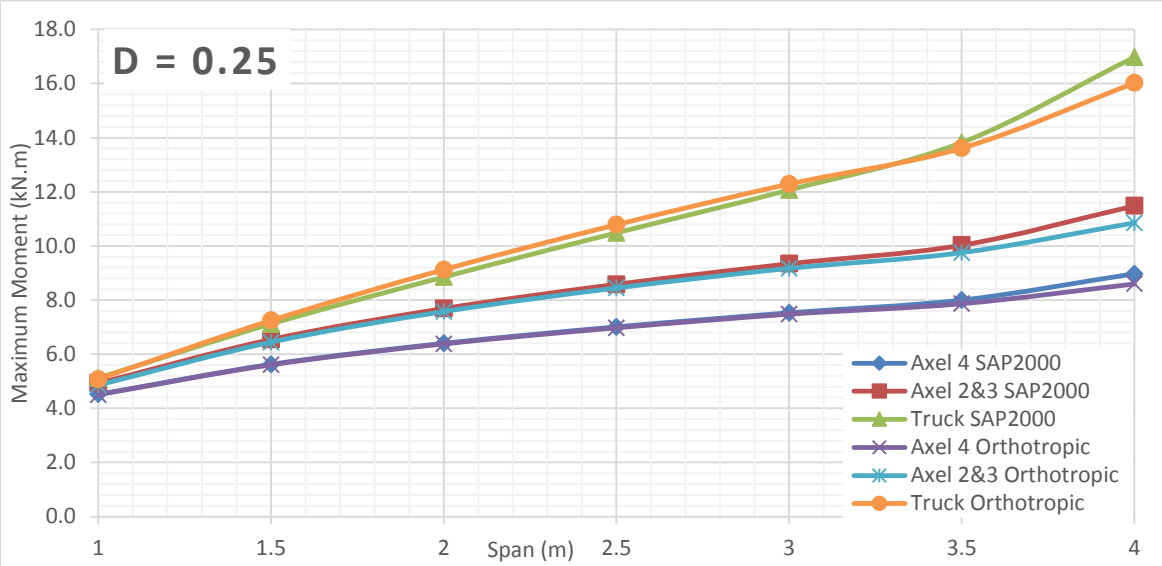

Figure 601 Moment comparison between FEA and Orthotropic Plate Theory for D = 0.25 of alpha 6 (main bars perpendicular traffic)

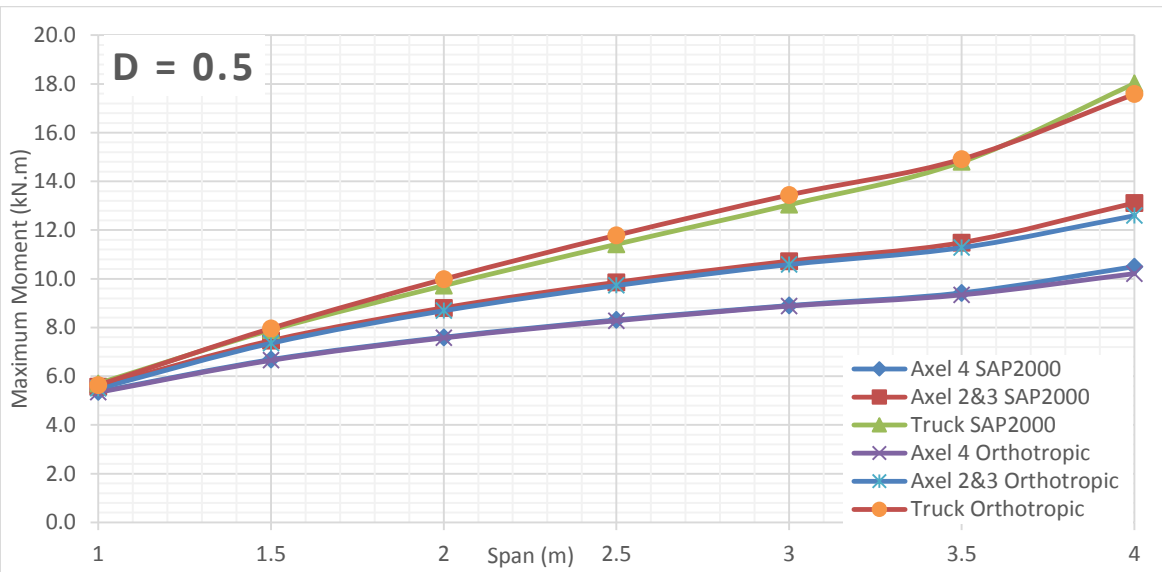

Figure 602 Moment comparison between FEA and Orthotropic Plate Theory for D = 0.5 of alpha 6 (main bars perpendicular traffic)

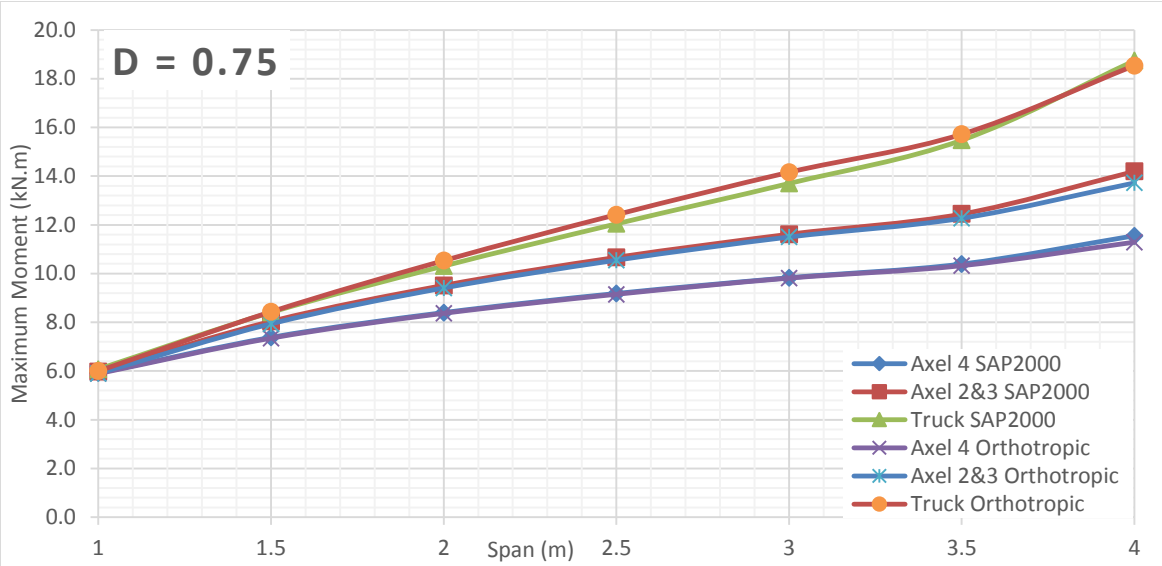

Figure 603 Moment comparison between FEA and Orthotropic Plate Theory for D = 0.75 of alpha 6 (main bars perpendicular traffic)

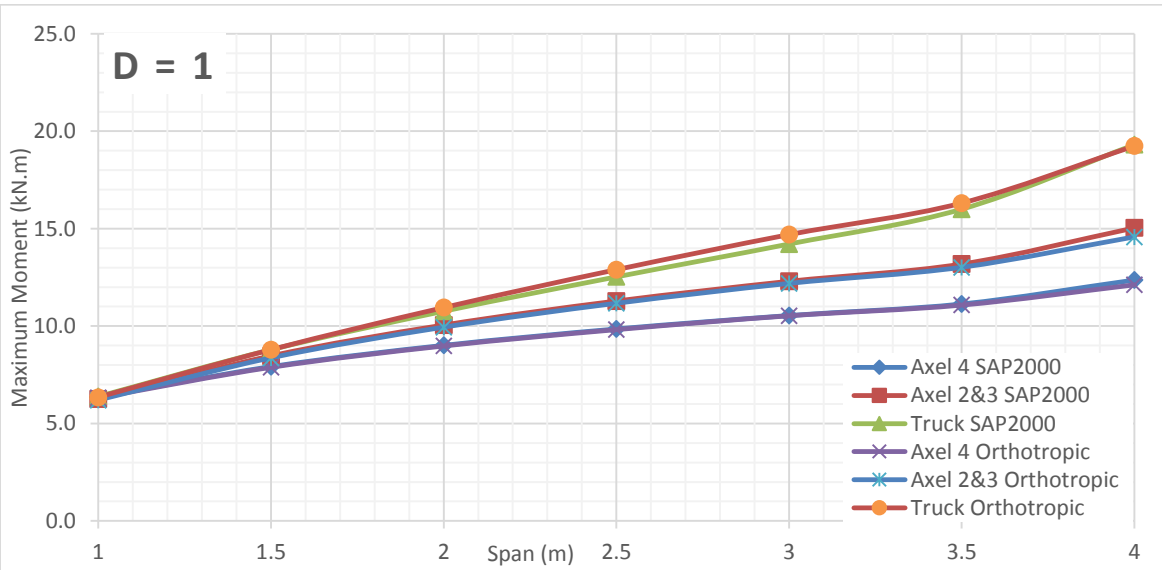

Figure 604 Moment comparison between FEA and Orthotropic Plate Theory for D = 1 of alpha 6 (main bars perpendicular traffic)

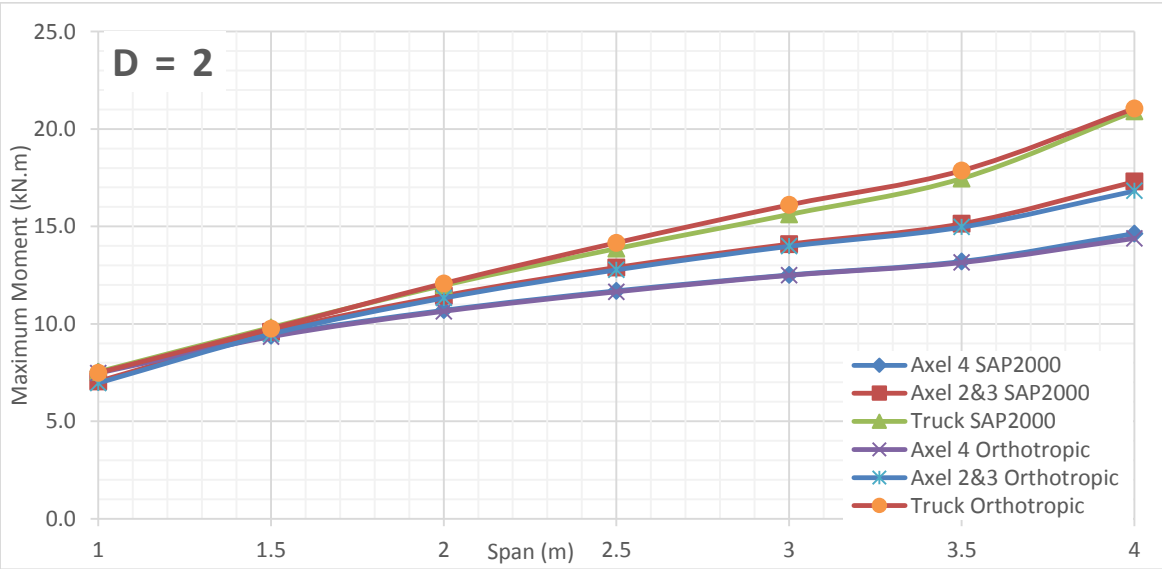

Figure 605 Moment comparison between FEA and Orthotropic Plate Theory for D = 2 of alpha 6 (main bars perpendicular traffic)

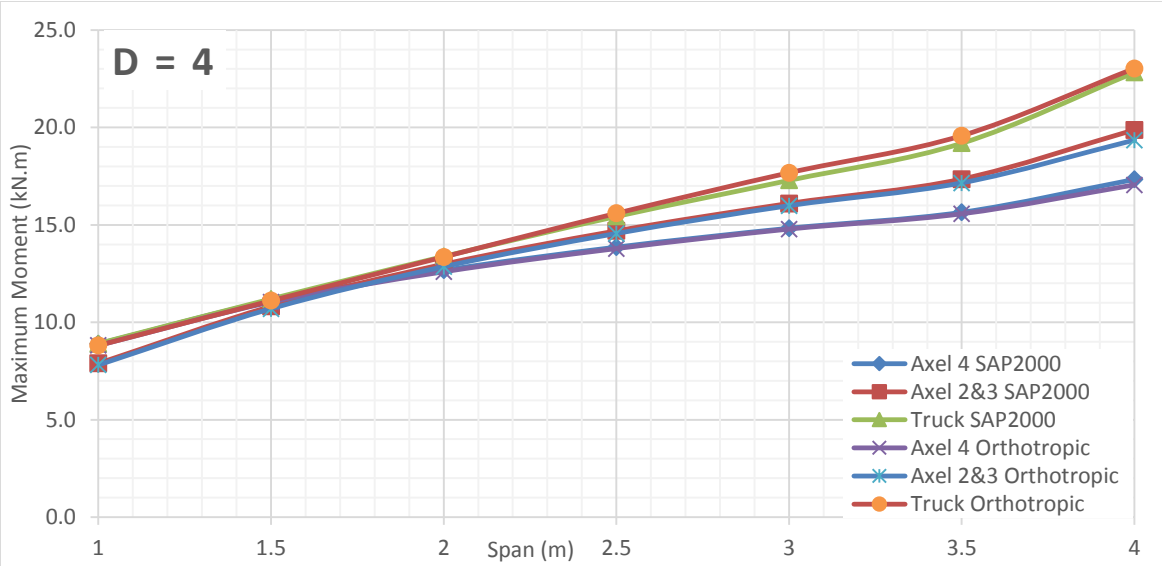

Figure 606 Moment comparison between FEA and Orthotropic Plate Theory for D = 4 of alpha 6 (main bars perpendicular traffic)

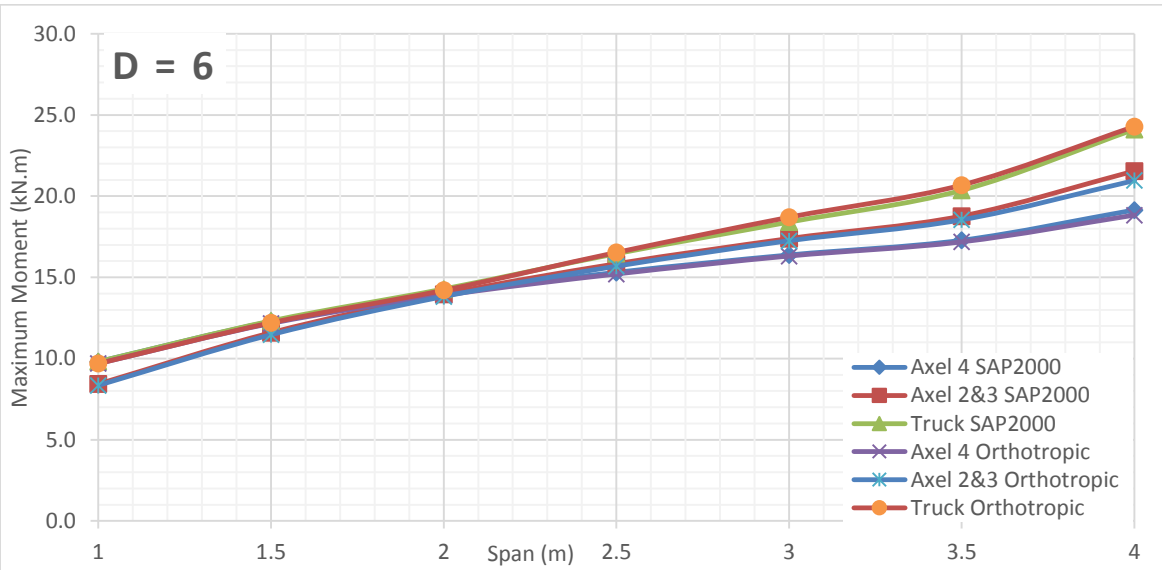

Figure 607 Moment comparison between FEA and Orthotropic Plate Theory for D = 6 of alpha 6 (main bars perpendicular traffic)

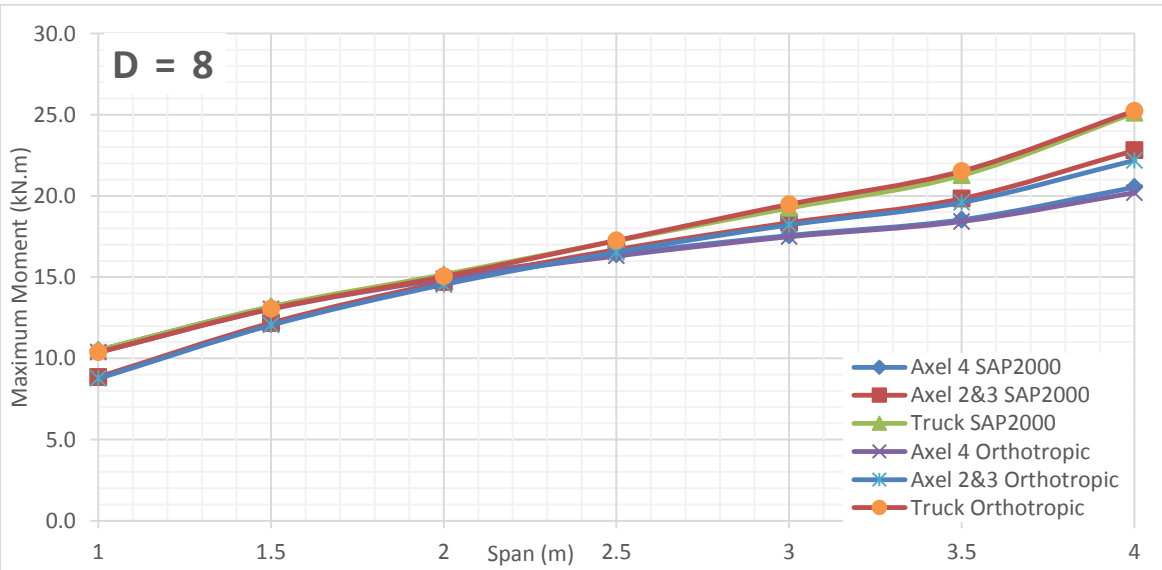

Figure 608 Moment comparison between FEA and Orthotropic Plate Theory for D = 8 of alpha 6 (main bars perpendicular traffic)

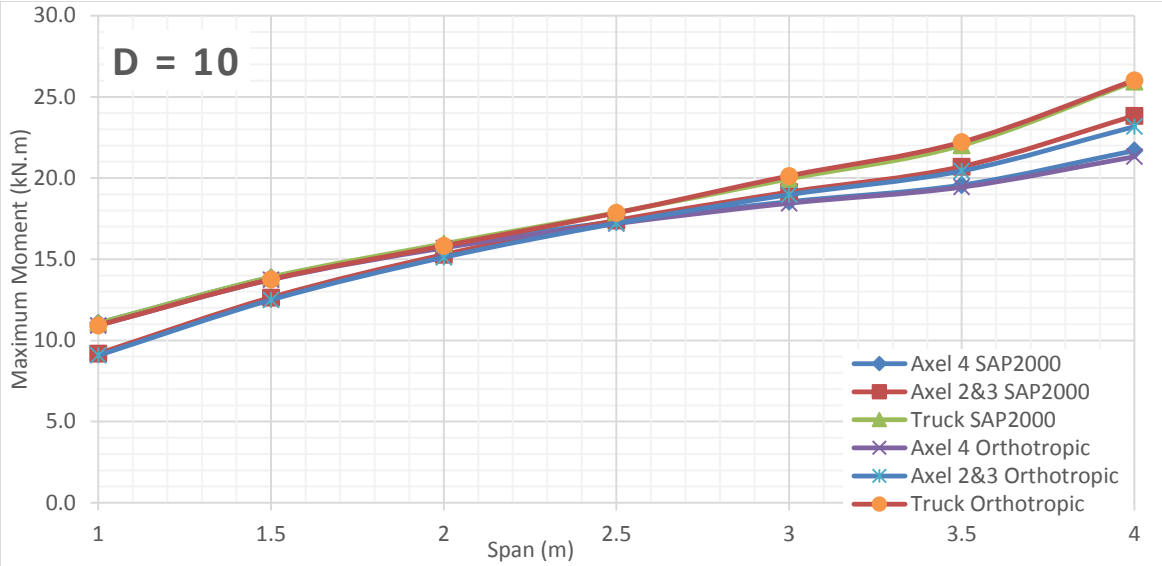

Figure 609 Moment comparison between FEA and Orthotropic Plate Theory for D = 10 of alpha 6 (main bars perpendicular traffic)

Alpha 6 Bending Moment VS Span Length for Different D Values (Main bars parallel to traffic)

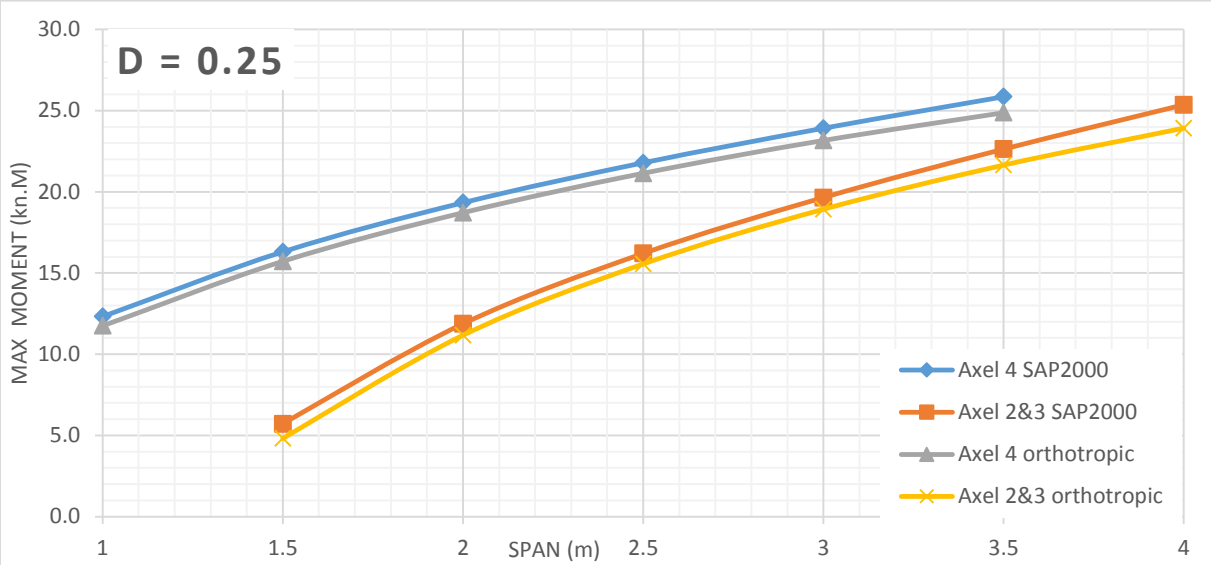

Figure 610 Moment comparison between FEA and Orthotropic Plate Theory for D = 0.25 of alpha 6 (main bars parallel traffic)

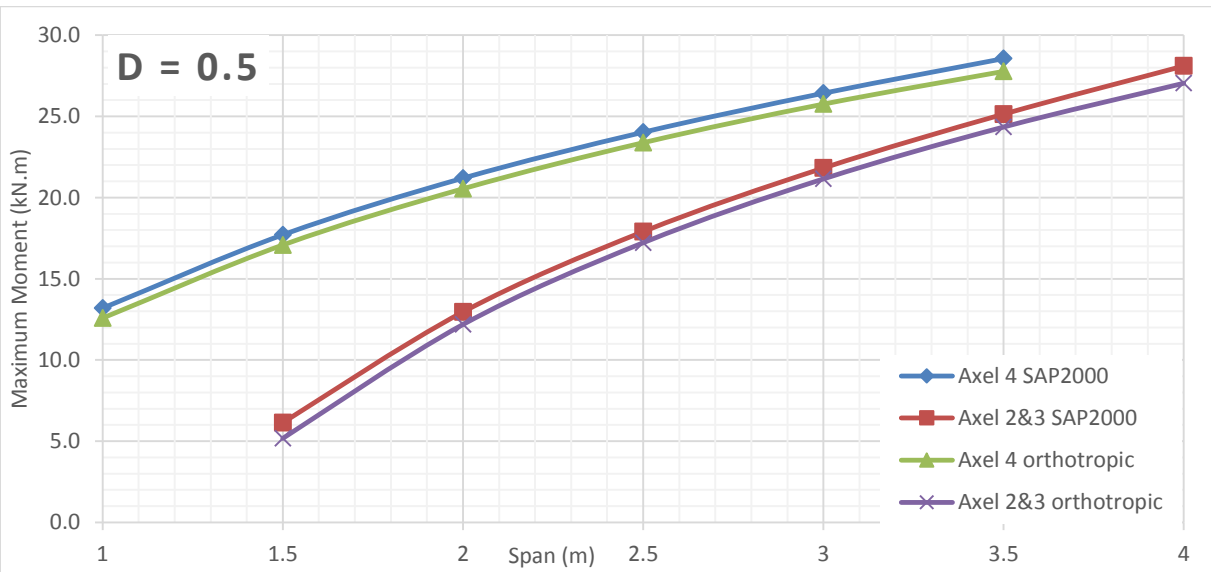

Figure 611 Moment comparison between FEA and Orthotropic Plate Theory for D = 0.5 of alpha 6 (main bars parallel traffic)

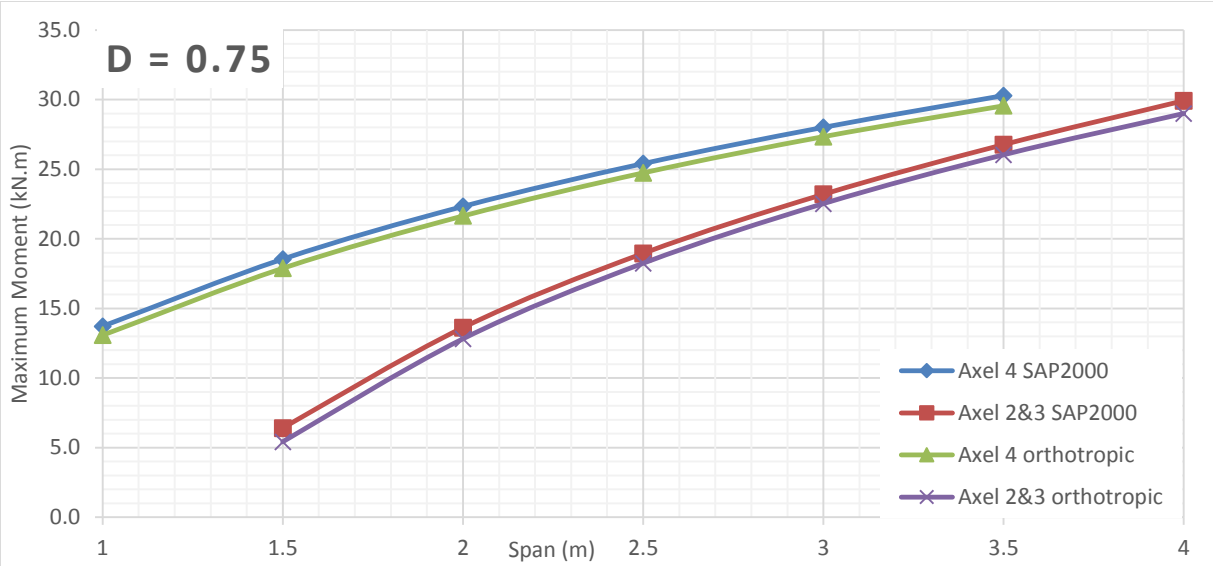

Figure 612 Moment comparison between FEA and Orthotropic Plate Theory for D = 0.75 of alpha 6 (main bars parallel traffic)

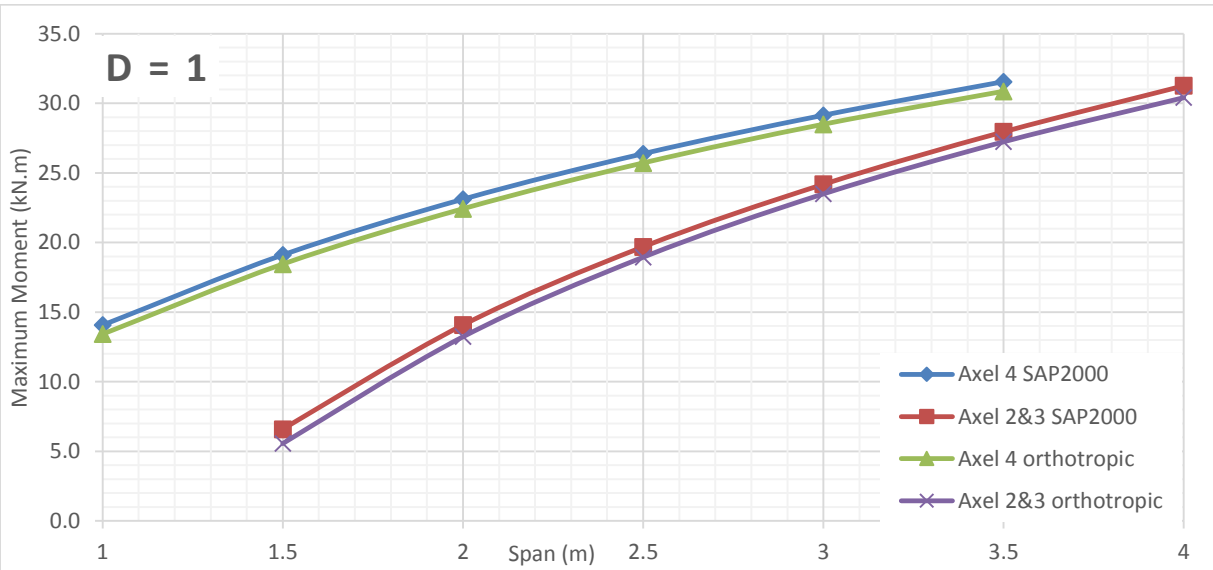

Figure 613 Moment comparison between FEA and Orthotropic Plate Theory for D = 1 of alpha 6 (main bars parallel traffic)

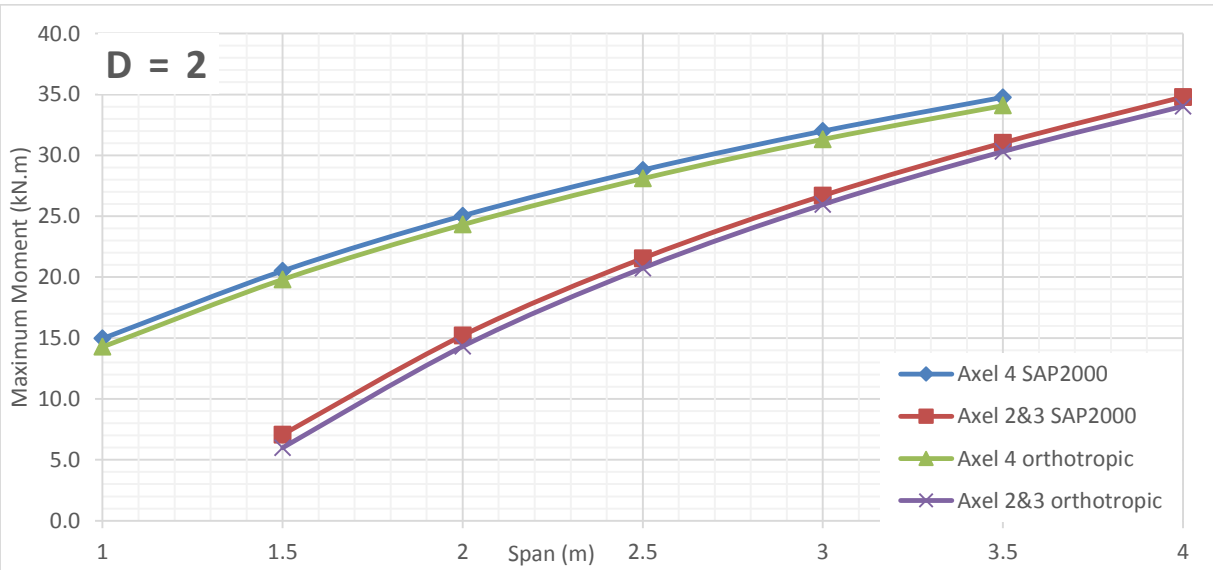

Figure 614 Moment comparison between FEA and Orthotropic Plate Theory for D = 2 of alpha 6 (main bars parallel traffic)

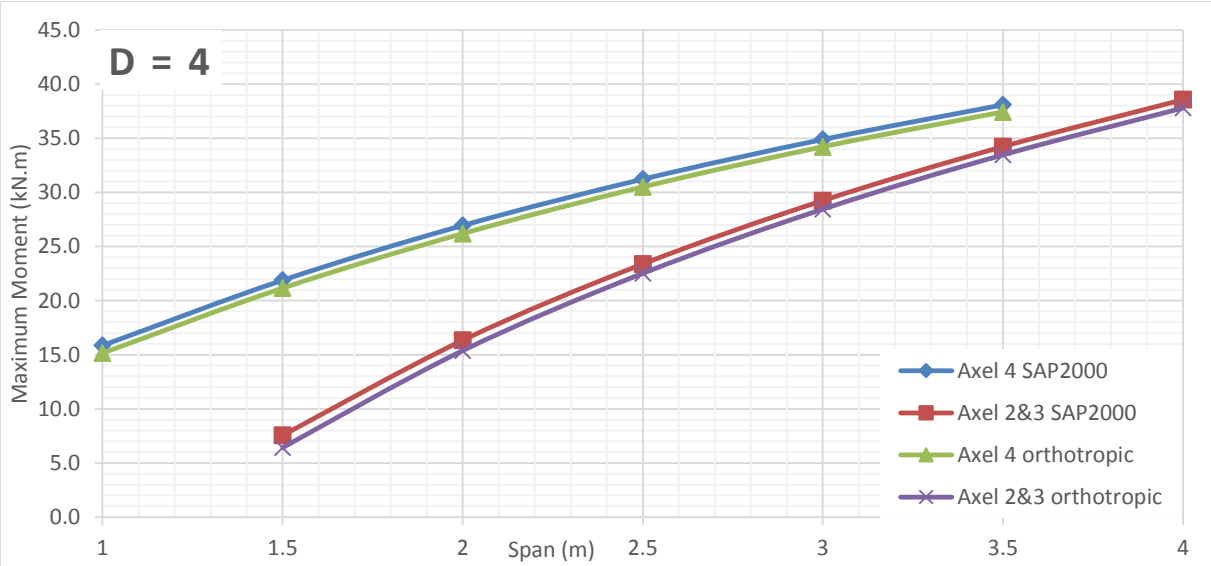

Figure 615 Moment comparison between FEA and Orthotropic Plate Theory for D = 4 of alpha 6 (main bars parallel traffic)

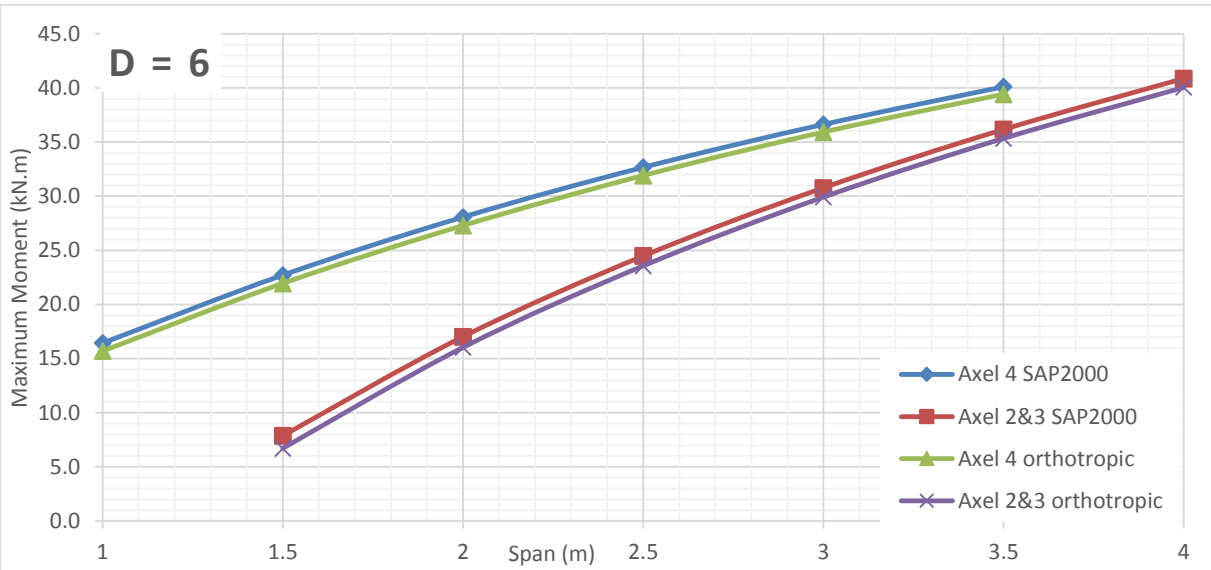

Figure 616 Moment comparison between FEA and Orthotropic Plate Theory for D = 6 of alpha 6 (main bars parallel traffic)

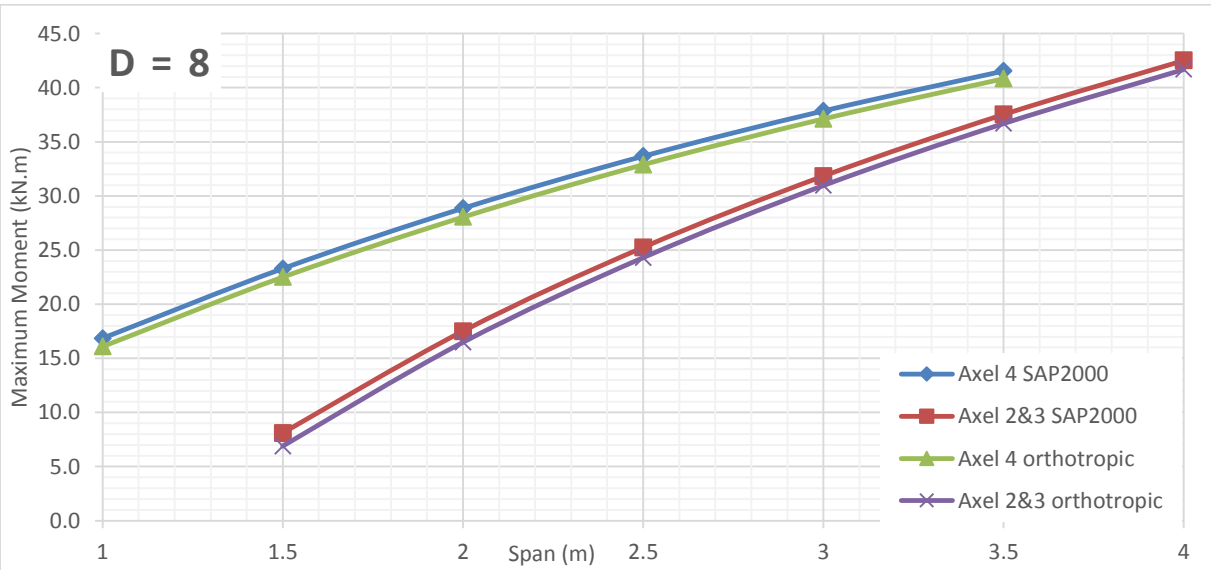

Figure 617 Moment comparison between FEA and Orthotropic Plate Theory for D = 8 of alpha 6 (main bars parallel traffic)

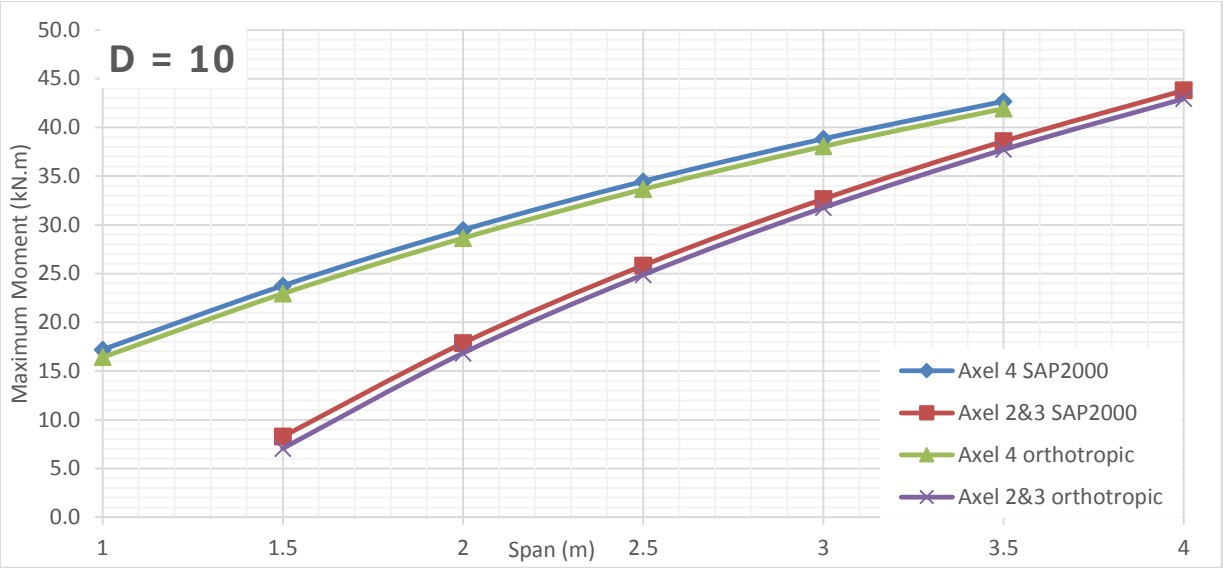

Figure 618 Moment comparison between FEA and Orthotropic Plate Theory for D = 10 of alpha 6 (main bars parallel traffic)

Alpha 8 Bending Moment VS Span Length for Different D Values (Main bars perpendicular to traffic)

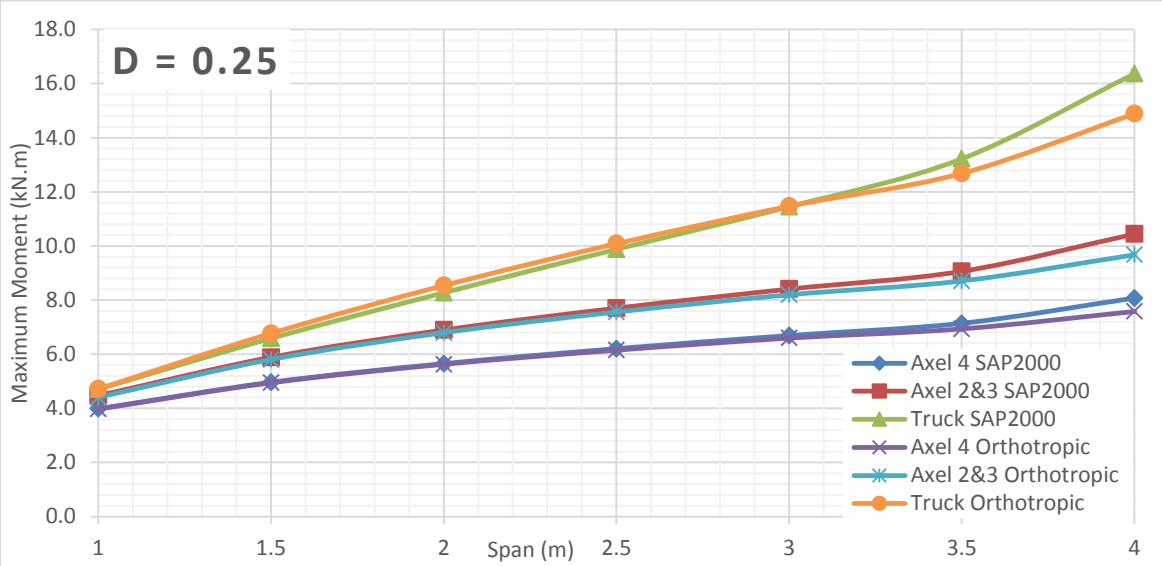

Figure 619 Moment comparison between FEA and Orthotropic Plate Theory for D = 0.25 of alpha 8 (main bars perpendicular traffic)

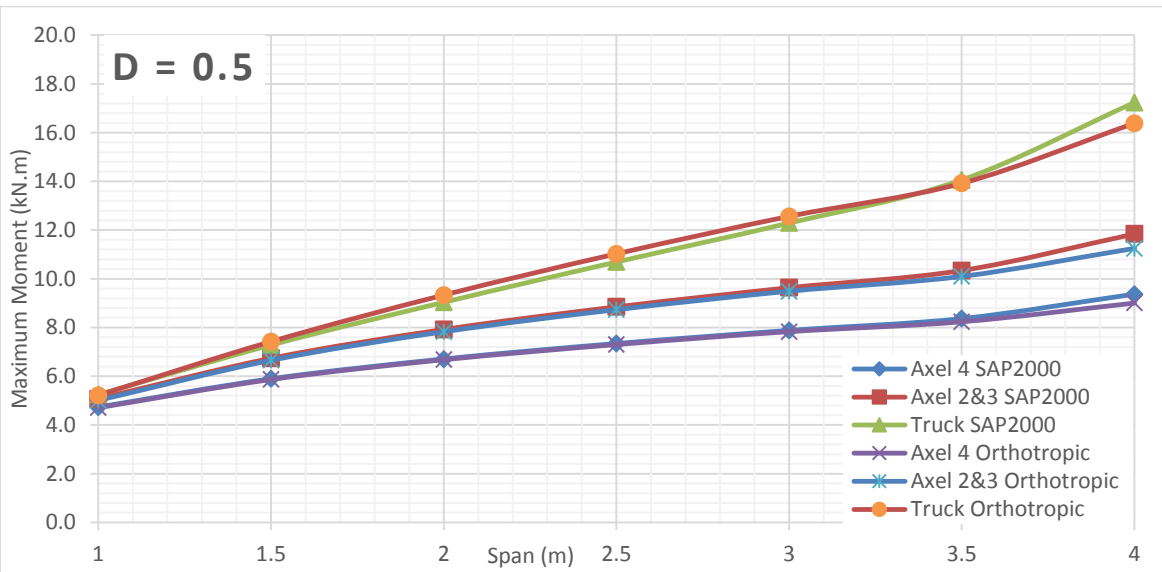

Figure 620 Moment comparison between FEA and Orthotropic Plate Theory for D = 0.5 of alpha 8 (main bars perpendicular traffic)

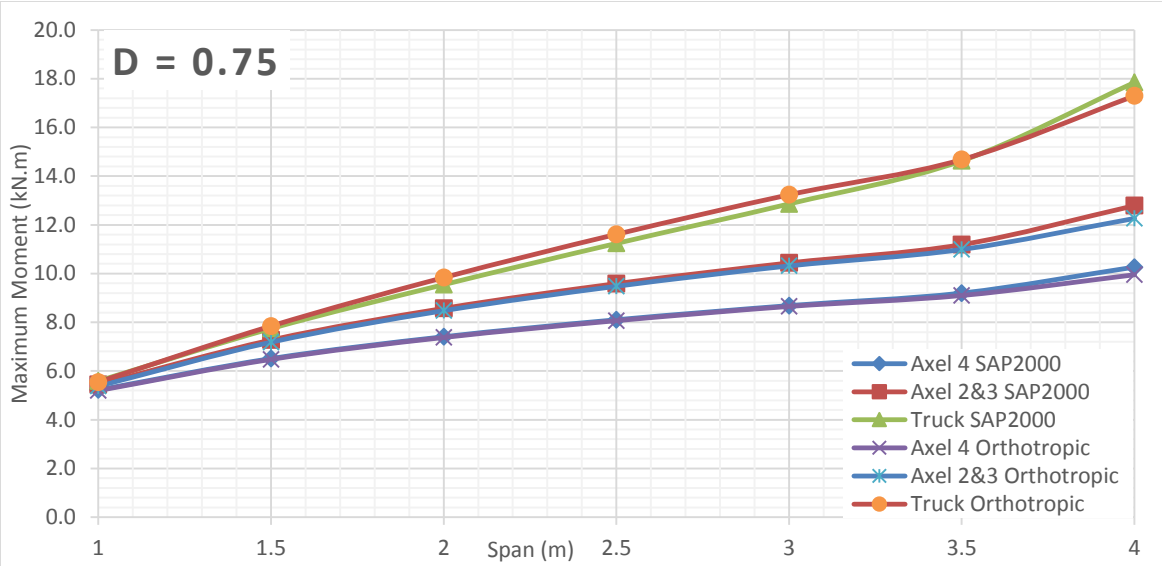

Figure 621 Moment comparison between FEA and Orthotropic Plate Theory for D = 0.75 of alpha 8 (main bars perpendicular traffic)

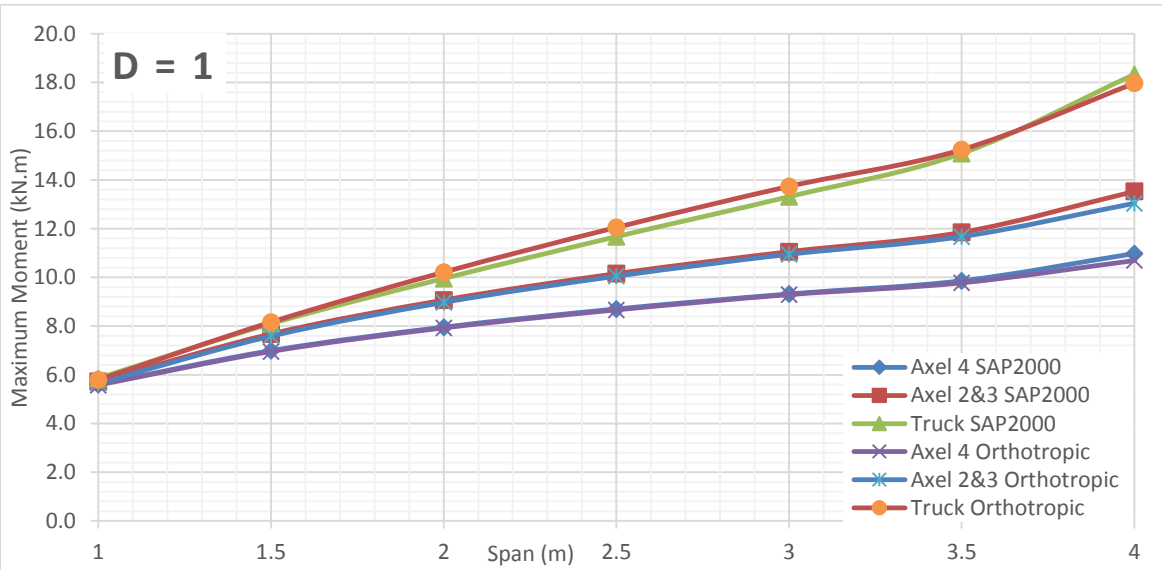

Figure 622 Moment comparison between FEA and Orthotropic Plate Theory for D = 1 of alpha 8 (main bars perpendicular traffic)

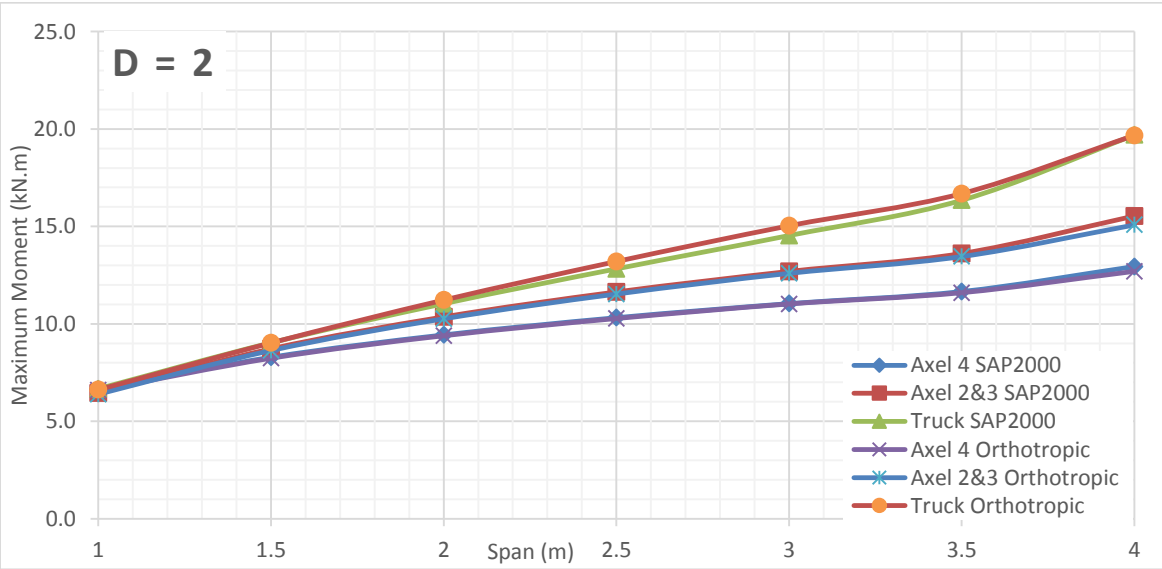

Figure 623 Moment comparison between FEA and Orthotropic Plate Theory for D = 2 of alpha 8 (main bars perpendicular traffic)

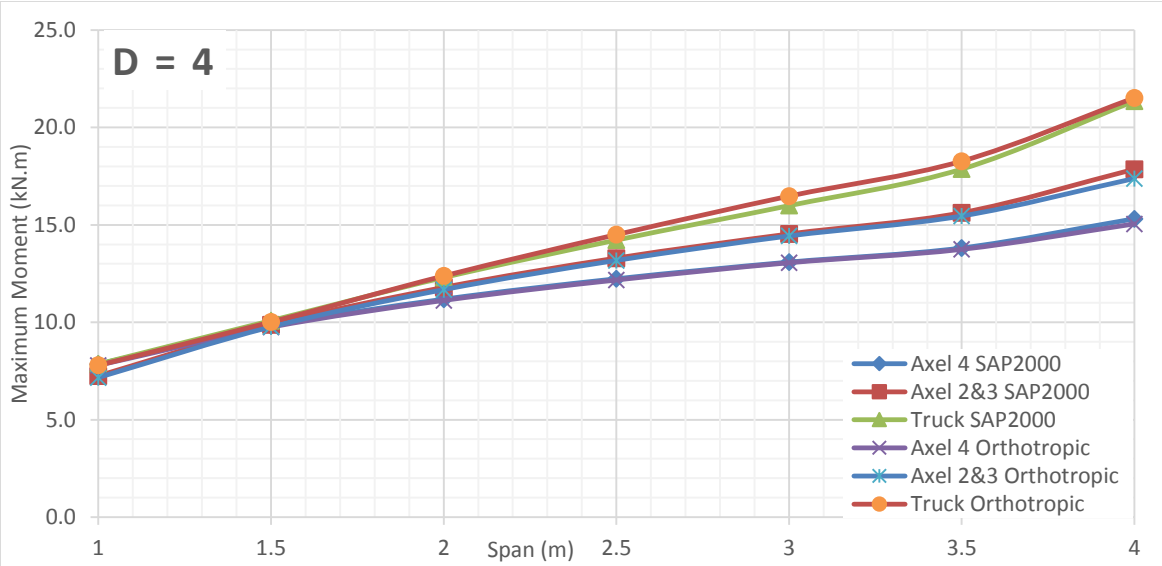

Figure 624 Moment comparison between FEA and Orthotropic Plate Theory for D = 4 of alpha 8 (main bars perpendicular traffic)

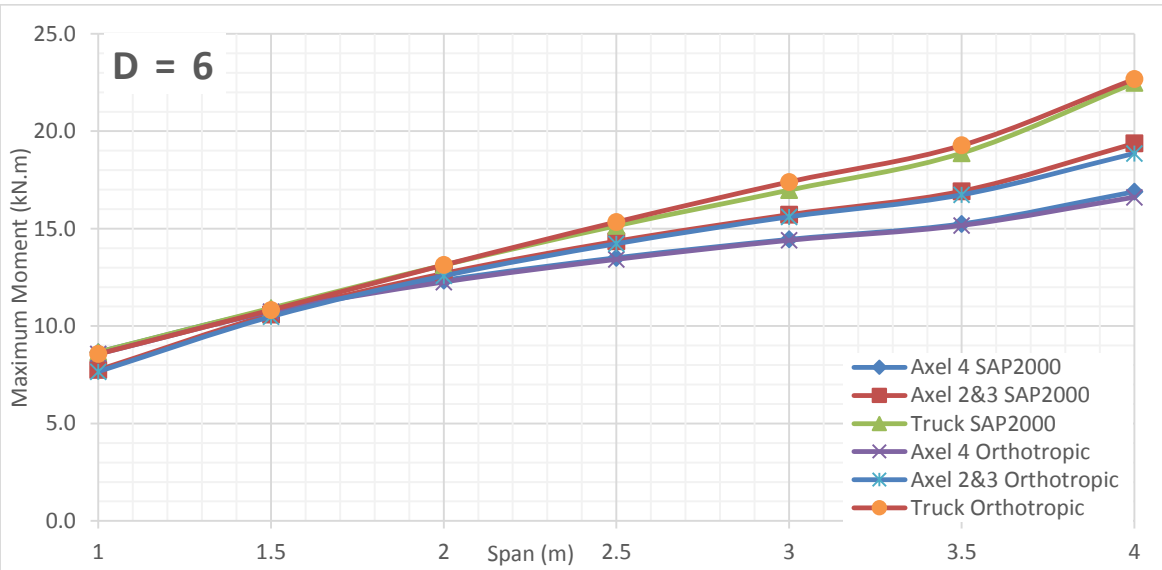

Figure 625 Moment comparison between FEA and Orthotropic Plate Theory for D = 6 of alpha 8 (main bars perpendicular traffic)

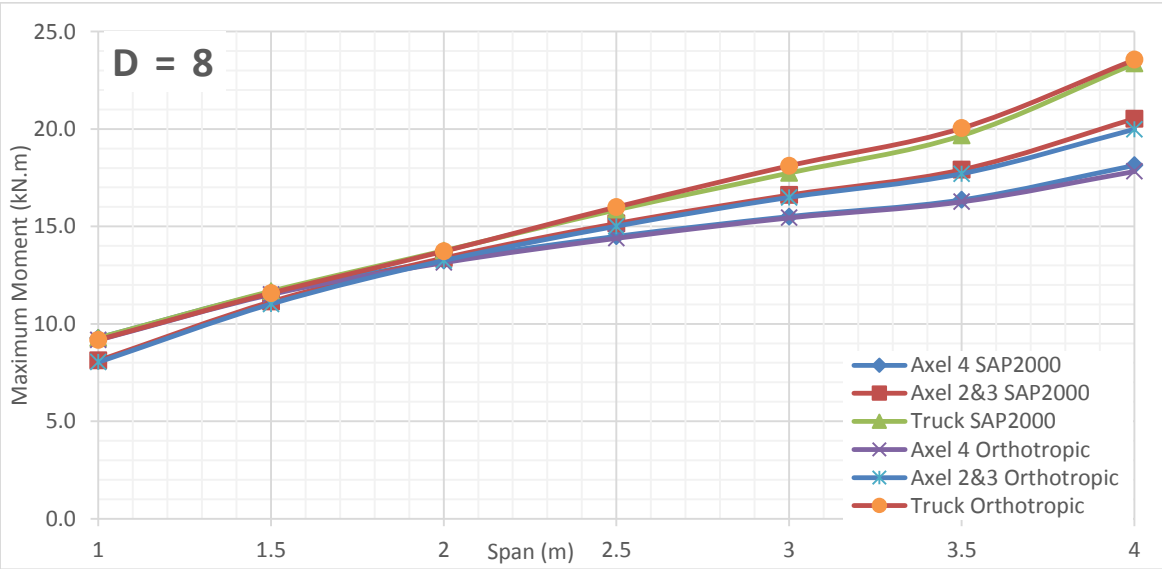

Figure 626 Moment comparison between FEA and Orthotropic Plate Theory for D = 8 of alpha 8 (main bars perpendicular traffic)

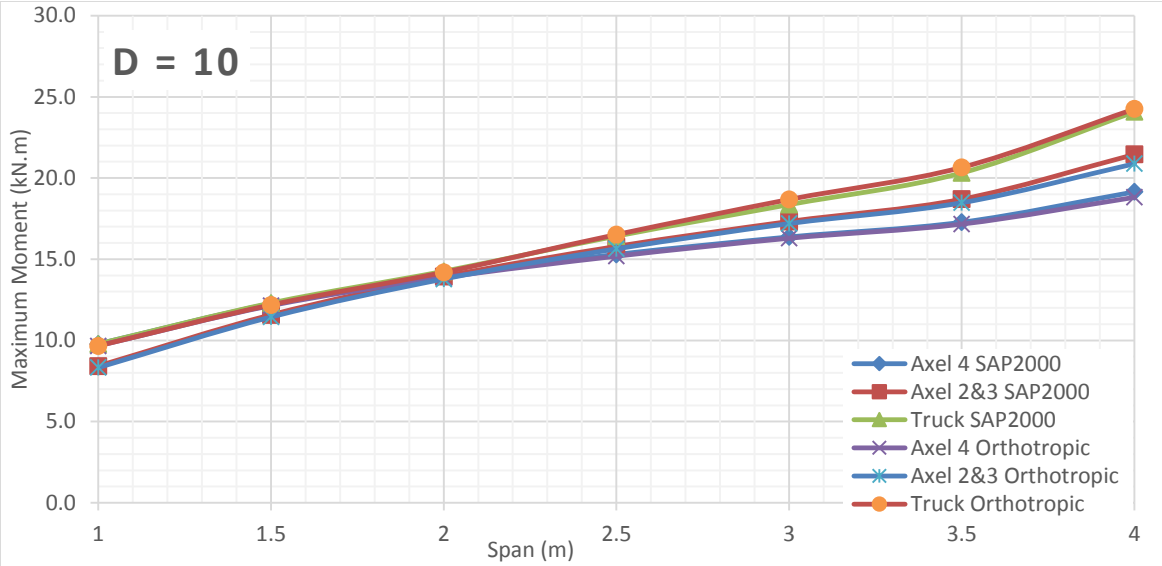

Figure 627 Moment comparison between FEA and Orthotropic Plate Theory for D = 10 of alpha 8 (main bars perpendicular traffic)

Alpha 8 Bending Moment VS Span Length for Different D Values (Main bars parallel to traffic)

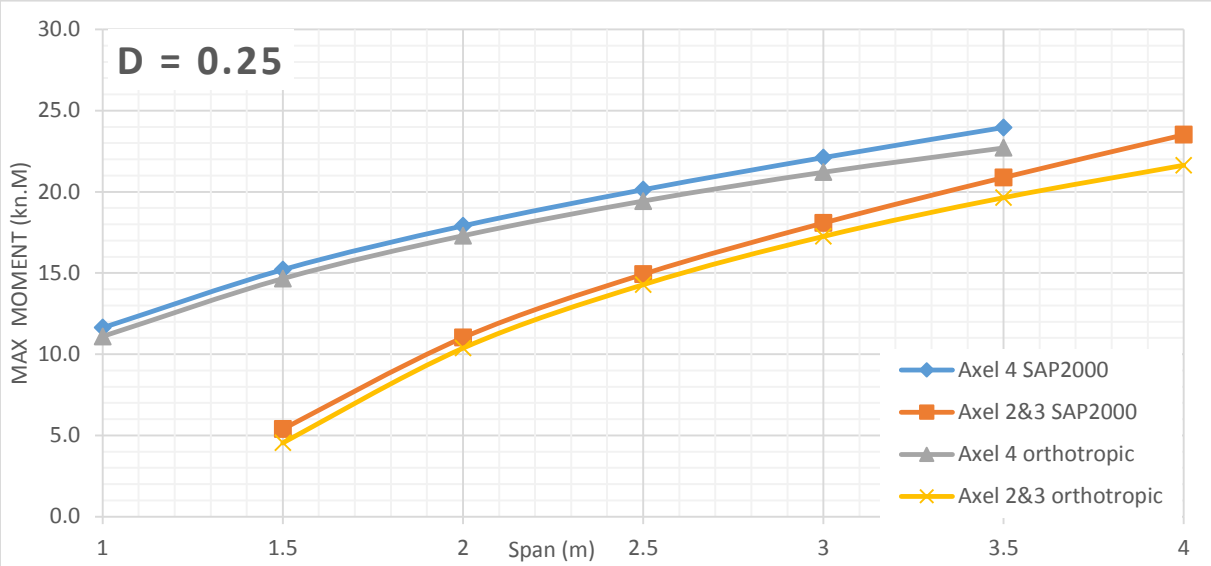

Figure 628 Moment comparison between FEA and Orthotropic Plate Theory for D = 0.25 of alpha 8 (main bars parallel traffic)

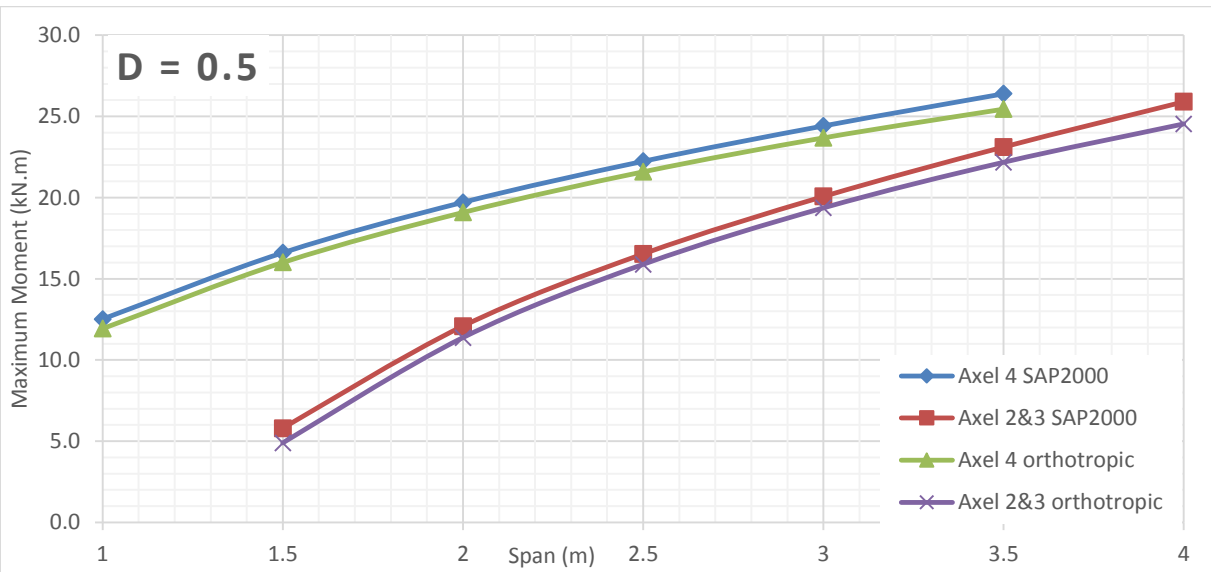

Figure 629 Moment comparison between FEA and Orthotropic Plate Theory for D = 0.5 of alpha 8 (main bars parallel traffic)

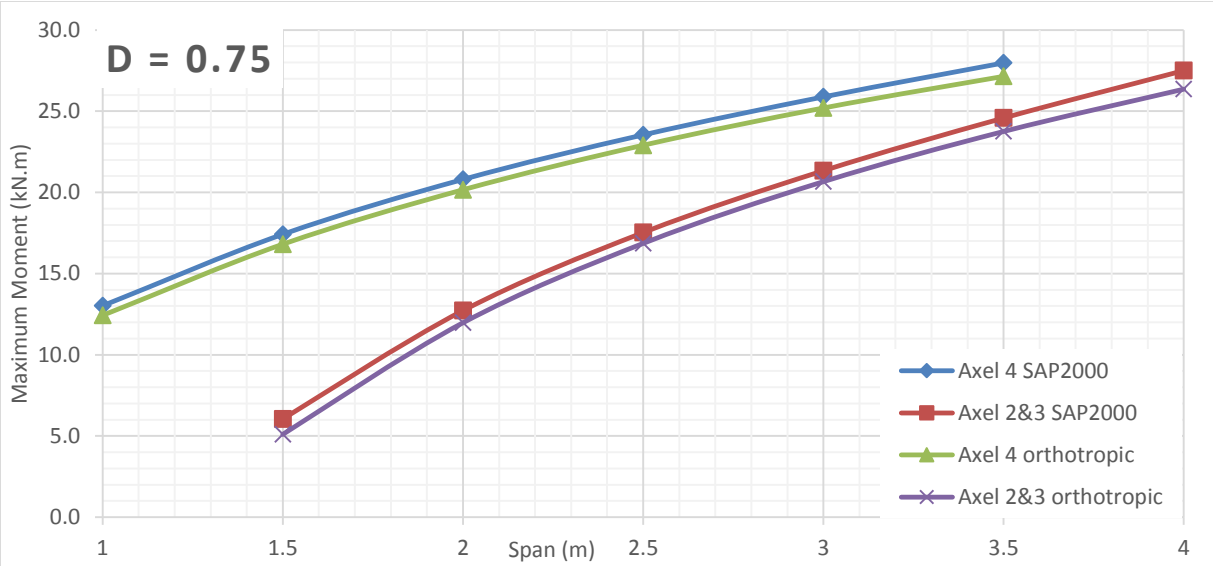

Figure 630 Moment comparison between FEA and Orthotropic Plate Theory for D = 0.75 of alpha 8 (main bars parallel traffic)

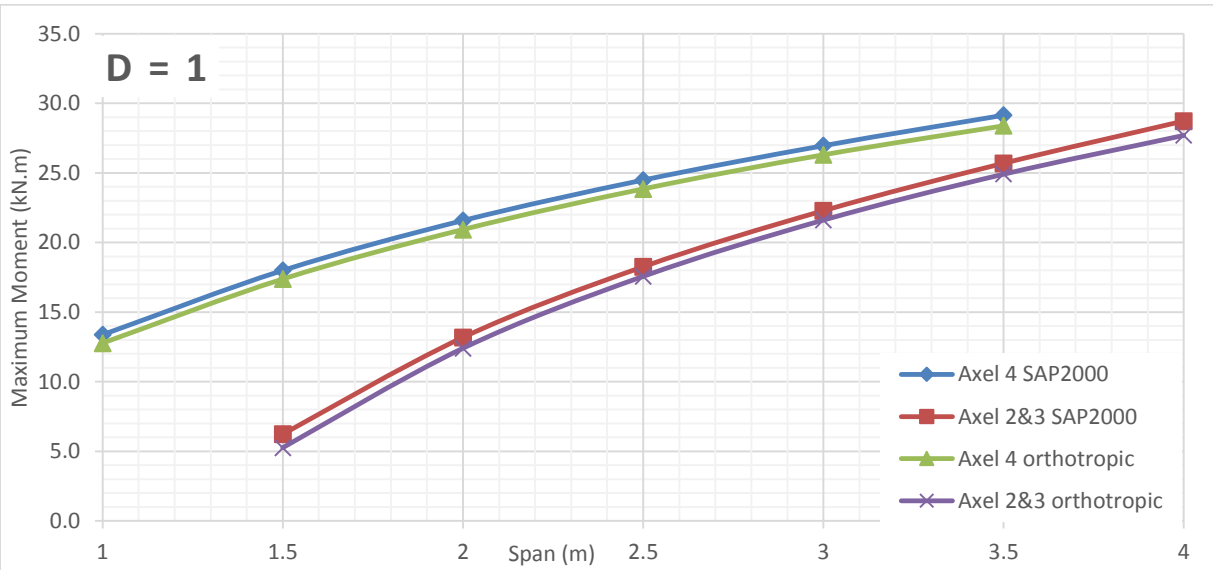

Figure 631 Moment comparison between FEA and Orthotropic Plate Theory for D = 1 of alpha 8 (main bars parallel traffic)

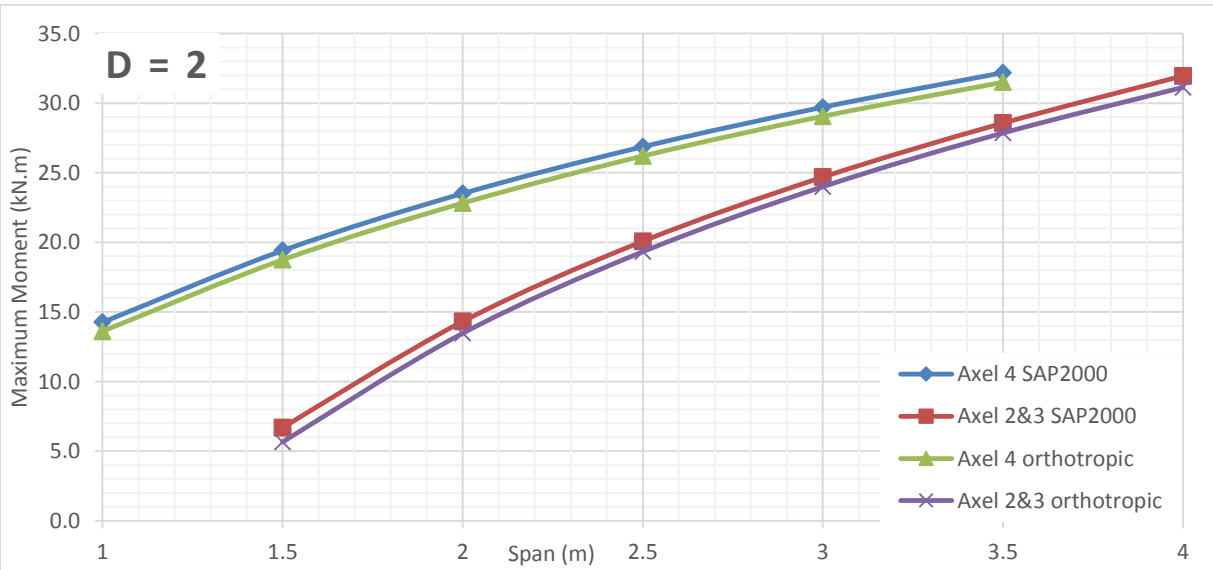

Figure 632 Moment comparison between FEA and Orthotropic Plate Theory for D = 2 of alpha 8 (main bars parallel traffic)

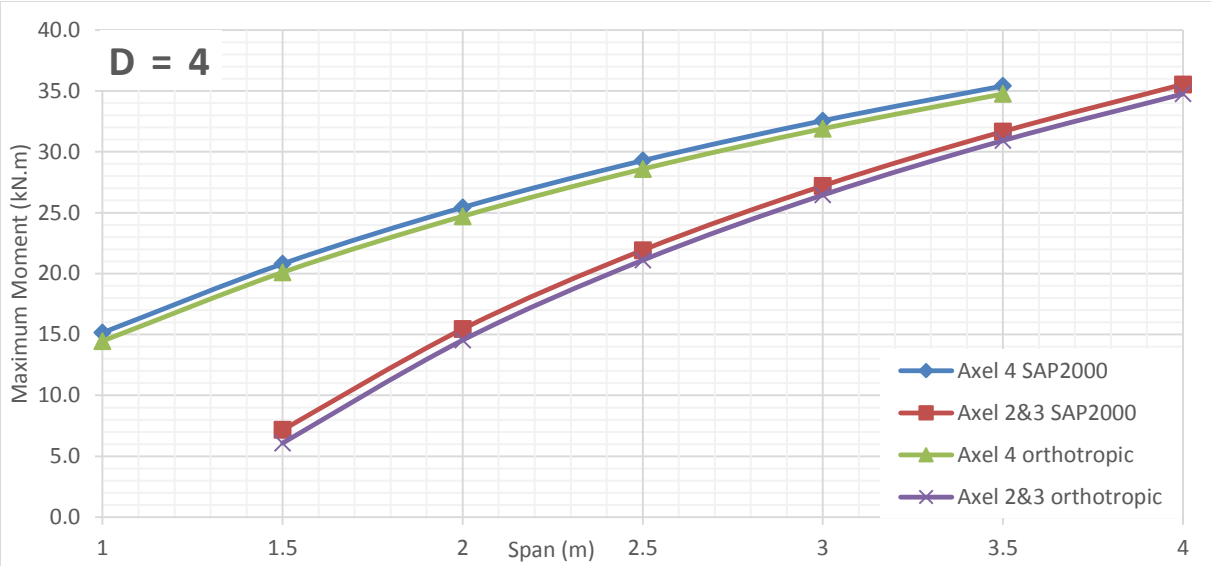

Figure 633 Moment comparison between FEA and Orthotropic Plate Theory for D = 4 of alpha 8 (main bars parallel traffic)

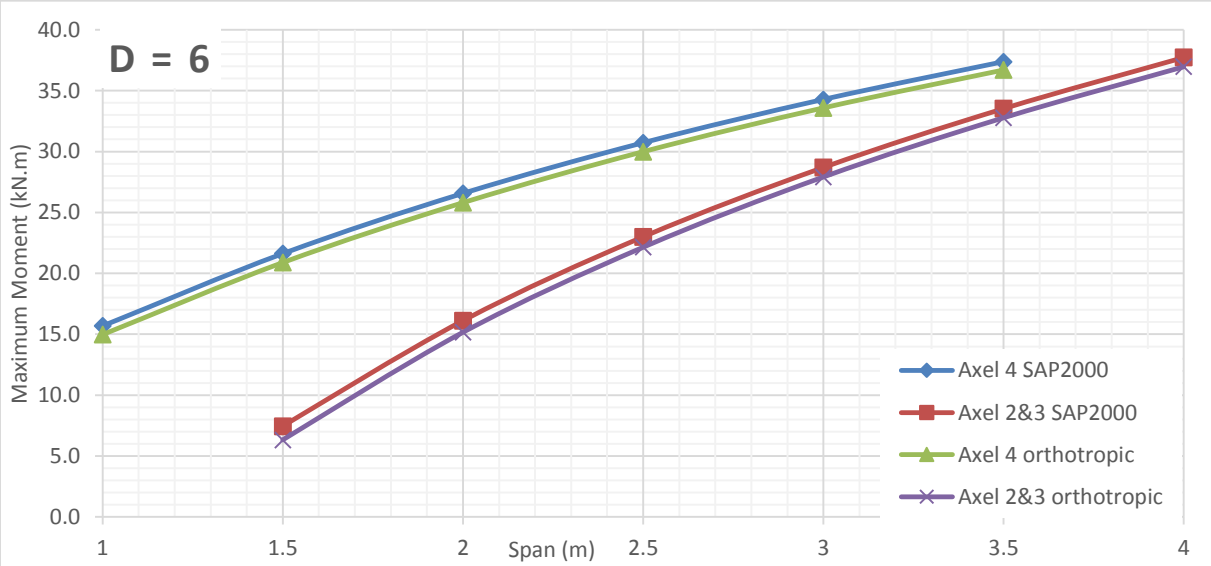

Figure 634 Moment comparison between FEA and Orthotropic Plate Theory for D = 6 of alpha 8 (main bars parallel traffic)

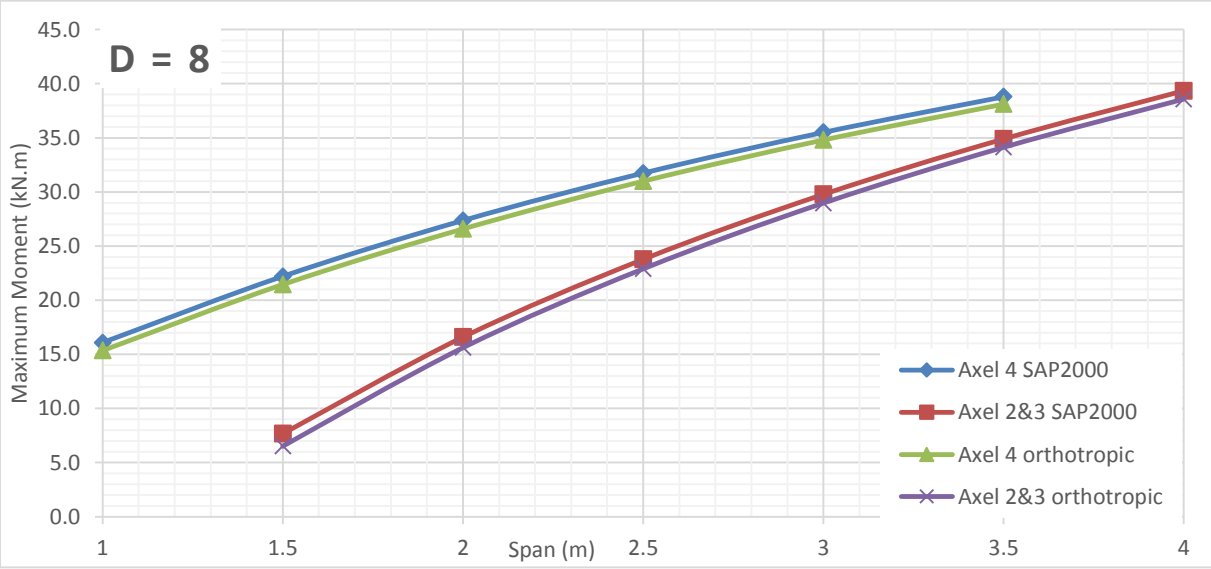

Figure 635 Moment comparison between FEA and Orthotropic Plate Theory for D = 8 of alpha 8 (main bars parallel traffic)

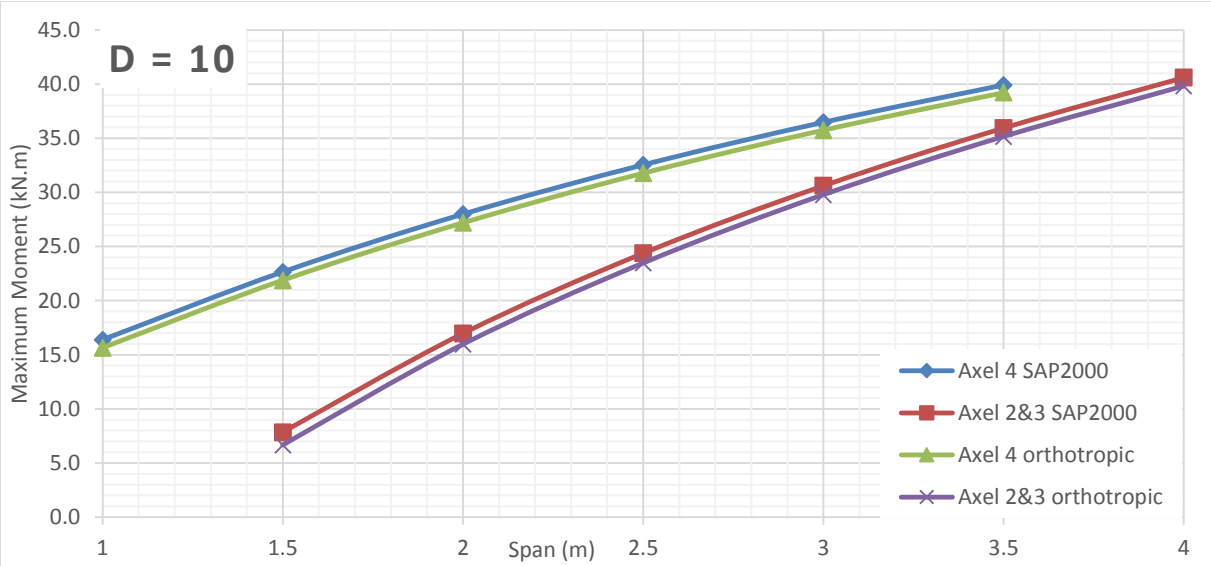

Figure 636 Moment comparison between FEA and Orthotropic Plate Theory for D = 10 of alpha 8 (main bars parallel traffic)

Alpha 10 Bending Moment VS Span Length for Different D Values (Main bars perpendicular to traffic)

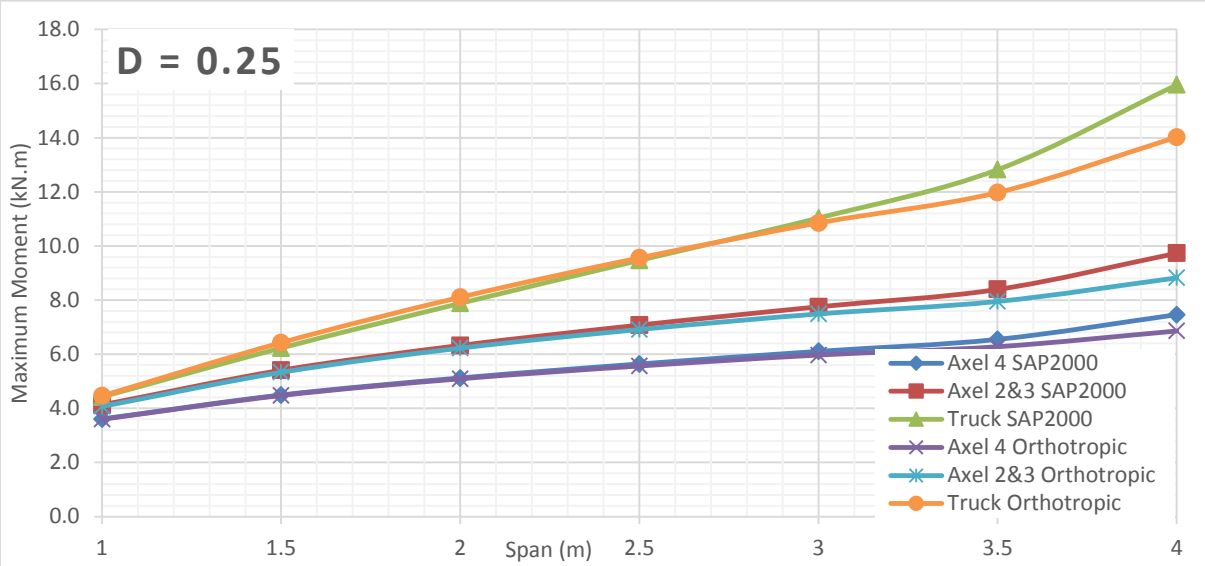

Figure 637 Moment comparison between FEA and Orthotropic Plate Theory for D = 0.25 of alpha 10 (main bars perpendicular traffic)

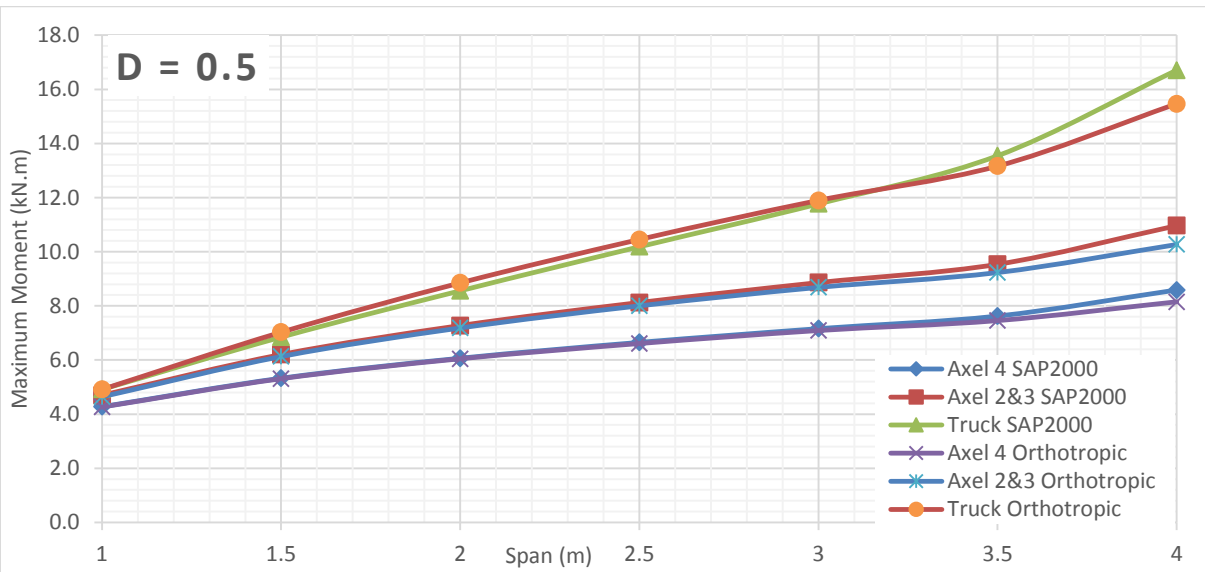

Figure 638 Moment comparison between FEA and Orthotropic Plate Theory for D = 0.5 of alpha 10 (main bars perpendicular traffic)

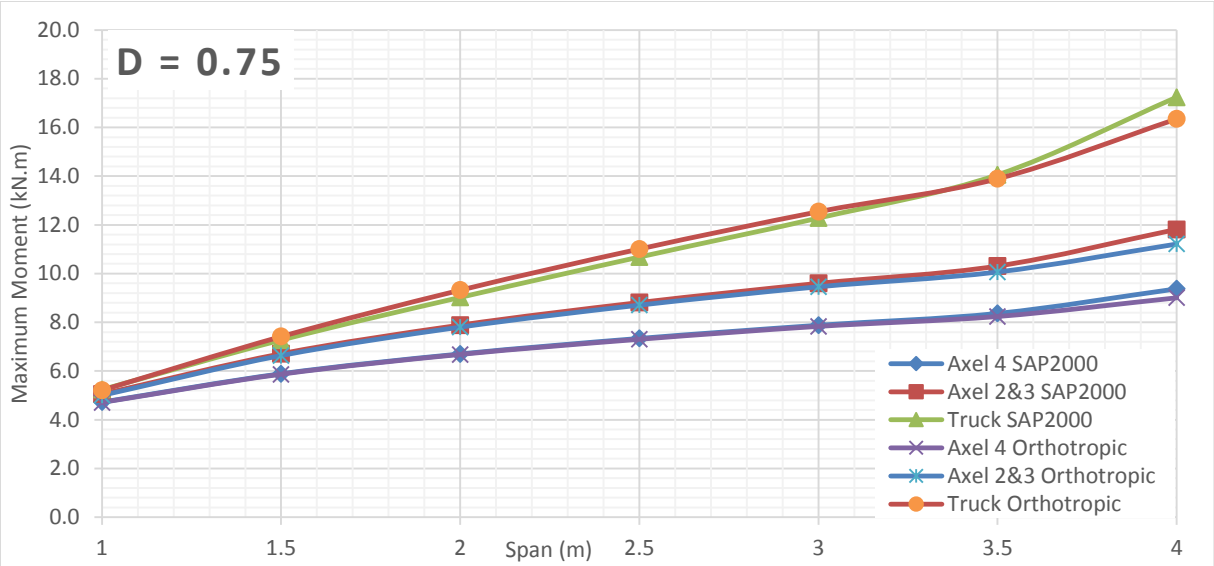

Figure 639 Moment comparison between FEA and Orthotropic Plate Theory for D = 0.75 of alpha 10 (main bars perpendicular traffic)

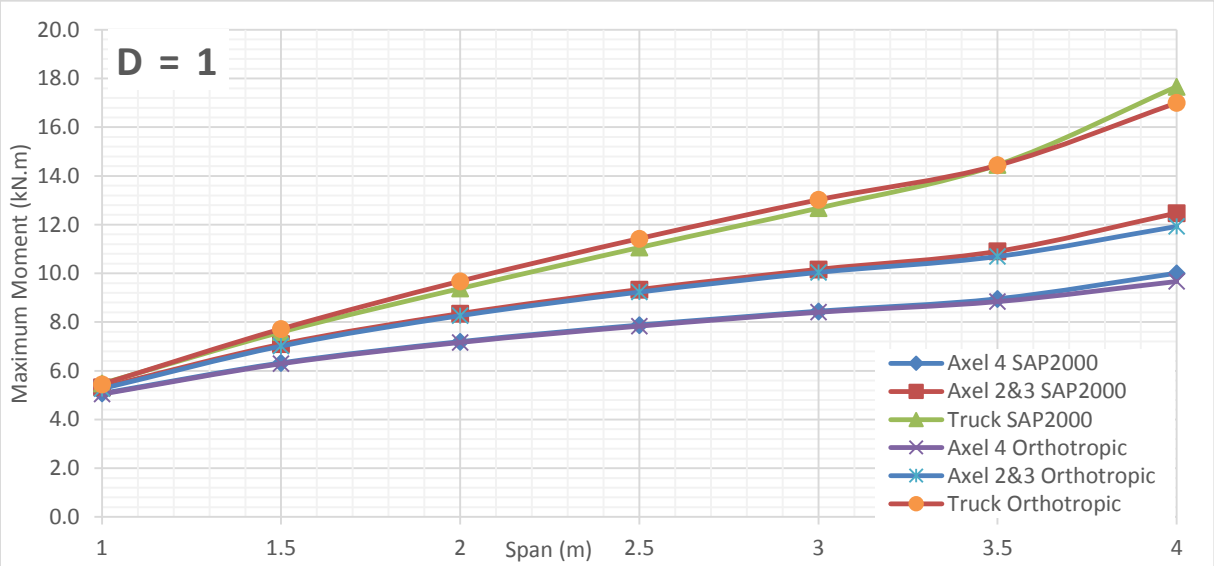

Figure 640 Moment comparison between FEA and Orthotropic Plate Theory for D = 1 of alpha 10 (main bars perpendicular traffic)

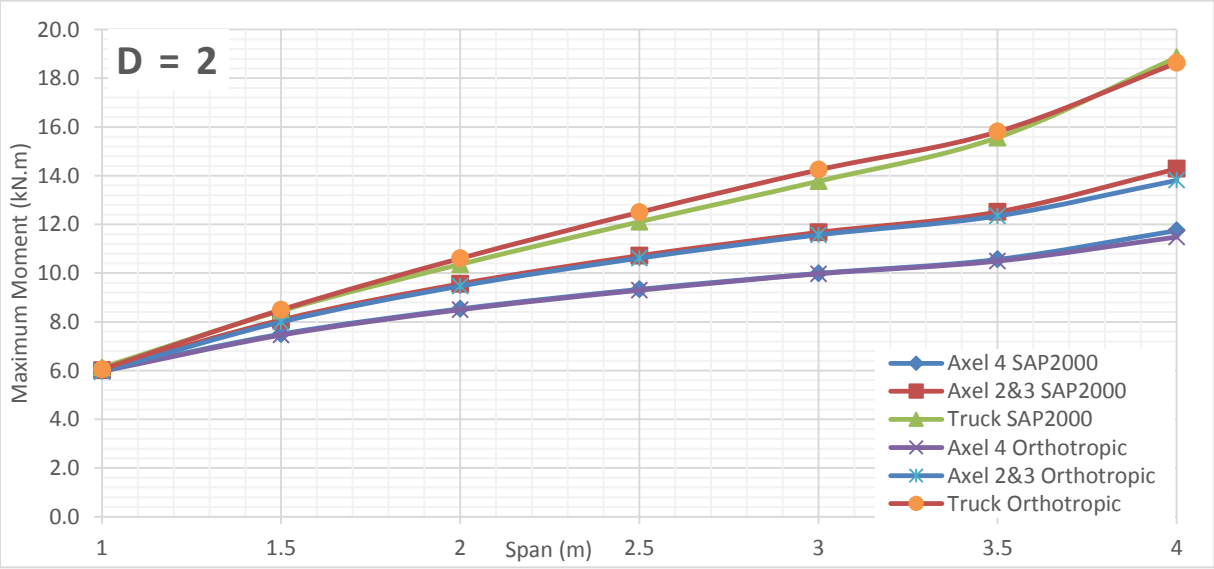

Figure 641 Moment comparison between FEA and Orthotropic Plate Theory for D = 2 of alpha 10 (main bars perpendicular traffic)

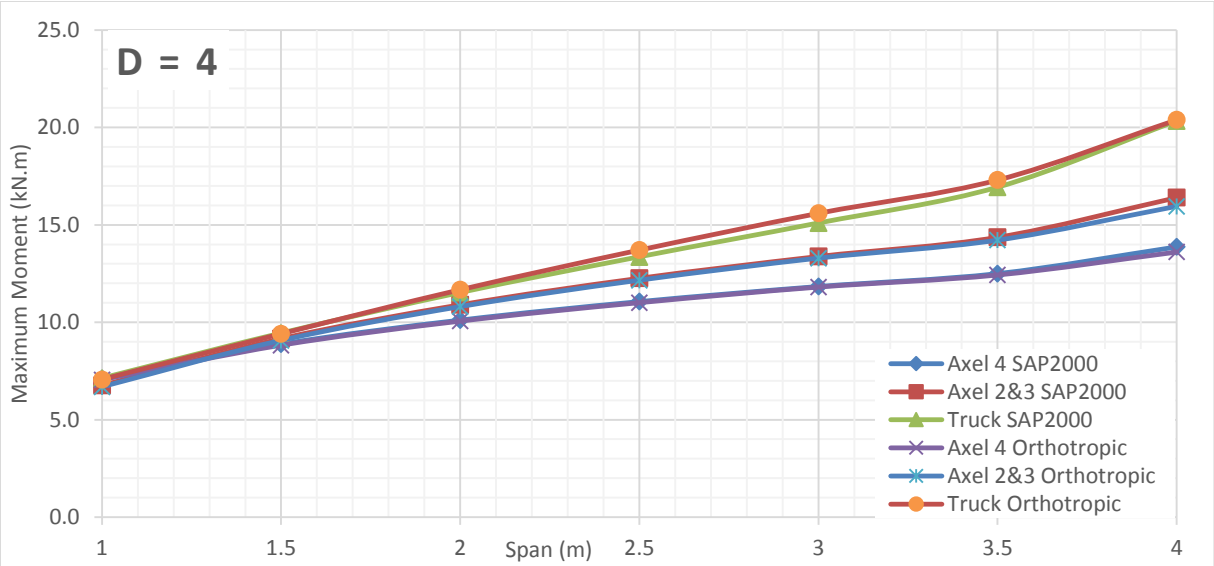

Figure 642 Moment comparison between FEA and Orthotropic Plate Theory for D = 4 of alpha 10 (main bars perpendicular traffic)

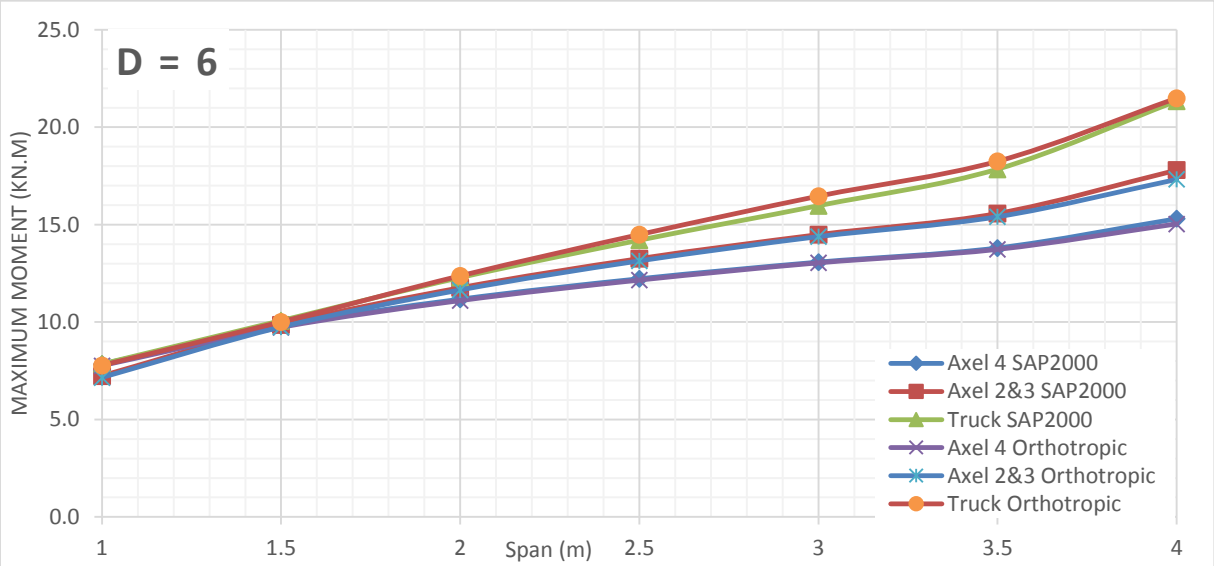

Figure 643 Moment comparison between FEA and Orthotropic Plate Theory for D = 6 of alpha 10 (main bars perpendicular traffic)

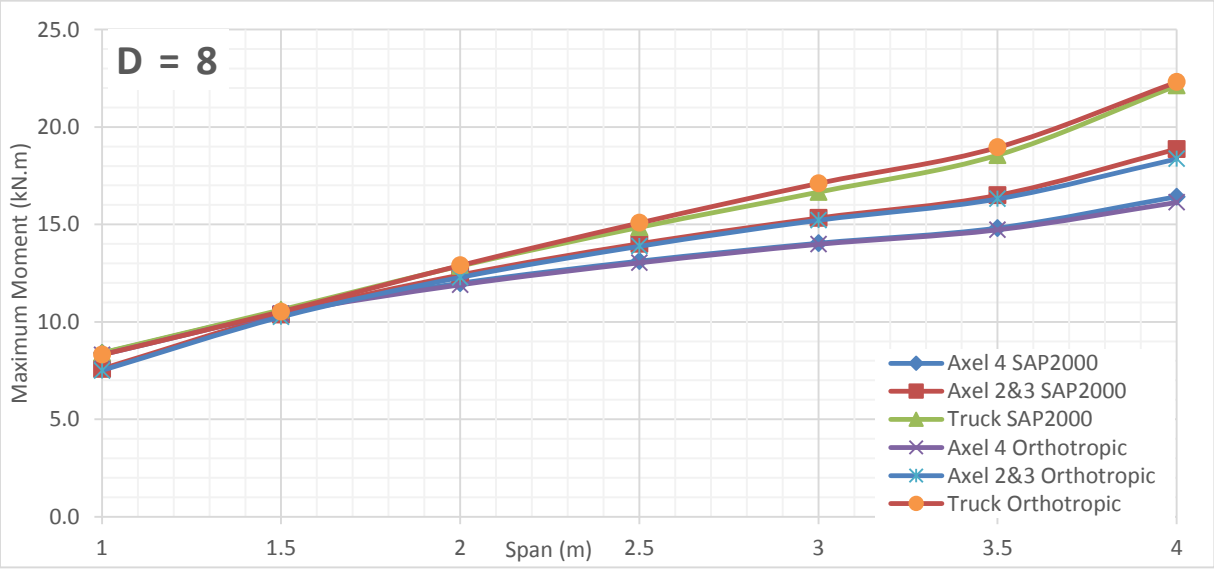

Figure 644 Moment comparison between FEA and Orthotropic Plate Theory for D = 8 of alpha 10 (main bars perpendicular traffic)

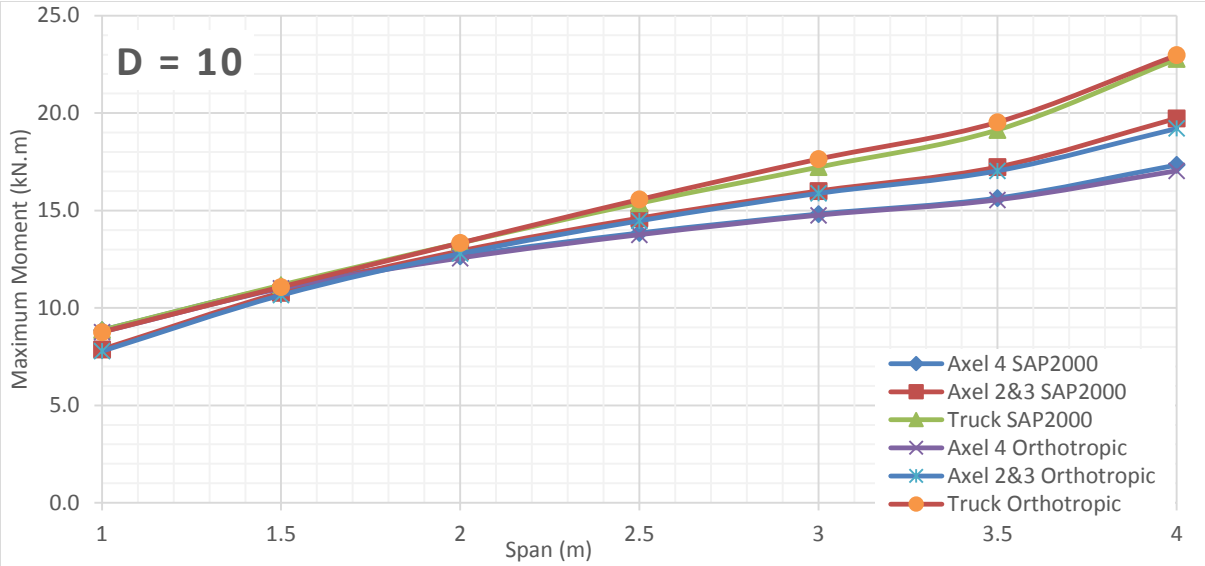

Figure 645 Moment comparison between FEA and Orthotropic Plate Theory for D = 10 of alpha 10 (main bars perpendicular traffic)

Alpha 10 Bending Moment VS Span Length for Different D Values (Main bars parallel to traffic)

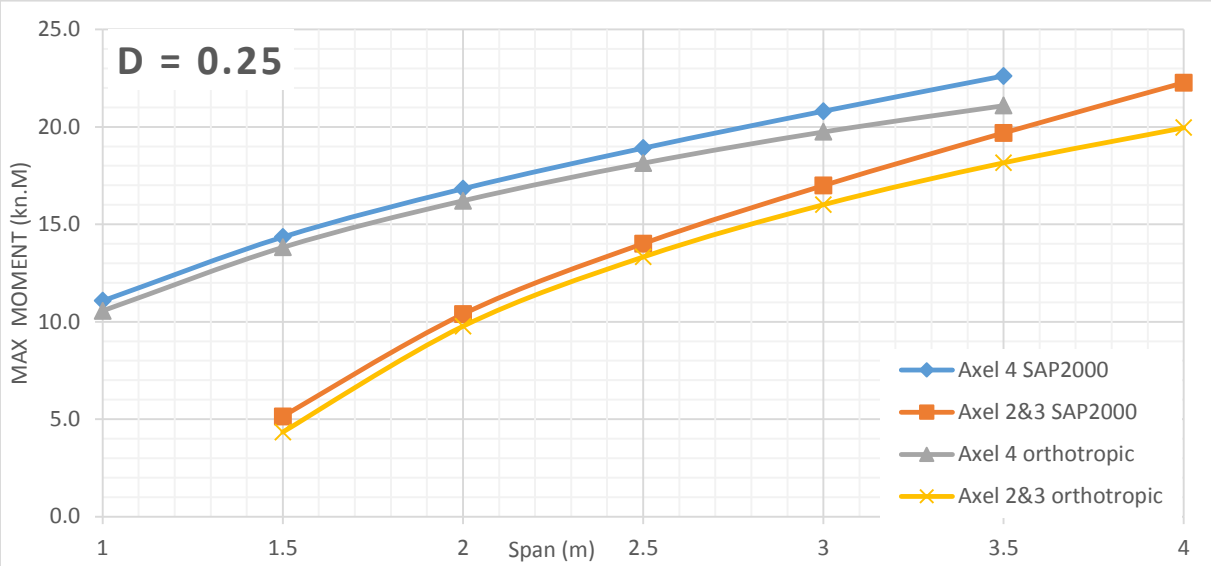

Figure 646 Moment comparison between FEA and Orthotropic Plate Theory for D = 0.25 of alpha 10 (main bars parallel traffic)

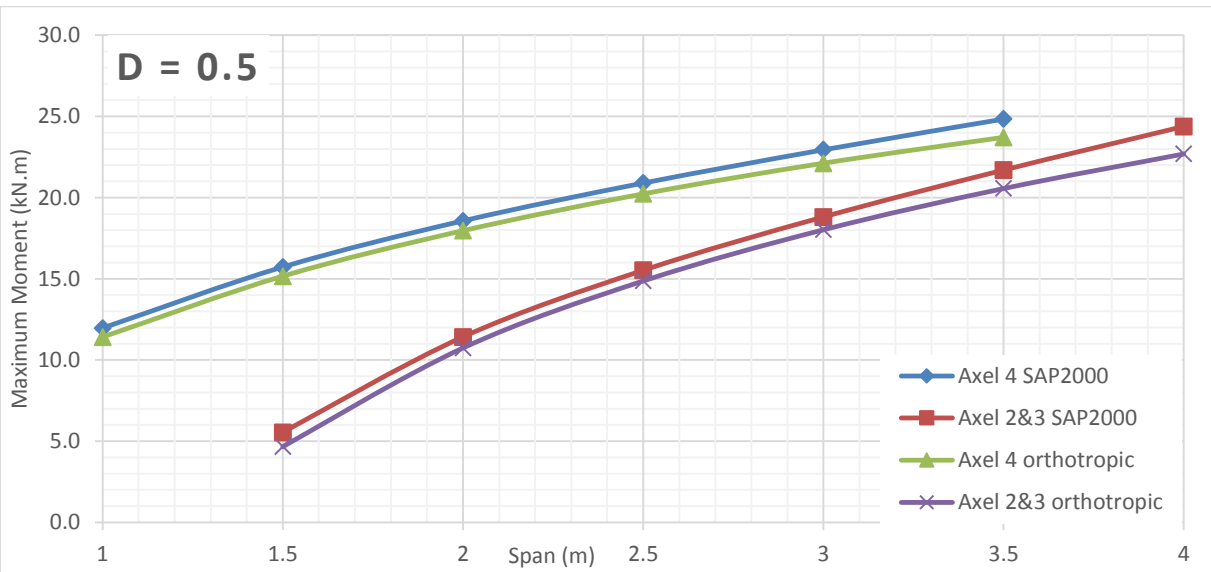

Figure 647 Moment comparison between FEA and Orthotropic Plate Theory for D = 0.5 of alpha 10 (main bars parallel traffic)

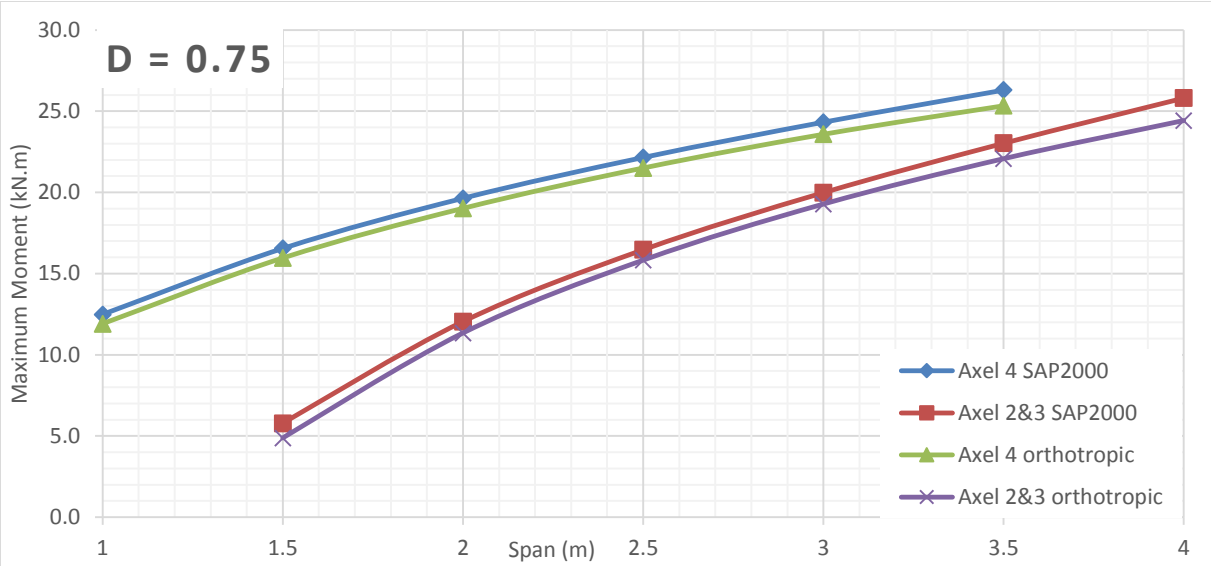

Figure 648 Moment comparison between FEA and Orthotropic Plate Theory for D = 0.75 of alpha 10 (main bars parallel traffic)

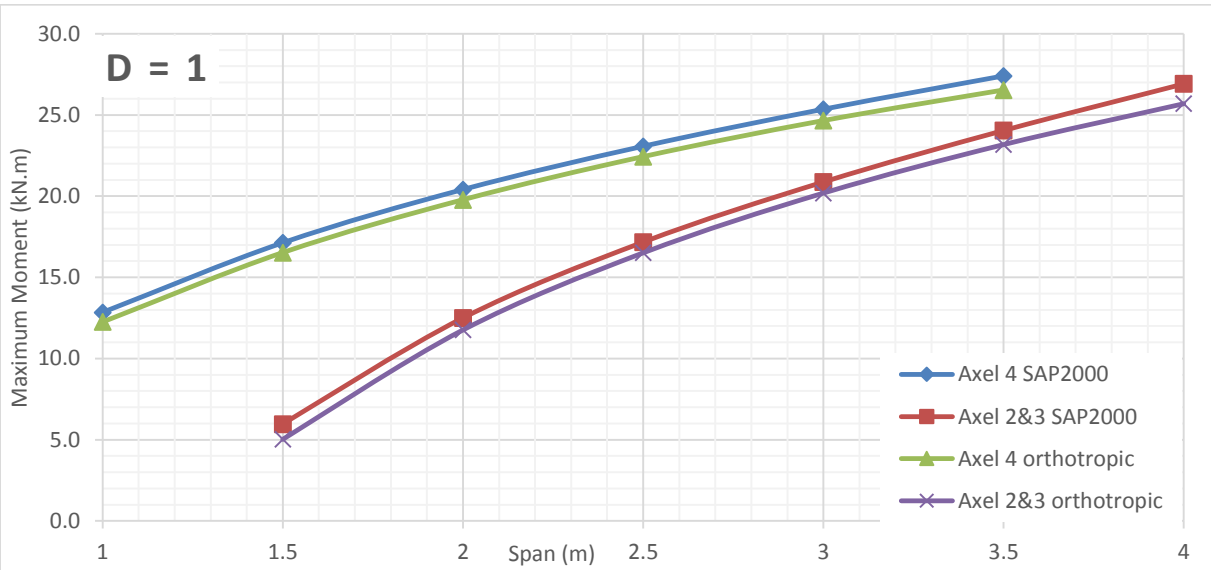

Figure 649 Moment comparison between FEA and Orthotropic Plate Theory for D = 1 of alpha 10 (main bars parallel traffic)

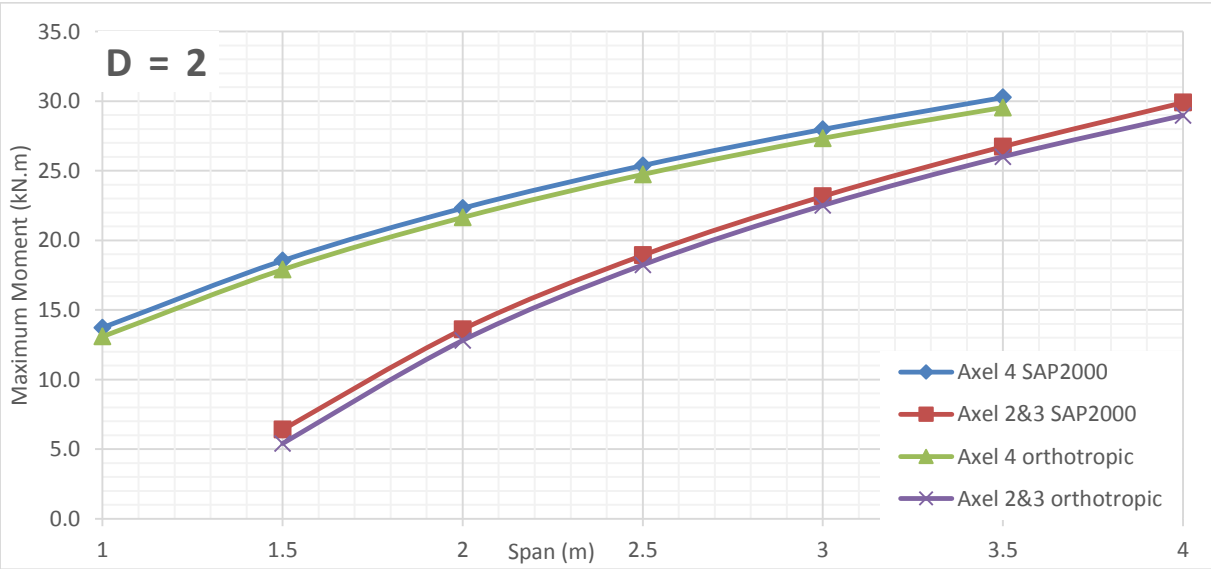

Figure 650 Moment comparison between FEA and Orthotropic Plate Theory for D = 2 of alpha 10 (main bars parallel traffic)

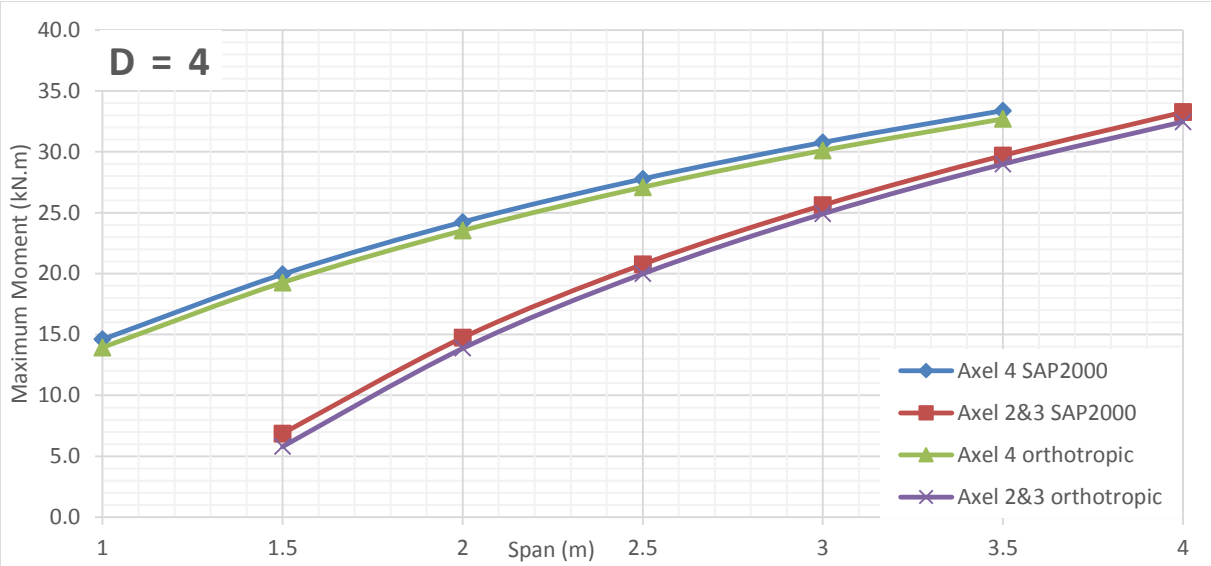

Figure 651 Moment comparison between FEA and Orthotropic Plate Theory for D = 4 of alpha 10 (main bars parallel traffic)

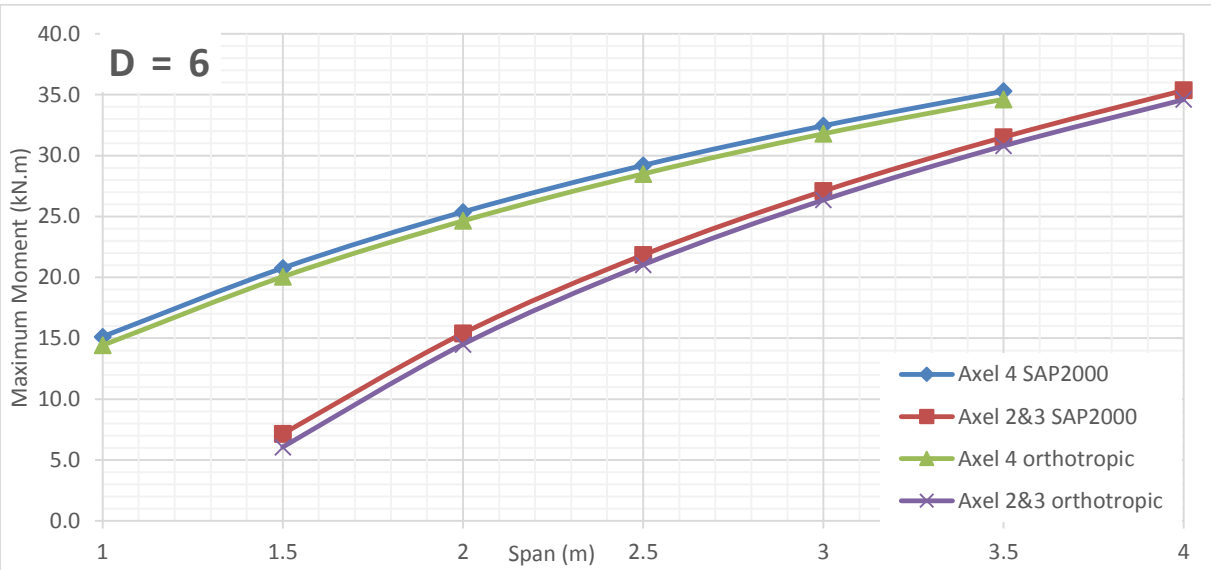

Figure 652 Moment comparison between FEA and Orthotropic Plate Theory for D = 6 of alpha 10 (main bars parallel traffic)

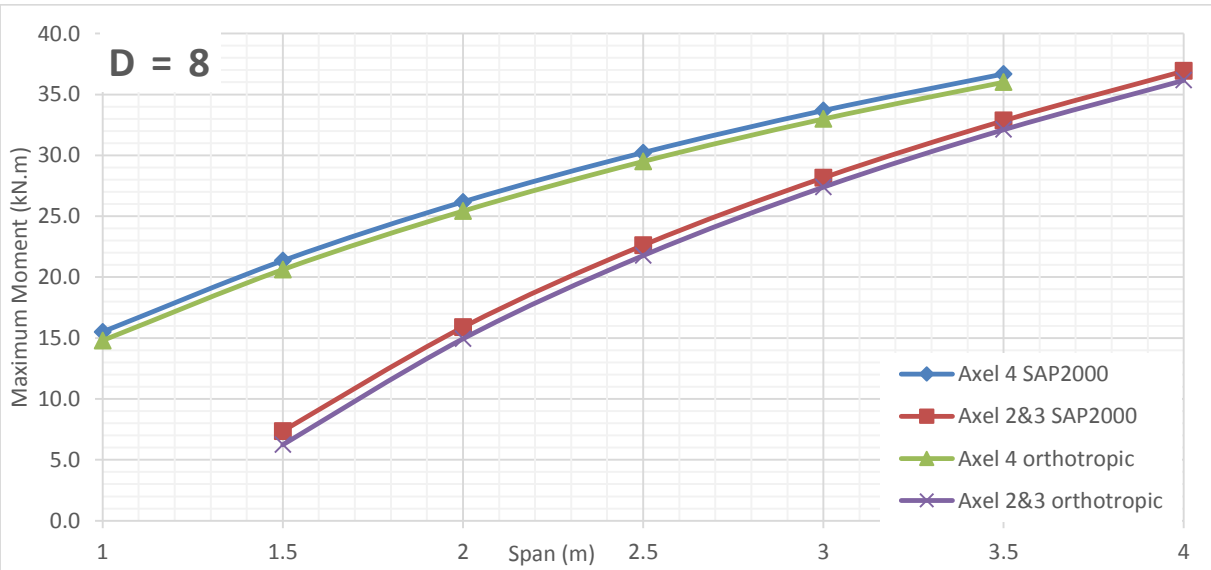

Figure 653 Moment comparison between FEA and Orthotropic Plate Theory for D = 8 of alpha 10 (main bars parallel traffic)

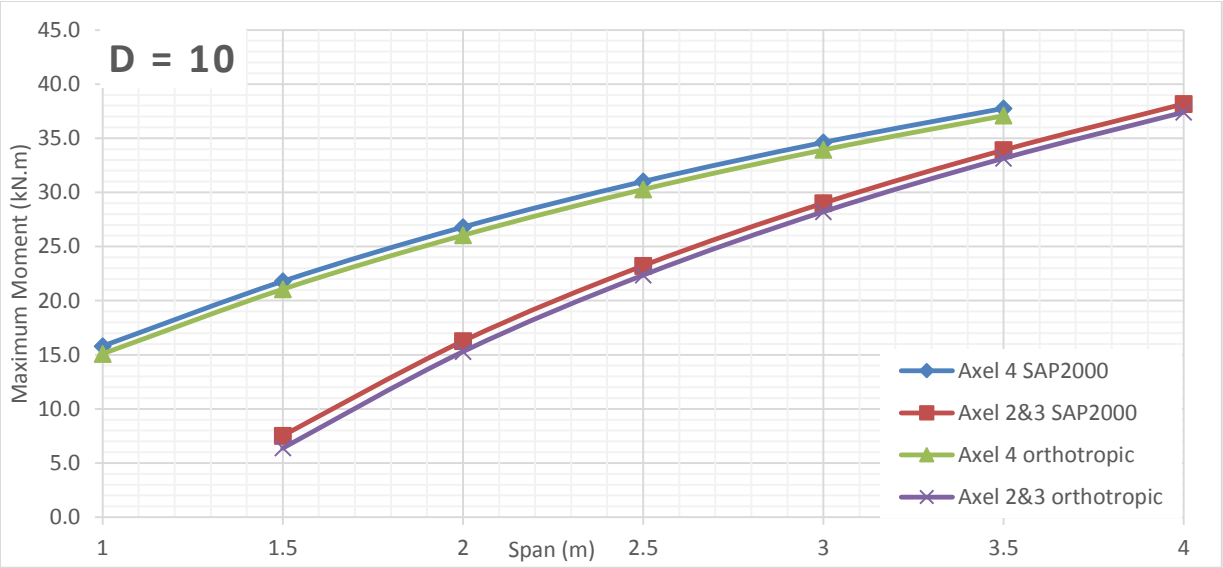

Figure 654 Moment comparison between FEA and Orthotropic Plate Theory for D = 10 of alpha 10 (main bars parallel traffic)

D.1.2 MAXIMUM BENDING MOMENT VS FLEXURAL RIGIDITY

Alpha 0.25 Moment VS Flexural Rigidity for Different Span Length (Main bars perpendicular to traffic)

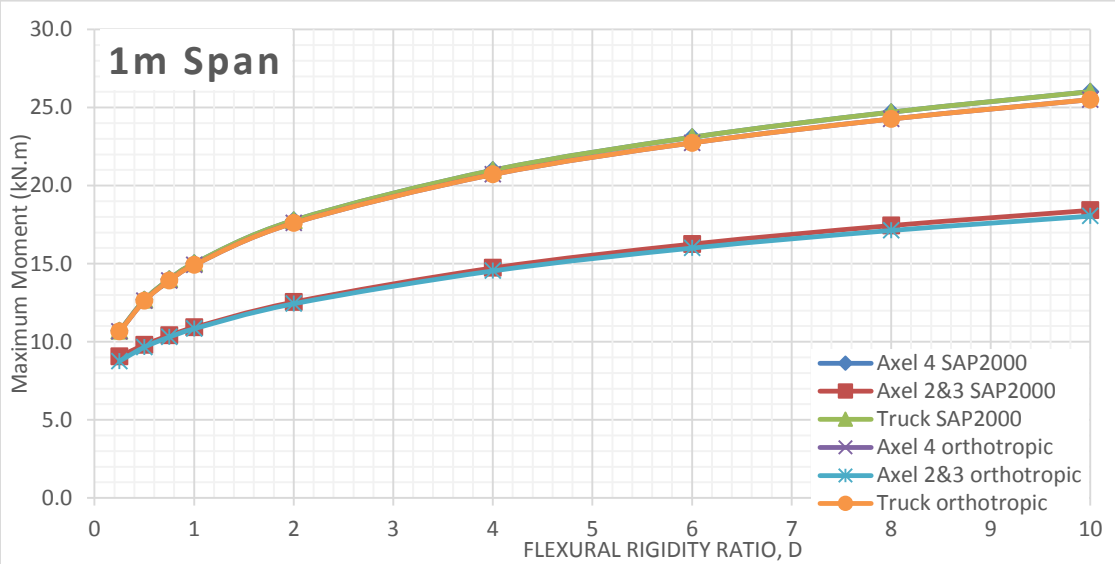

Figure 655 Moment comparison between FEA and Orthotropic Plate Theory for 1 m span of alpha 0.25 (main bars perpendicular to traffic)

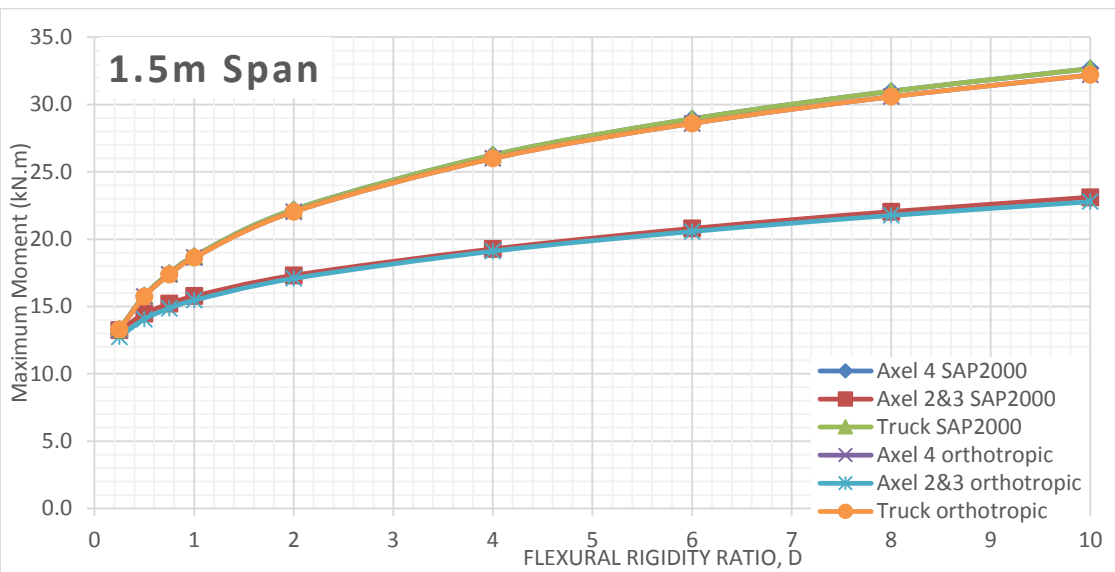

Figure 656 Moment comparison between FEA and Orthotropic Plate Theory for 1.5 m span of alpha 0.25 (main bars perpendicular to traffic)

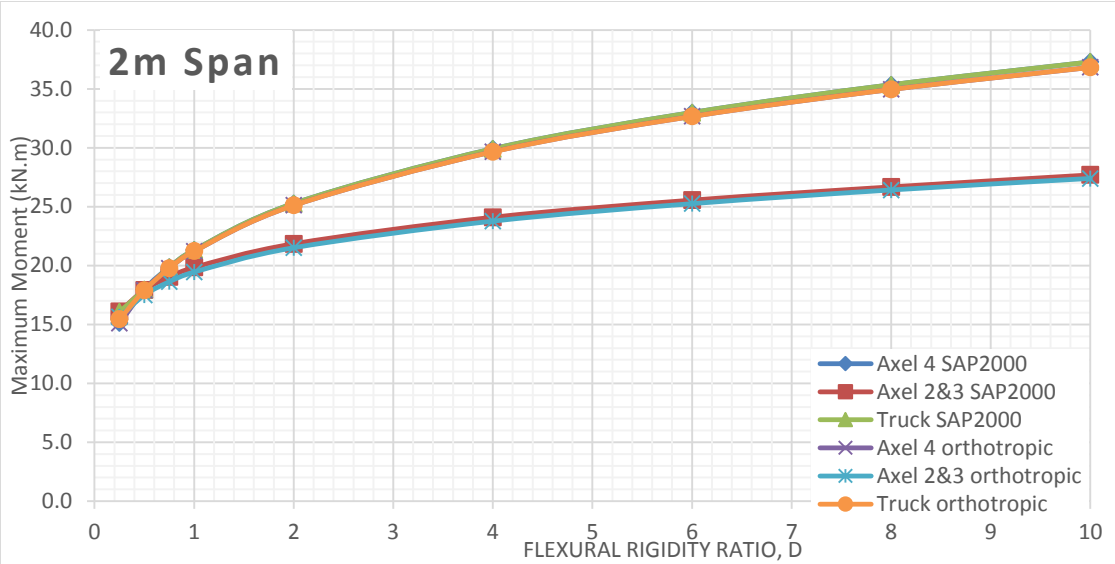

Figure 657 Moment comparison between FEA and Orthotropic Plate Theory for 2 m span of alpha 0.25 (main bars perpendicular to traffic)

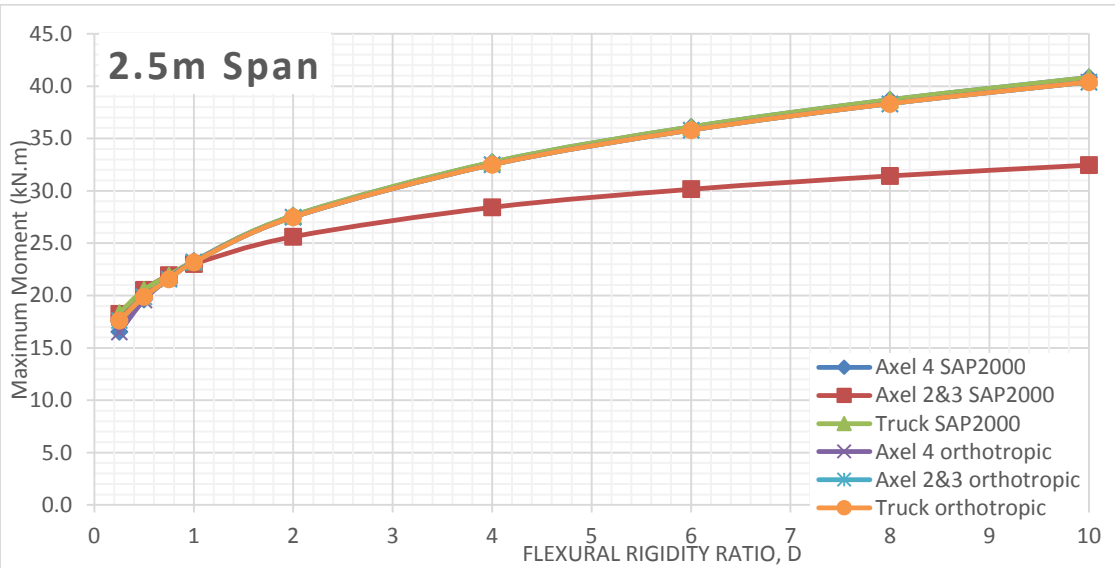

Figure 658 Moment comparison between FEA and Orthotropic Plate Theory for 2.5 m span of alpha 0.25 (main bars perpendicular to traffic)

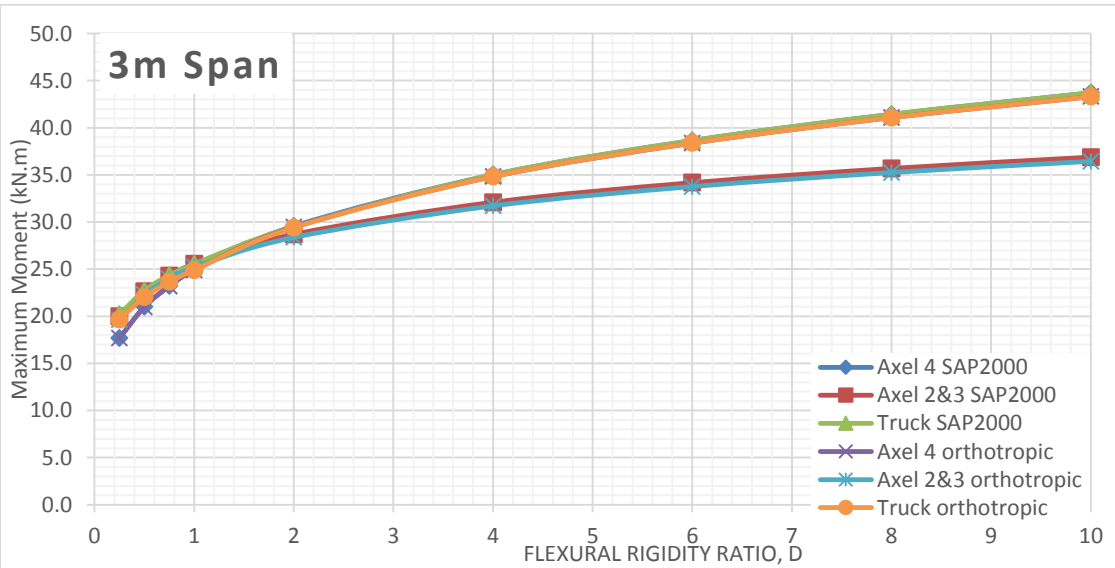

Figure 659 Moment comparison between FEA and Orthotropic Plate Theory for 3 m span of alpha 0.25 (main bars perpendicular to traffic)

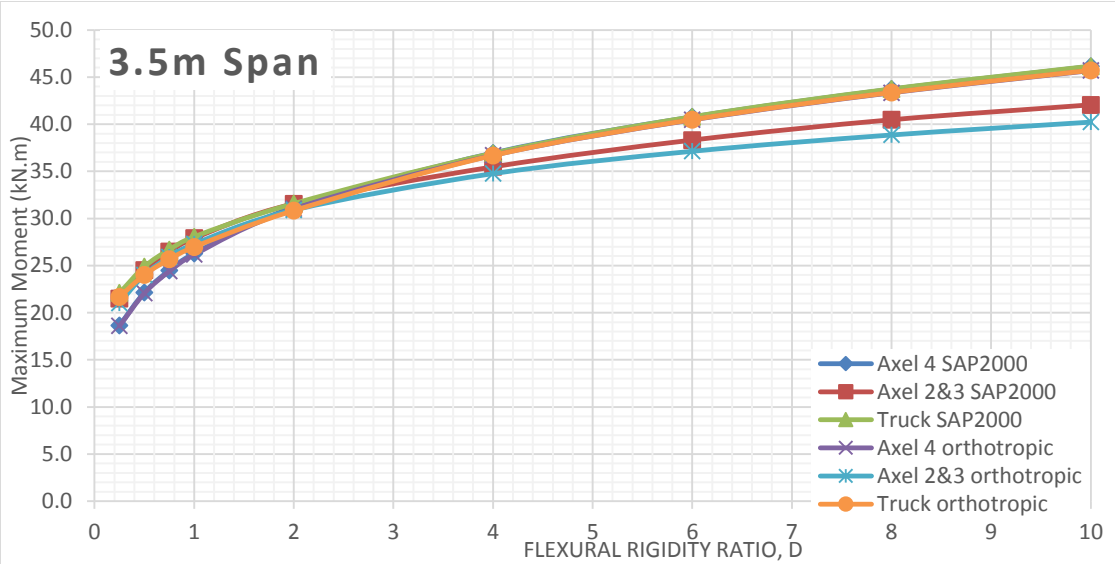

Figure 660 Moment comparison between FEA and Orthotropic Plate Theory for 3.5 m span of alpha 0.25 (main bars perpendicular to traffic)

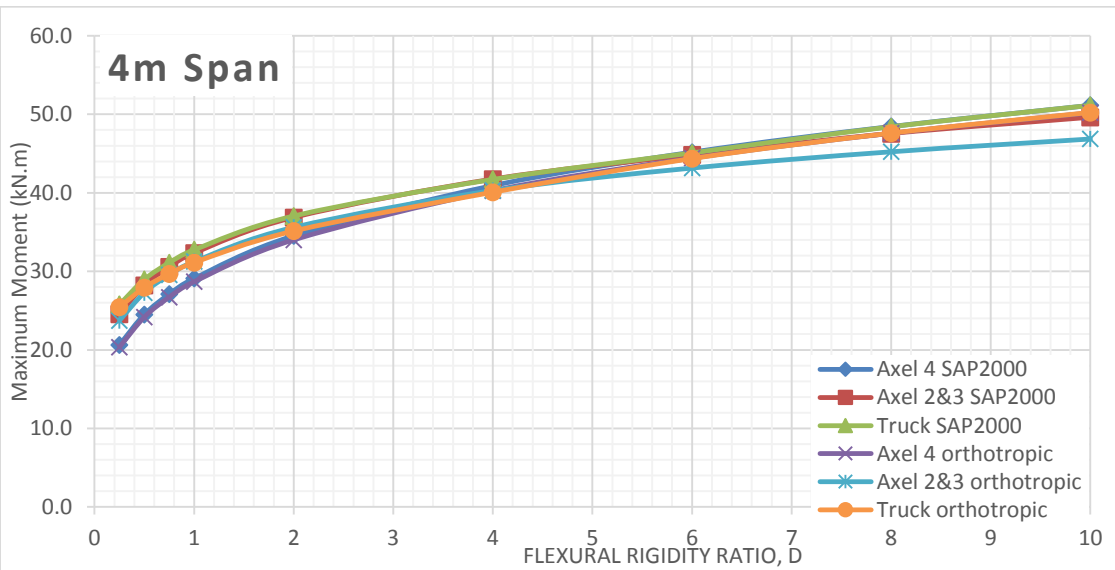

Figure 661 Moment comparison between FEA and Orthotropic Plate Theory for 4 m span of alpha 0.25 (main bars perpendicular to traffic)

Alpha 0.25 Bending Moment VS Flexural Rigidity for Different Span Length (Main bars parallel to traffic)

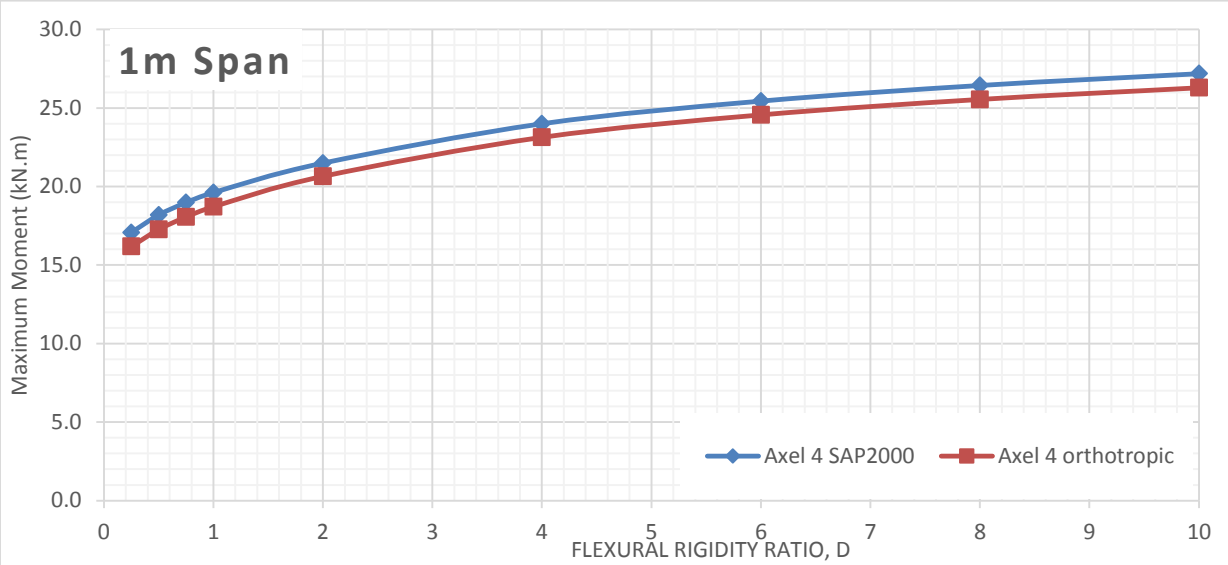

Figure 662 Moment comparison between FEA and Orthotropic Plate Theory for 1 m span of alpha 0.25 (main bars parallel to traffic)

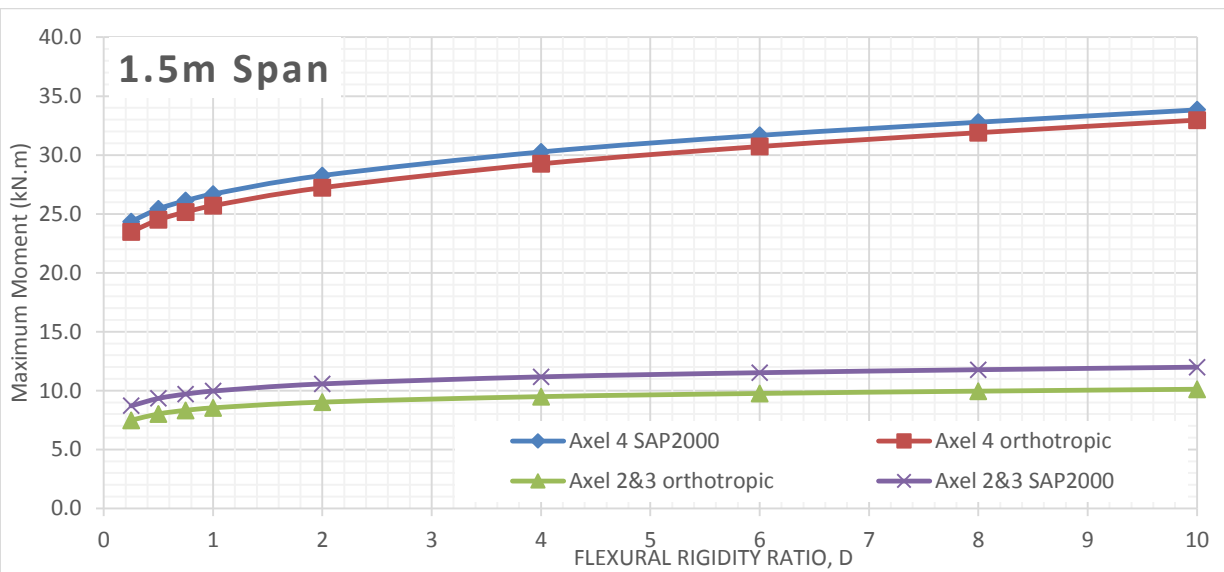

Figure 663 Moment comparison between FEA and Orthotropic Plate Theory for 1.5 m span of alpha 0.25 (main bars parallel to traffic)

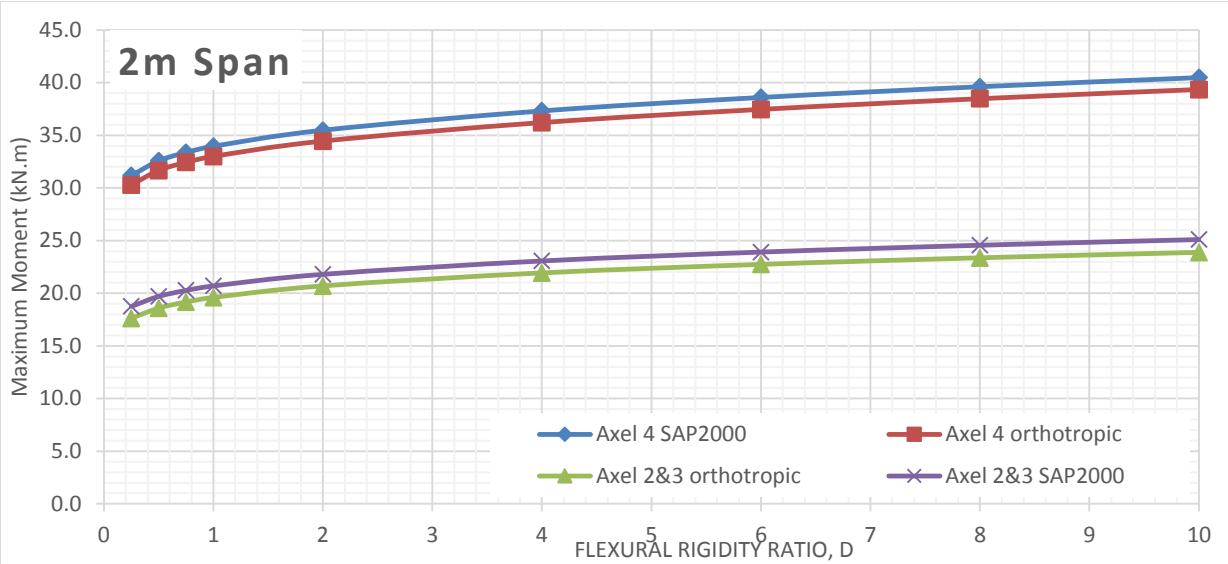

Figure 664 Moment comparison between FEA and Orthotropic Plate Theory for 2 m span of alpha 0.25 (main bars parallel to traffic)

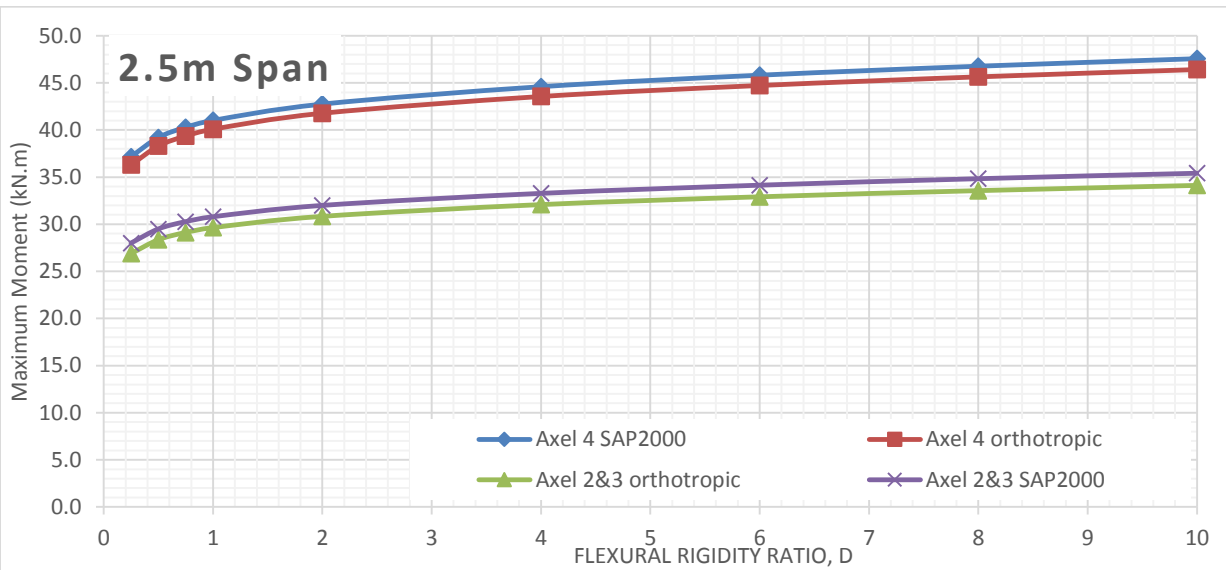

Figure 665 Moment comparison between FEA and Orthotropic Plate Theory for 2.5 m span of alpha 0.25 (main bars parallel to traffic)

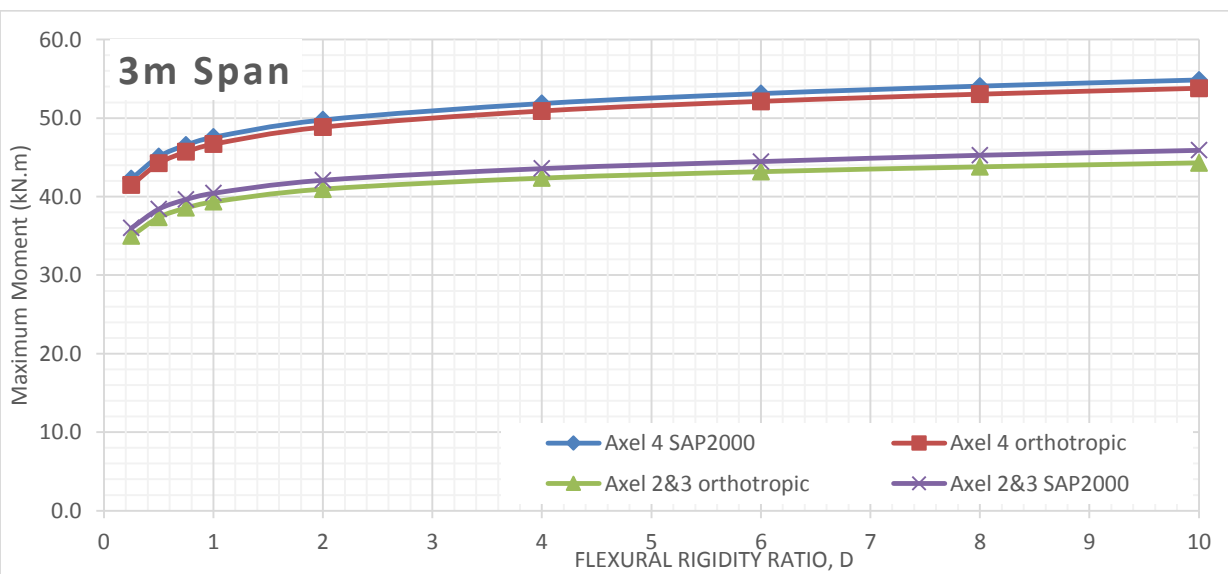

Figure 666 Moment comparison between FEA and Orthotropic Plate Theory for 3 m span of alpha 0.25 (main bars parallel to traffic)

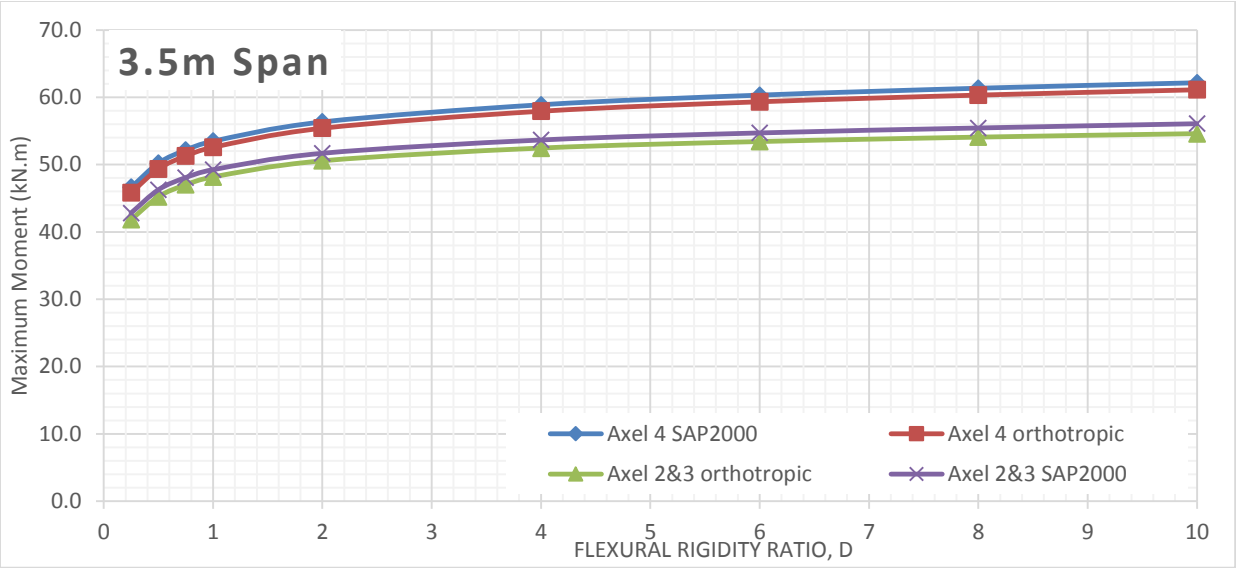

Figure 667 Moment comparison between FEA and Orthotropic Plate Theory for 3.5 m span of alpha 0.25 (main bars parallel to traffic)

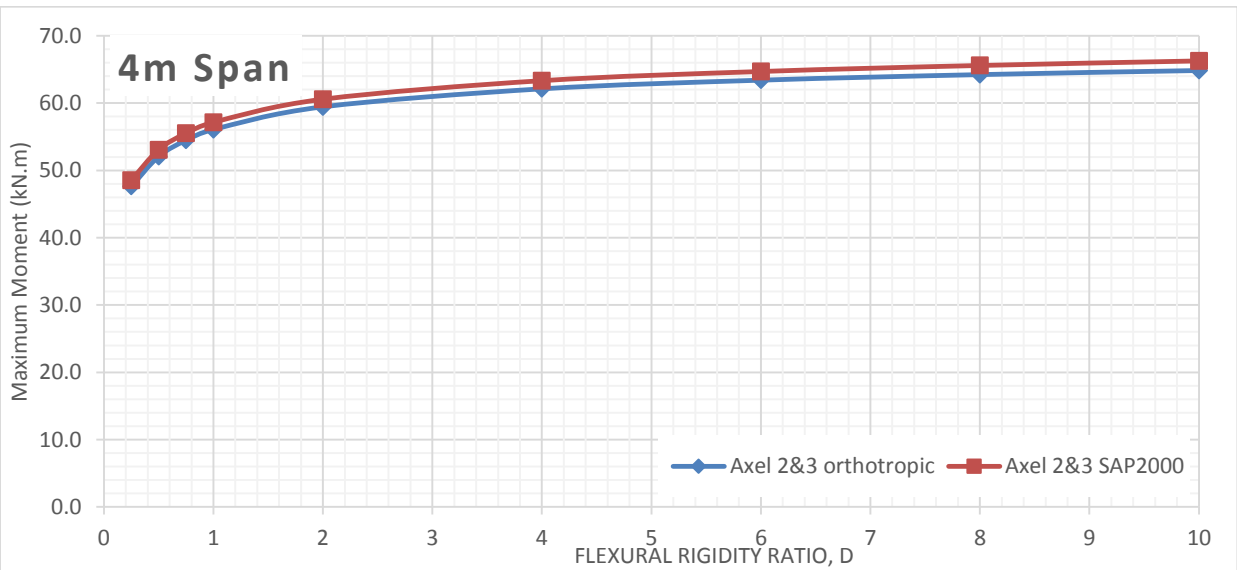

Figure 668 Moment comparison between FEA and Orthotropic Plate Theory for 4 m span of alpha 0.25 (main bars parallel to traffic)

Alpha 0.5 Bending Moment VS Flexural Rigidity for Different Span Length (Main bars perpendicular to traffic)

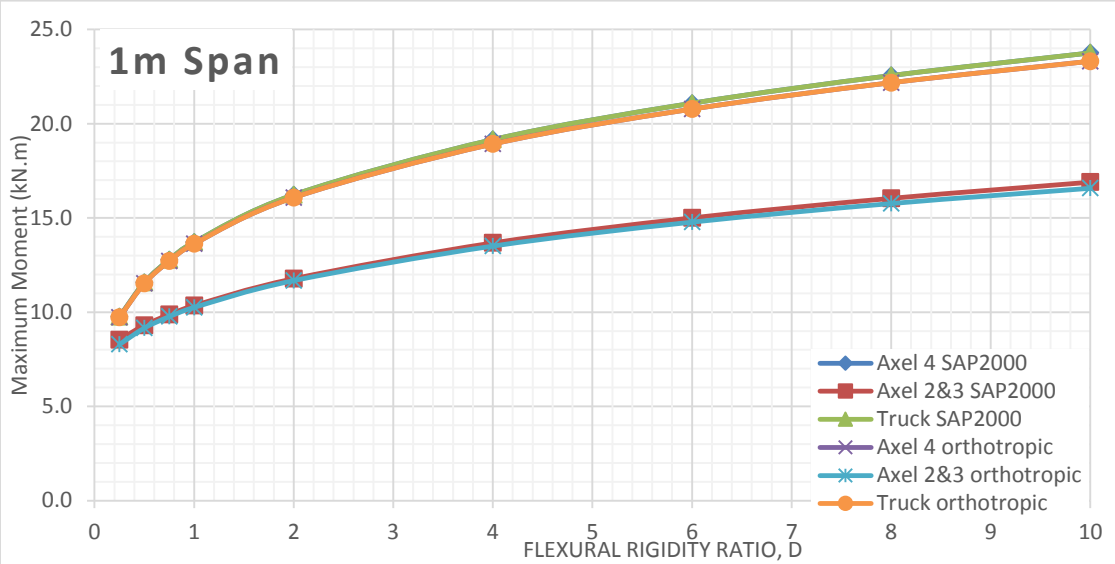

Figure 669 Moment comparison between FEA and Orthotropic Plate Theory for 1 m span of alpha 0.5 (main bars perpendicular to traffic)

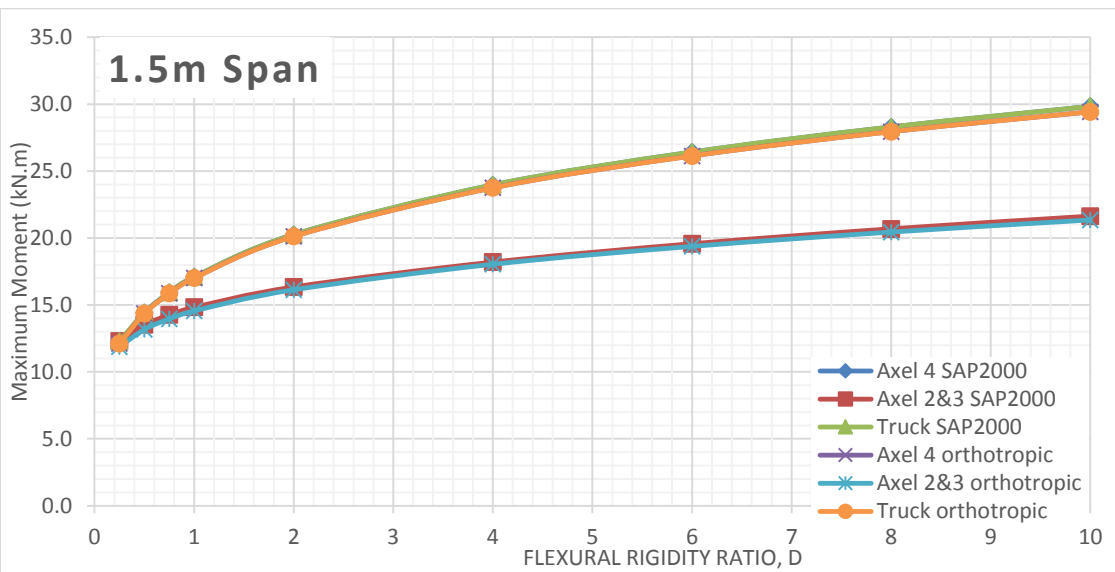

Figure 670 Moment comparison between FEA and Orthotropic Plate Theory for 1.5 m span of alpha 0.5 (main bars perpendicular to traffic)

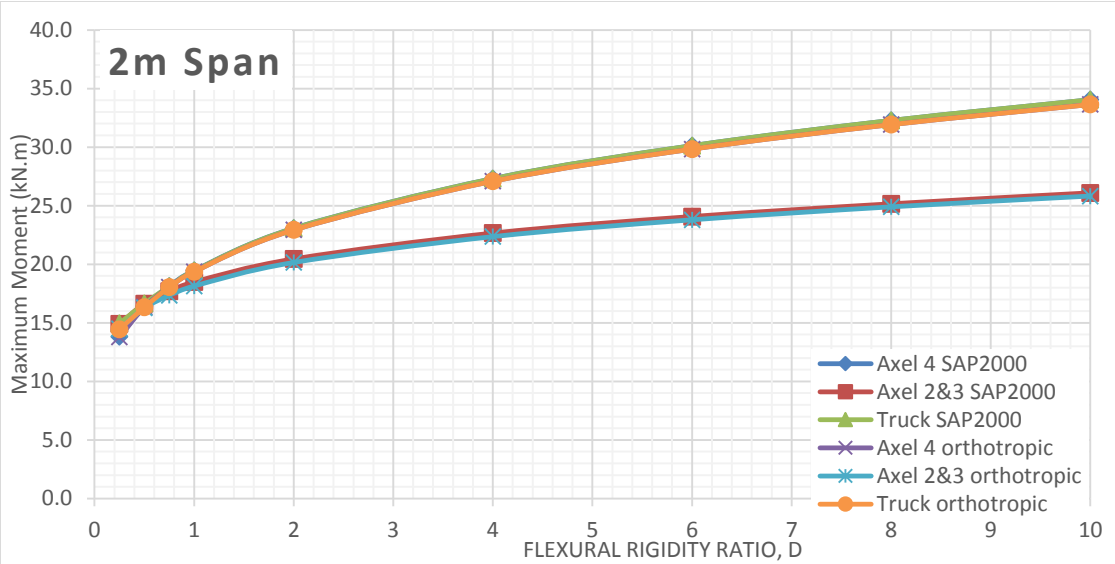

Figure 671 Moment comparison between FEA and Orthotropic Plate Theory for 2 m span of alpha 0.5 (main bars perpendicular to traffic)

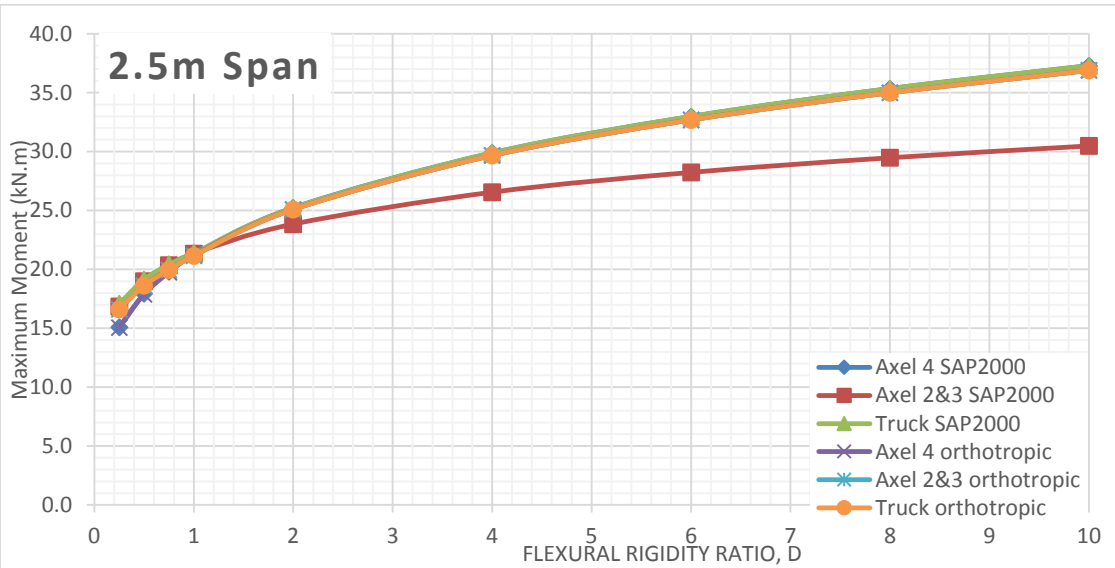

Figure 672 Moment comparison between FEA and Orthotropic Plate Theory for 2.5 m span of alpha 0.5 (main bars perpendicular to traffic)

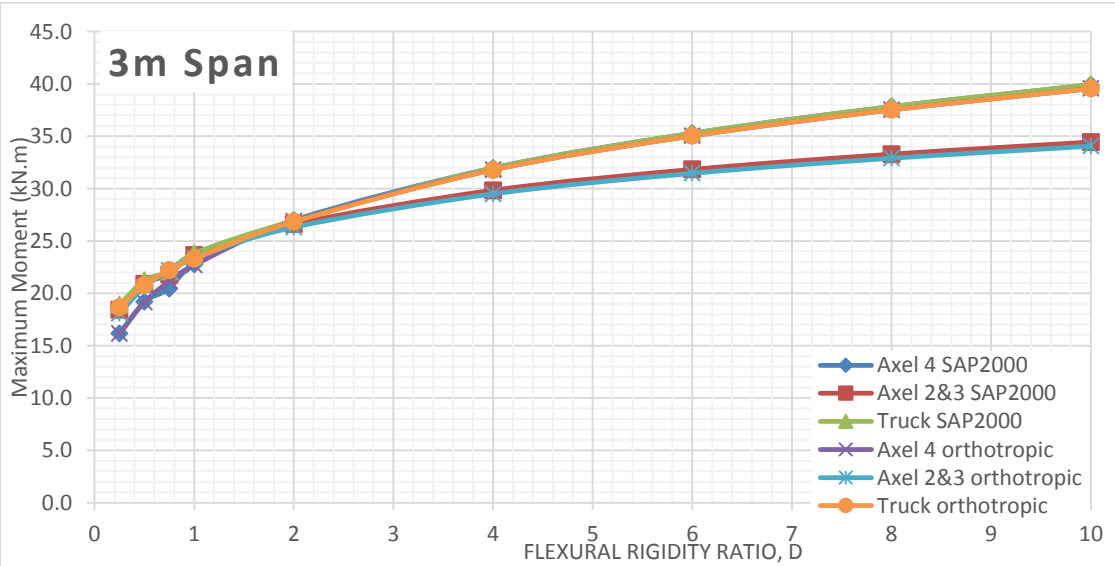

Figure 673 Moment comparison between FEA and Orthotropic Plate Theory for 3 m span of alpha 0.5 (main bars perpendicular to traffic)

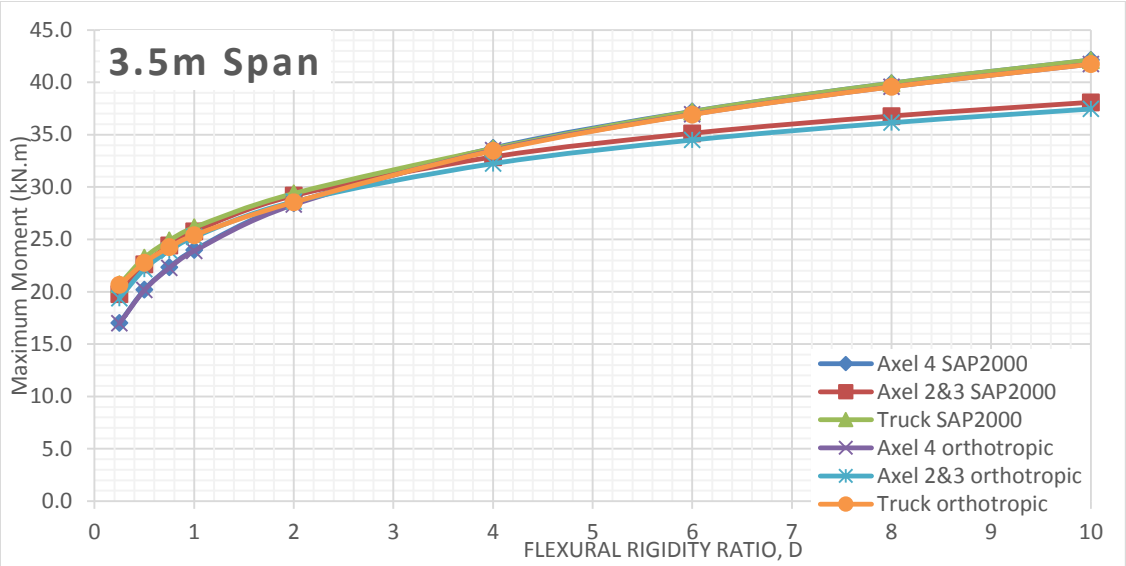

Figure 674 Moment comparison between FEA and Orthotropic Plate Theory for 3.5 m span of alpha 0.5 (main bars perpendicular to traffic)

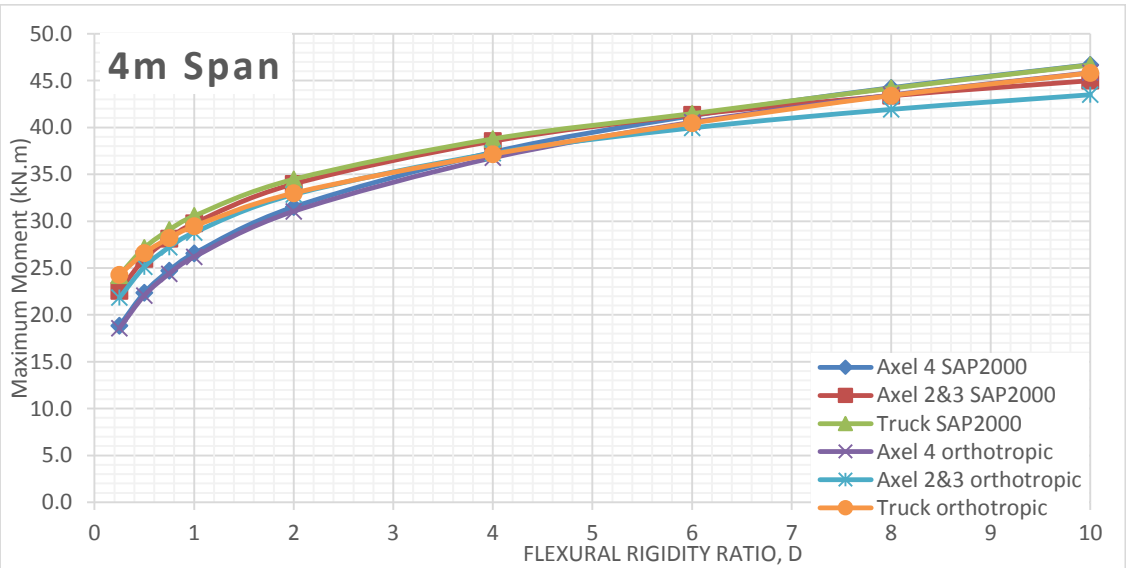

Figure 675 Moment comparison between FEA and Orthotropic Plate Theory for 4 m span of alpha 0.5 (main bars perpendicular to traffic)

Alpha 0.5 Bending Moment VS Flexural Rigidity for Different Span Length (Main bars parallel to traffic)

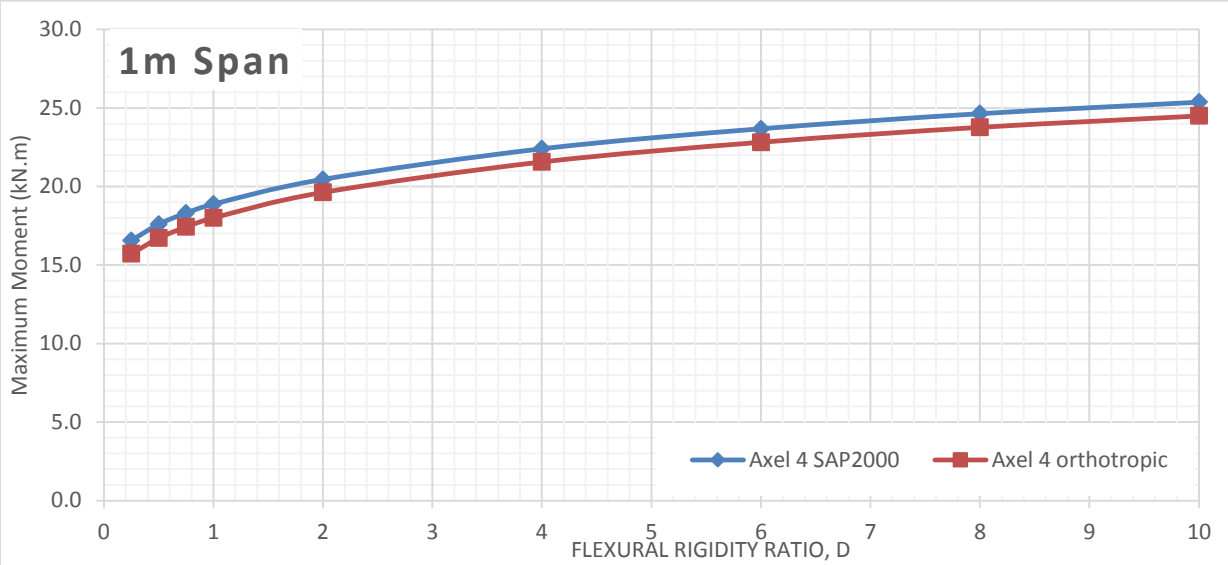

Figure 676 Moment comparison between FEA and Orthotropic Plate Theory for 1 m span of alpha 0.5 (main bars parallel to traffic)

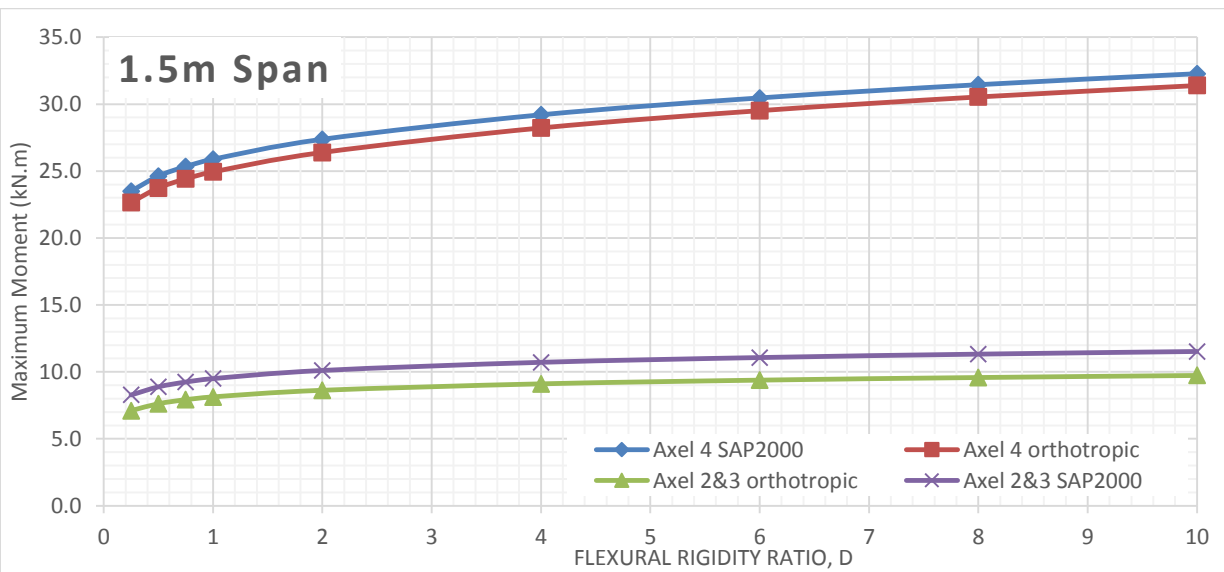

Figure 677 Moment comparison between FEA and Orthotropic Plate Theory for 1.5 m span of alpha 0.5 (main bars parallel to traffic)

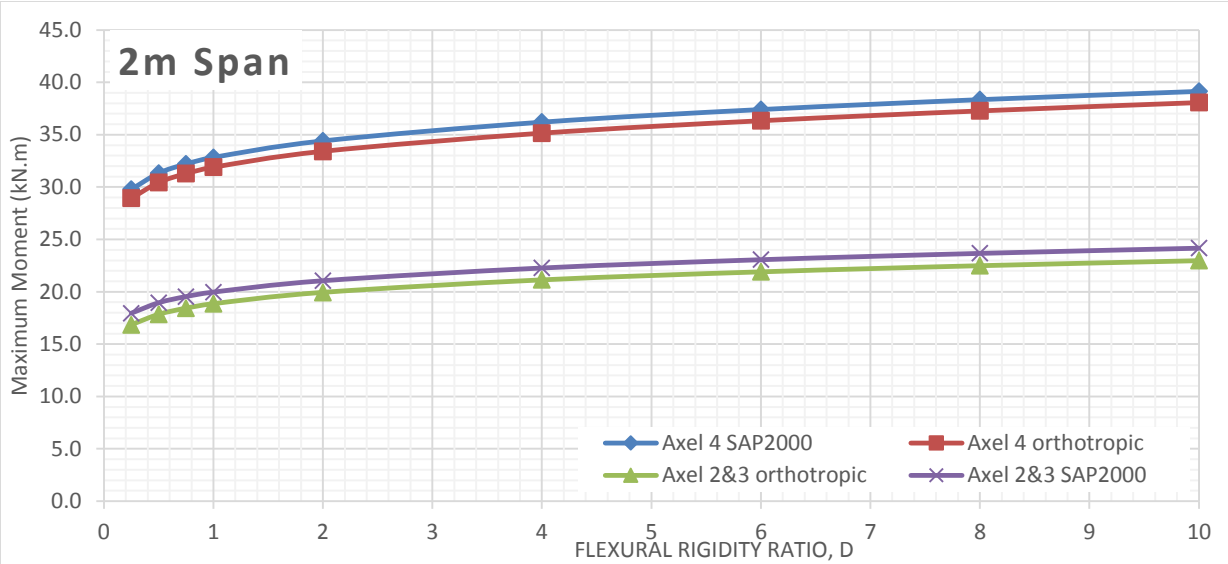

Figure 678 Moment comparison between FEA and Orthotropic Plate Theory for 2 m span of alpha 0.5 (main bars parallel to traffic)

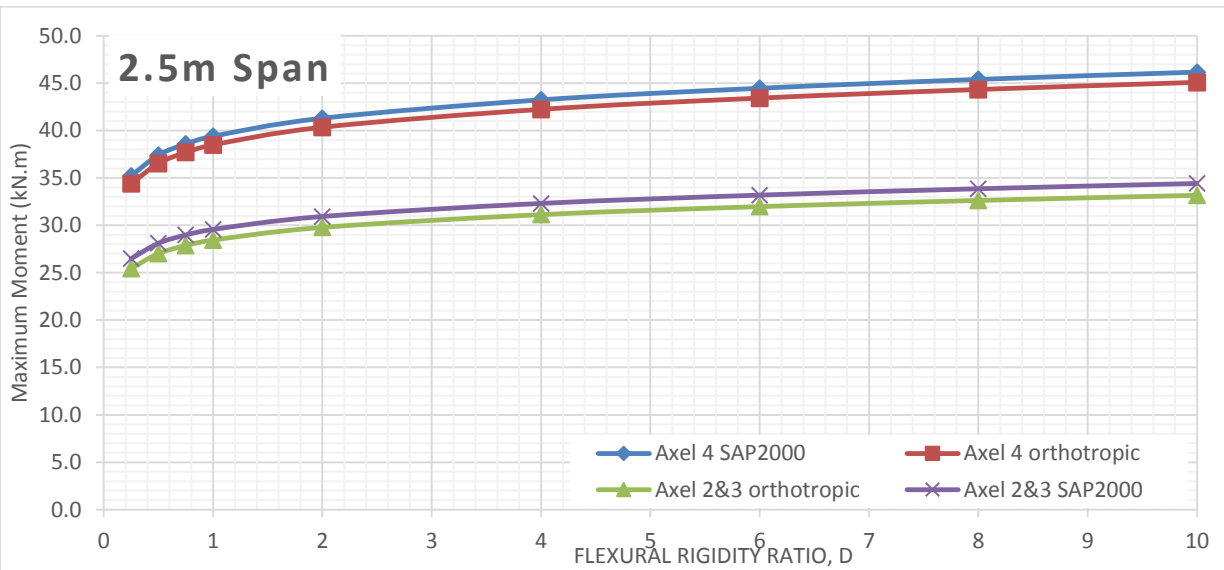

Figure 679 Moment comparison between FEA and Orthotropic Plate Theory for 2.5 m span of alpha 0.5 (main bars parallel to traffic)

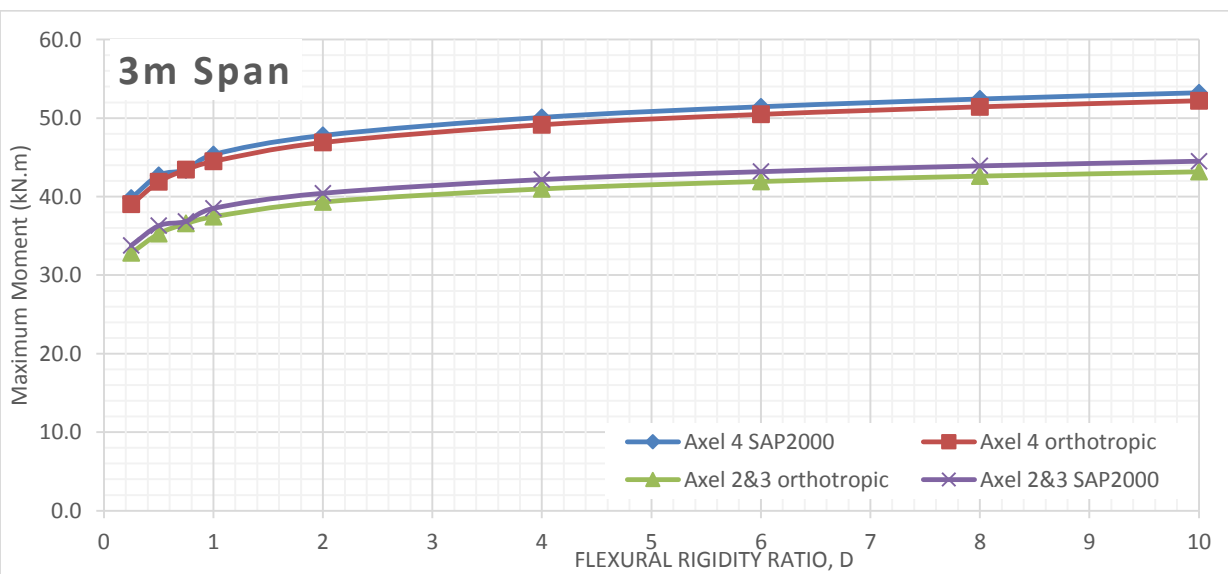

Figure 680 Moment comparison between FEA and Orthotropic Plate Theory for 3 m span of alpha 0.5 (main bars parallel to traffic)

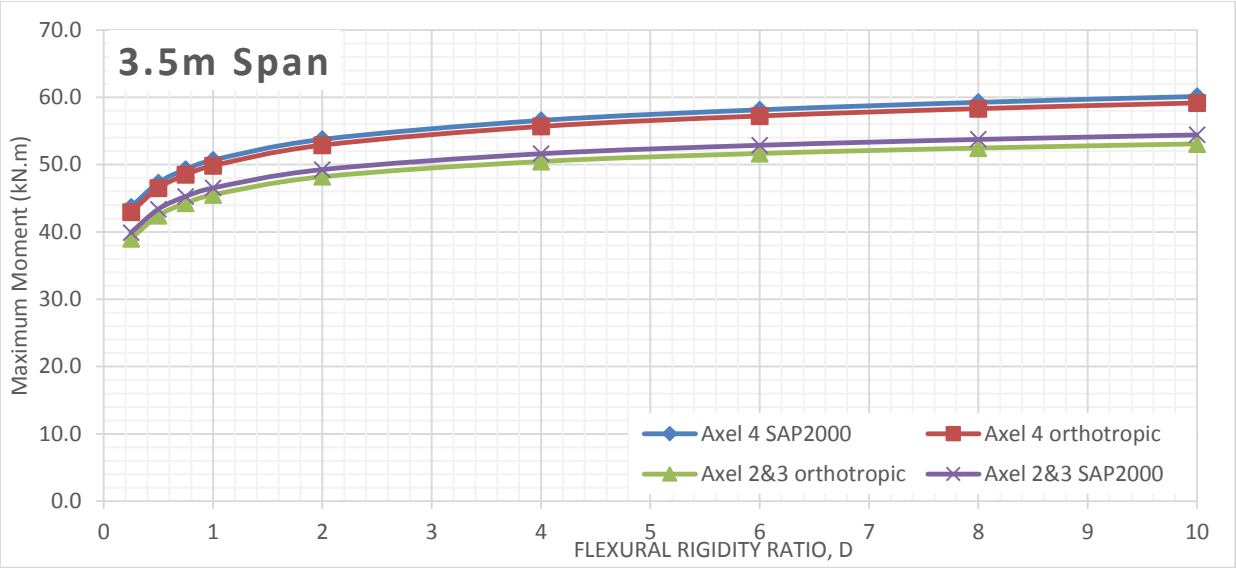

Figure 681 Moment comparison between FEA and Orthotropic Plate Theory for 3.5 m span of alpha 0.5 (main bars parallel to traffic)

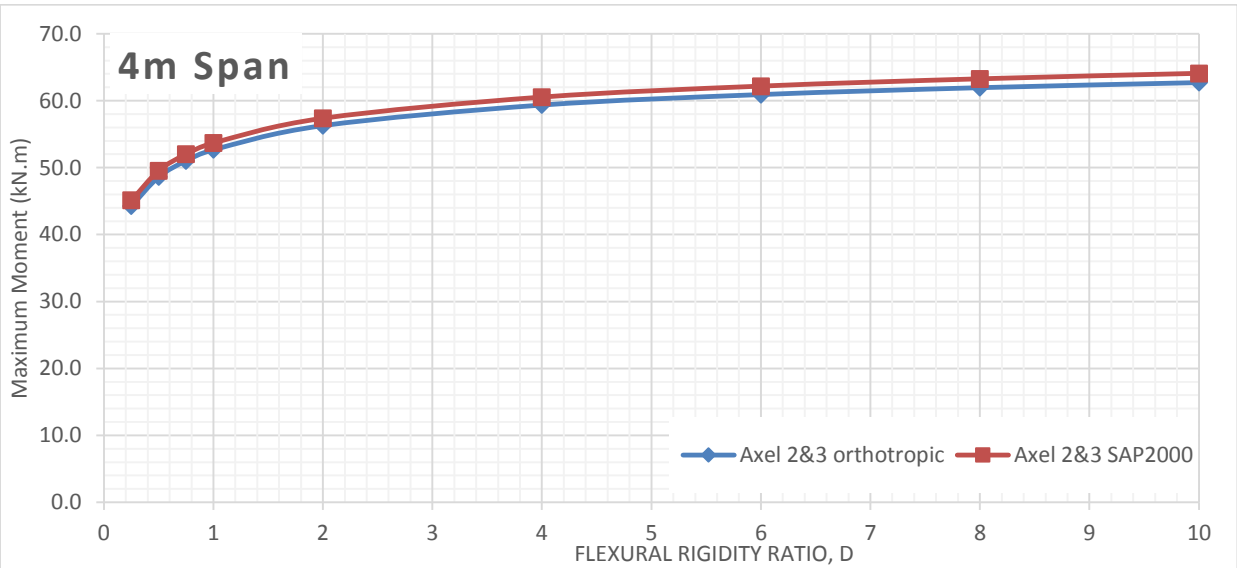

Figure 682 Moment comparison between FEA and Orthotropic Plate Theory for 4 m span of alpha 0.5 (main bars parallel to traffic)

Alpha 0.75 Bending Moment VS Flexural Rigidity for Different Span Length (Main bars perpendicular to traffic)

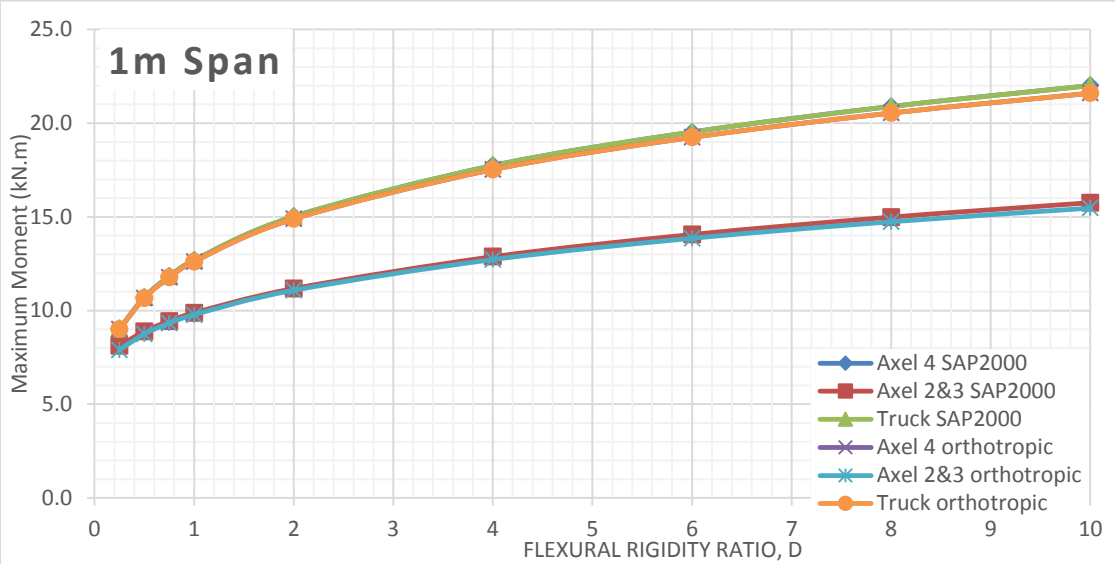

Figure 683 Moment comparison between FEA and Orthotropic Plate Theory for 1 m span of alpha 0.75 (main bars perpendicular to traffic)

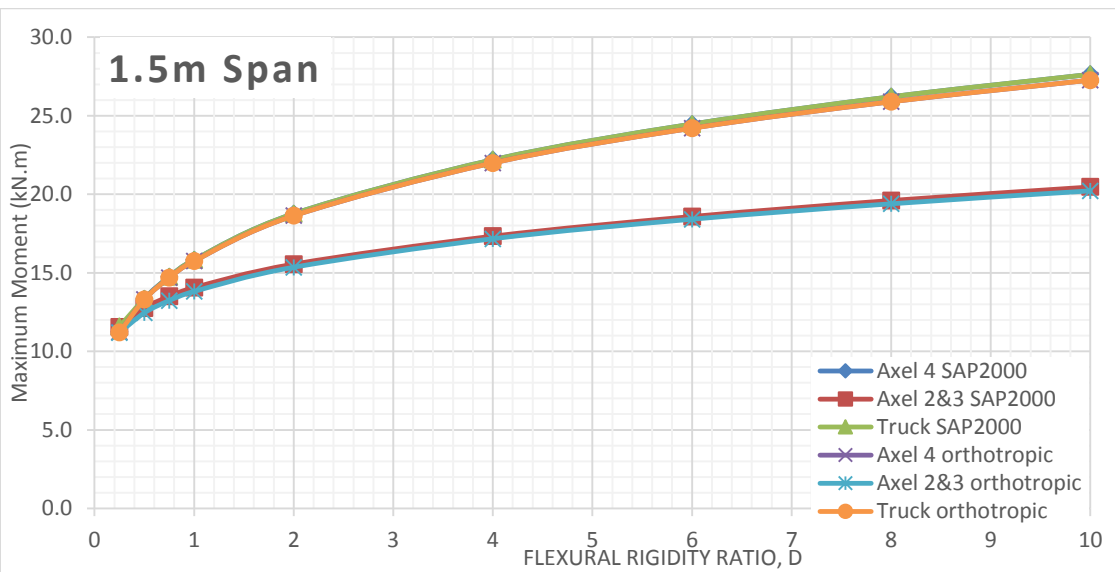

Figure 684 Moment comparison between FEA and Orthotropic Plate Theory for 1.5 m span of alpha 0.75 (main bars perpendicular to traffic)

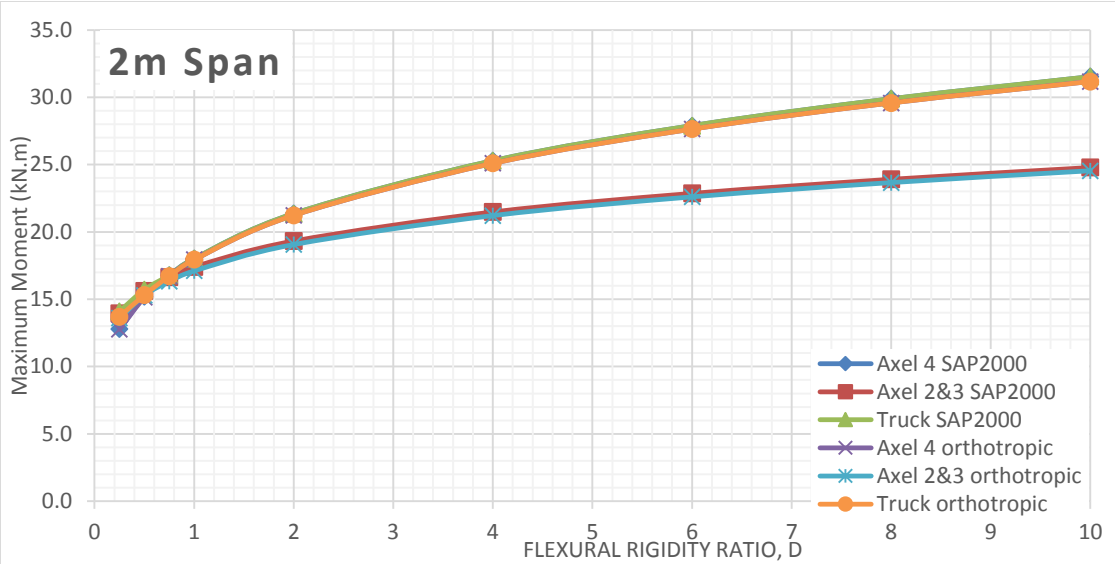

Figure 685 Moment comparison between FEA and Orthotropic Plate Theory for 2 m span of alpha 0.75 (main bars perpendicular to traffic)

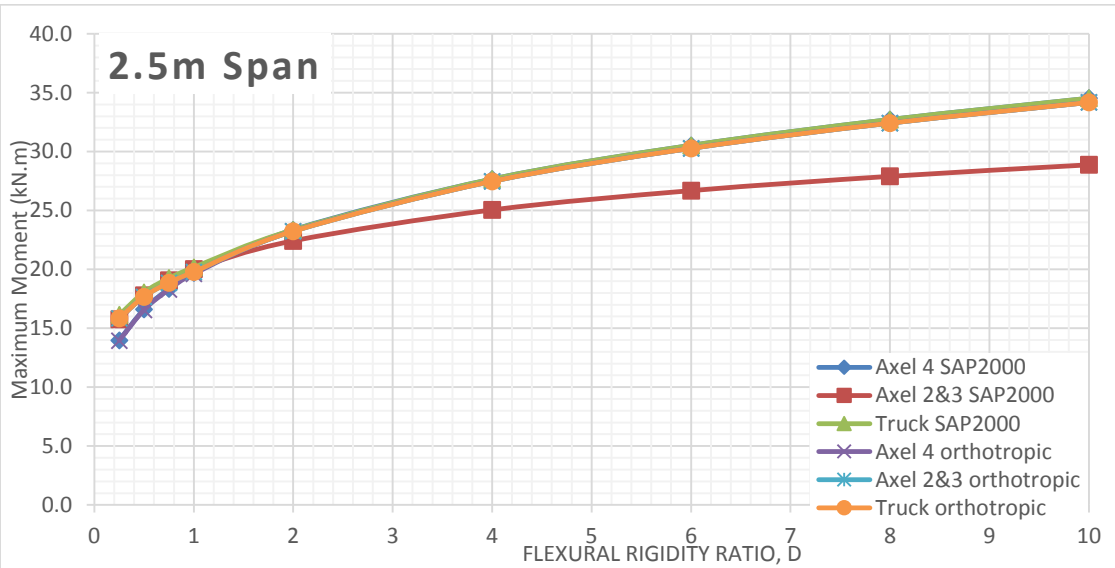

Figure 686 Moment comparison between FEA and Orthotropic Plate Theory for 2.5 m span of alpha 0.75 (main bars perpendicular to traffic)

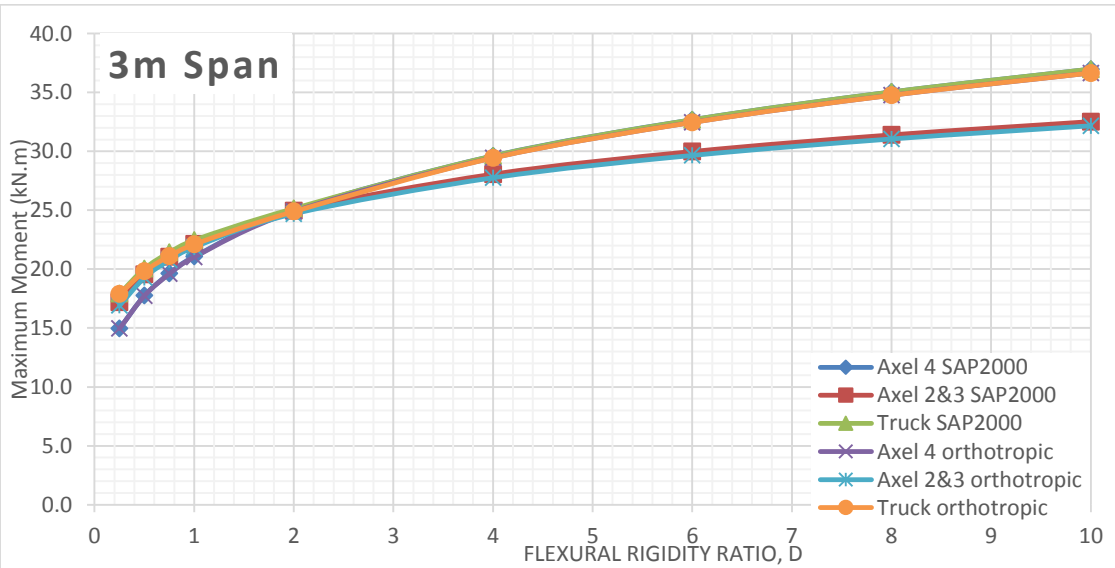

Figure 687 Moment comparison between FEA and Orthotropic Plate Theory for 3 m span of alpha 0.75 (main bars perpendicular to traffic)

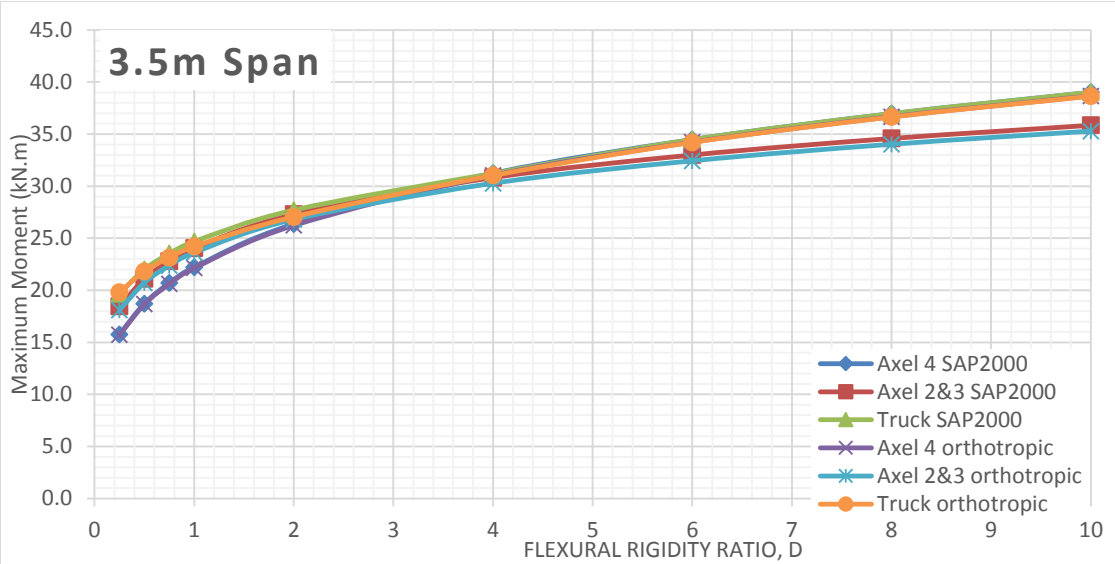

Figure 688 Moment comparison between FEA and Orthotropic Plate Theory for 3.5 m span of alpha 0.75 (main bars perpendicular to traffic)

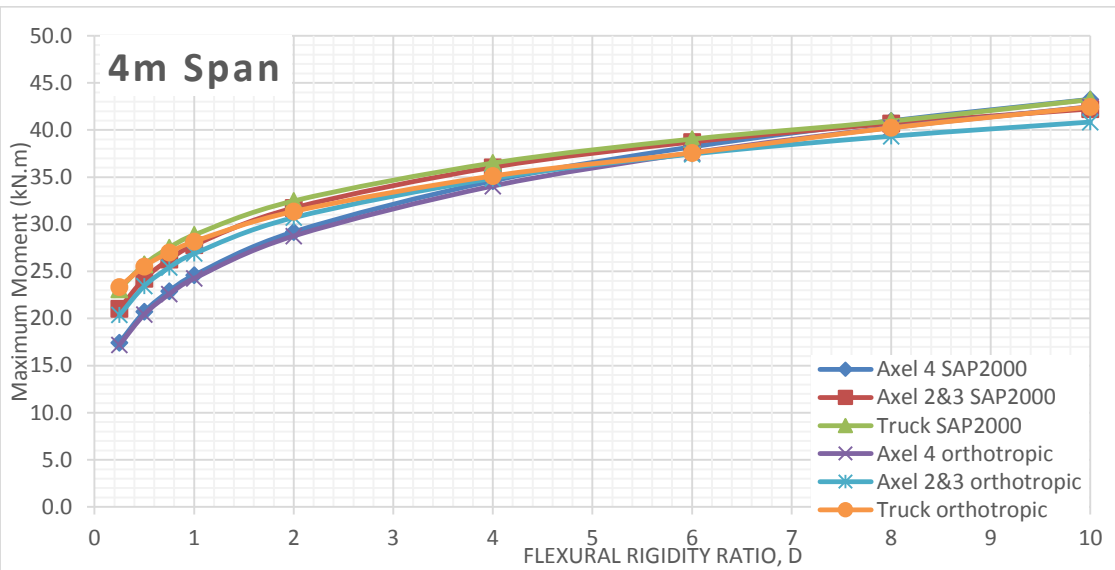

Figure 689 Moment comparison between FEA and Orthotropic Plate Theory for 4 m span of alpha 0.75 (main bars perpendicular to traffic)

Alpha 0.75 Bending Moment VS Flexural Rigidity for Different Span Length (Main bars parallel to traffic)

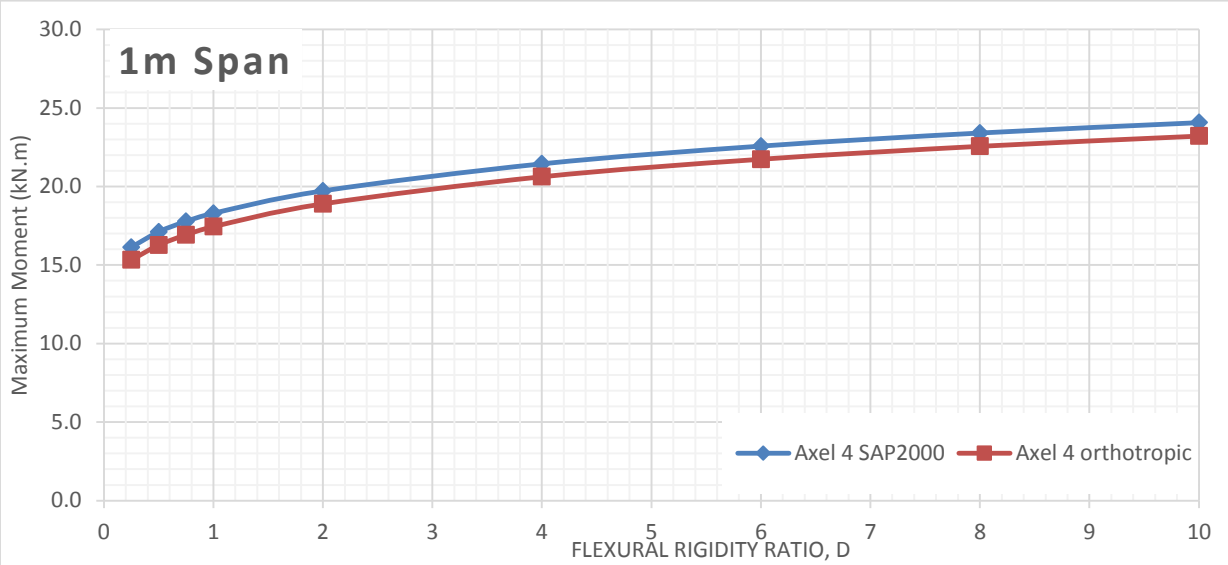

Figure 690 Moment comparison between FEA and Orthotropic Plate Theory for 1 m span of alpha 0.75 (main bars parallel to traffic)

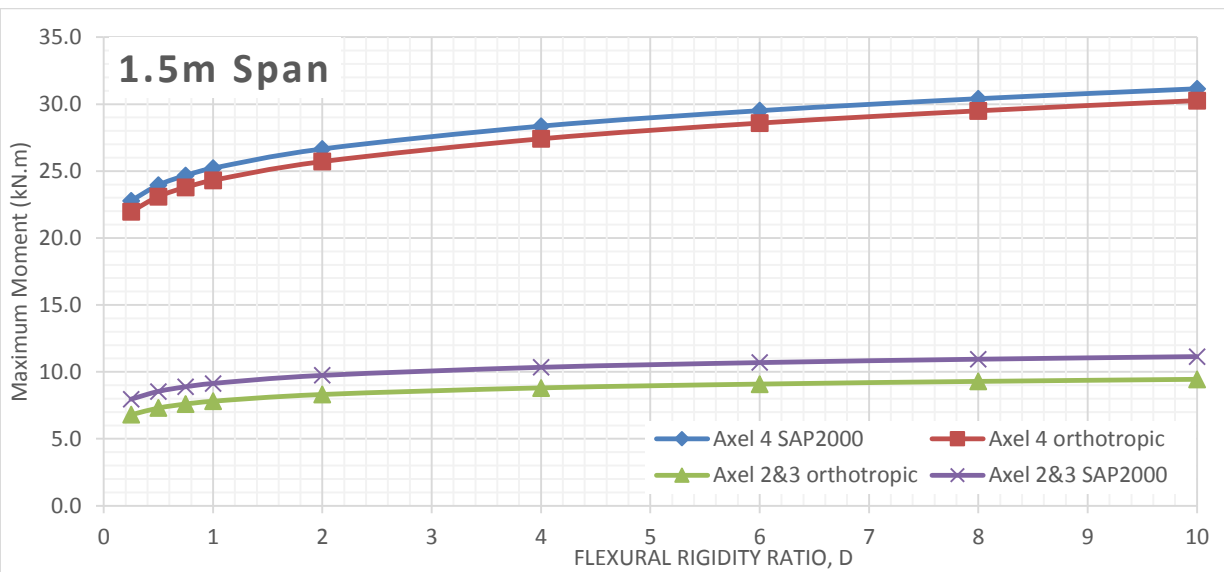

Figure 691 Moment comparison between FEA and Orthotropic Plate Theory for 1.5 m span of alpha 0.75 (main bars parallel to traffic)

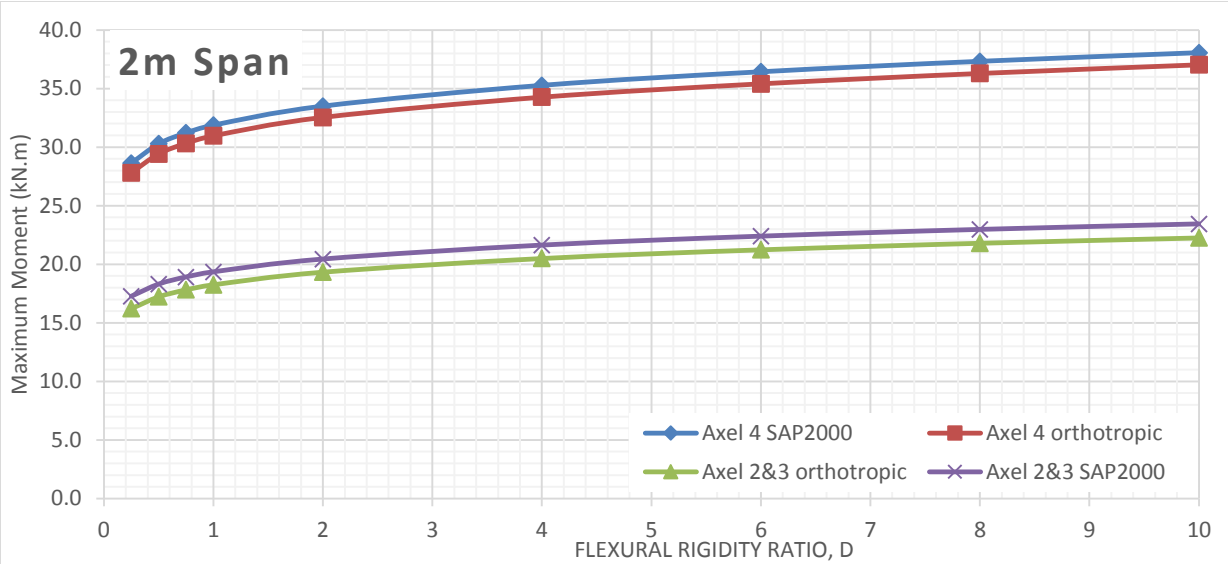

Figure 692 Moment comparison between FEA and Orthotropic Plate Theory for 2 m span of alpha 0.75 (main bars parallel to traffic)

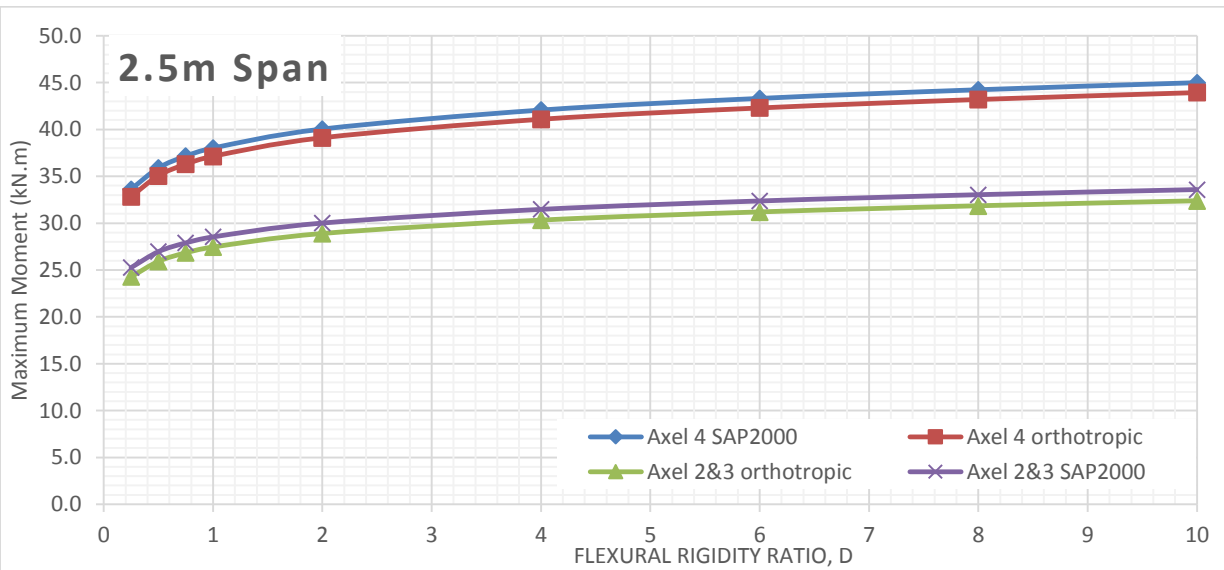

Figure 693 Moment comparison between FEA and Orthotropic Plate Theory for 2.5 m span of alpha 0.75 (main bars parallel to traffic)

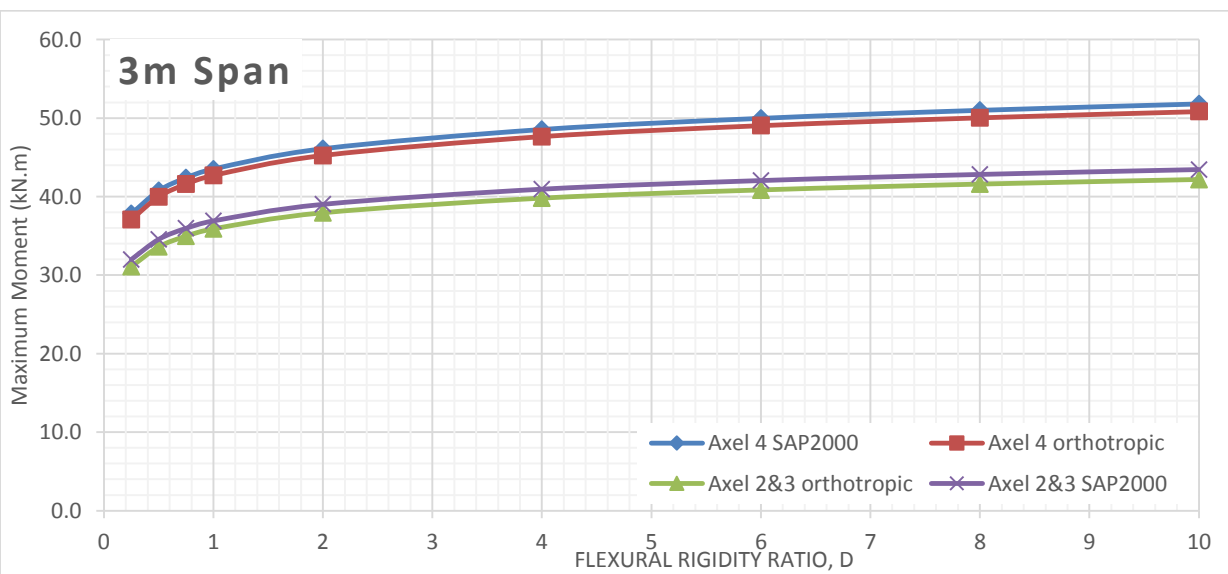

Figure 694 Moment comparison between FEA and Orthotropic Plate Theory for 3 m span of alpha 0.75 (main bars parallel to traffic)

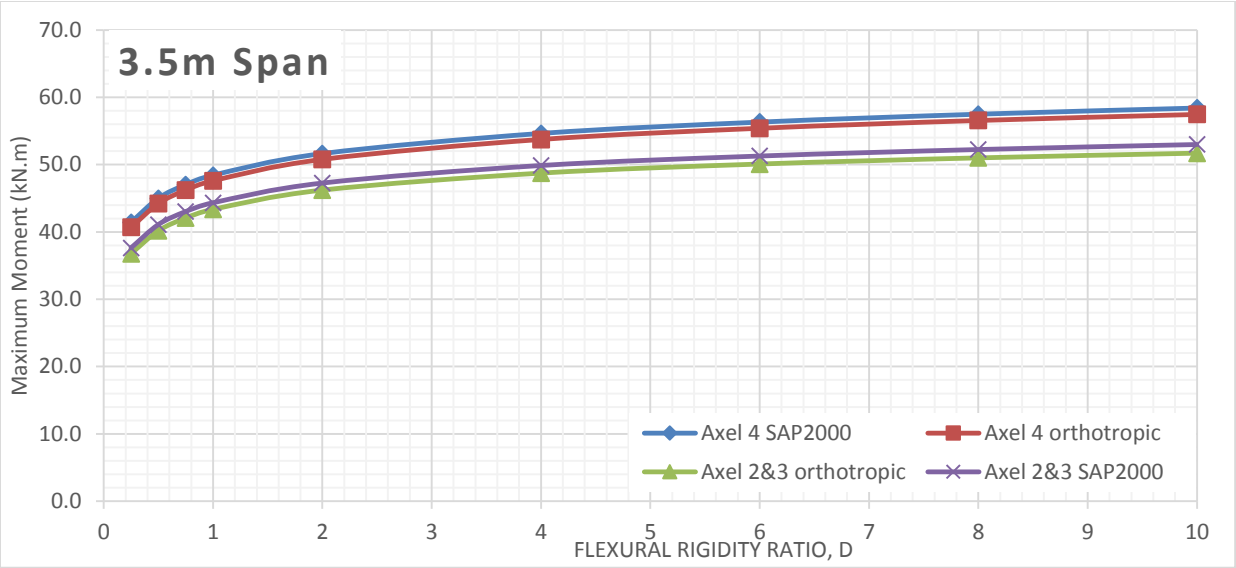

Figure 695 Moment comparison between FEA and Orthotropic Plate Theory for 3.5 m span of alpha 0.75 (main bars parallel to traffic)

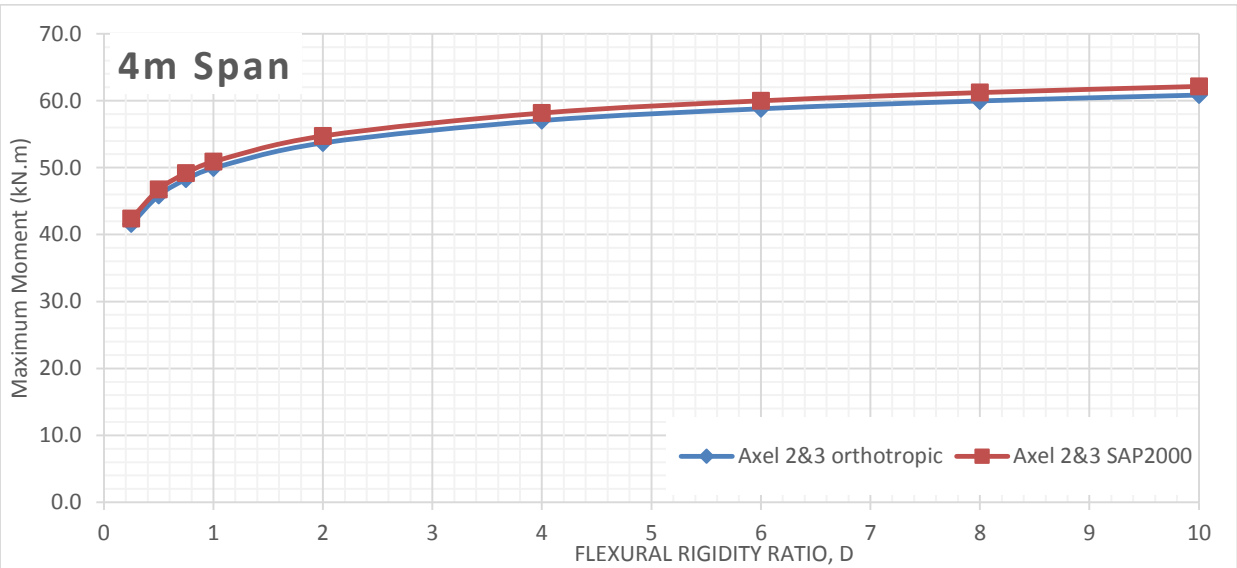

Figure 696 Moment comparison between FEA and Orthotropic Plate Theory for 4 m span of alpha 0.75 (main bars parallel to traffic)

Alpha 1 Bending Moment VS Flexural Rigidity for Different Span Length (Main bars perpendicular to traffic)

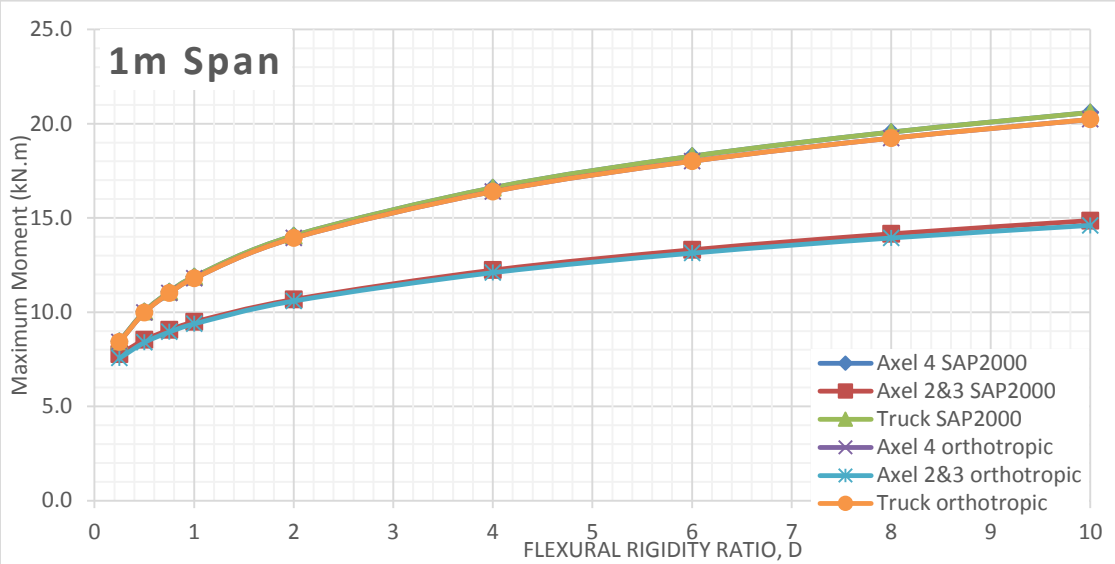

Figure 697 Moment comparison between FEA and Orthotropic Plate Theory for 1 m span of alpha 1 (main bars perpendicular to traffic)

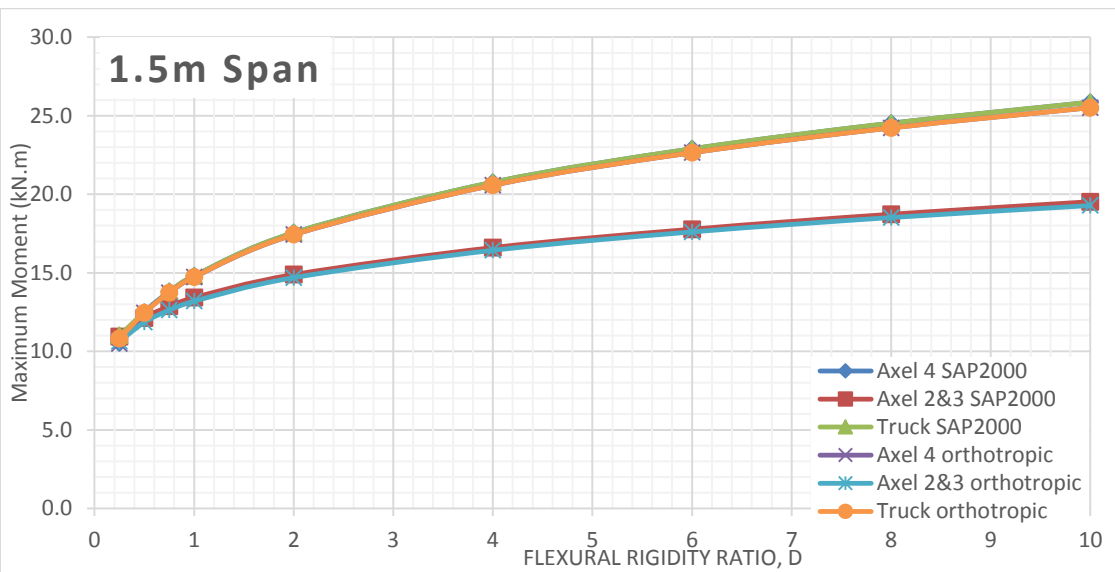

Figure 698 Moment comparison between FEA and Orthotropic Plate Theory for 1.5 m span of alpha 1 (main bars perpendicular to traffic)

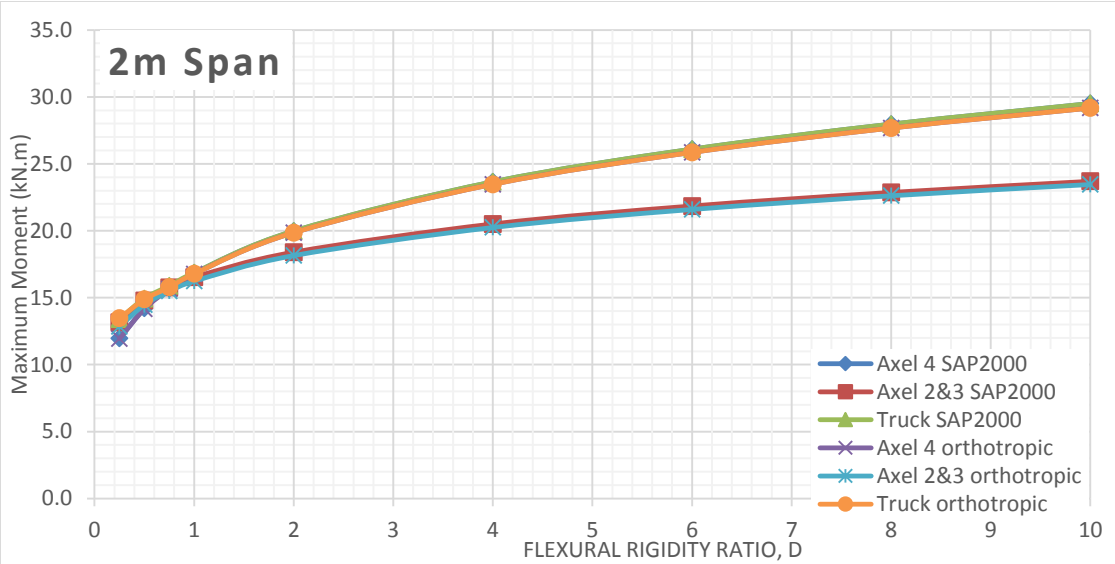

Figure 699 Moment comparison between FEA and Orthotropic Plate Theory for 2 m span of alpha 1 (main bars perpendicular to traffic)

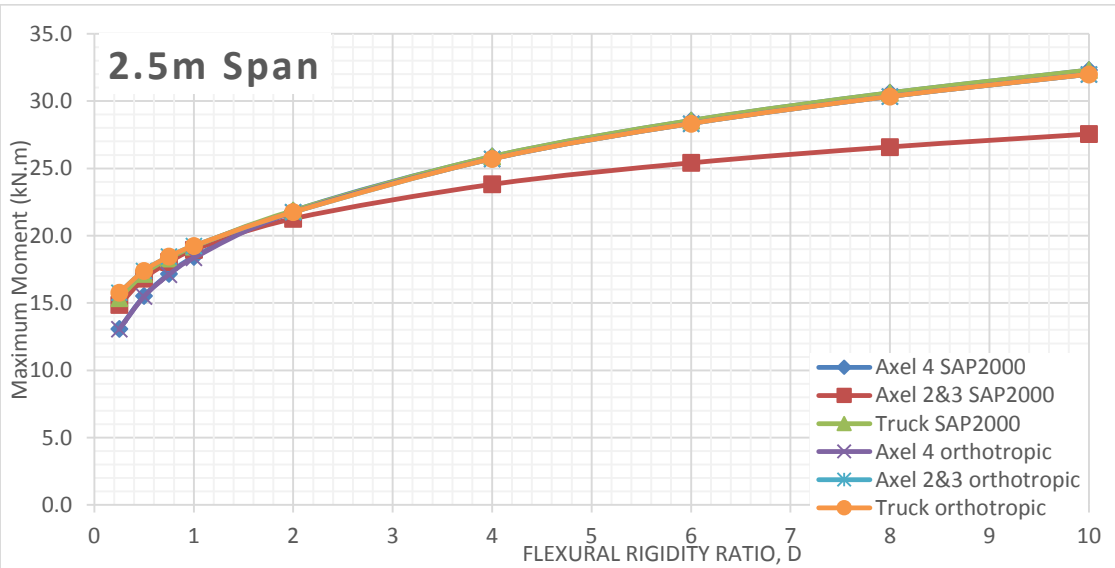

Figure 700 Moment comparison between FEA and Orthotropic Plate Theory for 2.5 m span of alpha 1 (main bars perpendicular to traffic)

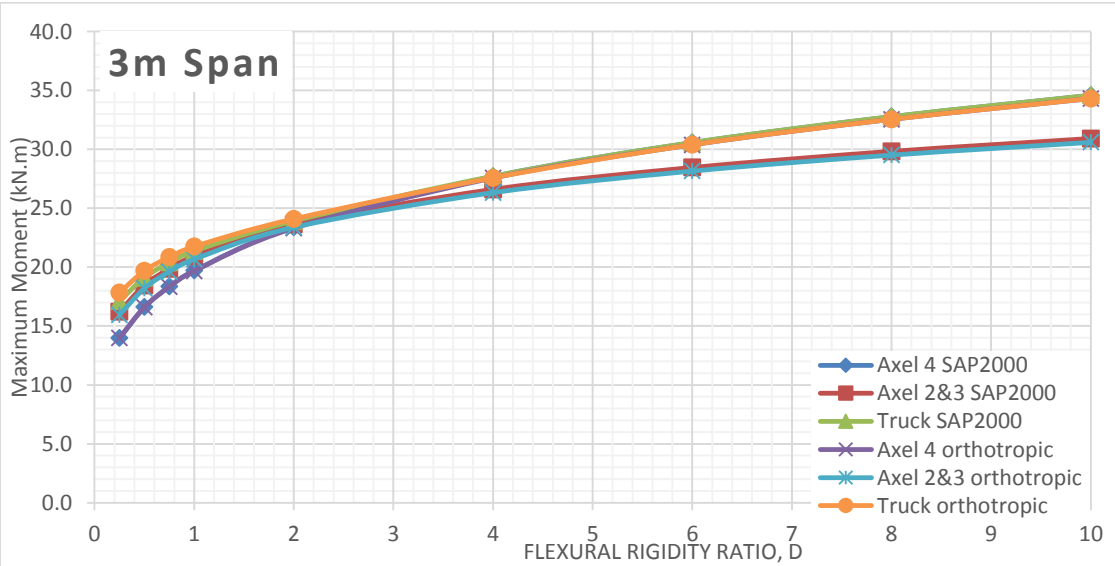

Figure 701 Moment comparison between FEA and Orthotropic Plate Theory for 3 m span of alpha 1 (main bars perpendicular to traffic)

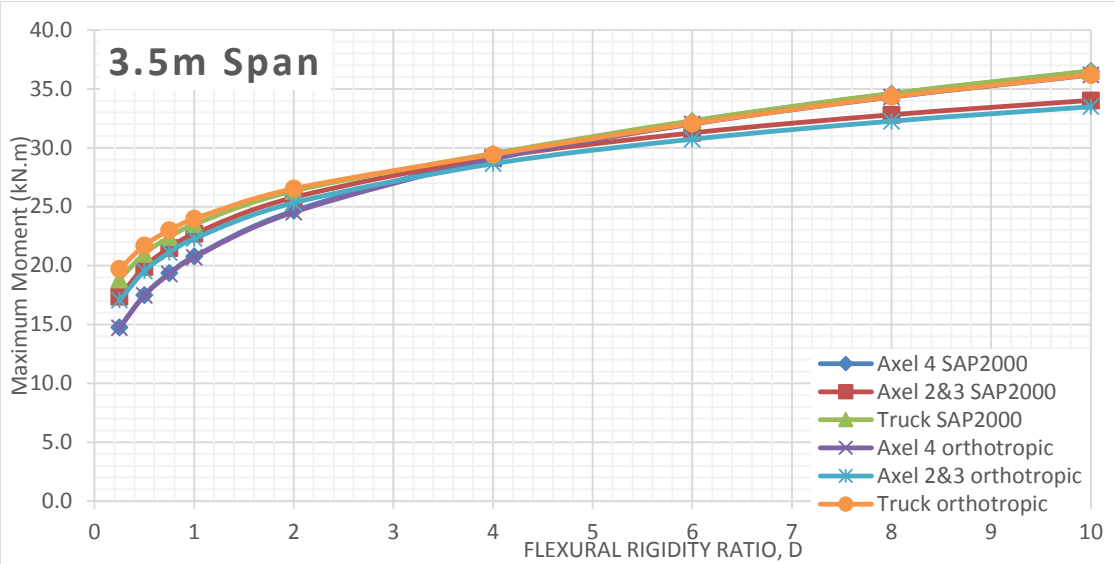

Figure 702 Moment comparison between FEA and Orthotropic Plate Theory for 3.5 m span of alpha 1 (main bars perpendicular to traffic)

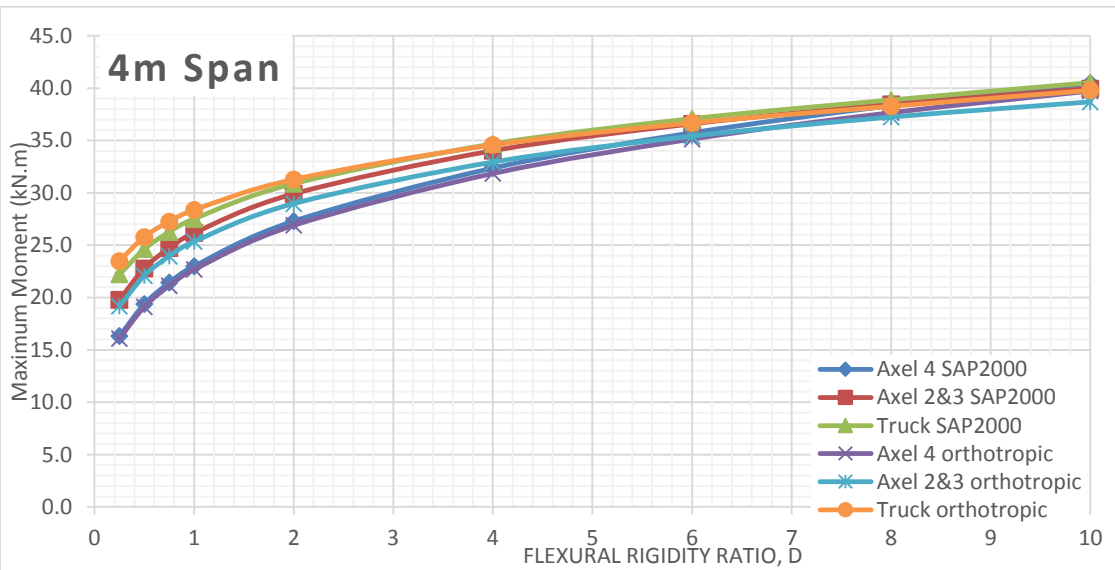

Figure 703 Moment comparison between FEA and Orthotropic Plate Theory for 4 m span of alpha 1 (main bars perpendicular to traffic)

Alpha 1 Bending Moment VS Flexural Rigidity for Different Span Length (Main bars parallel to traffic)

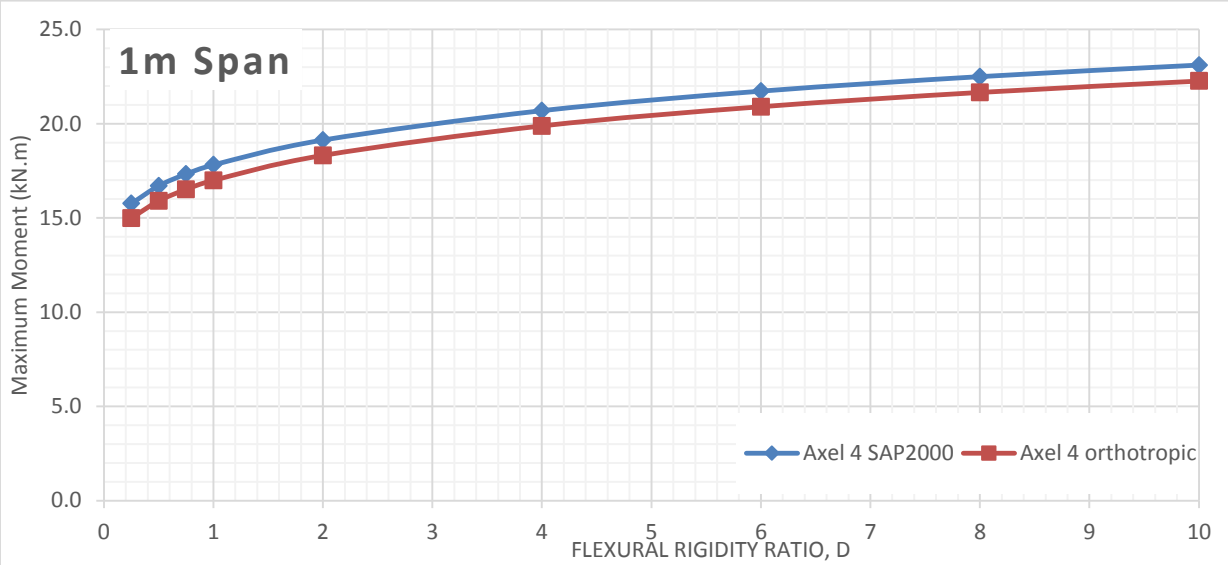

Figure 704 Moment comparison between FEA and Orthotropic Plate Theory for 1 m span of alpha 1 (main bars parallel to traffic)

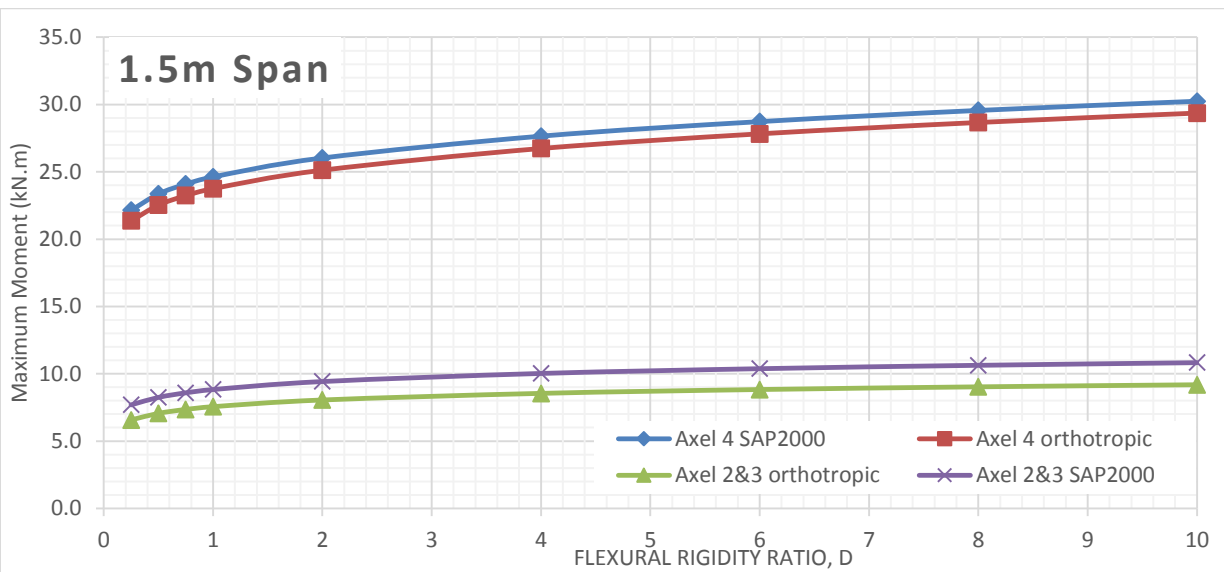

Figure 705 Moment comparison between FEA and Orthotropic Plate Theory for 1.5 m span of alpha 1 (main bars parallel to traffic)

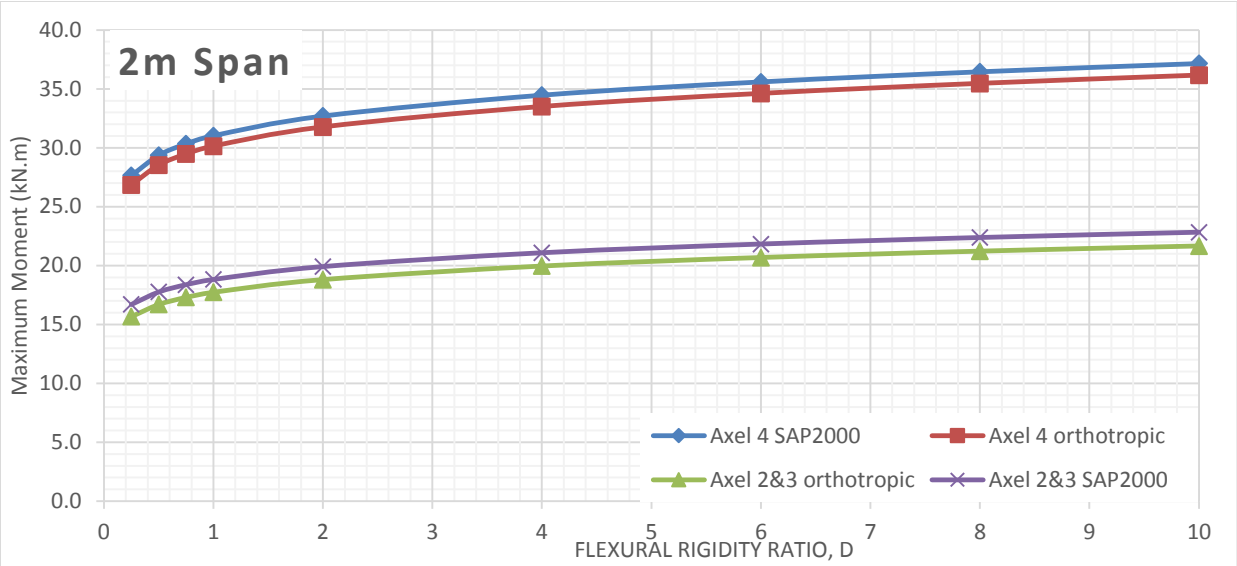

Figure 706 Moment comparison between FEA and Orthotropic Plate Theory for 2 m span of alpha 1 (main bars parallel to traffic)

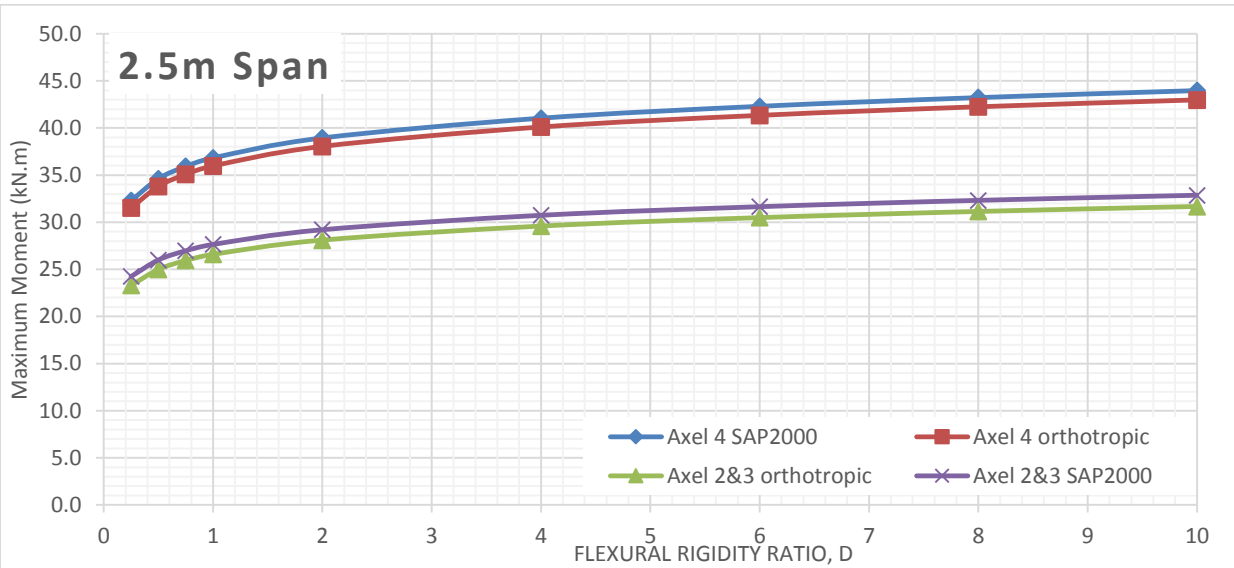

Figure 707 Moment comparison between FEA and Orthotropic Plate Theory for 2.5 m span of alpha 1 (main bars parallel to traffic)

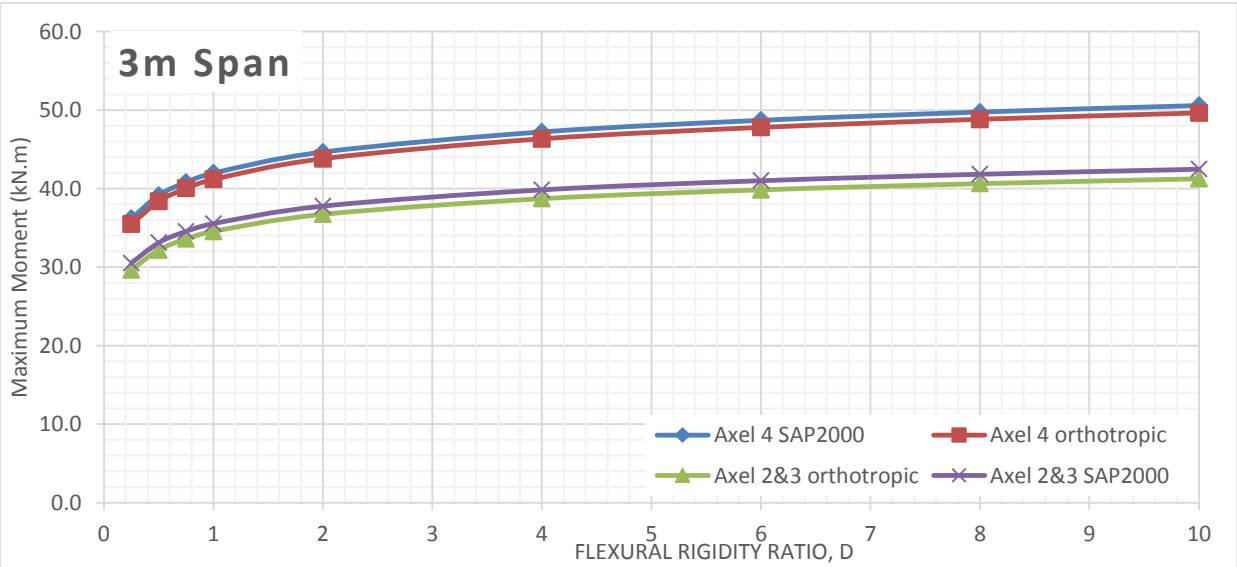

Figure 708 Moment comparison between FEA and Orthotropic Plate Theory for 3 m span of alpha 1 (main bars parallel to traffic)

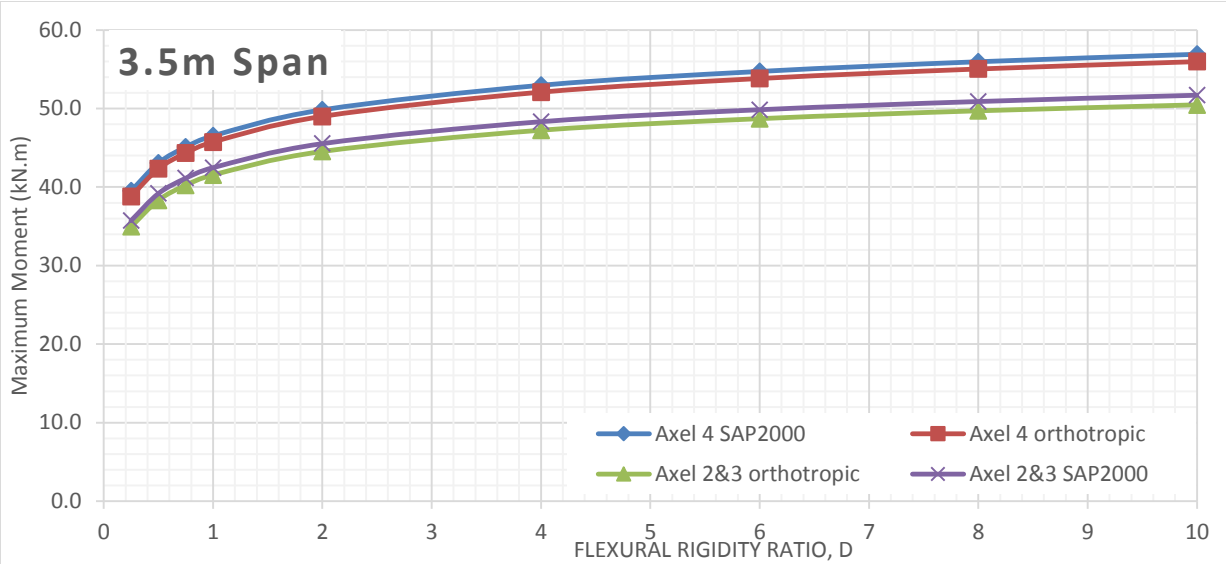

Figure 709 Moment comparison between FEA and Orthotropic Plate Theory for 3.5 m span of alpha 1 (main bars parallel to traffic)

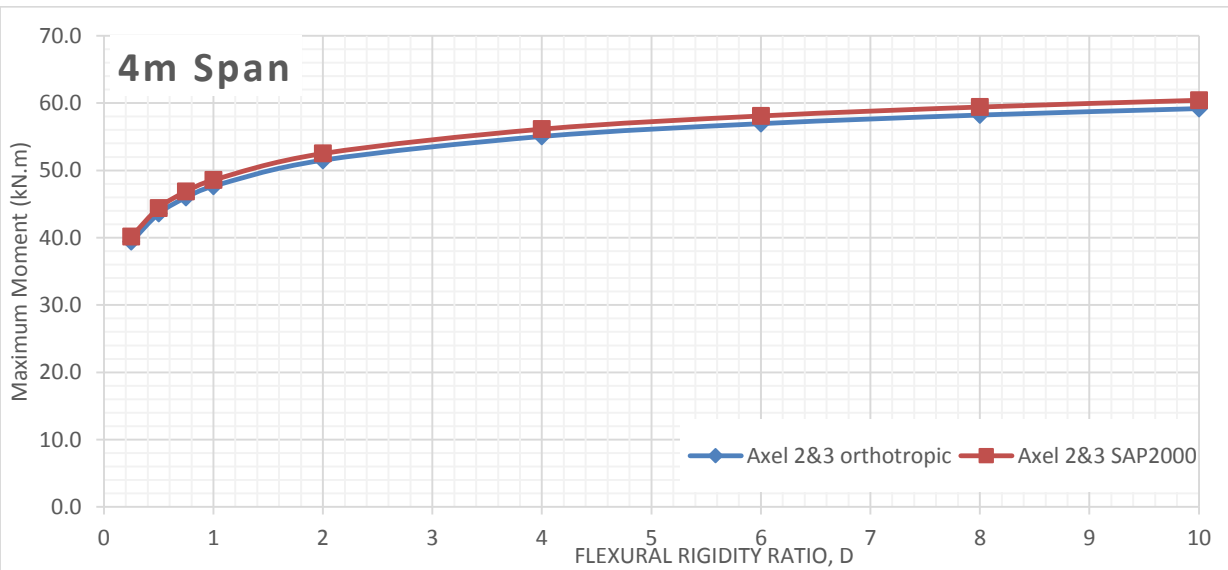

Figure 710 Moment comparison between FEA and Orthotropic Plate Theory for 4 m span of alpha 1 (main bars parallel to traffic)

Alpha 2 Bending Moment VS Flexural Rigidity for Different Span Length (Main bars perpendicular to traffic)

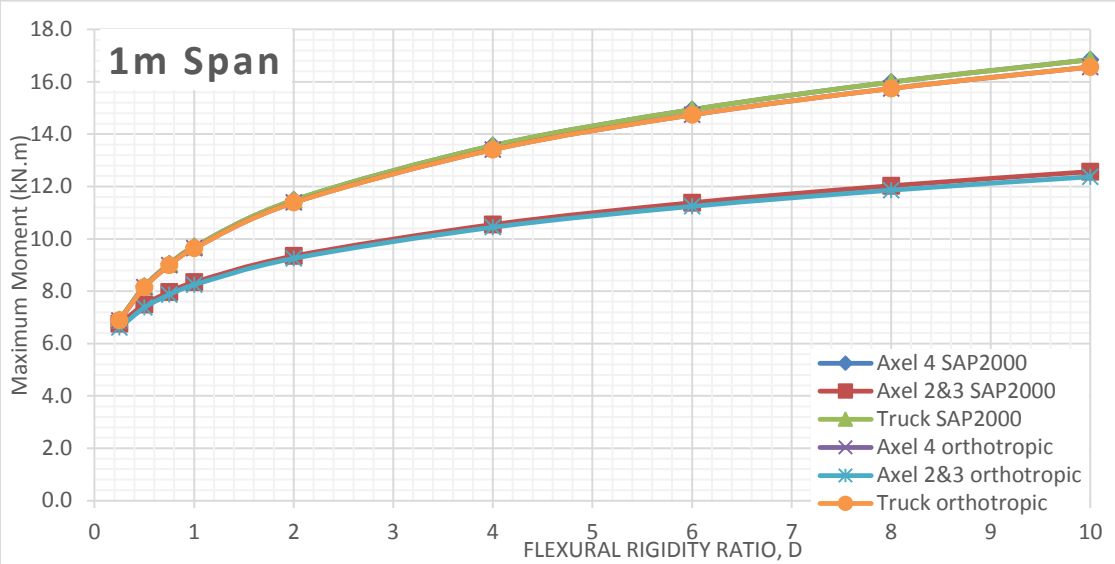

Figure 711 Moment comparison between FEA and Orthotropic Plate Theory for 1 m span of alpha 2 (main bars perpendicular to traffic)

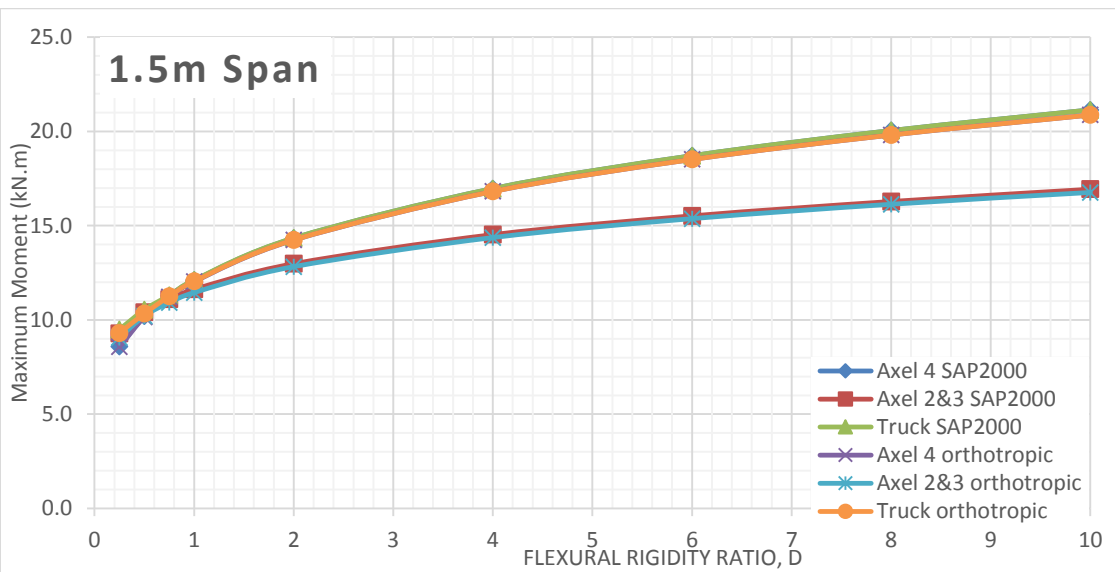

Figure 712 Moment comparison between FEA and Orthotropic Plate Theory for 1.5 m span of alpha 2 (main bars perpendicular to traffic)

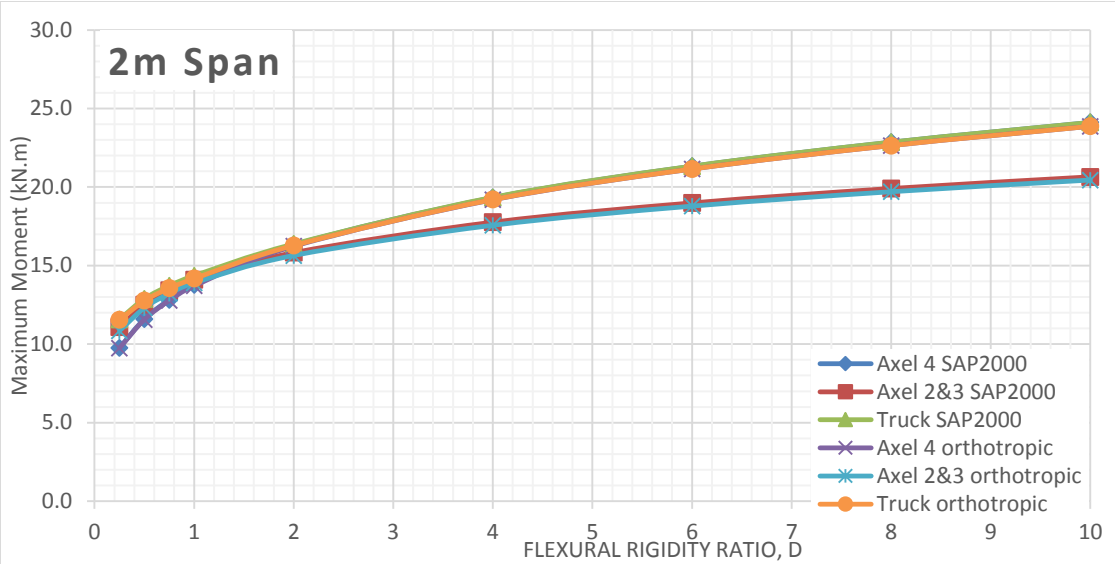

Figure 713 Moment comparison between FEA and Orthotropic Plate Theory for 2 m span of alpha 2 (main bars perpendicular to traffic)

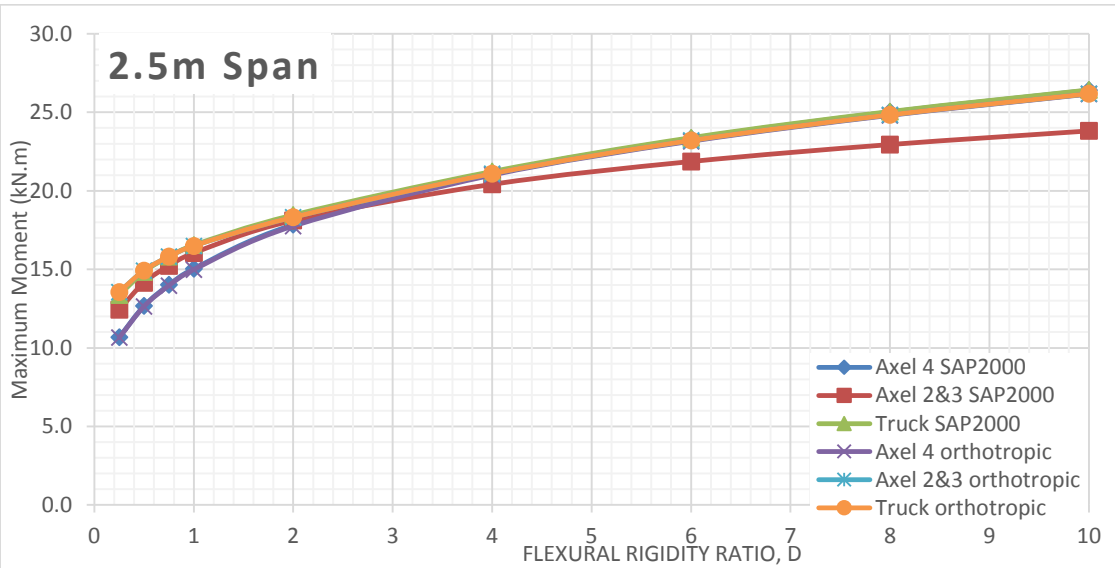

Figure 714 Moment comparison between FEA and Orthotropic Plate Theory for 2.5 m span of alpha 2 (main bars perpendicular to traffic)

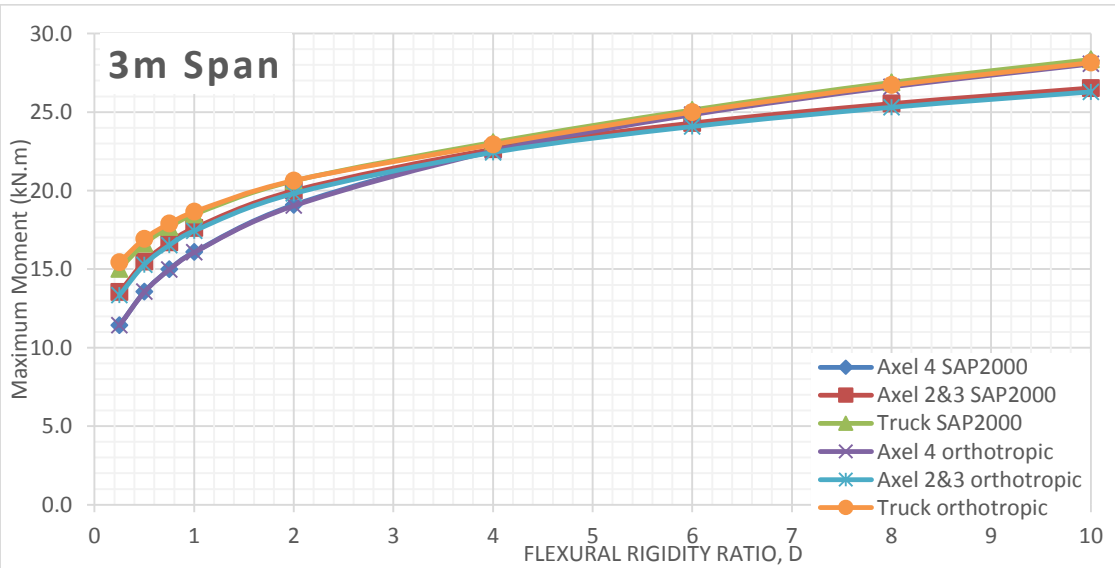

Figure 715 Moment comparison between FEA and Orthotropic Plate Theory for 3 m span of alpha 2 (main bars perpendicular to traffic)

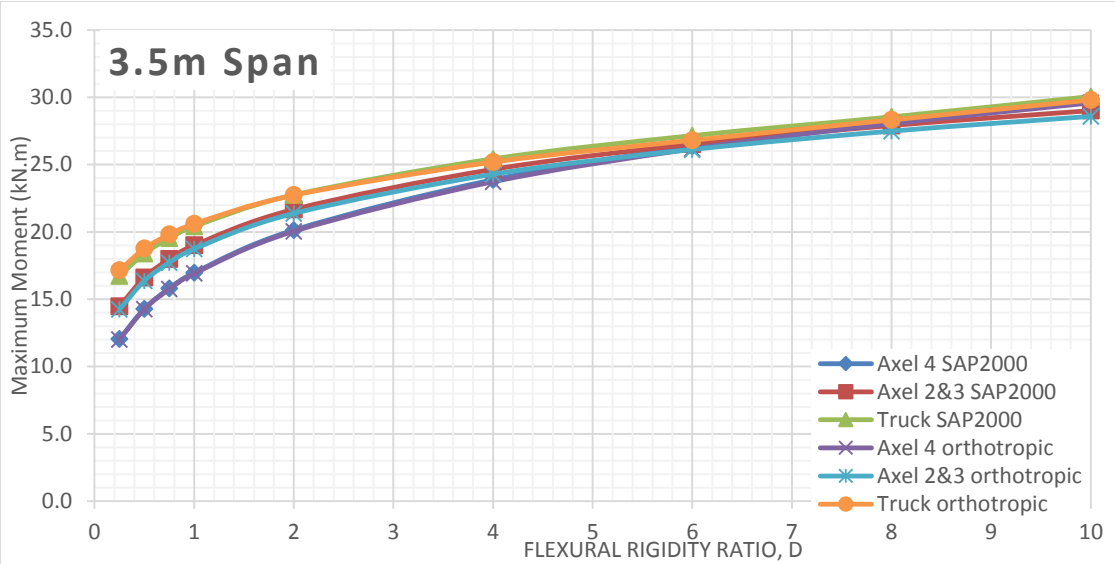

Figure 716 Moment comparison between FEA and Orthotropic Plate Theory for 3.5 m span of alpha 2 (main bars perpendicular to traffic)

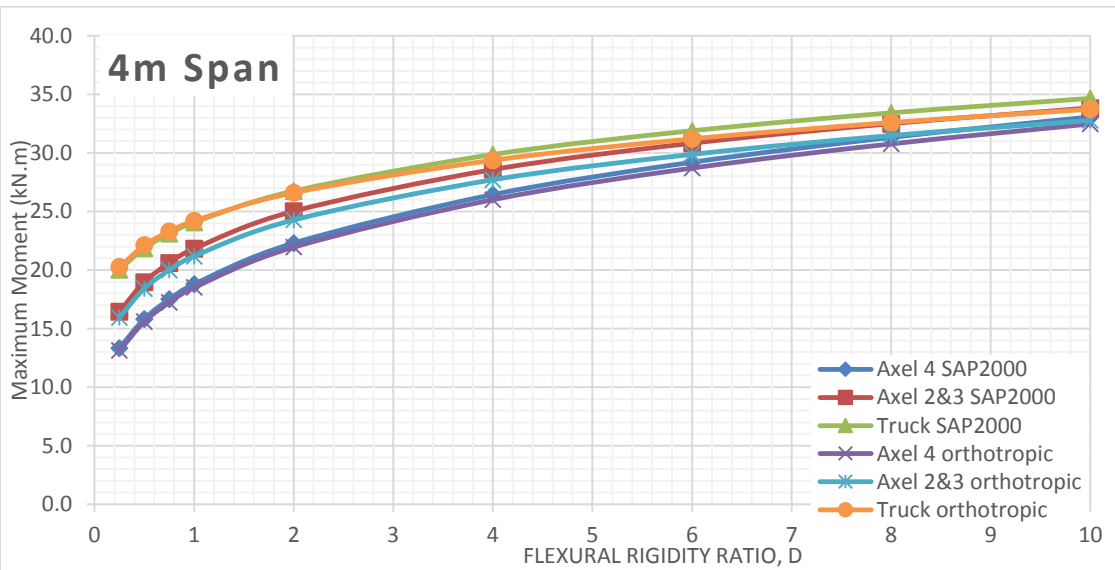

Figure 717 Moment comparison between FEA and Orthotropic Plate Theory for 4 m span of alpha 2 (main bars perpendicular to traffic)

Alpha 2 Bending Moment VS Flexural Rigidity for Different Span Length (Main bars parallel to traffic)

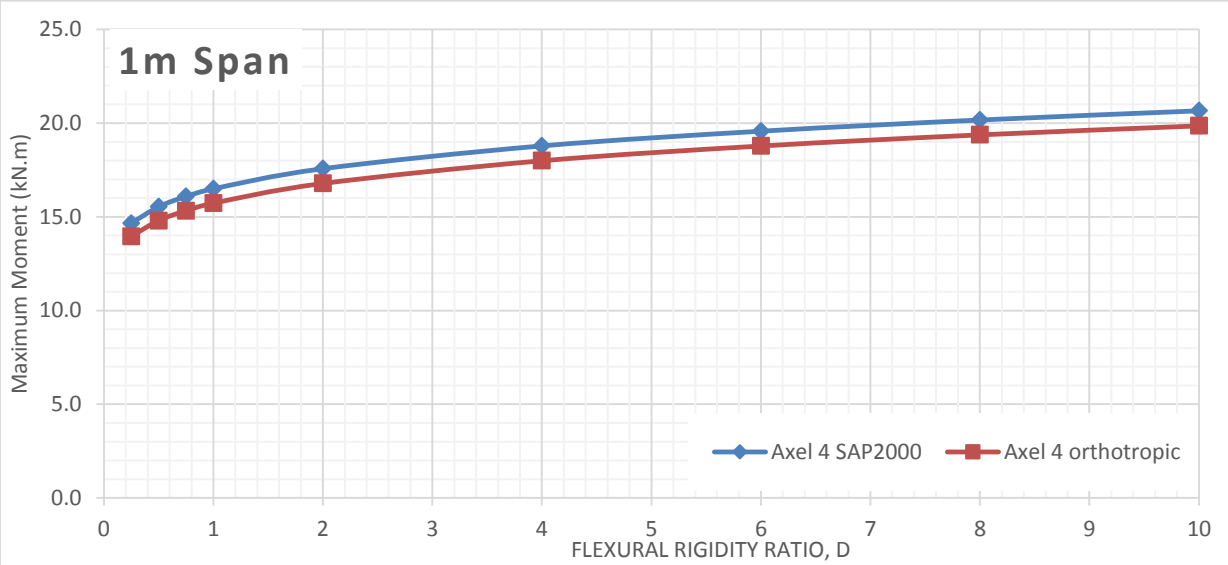

Figure 718 Moment comparison between FEA and Orthotropic Plate Theory for 1 m span of alpha 2 (main bars parallel to traffic)

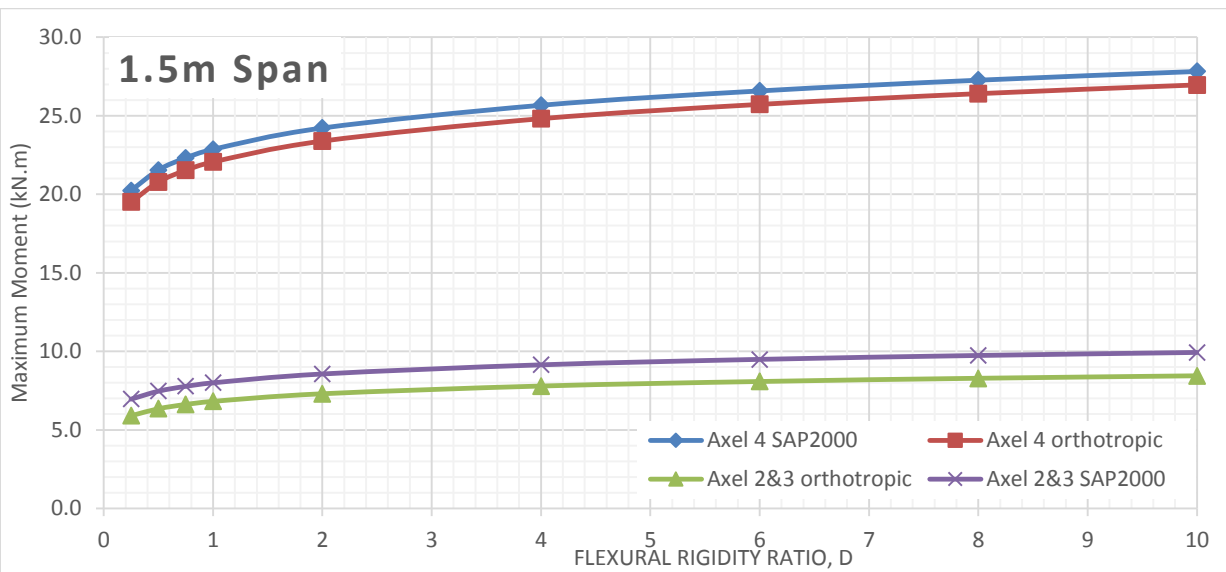

Figure 719 Moment comparison between FEA and Orthotropic Plate Theory for 1.5 m span of alpha 2 (main bars parallel to traffic)

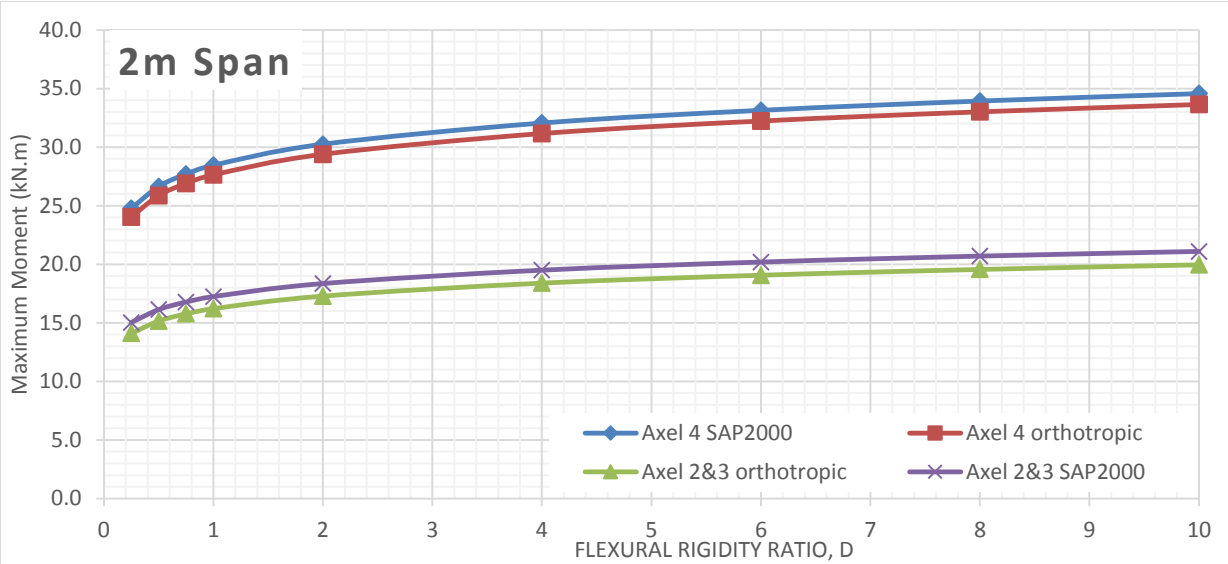

Figure 720 Moment comparison between FEA and Orthotropic Plate Theory for 2 m span of alpha 2 (main bars parallel to traffic)

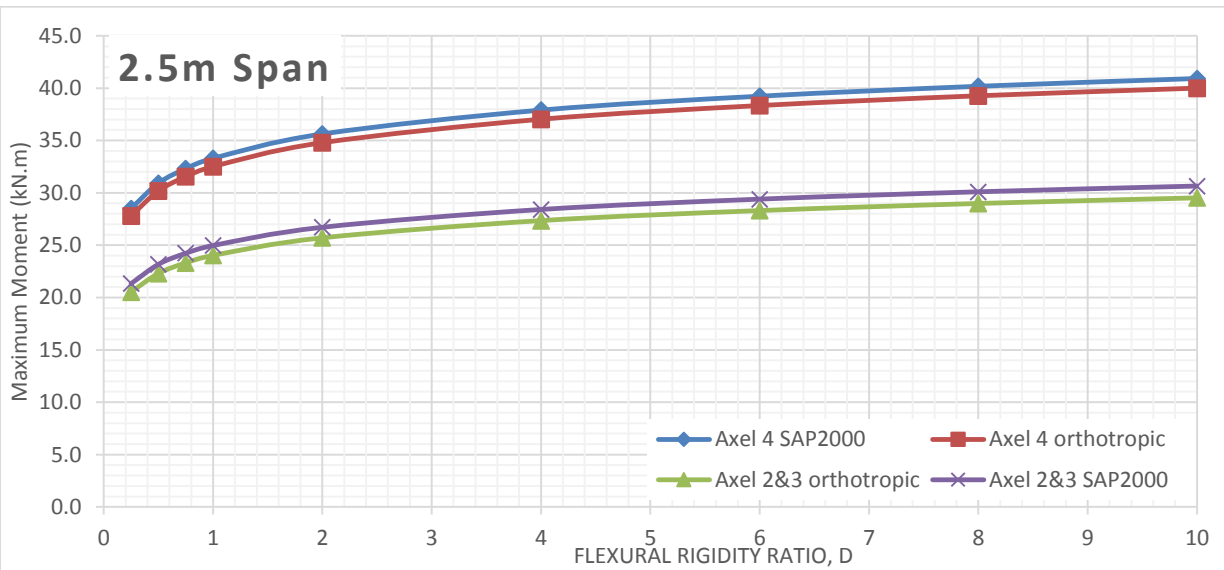

Figure 721 Moment comparison between FEA and Orthotropic Plate Theory for 2.5 m span of alpha 2 (main bars parallel to traffic)

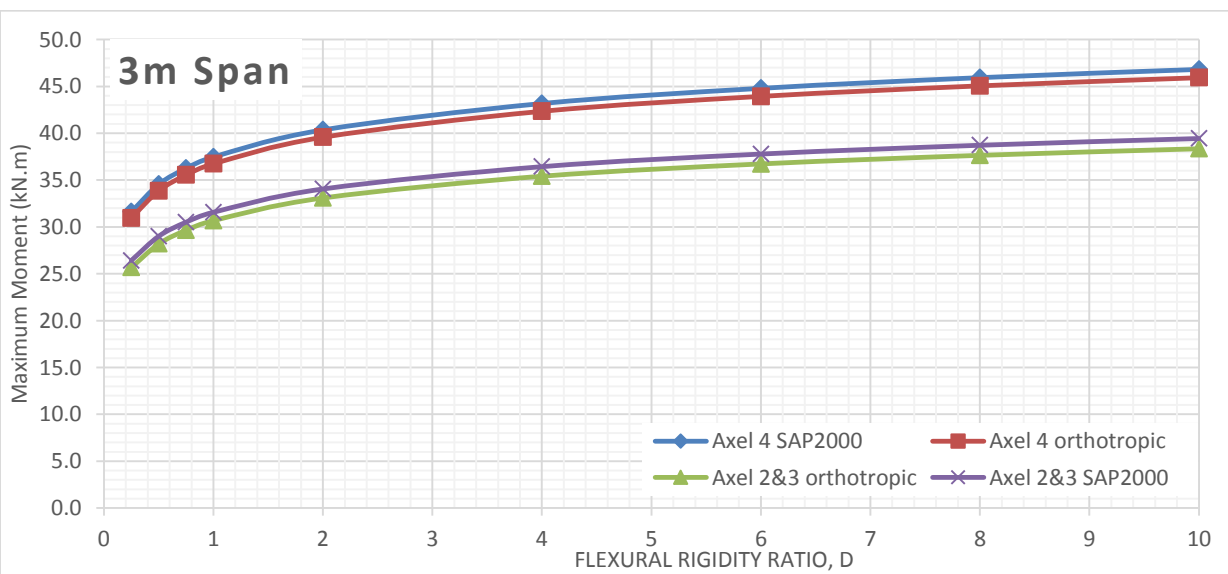

Figure 722 Moment comparison between FEA and Orthotropic Plate Theory for 3 m span of alpha 2 (main bars parallel to traffic)

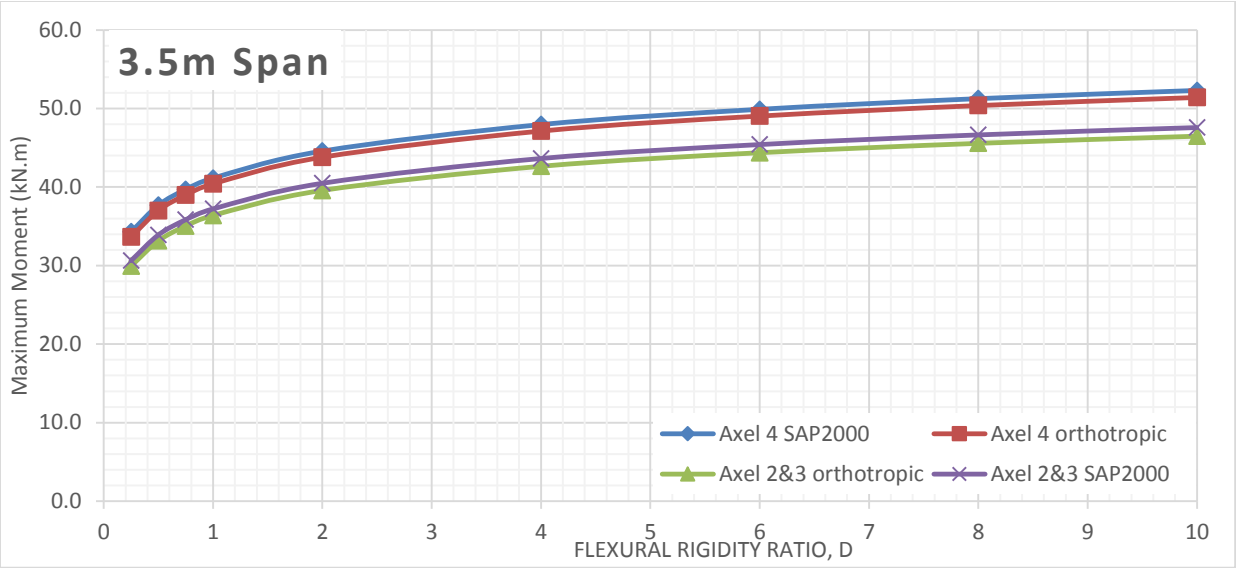

Figure 723 Moment comparison between FEA and Orthotropic Plate Theory for 3.5 m span of alpha 2 (main bars parallel to traffic)

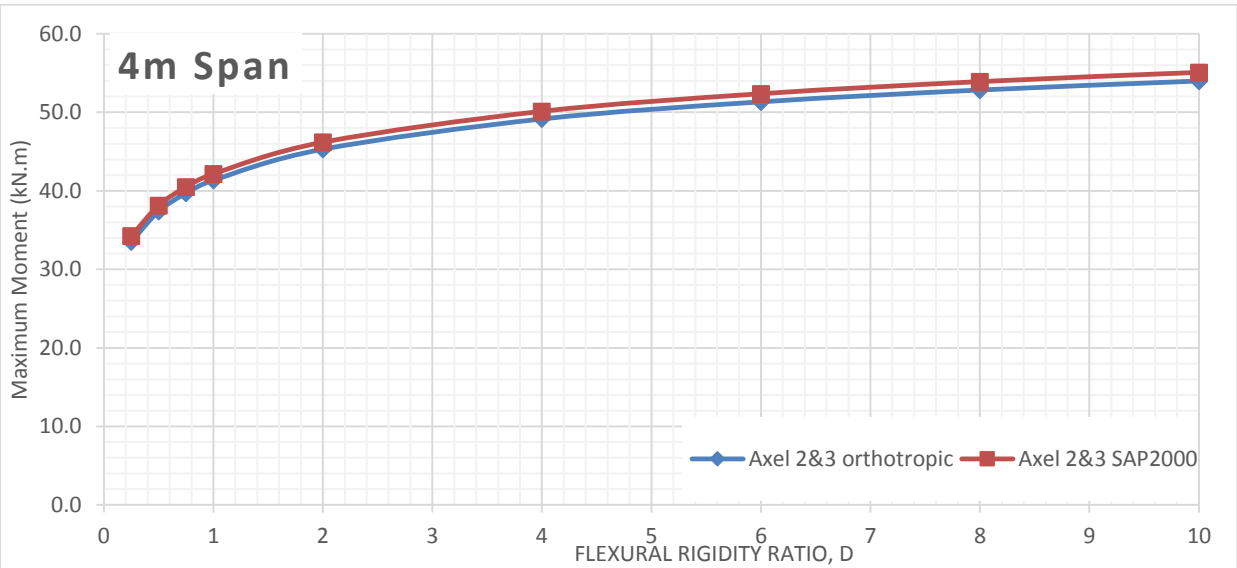

Figure 724 Moment comparison between FEA and Orthotropic Plate Theory for 4 m span of alpha 2 (main bars parallel to traffic)

Alpha 4 Bending Moment VS Flexural Rigidity for Different Span Length (Main bars perpendicular to traffic)

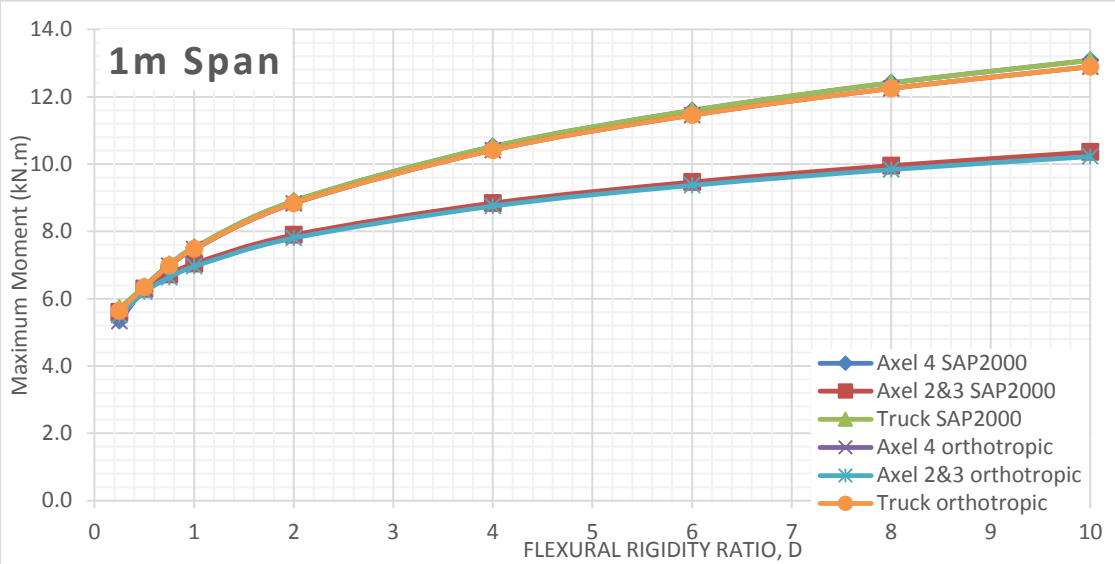

Figure 725 Moment comparison between FEA and Orthotropic Plate Theory for 1 m span of alpha 4 (main bars perpendicular to traffic)

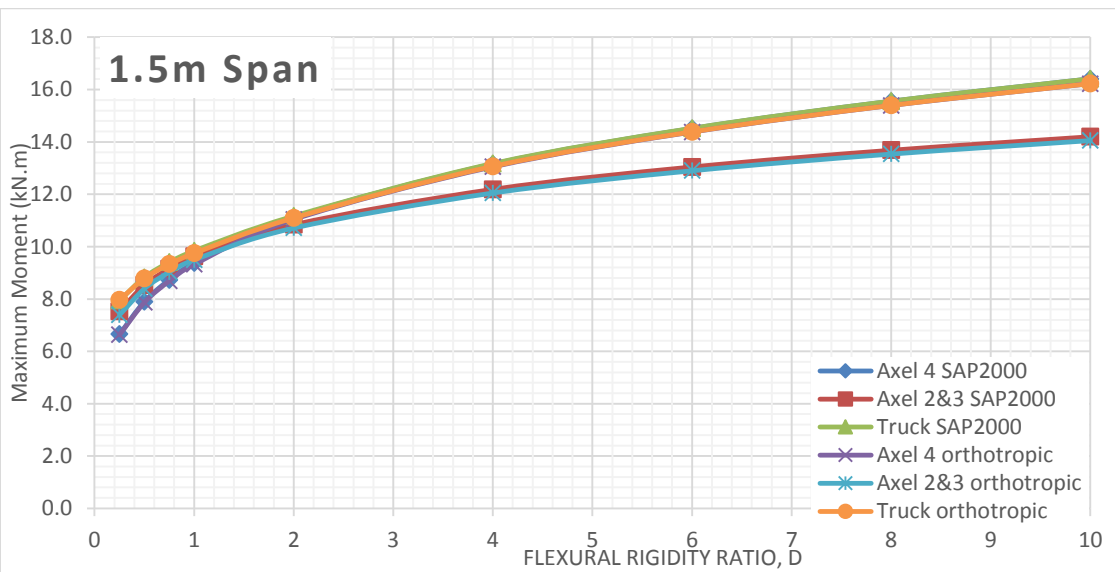

Figure 726 Moment comparison between FEA and Orthotropic Plate Theory for 1.5 m span of alpha 4 (main bars perpendicular to traffic)

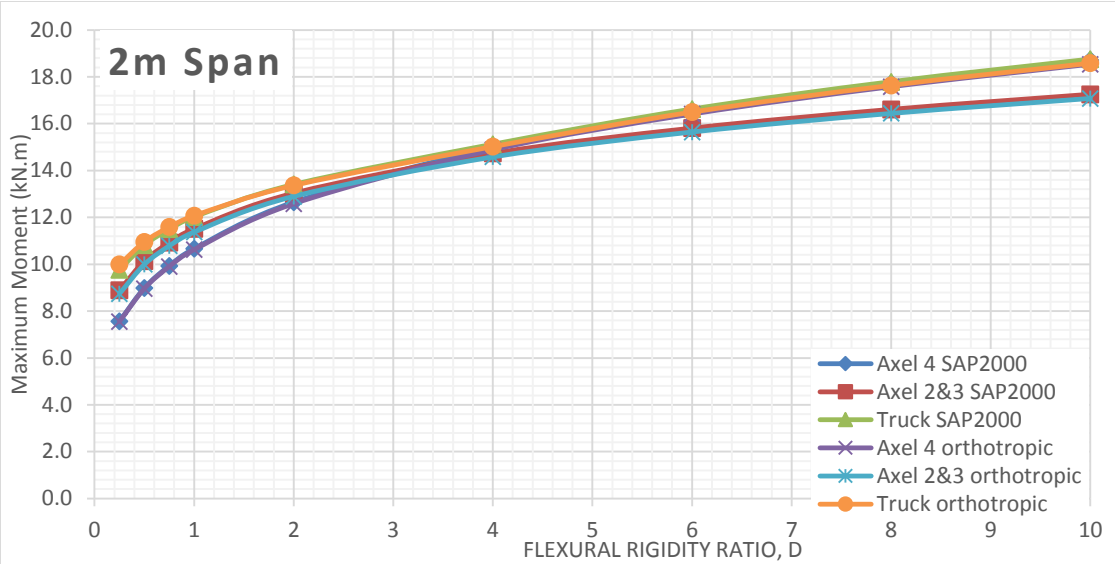

Figure 727 Moment comparison between FEA and Orthotropic Plate Theory for 2 m span of alpha 4 (main bars perpendicular to traffic)

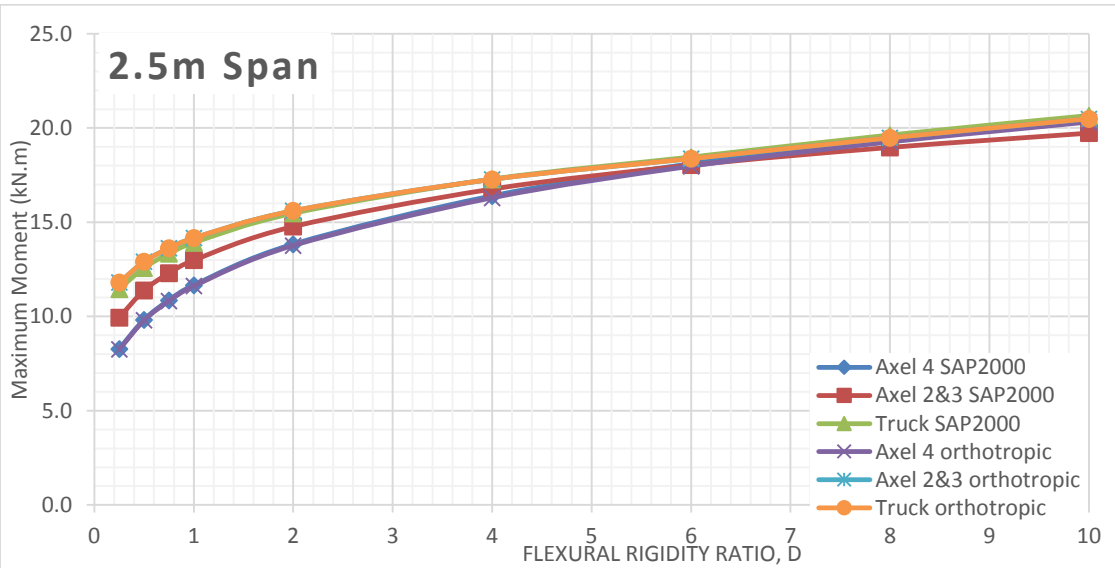

Figure 728 Moment comparison between FEA and Orthotropic Plate Theory for 2.5 m span of alpha 4 (main bars perpendicular to traffic)

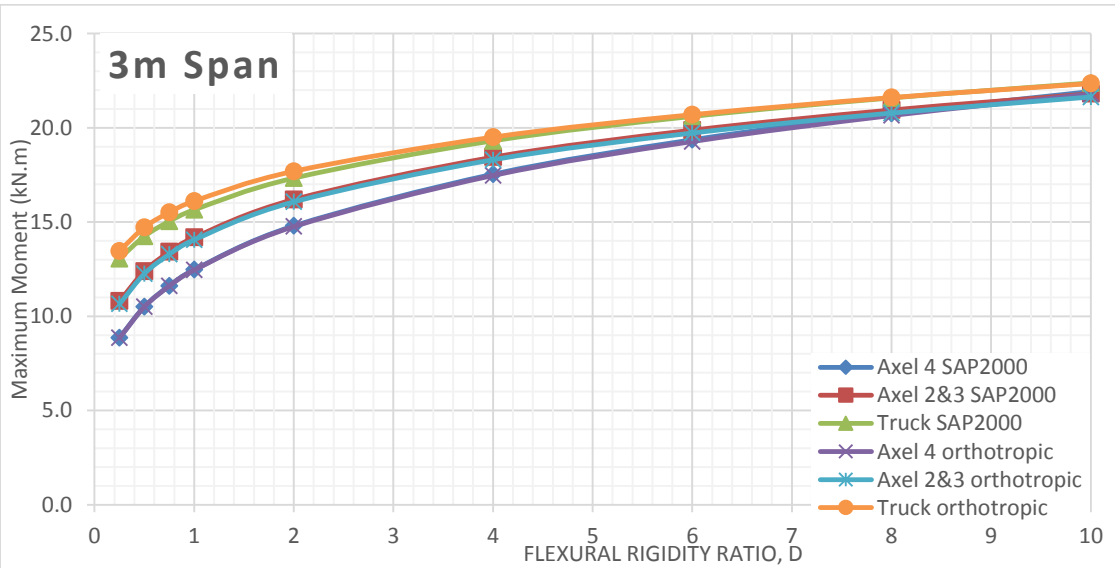

Figure 729 Moment comparison between FEA and Orthotropic Plate Theory for 3 m span of alpha 4 (main bars perpendicular to traffic)

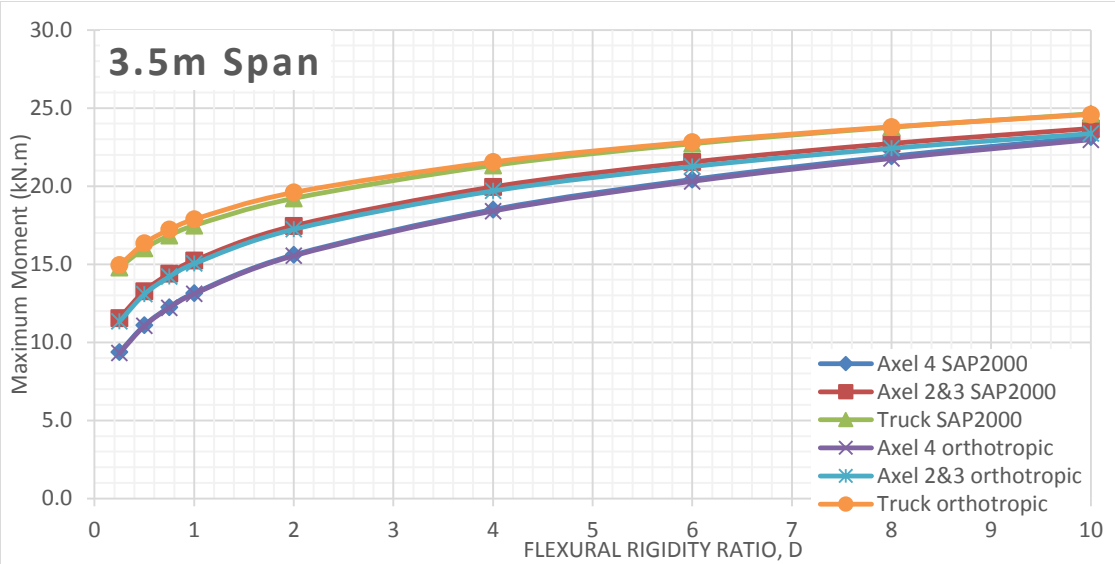

Figure 730 Moment comparison between FEA and Orthotropic Plate Theory for 3.5 m span of alpha 4 (main bars perpendicular to traffic)

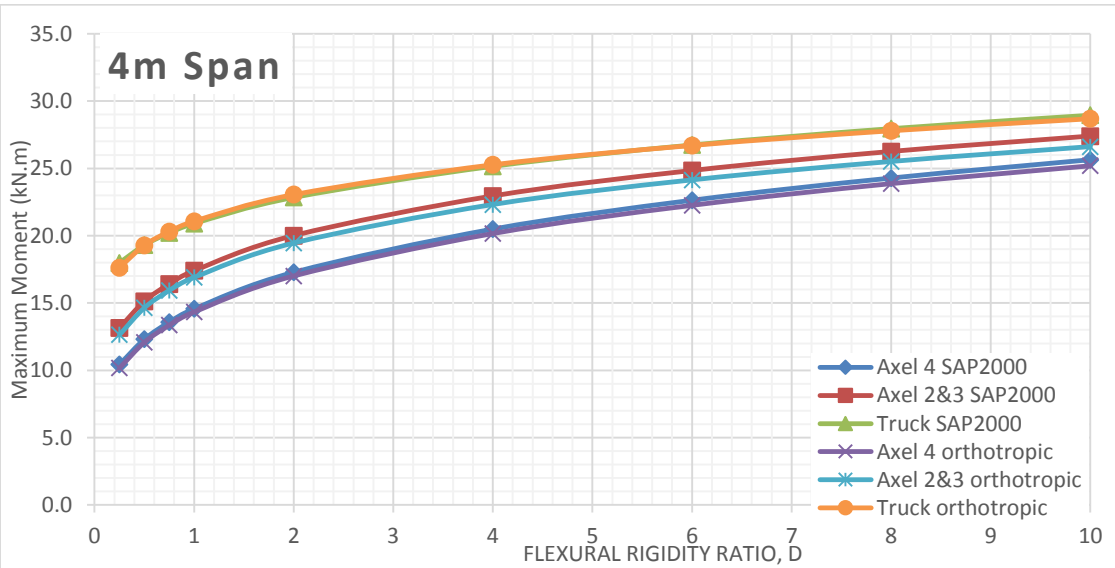

Figure 731 Moment comparison between FEA and Orthotropic Plate Theory for 4 m span of alpha 4 (main bars perpendicular to traffic)

Alpha 4 Bending Moment VS Flexural Rigidity for Different Span Length (Main bars parallel to traffic)

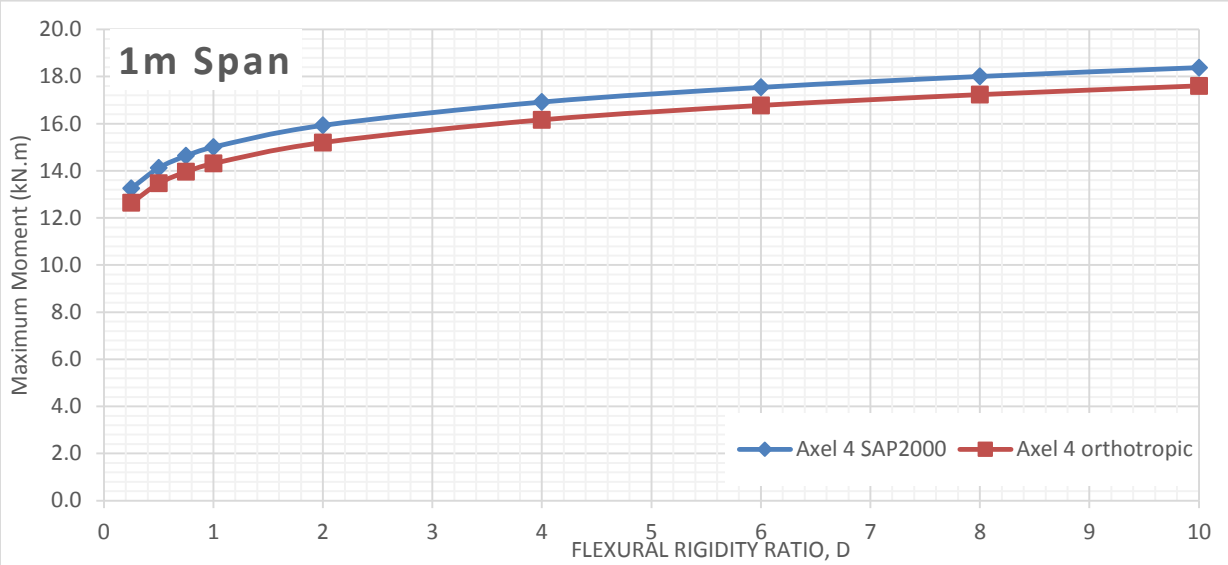

Figure 732 Moment comparison between FEA and Orthotropic Plate Theory for 1 m span of alpha 4 (main bars parallel to traffic)

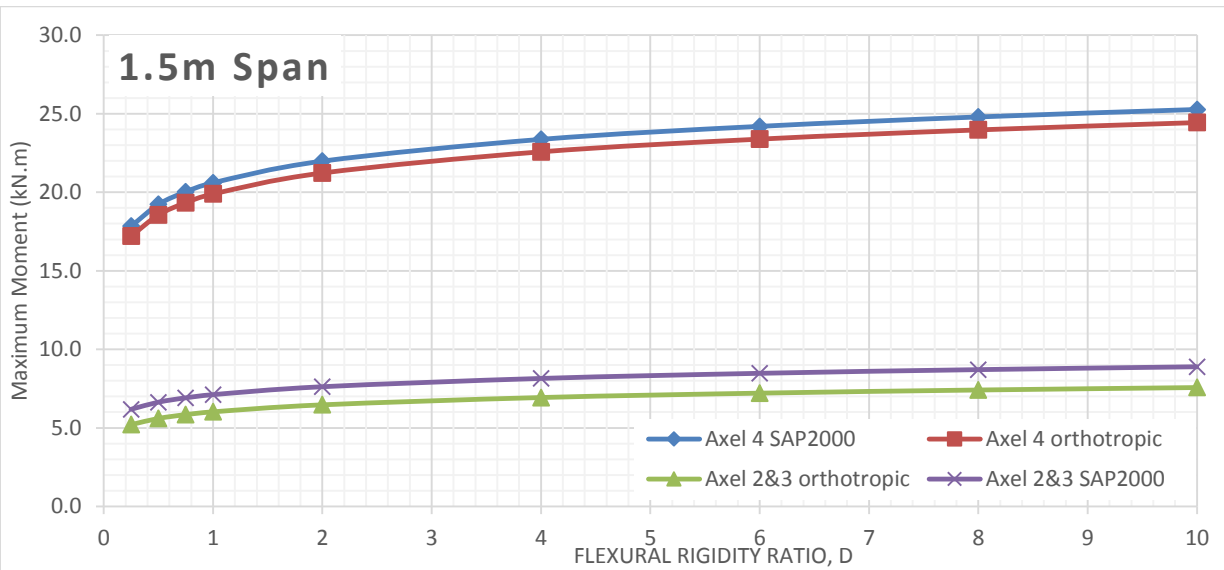

Figure 733 Moment comparison between FEA and Orthotropic Plate Theory for 1.5 m span of alpha 4 (main bars parallel to traffic)

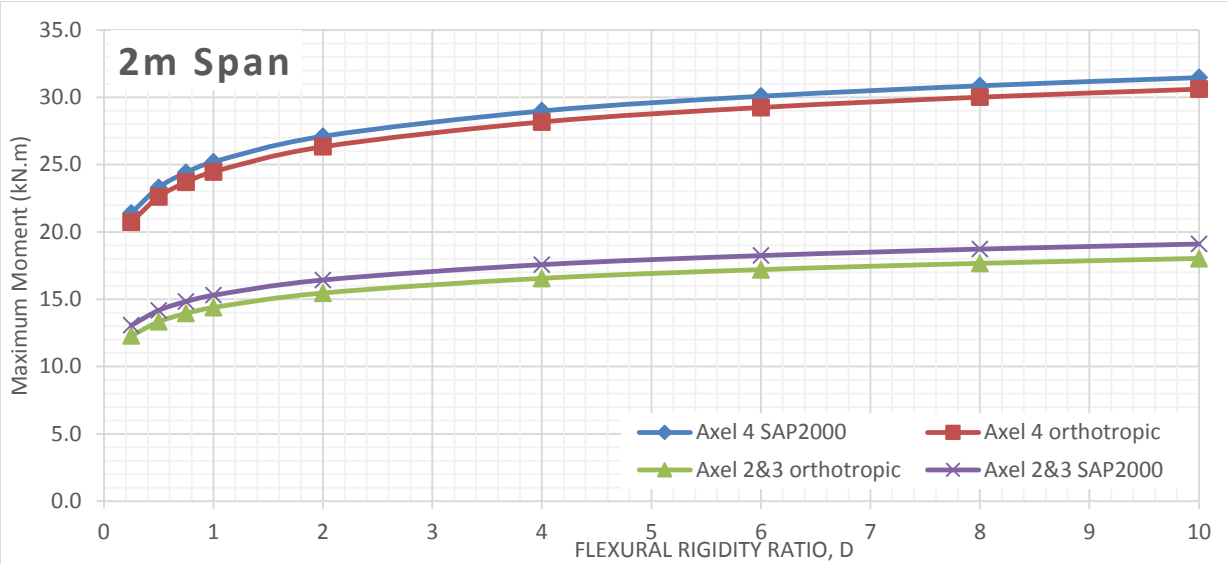

Figure 734 Moment comparison between FEA and Orthotropic Plate Theory for 2 m span of alpha 4 (main bars parallel to traffic)

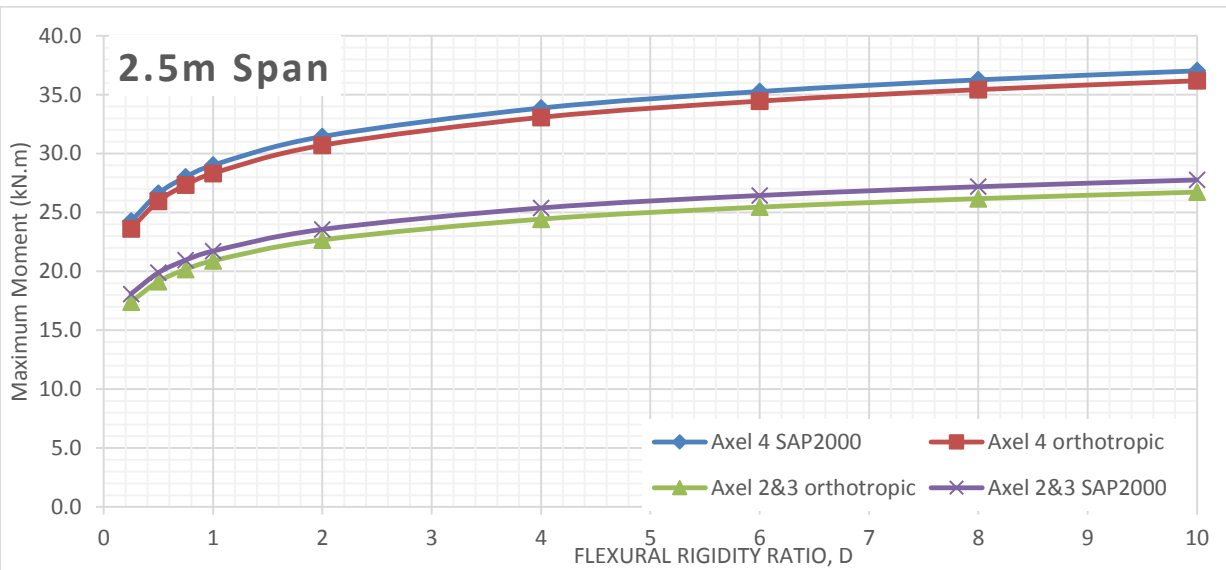

Figure 735 Moment comparison between FEA and Orthotropic Plate Theory for 2.5 m span of alpha 4 (main bars parallel to traffic)

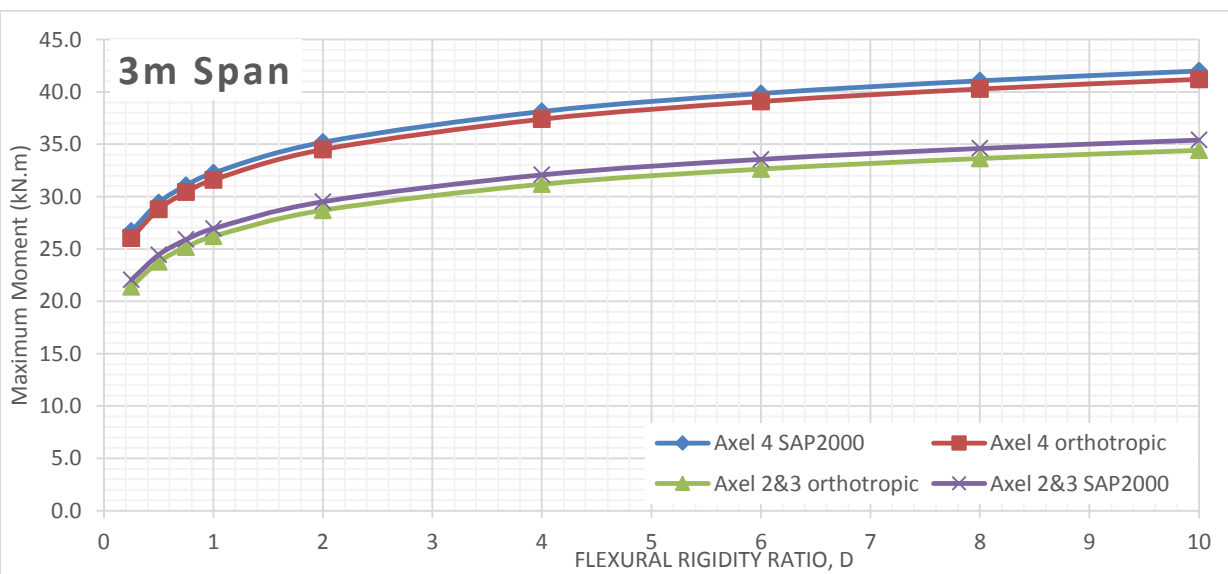

Figure 736 Moment comparison between FEA and Orthotropic Plate Theory for 3 m span of alpha 4 (main bars parallel to traffic)

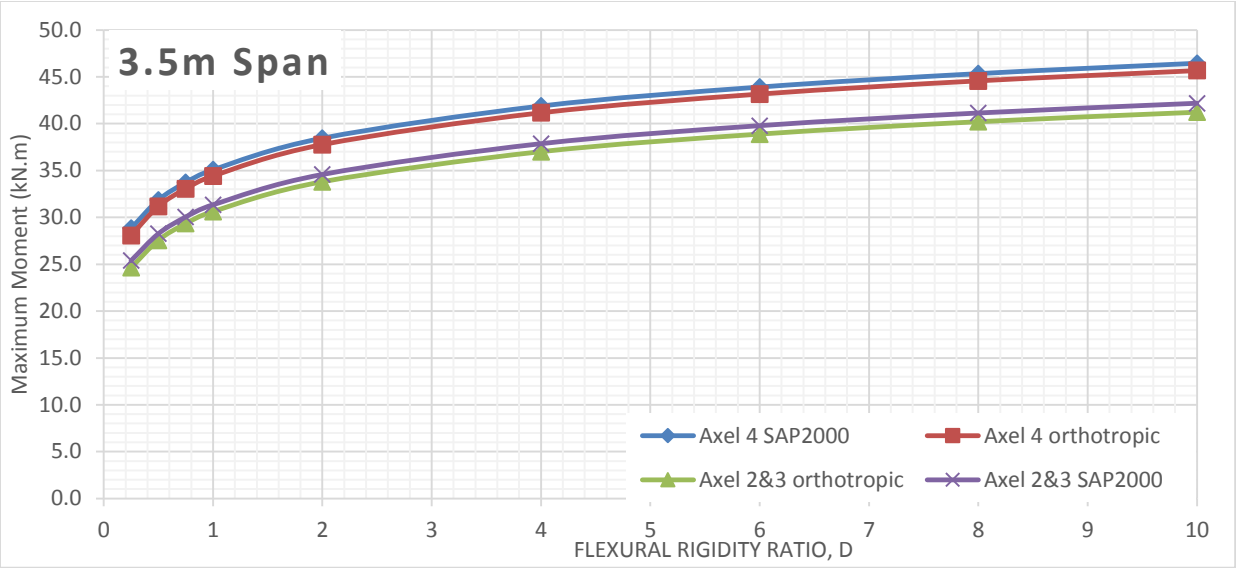

Figure 737 Moment comparison between FEA and Orthotropic Plate Theory for 3.5 m span of alpha 4 (main bars parallel to traffic)

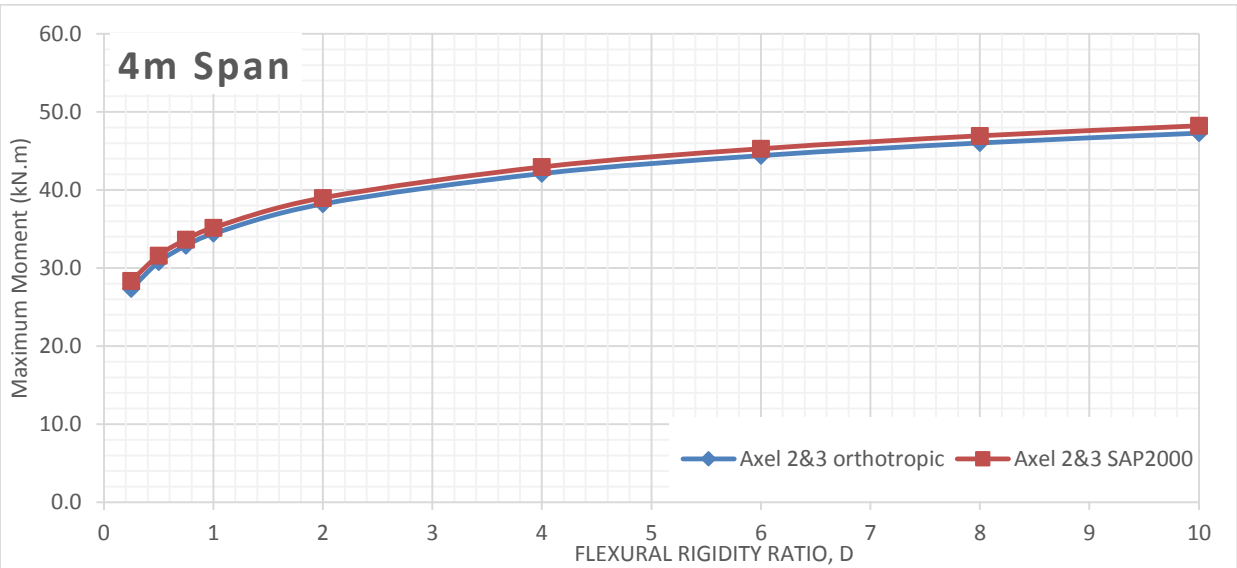

Figure 738 Moment comparison between FEA and Orthotropic Plate Theory for 4 m span of alpha 4 (main bars parallel to traffic)

Alpha 6 Bending Moment VS Flexural Rigidity for Different Span Length (Main bars perpendicular to traffic)

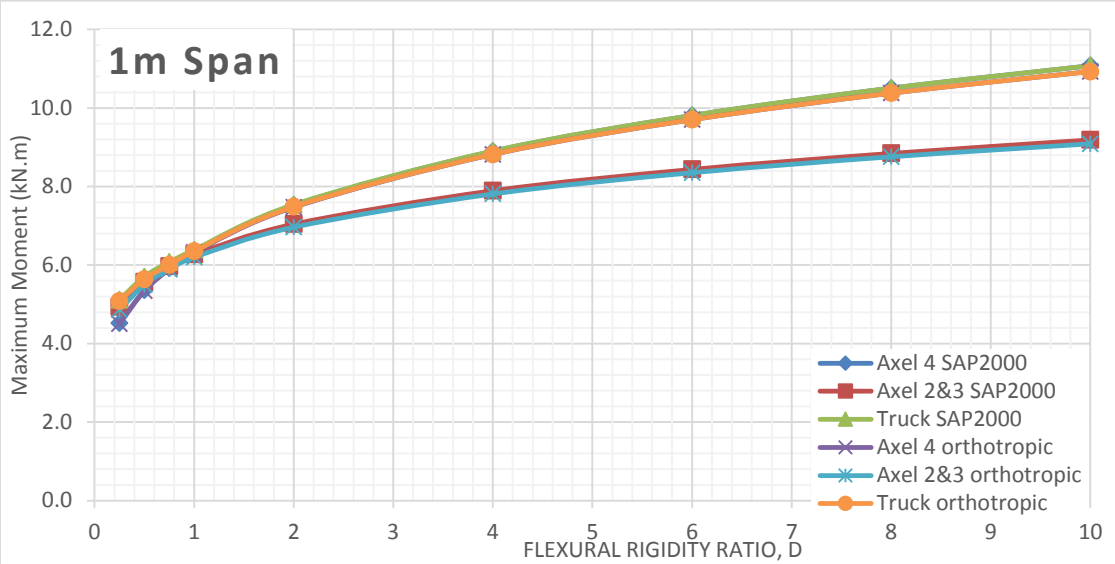

Figure 739 Moment comparison between FEA and Orthotropic Plate Theory for 1 m span of alpha 6 (main bars perpendicular to traffic)

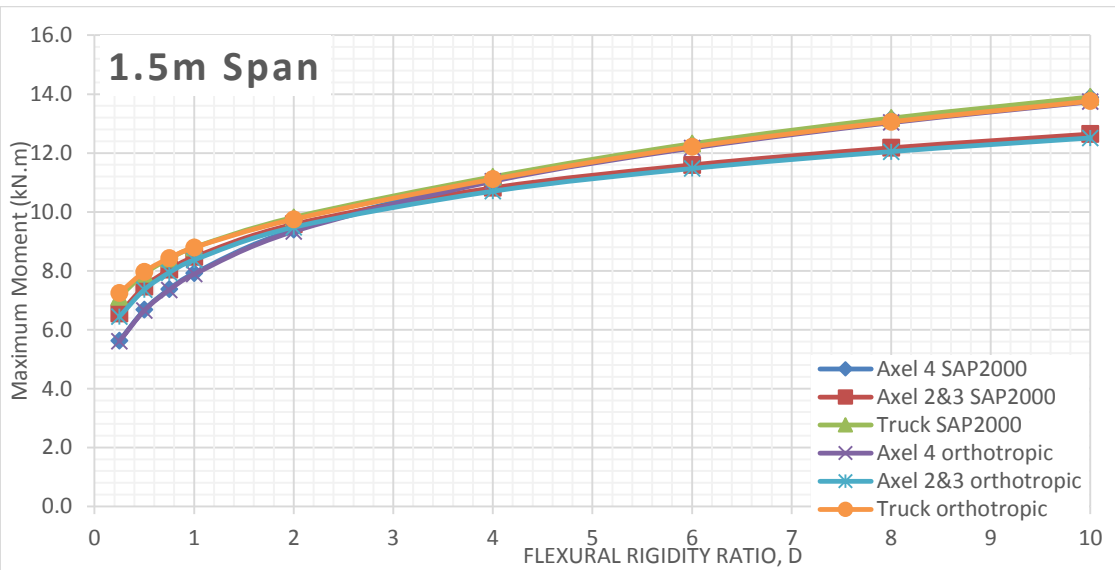

Figure 740 Moment comparison between FEA and Orthotropic Plate Theory for 1.5 m span of alpha 6 (main bars perpendicular to traffic)

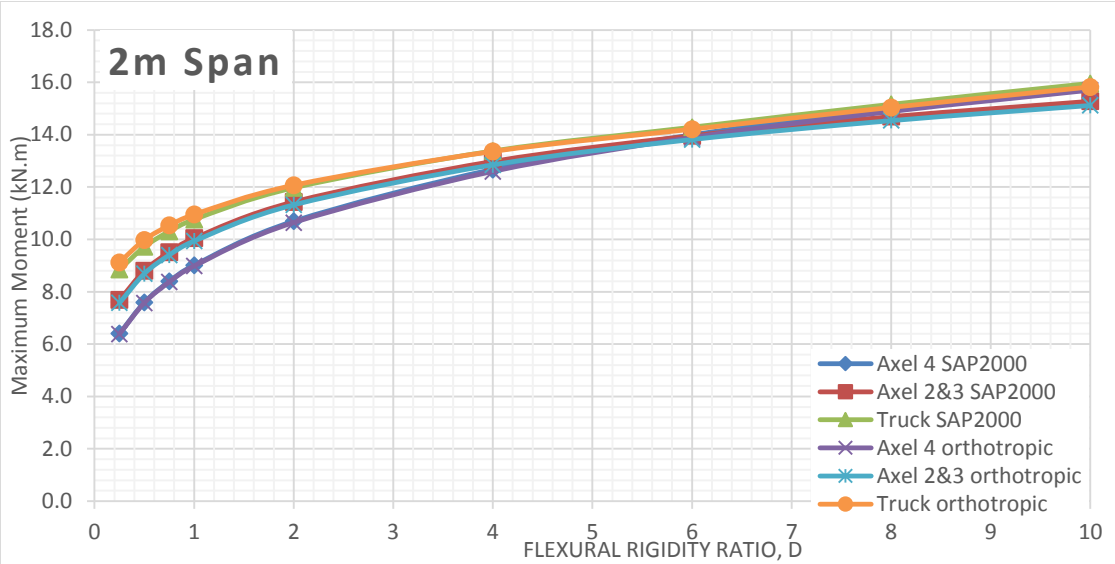

Figure 741 Moment comparison between FEA and Orthotropic Plate Theory for 2 m span of alpha 6 (main bars perpendicular to traffic)

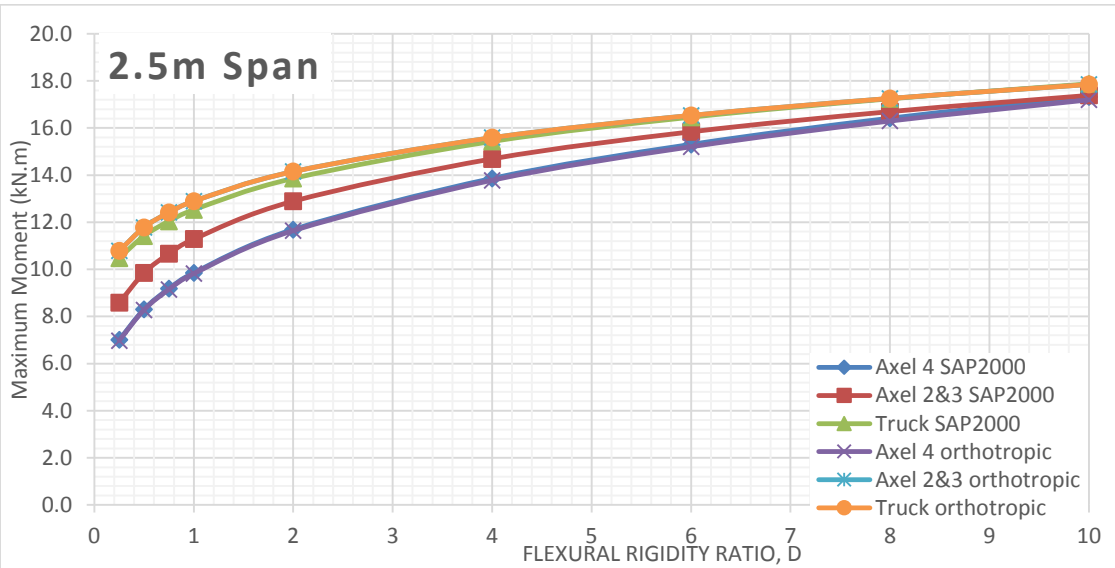

Figure 742 Moment comparison between FEA and Orthotropic Plate Theory for 2.5 m span of alpha 6 (main bars perpendicular to traffic)

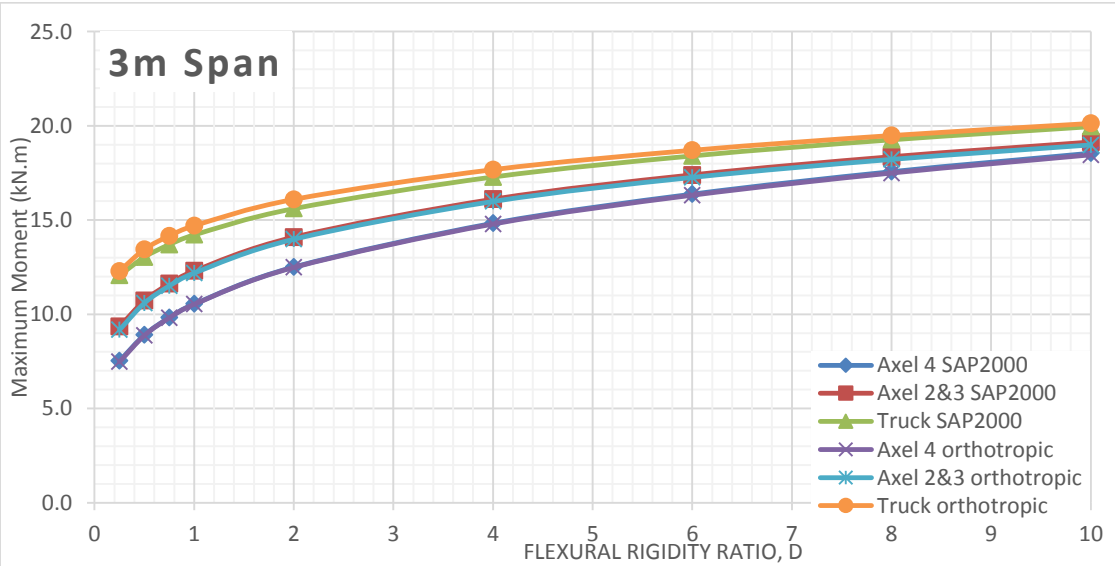

Figure 743 Moment comparison between FEA and Orthotropic Plate Theory for 3 m span of alpha 6 (main bars perpendicular to traffic)

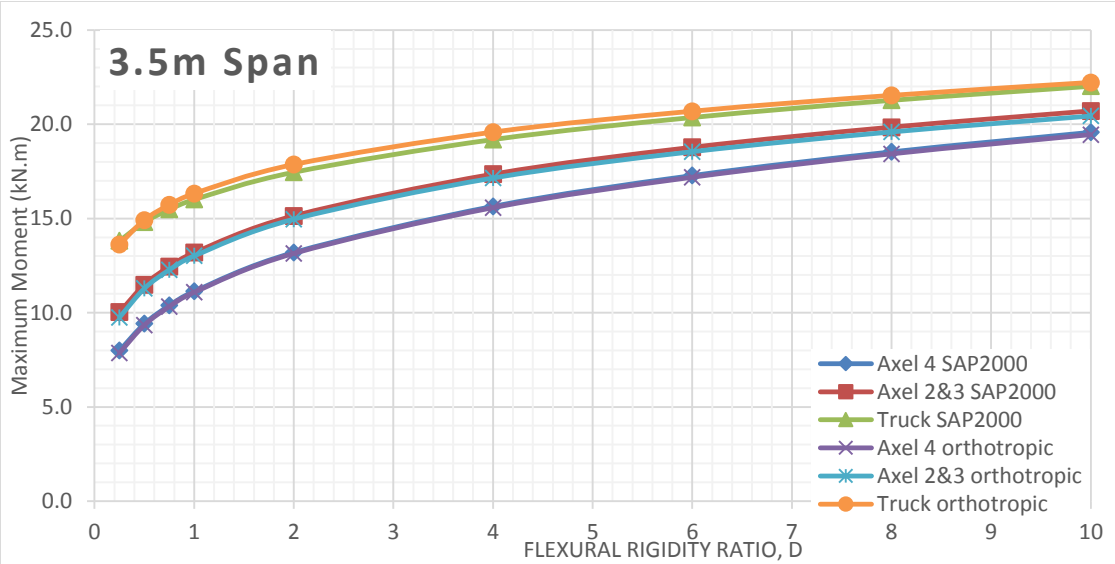

Figure 744 Moment comparison between FEA and Orthotropic Plate Theory for 3.5 m span of alpha 6 (main bars perpendicular to traffic)

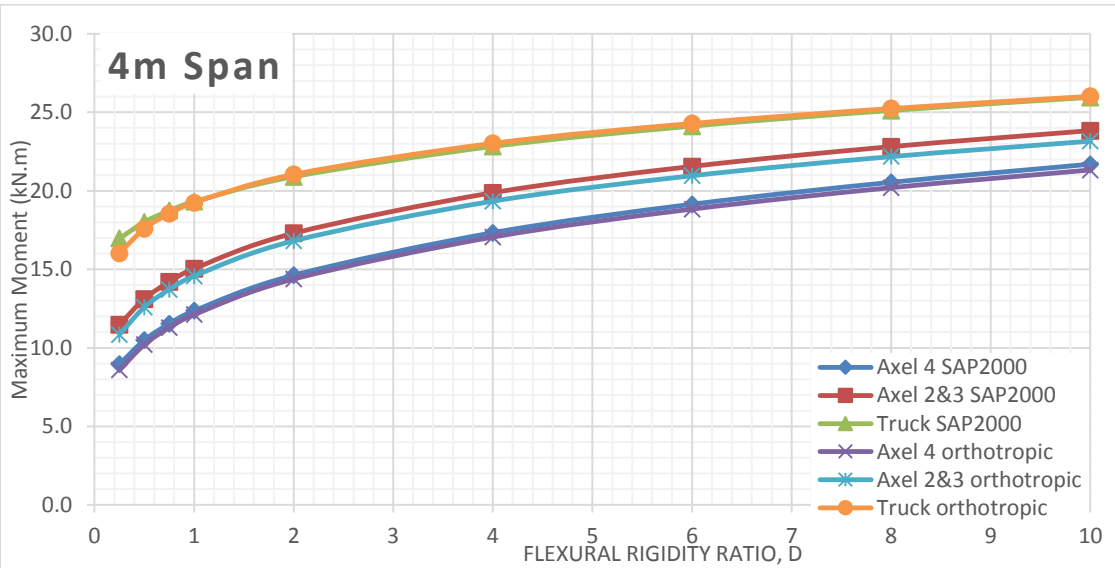

Figure 745 Moment comparison between FEA and Orthotropic Plate Theory for 4 m span of alpha 6 (main bars perpendicular to traffic)

Alpha 6 Bending Moment VS Flexural Rigidity for Different Span Length (Main bars parallel to traffic)

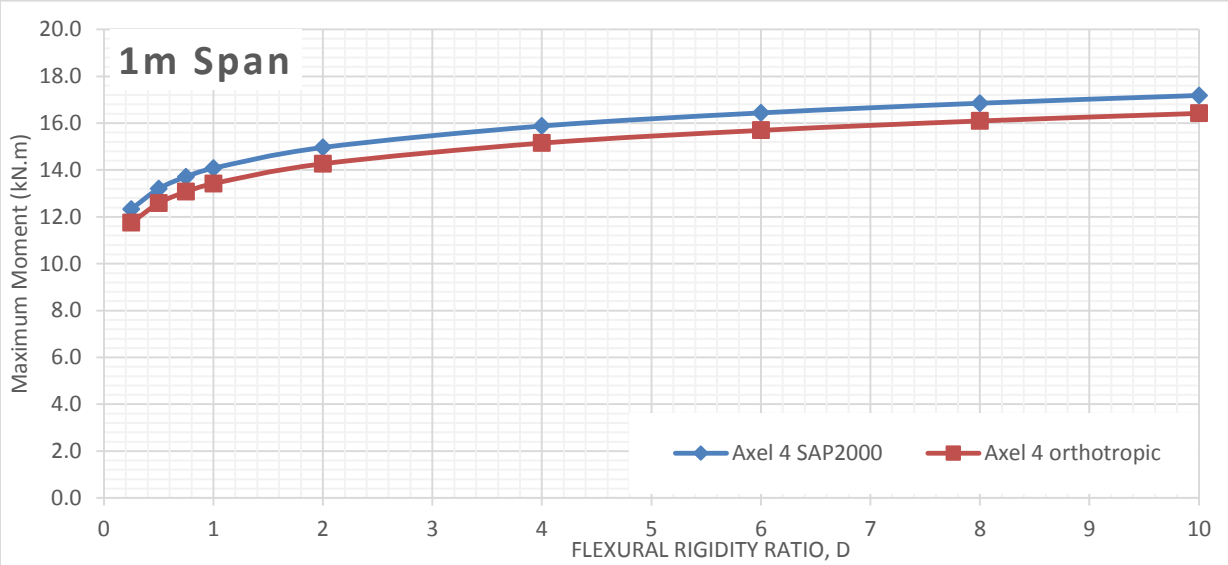

Figure 746 Moment comparison between FEA and Orthotropic Plate Theory for 1 m span of alpha 6 (main bars parallel to traffic)

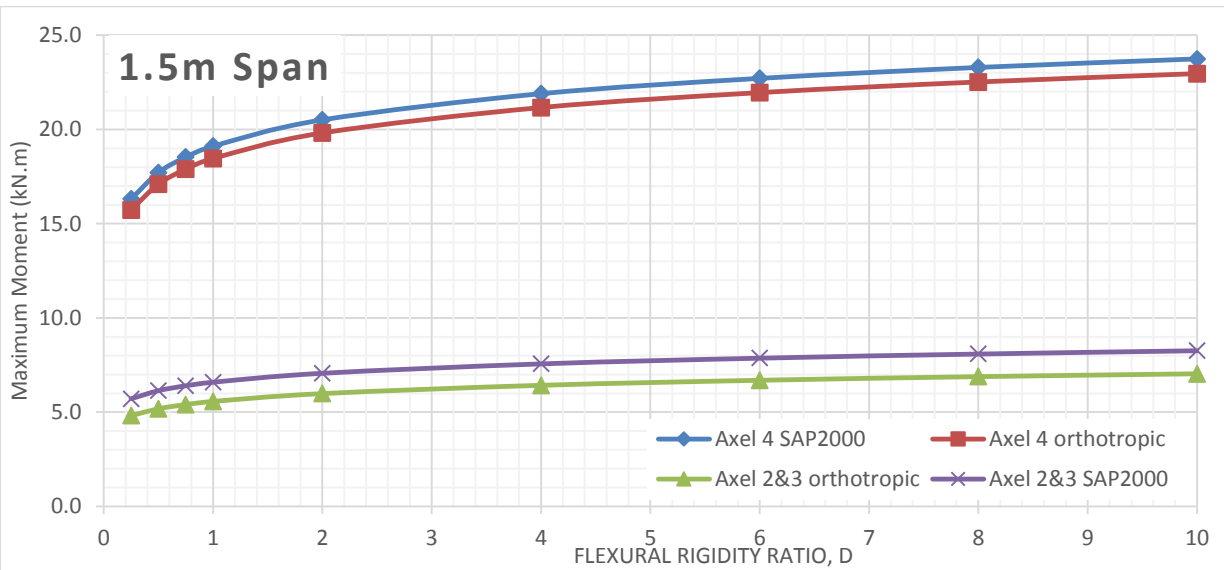

Figure 747 Moment comparison between FEA and Orthotropic Plate Theory for 1.5 m span of alpha 6 (main bars parallel to traffic)

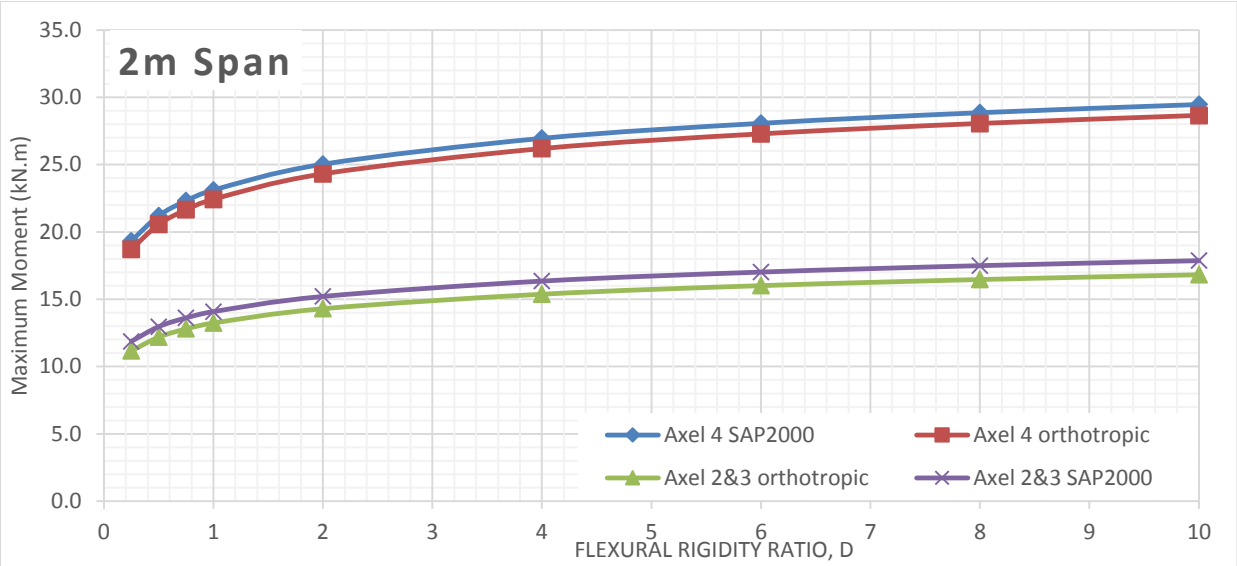

Figure 748 Moment comparison between FEA and Orthotropic Plate Theory for 2 m span of alpha 6 (main bars parallel to traffic)

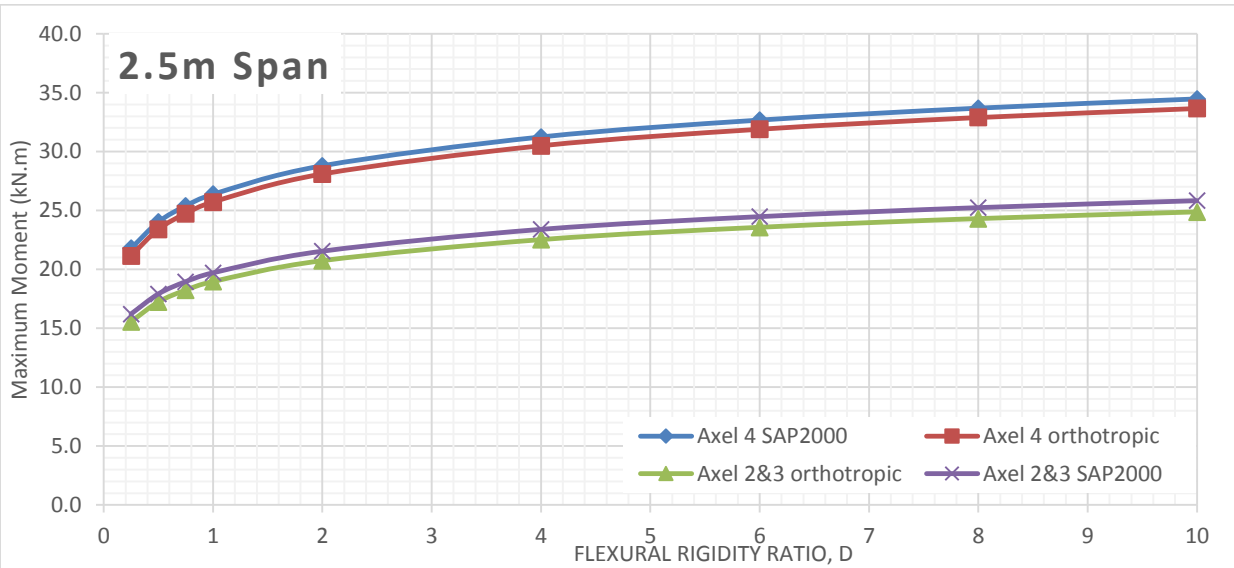

Figure 749 Moment comparison between FEA and Orthotropic Plate Theory for 2.5 m span of alpha 6 (main bars parallel to traffic)

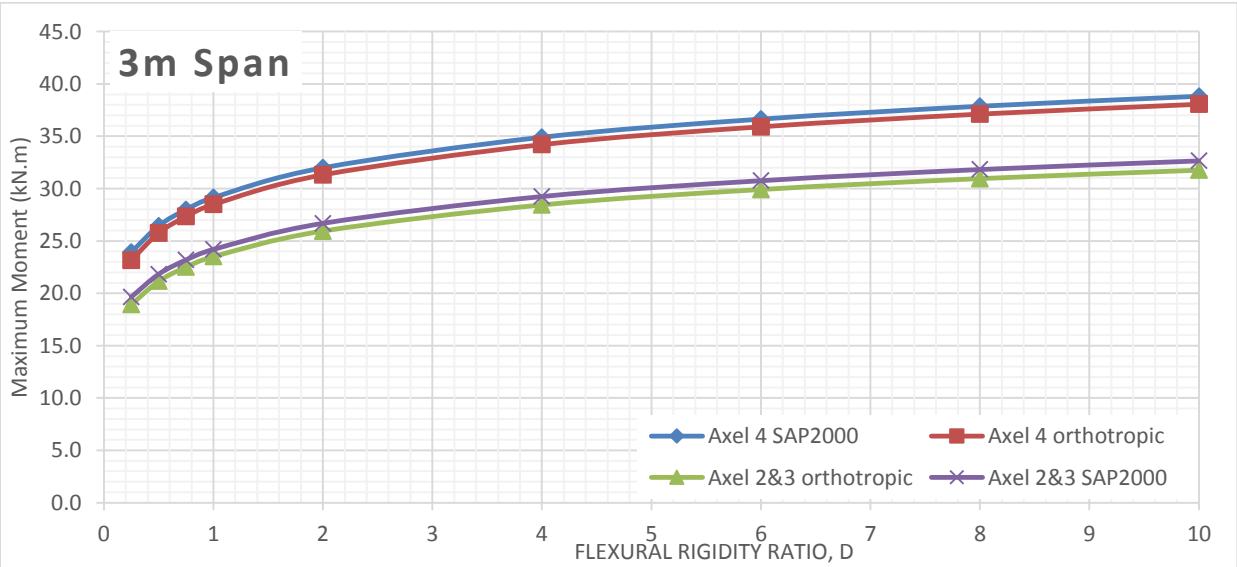

Figure 750 Moment comparison between FEA and Orthotropic Plate Theory for 3 m span of alpha 6 (main bars parallel to traffic)

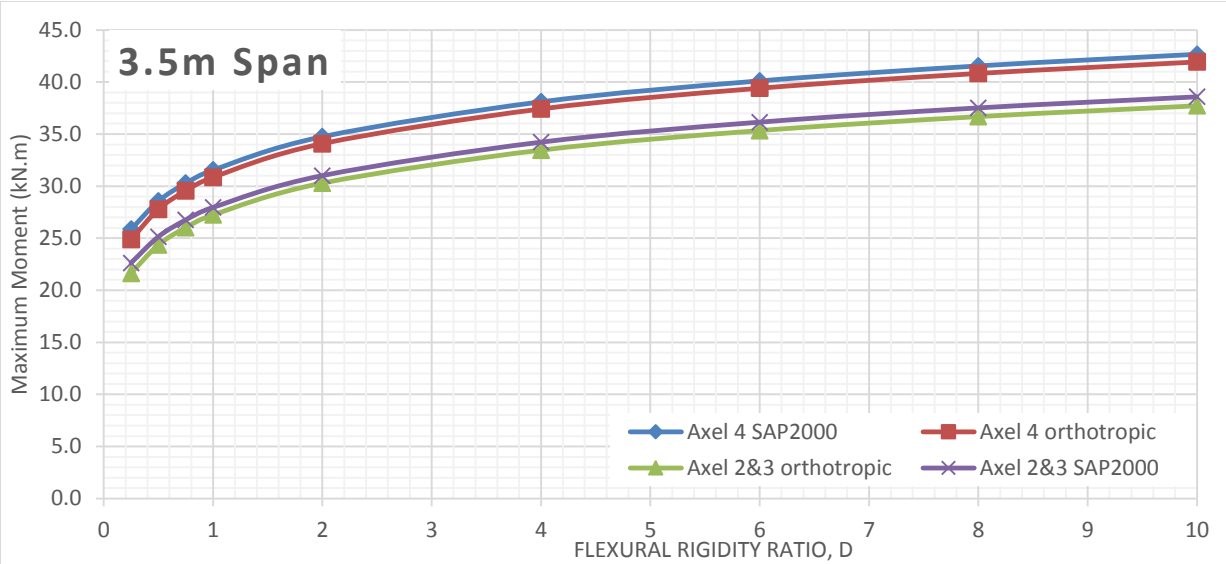

Figure 751 Moment comparison between FEA and Orthotropic Plate Theory for 3.5 m span of alpha 6 (main bars parallel to traffic)

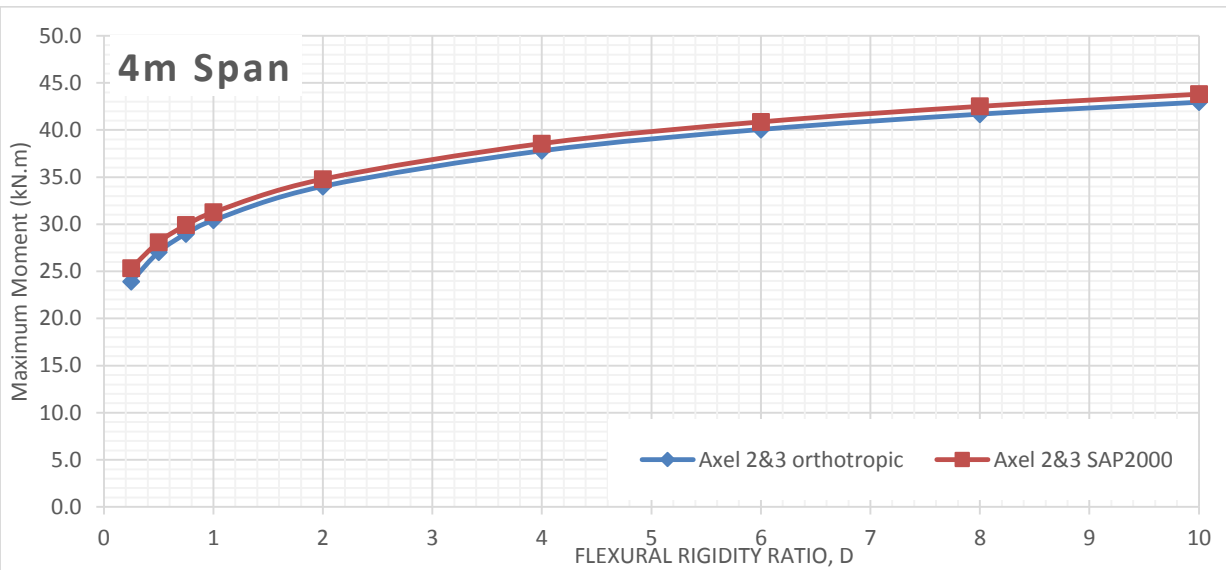

Figure 752 Moment comparison between FEA and Orthotropic Plate Theory for 4 m span of alpha 6 (main bars parallel to traffic)

Alpha 8 Bending Moment VS Flexural Rigidity for Different Span Length (Main bars perpendicular to traffic)

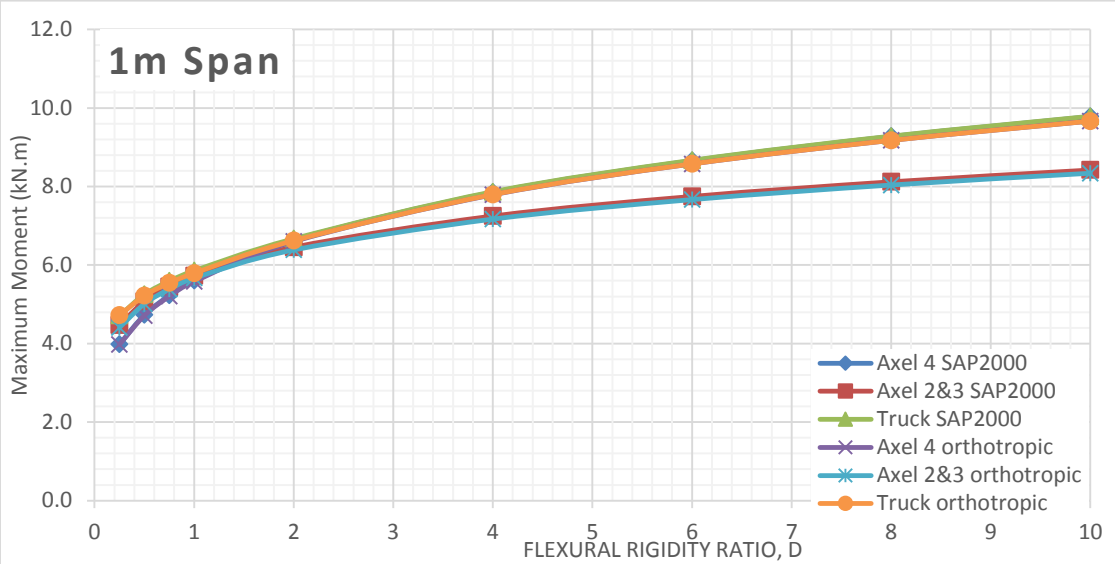

Figure 753 Moment comparison between FEA and Orthotropic Plate Theory for 1 m span of alpha 8 (main bars perpendicular to traffic)

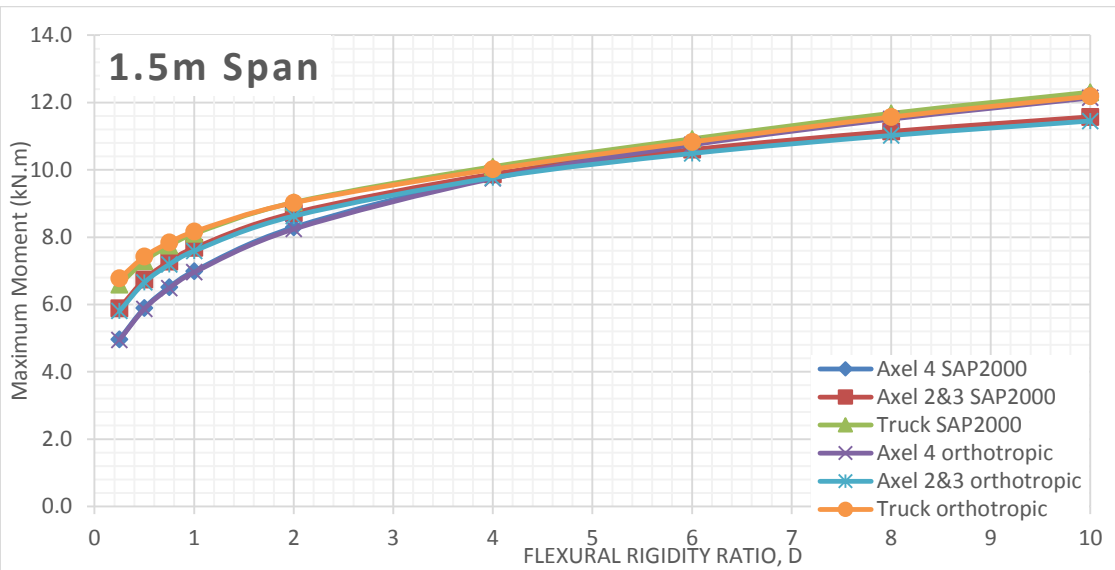

Figure 754 Moment comparison between FEA and Orthotropic Plate Theory for 1.5 m span of alpha 8 (main bars perpendicular to traffic)

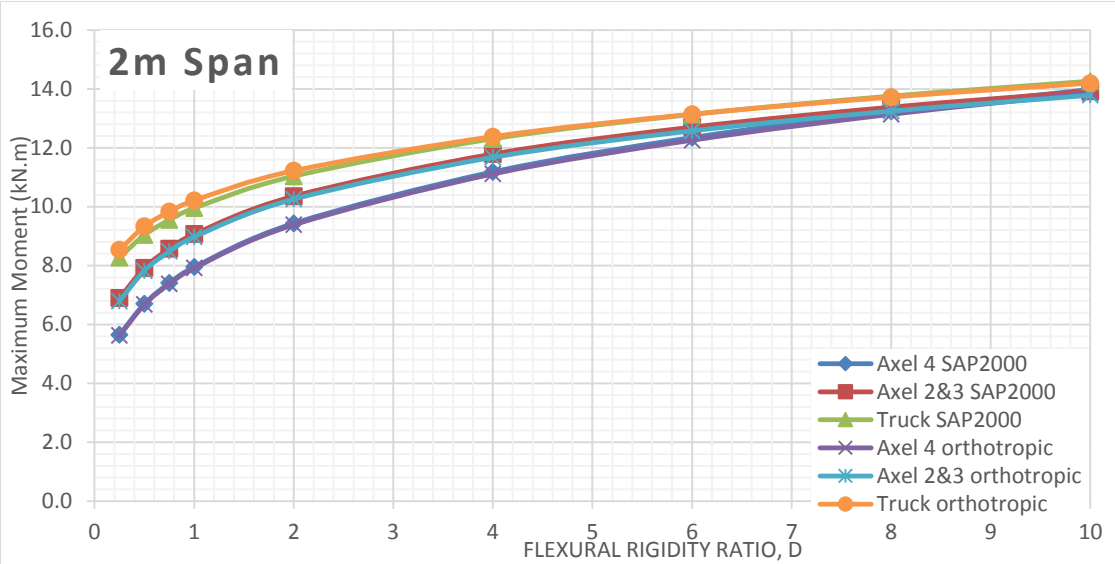

Figure 755 Moment comparison between FEA and Orthotropic Plate Theory for 2 m span of alpha 8 (main bars perpendicular to traffic)

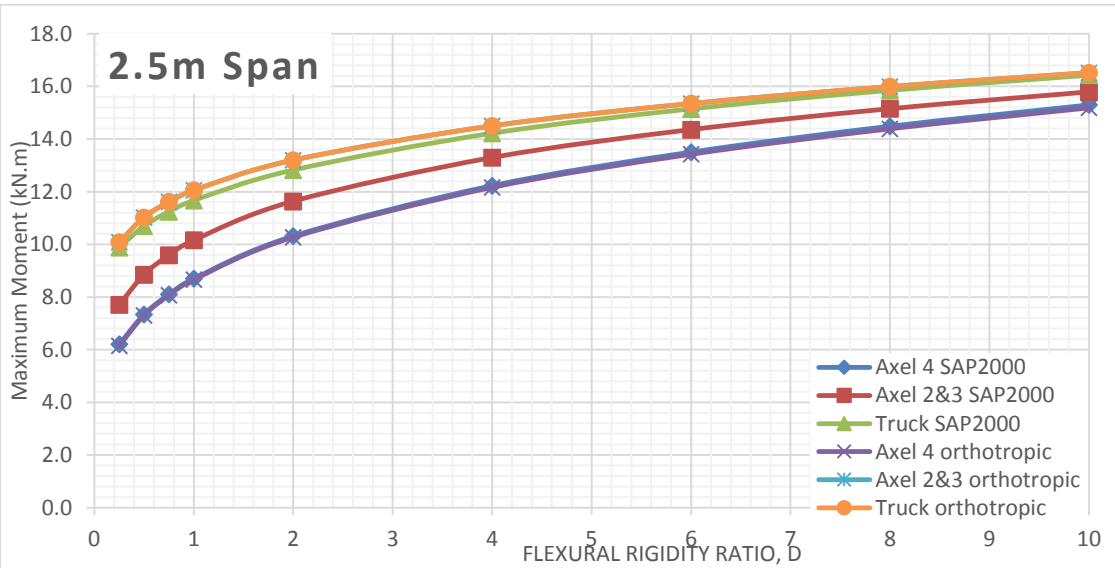

Figure 756 Moment comparison between FEA and Orthotropic Plate Theory for 2.5 m span of alpha 8 (main bars perpendicular to traffic)

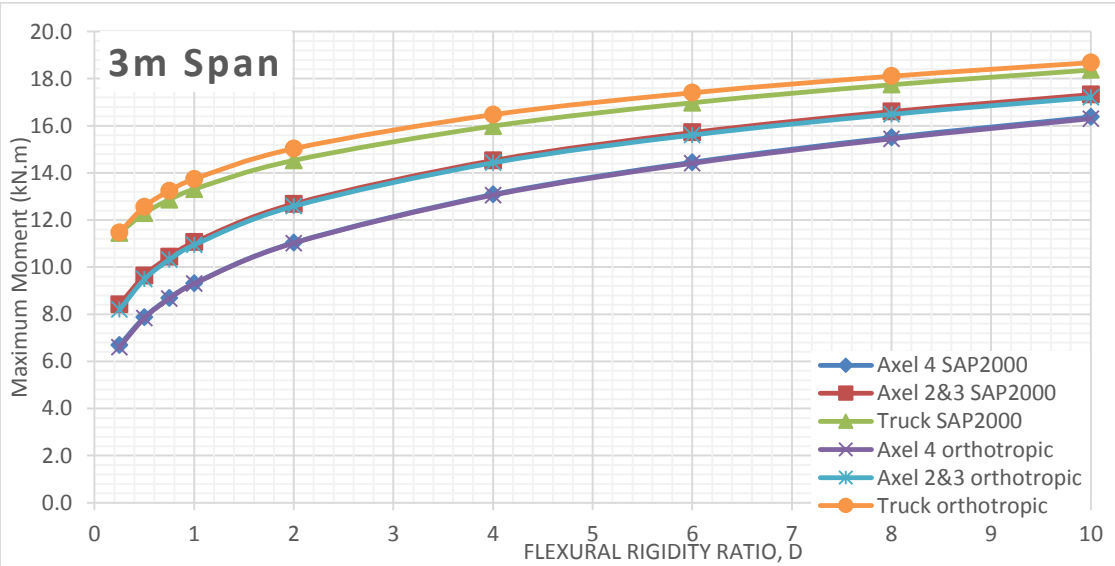

Figure 757 Moment comparison between FEA and Orthotropic Plate Theory for 3 m span of alpha 8 (main bars perpendicular to traffic)

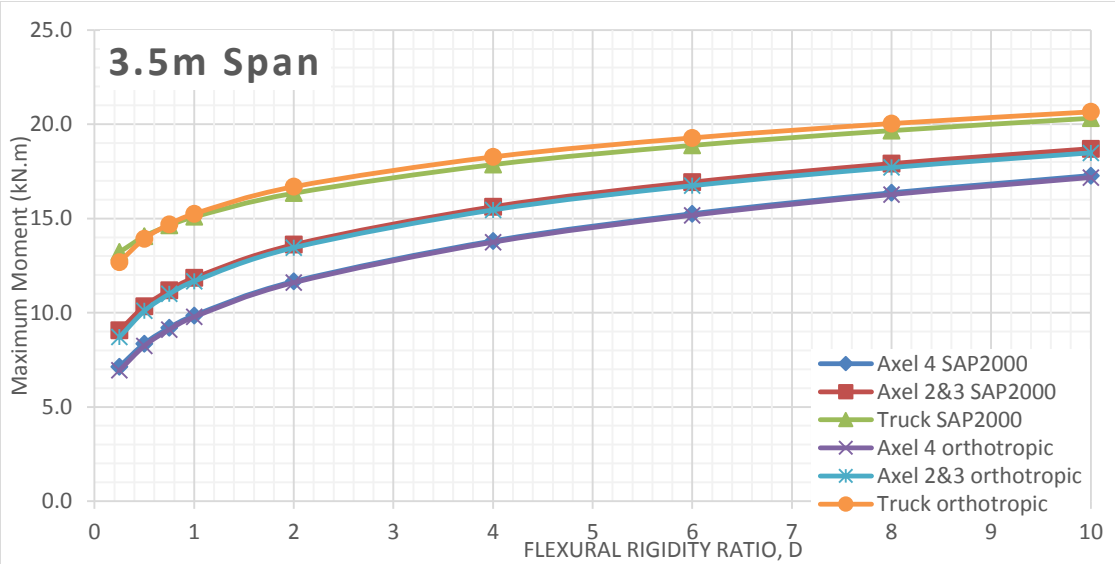

Figure 758 Moment comparison between FEA and Orthotropic Plate Theory for 3.5 m span of alpha 8 (main bars perpendicular to traffic)

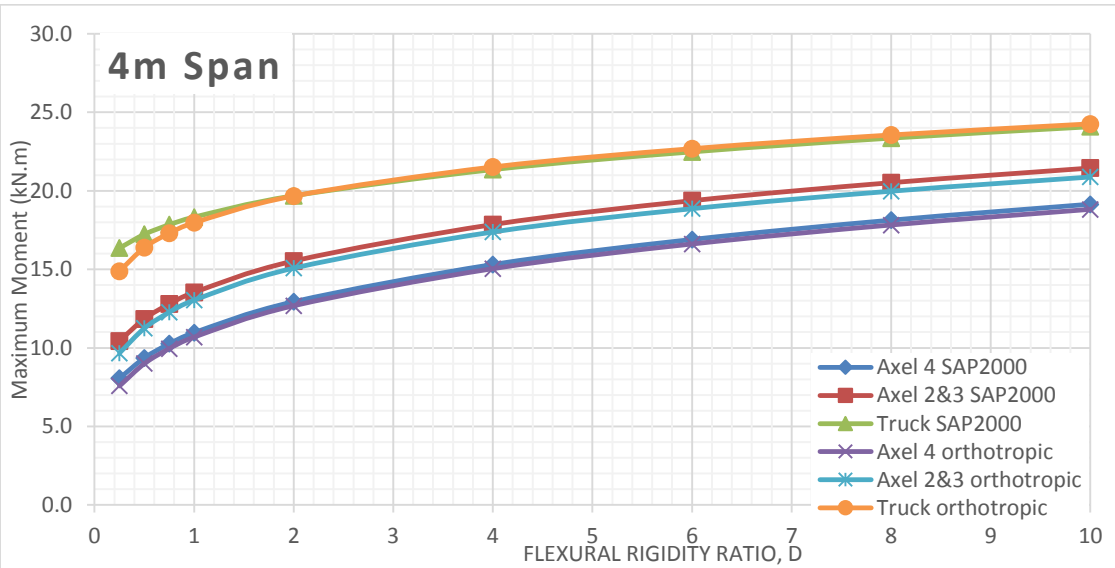

Figure 759 Moment comparison between FEA and Orthotropic Plate Theory for 4 m span of alpha 8 (main bars perpendicular to traffic)

Alpha 8 Bending Moment VS Flexural Rigidity for Different Span Length (Main bars parallel to traffic)

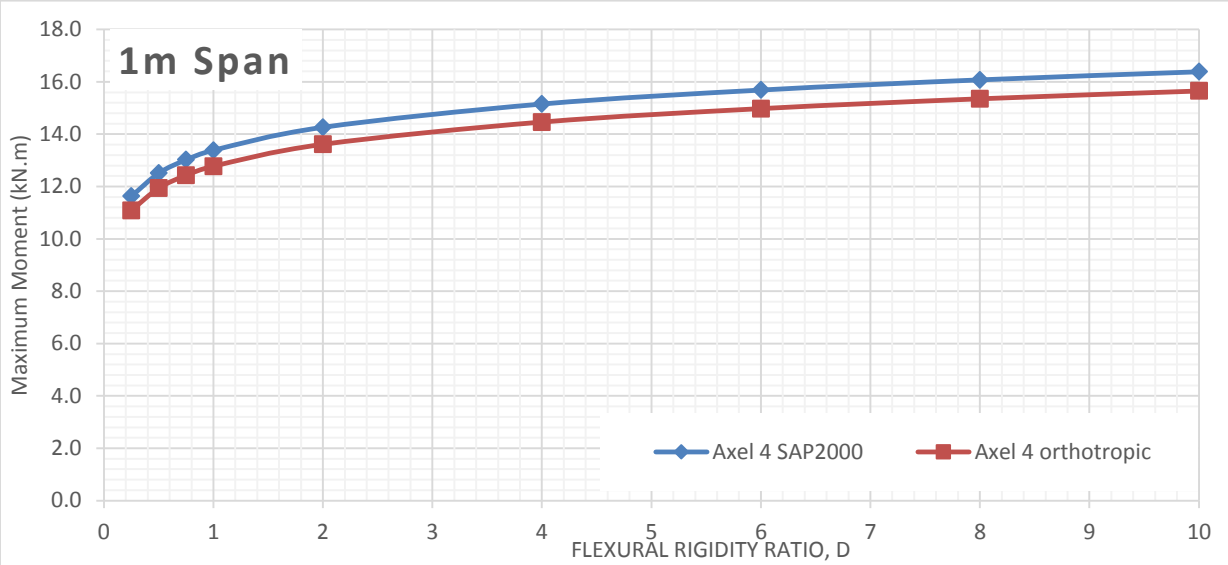

Figure 760 Moment comparison between FEA and Orthotropic Plate Theory for 1 m span of alpha 8 (main bars parallel to traffic)

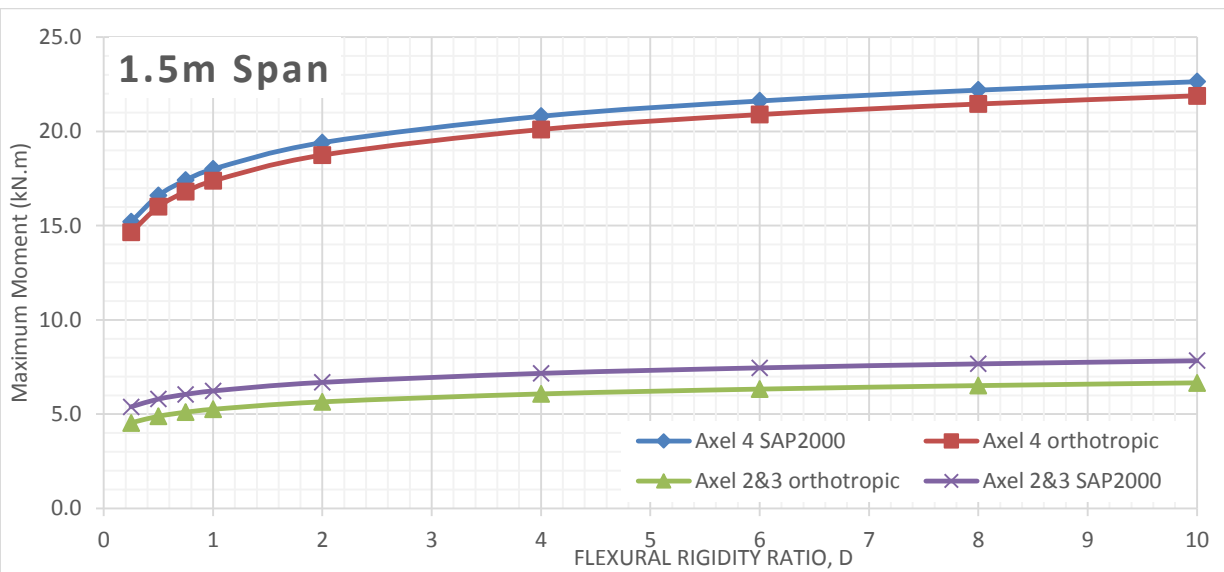

Figure 761 Moment comparison between FEA and Orthotropic Plate Theory for 1.5 m span of alpha 8 (main bars parallel to traffic)

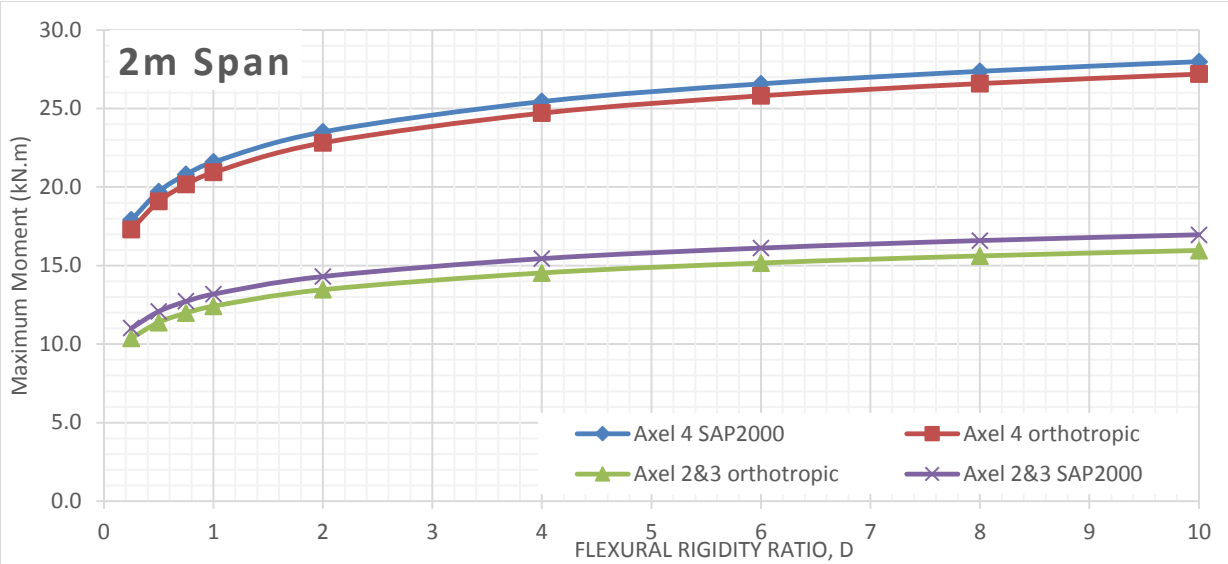

Figure 762 Moment comparison between FEA and Orthotropic Plate Theory for 2 m span of alpha 8 (main bars parallel to traffic)

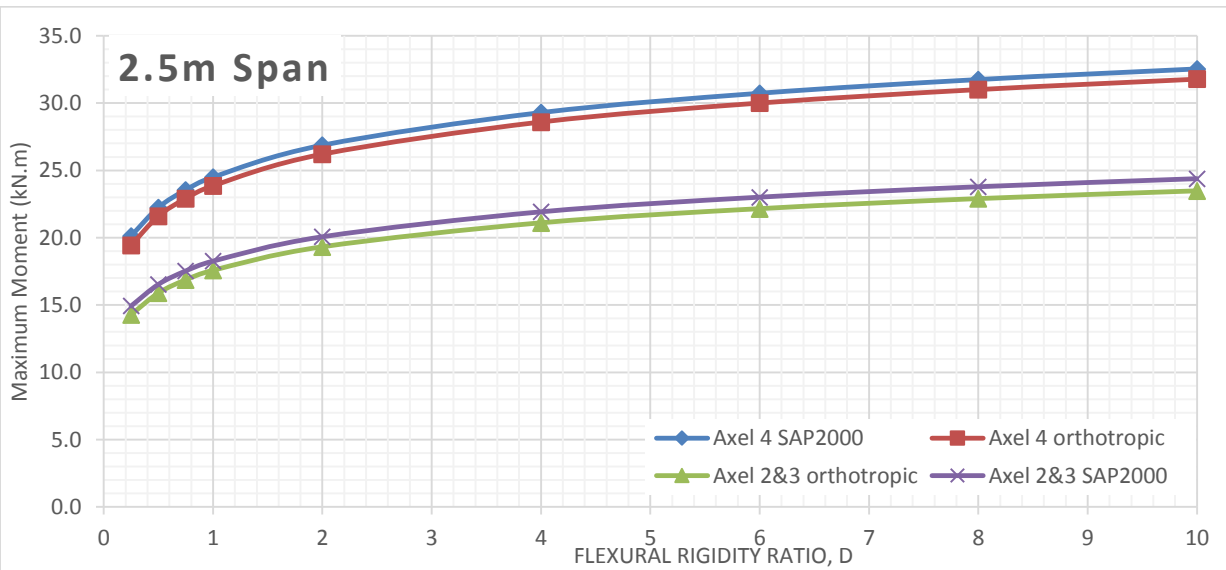

Figure 763 Moment comparison between FEA and Orthotropic Plate Theory for 2.5 m span of alpha 8 (main bars parallel to traffic)

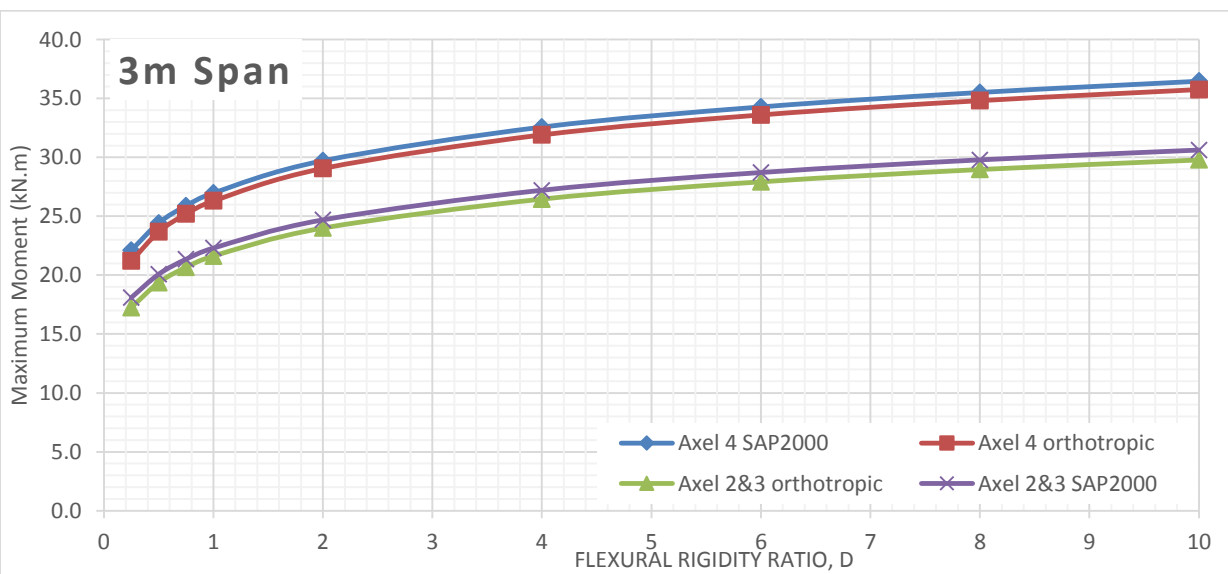

Figure 764 Moment comparison between FEA and Orthotropic Plate Theory for 3 m span of alpha 8 (main bars parallel to traffic)

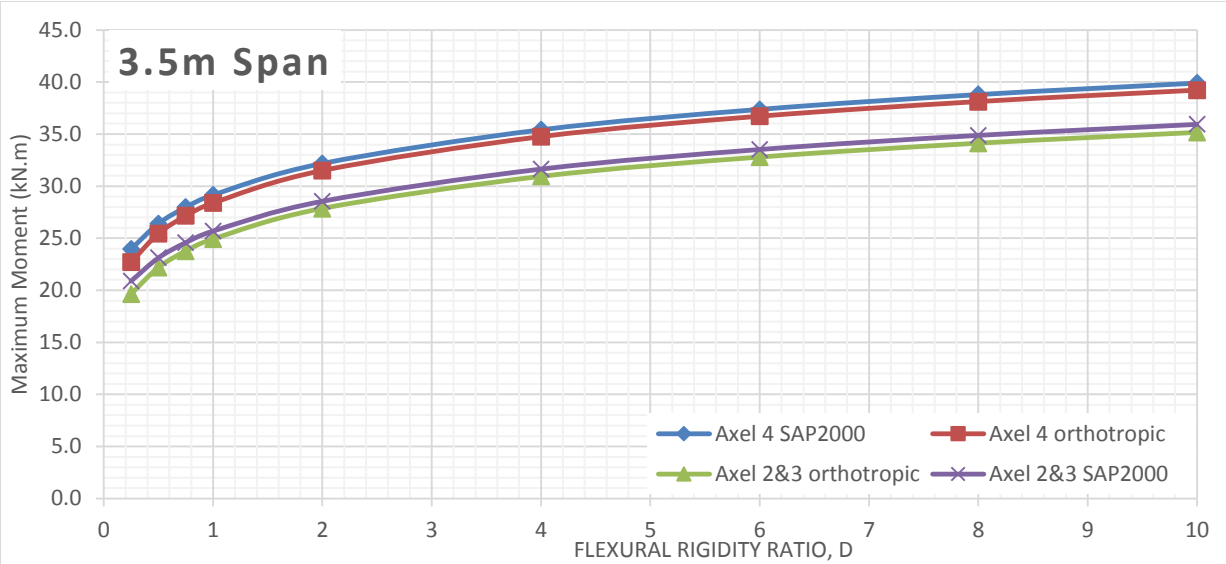

Figure 765 Moment comparison between FEA and Orthotropic Plate Theory for 3.5 m span of alpha 8 (main bars parallel to traffic)

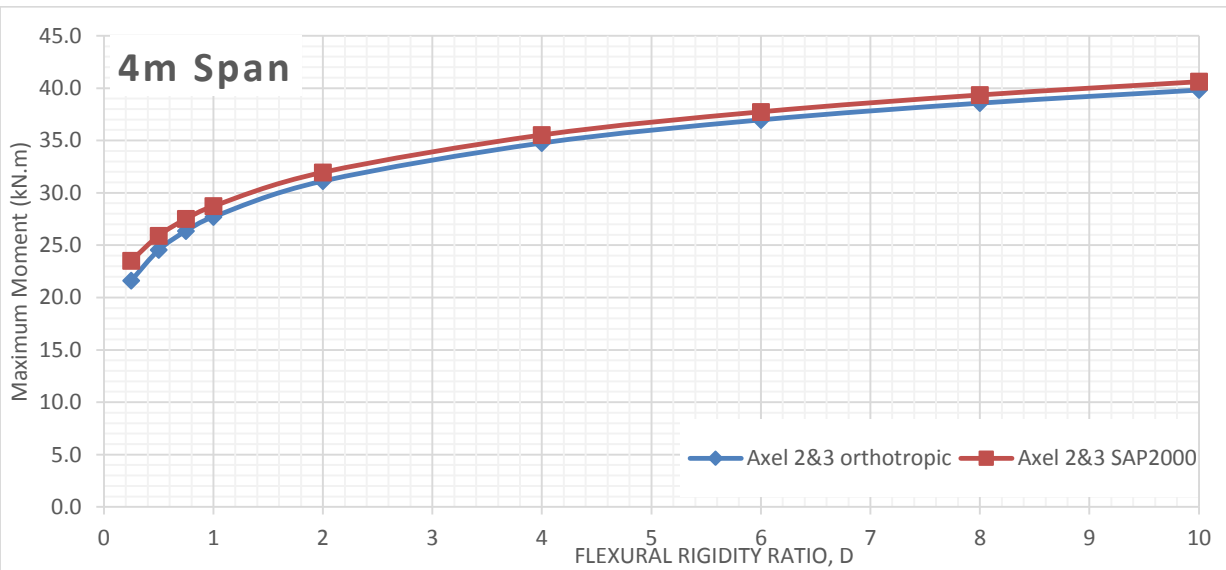

Figure 766 Moment comparison between FEA and Orthotropic Plate Theory for 4 m span of alpha 8 (main bars parallel to traffic)

Alpha 10 Bending Moment VS Flexural Rigidity for Different Span Length (Main bars perpendicular to traffic)

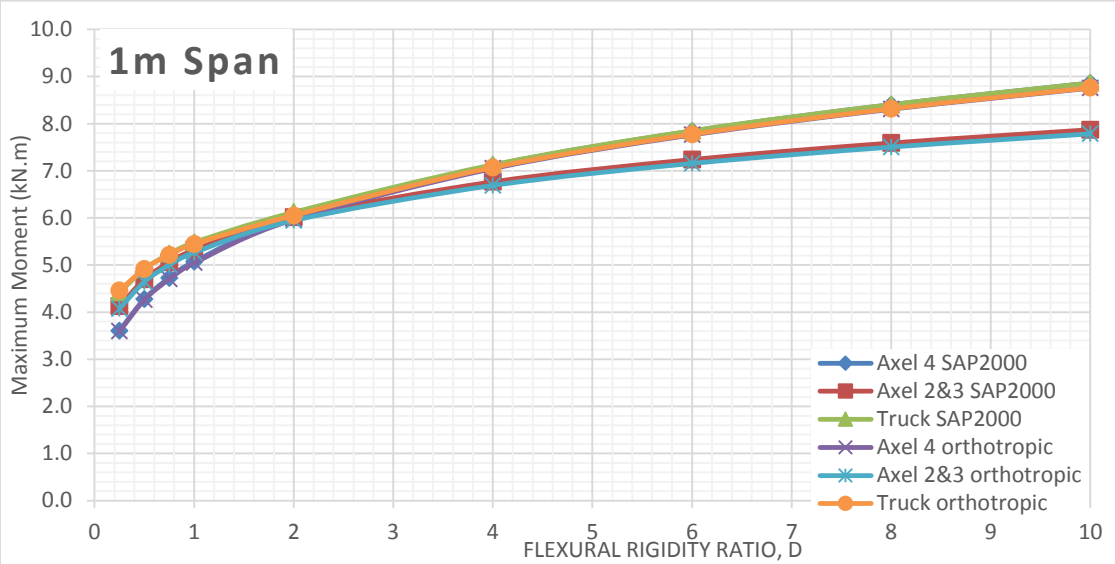

Figure 767 Moment comparison between FEA and Orthotropic Plate Theory for 1 m span of alpha 10 (main bars perpendicular to traffic)

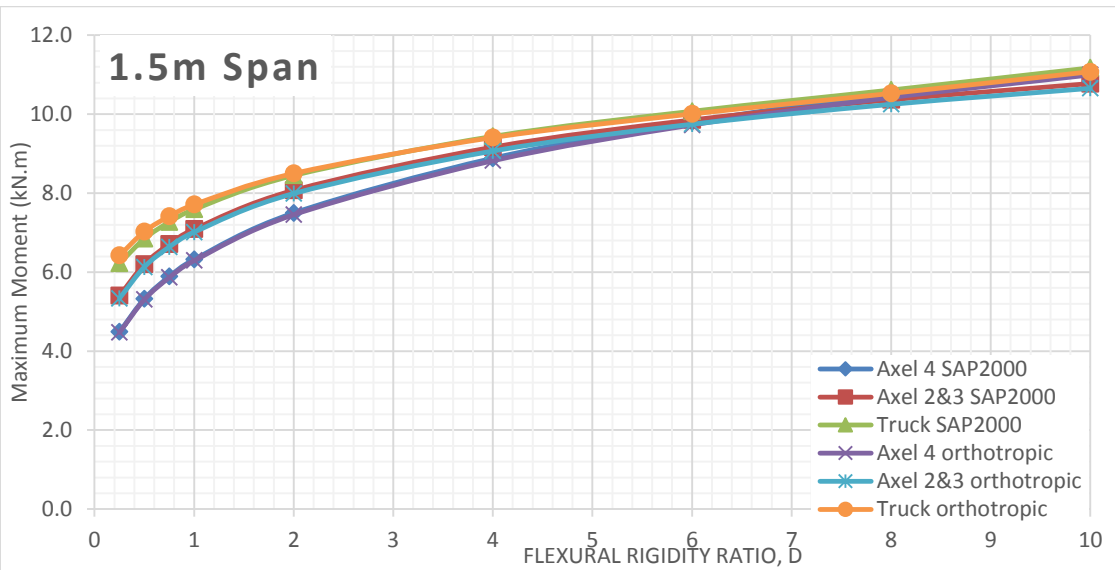

Figure 768 Moment comparison between FEA and Orthotropic Plate Theory for 1.5 m span of alpha 10 (main bars perpendicular to traffic)

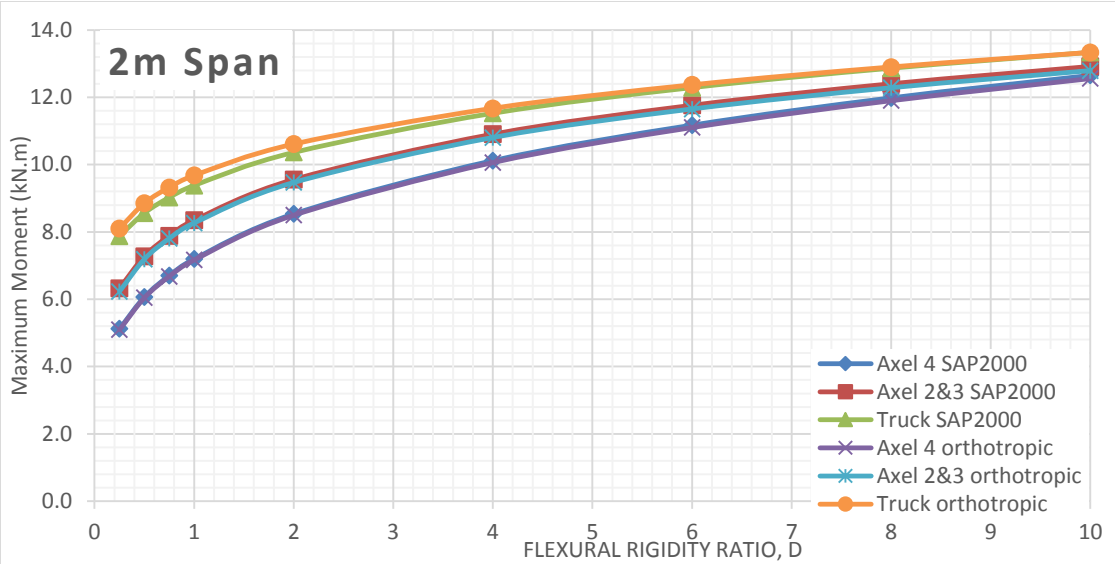

Figure 769 Moment comparison between FEA and Orthotropic Plate Theory for 2 m span of alpha 10 (main bars perpendicular to traffic)

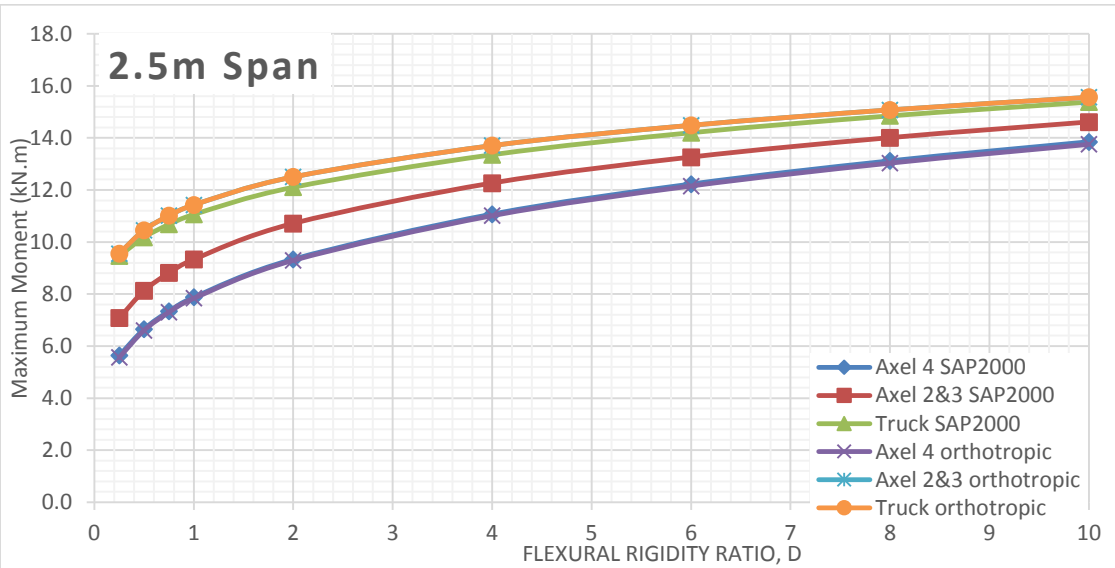

Figure 770 Moment comparison between FEA and Orthotropic Plate Theory for 2.5 m span of alpha 10 (main bars perpendicular to traffic)

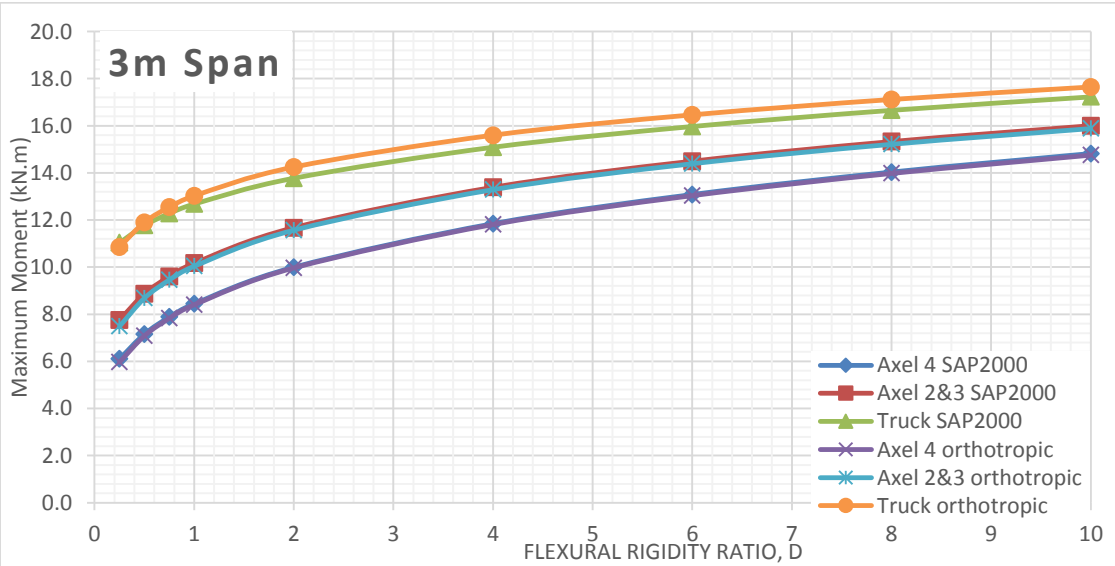

Figure 771 Moment comparison between FEA and Orthotropic Plate Theory for 3 m span of alpha 10 (main bars perpendicular to traffic)

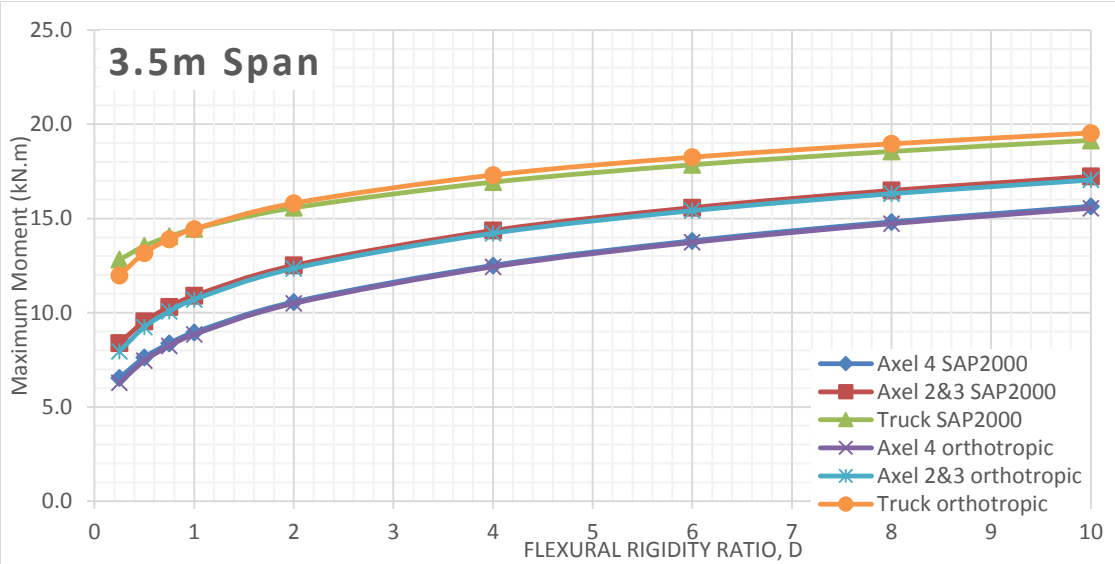

Figure 772 Moment comparison between FEA and Orthotropic Plate Theory for 3.5 m span of alpha 10 (main bars perpendicular to traffic)

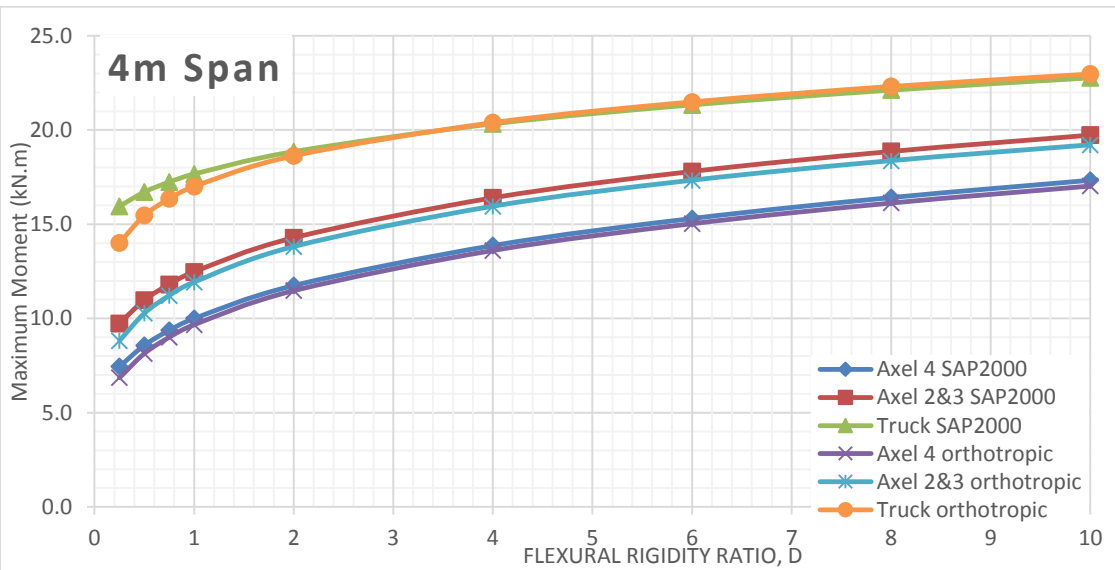

Figure 773 Moment comparison between FEA and Orthotropic Plate Theory for 4 m span of alpha 10 (main bars perpendicular to traffic)

Alpha 10 Bending Moment VS Flexural Rigidity for Different Span Length (Main bars parallel to traffic)

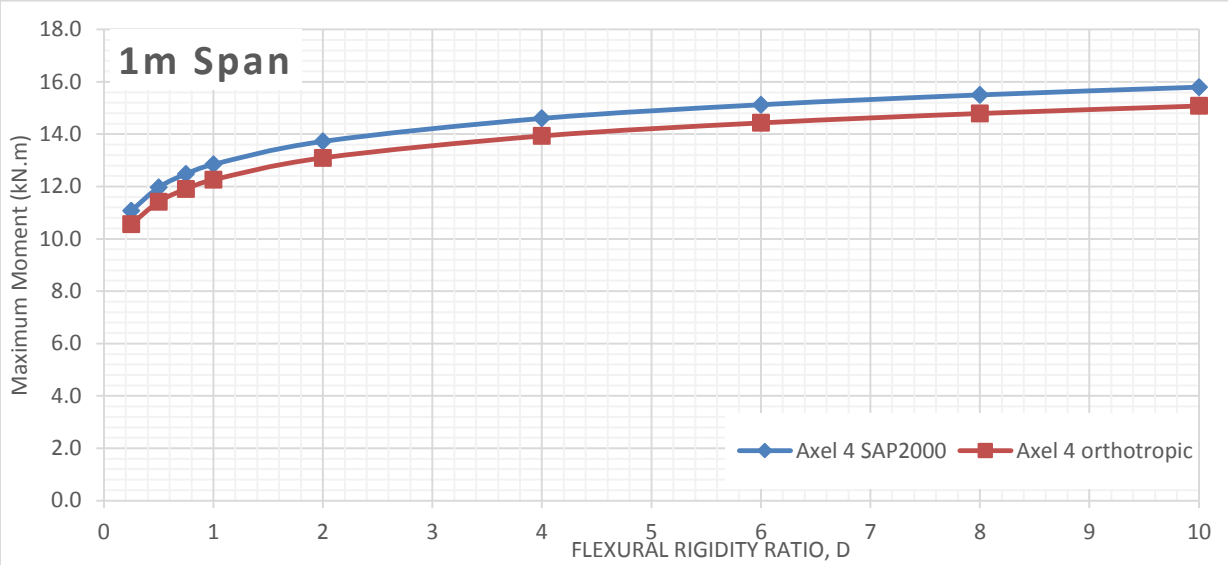

Figure 774 Moment comparison between FEA and Orthotropic Plate Theory for 1 m span of alpha 10 (main bars parallel to traffic)

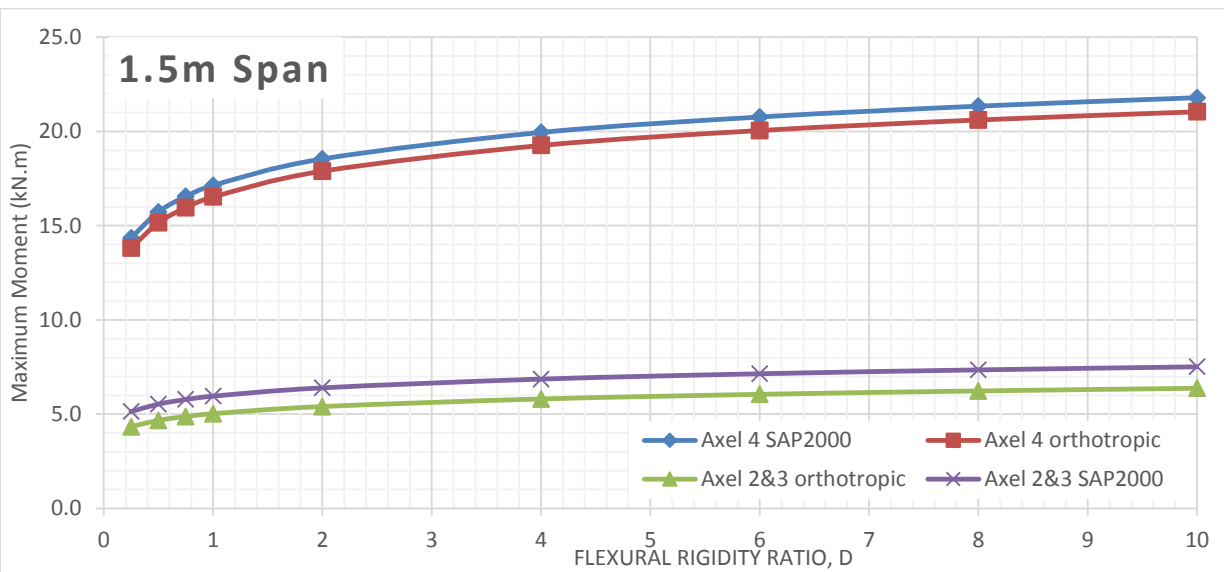

Figure 775 Moment comparison between FEA and Orthotropic Plate Theory for 1.5 m span of alpha 10 (main bars parallel to traffic)

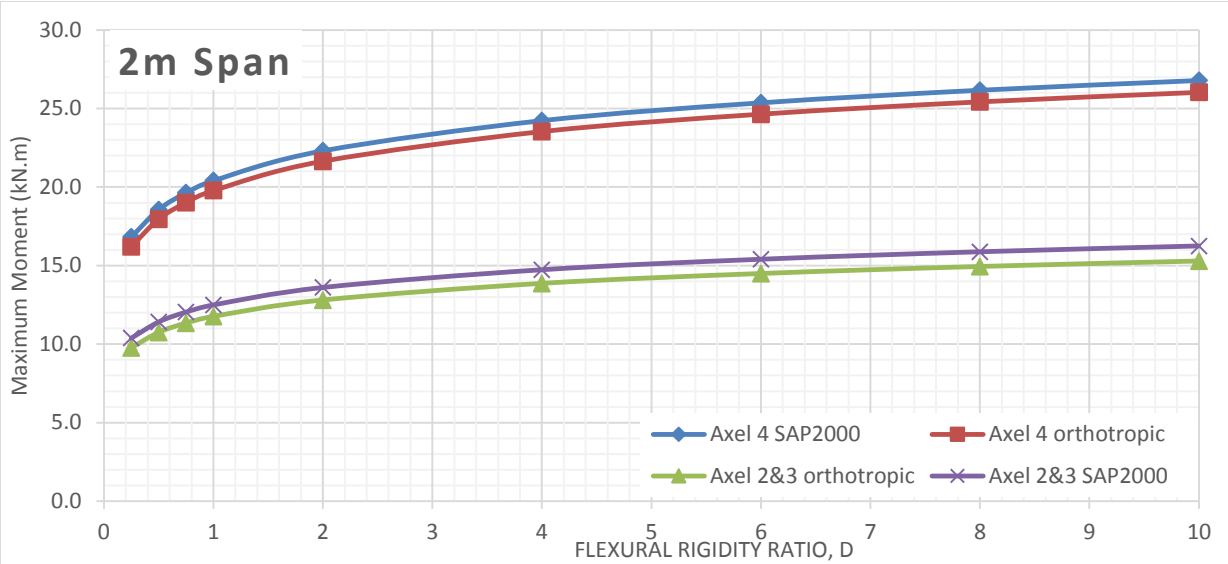

Figure 776 Moment comparison between FEA and Orthotropic Plate Theory for 2 m span of alpha 10 (main bars parallel to traffic)

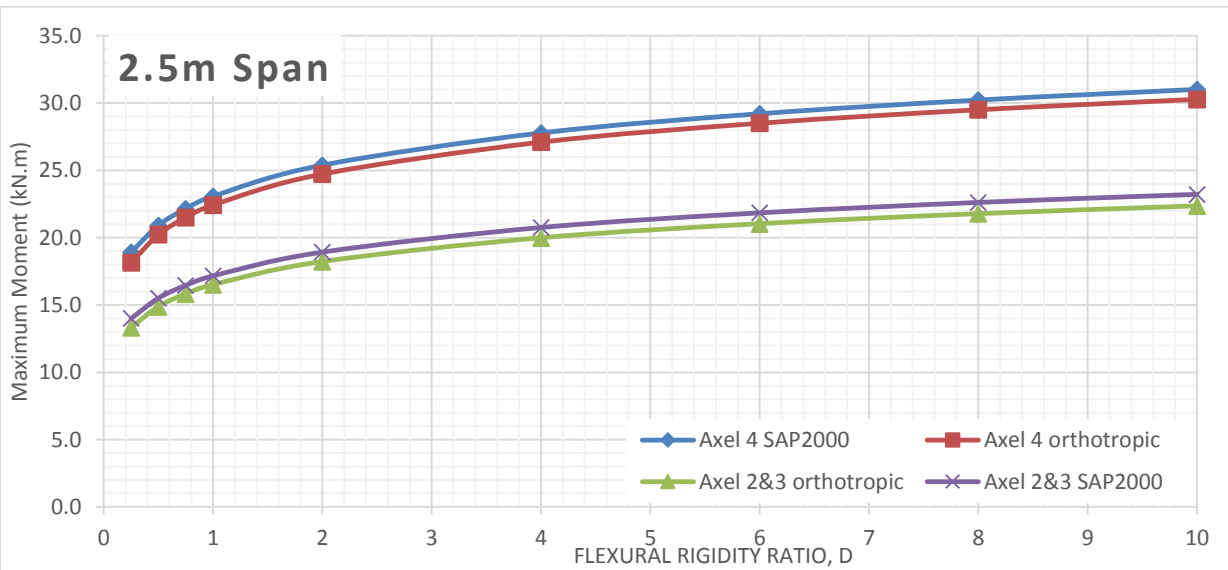

Figure 777 Moment comparison between FEA and Orthotropic Plate Theory for 2.5 m span of alpha 10 (main bars parallel to traffic)

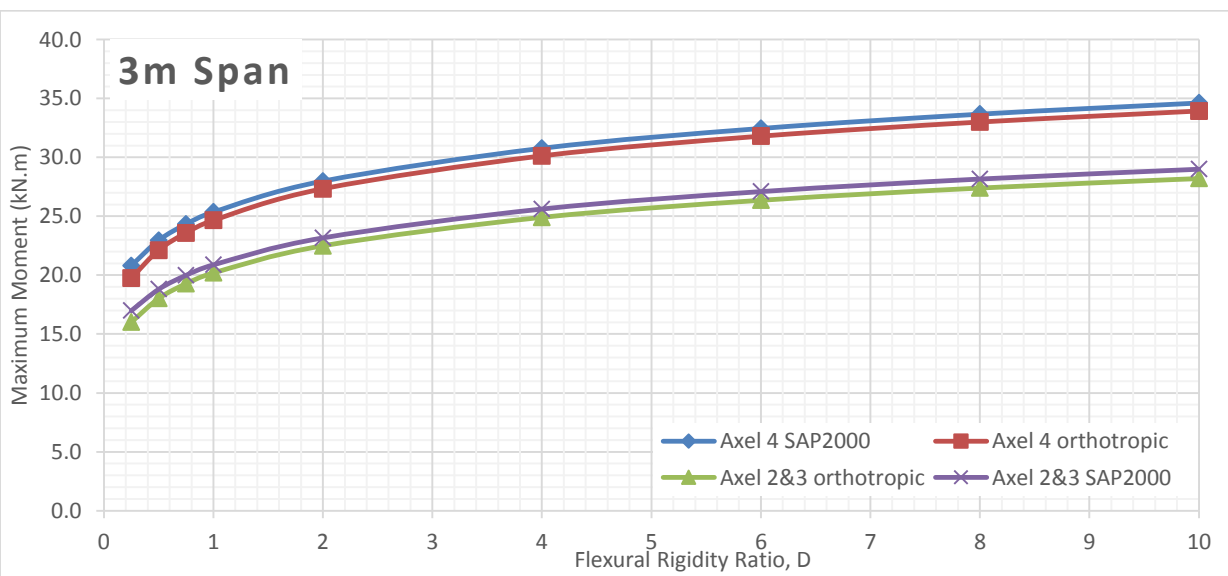

Figure 778 Moment comparison between FEA and Orthotropic Plate Theory for 3 m span of alpha 10 (main bars parallel to traffic)

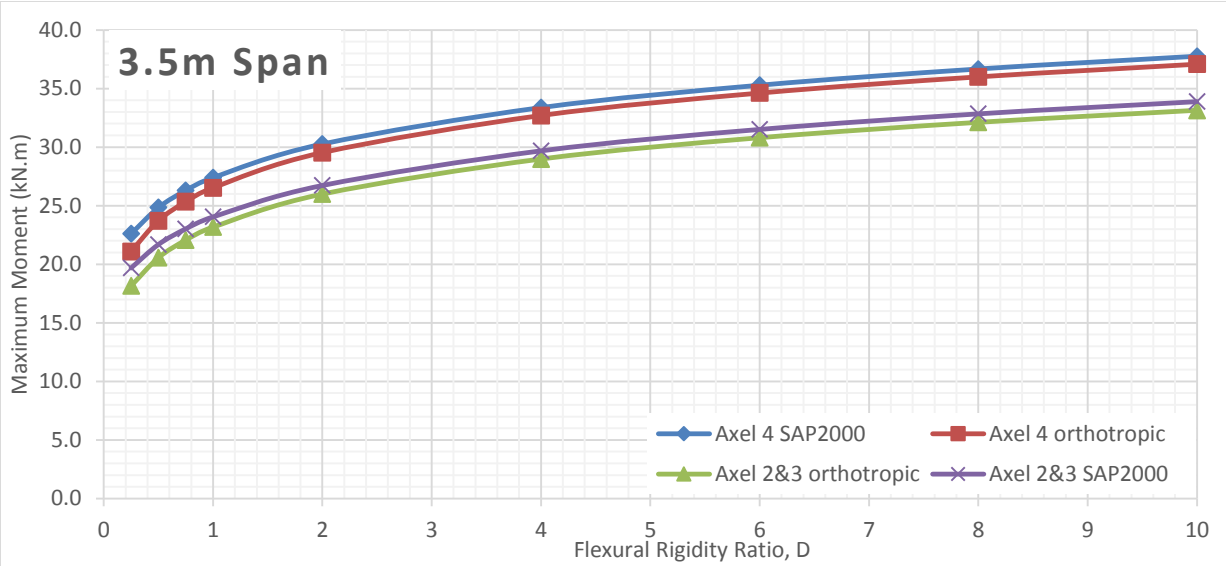

Figure 779 Moment comparison between FEA and Orthotropic Plate Theory for 3.5 m span of alpha 10 (main bars parallel to traffic)

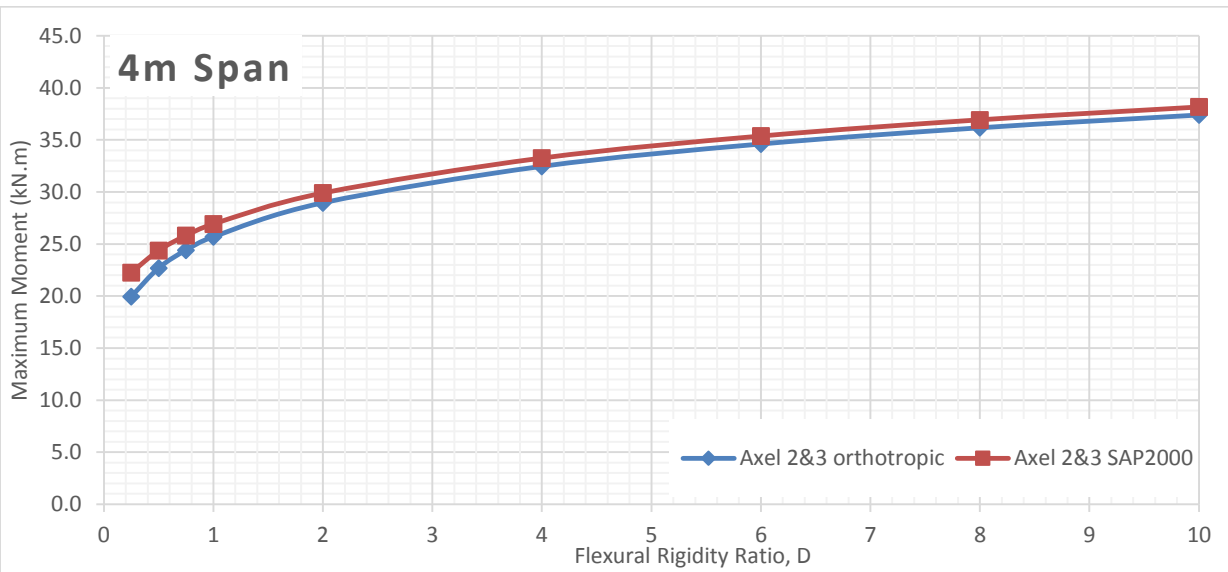

Figure 780 Moment comparison between FEA and Orthotropic Plate Theory for 4 m span of alpha 10 (main bars parallel to traffic)

D.2 Results Comparison (Deflection)

D.2.1 DEFLECTION COMPARISON RESULTS TABLES

Alpha 0.25 Deflection Comparison Results

Table 235 Maximum deflection results comparison for alpha 0.25 for slabs subjected to CHBDC axle 4 loading (main bars perpendicular to traffic)

		Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4	1	0.9807%	0.8086%	0.7753%	0.6081%	1.0889%	0.9814%	1.3772%	1.7457%	1.9403%
	1.5	0.1216%	0.3394%	0.1414%	0.2735%	0.4578%	0.4944%	0.7883%	0.9801%	1.0484%
	2	0.2038%	0.2054%	0.1867%	0.1021%	0.1864%	0.3822%	0.4673%	0.6104%	0.6799%
	2.5	0.0499%	0.0504%	0.0727%	0.0736%	0.2384%	0.2299%	0.3596%	0.4002%	0.4127%
	3	0.0091%	0.0185%	0.0021%	0.0829%	0.0920%	0.1274%	0.1172%	0.1386%	0.1902%
	3.5	0.0319%	0.0406%	0.0382%	0.0595%	0.0788%	0.0770%	0.1152%	0.1290%	0.1469%
	4	0.0003%	0.0409%	0.0262%	0.0358%	0.0419%	0.0558%	0.0916%	0.0893%	0.1149%

Table 236 Maximum deflection results comparison for alpha 0.25 for slabs subjected to CHBDC axle 2 & 3 loading (main bars perpendicular to traffic)

		Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2and 3	1	2.2179%	1.2812%	1.3157%	0.8814%	1.0938%	1.1240%	1.1073%	2.0976%	2.3331%
	1.5	0.0361%	0.0763%	0.7675%	2.6082%	1.6925%	0.9890%	0.5469%	0.9502%	0.9743%
	2	0.1365%	0.0430%	0.0307%	0.1363%	0.4746%	2.4350%	1.7339%	1.2344%	1.1666%
	2.5	0.0616%	0.0727%	0.0627%	0.0296%	0.0116%	0.2338%	1.6562%	2.8273%	2.3112%
	3	0.0542%	0.0209%	0.0236%	0.0619%	0.0712%	0.0699%	0.0280%	0.0467%	0.0322%
	3.5	0.0405%	0.0364%	0.0409%	0.0492%	0.0415%	0.0476%	0.0488%	0.0318%	0.0370%
	4	0.0235%	0.0130%	0.0363%	0.0106%	0.0412%	0.0343%	0.0497%	0.0363%	0.0469%

Table 237 Maximum deflection results comparison for alpha 0.25 for slabs subjected to CHBDC truck loading (main bars perpendicular to traffic)

		Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
TRUCK	1	0.9813%	0.8089%	0.7753%	0.6081%	1.0889%	0.9814%	1.3772%	1.7457%	1.9403%
	1.5	0.1747%	0.3126%	0.1341%	0.2723%	0.4584%	0.4944%	0.7883%	0.9801%	1.0484%
	2	0.5878%	0.6645%	0.5390%	0.4263%	0.3699%	0.3827%	0.4679%	0.6107%	0.6800%
	2.5	0.4976%	0.3862%	0.5670%	0.5318%	0.3466%	0.3097%	0.3535%	0.3995%	0.4133%
	3	2.1969%	0.5143%	0.0634%	0.3695%	0.6707%	0.4998%	0.3217%	0.2304%	0.1747%
	3.5	4.0251%	1.9621%	0.9363%	0.4067%	0.4486%	0.6340%	0.5441%	0.4566%	0.3538%
	4	5.6738%	3.4912%	2.2905%	1.5307%	0.1421%	0.5357%	0.6418%	0.6226%	0.5549%

Table 238 Maximum deflection results comparison for alpha 0.25 for slabs subjected to CHBDC axle 4 loading (main bars parallel to traffic)

		Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4 Transverse	1	3.2589%	2.2668%	1.6293%	1.7818%	1.0582%	0.7458%	0.8133%	0.6917%	0.9324%
	1.5	2.7921%	2.9280%	3.1481%	2.9787%	2.4410%	1.5810%	1.1314%	0.5961%	0.4337%
	2	2.4906%	2.3486%	2.5501%	2.5662%	2.7898%	2.6122%	2.3704%	1.9422%	1.5907%
	2.5	2.3675%	2.3216%	2.3116%	2.3090%	2.3695%	2.6205%	2.6685%	2.6645%	2.4871%
	3	2.1977%	2.3007%	2.3161%	2.2958%	2.2453%	2.3470%	2.4937%	2.5841%	2.5820%
	3.5	1.9952%	2.1669%	2.2315%	2.2586%	2.2483%	2.1921%	2.2444%	2.3183%	2.3843%

Table 239 Maximum deflection results comparison for alpha 0.25 for slabs subjected to CHBDC axle 2 & 3 loading (main bars parallel to traffic)

		Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2&3 Transverse	1.5	0.1765%	0.0561%	0.5521%	0.1258%	1.7321%	1.3834%	1.1265%	0.5204%	0.6123%
	2	0.0902%	0.1961%	0.1508%	0.0876%	0.2751%	0.4453%	2.2373%	2.6573%	1.9966%
	2.5	0.1398%	0.1448%	0.0779%	0.0728%	0.1370%	0.0893%	0.1170%	0.4368%	1.0212%
	3	0.0757%	0.0755%	0.0881%	0.0660%	0.0830%	0.0826%	0.0876%	0.0798%	0.0934%
	3.5	0.0547%	0.0503%	0.0526%	0.0632%	0.0616%	0.0708%	0.0609%	0.0637%	0.0748%
	4	0.0499%	0.0428%	0.0494%	0.0526%	0.0502%	0.0494%	0.0537%	0.0441%	0.0460%

Alpha 0.5 Deflection Comparison Results

Table 240 Maximum deflection results comparison for alpha 0.5 for slabs subjected to CHBDC axle 4 loading (main bars perpendicular to traffic)

		Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4	1	0.5512%	0.5013%	0.1000%	0.5969%	0.5289%	1.0340%	1.4971%	1.7340%	1.6899%
	1.5	0.3104%	0.3264%	0.5053%	0.3215%	0.3871%	0.5405%	0.8053%	0.7727%	1.0674%
	2	0.0162%	0.0352%	0.1166%	0.1701%	0.2322%	0.4631%	0.4491%	0.4744%	0.6160%
	2.5	0.0870%	0.0667%	0.1406%	0.1512%	0.1976%	0.3222%	0.3239%	0.3433%	0.4076%
	3	0.0028%	0.0426%	3.5326%	0.0217%	0.0919%	0.1207%	0.1069%	0.1779%	0.1678%
	3.5	0.0187%	0.0205%	0.0600%	0.0510%	0.0539%	0.0995%	0.0882%	0.1261%	0.1281%
	4	0.0245%	0.0419%	0.0168%	0.0415%	0.0370%	0.0692%	0.0838%	0.0977%	0.1047%

Table 241 Maximum deflection results comparison for alpha 0.5 for slabs subjected to CHBDC axle 2 & 3 loading (main bars perpendicular to traffic)

		Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2and 3	1	2.1590%	1.4150%	0.1752%	0.2080%	0.6362%	1.5600%	1.7048%	1.5760%	1.5460%
	1.5	0.2312%	0.0157%	1.1352%	2.6889%	1.8507%	0.8076%	0.6149%	0.8886%	0.7418%
	2	0.0387%	0.1040%	0.1435%	0.0277%	0.7963%	2.1300%	1.7059%	1.3439%	1.0906%
	2.5	0.0803%	0.0091%	0.0024%	0.0638%	0.0107%	0.3638%	1.8619%	2.5040%	2.0864%
	3	0.0657%	0.0590%	3.4422%	0.0588%	0.0117%	0.0391%	0.0349%	0.0012%	0.0333%
	3.5	0.0171%	0.0398%	0.0180%	0.0019%	0.0328%	0.0264%	0.0398%	0.0296%	0.0198%
	4	0.0052%	0.0168%	0.0270%	0.0185%	0.0198%	0.0248%	0.0244%	0.0339%	0.0356%

Table 242 Maximum deflection results comparison for alpha 0.5 for slabs subjected to CHBDC truck loading (main bars perpendicular to traffic)

		Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
TRUCK	1	0.5502%	0.5013%	0.1000%	0.5969%	0.5289%	1.0340%	1.4971%	1.7340%	1.6899%
	1.5	0.1113%	0.3249%	0.5022%	0.3196%	0.3870%	0.5405%	0.8053%	0.7727%	1.0674%
	2	0.4403%	0.0209%	0.1307%	0.2405%	0.2290%	0.4621%	0.4489%	0.4744%	0.6160%
	2.5	1.5055%	0.5475%	0.1553%	0.0209%	0.1604%	0.3202%	0.3210%	0.3416%	0.4067%
	3	3.4300%	1.6544%	3.9175%	0.5896%	0.0036%	0.1939%	0.1660%	0.1440%	0.1335%
	3.5	5.1278%	3.1390%	2.1546%	1.5185%	0.4639%	0.0637%	0.1612%	0.2104%	0.1874%
	4	6.5719%	4.6278%	3.4931%	2.7169%	1.2417%	0.3124%	0.0029%	0.1144%	0.1644%

Table 243 Maximum deflection results comparison for alpha 0.5 for slabs subjected to CHBDC axle 4 loading (main bars parallel to traffic)

Deflection (m)

	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4 Transverse	1	3.1713%	2.8175%	1.7059%	1.3968%	0.8136%	1.0285%	1.2482%	1.3242%	0.9341%
	1.5	2.7178%	2.7521%	2.5215%	2.3945%	1.9963%	1.2256%	1.0448%	0.9108%	0.5217%
	2	2.4131%	2.2712%	2.3736%	2.2984%	2.3427%	2.1429%	1.9374%	1.7144%	1.4243%
	2.5	2.2485%	2.2902%	2.2273%	2.2192%	2.2042%	2.2478%	2.2269%	2.1230%	2.0478%
	3	2.0368%	2.1972%	0.0577%	2.2121%	2.1285%	2.1569%	2.2198%	2.2064%	2.2295%
	3.5	1.8584%	2.0332%	2.1021%	2.1326%	2.1756%	2.0990%	2.0953%	2.1333%	2.1686%

Table 244 Maximum deflection results comparison for alpha 0.5 for slabs subjected to CHBDC axle 2 & 3 loading (main bars parallel to traffic)

		Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2&3 Transverse	1.5	0.1085%	0.1077%	0.5176%	0.1783%	2.6478%	1.5286%	0.7629%	0.9376%	0.3182%
	2	0.2497%	0.2571%	0.1134%	0.1183%	0.1235%	0.8518%	2.6461%	2.1108%	1.6448%
	2.5	0.0676%	0.0752%	0.1449%	0.0807%	0.0789%	0.1147%	0.2206%	0.6265%	1.3416%
	3	0.0876%	0.0888%	2.0882%	0.0629%	0.0857%	0.0792%	0.0797%	0.0830%	0.1582%
	3.5	0.0540%	0.0481%	0.0458%	0.0474%	0.0713%	0.0647%	0.0744%	0.0771%	0.0598%
	4	0.0489%	0.0442%	0.0538%	0.0418%	0.0562%	0.0560%	0.0533%	0.0477%	0.0542%

Alpha 0.75 Deflection Comparison Results

Table 245 Maximum deflection results comparison for alpha 0.75 for slabs subjected to CHBDC axle 4 loading (main bars perpendicular to traffic)

		Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4	1	0.4531%	0.8923%	1.1671%	0.8684%	0.8619%	1.5962%	1.0383%	1.8096%	2.1314%
	1.5	0.3979%	0.4438%	0.2832%	0.1318%	0.6056%	0.4962%	0.8531%	0.7155%	0.8512%
	2	0.2276%	0.1646%	0.1121%	0.1653%	0.3204%	0.4225%	0.4468%	0.5105%	0.6046%
	2.5	0.0336%	0.0530%	0.1559%	0.1974%	0.1868%	0.2236%	0.3226%	0.3662%	0.3646%
	3	0.0491%	0.0492%	0.0430%	0.0821%	0.1169%	0.0824%	0.1308%	0.1640%	0.1482%
	3.5	0.0247%	0.0409%	0.0498%	0.0523%	0.0694%	0.0875%	0.1056%	0.1310%	0.1431%
	4	0.0032%	0.0184%	0.0133%	0.0356%	0.0483%	0.0645%	0.0739%	0.0871%	0.1068%

Table 246 Maximum deflection results comparison for alpha 0.75 for slabs subjected to CHBDC axle 2 & 3 loading (main bars perpendicular to traffic)

		Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2and 3	1	3.0914%	0.5868%	1.3999%	0.0325%	0.1343%	1.3954%	1.3807%	1.9745%	1.4050%
	1.5	0.1232%	0.2661%	1.2093%	2.5127%	1.5393%	0.9565%	0.8106%	0.7268%	0.9990%
	2	0.0703%	0.0224%	0.0604%	0.1486%	0.8006%	2.0534%	1.5077%	1.2775%	1.1710%
	2.5	0.0062%	0.0291%	0.0841%	0.0773%	0.0439%	0.4899%	1.9365%	2.2779%	1.9904%
	3	0.0042%	0.0423%	0.0574%	0.0034%	0.0044%	0.0213%	0.0055%	0.0008%	0.0150%
	3.5	0.0275%	0.0022%	0.0035%	0.0395%	0.0389%	0.0354%	0.0337%	0.0110%	0.0208%
	4	0.0200%	0.0314%	0.0242%	0.0118%	0.0103%	0.0407%	0.0405%	0.0200%	0.0276%

Table 247 Maximum deflection results comparison for alpha 0.75 for slabs subjected to CHBDC truck loading (main bars perpendicular to traffic)

		Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
TRUCK	1	0.4528%	0.8923%	1.1671%	0.8684%	0.8619%	1.5962%	1.0383%	1.8096%	2.1314%
	1.5	0.4010%	0.2357%	0.2859%	0.1327%	0.6056%	0.4962%	0.8531%	0.7155%	0.8512%
	2	0.8941%	0.3512%	0.0990%	0.0450%	0.3249%	0.4229%	0.4468%	0.5105%	0.6046%
	2.5	2.5236%	1.2310%	0.8243%	0.5348%	0.2122%	0.2313%	0.3249%	0.3670%	0.3649%
	3	4.2592%	2.6136%	1.8614%	1.3390%	0.5293%	0.1267%	0.0400%	0.0300%	0.0131%
	3.5	5.8128%	4.0320%	3.0750%	2.4439%	1.2532%	0.4820%	0.2153%	0.1199%	0.0450%
	4	7.0240%	5.3748%	4.3468%	3.6529%	2.1141%	1.0279%	0.6003%	0.3728%	0.2448%

Table 248 Maximum deflection results comparison for alpha 0.75 for slabs subjected to CHBDC axle 4 loading (main bars parallel to traffic)

		Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4 Transverse	1	2.7840%	1.7066%	2.1955%	1.1906%	0.8140%	0.5615%	0.7838%	0.7595%	0.7678%
	1.5	2.3264%	2.3537%	2.3947%	2.2652%	1.7983%	1.4077%	0.8952%	0.9702%	0.6977%
	2	2.3239%	2.2580%	2.1969%	2.0821%	2.1375%	1.9594%	1.6596%	1.5276%	1.3282%
	2.5	2.1748%	2.1878%	2.1353%	2.1369%	2.0658%	2.0526%	1.9400%	1.8454%	1.8247%
	3	1.9694%	2.0845%	2.0881%	2.1013%	2.0365%	1.9879%	1.9813%	1.9741%	1.9745%
	3.5	1.7403%	1.9062%	2.0121%	2.0297%	2.0786%	1.9787%	1.9768%	1.9817%	1.9613%

Table 249 Maximum deflection results comparison for alpha 0.75 for slabs subjected to CHBDC axle 2 & 3 loading (main bars parallel to traffic)

		Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2&3 Transverse	1.5	0.5129%	0.0977%	0.7260%	0.3792%	2.7664%	1.7715%	0.8995%	0.9129%	0.7425%
	2	0.1045%	0.2297%	0.2469%	0.1254%	0.1925%	1.0956%	2.3569%	1.9761%	1.5795%
	2.5	0.0710%	0.1528%	0.0776%	0.1324%	0.1012%	0.1566%	0.3058%	0.8609%	1.4915%
	3	0.0757%	0.0683%	0.0975%	0.0948%	0.0597%	0.1040%	0.0953%	0.1062%	0.2312%
	3.5	0.0514%	0.0483%	0.0565%	0.0539%	0.0621%	0.0515%	0.0516%	0.0622%	0.0660%
	4	0.0376%	0.0563%	0.0453%	0.0417%	0.0492%	0.0561%	0.0422%	0.0446%	0.0567%

Alpha 1 Deflection Comparison Results

Table 250 Maximum deflection results comparison for alpha 1 for slabs subjected to CHBDC axle 4 loading (main bars perpendicular to traffic)

		Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4	1	0.6059%	0.3279%	0.7240%	0.8955%	0.7536%	1.5715%	1.5765%	1.9346%	1.7866%
	1.5	0.3767%	0.2141%	0.1304%	0.4478%	0.5818%	0.7431%	0.6657%	0.9817%	0.8311%
	2	0.0581%	0.0554%	0.0331%	0.2722%	0.2546%	0.3955%	0.4972%	0.4898%	0.6133%
	2.5	0.1409%	0.1364%	0.1027%	0.0699%	0.2290%	0.2901%	0.3261%	0.3954%	0.4406%
	3	0.0512%	0.0792%	0.0994%	0.0247%	0.0729%	0.1326%	0.1595%	0.1752%	0.1954%
	3.5	0.0553%	0.0427%	0.0144%	0.0620%	0.0747%	0.0565%	0.0902%	0.1183%	0.1353%
	4	0.0048%	0.0487%	0.0086%	0.0124%	0.0354%	0.0558%	0.0913%	0.1056%	0.1047%

Table 251 Maximum deflection results comparison for alpha 1 for slabs subjected to CHBDC axle 2 & 3 loading (main bars perpendicular to traffic)

		Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2and 3	1	3.3002%	0.8879%	0.1465%	0.7708%	0.0962%	1.2268%	0.7637%	1.9984%	1.8368%
	1.5	0.2101%	0.0268%	1.4253%	2.3554%	1.5180%	1.3059%	1.0671%	0.8919%	0.6619%
	2	0.1100%	0.0319%	0.1093%	0.0682%	0.9437%	2.0891%	1.6277%	1.2942%	1.1075%
	2.5	0.0012%	0.0272%	0.0173%	0.0549%	0.0283%	0.6253%	1.9558%	2.1448%	1.8902%
	3	0.0226%	0.0080%	0.0127%	0.0048%	0.0092%	0.0096%	0.0039%	0.0095%	0.0369%
	3.5	0.0427%	0.0075%	0.0078%	0.0146%	0.0025%	0.0465%	0.0194%	0.0047%	0.0354%
	4	0.0329%	0.0173%	0.0168%	0.0194%	0.0094%	0.0171%	0.0239%	0.0308%	0.0215%

Table 252 Maximum deflection results comparison for alpha 1 for slabs subjected to CHBDC truck loading (main bars perpendicular to traffic)

		Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
TRUCK	1	0.6048%	0.3280%	0.7240%	0.8955%	0.7536%	1.5715%	1.5765%	1.9346%	1.7866%
	1.5	0.6938%	0.2630%	0.1245%	0.4454%	0.5816%	0.7431%	0.6657%	0.9817%	0.8311%
	2	1.6627%	0.9054%	0.5658%	0.3213%	0.2449%	0.3944%	0.4970%	0.4897%	0.6133%
	2.5	3.1660%	1.9977%	1.3898%	1.0698%	0.4032%	0.5563%	0.3208%	0.3933%	0.4396%
	3	5.9847%	4.0792%	3.1018%	2.4689%	1.3428%	0.6136%	0.3293%	0.2581%	0.1815%
	3.5	7.5618%	5.6984%	4.6087%	3.8972%	2.3447%	1.2198%	0.8022%	0.5532%	0.4056%
	4	8.7018%	7.1299%	6.0349%	5.2514%	3.4595%	2.0226%	1.3897%	1.0391%	0.7941%

Table 253 Maximum deflection results comparison for alpha 1 for slabs subjected to CHBDC axle 4 loading (main bars parallel to traffic)

Deflection (m)

	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4 Transverse	1	2.1597%	2.5724%	2.2193%	1.4935%	0.9527%	0.7675%	0.6906%	1.0559%	1.3255%
	1.5	2.0520%	2.1402%	2.0798%	1.9327%	1.6432%	1.4259%	1.0305%	0.8633%	0.9039%
	2	2.2236%	2.0501%	2.0731%	1.9588%	1.9032%	1.6991%	1.5256%	1.4080%	1.2294%
	2.5	2.0815%	2.0332%	2.0030%	1.9942%	1.9162%	1.8278%	1.7820%	1.6737%	1.6013%
	3	1.8216%	1.9505%	2.0002%	2.0198%	1.9322%	1.8917%	1.8627%	1.7833%	1.7644%
	3.5	1.6588%	1.8338%	1.8885%	1.9521%	1.9936%	1.9053%	1.8605%	1.8479%	1.8298%

Table 254 Maximum deflection results comparison for alpha 1 for slabs subjected to CHBDC axle 2 & 3 loading (main bars parallel to traffic)

		Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2&3 Transverse	1.5	0.5744%	0.0609%	0.5182%	0.1231%	2.0385%	1.5529%	1.1644%	0.8395%	1.0193%
	2	0.2634%	0.2088%	0.2350%	0.1979%	0.2762%	1.0658%	1.9075%	1.6987%	1.4770%
	2.5	0.1118%	0.1503%	0.1111%	0.0860%	0.1202%	0.1002%	0.4040%	0.9911%	1.5800%
	3	0.0593%	0.0552%	0.0623%	0.0552%	0.0785%	0.1001%	0.0939%	0.1396%	0.3347%
	3.5	0.0611%	0.0516%	0.0739%	0.0642%	0.0487%	0.0596%	0.0643%	0.0591%	0.0675%
	4	0.0469%	0.0481%	0.0509%	0.0539%	0.0528%	0.0554%	0.0564%	0.0560%	0.0589%

Alpha 2 Deflection Comparison Results

Table 255 Maximum deflection results comparison for alpha 2 for slabs subjected to CHBDC axle 4 loading (main bars perpendicular to traffic)

		Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4	1	0.5106%	0.0082%	0.2904%	0.2099%	0.3074%	1.0163%	0.8063%	1.6251%	1.5263%
	1.5	0.2270%	0.3998%	0.2436%	0.1323%	0.4253%	0.7336%	0.5234%	0.7585%	0.9524%
	2	0.0719%	0.1723%	0.3305%	0.3290%	0.1544%	0.2277%	0.3674%	0.5639%	0.6418%
	2.5	0.0935%	0.0072%	0.1669%	0.0791%	0.1739%	0.2331%	0.3619%	0.3336%	0.4186%
	3	0.1364%	0.0511%	0.0656%	0.0860%	0.0462%	0.0953%	0.1531%	0.1667%	0.1752%
	3.5	0.0446%	0.0088%	0.0382%	0.0500%	0.0426%	0.0615%	0.0932%	0.1396%	0.1158%
	4	0.2015%	0.1033%	0.0479%	0.0188%	0.0686%	0.0650%	0.0764%	0.0824%	0.0902%

Table 256 Maximum deflection results comparison for alpha 2 for slabs subjected to CHBDC axle 2 & 3 loading (main bars perpendicular to traffic)

		Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2and 3	1	1.0522%	1.5491%	1.3948%	0.7492%	0.4077%	1.5330%	1.6146%	1.8412%	1.6029%
	1.5	0.1964%	0.2188%	1.5778%	1.8167%	1.6110%	0.8778%	1.1578%	0.8909%	0.9750%
	2	0.0229%	0.0029%	0.0220%	0.0834%	1.1872%	1.6412%	1.3329%	1.1339%	1.3156%
	2.5	0.0836%	0.0676%	0.0065%	0.0457%	0.0236%	0.8965%	1.9970%	1.8377%	1.6303%
	3	0.0437%	0.0381%	0.0348%	0.0403%	0.0190%	0.0299%	0.0127%	0.0297%	0.0973%
	3.5	0.0777%	0.0138%	0.0271%	0.0222%	0.0200%	0.0020%	0.0109%	0.0220%	0.0038%
	4	0.2706%	0.0868%	0.0150%	0.0071%	0.0353%	0.0088%	0.0023%	0.0133%	0.0200%

Table 257 Maximum deflection results comparison for alpha 2 for slabs subjected to CHBDC truck loading (main bars perpendicular to traffic)

		Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
TRUCK	1	0.6324%	0.0204%	0.3012%	0.2150%	0.3068%	1.0163%	0.8062%	1.6251%	1.5263%
	1.5	1.8129%	0.3554%	0.8539%	0.0553%	0.3777%	0.7242%	0.5202%	0.7571%	0.9517%
	2	3.5740%	2.2179%	1.7380%	1.1645%	0.6934%	0.3652%	0.3145%	0.5358%	0.6251%
	2.5	4.9113%	3.8605%	3.0893%	2.6822%	1.5397%	0.1173%	1.6895%	0.2957%	0.4331%
	3	6.0099%	5.1151%	4.4942%	3.9812%	2.8659%	1.8470%	1.3271%	1.0558%	0.7225%
	3.5	6.3672%	5.9473%	5.4486%	5.0150%	3.8695%	2.6974%	2.0993%	1.7502%	1.4711%
	4	6.1053%	6.3320%	6.0771%	5.7702%	4.7490%	3.5648%	2.9123%	2.4601%	2.1456%

Table 258 Maximum deflection results comparison for alpha 2 for slabs subjected to CHBDC axle 4 loading (main bars parallel to traffic)

Deflection (m)

	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4 Transverse	1	1.9518%	1.5772%	1.9002%	1.7847%	1.0107%	1.2851%	0.7715%	1.3118%	0.5387%
	1.5	1.7731%	1.7540%	1.7276%	1.4309%	1.3186%	1.0371%	0.9233%	0.9361%	1.0705%
	2	1.8918%	1.7919%	1.7142%	1.6950%	1.4973%	1.3215%	1.1480%	1.1625%	1.1502%
	2.5	1.7968%	1.8011%	1.7045%	1.6409%	1.5852%	1.4576%	1.3191%	1.3365%	1.2463%
	3	1.5939%	1.6767%	1.7066%	1.7045%	1.6552%	1.5412%	1.4437%	1.4162%	1.3742%
	3.5	1.5355%	1.5975%	1.6613%	1.6873%	1.6761%	1.5727%	1.5305%	1.5045%	1.4544%

Table 259 Maximum deflection results comparison for alpha 2 for slabs subjected to CHBDC axle 2 & 3 loading (main bars parallel to traffic)

		Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2&3 Transverse	1.5	0.1590%	0.6513%	0.8317%	1.0385%	1.6406%	1.3175%	1.1410%	0.9215%	1.1435%
	2	0.2796%	0.2423%	0.1667%	0.1939%	0.3135%	1.3794%	1.3928%	1.2744%	1.1937%
	2.5	0.1020%	0.0687%	0.1267%	0.0907%	0.0812%	0.2290%	0.6726%	1.1183%	1.5623%
	3	0.0871%	0.0867%	0.0755%	0.0963%	0.0864%	0.0738%	0.1130%	0.2902%	0.4896%
	3.5	0.1550%	0.0960%	0.0799%	0.0682%	0.0490%	0.0536%	0.0620%	0.0554%	0.1069%
	4	0.3389%	0.1401%	0.0807%	0.0691%	0.0506%	0.0477%	0.0474%	0.0518%	0.0501%

Alpha 4 Deflection Comparison Results

Table 260 Maximum deflection results comparison for alpha 4 for slabs subjected to CHBDC axle 4 loading (main bars perpendicular to traffic)

		Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4	1	0.8693%	0.6291%	0.5386%	0.3211%	1.5542%	0.2626%	1.1545%	1.2873%	1.2784%
	1.5	0.0766%	0.2478%	0.5104%	0.5897%	0.2703%	0.1979%	0.4013%	0.5139%	0.7591%
	2	0.1793%	0.1117%	0.3853%	0.0383%	0.0845%	0.3866%	0.2564%	0.4966%	0.5196%
	2.5	0.0346%	0.1994%	0.0397%	0.1799%	0.1741%	0.2321%	0.3210%	0.3280%	0.3112%
	3	0.2543%	0.0916%	0.0969%	0.0813%	0.0887%	0.1210%	0.1076%	0.1261%	0.1220%
	3.5	0.9241%	0.3131%	0.1608%	0.1159%	0.0767%	0.0728%	0.1090%	0.1207%	0.1044%
	4	1.7271%	0.6496%	0.3643%	0.2715%	0.0734%	0.0527%	0.0870%	0.0832%	0.1074%

Table 261 Maximum deflection results comparison for alpha 4 for slabs subjected to CHBDC axle 2 & 3 loading (main bars perpendicular to traffic)

		Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2and 3	1	0.5303%	2.4308%	0.6169%	0.6092%	0.1939%	0.5294%	0.8970%	1.0690%	0.4686%
	1.5	0.0045%	0.9567%	1.7433%	1.8765%	1.3983%	1.3591%	0.8871%	0.8779%	1.1725%
	2	0.2366%	0.1663%	0.1020%	0.3054%	1.2575%	1.2763%	1.3896%	1.1564%	1.0286%
	2.5	0.1980%	0.0924%	0.0154%	0.0541%	0.1847%	0.9652%	1.6400%	1.4952%	1.3507%
	3	0.3234%	0.1892%	0.0557%	0.0627%	0.0287%	0.0096%	0.0264%	0.0712%	0.2951%
	3.5	0.9228%	0.3424%	0.1922%	0.0775%	0.0355%	0.0399%	0.0106%	0.0255%	0.0249%
	4	1.7742%	0.6960%	0.3612%	0.2160%	0.0886%	0.0067%	0.0223%	0.0012%	0.0038%

Table 262 Maximum deflection results comparison for alpha 4 for slabs subjected to CHBDC truck loading (main bars perpendicular to traffic)

		Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
TRUCK	1	1.3534%	0.2076%	0.3239%	0.1938%	1.5228%	0.2568%	1.1526%	1.2865%	1.2780%
	1.5	2.9088%	1.3955%	0.2888%	0.4451%	1.8590%	0.6228%	0.8710%	0.4631%	0.7276%
	2	4.9772%	4.0620%	3.4399%	2.7435%	0.6529%	2.2780%	1.7145%	0.3650%	0.4984%
	2.5	5.7480%	5.4695%	4.9993%	4.6286%	3.1646%	1.3195%	0.1555%	1.3520%	2.4147%
	3	5.1540%	5.7752%	5.7444%	5.5709%	4.8273%	3.8105%	3.1071%	2.4407%	1.8842%
	3.5	3.7071%	5.2955%	5.6837%	5.7712%	5.5044%	4.6957%	4.0746%	3.6558%	3.2156%
	4	1.6831%	4.2686%	5.1360%	5.5210%	5.7808%	5.3472%	4.8712%	4.4529%	4.1254%

Table 263 Maximum deflection results comparison for alpha 4 for slabs subjected to CHBDC axle 4 loading (main bars parallel to traffic)

Deflection (m)

	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4 Transverse	1	1.5630%	1.0698%	1.6839%	1.8931%	1.1120%	1.0408%	1.8551%	1.2947%	1.2427%
	1.5	1.3212%	1.3640%	1.3307%	1.1844%	1.1903%	1.2155%	1.2383%	1.0432%	0.9685%
	2	1.5222%	1.4373%	1.2778%	1.2951%	1.1931%	1.1352%	0.9888%	1.0383%	0.9657%
	2.5	1.5217%	1.4135%	1.3902%	1.2742%	1.2590%	1.1425%	1.1197%	1.0735%	1.0147%
	3	1.7456%	1.5137%	1.3990%	1.3742%	1.2683%	1.2115%	1.1725%	1.1241%	1.0976%
	3.5	2.2294%	1.6854%	1.5105%	1.4298%	1.3202%	1.2320%	1.1968%	1.1492%	1.1422%

Table 264 Maximum deflection results comparison for alpha 4 for slabs subjected to CHBDC axle 2 & 3 loading (main bars parallel to traffic)

		Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2&3 Transverse	1.5	0.4914%	0.0004%	0.5941%	1.3321%	1.7207%	1.6073%	1.0291%	1.3434%	1.2400%
	2	0.2763%	0.2316%	0.1795%	0.0561%	0.5024%	1.2340%	1.1521%	1.0240%	1.0265%
	2.5	0.3100%	0.1467%	0.1141%	0.0595%	0.0812%	0.3470%	0.6639%	1.0463%	1.1590%
	3	0.5619%	0.2325%	0.1623%	0.1351%	0.0955%	0.0875%	0.1964%	0.3628%	0.5775%
	3.5	1.1230%	0.4404%	0.2508%	0.1684%	0.1040%	0.0567%	0.0549%	0.1249%	0.2108%
	4	2.1304%	0.9269%	0.5208%	0.3515%	0.1453%	0.0711%	0.0551%	0.0626%	0.0592%

Alpha 6 Deflection Comparison Results

Table 265 Maximum deflection results comparison for alpha 6 for slabs subjected to CHBDC axle 4 loading (main bars perpendicular to traffic)

		Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4	1	1.2301%	0.6903%	0.4809%	0.5479%	0.3585%	1.7341%	0.8729%	0.6018%	1.4923%
	1.5	0.3754%	0.2472%	0.1746%	0.5130%	0.3966%	0.1695%	0.7606%	0.8273%	0.8549%
	2	0.1903%	0.2086%	0.3498%	0.0935%	0.2064%	0.2435%	0.3928%	0.5641%	0.5988%
	2.5	0.2606%	0.0247%	0.1186%	0.1521%	0.1150%	0.1108%	0.1762%	0.3979%	0.3589%
	3	1.1410%	0.3106%	0.1599%	0.0798%	0.0195%	0.1520%	0.1887%	0.1473%	0.1275%
	3.5	2.3282%	0.9284%	0.5596%	0.3905%	0.1236%	0.1299%	0.0972%	0.0794%	0.1295%
	4	4.1493%	1.9029%	1.1148%	0.8273%	0.2816%	0.1593%	0.0976%	0.0790%	0.0969%

Table 266 Maximum deflection results comparison for alpha 6 for slabs subjected to CHBDC axle 2 & 3 loading (main bars perpendicular to traffic)

		Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2and 3	1	0.6295%	0.7564%	2.1790%	0.1050%	0.6020%	0.1450%	1.4903%	0.5124%	0.4558%
	1.5	0.0929%	1.0157%	1.2140%	1.6769%	1.3265%	0.8027%	0.9310%	0.7354%	0.8289%
	2	0.1508%	0.2184%	0.2637%	0.2267%	1.1998%	1.3097%	1.0061%	1.1839%	1.0570%
	2.5	0.3584%	0.2326%	0.0174%	0.0156%	0.3381%	0.9695%	1.2251%	1.3436%	1.1602%
	3	1.1258%	0.4863%	0.2043%	0.0955%	0.0277%	0.0115%	0.0025%	0.2272%	0.3983%
	3.5	2.3910%	1.0393%	0.6107%	0.4199%	0.1493%	0.0496%	0.0038%	0.0155%	0.0766%
	4	4.2258%	1.9813%	1.2134%	0.7923%	0.2826%	0.0881%	0.0450%	0.0028%	0.0224%

Table 267 Maximum deflection results comparison for alpha 6 for slabs subjected to CHBDC truck loading (main bars perpendicular to traffic)

		Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
TRUCK	1	0.8645%	3.3437%	1.5093%	0.0497%	0.2016%	1.6936%	0.8568%	0.5939%	1.4878%
	1.5	4.1485%	2.4211%	1.6410%	0.5594%	2.3708%	0.9283%	0.3831%	0.5922%	0.6960%
	2	5.6508%	4.9132%	4.4415%	4.0584%	1.9677%	0.4408%	2.2557%	3.6111%	2.7543%
	2.5	4.9760%	5.5859%	5.4350%	5.2771%	4.3224%	2.4969%	1.1635%	0.1384%	0.8210%
	3	2.7501%	4.6832%	5.3695%	5.5474%	5.5620%	4.9000%	4.1597%	3.5705%	3.0201%
	3.5	0.0651%	3.1337%	4.3631%	4.9587%	5.6738%	5.5023%	5.1253%	4.7331%	4.3698%
	4	3.4024%	1.0132%	2.8372%	3.7978%	5.2667%	5.6903%	5.5806%	5.3653%	5.1535%

Table 268 Maximum deflection results comparison for alpha 6 for slabs subjected to CHBDC axle 4 loading (main bars parallel to traffic)

Deflection (m)

	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4 Transverse	1	1.1642%	1.8698%	1.0066%	1.2572%	2.0322%	1.2807%	1.4692%	1.3188%	1.6337%
	1.5	1.3073%	1.5423%	1.2733%	1.4298%	1.1044%	1.0013%	1.0788%	0.9763%	1.0181%
	2	1.4157%	1.3110%	1.2620%	1.1634%	1.1277%	1.0882%	0.9406%	0.9027%	0.9590%
	2.5	1.6515%	1.4151%	1.1808%	1.1816%	1.1156%	1.0011%	0.9668%	0.9655%	0.9868%
	3	2.5210%	1.7014%	1.4550%	1.2849%	1.1658%	1.0158%	1.0019%	0.9956%	0.9701%
	3.5	3.7790%	2.3402%	1.8369%	1.6084%	1.2594%	1.1102%	1.0349%	1.0150%	0.9966%

Table 269 Maximum deflection results comparison for alpha 6 for slabs subjected to CHBDC axle 2 & 3 loading (main bars parallel to traffic)

		Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2&3 Transverse	1.5	0.4980%	0.7199%	0.9493%	0.2888%	1.2297%	0.9185%	1.2944%	0.7706%	0.7834%
	2	0.2009%	0.1825%	0.2870%	0.2725%	0.4500%	1.1858%	1.1333%	1.0997%	1.0336%
	2.5	0.6653%	0.3039%	0.2265%	0.1661%	0.0907%	0.4317%	0.6760%	0.9529%	1.0222%
	3	1.5040%	0.6255%	0.3578%	0.2424%	0.0974%	0.1315%	0.2264%	0.3938%	0.5212%
	3.5	2.9206%	1.3341%	0.8190%	0.5316%	0.2063%	0.0937%	0.0944%	0.1385%	0.2290%
	4	4.9340%	2.4403%	1.5177%	1.0697%	0.4248%	0.1608%	0.0939%	0.0821%	0.1022%

Alpha 8 Deflection Comparison Results

Table 270 Maximum deflection results comparison for alpha 8 for slabs subjected to CHBDC axle 4 loading (main bars perpendicular to traffic)

		Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4	1	1.6429%	0.2862%	0.2454%	0.6778%	1.3151%	0.5074%	0.8243%	1.3466%	1.2617%
	1.5	0.1459%	0.6750%	0.1683%	0.0150%	0.0527%	0.2444%	0.6298%	0.8915%	0.9366%
	2	0.0957%	0.4868%	0.3062%	0.3105%	0.3852%	0.2530%	0.4624%	0.4201%	0.4532%
	2.5	0.9256%	0.3419%	0.4323%	0.1910%	0.2647%	0.1020%	0.1783%	0.3949%	0.3904%
	3	2.2943%	0.9377%	0.6520%	0.4526%	0.1293%	0.0732%	0.1207%	0.1033%	0.0953%
	3.5	4.2738%	1.9904%	1.2805%	0.8926%	0.3093%	0.1197%	0.0858%	0.1630%	0.1539%
	4	7.0321%	3.6023%	2.2674%	1.6357%	0.7176%	0.2426%	0.1649%	0.1184%	0.1431%

Table 271 Maximum deflection results comparison for alpha 8 for slabs subjected to CHBDC axle 2 & 3 loading (main bars perpendicular to traffic)

		Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2and 3	1	0.1882%	0.8442%	0.1730%	0.6484%	2.0979%	0.0045%	0.0873%	1.3885%	1.6574%
	1.5	0.3761%	0.3380%	0.9483%	0.7712%	1.3287%	0.7264%	1.3295%	0.7153%	1.0832%
	2	0.3949%	0.2736%	0.2902%	0.6398%	0.9804%	1.1201%	0.9195%	1.1041%	0.8876%
	2.5	0.8579%	0.3122%	0.1603%	0.0862%	0.3898%	0.8972%	1.1367%	1.2321%	1.1201%
	3	2.4354%	1.0731%	0.4834%	0.2601%	0.1091%	0.0303%	0.0543%	0.2898%	0.3620%
	3.5	4.5076%	2.1213%	1.2585%	0.8170%	0.3548%	0.0642%	0.0225%	0.0631%	0.1030%
	4	7.2373%	3.7464%	2.4259%	1.7136%	0.6905%	0.2117%	0.1324%	0.0759%	0.0600%

Table 272 Maximum deflection results comparison for alpha 8 for slabs subjected to CHBDC truck loading (main bars perpendicular to traffic)

		Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
TRUCK	1	0.3604%	1.2039%	2.6386%	3.9969%	0.9004%	0.3816%	0.7671%	1.3154%	1.2429%
	1.5	4.9237%	3.4083%	2.1841%	1.7479%	0.9442%	3.7828%	1.9872%	0.3090%	0.5215%
	2	5.1372%	5.2184%	4.7733%	4.5246%	2.8788%	0.8888%	0.9339%	2.1419%	2.9754%
	2.5	3.4254%	5.0194%	5.3061%	5.3764%	4.8577%	3.5157%	2.3180%	1.3697%	0.5573%
	3	0.0799%	3.1354%	4.3523%	4.8918%	5.6095%	5.3848%	4.9360%	4.4184%	3.9023%
	3.5	3.9849%	0.5152%	2.4383%	3.4923%	5.0615%	5.5659%	5.5207%	5.2849%	5.0717%
	4	8.4390%	2.5386%	0.0590%	1.5203%	4.0633%	5.3345%	5.5947%	5.5960%	5.5235%

Table 273 Maximum deflection results comparison for alpha 8 for slabs subjected to CHBDC axle 4 loading (main bars parallel to traffic)

Deflection (m)

	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4 Transverse	1	2.2531%	1.1435%	1.6555%	1.8501%	1.2482%	1.9931%	1.1413%	1.2007%	1.7226%
	1.5	1.4528%	1.0574%	1.2108%	1.2916%	1.2003%	0.9045%	0.9322%	1.2271%	0.8832%
	2	1.3710%	1.1731%	1.1520%	1.0343%	1.1029%	1.0622%	0.9715%	1.0330%	0.8433%
	2.5	2.2206%	1.5454%	1.2991%	1.0884%	1.0797%	0.9839%	0.9547%	0.8659%	0.9226%
	3	3.5920%	2.1919%	1.7015%	1.4866%	1.0873%	0.9955%	0.9462%	0.8897%	0.8782%
	3.5	5.8762%	3.4300%	2.5319%	2.0439%	1.3539%	1.0477%	0.9689%	0.9489%	0.9124%

Table 274 Maximum deflection results comparison for alpha 8 for slabs subjected to CHBDC axle 2 & 3 loading (main bars parallel to traffic)

		Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2&3 Transverse	1.5	0.2468%	0.3319%	0.3910%	0.7184%	1.3415%	0.7616%	1.0692%	1.4732%	1.4749%
	2	0.4922%	0.3156%	0.1172%	0.3685%	0.5703%	0.8880%	0.9851%	1.0814%	0.9348%
	2.5	1.2442%	0.5046%	0.3041%	0.1792%	0.2509%	0.4018%	0.5557%	0.7641%	0.9924%
	3	2.8474%	1.2635%	0.7464%	0.5461%	0.1892%	0.1842%	0.2571%	0.3856%	0.4693%
	3.5	5.1131%	2.5615%	1.6256%	1.1698%	0.4575%	0.2066%	0.1513%	0.2072%	0.2532%
	4	8.1557%	4.3919%	2.8993%	2.1125%	0.9278%	0.3754%	0.2033%	0.1531%	0.1549%

Alpha 10 Deflection Comparison Results

Table 275 Maximum deflection results comparison for alpha 10 for slabs subjected to CHBDC axle 4 loading (main bars perpendicular to traffic)

		Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 4	1	0.3490%	0.6380%	0.3846%	0.0556%	0.9880%	1.7171%	0.7782%	0.0498%	0.5289%
	1.5	0.4760%	0.6110%	0.6892%	0.2291%	0.8126%	0.6890%	0.3812%	0.6055%	0.4754%
	2	0.6683%	0.3854%	0.4613%	0.4865%	0.4441%	0.4557%	0.3175%	0.5729%	0.3647%
	2.5	1.7647%	0.6071%	0.2946%	0.3313%	0.2237%	0.1646%	0.1232%	0.3012%	0.3671%
	3	3.6988%	1.7151%	0.8610%	0.8068%	0.2085%	0.2356%	0.2178%	0.0917%	0.1811%
	3.5	6.3742%	3.2401%	2.0898%	1.4933%	0.5792%	0.3152%	0.1810%	0.1750%	0.1566%
	4	10.2305%	5.5014%	3.7644%	2.7745%	1.2153%	0.4754%	0.3342%	0.2339%	0.1652%

Table 276 Maximum deflection results comparison for alpha 10 for slabs subjected to CHBDC axle 2 & 3 loading (main bars perpendicular to traffic)

		Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Axle 2and 3	1	0.0486%	1.8143%	1.0343%	2.1224%	1.3801%	0.1458%	0.1660%	0.1321%	0.4644%
	1.5	0.0076%	0.1800%	1.1934%	1.3114%	0.5878%	0.6849%	0.9034%	1.2984%	1.1397%
	2	0.3031%	0.1080%	0.4764%	0.6202%	1.1458%	1.1321%	0.9348%	1.0400%	1.0301%
	2.5	1.6726%	0.5673%	0.3062%	0.3115%	0.3104%	0.7929%	0.9776%	0.9631%	1.1024%
	3	3.8404%	1.8447%	1.0355%	0.6737%	0.1686%	0.0742%	0.0995%	0.2732%	0.3211%
	3.5	6.8080%	3.4206%	2.2643%	1.5434%	0.5727%	0.2334%	0.0921%	0.1240%	0.1410%
	4	10.5587%	5.7886%	3.8577%	2.9169%	1.2824%	0.4507%	0.2653%	0.1554%	0.1006%

Table 277 Maximum deflection results comparison for alpha 10 for slabs subjected to CHBDC truck loading (main bars perpendicular to traffic)

		Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
TRUCK	1	1.8997%	0.1907%	1.8500%	4.6723%	2.8993%	1.4391%	0.6426%	0.0281%	0.4791%
	1.5	5.4609%	4.4439%	2.8308%	2.1677%	0.1259%	2.5029%	4.4251%	2.5904%	1.1359%
	2	4.2207%	4.9756%	5.2249%	4.7476%	3.8394%	1.6543%	0.2627%	0.7889%	1.7604%
	2.5	1.9430%	4.2372%	4.8827%	5.0527%	5.0558%	4.0629%	3.1531%	2.3632%	1.5565%
	3	2.9900%	1.1387%	2.9255%	3.8268%	5.1976%	5.3939%	5.2177%	4.9064%	4.5172%
	3.5	7.8947%	2.1532%	0.2655%	1.7383%	4.0955%	5.2743%	5.5041%	5.4416%	5.3027%
	4	13.2053%	6.0842%	2.8671%	0.9030%	2.5524%	4.5479%	5.1719%	5.4158%	5.4750%

Table 278 Maximum deflection results comparison for alpha 10 for slabs subjected to CHBDC axle 4 loading (main bars parallel to traffic)

Deflection (m)

Axle 4 Transverse	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
	1	2.2350%	0.9189%	1.3687%	1.5198%	2.2483%	1.6566%	0.8786%	1.0487%	1.6936%
	1.5	1.0507%	1.2755%	1.3907%	1.4259%	1.1773%	1.1654%	1.1076%	0.9480%	0.9923%
	2	1.5277%	1.2663%	1.0516%	0.9617%	1.0291%	0.8889%	0.9193%	0.9180%	0.8644%
	2.5	3.0001%	1.7889%	1.3891%	1.2685%	0.9833%	0.9120%	0.8474%	0.8257%	0.8439%
	3	5.0717%	2.8874%	2.1922%	1.7205%	1.2212%	0.9516%	0.9332%	0.8709%	0.8443%
	3.5	8.1596%	4.7339%	3.4670%	2.7164%	1.6059%	1.1020%	0.9634%	0.9373%	0.8696%

Table 279 Maximum deflection results comparison for alpha 10 for slabs subjected to CHBDC axle 2 & 3 loading (main bars parallel to traffic)

		Deflection (m)								
Axle 2&3 Transverse	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
	1.5	1.0236%	1.0107%	0.9359%	1.1542%	1.5668%	0.7415%	0.9572%	1.3212%	1.2935%
	2	0.7130%	0.4203%	0.2785%	0.2318%	0.3613%	0.7154%	1.0220%	1.0383%	1.0635%
	2.5	2.0827%	1.0181%	0.5110%	0.3322%	0.2570%	0.3656%	0.5334%	0.7505%	0.8954%
	3	4.4110%	2.1946%	1.3421%	0.9406%	0.3697%	0.2731%	0.2745%	0.3682%	0.4652%
	3.5	7.5858%	4.0827%	2.7017%	1.9514%	0.8592%	0.3439%	0.2391%	0.2387%	0.2839%
	4	11.6070%	6.6171%	4.5390%	3.4217%	1.5869%	0.6815%	0.3825%	0.2919%	0.2499%

D.2.2 MAXIMUM DEFLECTION VS SPAN LENGTH

Alpha 0.25 Deflection VS Span Length for Different D Values (Main bars perpendicular to traffic)

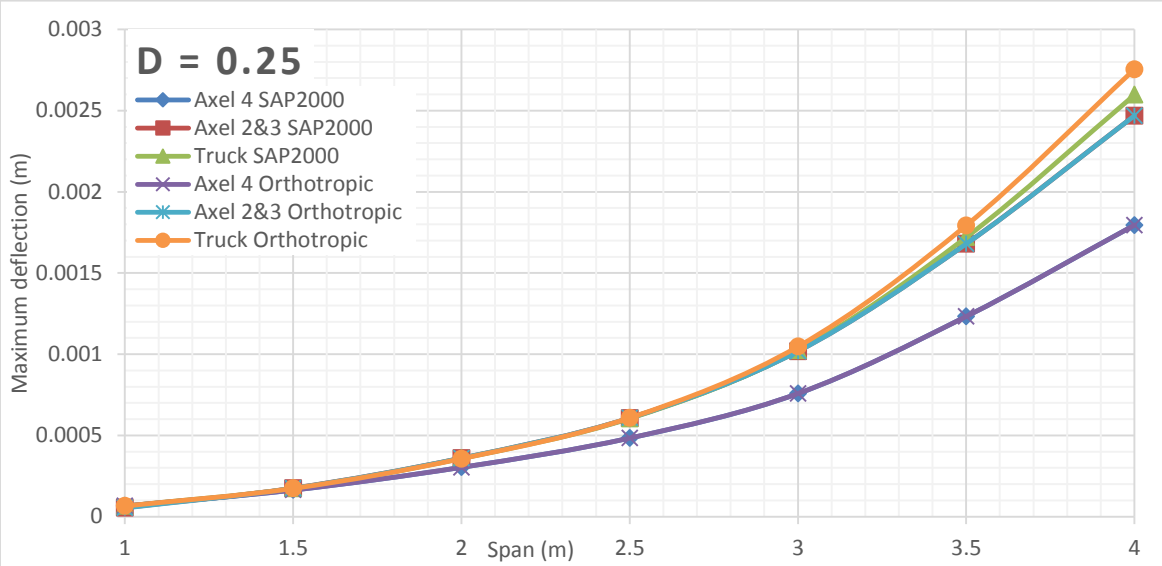

Figure 781 Deflection comparison between FEA and Orthotropic Plate Theory for D = 0.25 of alpha 0.25 (main bars perpendicular to traffic)

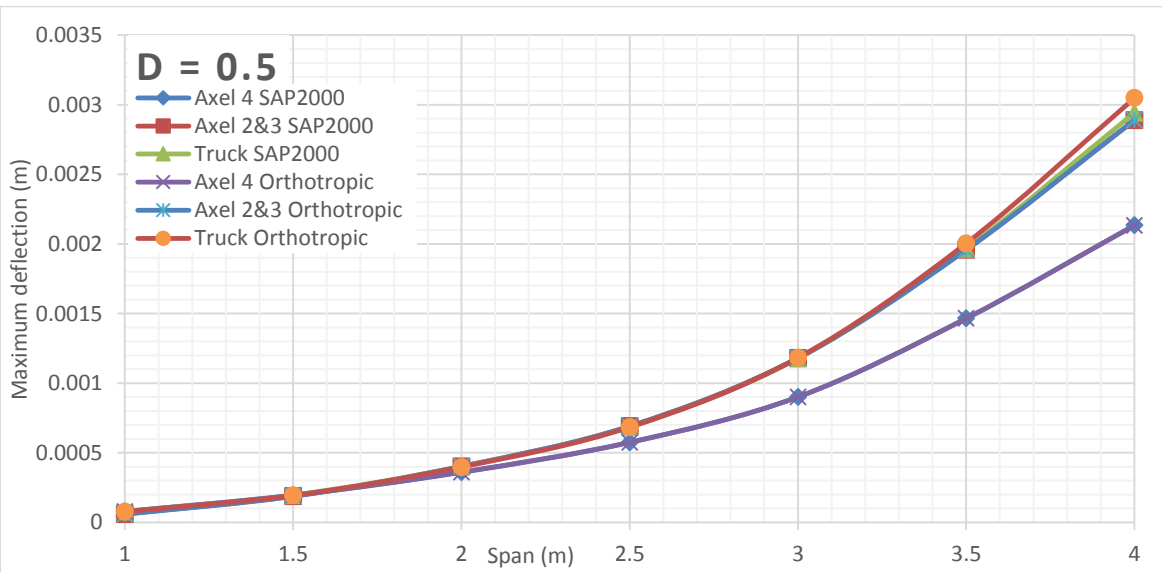

Figure 782 Deflection comparison between FEA and Orthotropic Plate Theory for D = 0.5 of alpha 0.25 (main bars perpendicular to traffic)

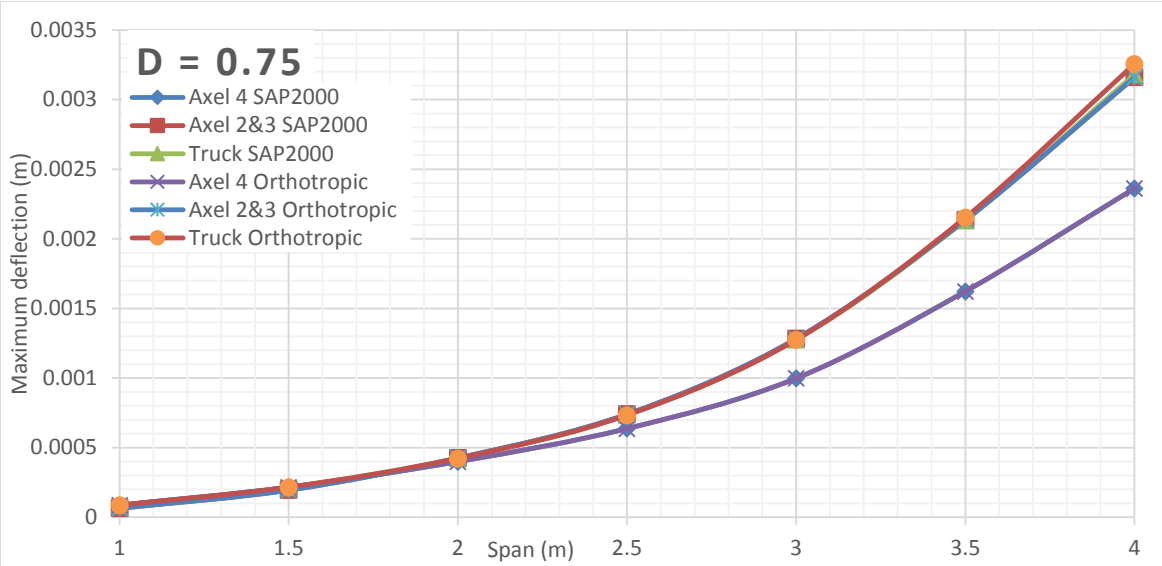

Figure 783 Deflection comparison between FEA and Orthotropic Plate Theory for D = 0.75 of alpha 0.25 (main bars perpendicular to traffic)

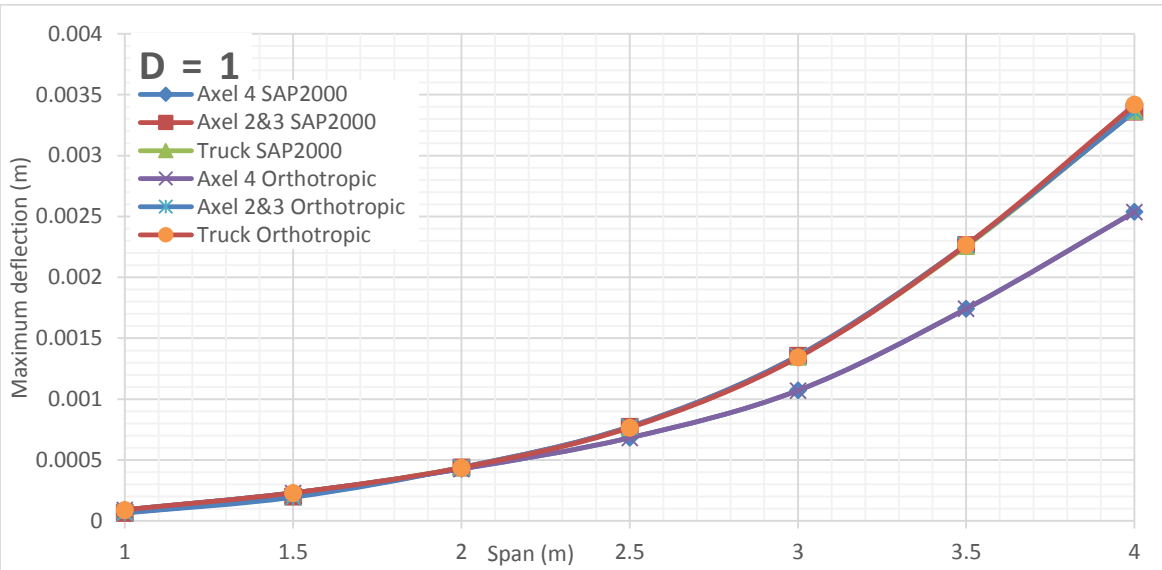

Figure 784 Deflection comparison between FEA and Orthotropic Plate Theory for D = 1 of alpha 0.25 (main bars perpendicular to traffic)

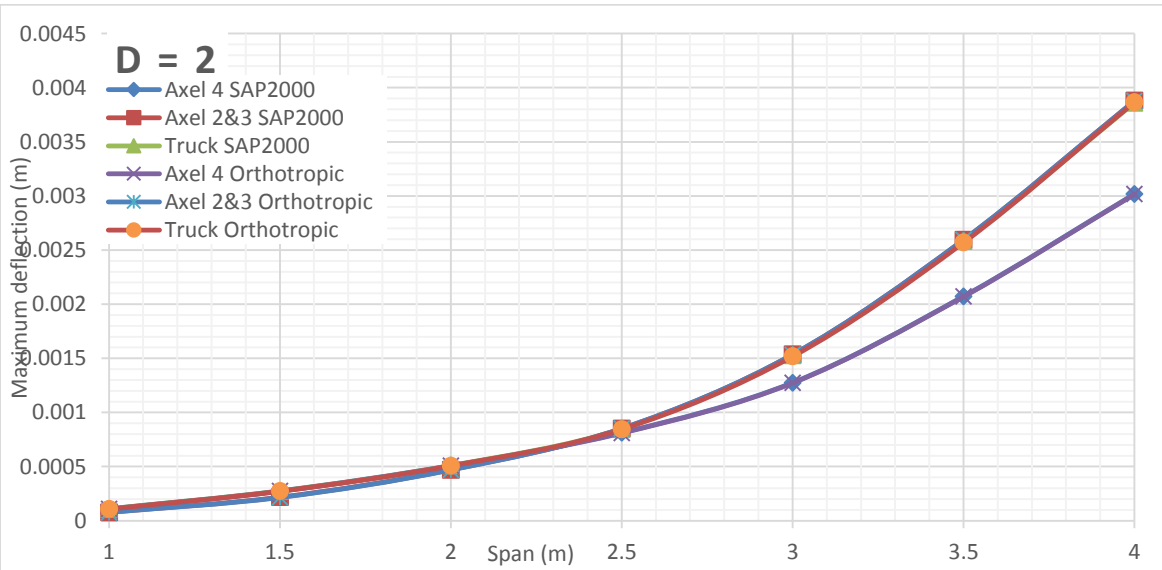

Figure 785 Deflection comparison between FEA and Orthotropic Plate Theory for D = 2 of alpha 0.25 (main bars perpendicular to traffic)

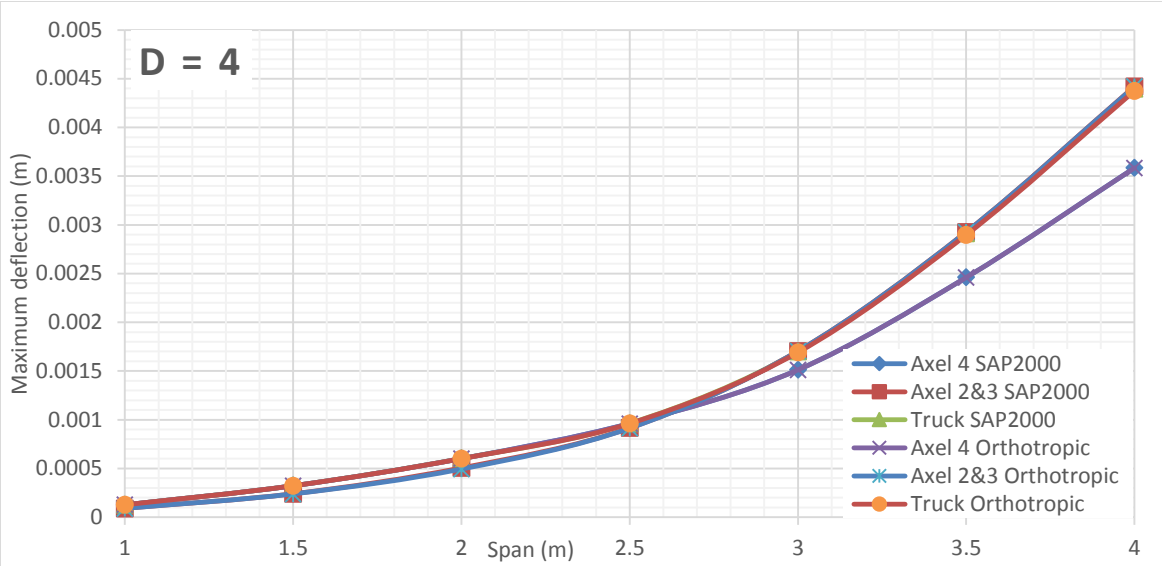

Figure 786 Deflection comparison between FEA and Orthotropic Plate Theory for D = 4 of alpha 0.25 (main bars perpendicular to traffic)

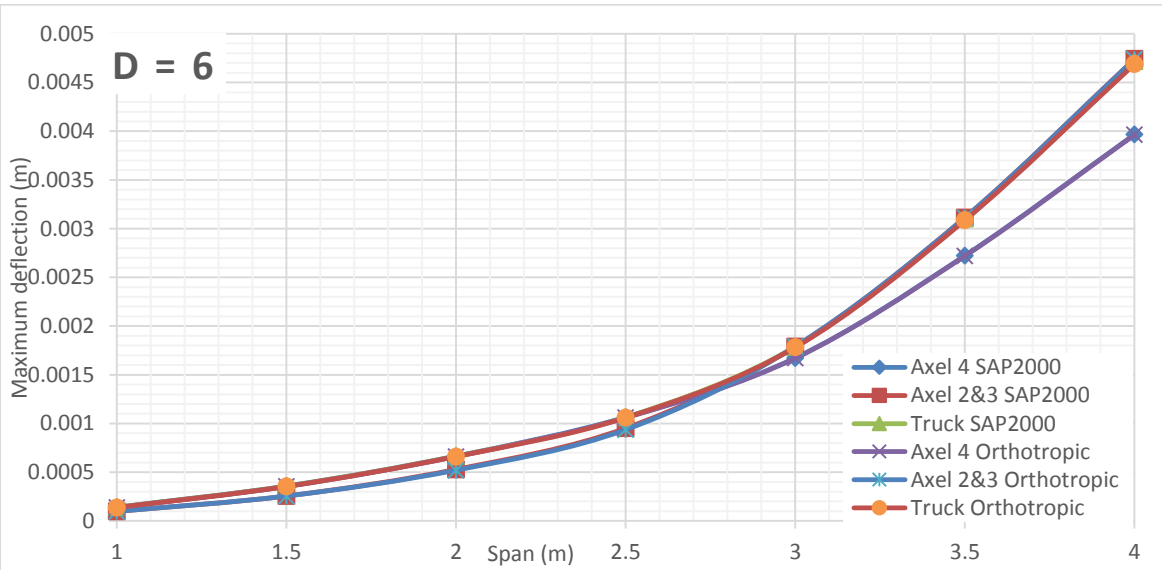

Figure 787 Deflection comparison between FEA and Orthotropic Plate Theory for D = 6 of alpha 0.25 (main bars perpendicular to traffic)

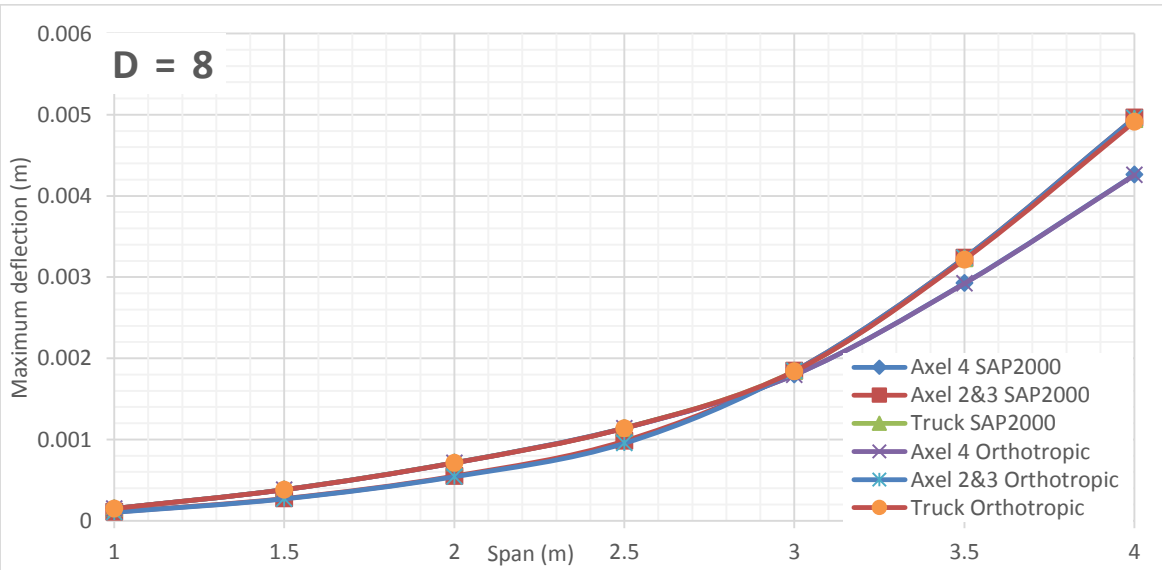

Figure 788 Deflection comparison between FEA and Orthotropic Plate Theory for D = 8 of alpha 0.25 (main bars perpendicular to traffic)

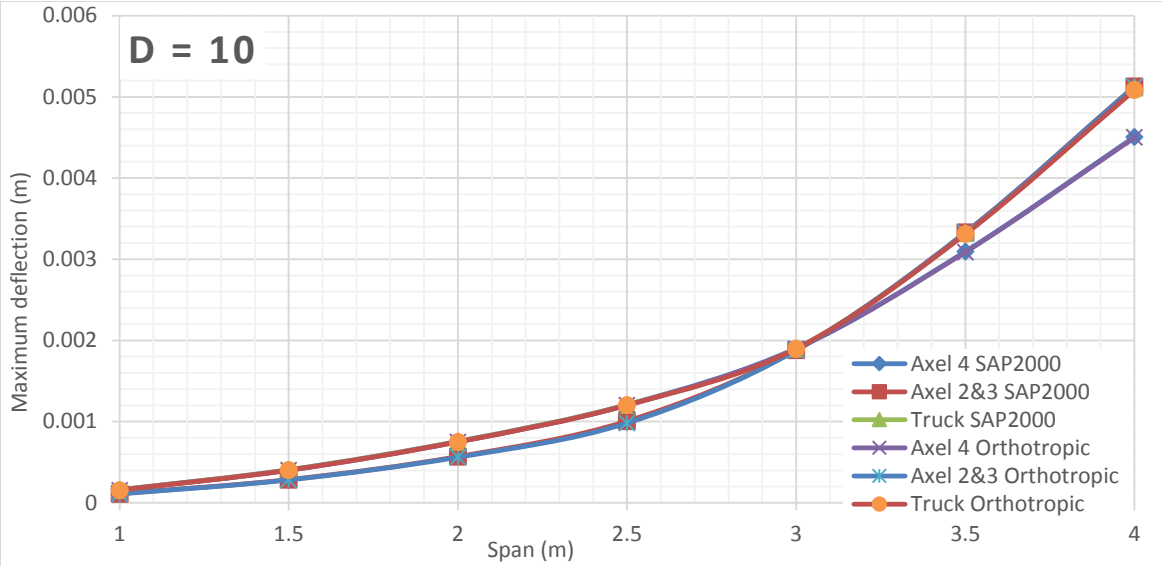

Figure 789 Deflection comparison between FEA and Orthotropic Plate Theory for D = 10 of alpha 0.25 (main bars perpendicular to traffic)

Alpha 0.25 Deflection VS Span Length for Different D Values (Main bars parallel to traffic)

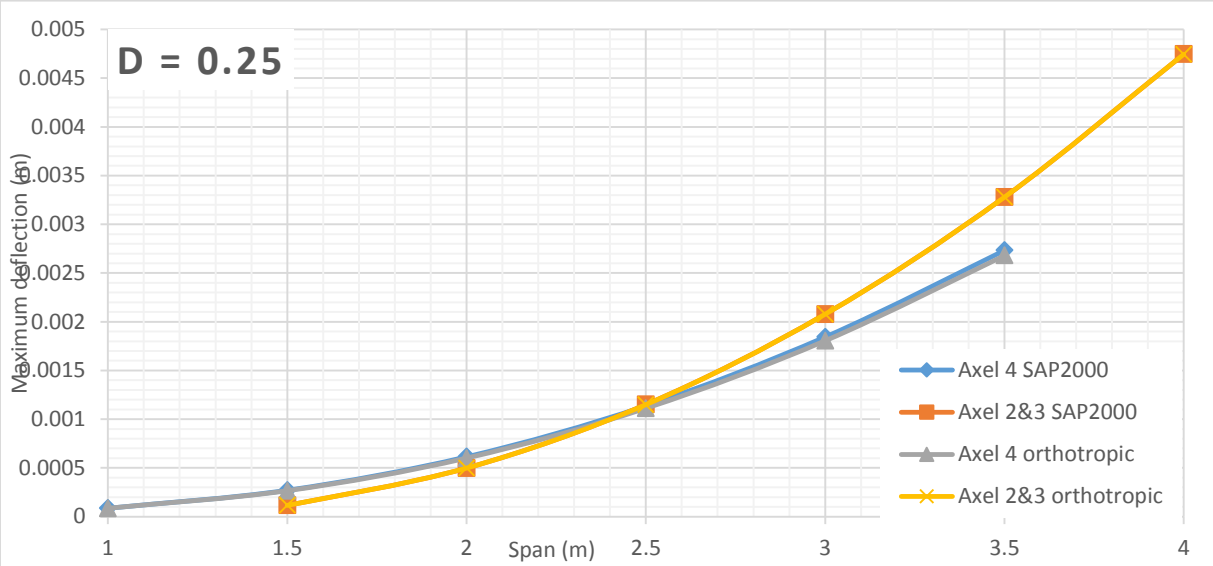

Figure 790 Deflection comparison between FEA and Orthotropic Plate Theory for D = 0.25 of alpha 0.25 (main bars parallel to traffic)

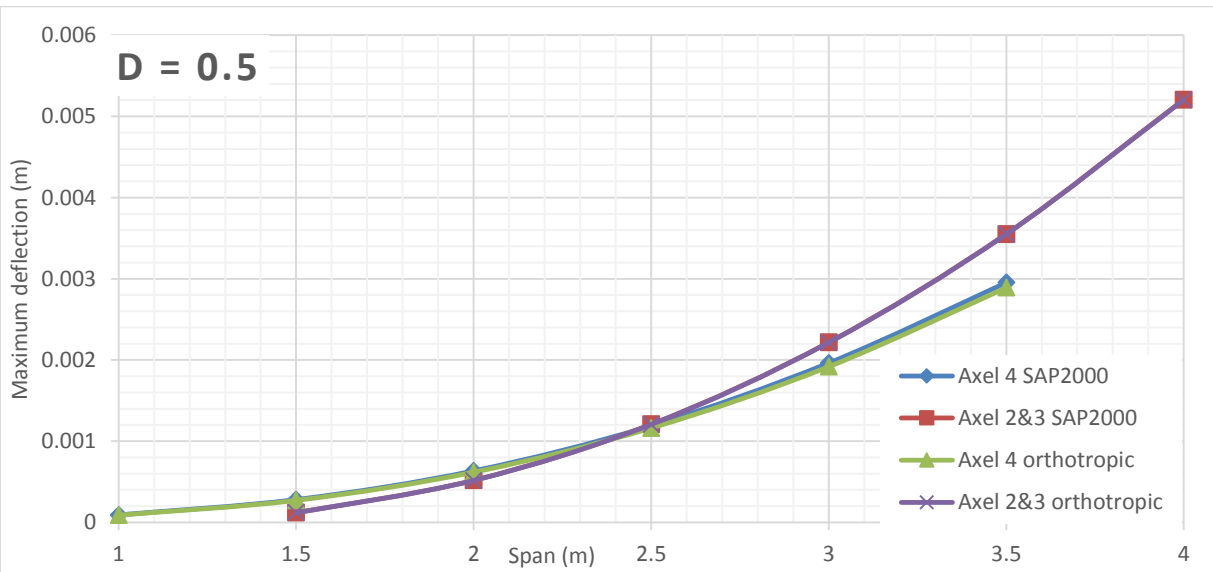

Figure 791 Deflection comparison between FEA and Orthotropic Plate Theory for D = 0.5 of alpha 0.25 (main bars parallel to traffic)

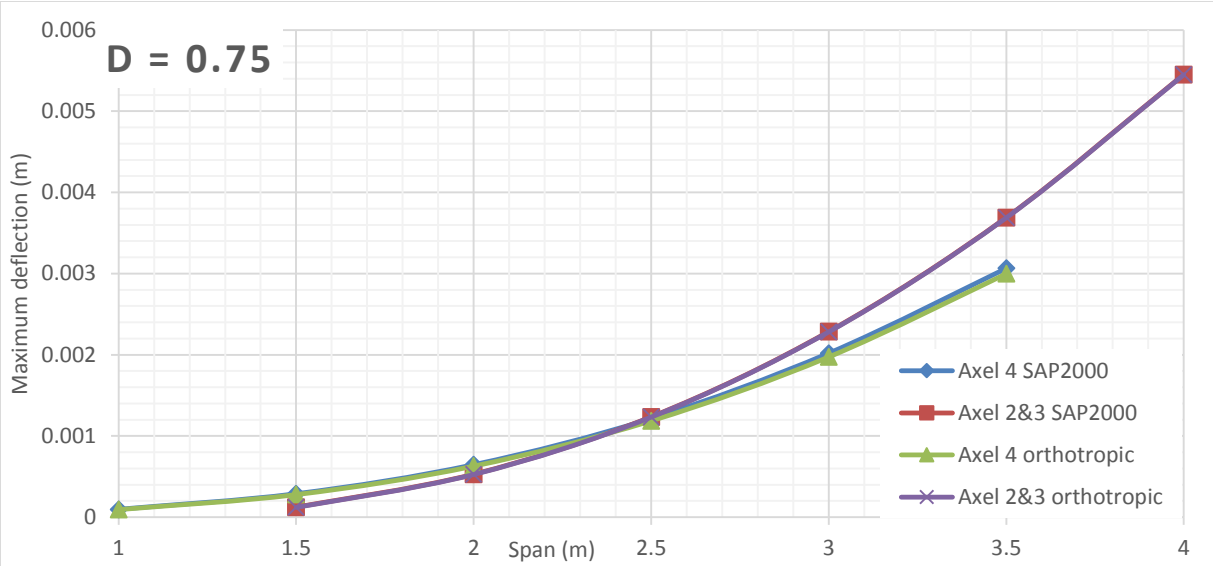

Figure 792 Deflection comparison between FEA and Orthotropic Plate Theory for D = 0.75 of alpha 0.25 (main bars parallel to traffic)

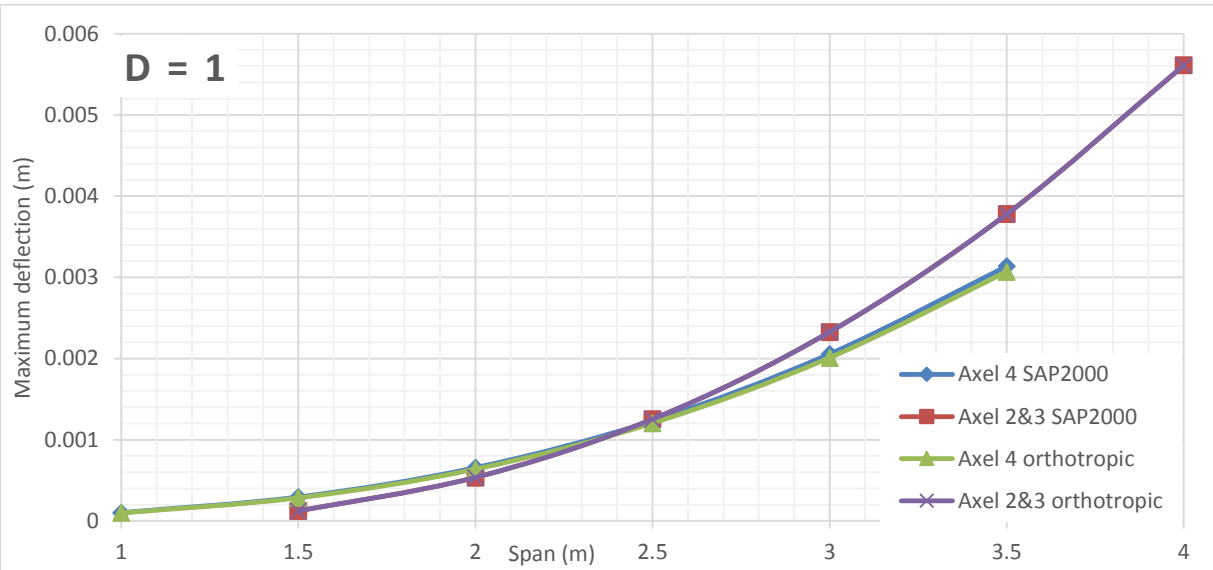

Figure 793 Deflection comparison between FEA and Orthotropic Plate Theory for D = 1 of alpha 0.25 (main bars parallel to traffic)

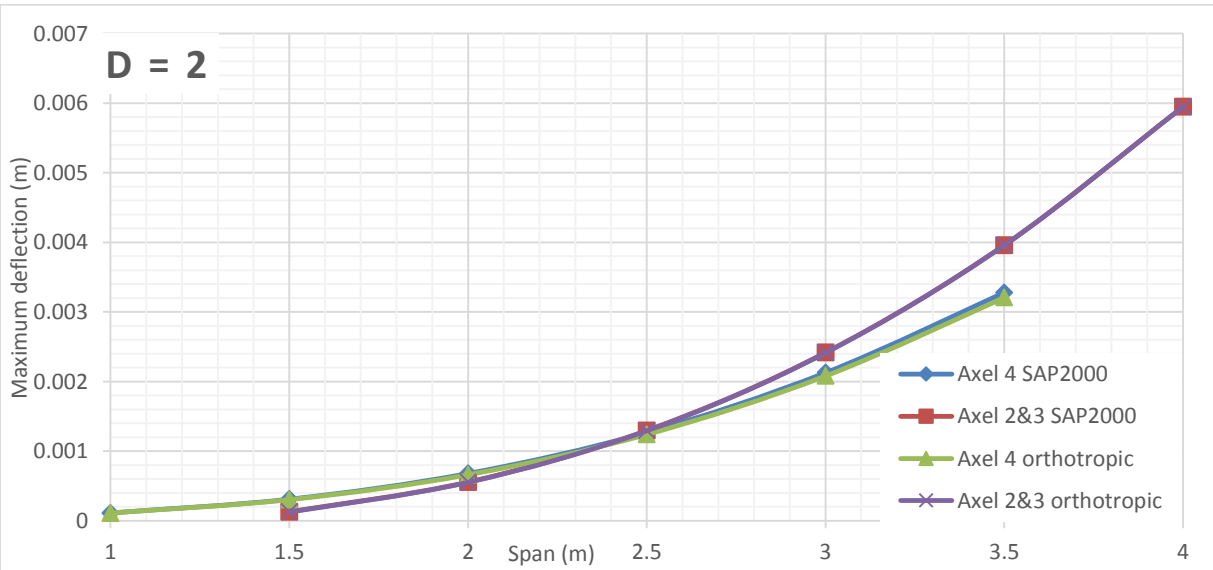

Figure 794 Deflection comparison between FEA and Orthotropic Plate Theory for D = 2 of alpha 0.25 (main bars parallel to traffic)

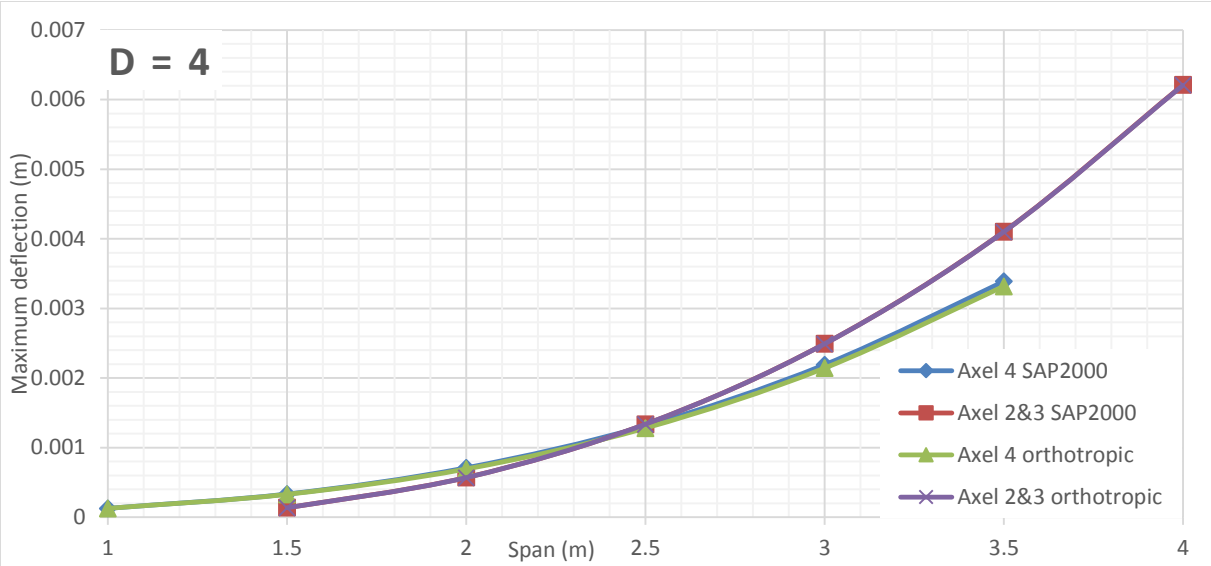

Figure 795 Deflection comparison between FEA and Orthotropic Plate Theory for D = 4 of alpha 0.25 (main bars parallel to traffic)

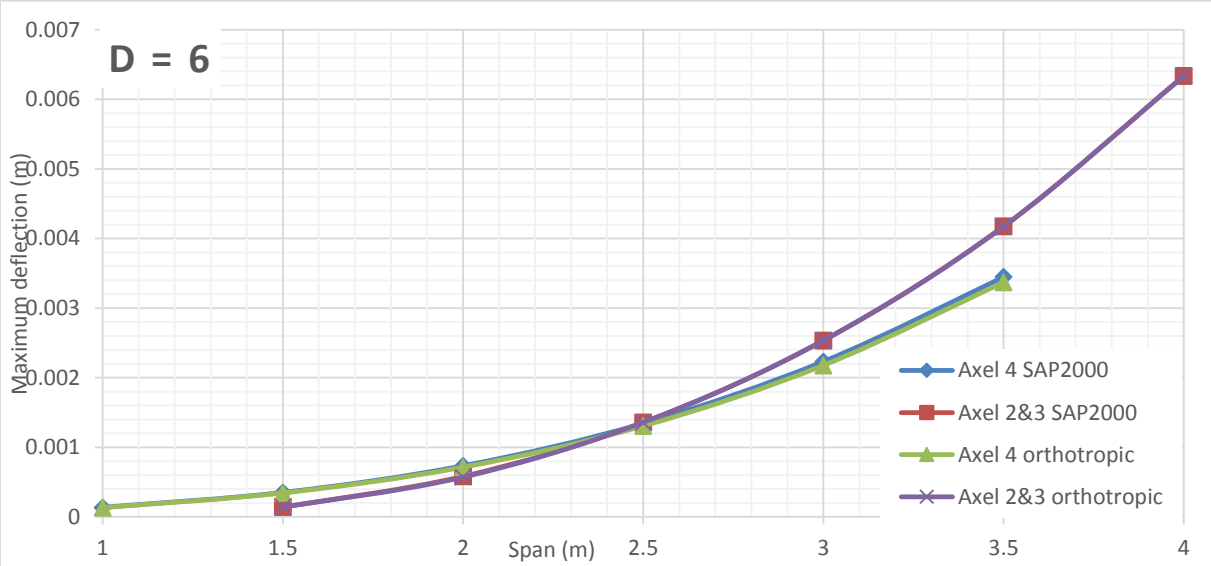

Figure 796 Deflection comparison between FEA and Orthotropic Plate Theory for D = 6 of alpha 0.25 (main bars parallel to traffic)

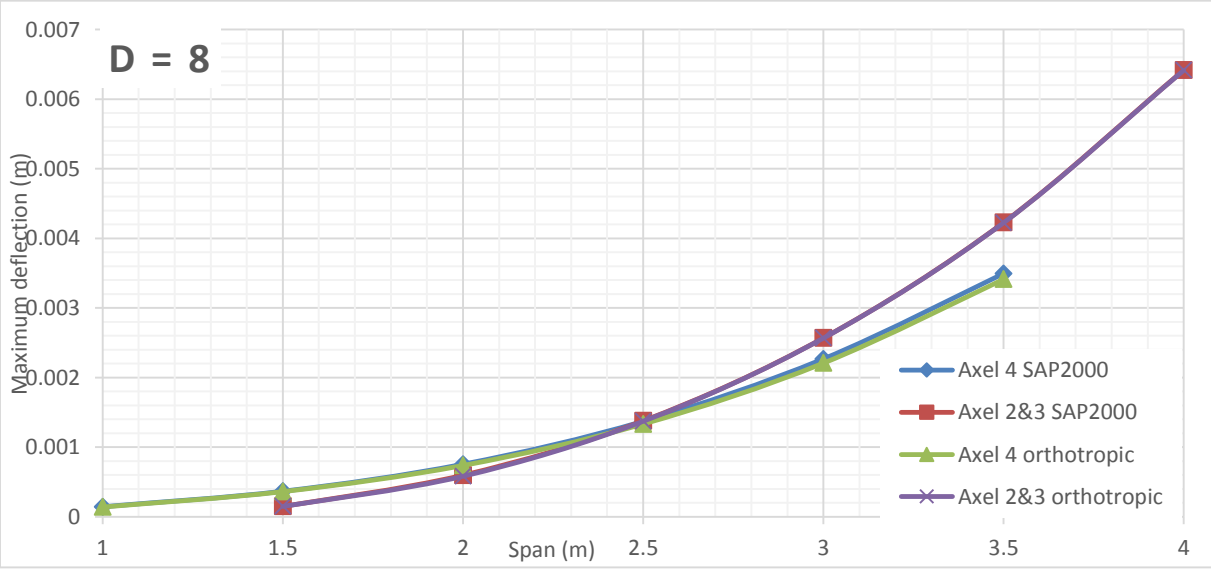

Figure 797 Deflection comparison between FEA and Orthotropic Plate Theory for D = 8 of alpha 0.25 (main bars parallel to traffic)

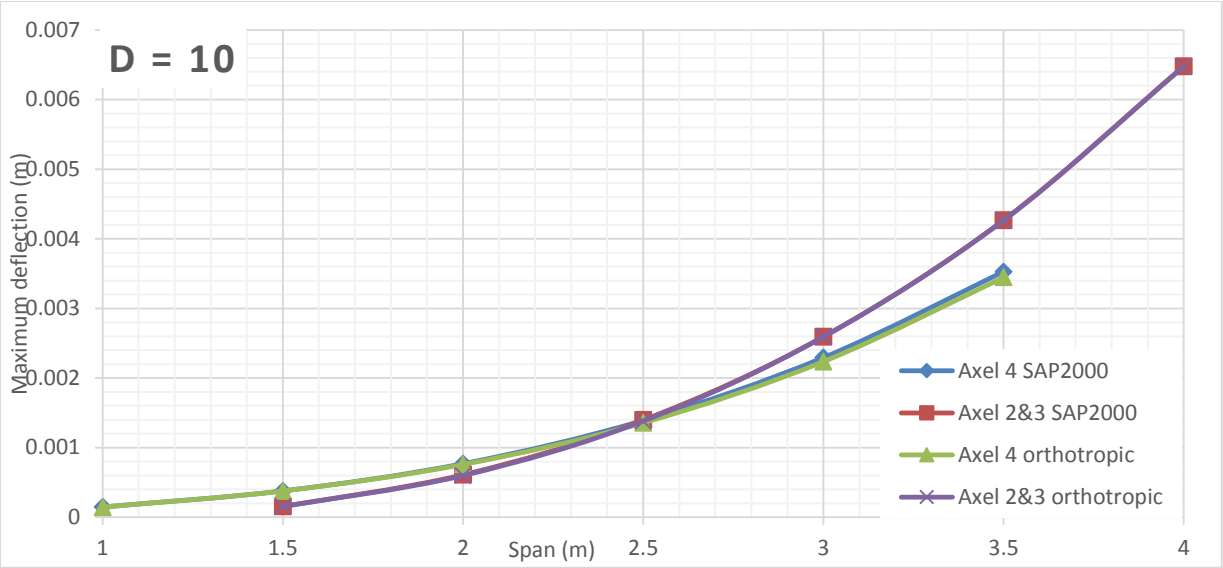

Figure 798 Deflection comparison between FEA and Orthotropic Plate Theory for D = 10 of alpha 0.25 (main bars parallel to traffic)

Alpha 0.5 Deflection VS Span Length for Different D Values (Main bars perpendicular to traffic)

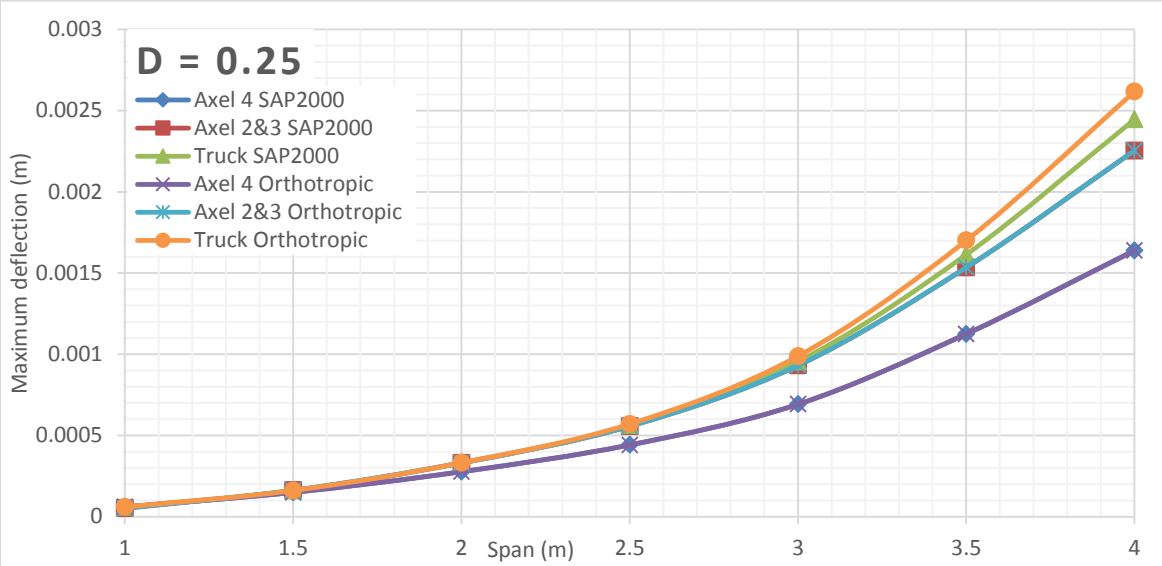

Figure 799 Deflection comparison between FEA and Orthotropic Plate Theory for D = 0.25 of alpha 0.5 (main bars perpendicular to traffic)

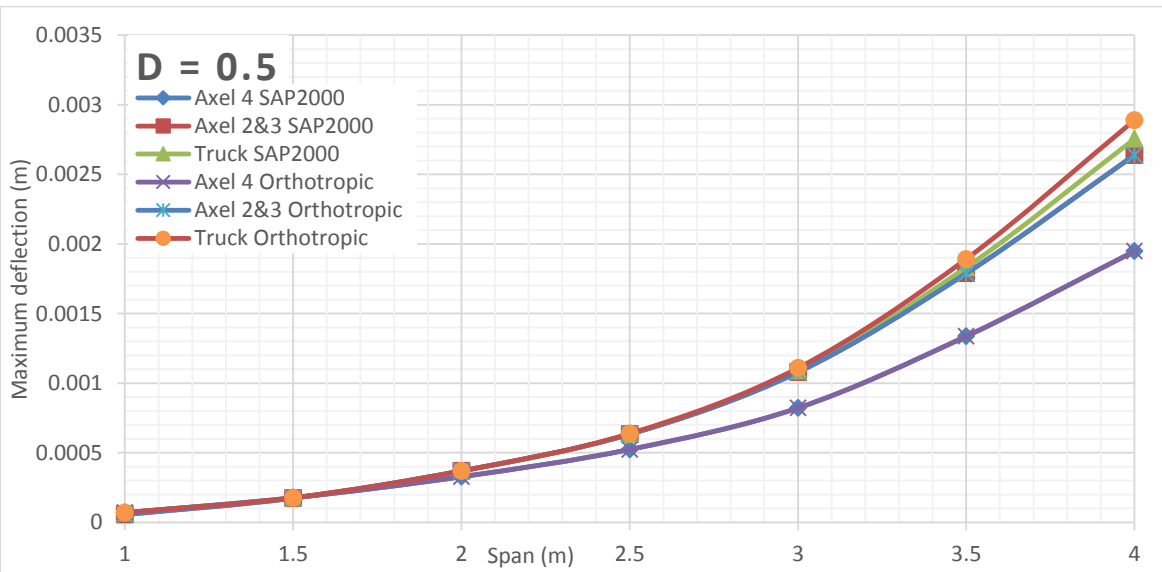

Figure 800 Deflection comparison between FEA and Orthotropic Plate Theory for D = 0.5 of alpha 0.5 (main bars perpendicular to traffic)

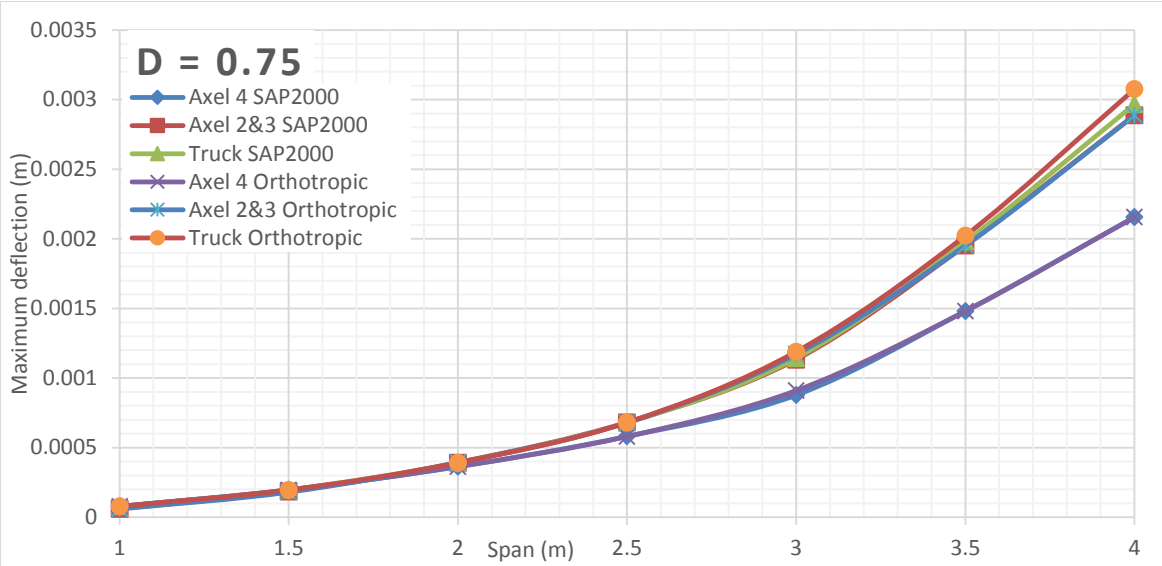

Figure 801 Deflection comparison between FEA and Orthotropic Plate Theory for D = 0.75 of alpha 0.5 (main bars perpendicular to traffic)

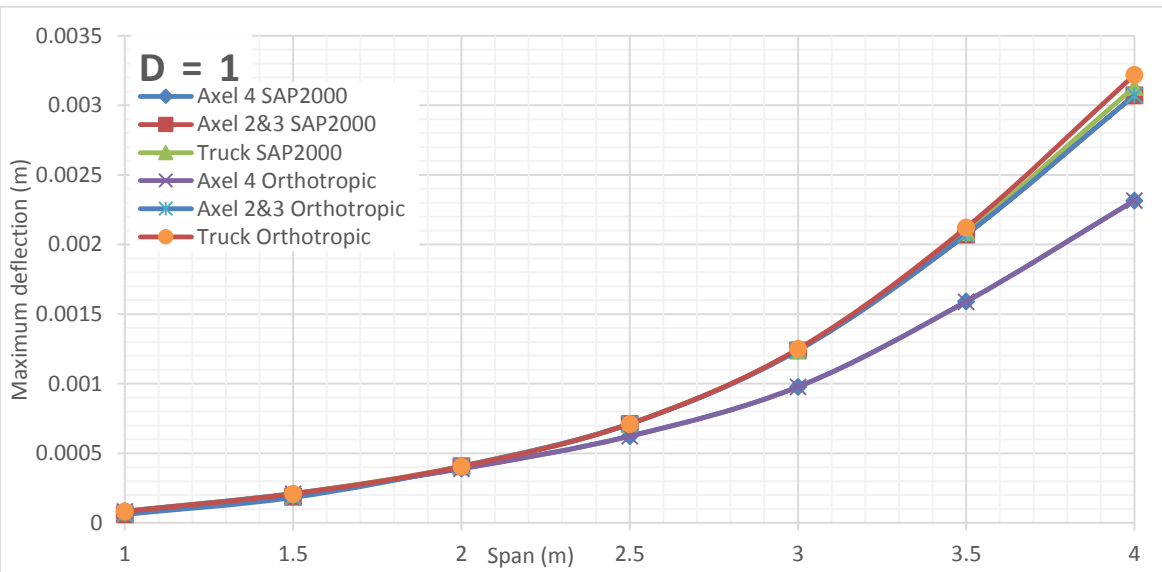

Figure 802 Deflection comparison between FEA and Orthotropic Plate Theory for D = 1 of alpha 0.5 (main bars perpendicular to traffic)

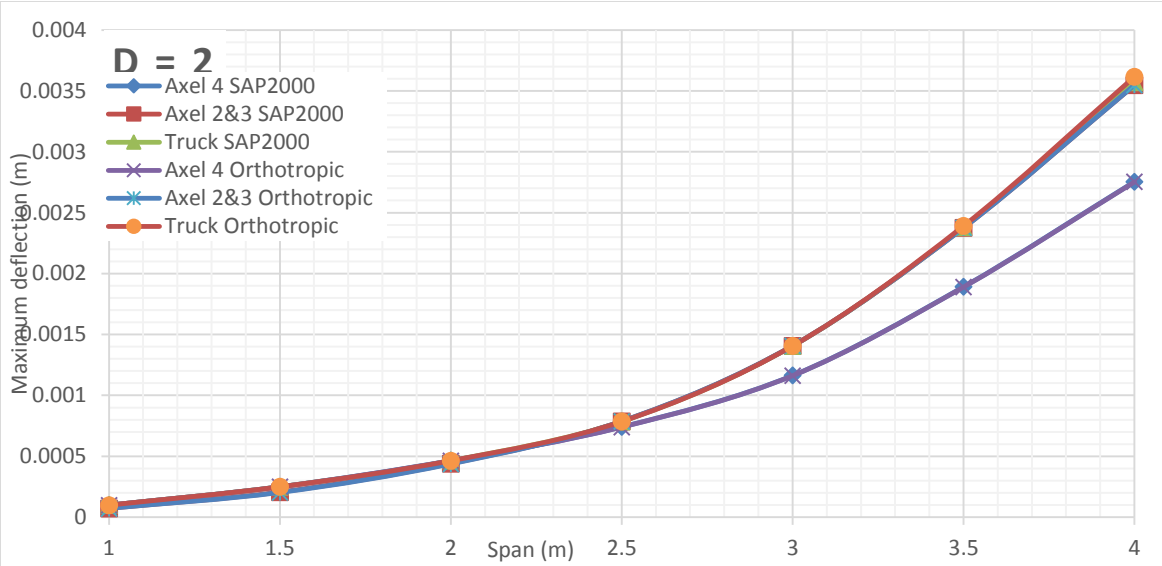

Figure 803 Deflection comparison between FEA and Orthotropic Plate Theory for D = 2 of alpha 0.5 (main bars perpendicular to traffic)

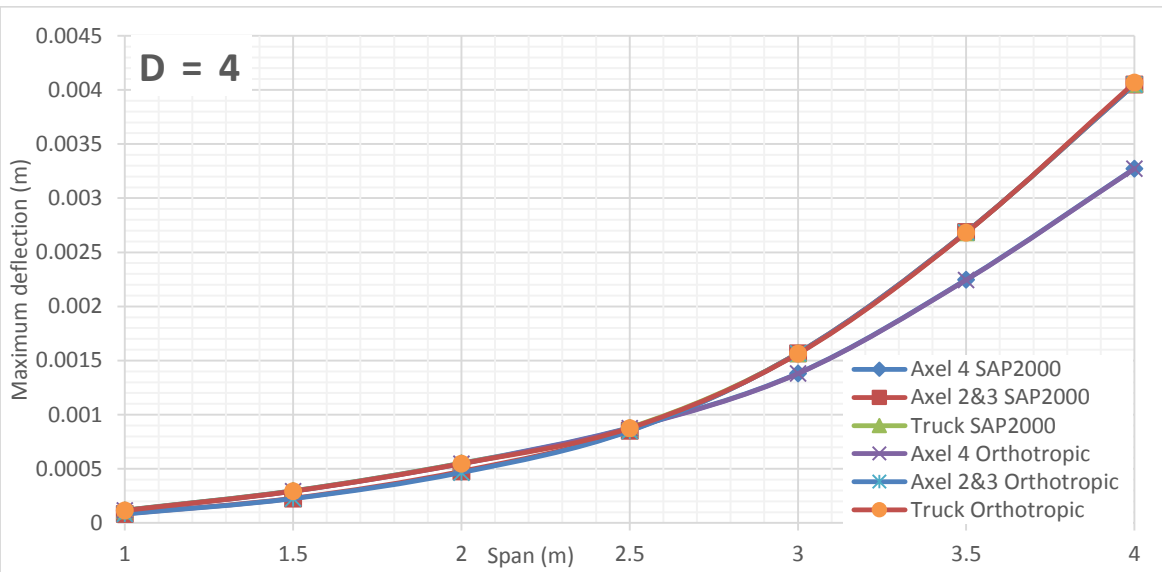

Figure 804 Deflection comparison between FEA and Orthotropic Plate Theory for D = 4 of alpha 0.5 (main bars perpendicular to traffic)

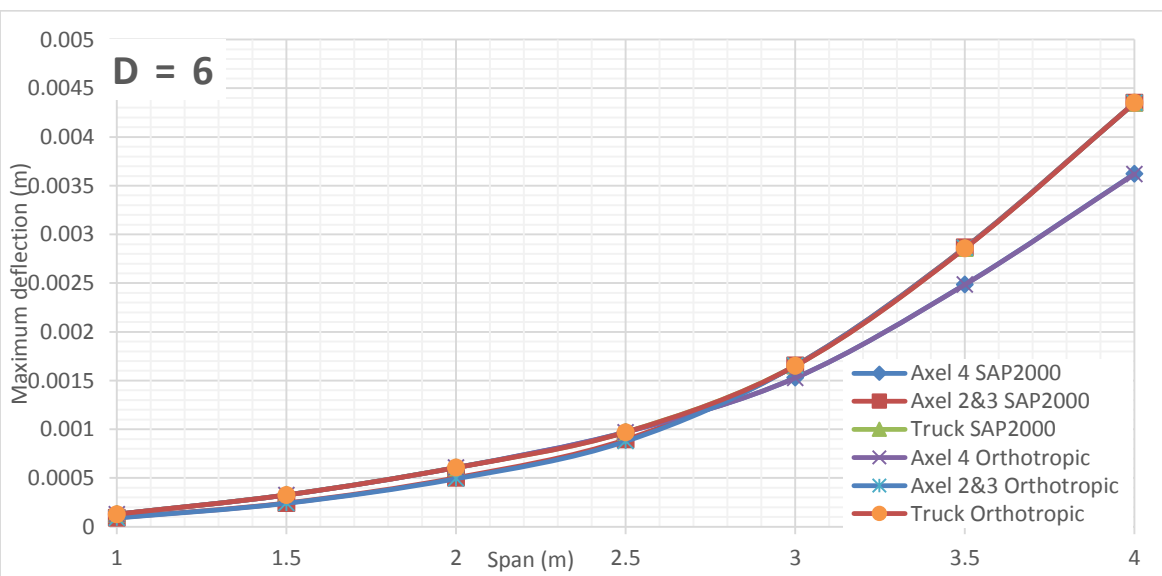

Figure 805 Deflection comparison between FEA and Orthotropic Plate Theory for D = 6 of alpha 0.5 (main bars perpendicular to traffic)

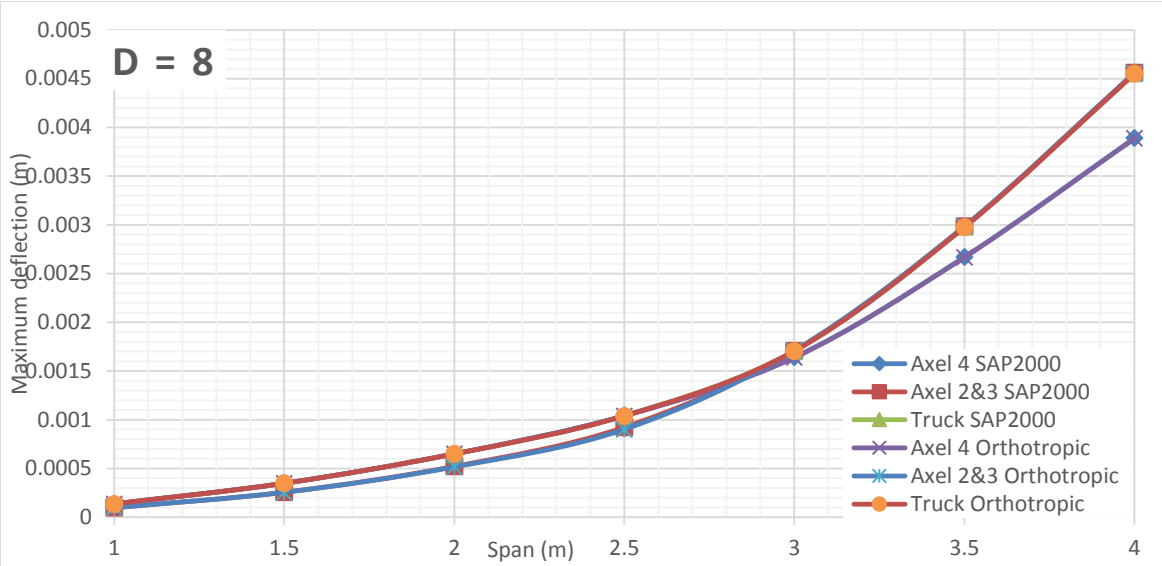

Figure 806 Deflection comparison between FEA and Orthotropic Plate Theory for D = 8 of alpha 0.5 (main bars perpendicular to traffic)

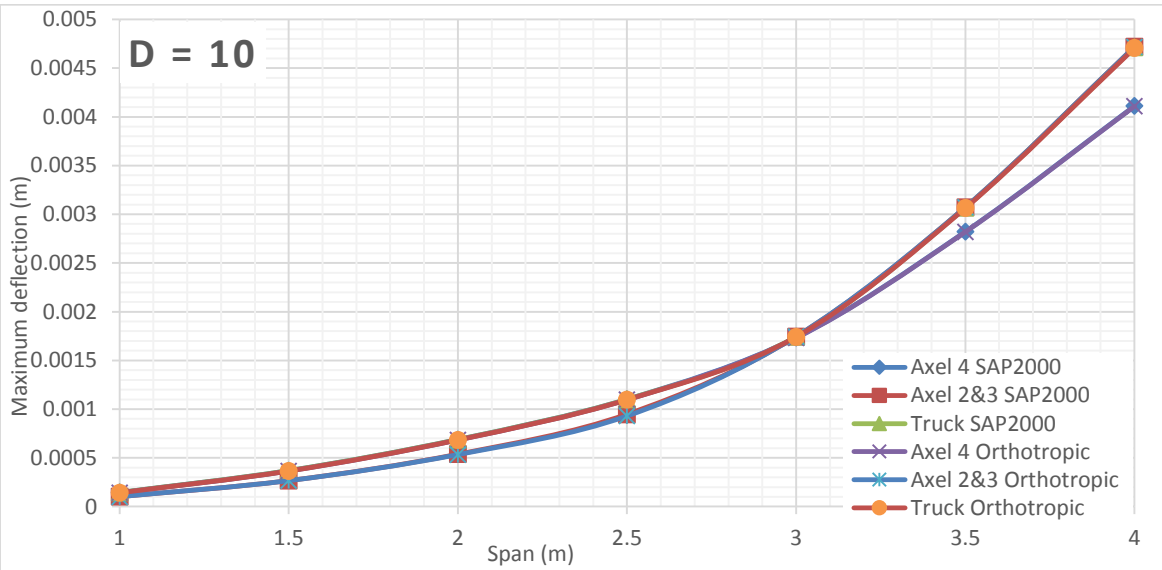

Figure 807 Deflection comparison between FEA and Orthotropic Plate Theory for D = 10 of alpha 0.5 (main bars perpendicular to traffic)

Alpha 0.5 Deflection VS Span Length for Different D Values (Main bars parallel to traffic)

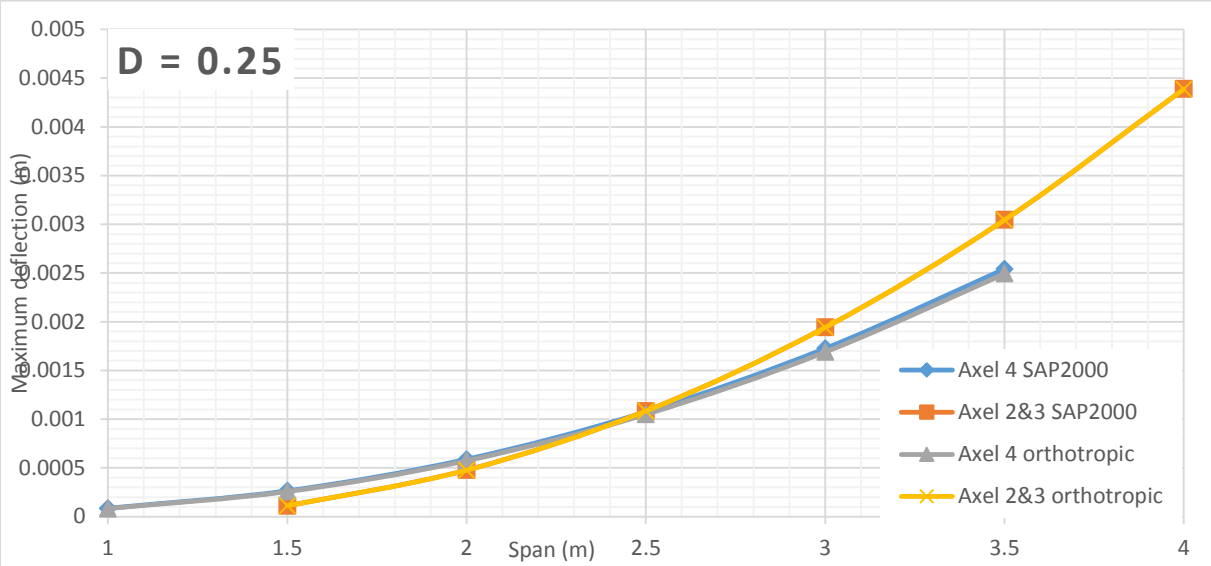

Figure 808 Deflection comparison between FEA and Orthotropic Plate Theory for D = 0.25 of alpha 0.5 (main bars parallel to traffic)

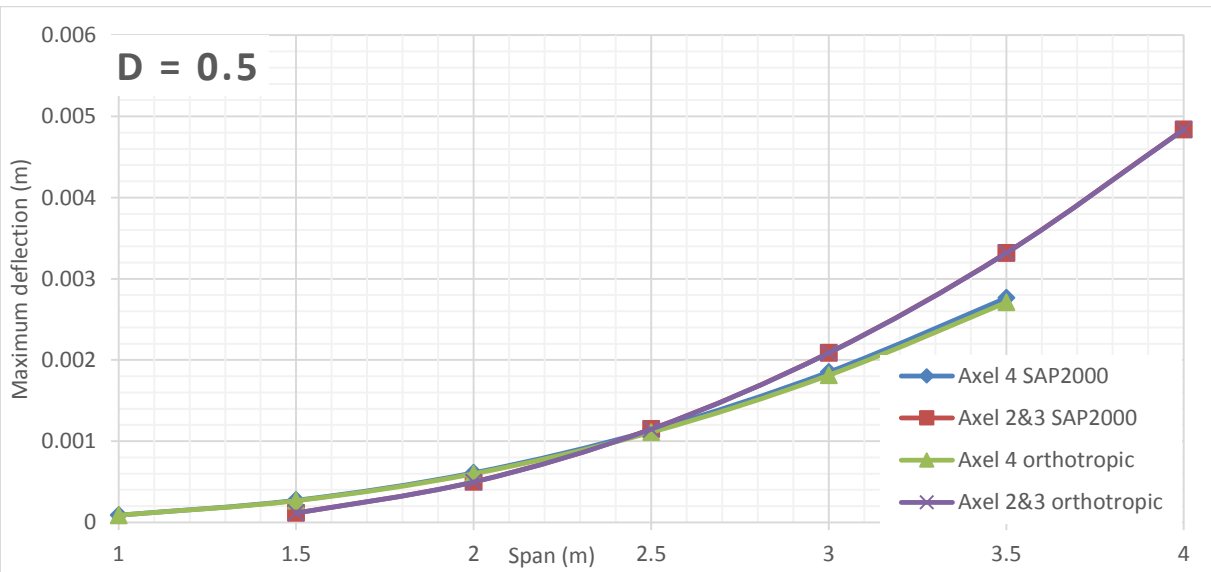

Figure 809 Deflection comparison between FEA and Orthotropic Plate Theory for D = 0.5 of alpha 0.5 (main bars parallel to traffic)

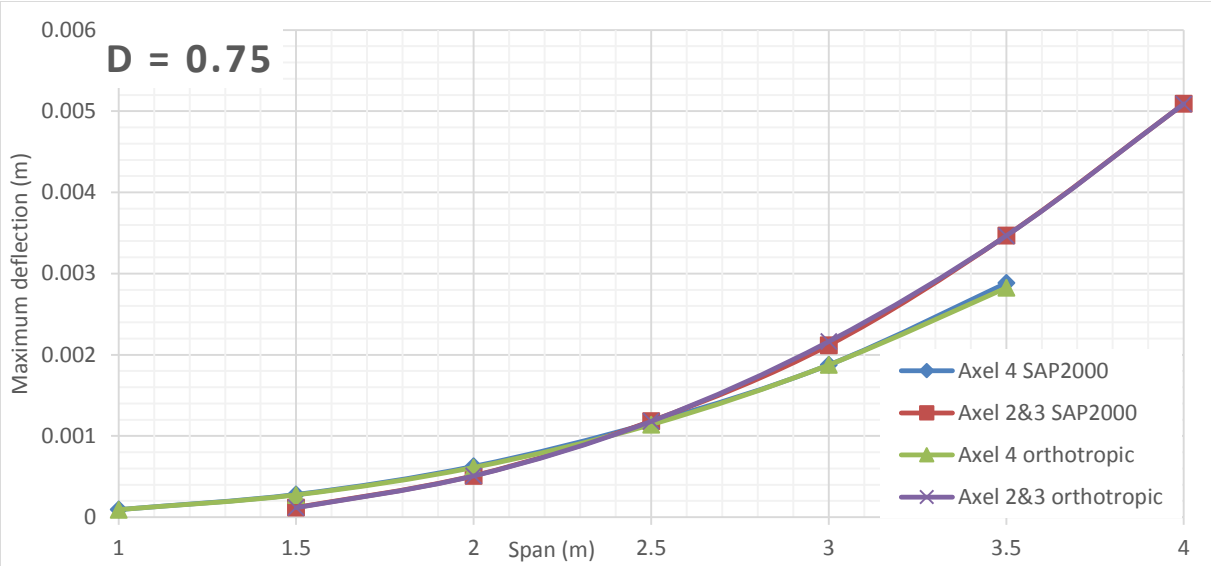

Figure 810 Deflection comparison between FEA and Orthotropic Plate Theory for D = 0.75 of alpha 0.5 (main bars parallel to traffic)

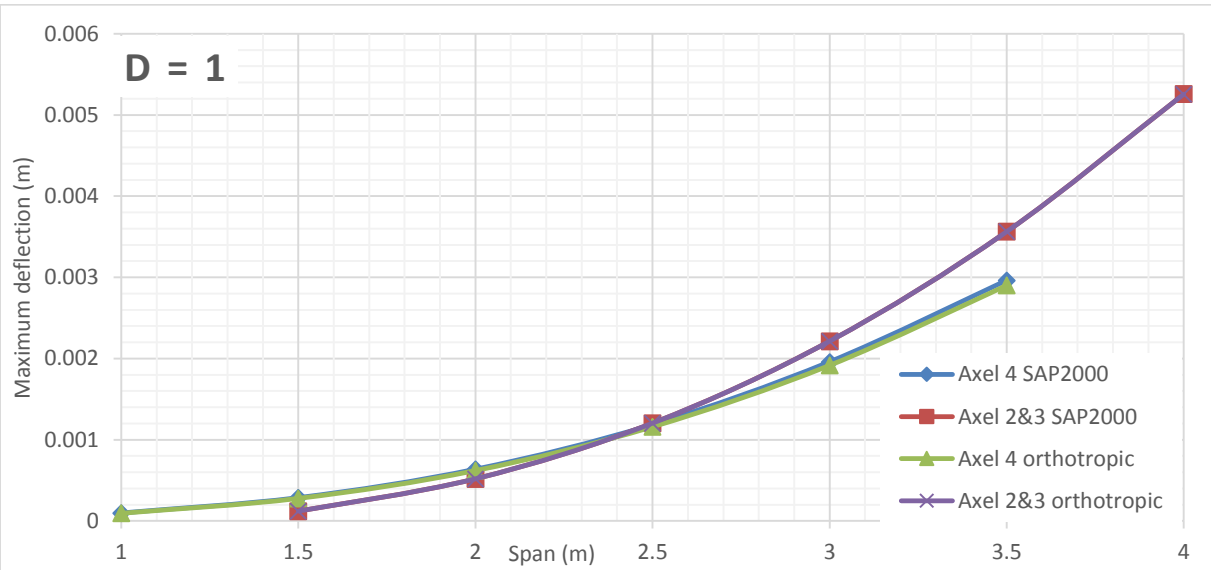

Figure 811 Deflection comparison between FEA and Orthotropic Plate Theory for D = 1 of alpha 0.5 (main bars parallel to traffic)

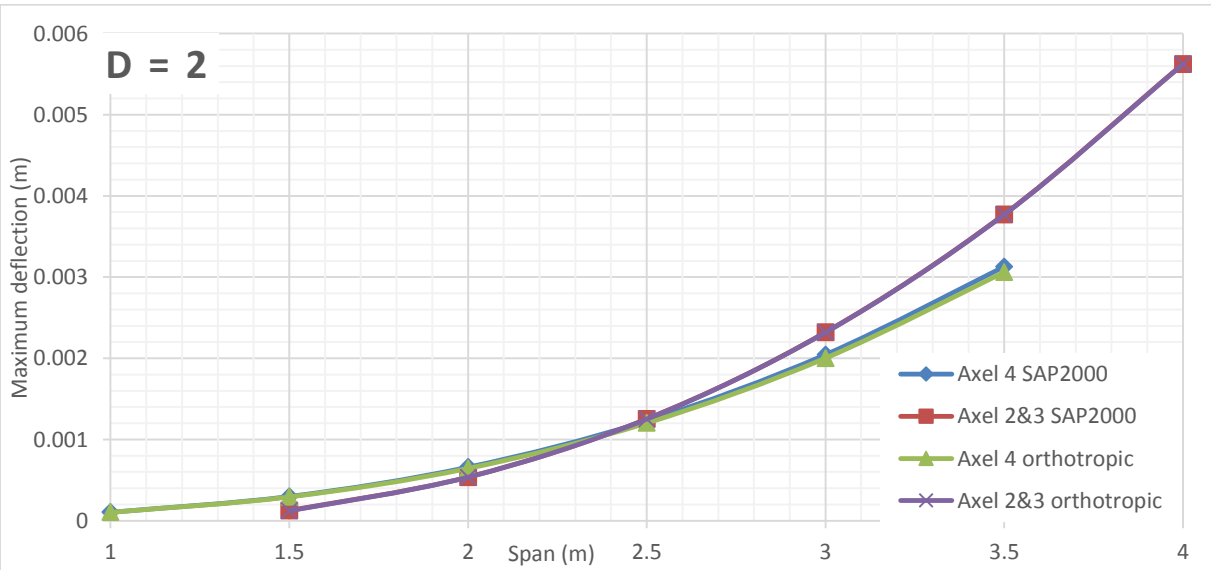

Figure 812 Deflection comparison between FEA and Orthotropic Plate Theory for D = 2 of alpha 0.5 (main bars parallel to traffic)

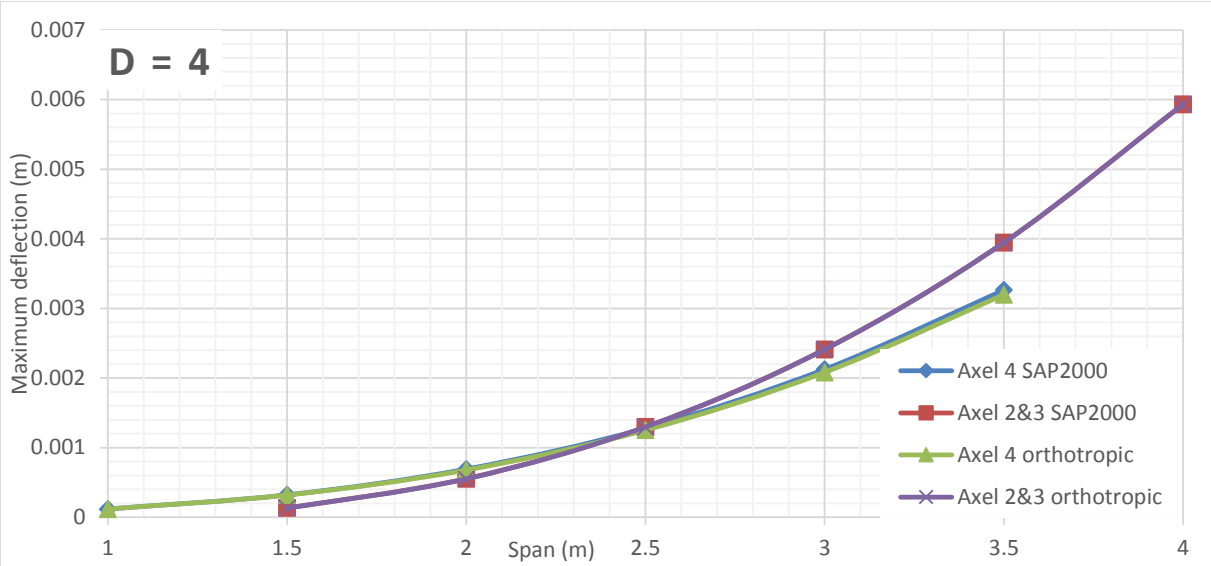

Figure 813 Deflection comparison between FEA and Orthotropic Plate Theory for D = 4 of alpha 0.5 (main bars parallel to traffic)

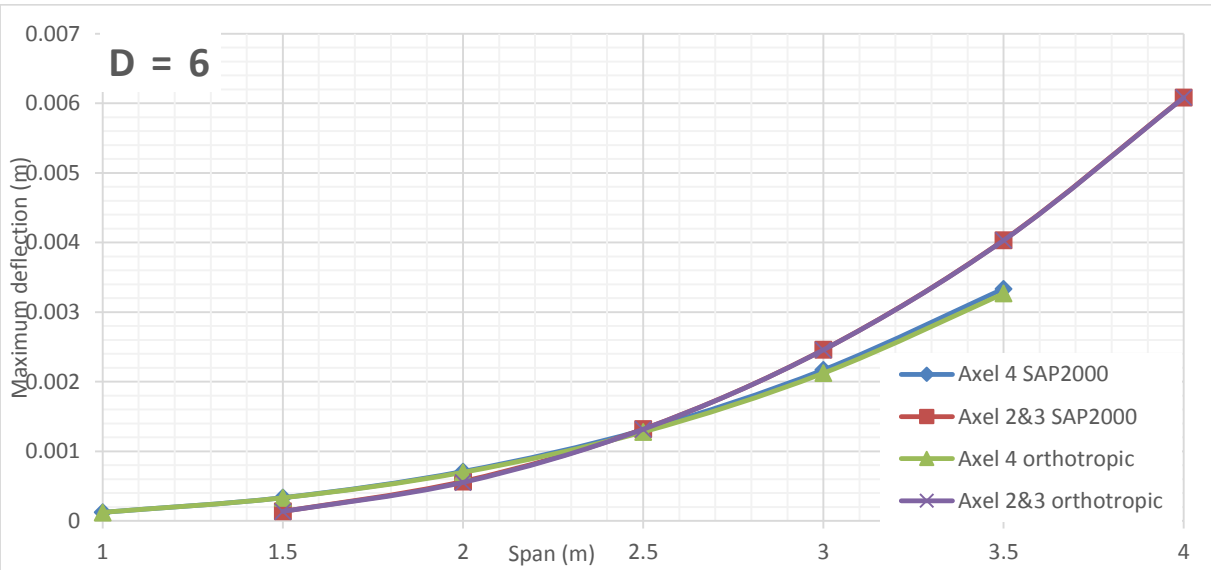

Figure 814 Deflection comparison between FEA and Orthotropic Plate Theory for D = 6 of alpha 0.5 (main bars parallel to traffic)

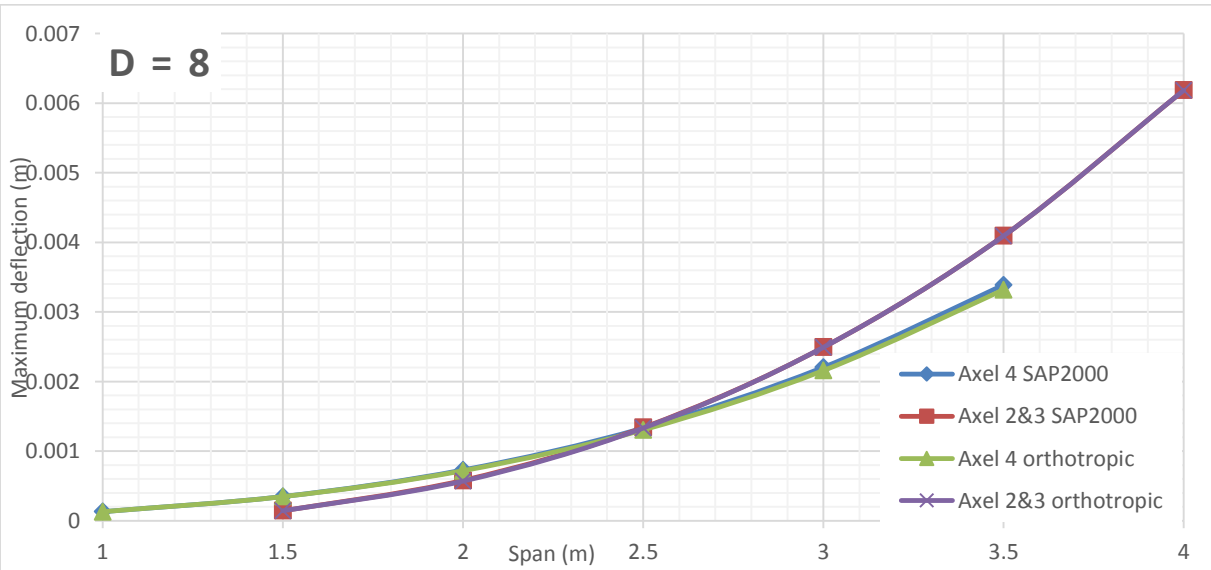

Figure 815 Deflection comparison between FEA and Orthotropic Plate Theory for D = 8 of alpha 0.5 (main bars parallel to traffic)

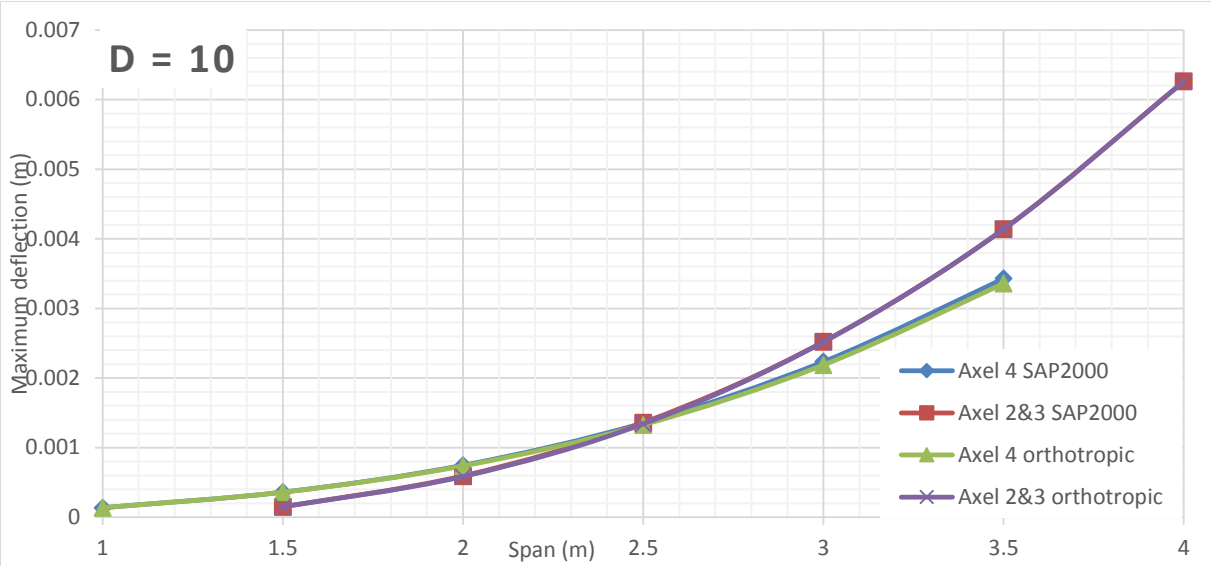

Figure 816 Deflection comparison between FEA and Orthotropic Plate Theory for D = 10 of alpha 0.5 (main bars parallel to traffic)

Alpha 0.75 Deflection VS Span Length for Different D Values (Main bars perpendicular to traffic)

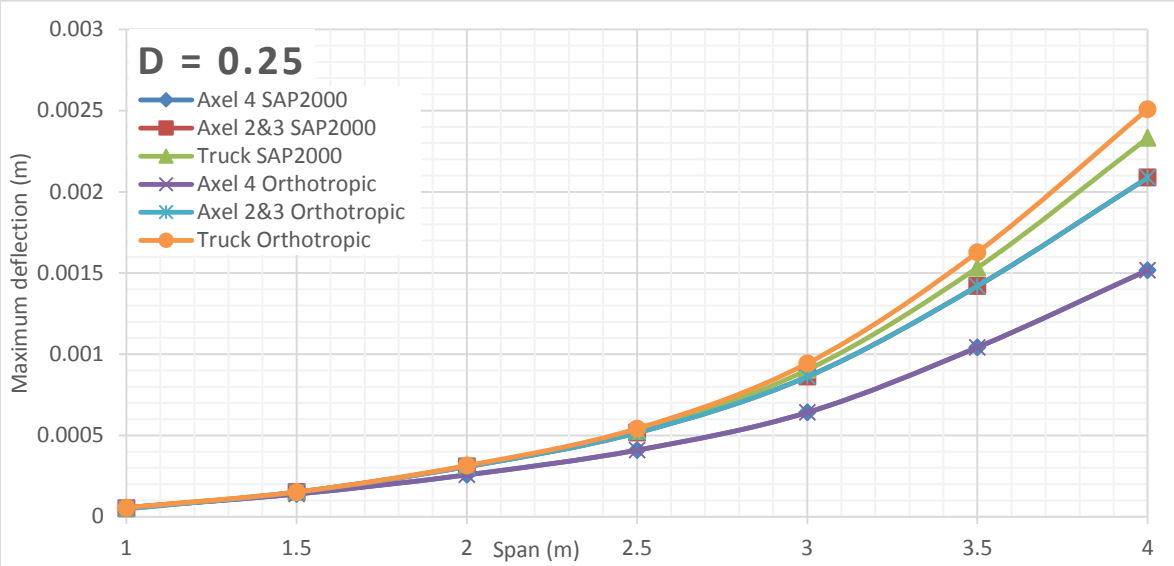

Figure 817 Deflection comparison between FEA and Orthotropic Plate Theory for D = 0.25 of alpha 0.75 (main bars perpendicular to traffic)

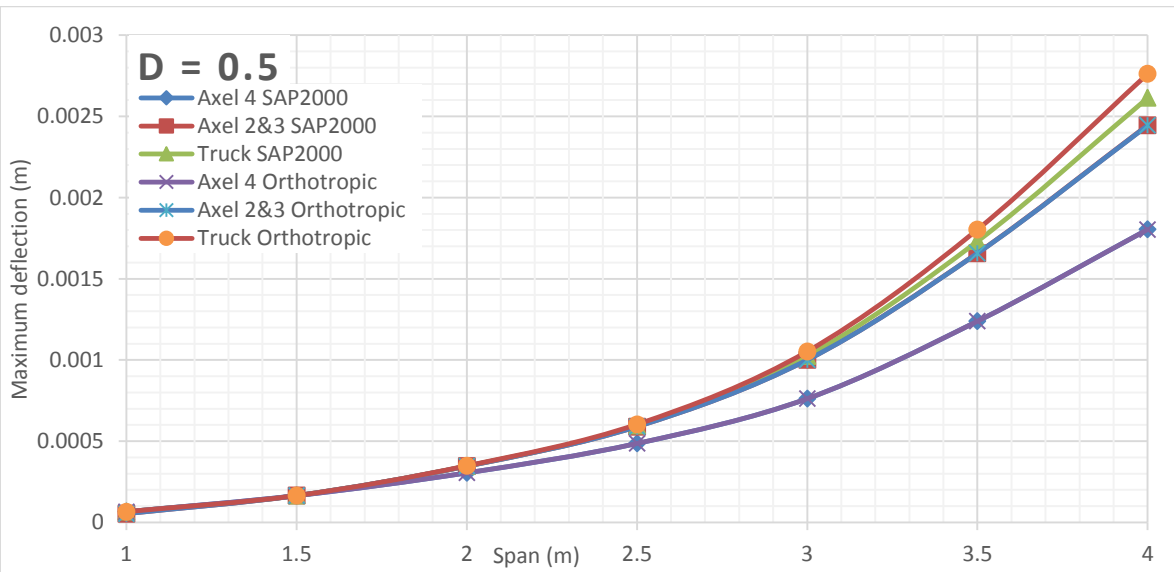

Figure 818 Deflection comparison between FEA and Orthotropic Plate Theory for D = 0.5 of alpha 0.75 (main bars perpendicular to traffic)

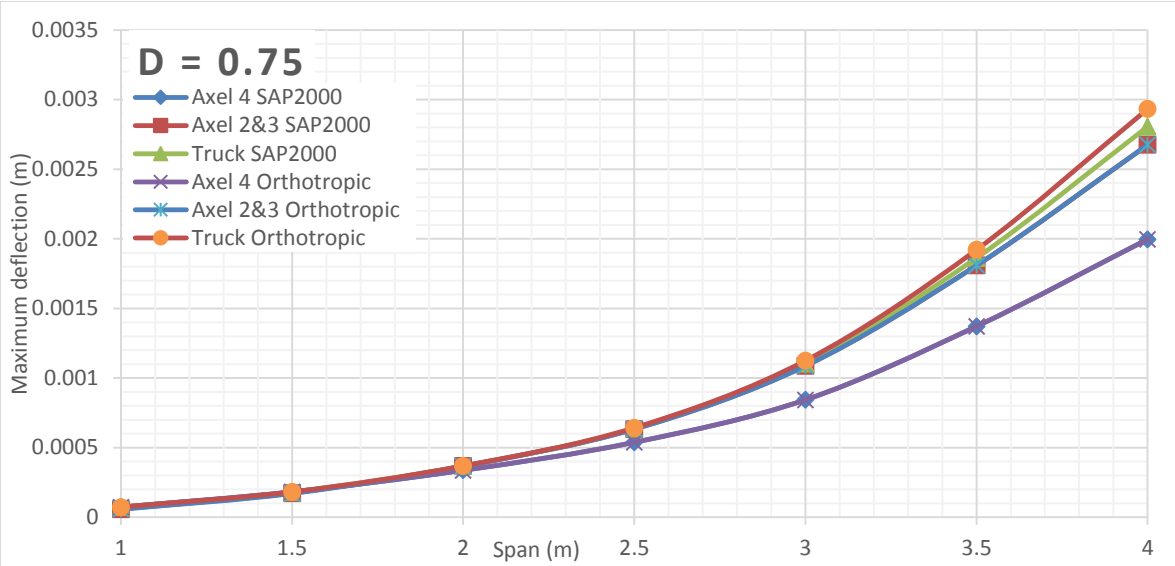

Figure 819 Deflection comparison between FEA and Orthotropic Plate Theory for D = 0.75 of alpha 0.75 (main bars perpendicular to traffic)

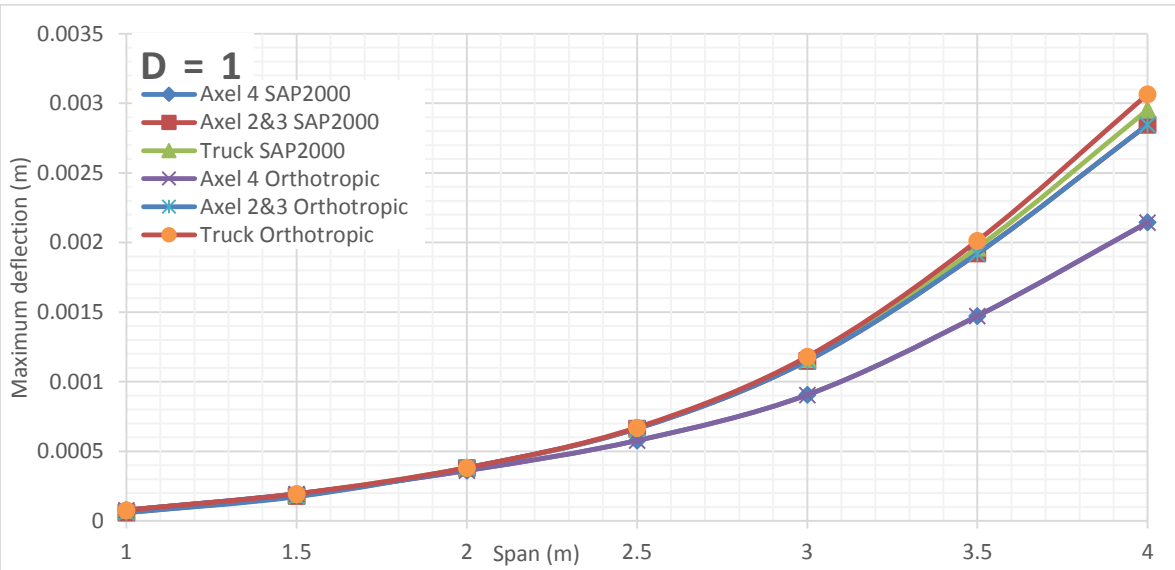

Figure 820 Deflection comparison between FEA and Orthotropic Plate Theory for D = 1 of alpha 0.75 (main bars perpendicular to traffic)

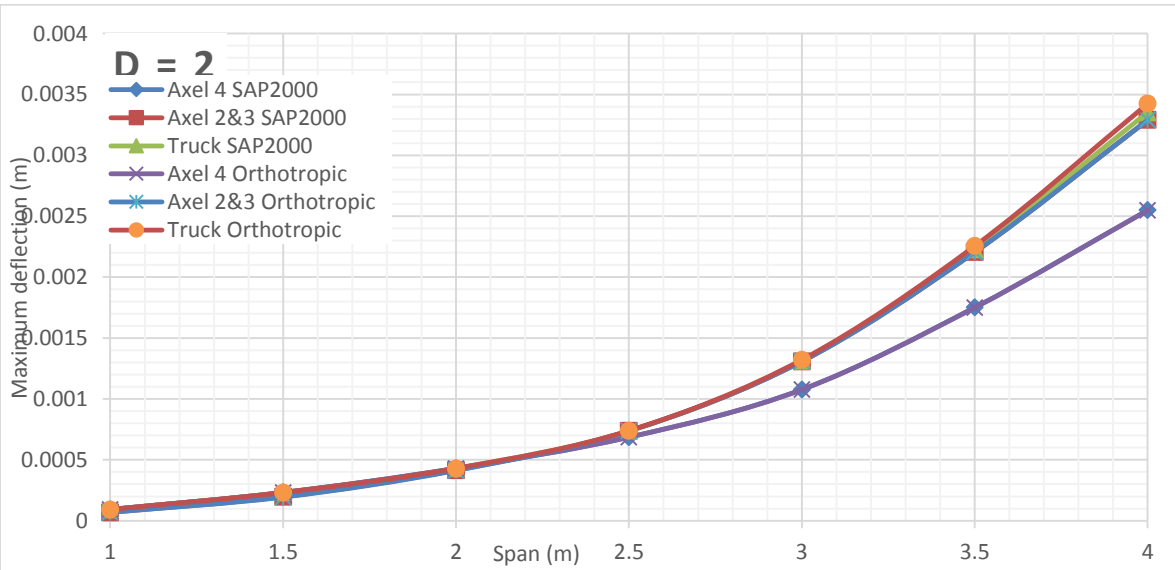

Figure 821 Deflection comparison between FEA and Orthotropic Plate Theory for D = 2 of alpha 0.75 (main bars perpendicular to traffic)

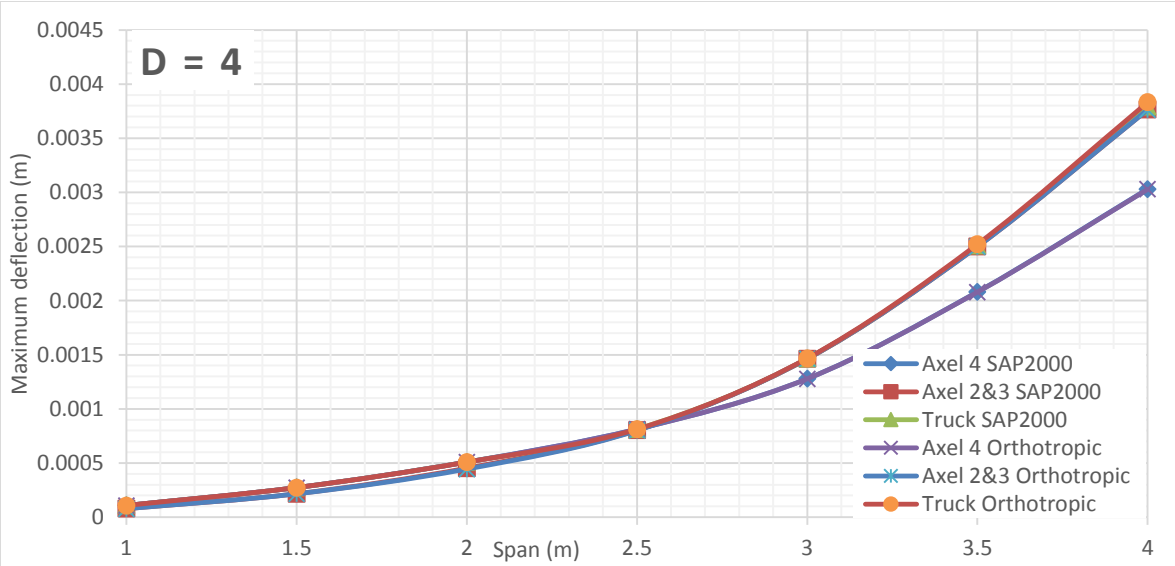

Figure 822 Deflection comparison between FEA and Orthotropic Plate Theory for D = 4 of alpha 0.75 (main bars perpendicular to traffic)

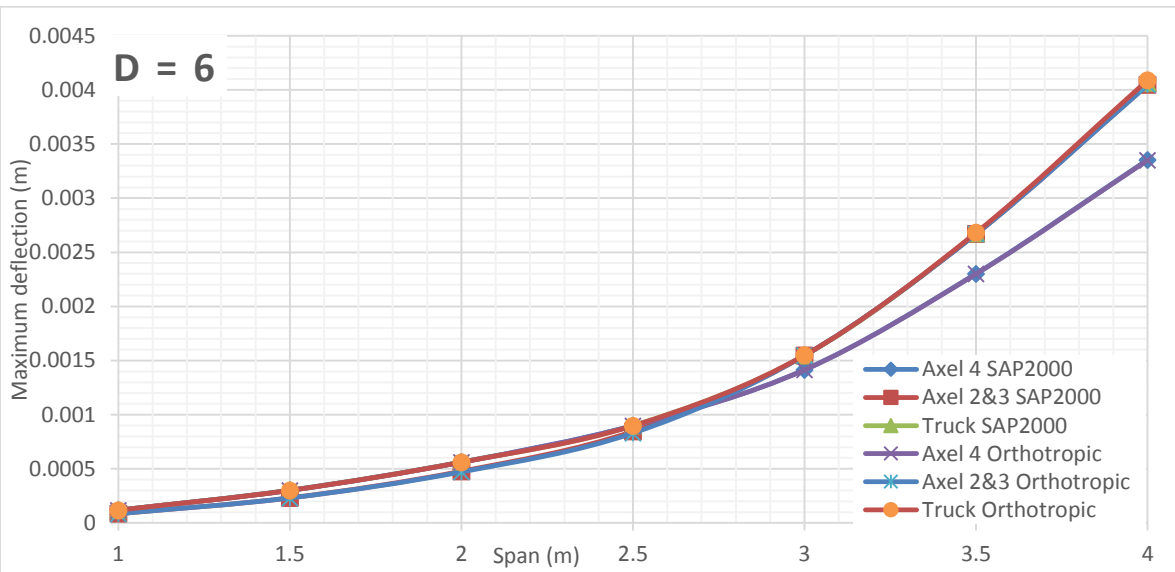

Figure 823 Deflection comparison between FEA and Orthotropic Plate Theory for D = 6 of alpha 0.75 (main bars perpendicular to traffic)

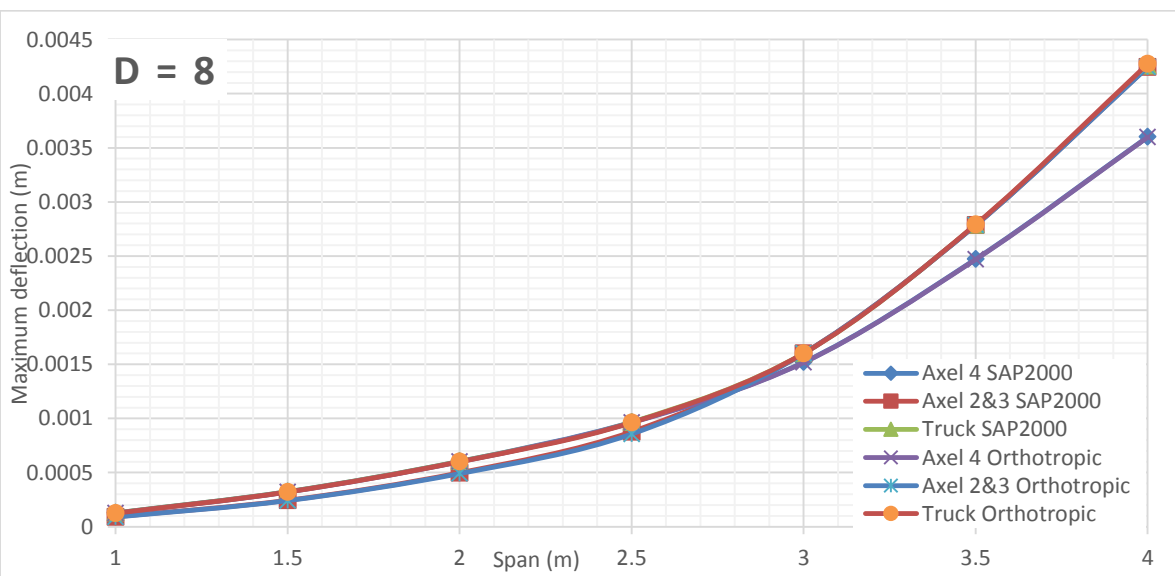

Figure 824 Deflection comparison between FEA and Orthotropic Plate Theory for D = 8 of alpha 0.75 (main bars perpendicular to traffic)

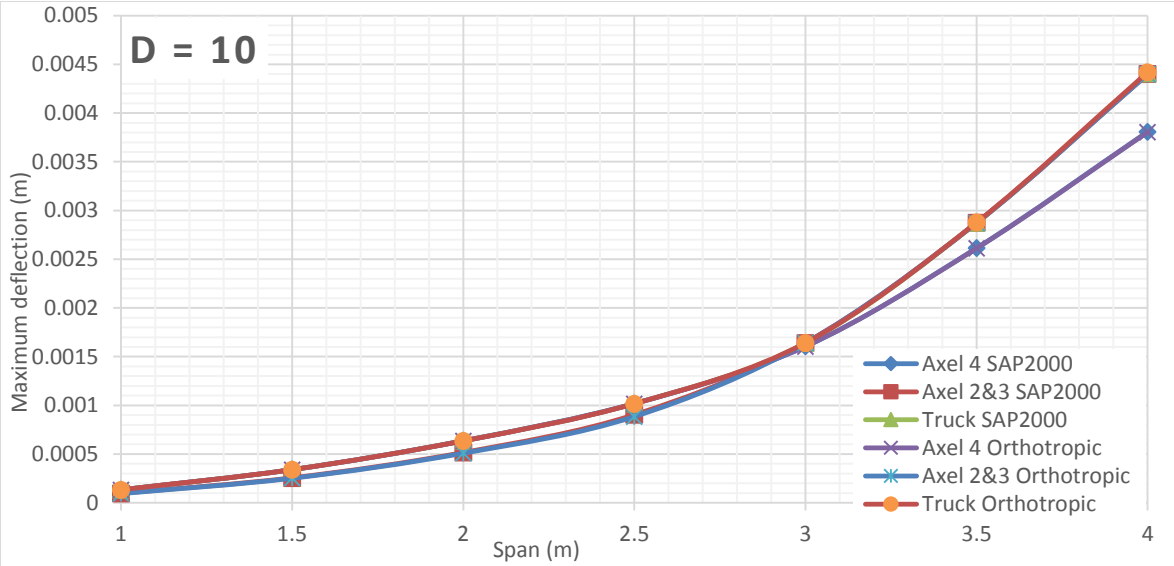

Figure 825 Deflection comparison between FEA and Orthotropic Plate Theory for D = 10 of alpha 0.75 (main bars perpendicular to traffic)

Alpha 0.75 Deflection VS Span Length for Different D Values (Main bars parallel to traffic)

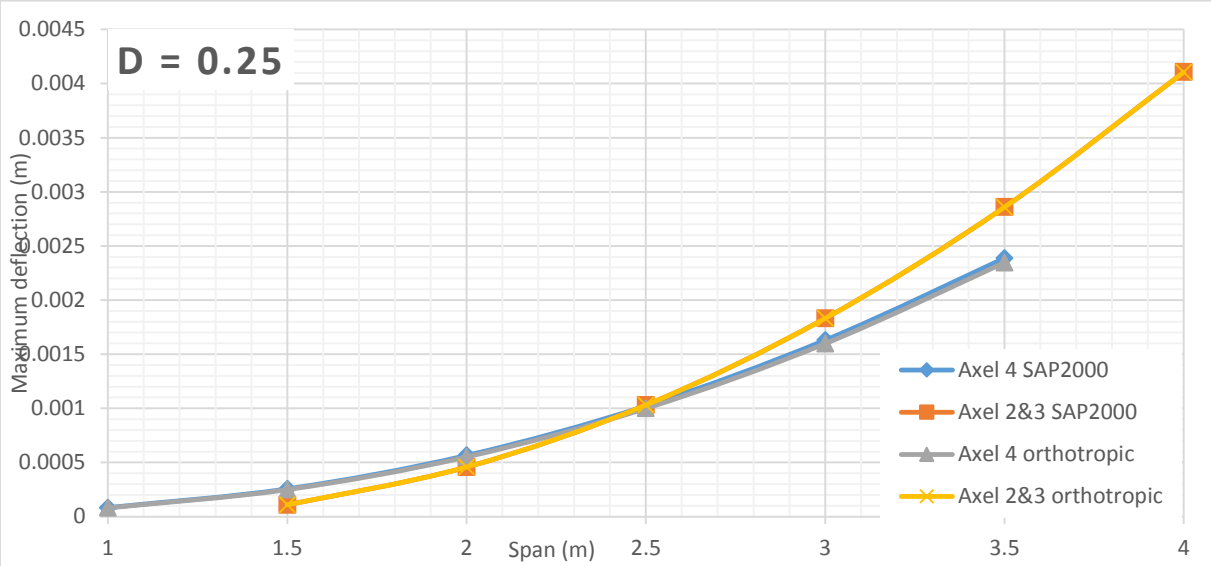

Figure 826 Deflection comparison between FEA and Orthotropic Plate Theory for D = 0.25 of alpha 0.75 (main bars parallel to traffic)

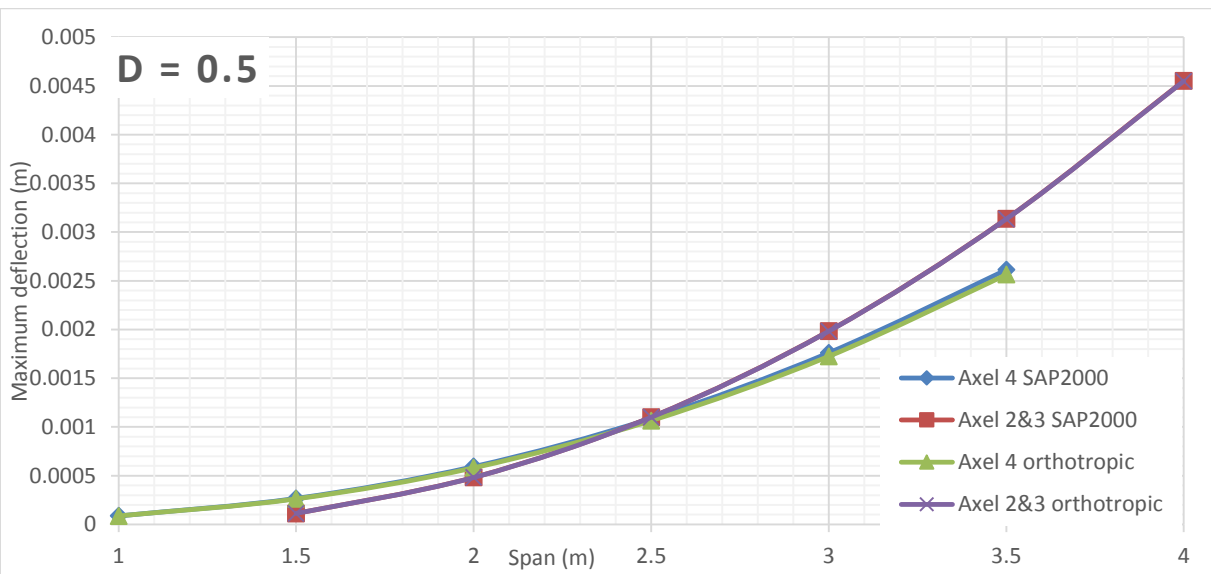

Figure 827 Deflection comparison between FEA and Orthotropic Plate Theory for D = 0.5 of alpha 0.75 (main bars parallel to traffic)

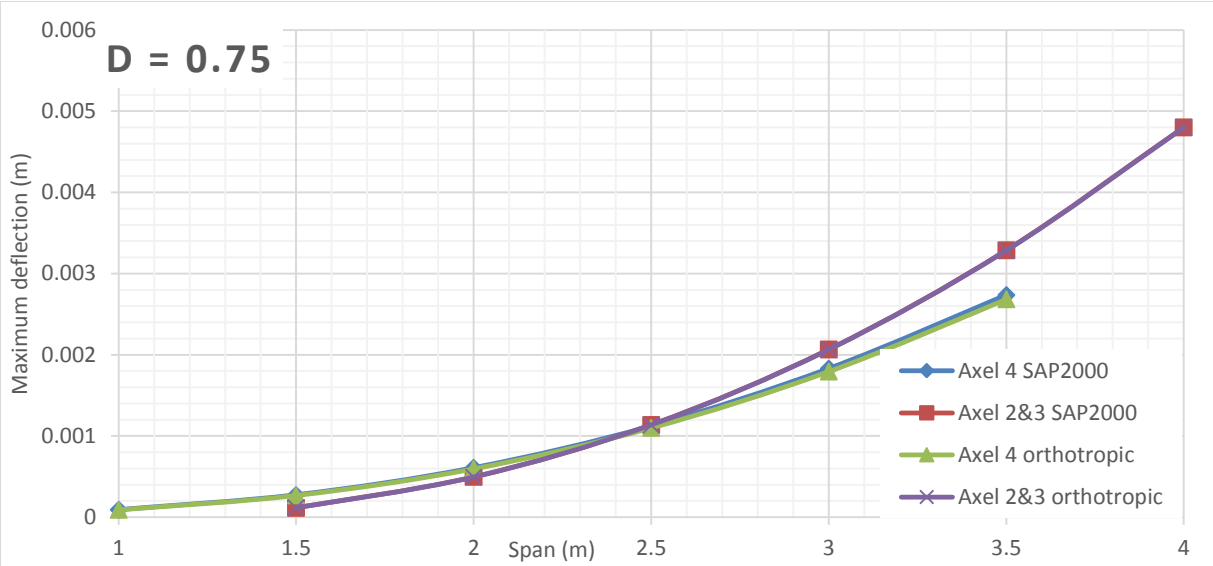

Figure 828 Deflection comparison between FEA and Orthotropic Plate Theory for D = 0.75 of alpha 0.75 (main bars parallel to traffic)

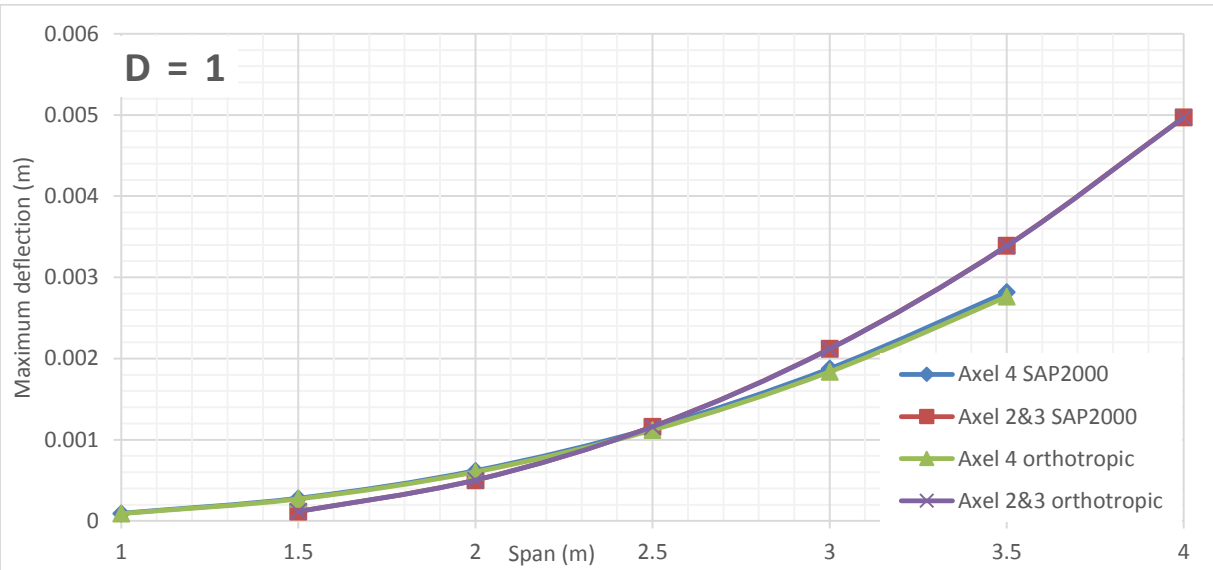

Figure 829 Deflection comparison between FEA and Orthotropic Plate Theory for D = 1 of alpha 0.75 (main bars parallel to traffic)

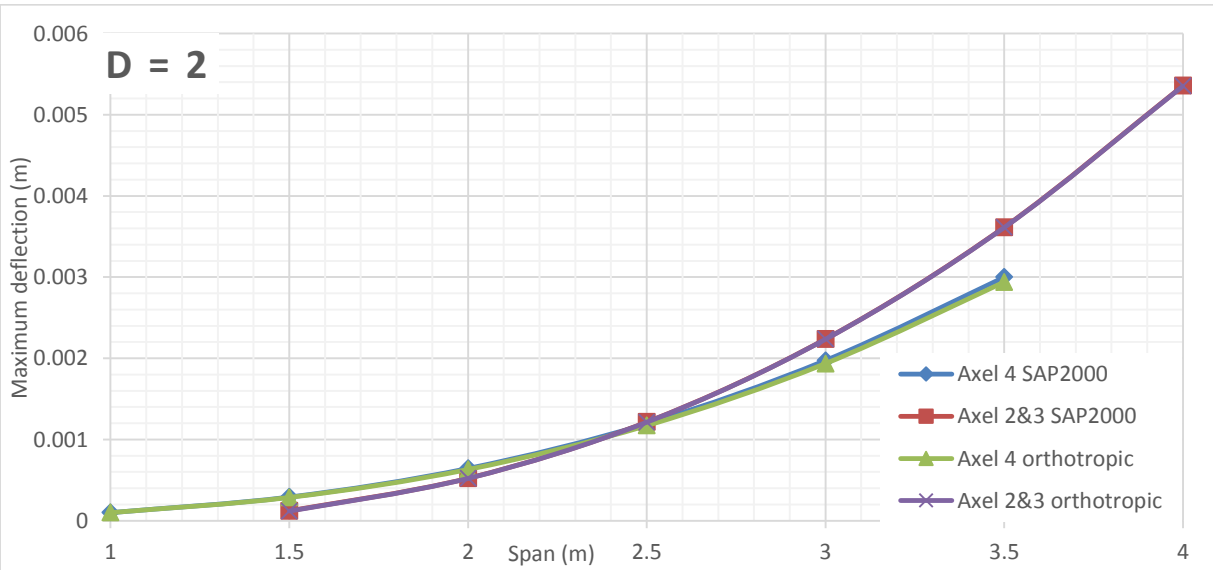

Figure 830 Deflection comparison between FEA and Orthotropic Plate Theory for D = 2 of alpha 0.75 (main bars parallel to traffic)

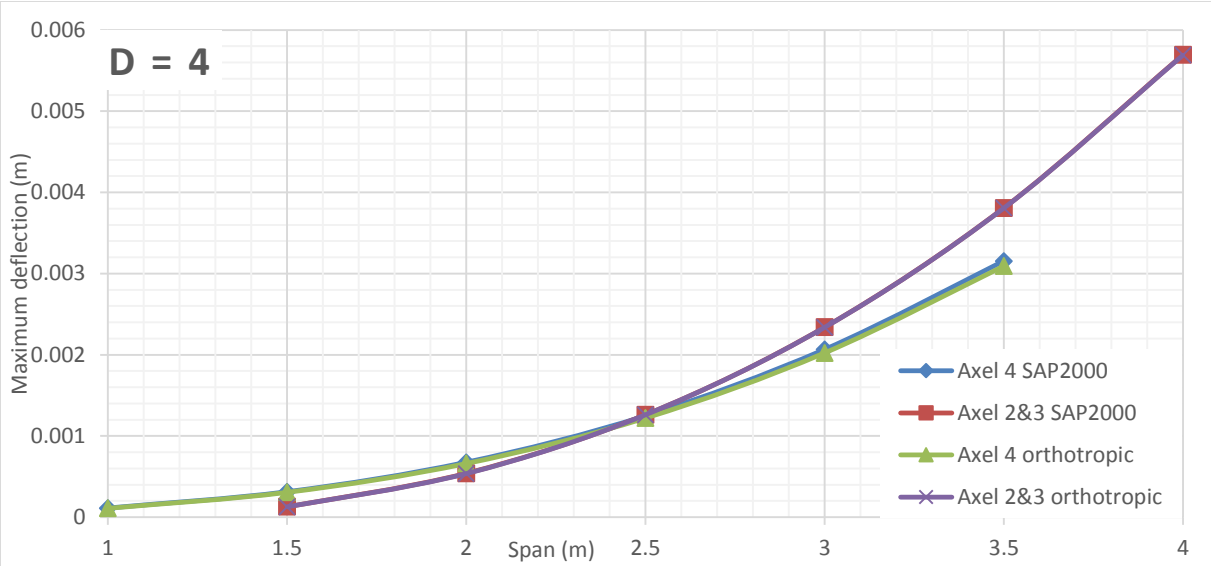

Figure 831 Deflection comparison between FEA and Orthotropic Plate Theory for D = 4 of alpha 0.75 (main bars parallel to traffic)

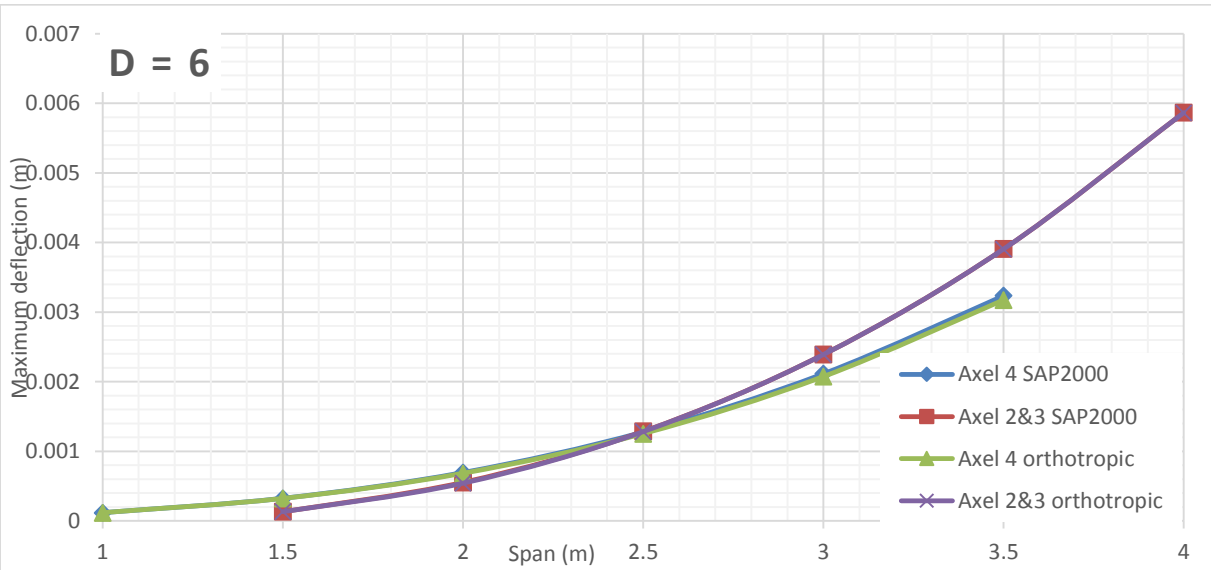

Figure 832 Deflection comparison between FEA and Orthotropic Plate Theory for D = 6 of alpha 0.75 (main bars parallel to traffic)

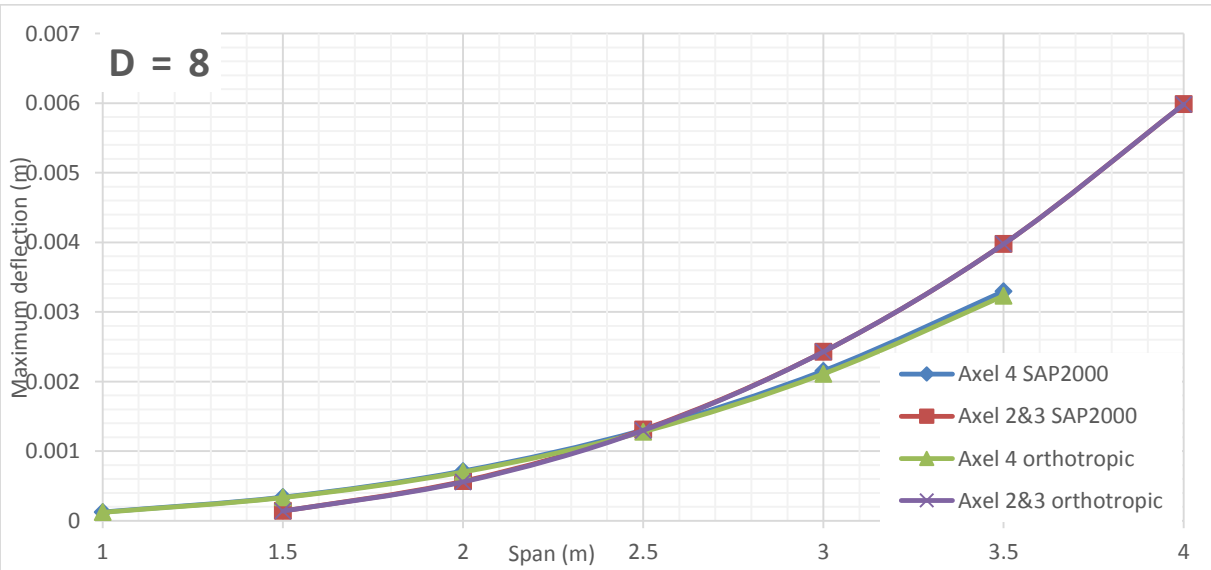

Figure 833 Deflection comparison between FEA and Orthotropic Plate Theory for D = 8 of alpha 0.75 (main bars parallel to traffic)

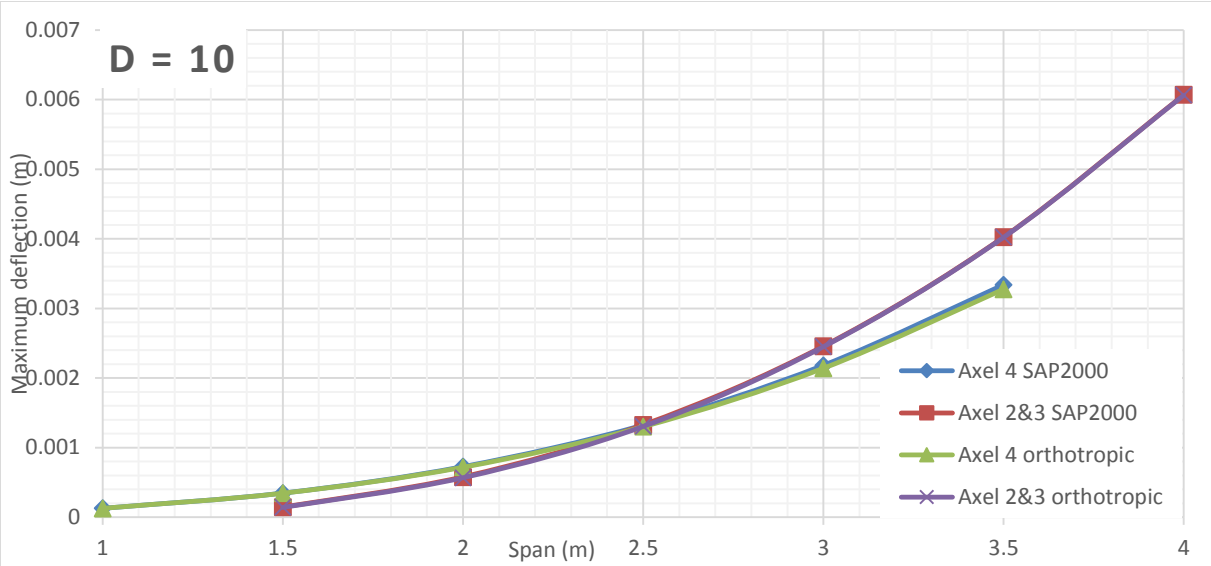

Figure 834 Deflection comparison between FEA and Orthotropic Plate Theory for D = 10 of alpha 0.75 (main bars parallel to traffic)

Alpha 1 Deflection VS Span Length for Different D Values (Main bars perpendicular to traffic)

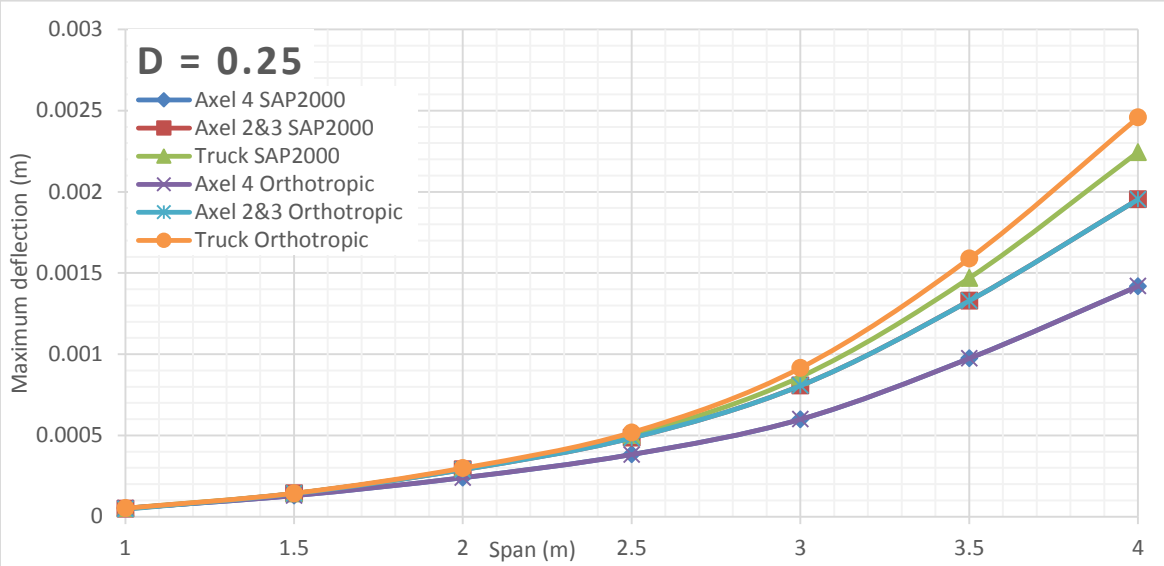

Figure 835 Deflection comparison between FEA and Orthotropic Plate Theory for D = 0.25 of alpha 1 (main bars perpendicular to traffic)

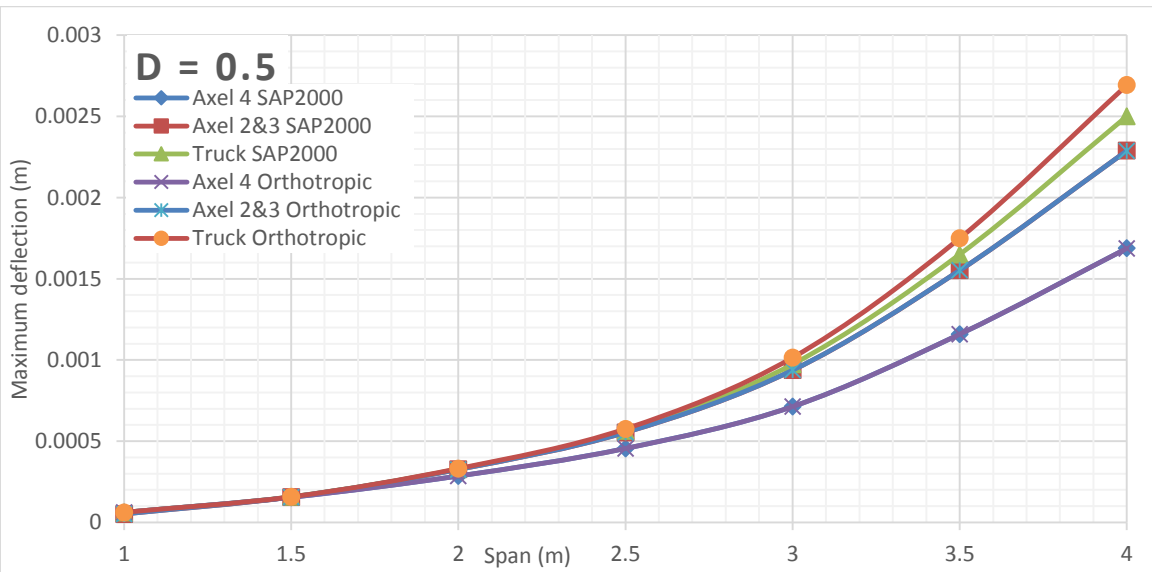

Figure 836 Deflection comparison between FEA and Orthotropic Plate Theory for D = 0.5 of alpha 1 (main bars perpendicular to traffic)

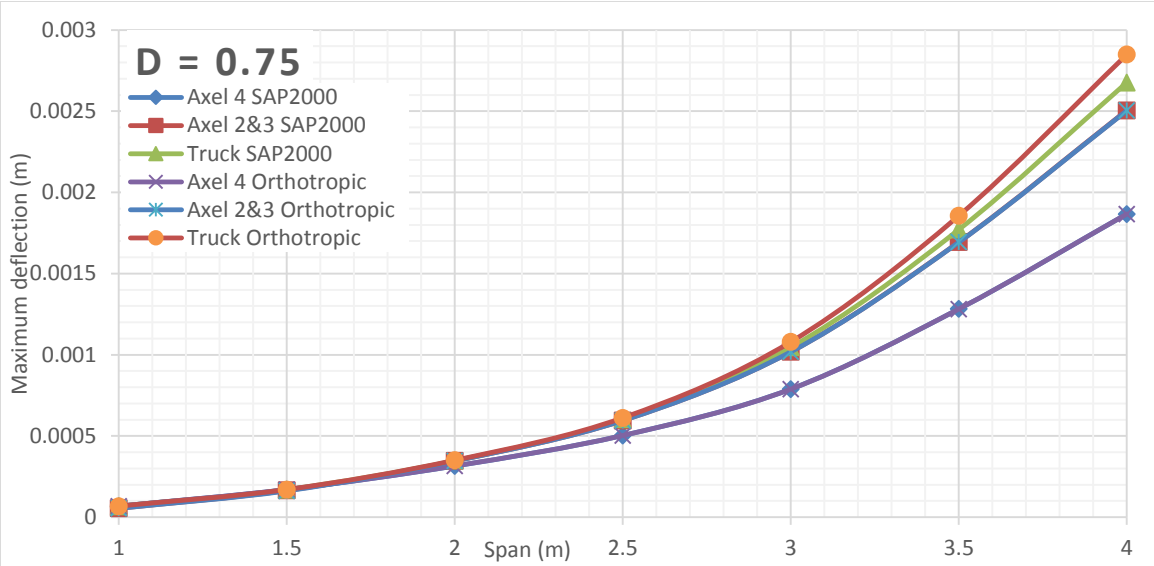

Figure 837 Deflection comparison between FEA and Orthotropic Plate Theory for D = 0.75 of alpha 1 (main bars perpendicular to traffic)

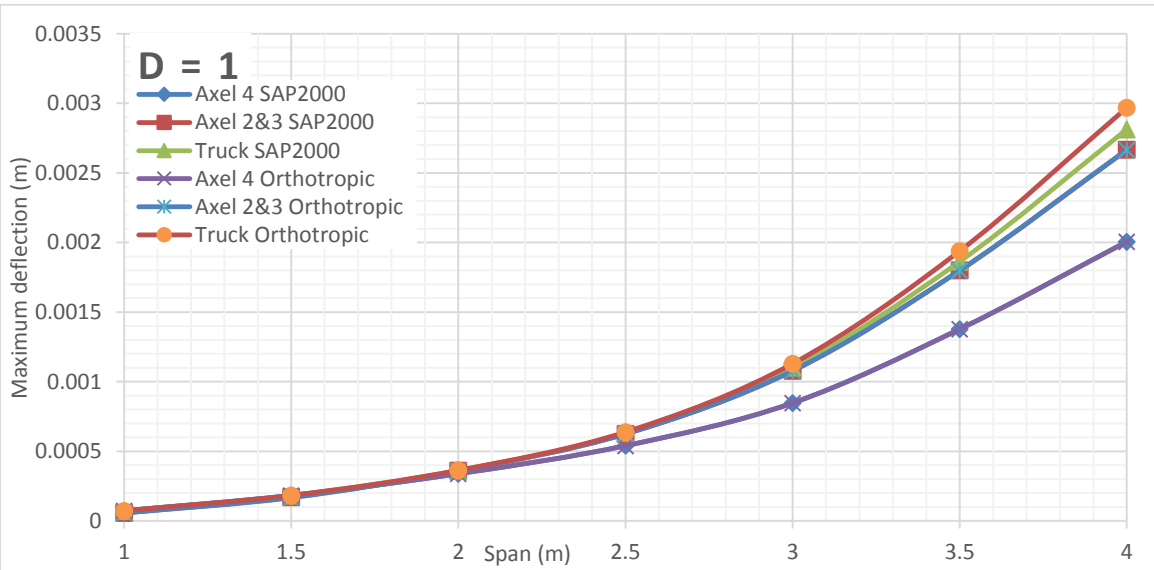

Figure 838 Deflection comparison between FEA and Orthotropic Plate Theory for D = 1 of alpha 1 (main bars perpendicular to traffic)

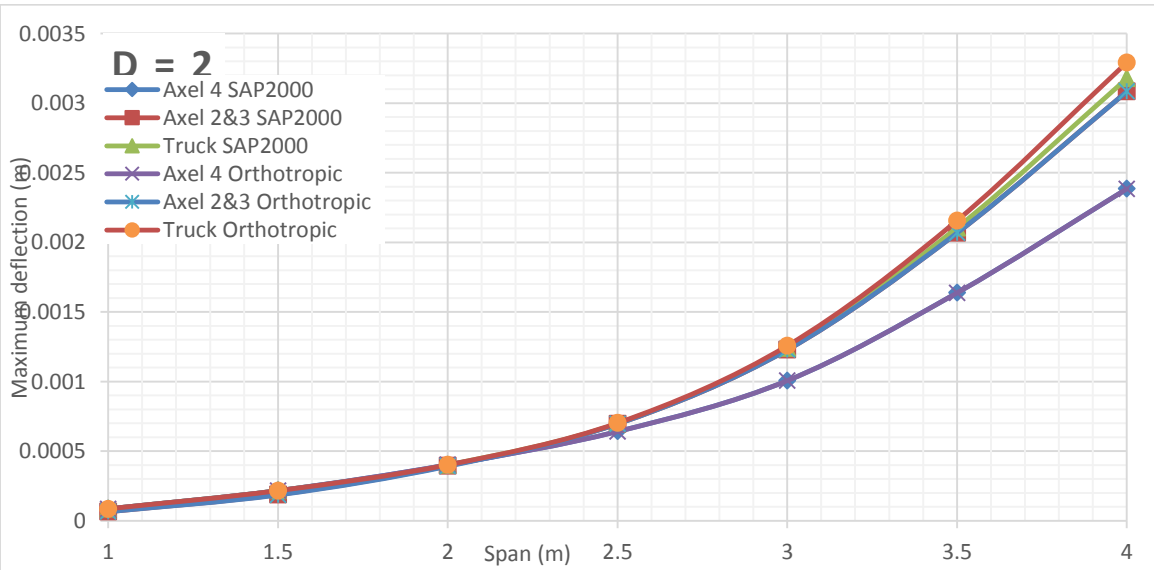

Figure 839 Deflection comparison between FEA and Orthotropic Plate Theory for D = 2 of alpha 1 (main bars perpendicular to traffic)

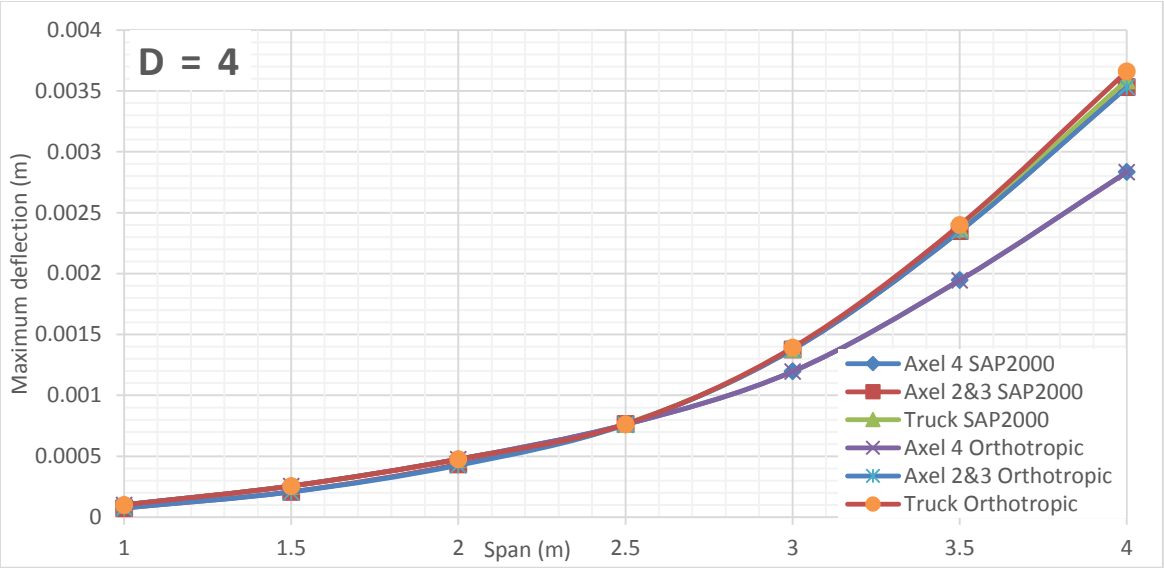

Figure 840 Deflection comparison between FEA and Orthotropic Plate Theory for D = 4 of alpha 1 (main bars perpendicular to traffic)

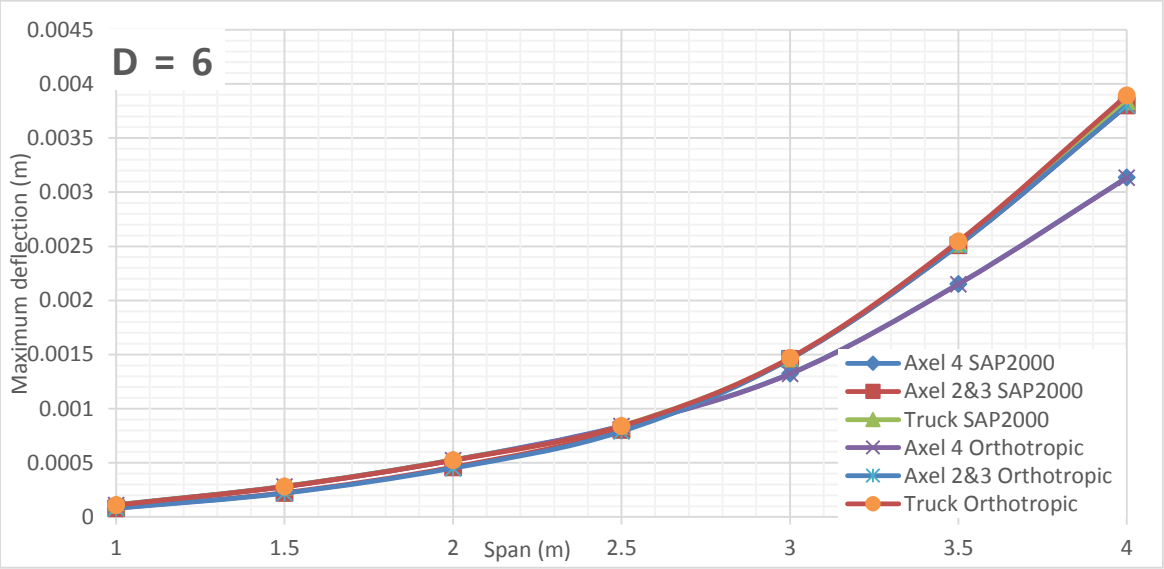

Figure 841 Deflection comparison between FEA and Orthotropic Plate Theory for D = 6 of alpha 1 (main bars perpendicular to traffic)

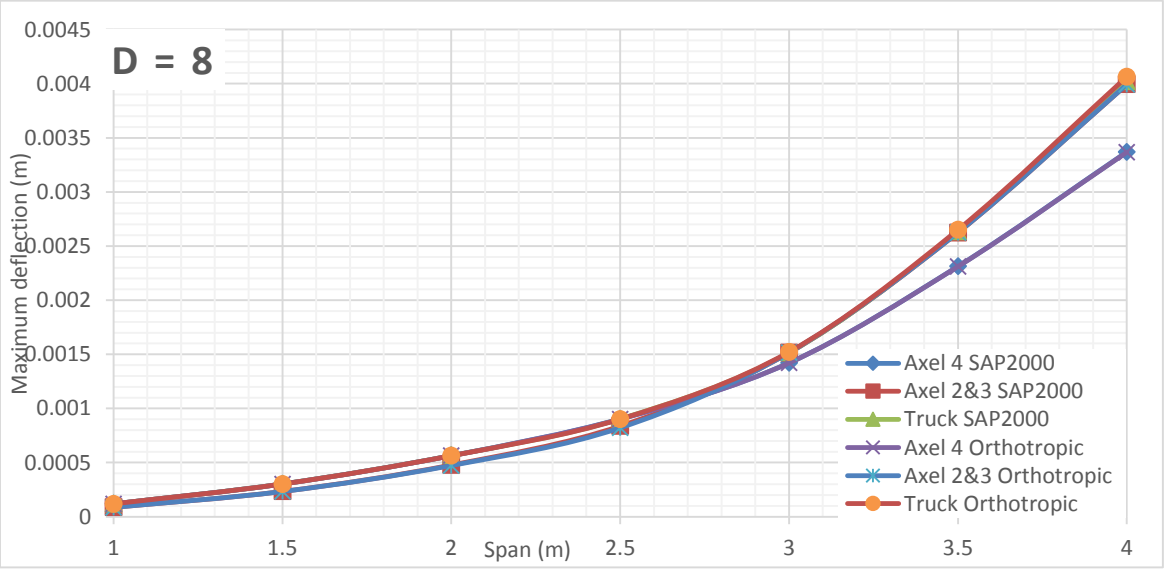

Figure 842 Deflection comparison between FEA and Orthotropic Plate Theory for D = 8 of alpha 1 (main bars perpendicular to traffic)

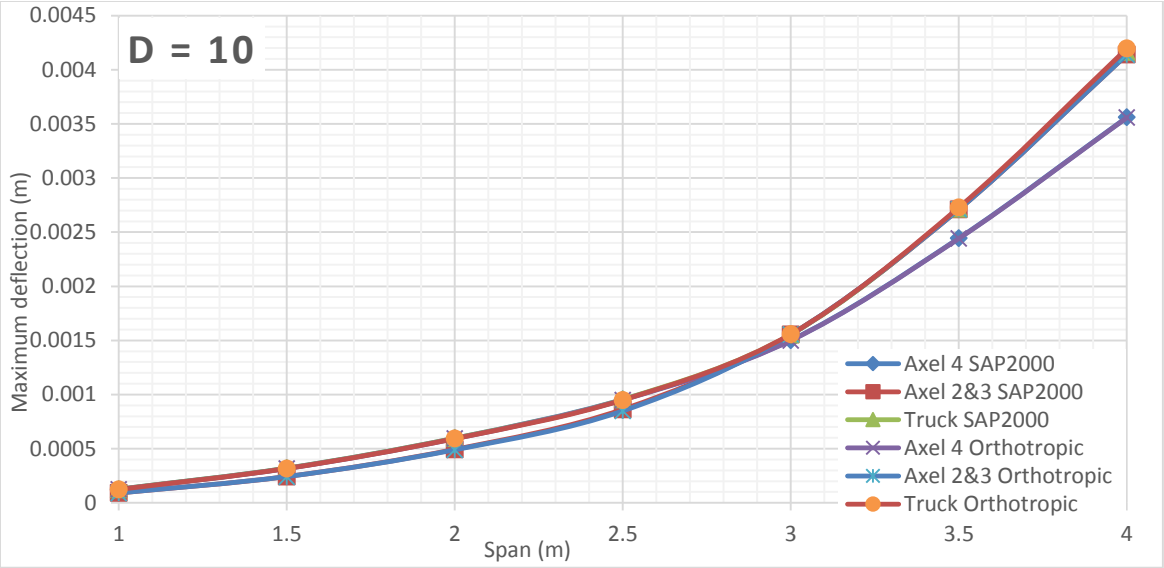

Figure 843 Deflection comparison between FEA and Orthotropic Plate Theory for D = 10 of alpha 1 (main bars perpendicular to traffic)

Alpha 1 Deflection VS Span Length for Different D Values (Main bars parallel to traffic)

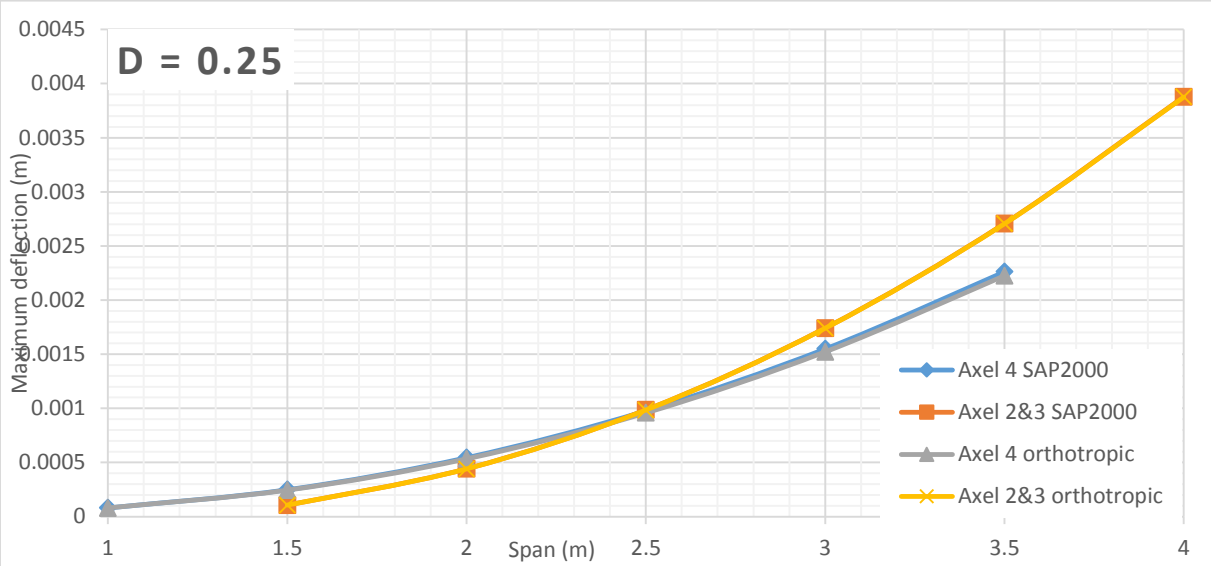

Figure 844 Deflection comparison between FEA and Orthotropic Plate Theory for D = 0.25 of alpha 1 (main bars parallel to traffic)

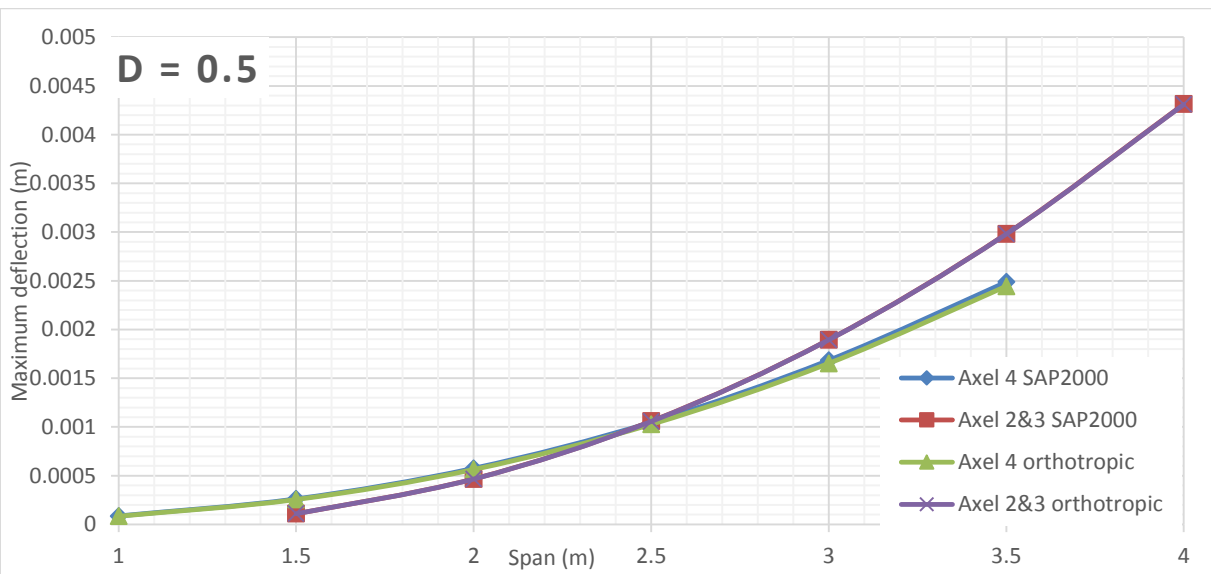

Figure 845 Deflection comparison between FEA and Orthotropic Plate Theory for D = 0.5 of alpha 1 (main bars parallel to traffic)

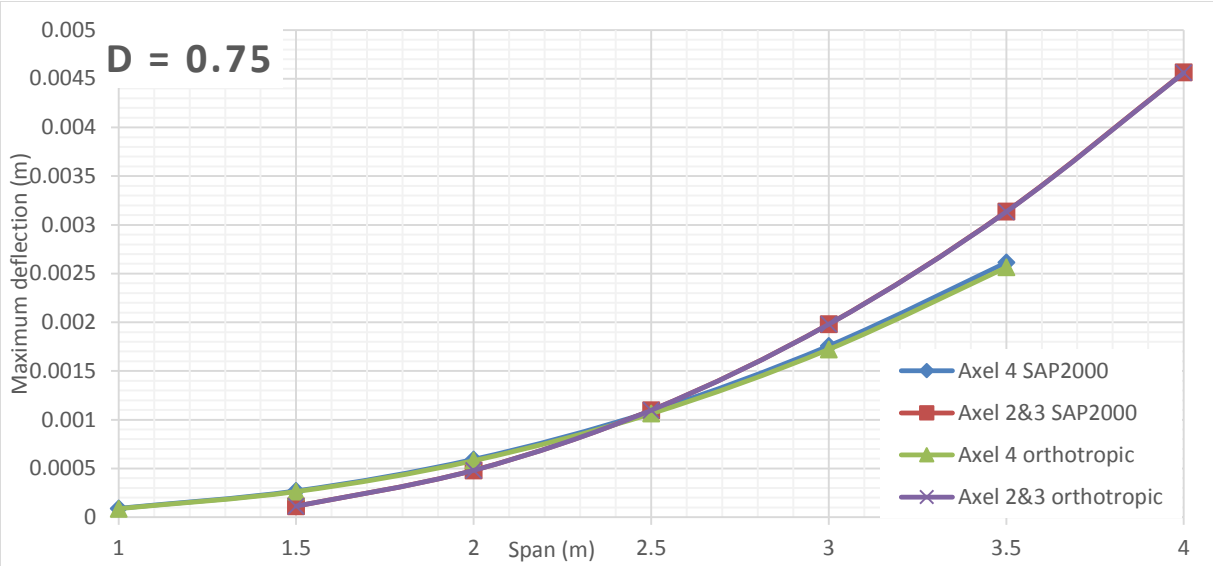

Figure 846 Deflection comparison between FEA and Orthotropic Plate Theory for D = 0.75 of alpha 1 (main bars parallel to traffic)

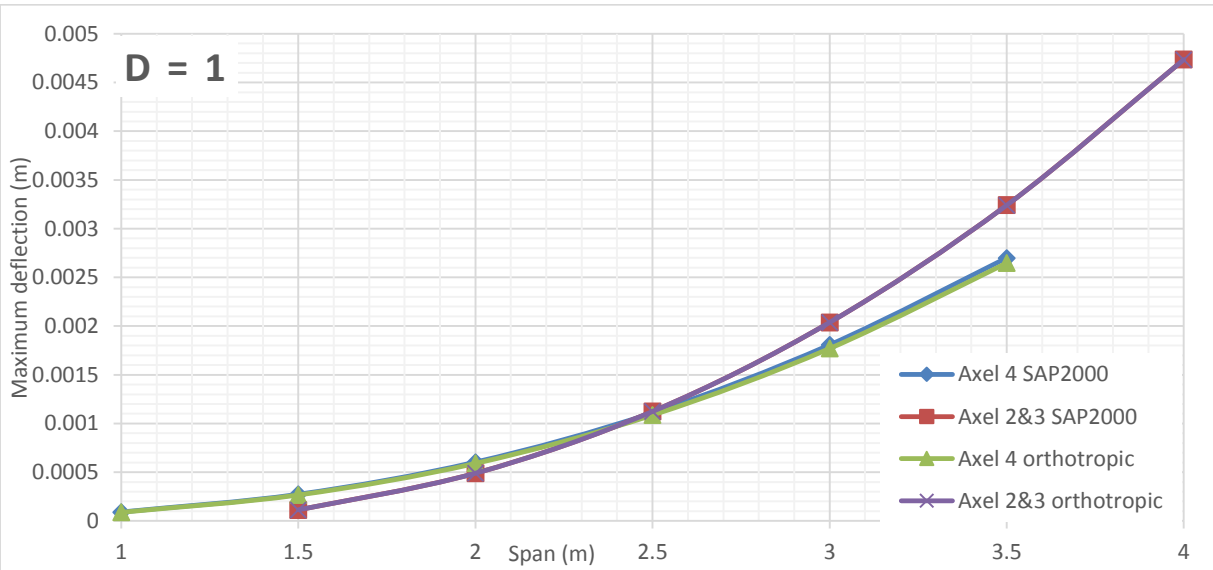

Figure 847 Deflection comparison between FEA and Orthotropic Plate Theory for D = 1 of alpha 1 (main bars parallel to traffic)

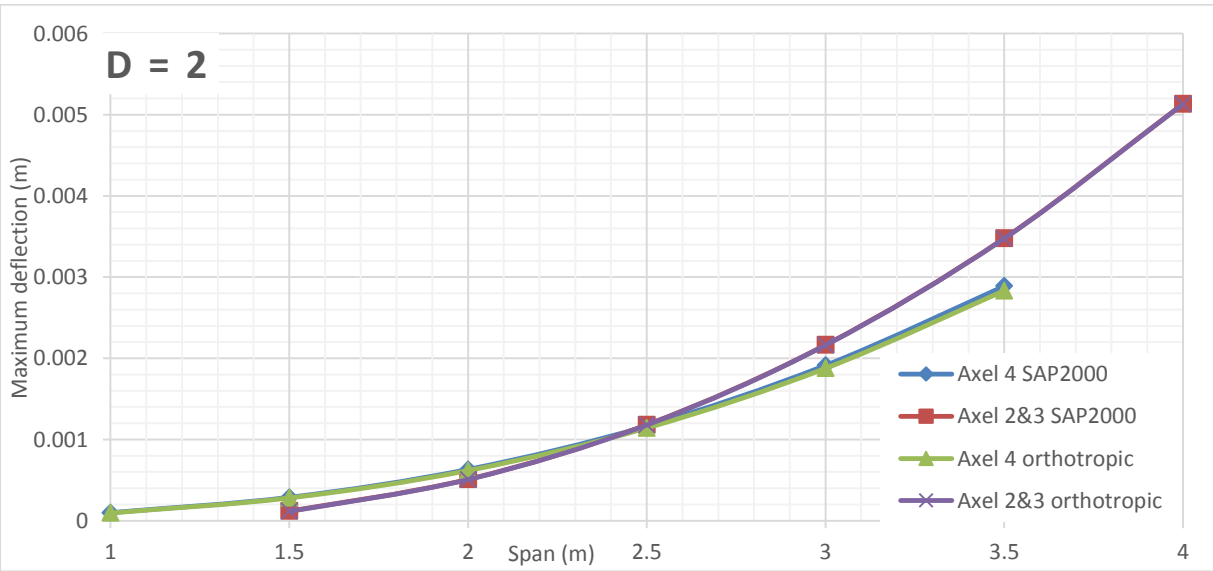

Figure 848 Deflection comparison between FEA and Orthotropic Plate Theory for D = 2 of alpha 1 (main bars parallel to traffic)

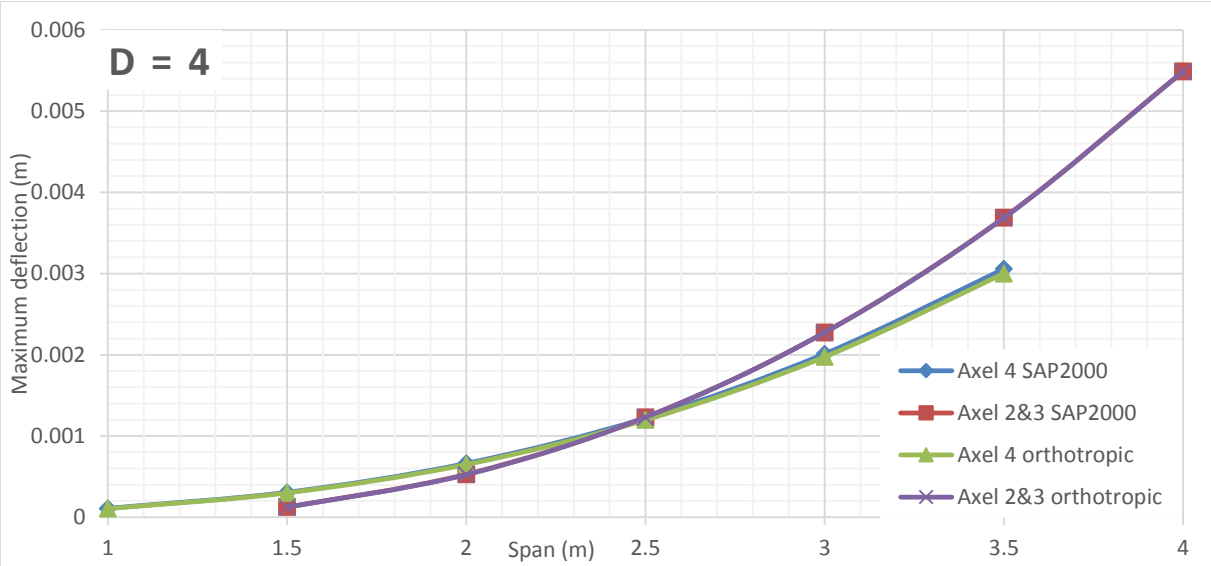

Figure 849 Deflection comparison between FEA and Orthotropic Plate Theory for D = 4 of alpha 1 (main bars parallel to traffic)

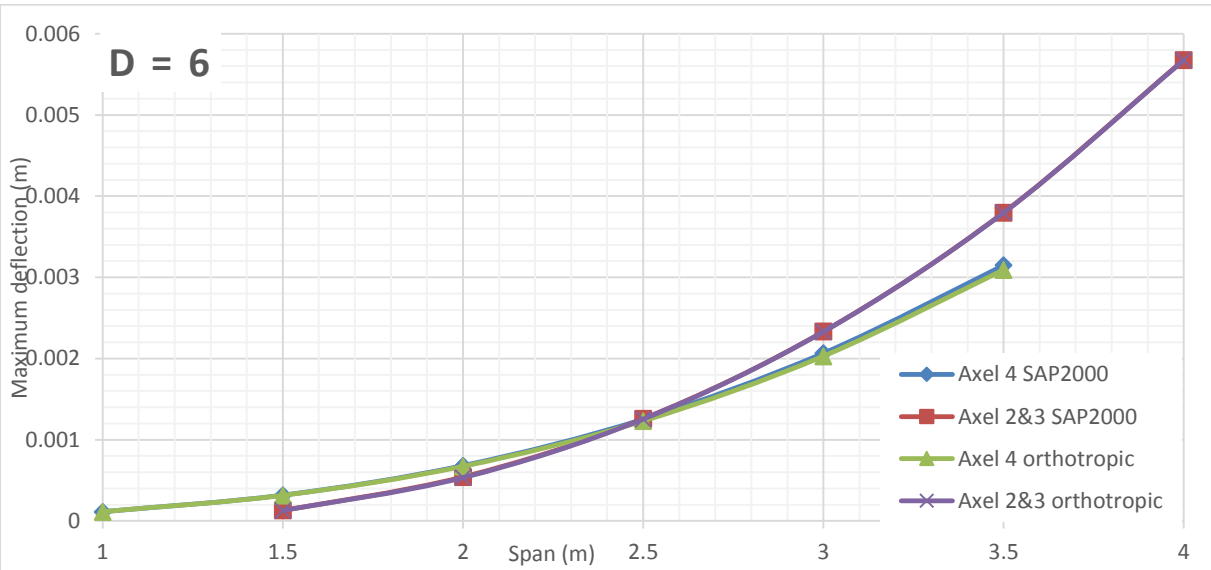

Figure 850 Deflection comparison between FEA and Orthotropic Plate Theory for D = 6 of alpha 1 (main bars parallel to traffic)

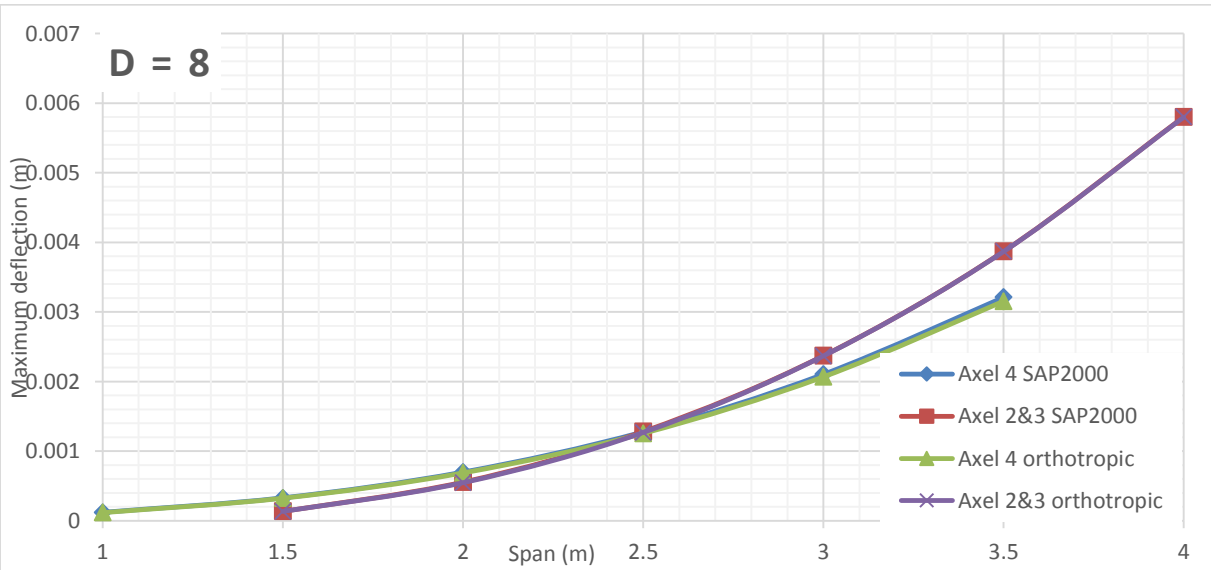

Figure 851 Deflection comparison between FEA and Orthotropic Plate Theory for D = 8 of alpha 1 (main bars parallel to traffic)

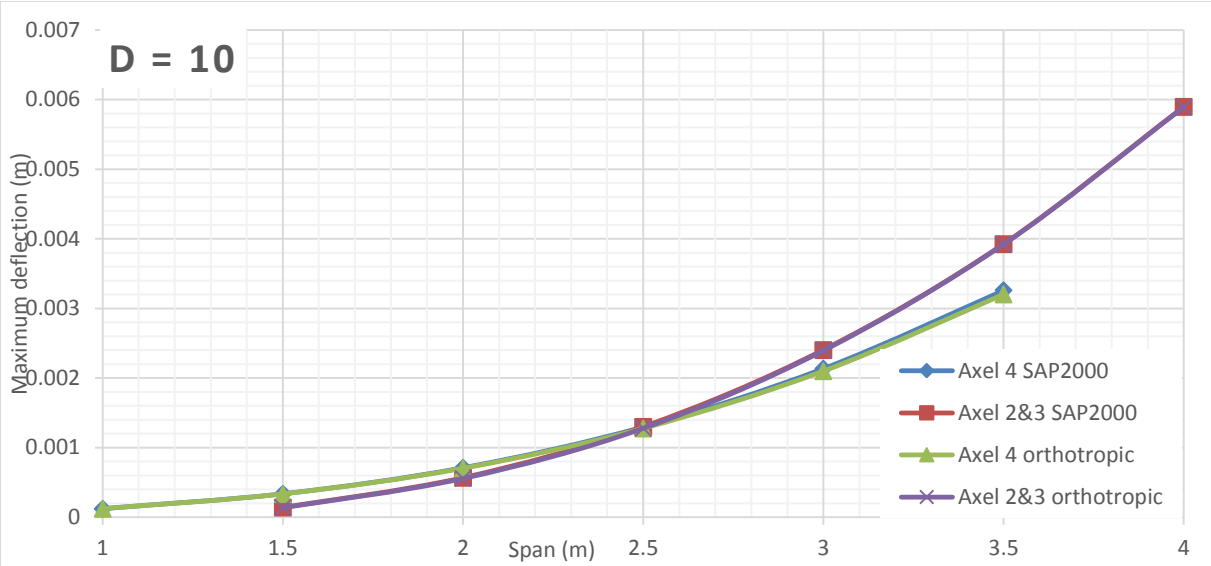

Figure 852 Deflection comparison between FEA and Orthotropic Plate Theory for D = 10 of alpha 1 (main bars parallel to traffic)

Alpha 2 Deflection VS Span Length for Different D Values (Main bars perpendicular to traffic)

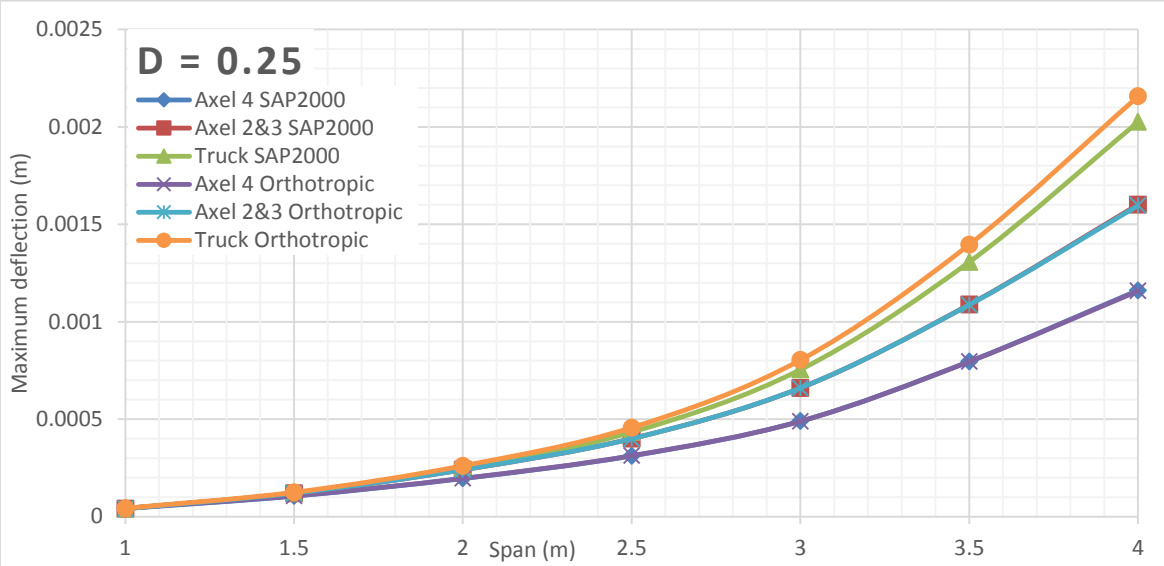

Figure 853 Deflection comparison between FEA and Orthotropic Plate Theory for D = 0.25 of alpha 2 (main bars perpendicular to traffic)

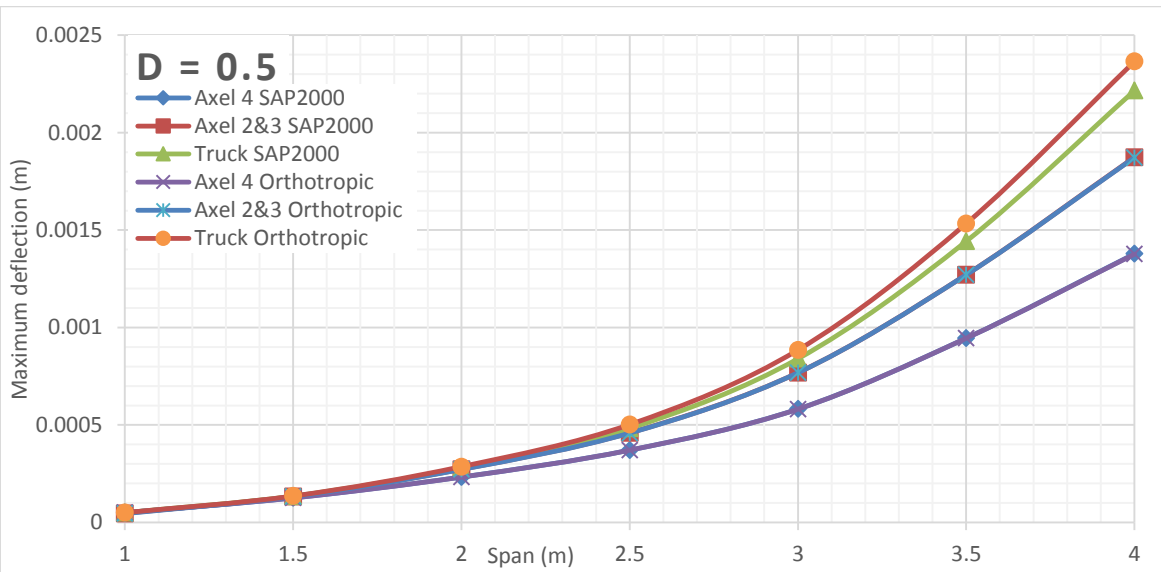

Figure 854 Deflection comparison between FEA and Orthotropic Plate Theory for D = 0.5 of alpha 2 (main bars perpendicular to traffic)

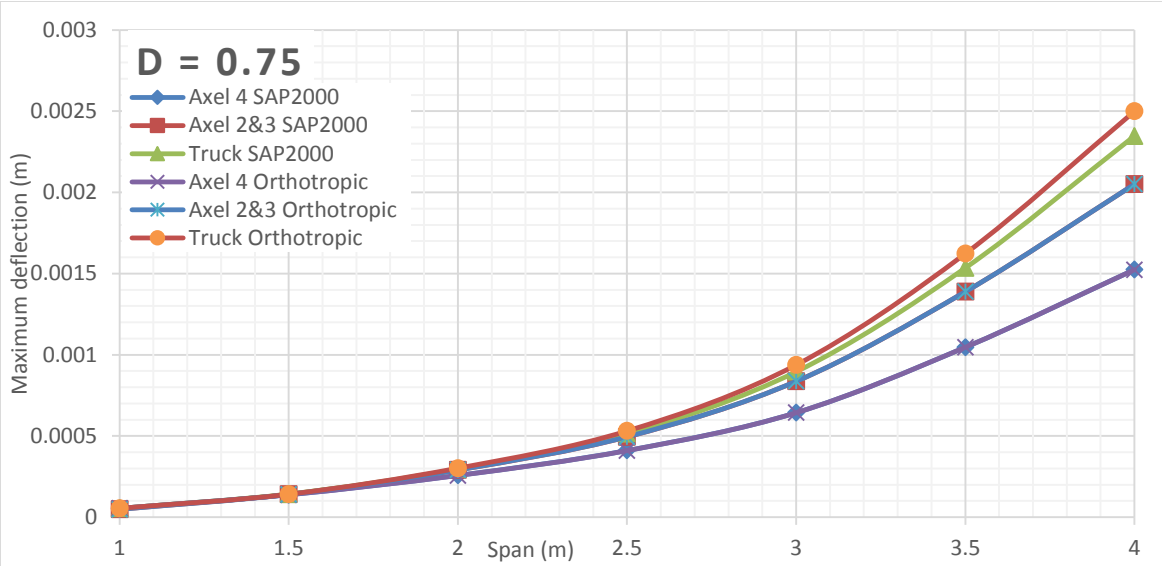

Figure 855 Deflection comparison between FEA and Orthotropic Plate Theory for D = 0.75 of alpha 2 (main bars perpendicular to traffic)

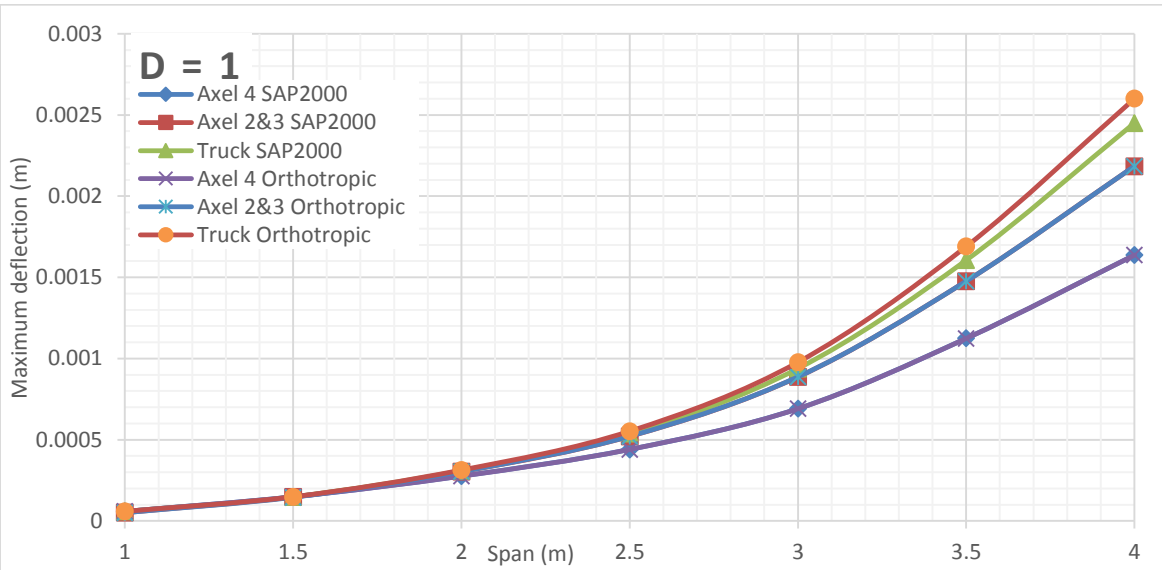

Figure 856 Deflection comparison between FEA and Orthotropic Plate Theory for D = 1 of alpha 2 (main bars perpendicular to traffic)

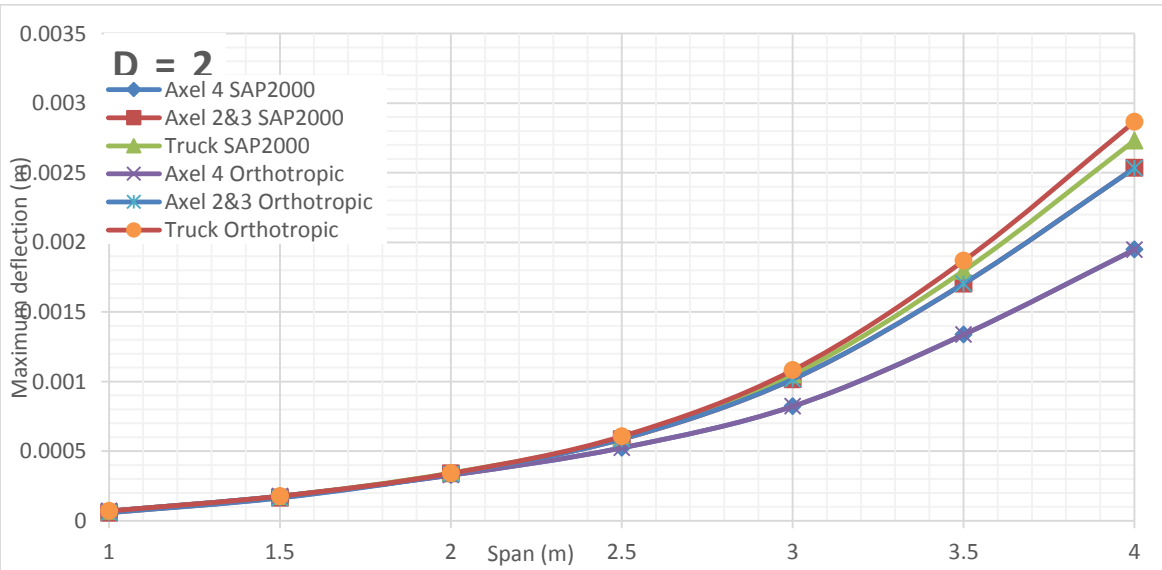

Figure 857 Deflection comparison between FEA and Orthotropic Plate Theory for D = 2 of alpha 2 (main bars perpendicular to traffic)

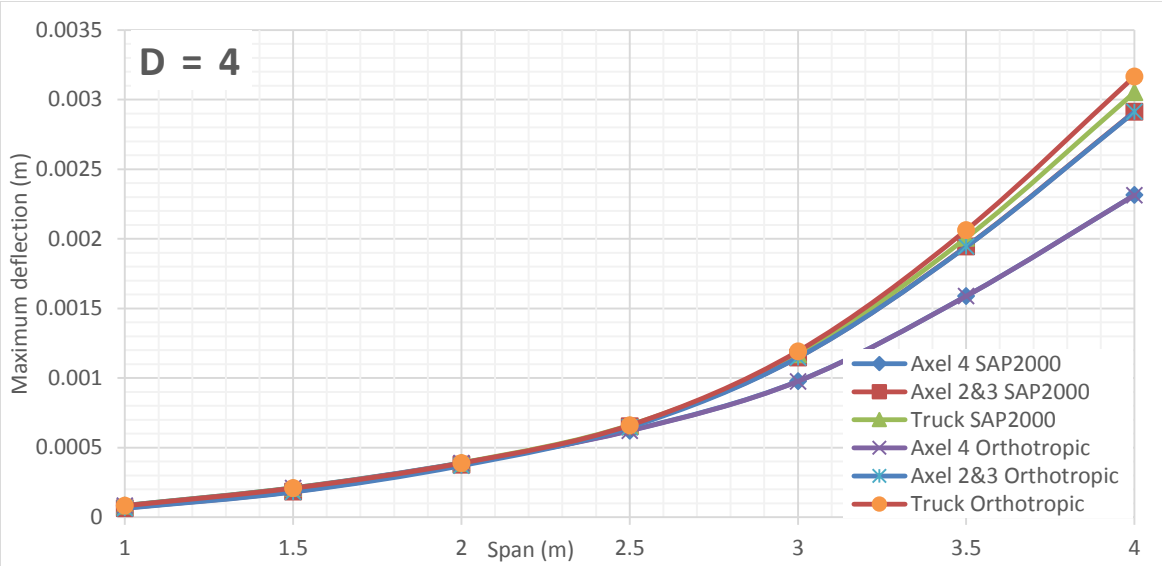

Figure 858 Deflection comparison between FEA and Orthotropic Plate Theory for D = 4 of alpha 2 (main bars perpendicular to traffic)

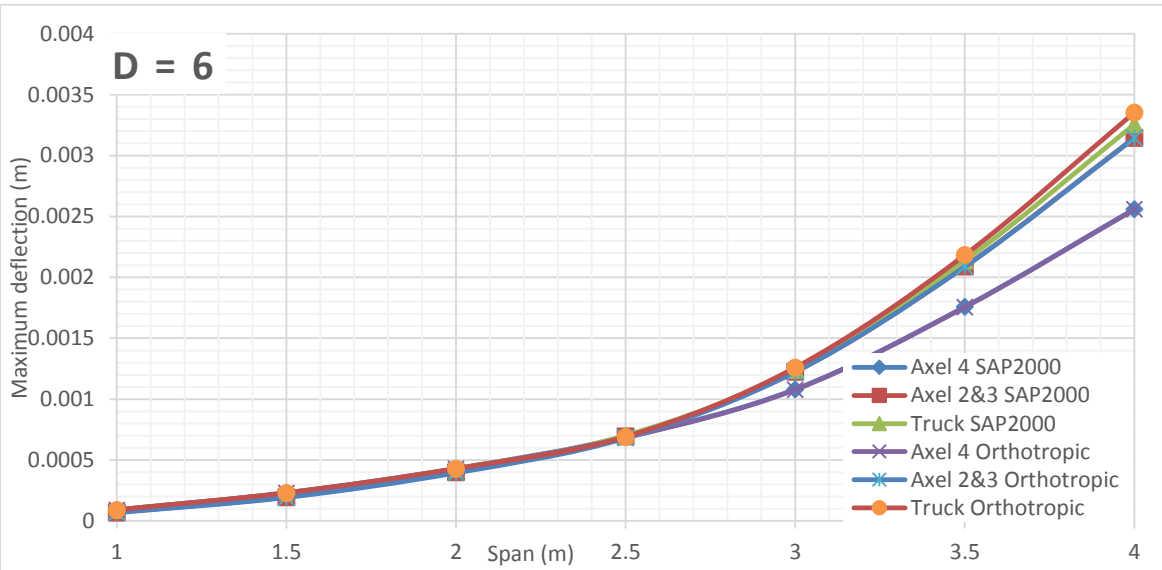

Figure 859 Deflection comparison between FEA and Orthotropic Plate Theory for D = 6 of alpha 2 (main bars perpendicular to traffic)

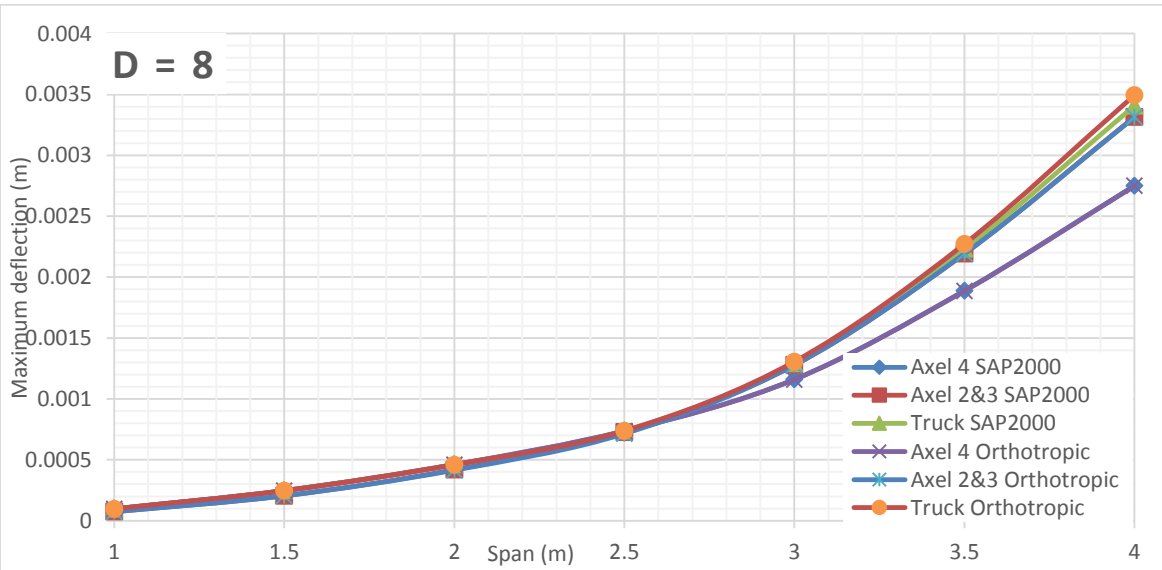

Figure 860 Deflection comparison between FEA and Orthotropic Plate Theory for D = 8 of alpha 2 (main bars perpendicular to traffic)

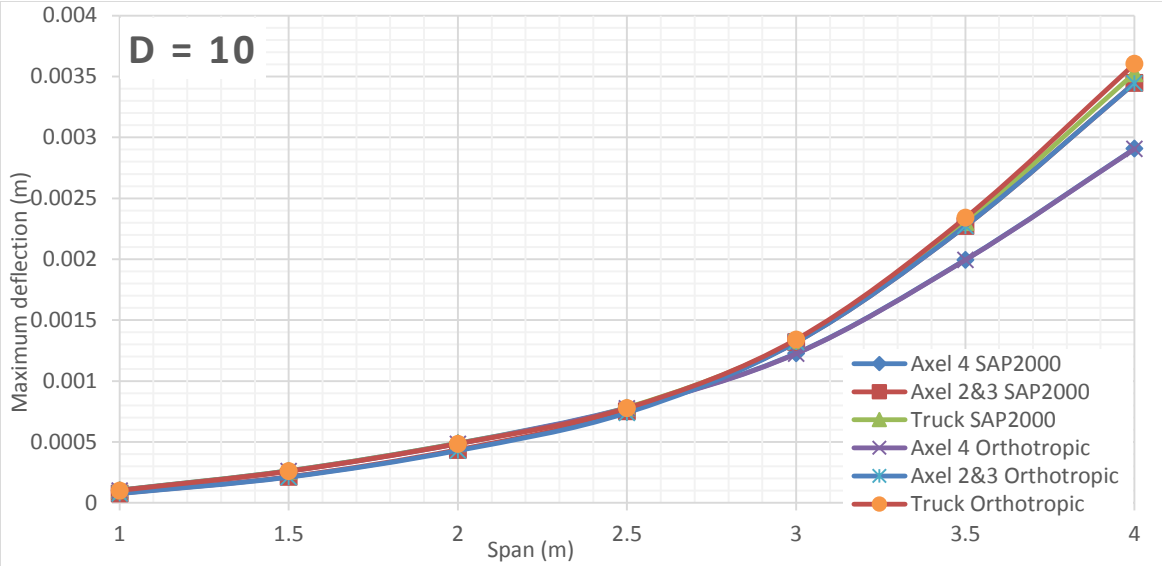

Figure 861 Deflection comparison between FEA and Orthotropic Plate Theory for D = 10 of alpha 2 (main bars perpendicular to traffic)

Alpha 2 Deflection VS Span Length for Different D Values (Main bars parallel to traffic)

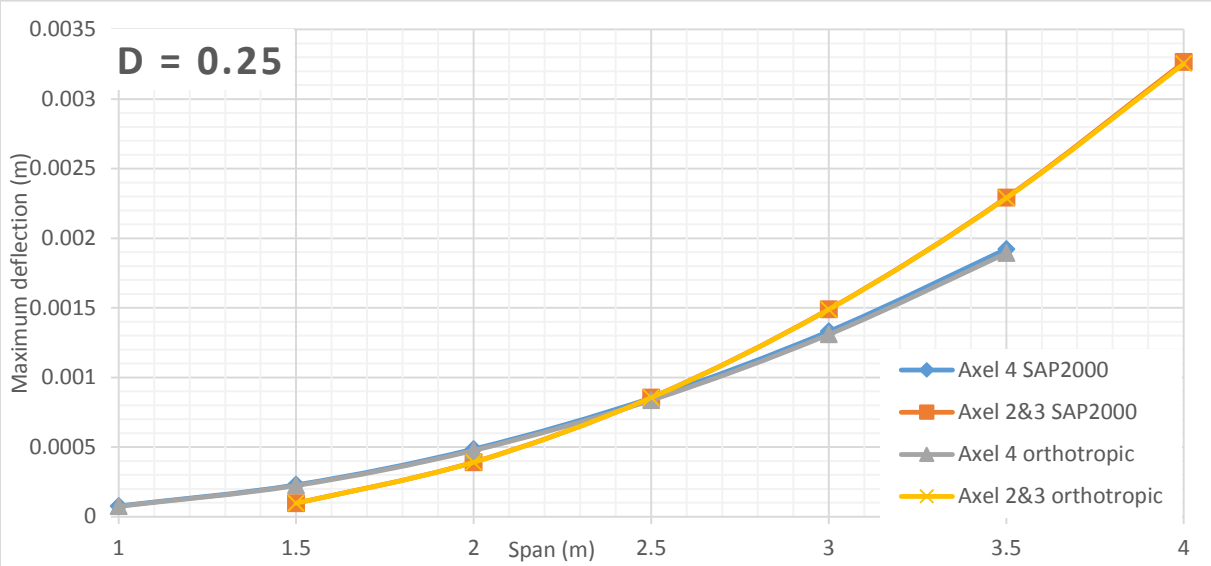

Figure 862 Deflection comparison between FEA and Orthotropic Plate Theory for D = 0.25 of alpha 2 (main bars parallel to traffic)

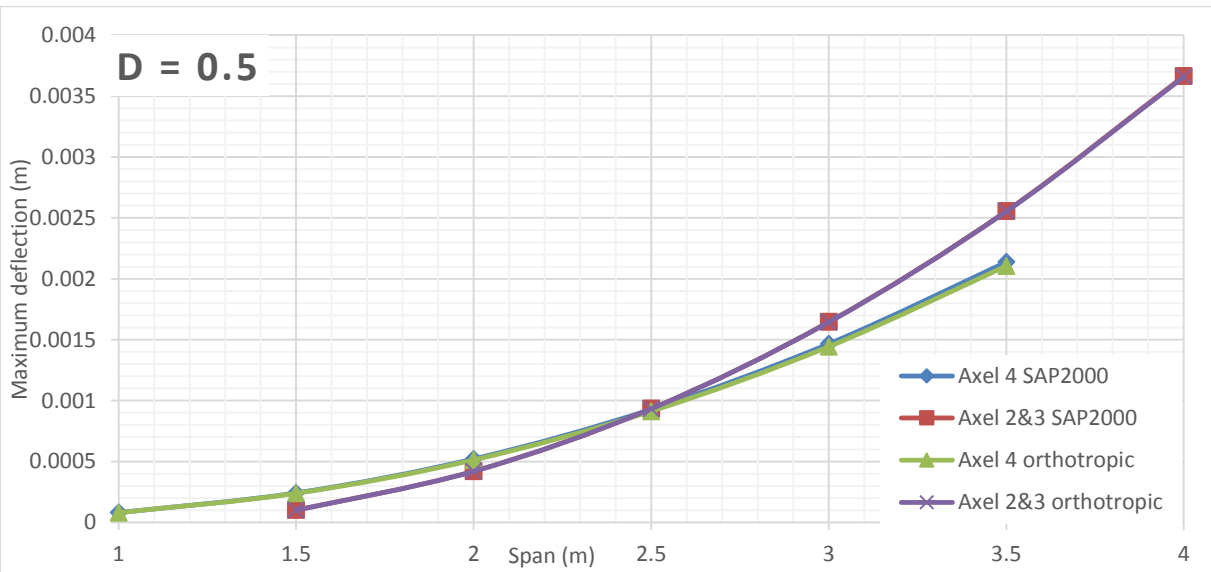

Figure 863 Deflection comparison between FEA and Orthotropic Plate Theory for D = 0.5 of alpha 2 (main bars parallel to traffic)

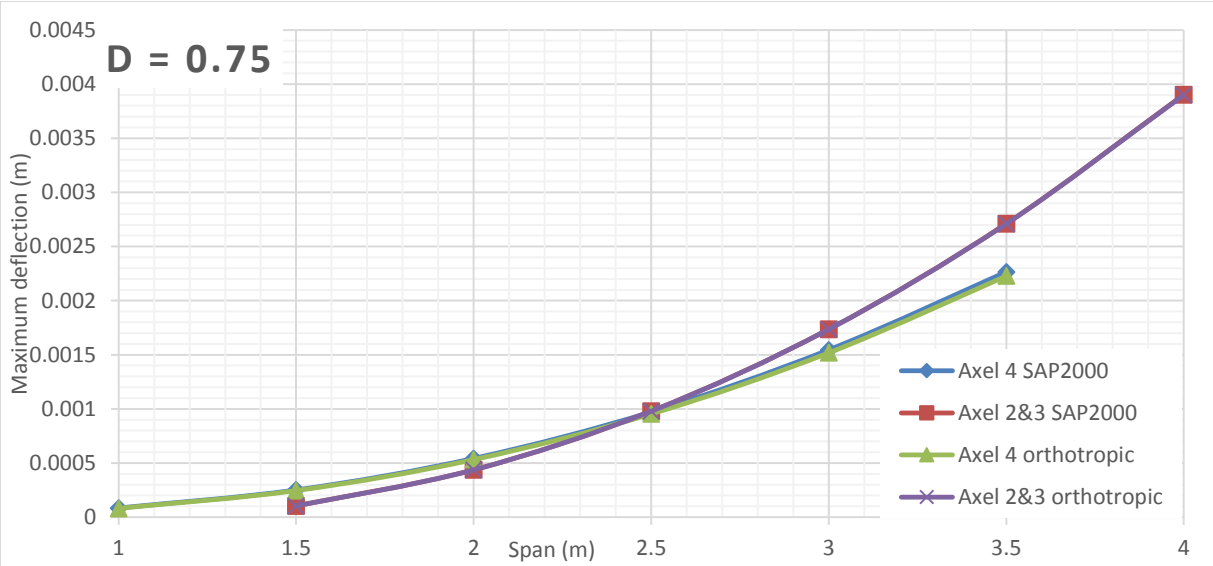

Figure 864 Deflection comparison between FEA and Orthotropic Plate Theory for D = 0.75 of alpha 2 (main bars parallel to traffic)

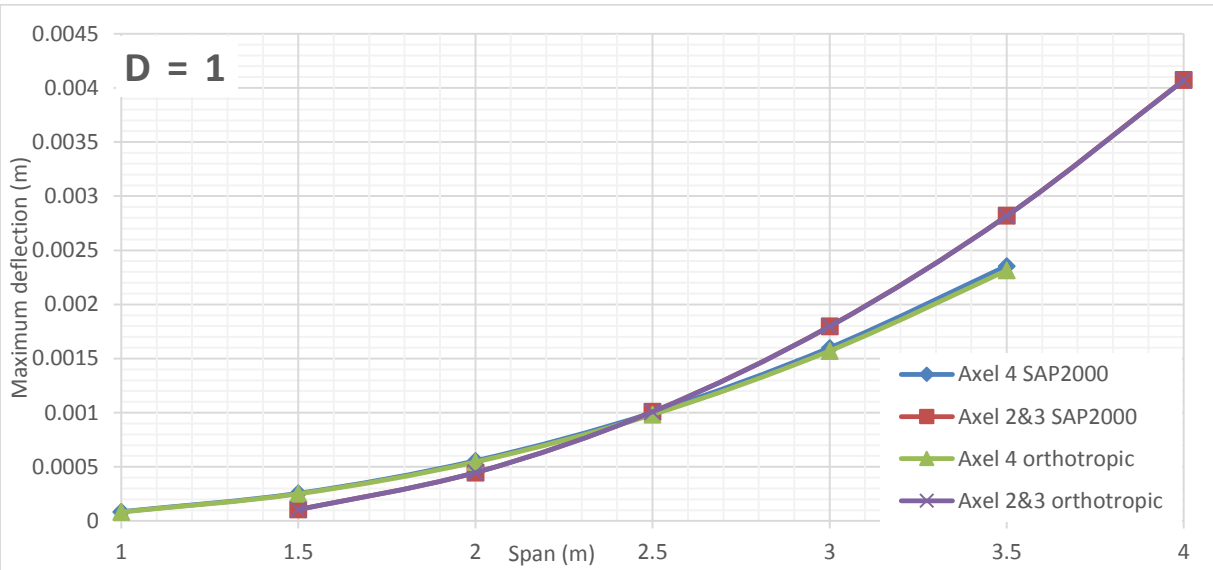

Figure 865 Deflection comparison between FEA and Orthotropic Plate Theory for D = 1 of alpha 2 (main bars parallel to traffic)

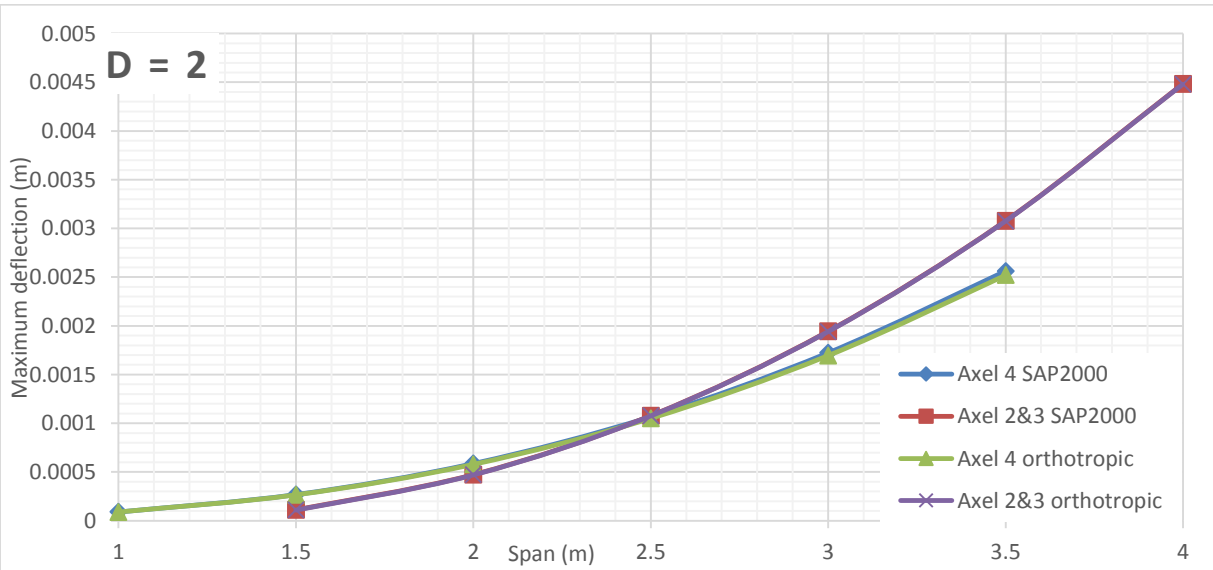

Figure 866 Deflection comparison between FEA and Orthotropic Plate Theory for D = 2 of alpha 2 (main bars parallel to traffic)

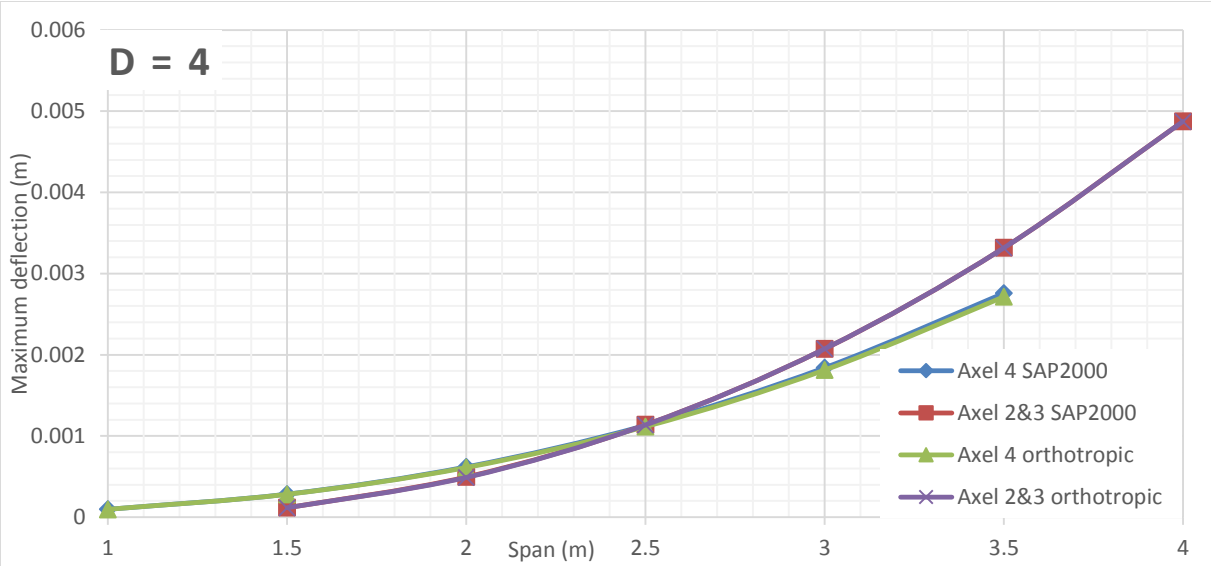

Figure 867 Deflection comparison between FEA and Orthotropic Plate Theory for D = 4 of alpha 2 (main bars parallel to traffic)

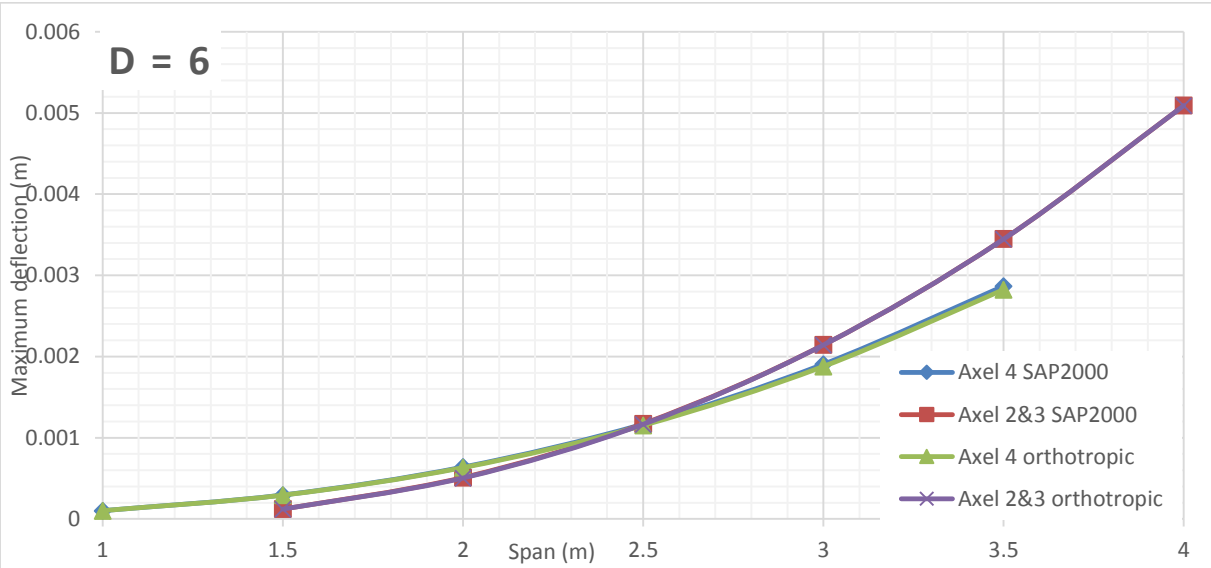

Figure 868 Deflection comparison between FEA and Orthotropic Plate Theory for D = 6 of alpha 2 (main bars parallel to traffic)

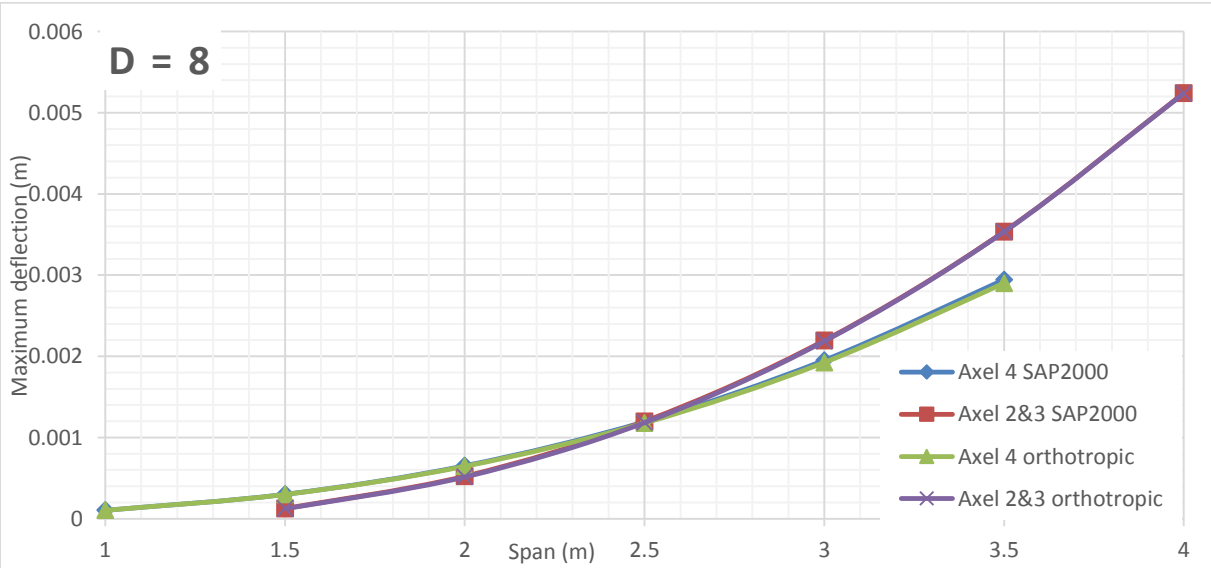

Figure 869 Deflection comparison between FEA and Orthotropic Plate Theory for D = 8 of alpha 2 (main bars parallel to traffic)

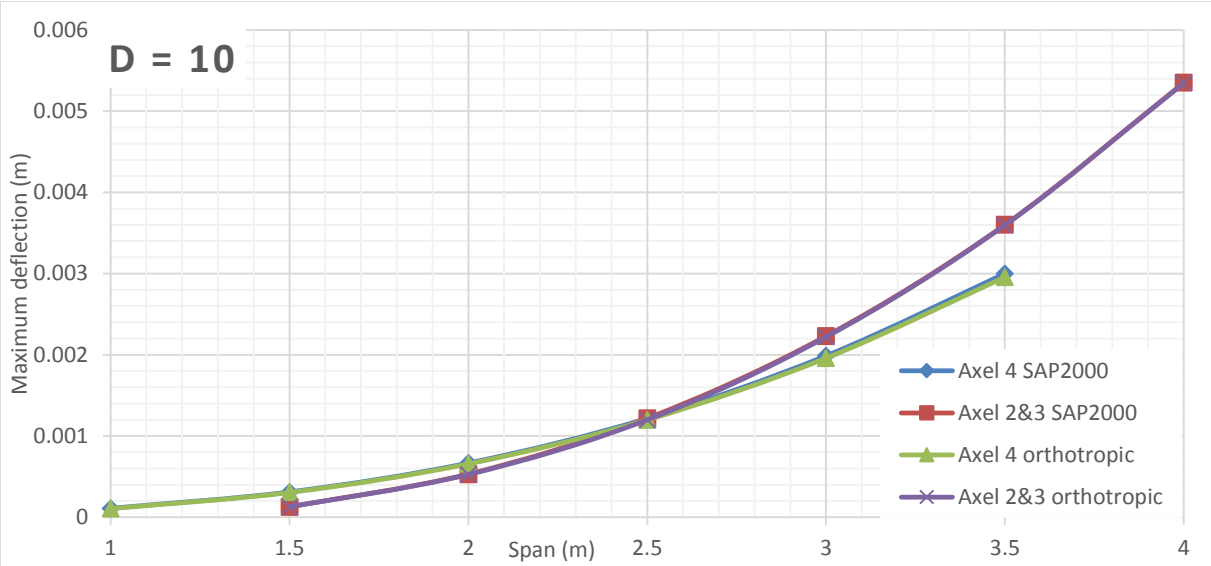

Figure 870 Deflection comparison between FEA and Orthotropic Plate Theory for D = 10 of alpha 2 (main bars parallel to traffic)

Alpha 4 Deflection VS Span Length for Different D Values (Main bars perpendicular to traffic)

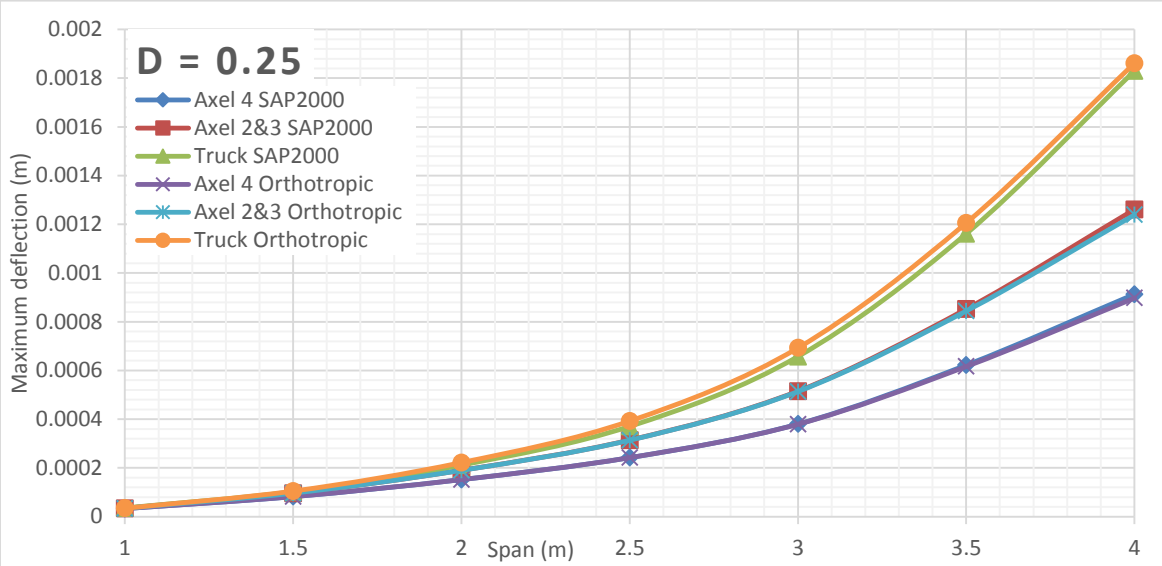

Figure 871 Deflection comparison between FEA and Orthotropic Plate Theory for D = 0.25 of alpha 4 (main bars perpendicular to traffic)

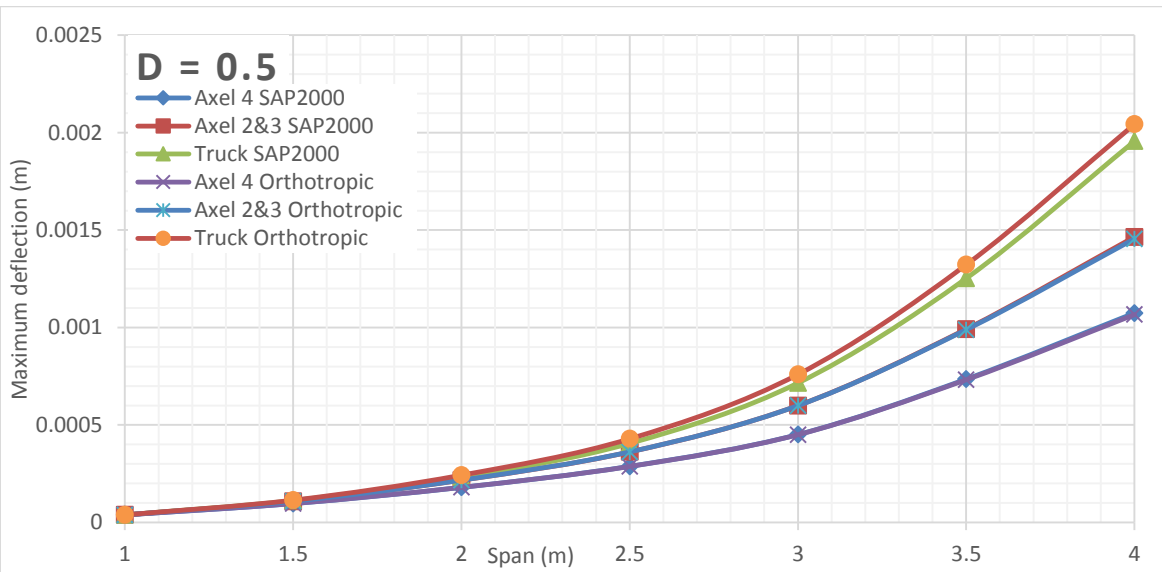

Figure 872 Deflection comparison between FEA and Orthotropic Plate Theory for D = 0.5 of alpha 4 (main bars perpendicular to traffic)

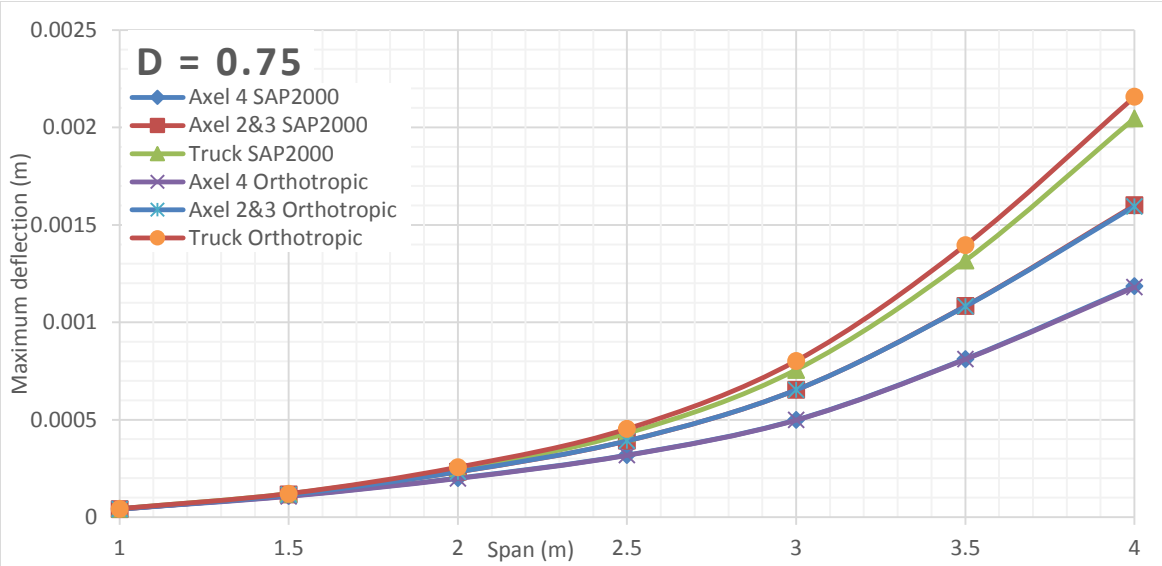

Figure 873 Deflection comparison between FEA and Orthotropic Plate Theory for D = 0.75 of alpha 4 (main bars perpendicular to traffic)

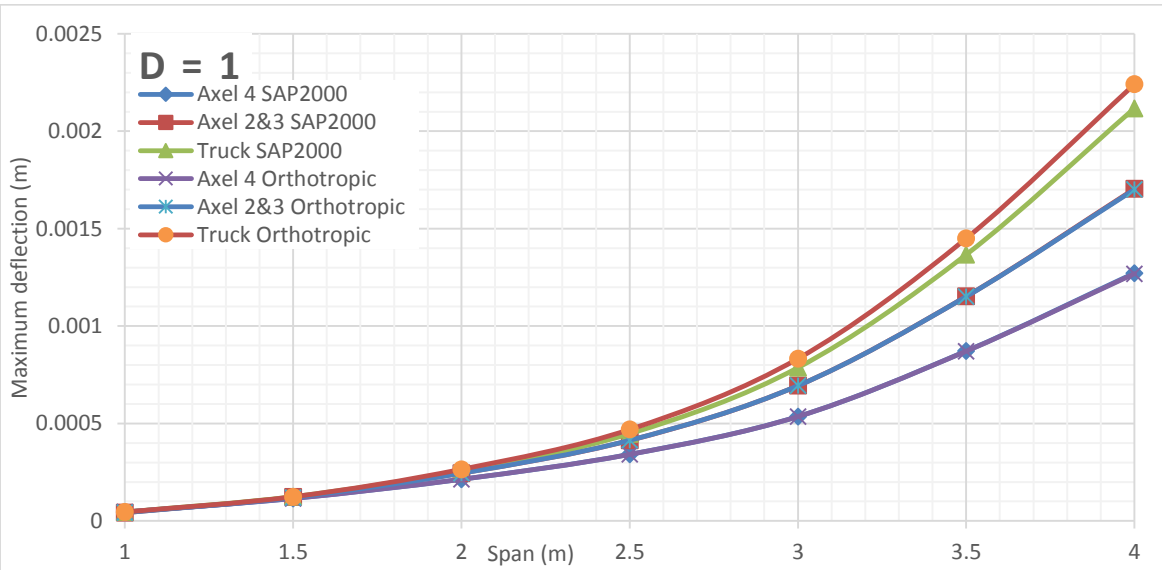

Figure 874 Deflection comparison between FEA and Orthotropic Plate Theory for D = 1 of alpha 4 (main bars perpendicular to traffic)

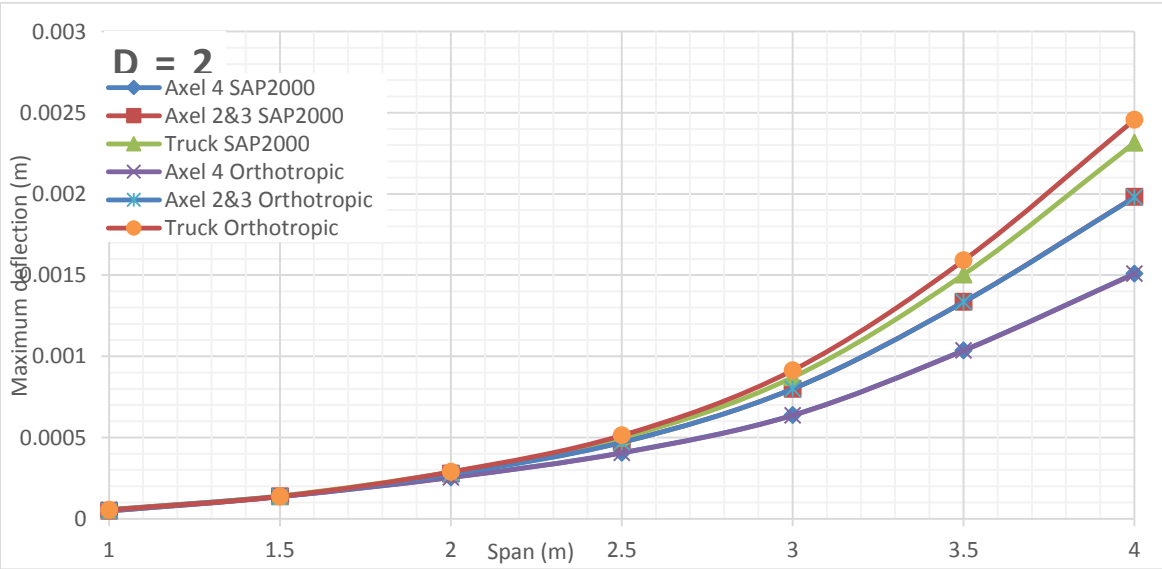

Figure 875 Deflection comparison between FEA and Orthotropic Plate Theory for D = 2 of alpha 4 (main bars perpendicular to traffic)

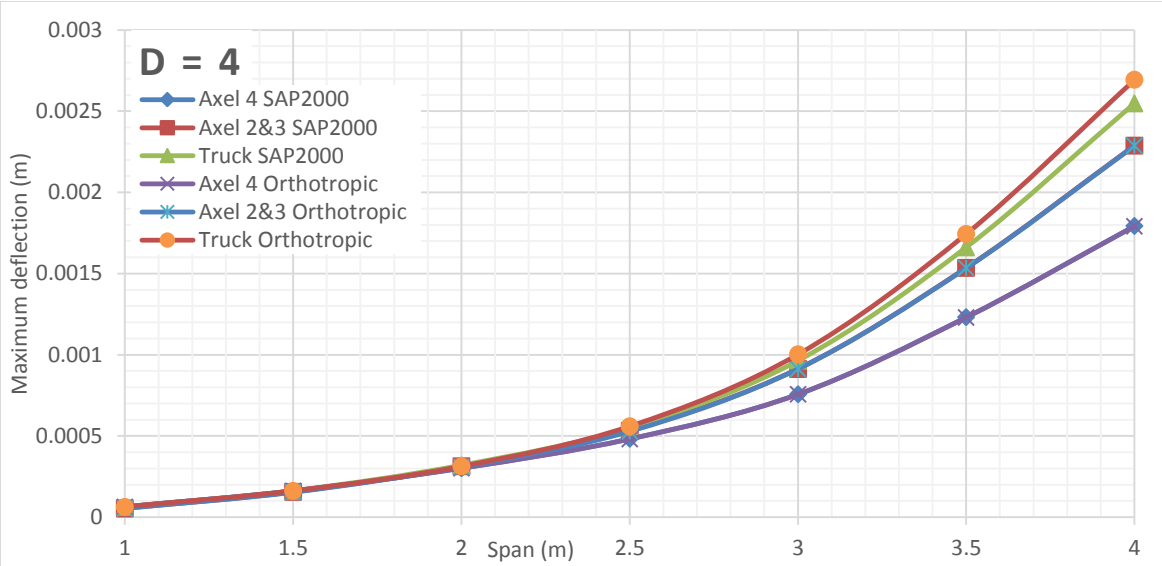

Figure 876 Deflection comparison between FEA and Orthotropic Plate Theory for D = 4 of alpha 4 (main bars perpendicular to traffic)

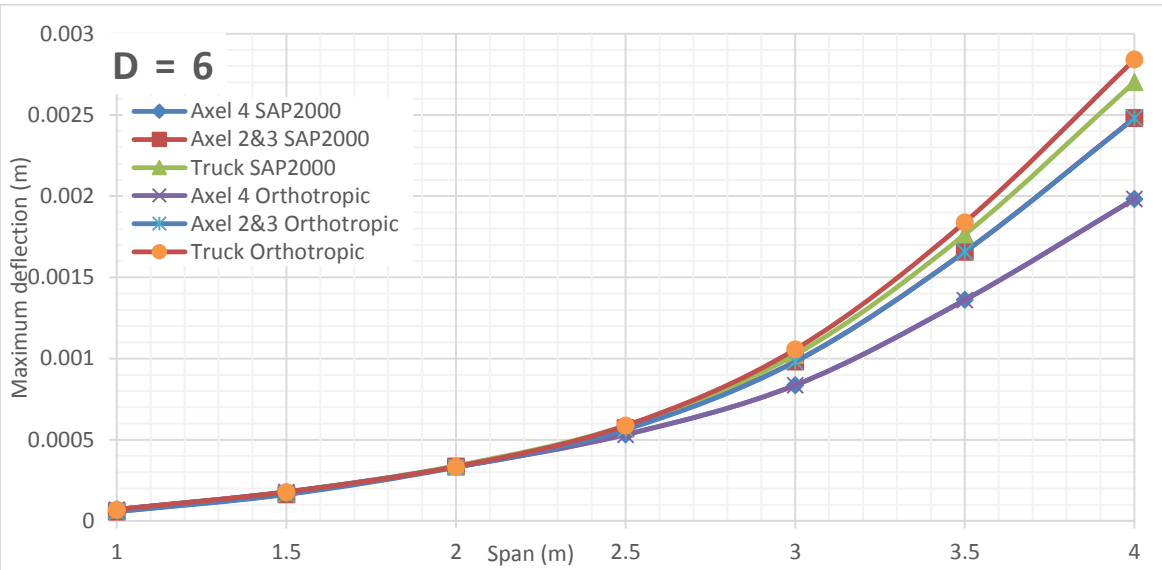

Figure 877 Deflection comparison between FEA and Orthotropic Plate Theory for D = 6 of alpha 4 (main bars perpendicular to traffic)

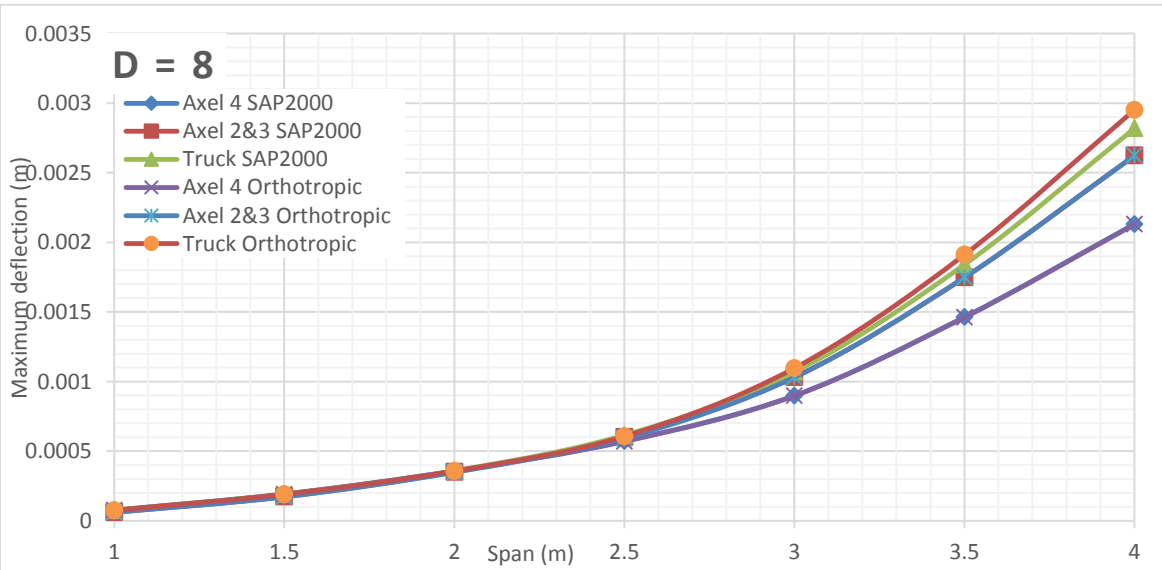

Figure 878 Deflection comparison between FEA and Orthotropic Plate Theory for D = 8 of alpha 4 (main bars perpendicular to traffic)

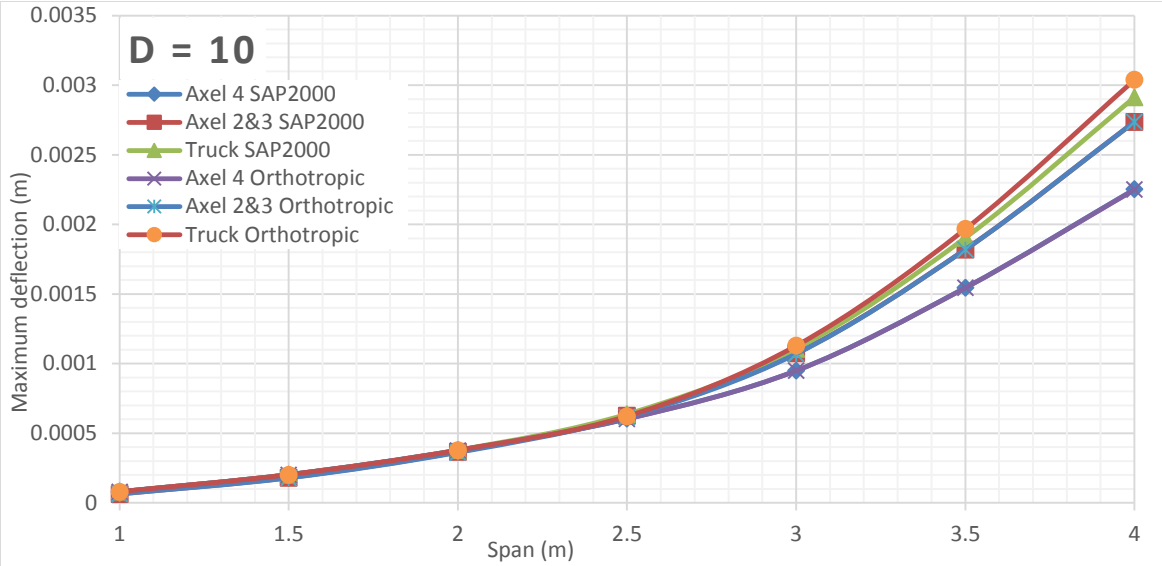

Figure 879 Deflection comparison between FEA and Orthotropic Plate Theory for D = 10 of alpha 4 (main bars perpendicular to traffic)

Alpha 4 Deflection VS Span Length for Different D Values (Main bars parallel to traffic)

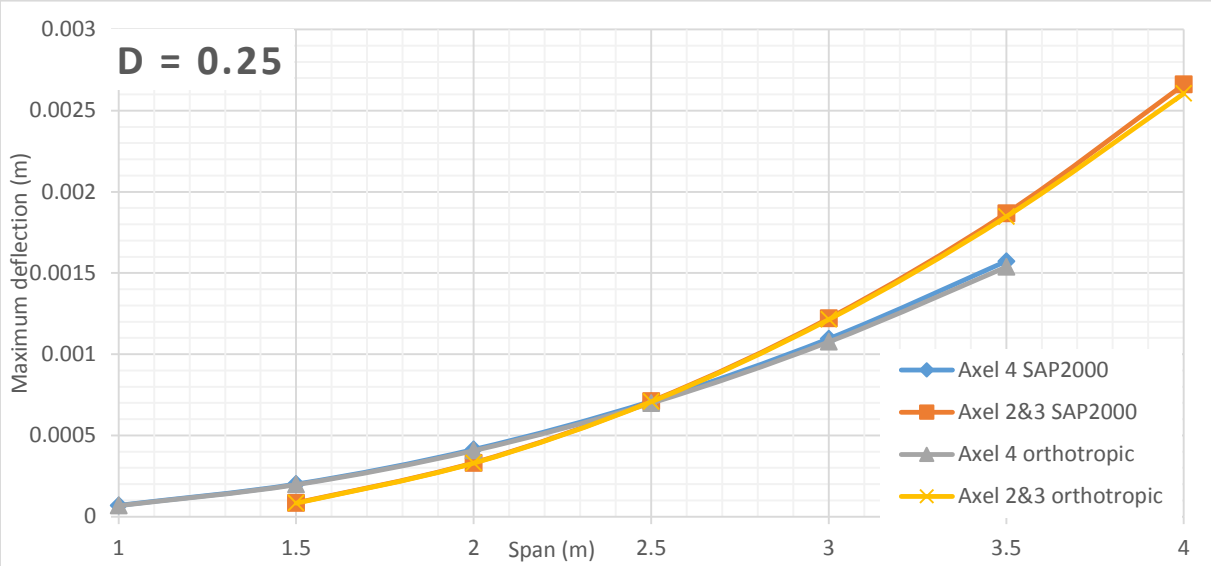

Figure 880 Deflection comparison between FEA and Orthotropic Plate Theory for D = 0.25 of alpha 4 (main bars parallel to traffic)

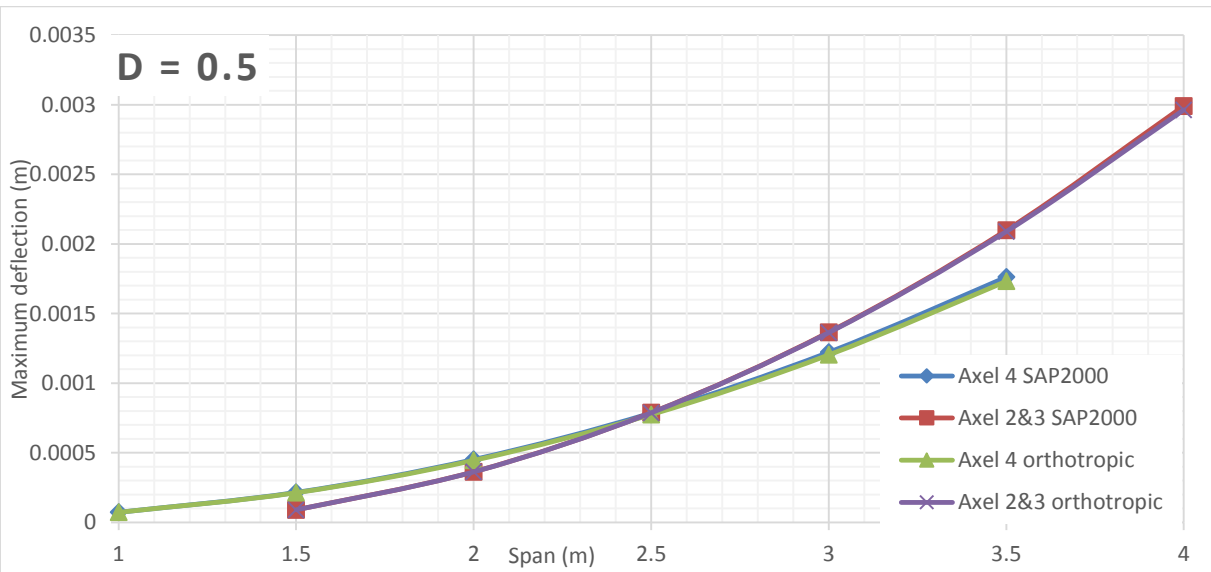

Figure 881 Deflection comparison between FEA and Orthotropic Plate Theory for D = 0.5 of alpha 4 (main bars parallel to traffic)

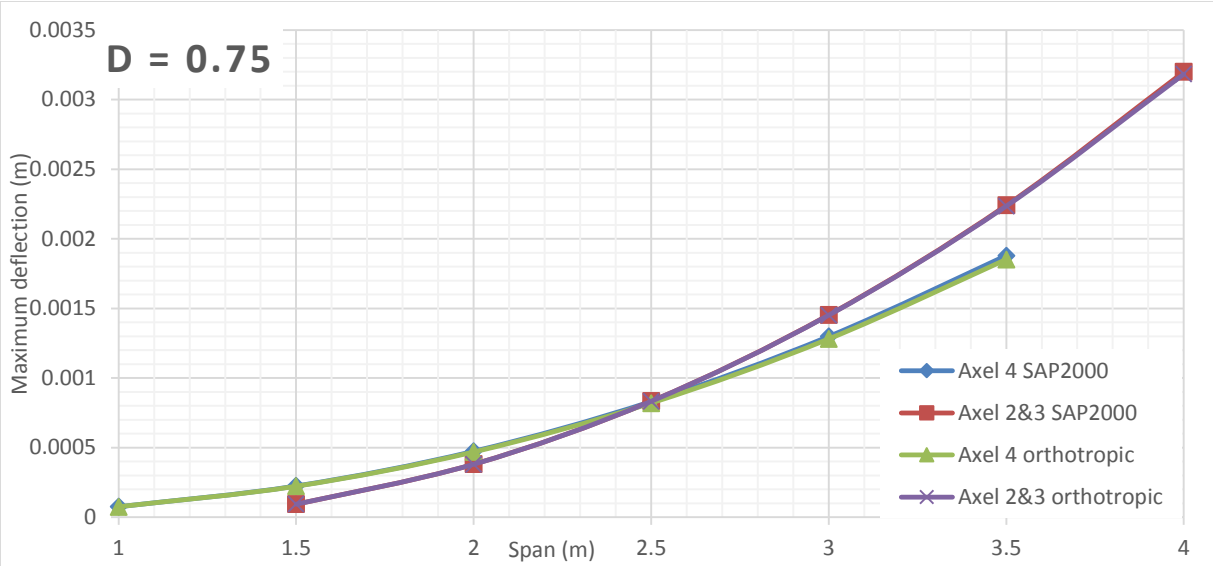

Figure 882 Deflection comparison between FEA and Orthotropic Plate Theory for D = 0.75 of alpha 4 (main bars parallel to traffic)

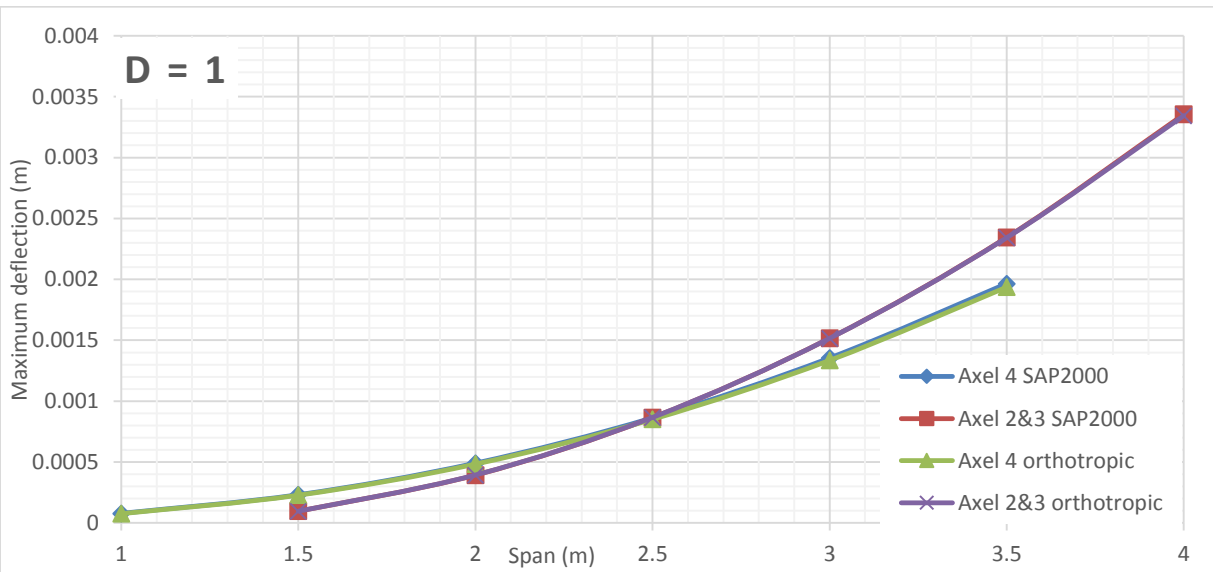

Figure 883 Deflection comparison between FEA and Orthotropic Plate Theory for D = 1 of alpha 4 (main bars parallel to traffic)

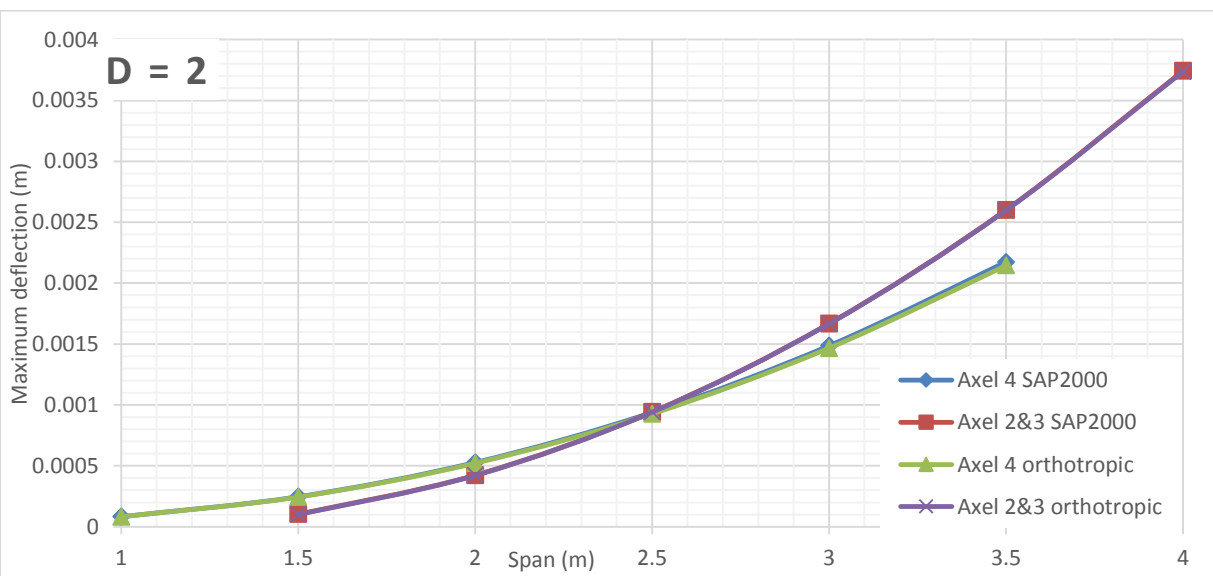

Figure 884 Deflection comparison between FEA and Orthotropic Plate Theory for D = 2 of alpha 4 (main bars parallel to traffic)

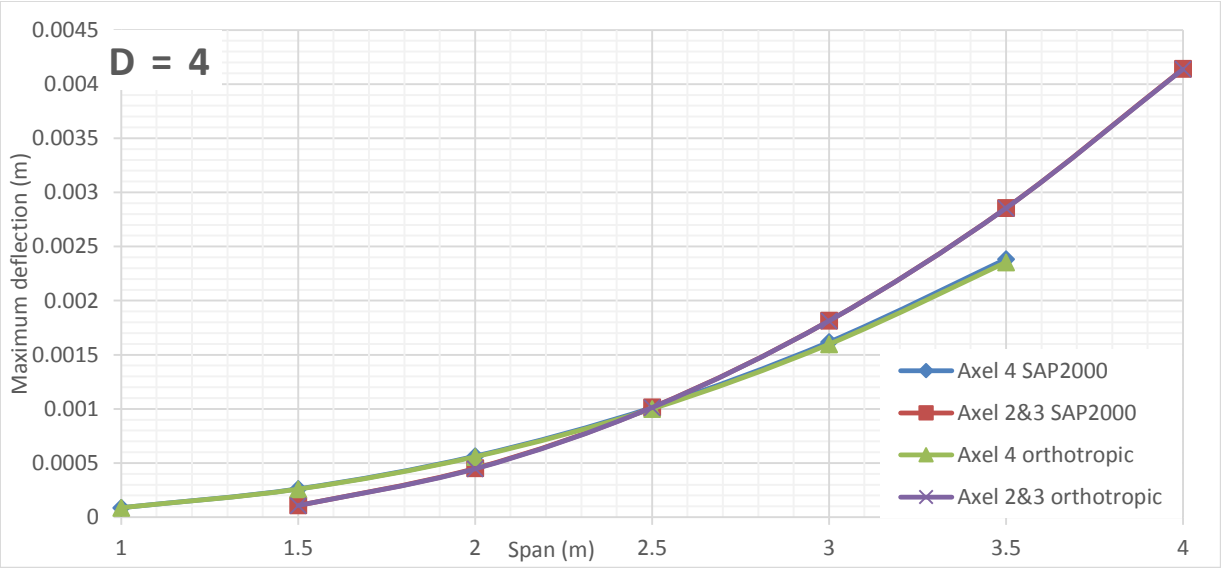

Figure 885 Deflection comparison between FEA and Orthotropic Plate Theory for D = 4 of alpha 4 (main bars parallel to traffic)

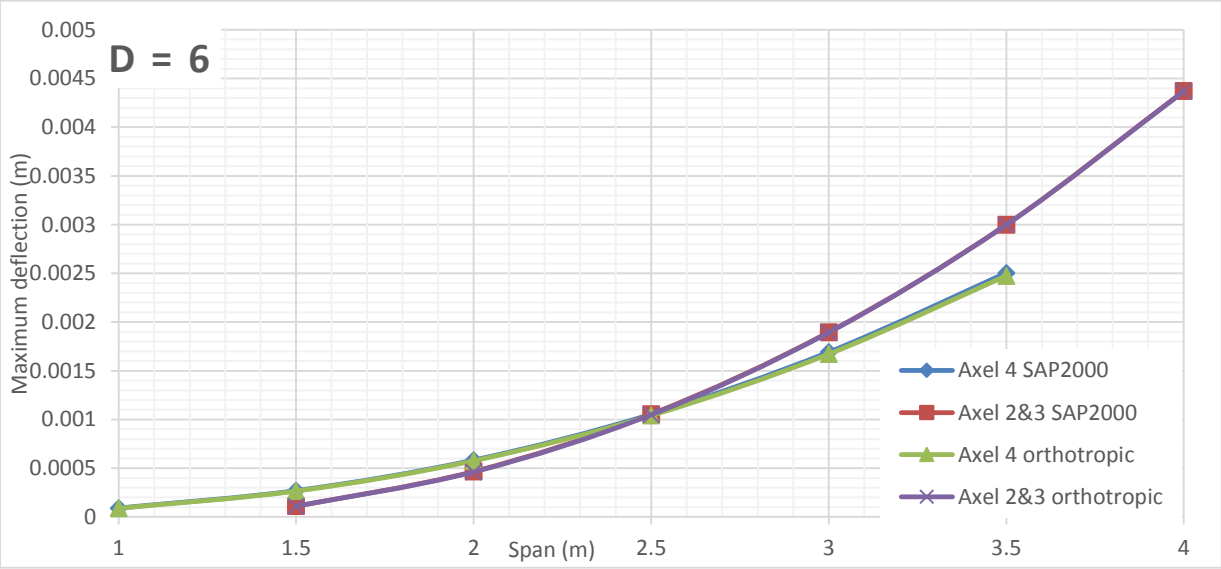

Figure 886 Deflection comparison between FEA and Orthotropic Plate Theory for D = 6 of alpha 4 (main bars parallel to traffic)

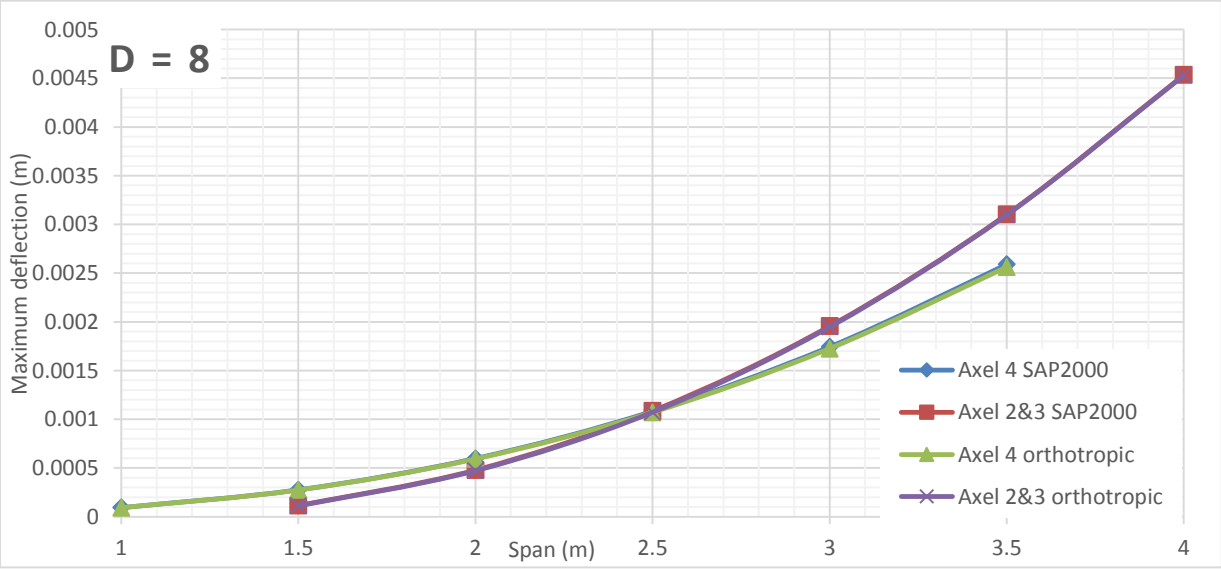

Figure 887 Deflection comparison between FEA and Orthotropic Plate Theory for D = 8 of alpha 4 (main bars parallel to traffic)

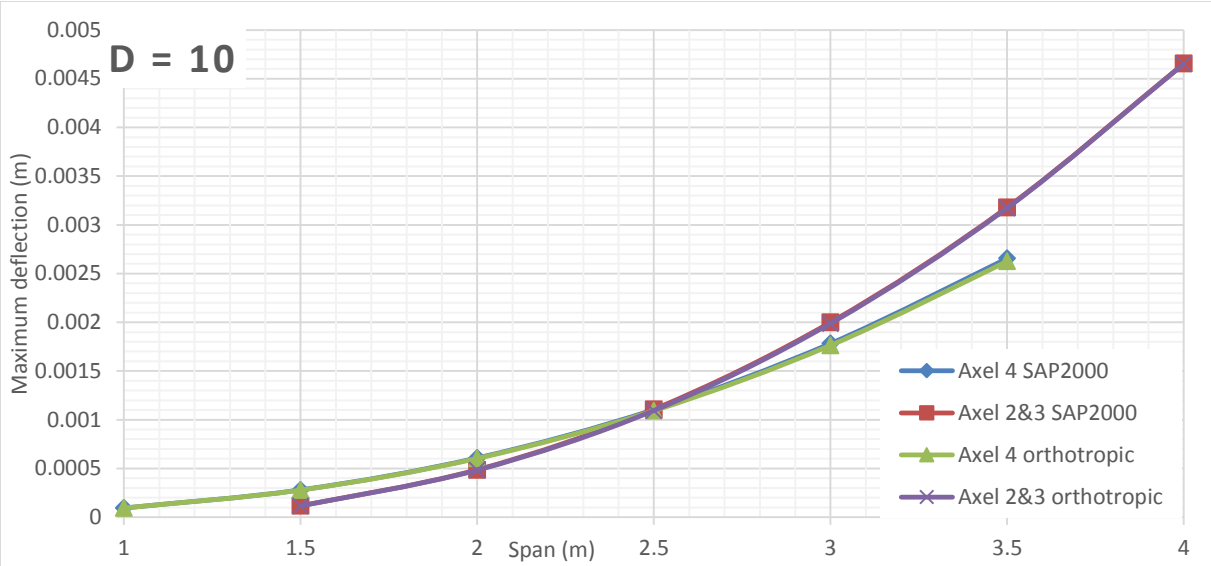

Figure 888 Deflection comparison between FEA and Orthotropic Plate Theory for D = 10 of alpha 4 (main bars parallel to traffic)

Alpha 6 Deflection VS Span Length for Different D Values (Main bars perpendicular to traffic)

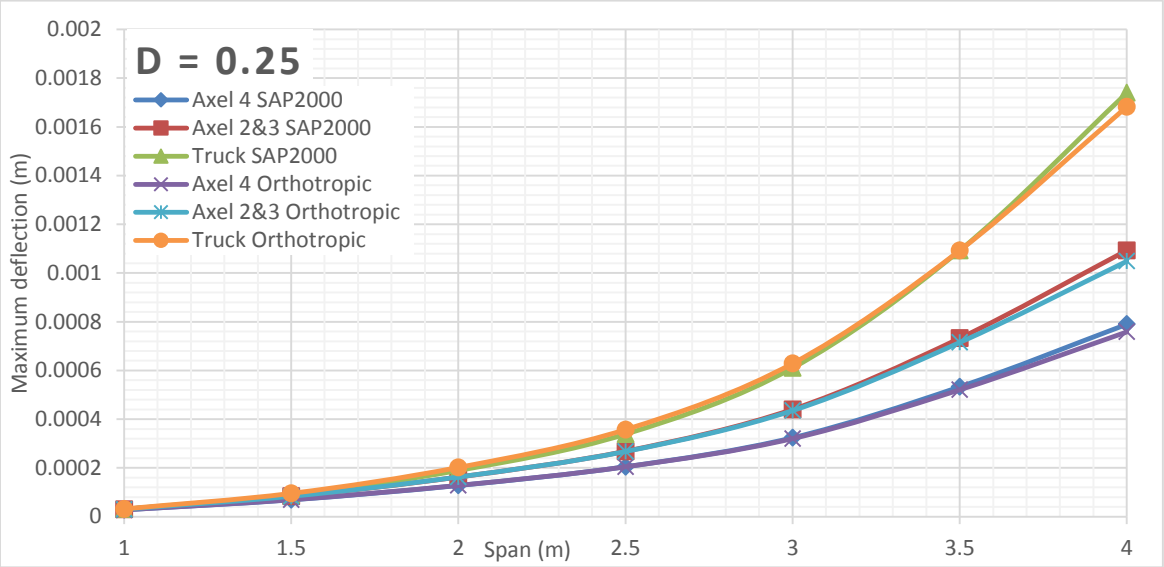

Figure 889 Deflection comparison between FEA and Orthotropic Plate Theory for D = 0.25 of alpha 6 (main bars perpendicular to traffic)

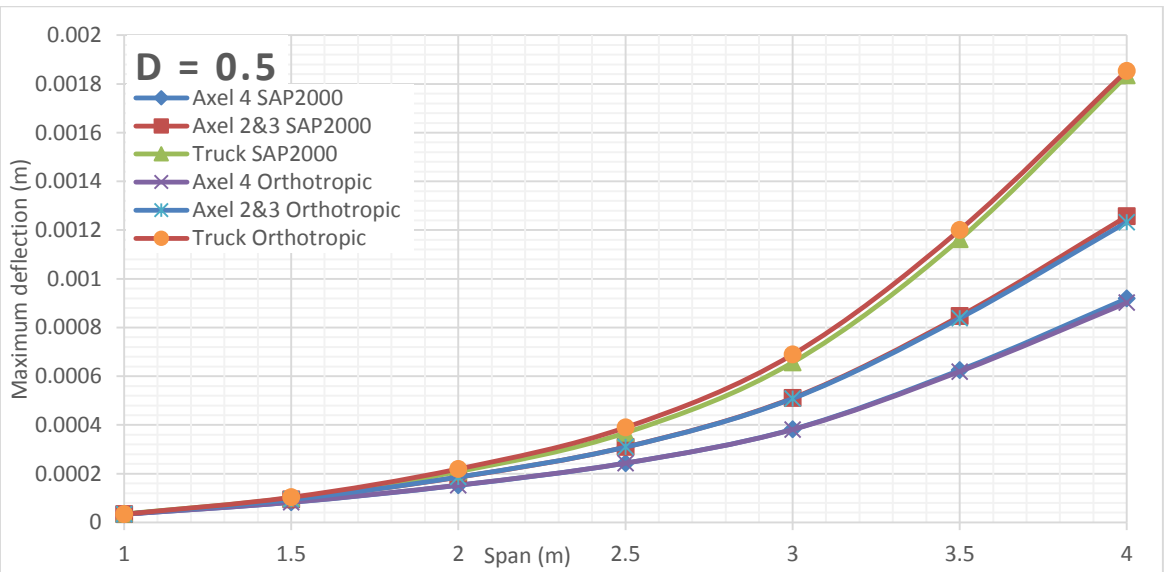

Figure 890 Deflection comparison between FEA and Orthotropic Plate Theory for D = 0.5 of alpha 6 (main bars perpendicular to traffic)

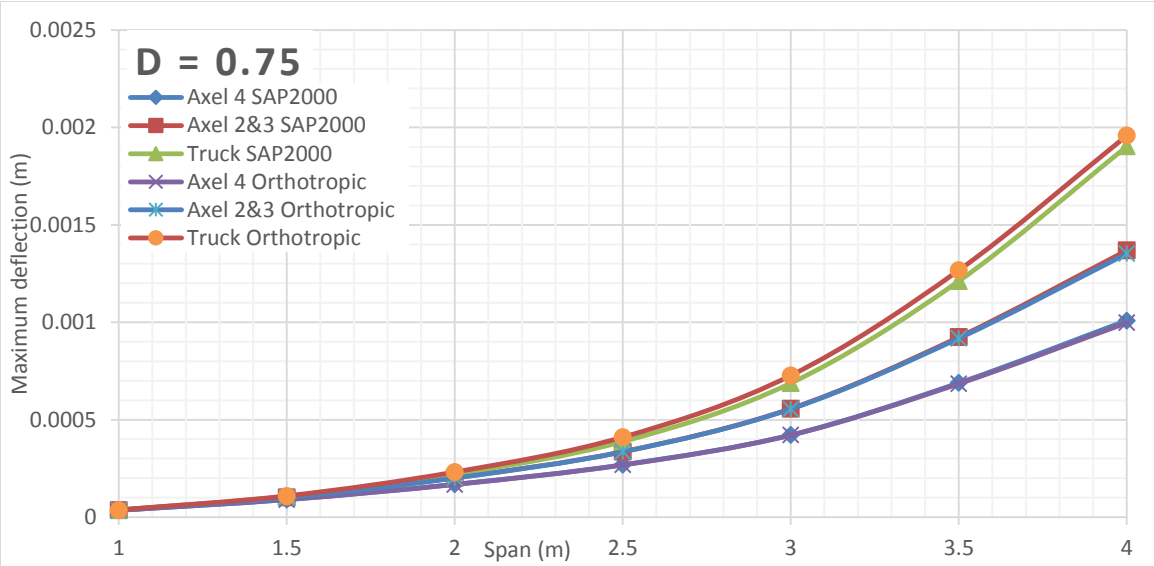

Figure 891 Deflection comparison between FEA and Orthotropic Plate Theory for D = 0.75 of alpha 6 (main bars perpendicular to traffic)

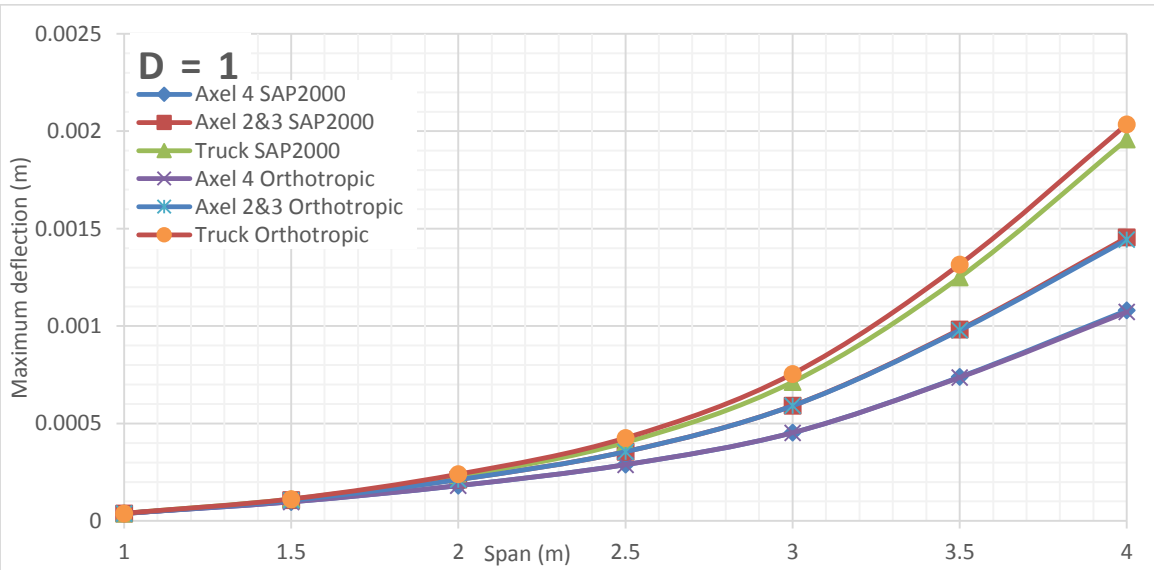

Figure 892 Deflection comparison between FEA and Orthotropic Plate Theory for D = 1 of alpha 6 (main bars perpendicular to traffic)

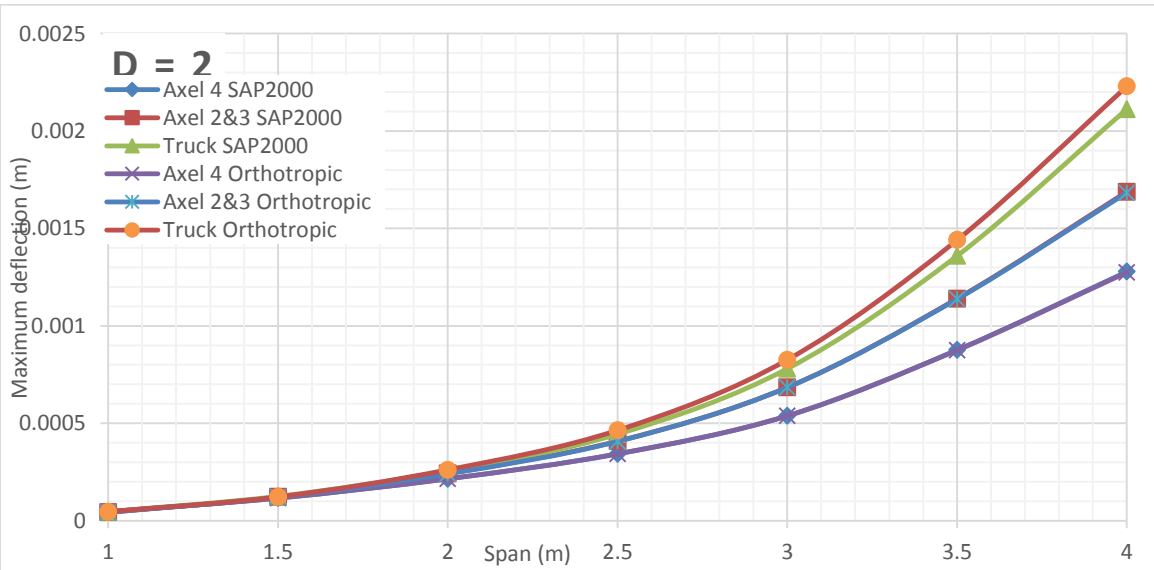

Figure 893 Deflection comparison between FEA and Orthotropic Plate Theory for D = 2 of alpha 6 (main bars perpendicular to traffic)

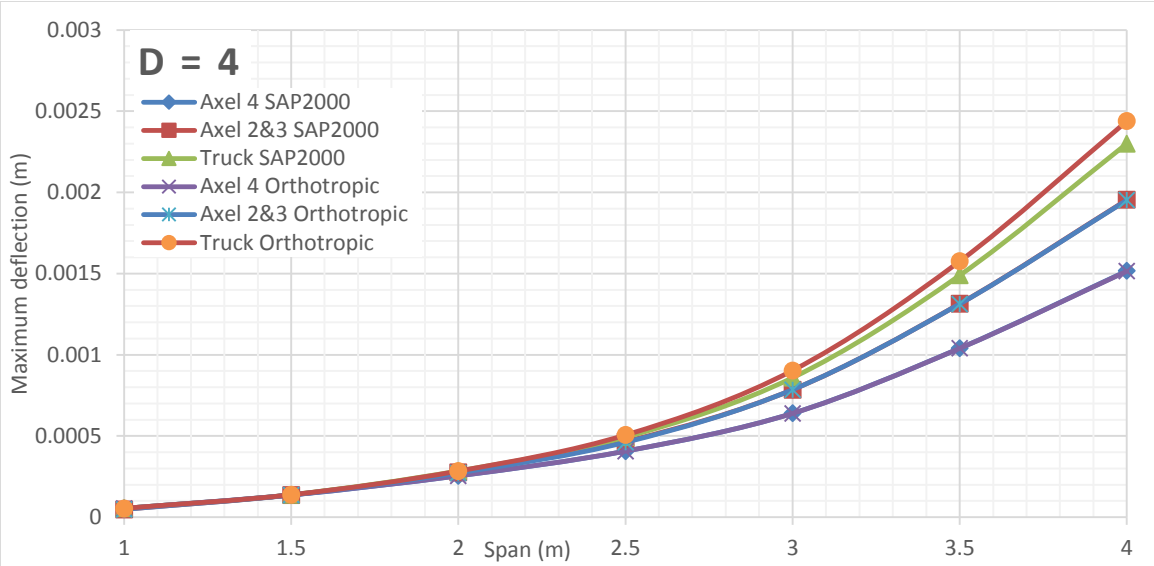

Figure 894 Deflection comparison between FEA and Orthotropic Plate Theory for D = 4 of alpha 6 (main bars perpendicular to traffic)

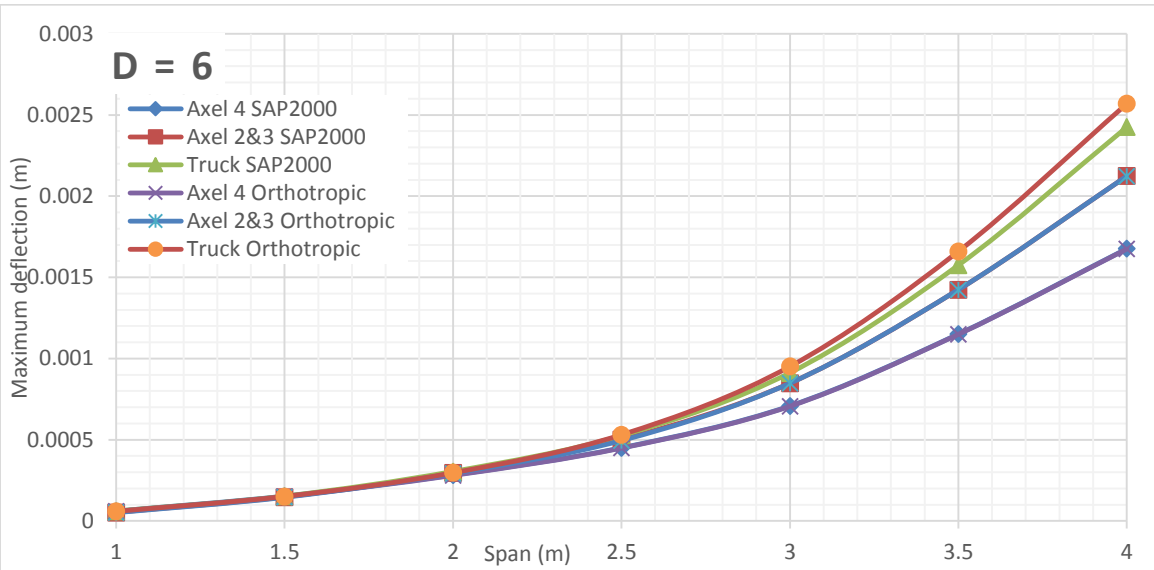

Figure 895 Deflection comparison between FEA and Orthotropic Plate Theory for D = 6 of alpha 6 (main bars perpendicular to traffic)

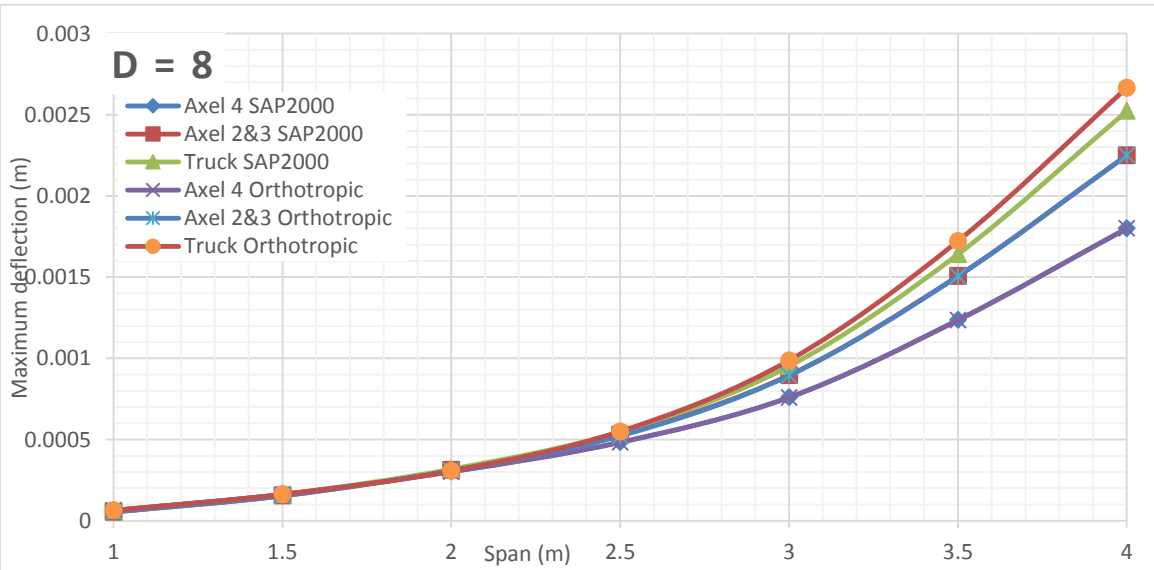

Figure 896 Deflection comparison between FEA and Orthotropic Plate Theory for D = 8 of alpha 6 (main bars perpendicular to traffic)

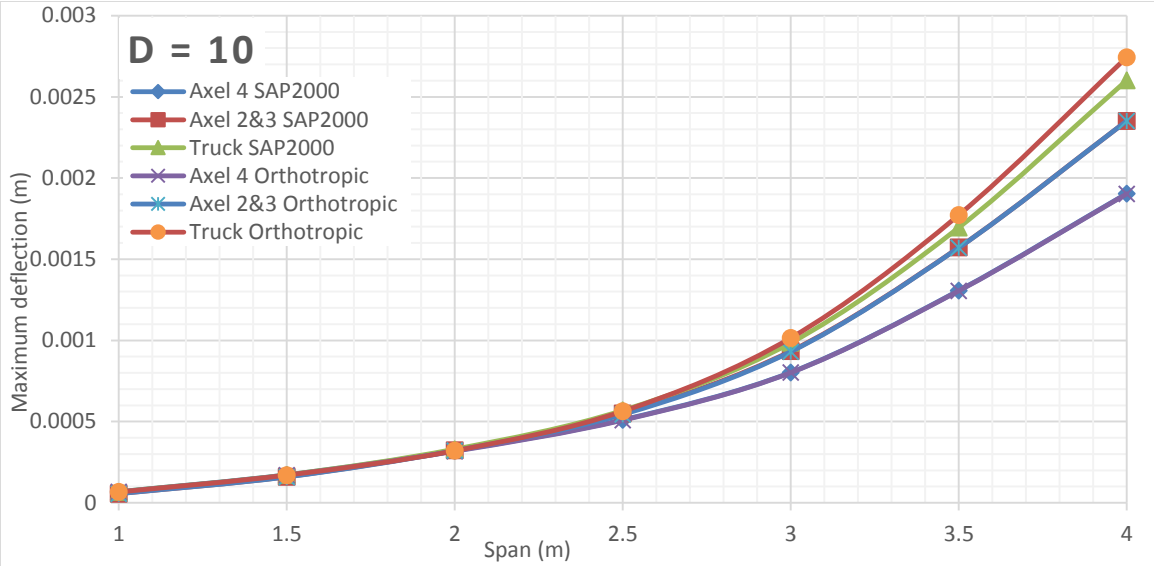

Figure 897 Deflection comparison between FEA and Orthotropic Plate Theory for D = 10 of alpha 6 (main bars perpendicular to traffic)

Alpha 6 Deflection VS Span Length for Different D Values (Main bars parallel to traffic)

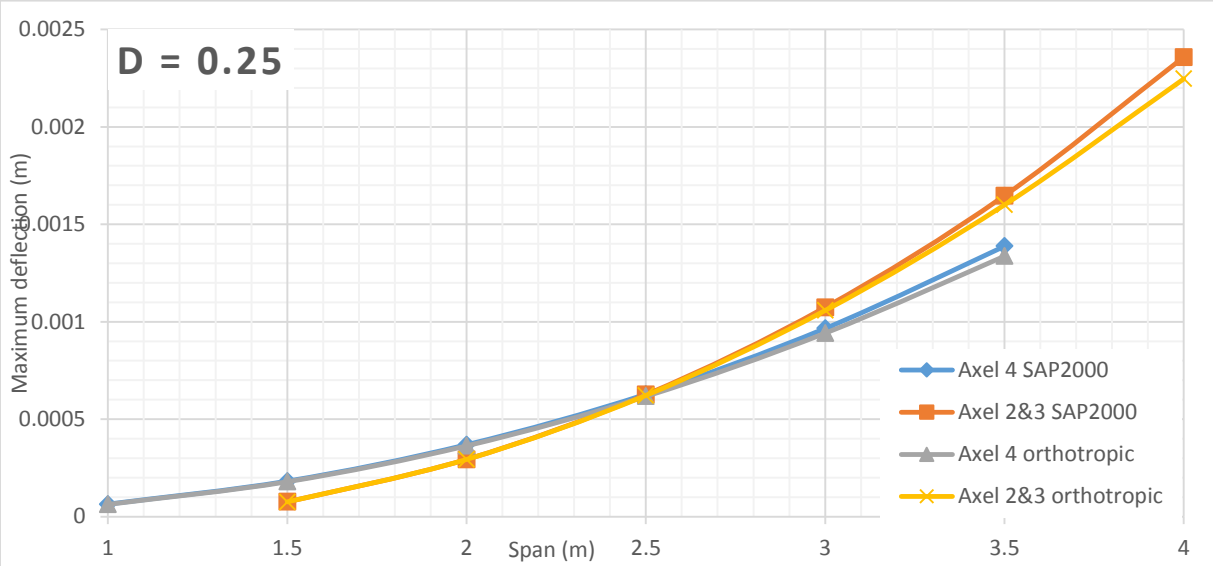

Figure 898 Deflection comparison between FEA and Orthotropic Plate Theory for D = 0.25 of alpha 6 (main bars parallel to traffic)

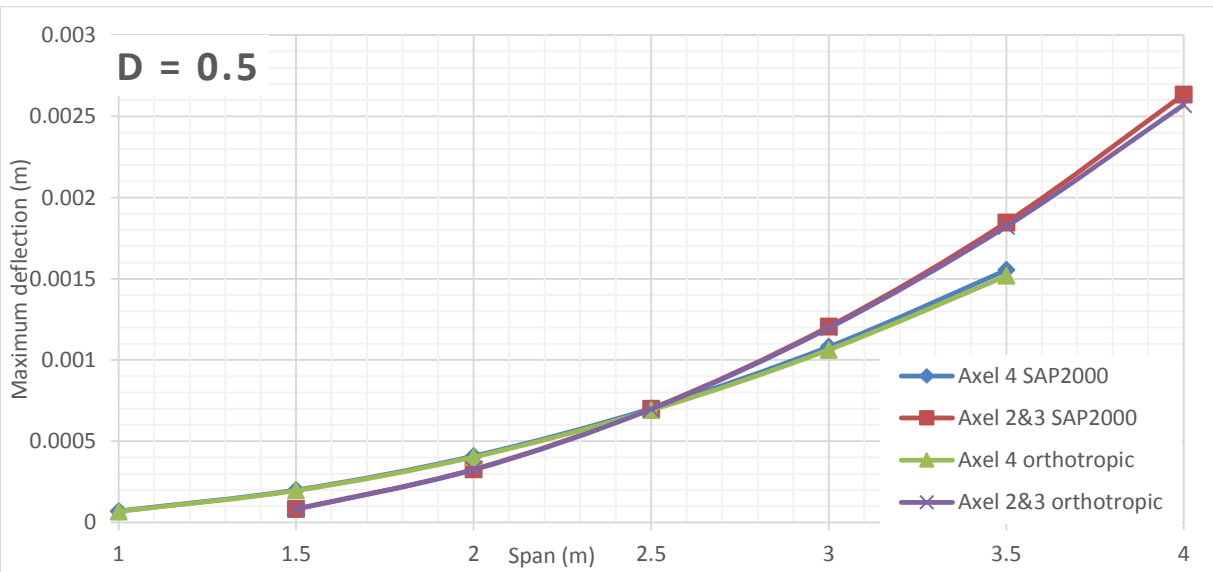

Figure 899 Deflection comparison between FEA and Orthotropic Plate Theory for D = 0.5 of alpha 6 (main bars parallel to traffic)

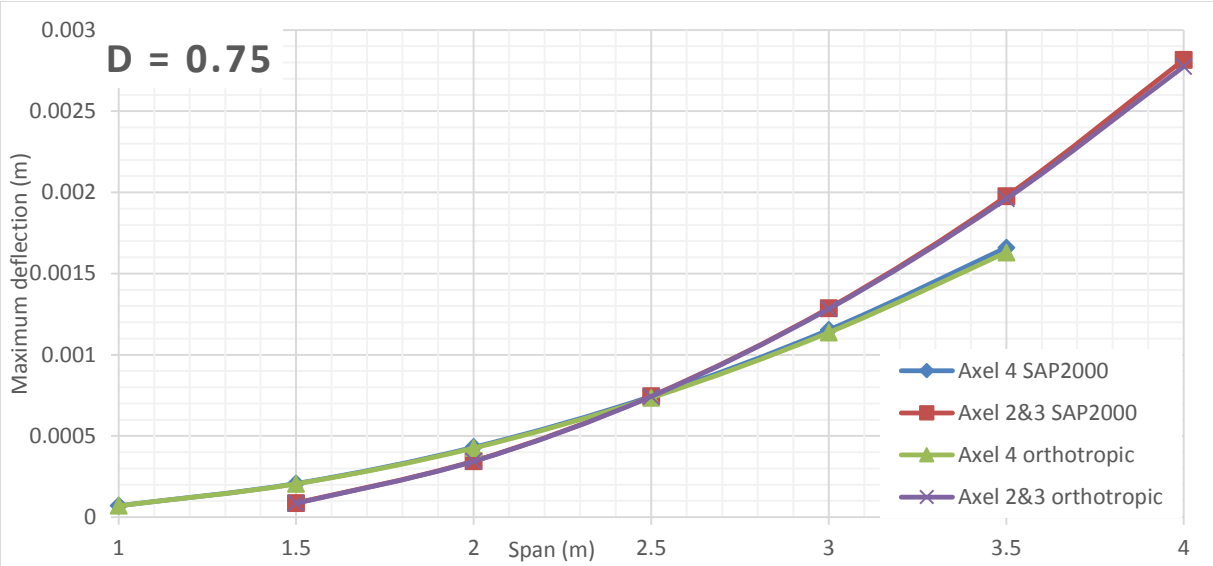

Figure 900 Deflection comparison between FEA and Orthotropic Plate Theory for D = 0.75 of alpha 6 (main bars parallel to traffic)

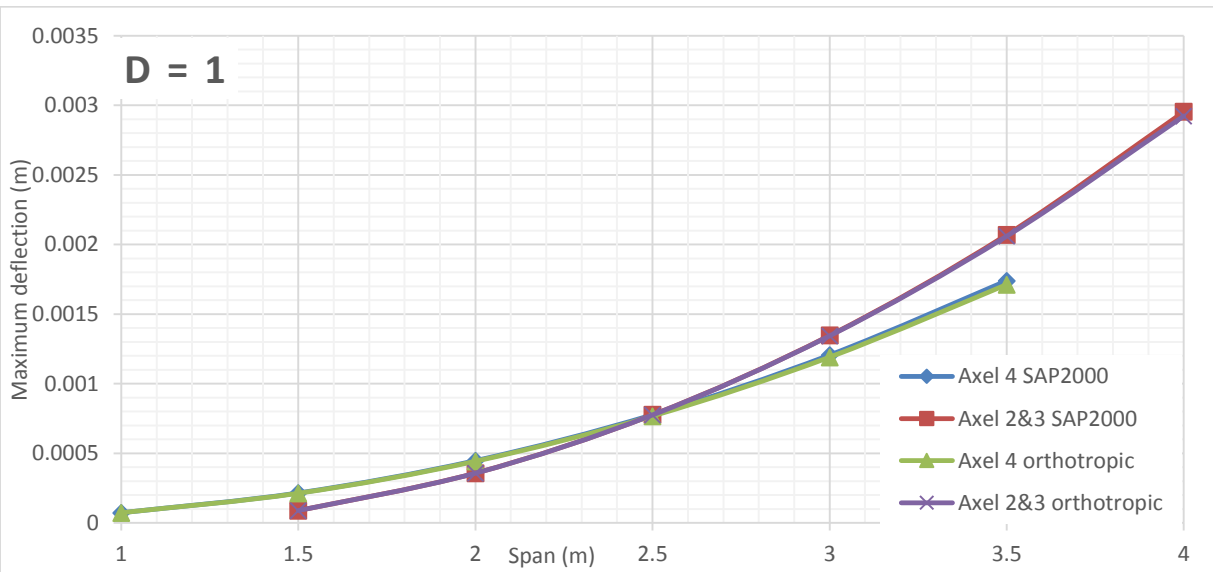

Figure 901 Deflection comparison between FEA and Orthotropic Plate Theory for D = 1 of alpha 6 (main bars parallel to traffic)

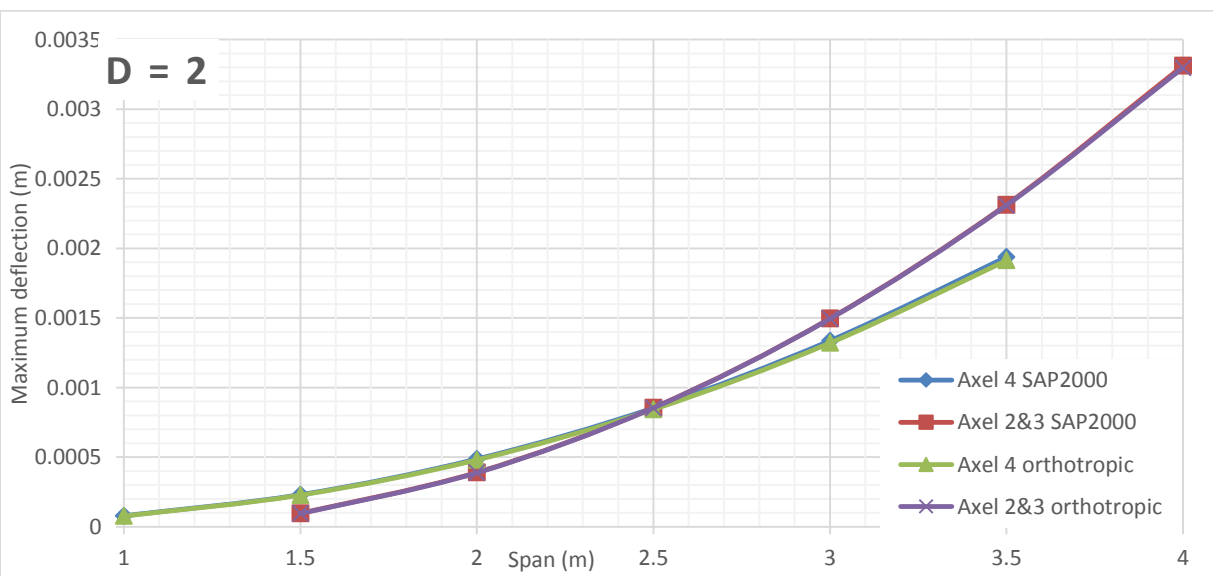

Figure 902 Deflection comparison between FEA and Orthotropic Plate Theory for D = 2 of alpha 6 (main bars parallel to traffic)

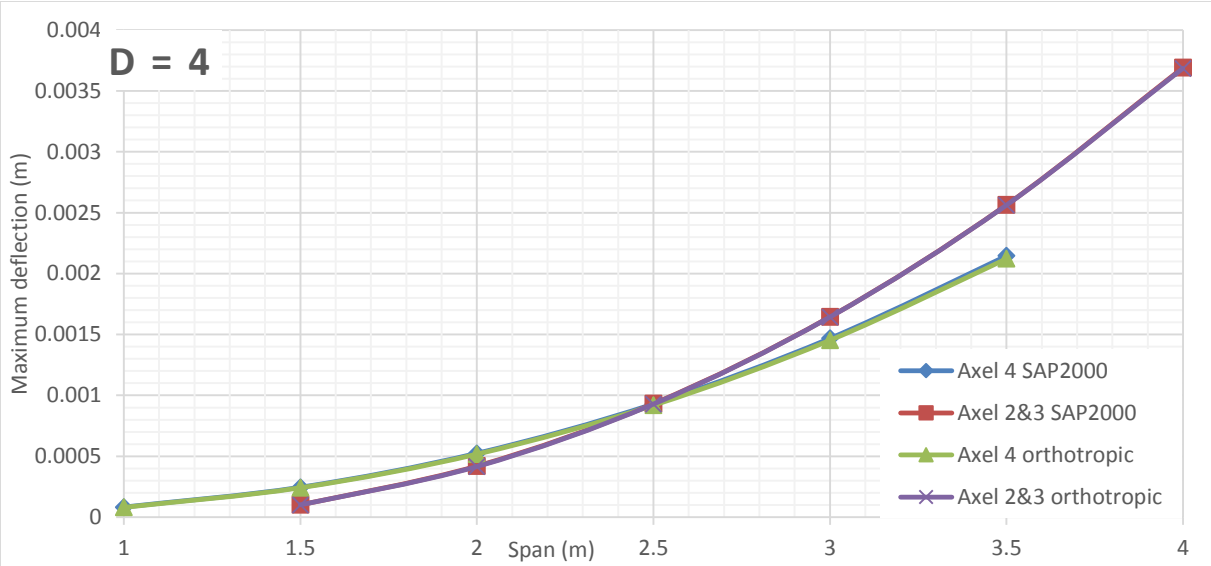

Figure 903 Deflection comparison between FEA and Orthotropic Plate Theory for D = 4 of alpha 6 (main bars parallel to traffic)

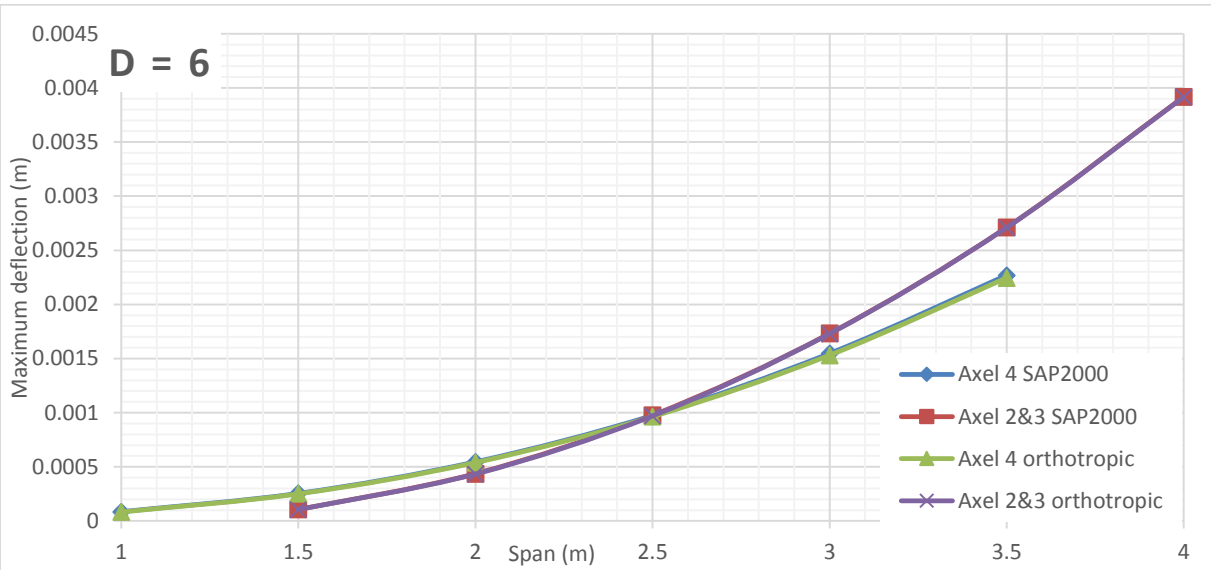

Figure 904 Deflection comparison between FEA and Orthotropic Plate Theory for D = 6 of alpha 6 (main bars parallel to traffic)

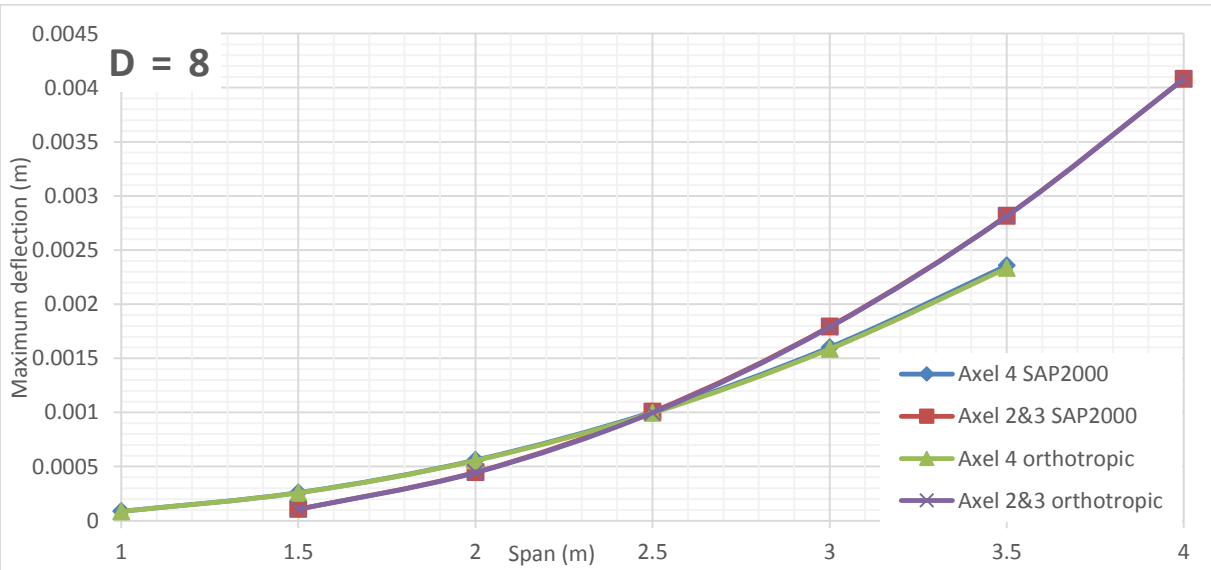

Figure 905 Deflection comparison between FEA and Orthotropic Plate Theory for D = 8 of alpha 6 (main bars parallel to traffic)

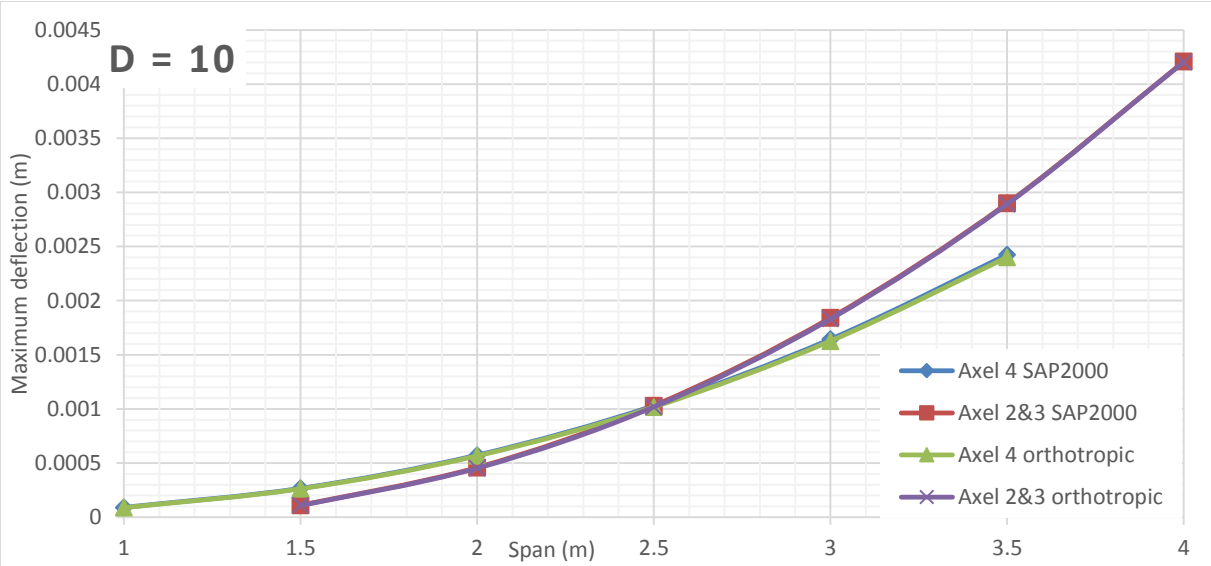

Figure 906 Deflection comparison between FEA and Orthotropic Plate Theory for D = 10 of alpha 6 (main bars parallel to traffic)

Alpha 8 Deflection VS Span Length for Different D Values (Main bars perpendicular to traffic)

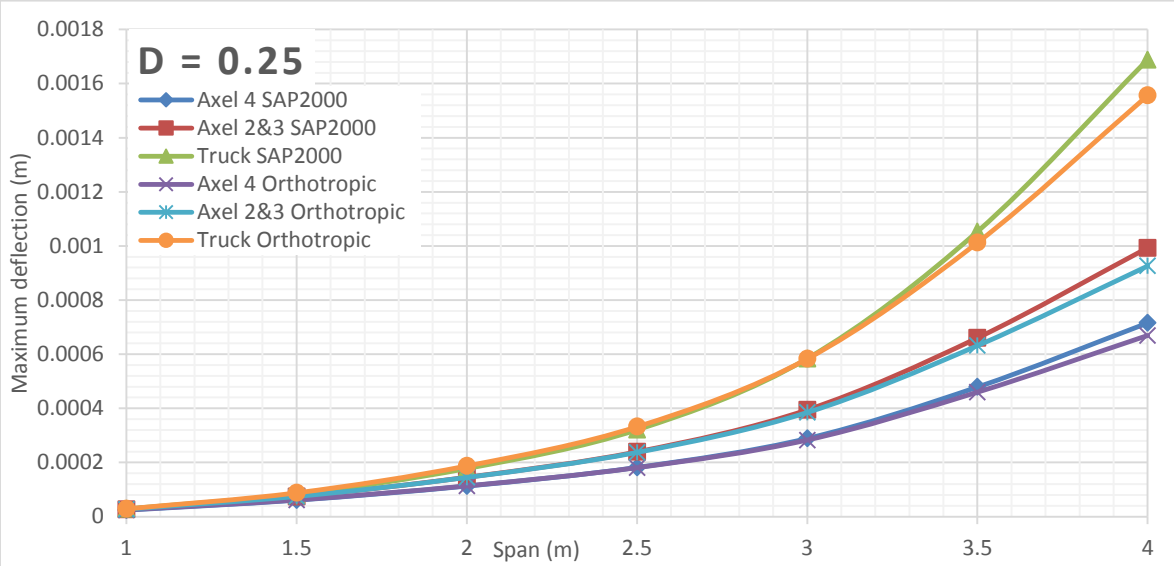

Figure 907 Deflection comparison between FEA and Orthotropic Plate Theory for D = 0.25 of alpha 8 (main bars perpendicular to traffic)

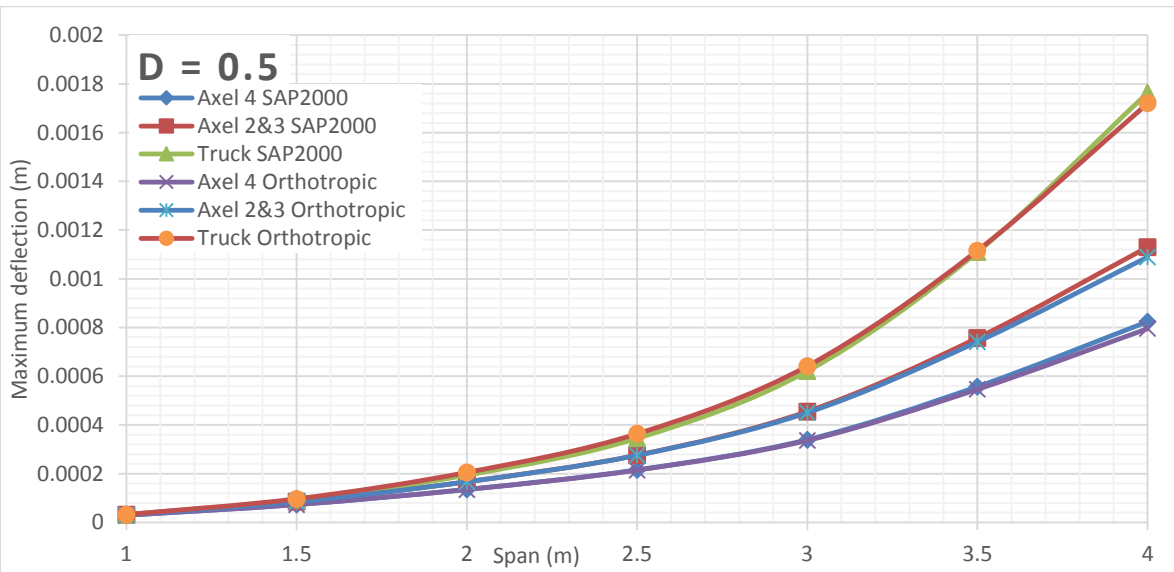

Figure 908 Deflection comparison between FEA and Orthotropic Plate Theory for D = 0.5 of alpha 8 (main bars perpendicular to traffic)

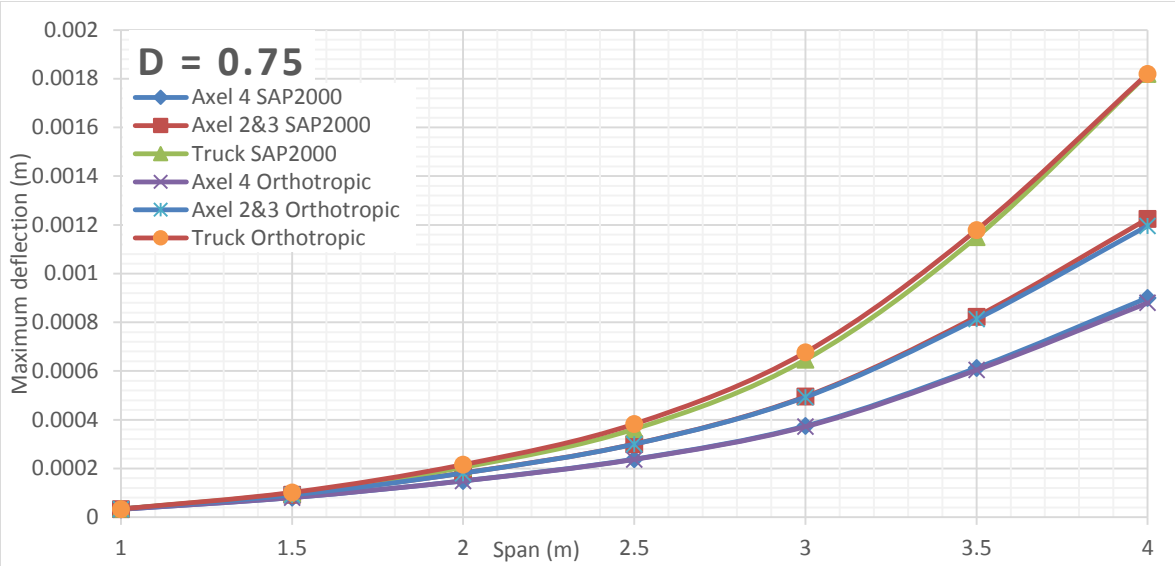

Figure 909 Deflection comparison between FEA and Orthotropic Plate Theory for D = 0.75 of alpha 8 (main bars perpendicular to traffic)

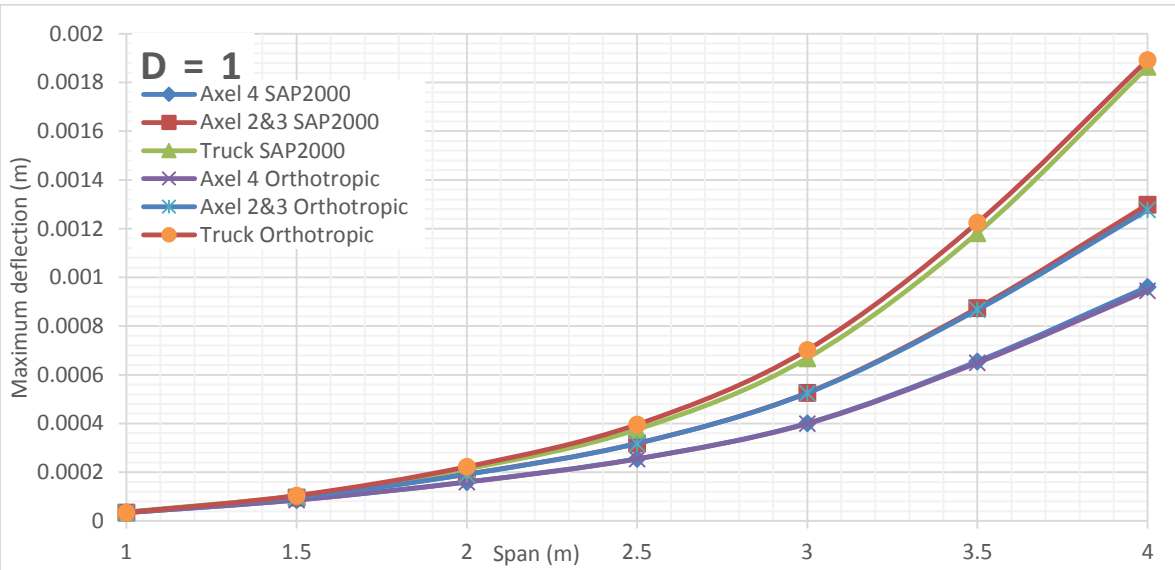

Figure 910 Deflection comparison between FEA and Orthotropic Plate Theory for D = 1 of alpha 8 (main bars perpendicular to traffic)

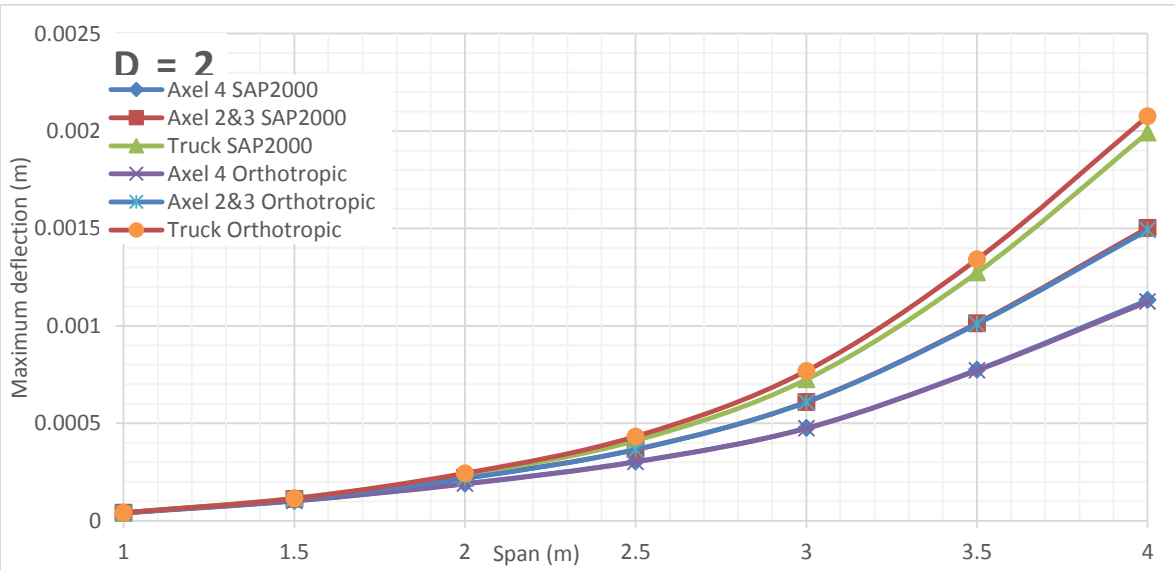

Figure 911 Deflection comparison between FEA and Orthotropic Plate Theory for D = 2 of alpha 8 (main bars perpendicular to traffic)

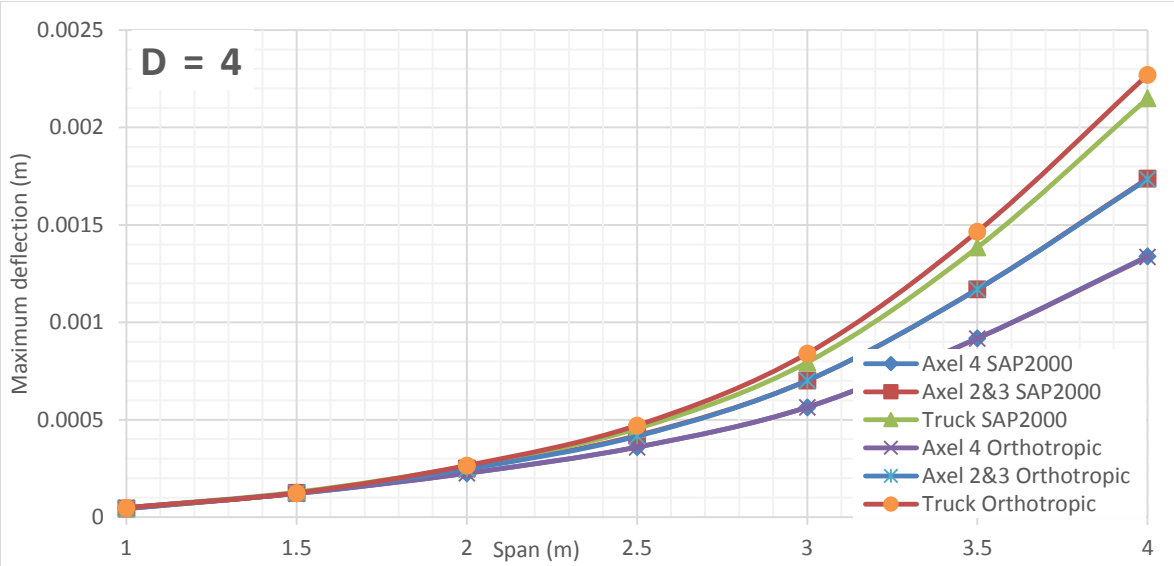

Figure 912 Deflection comparison between FEA and Orthotropic Plate Theory for D = 4 of alpha 8 (main bars perpendicular to traffic)

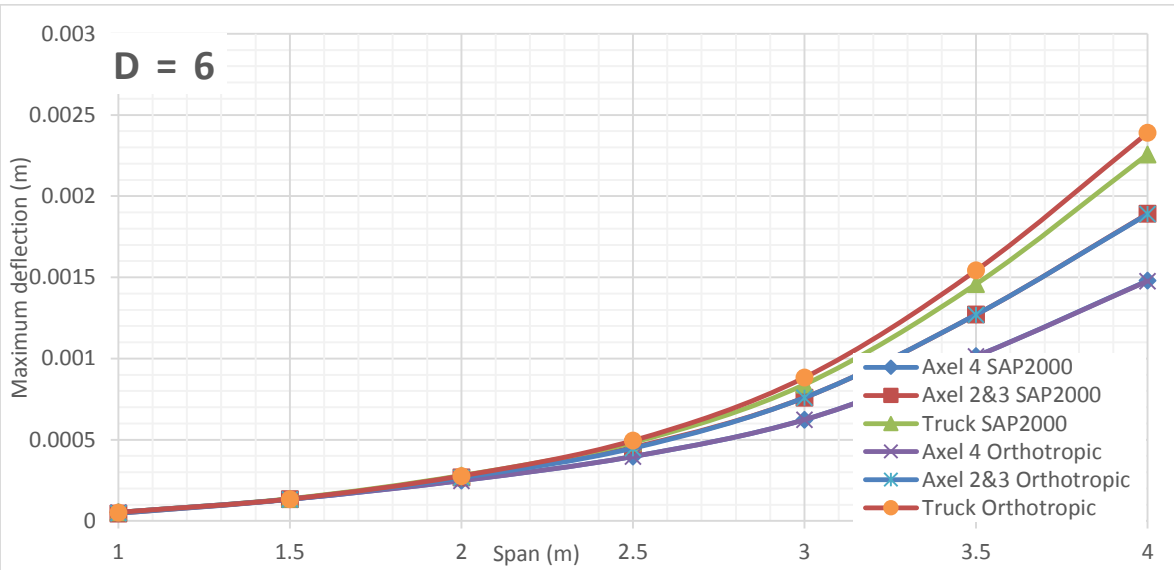

Figure 913 Deflection comparison between FEA and Orthotropic Plate Theory for D = 6 of alpha 8 (main bars perpendicular to traffic)

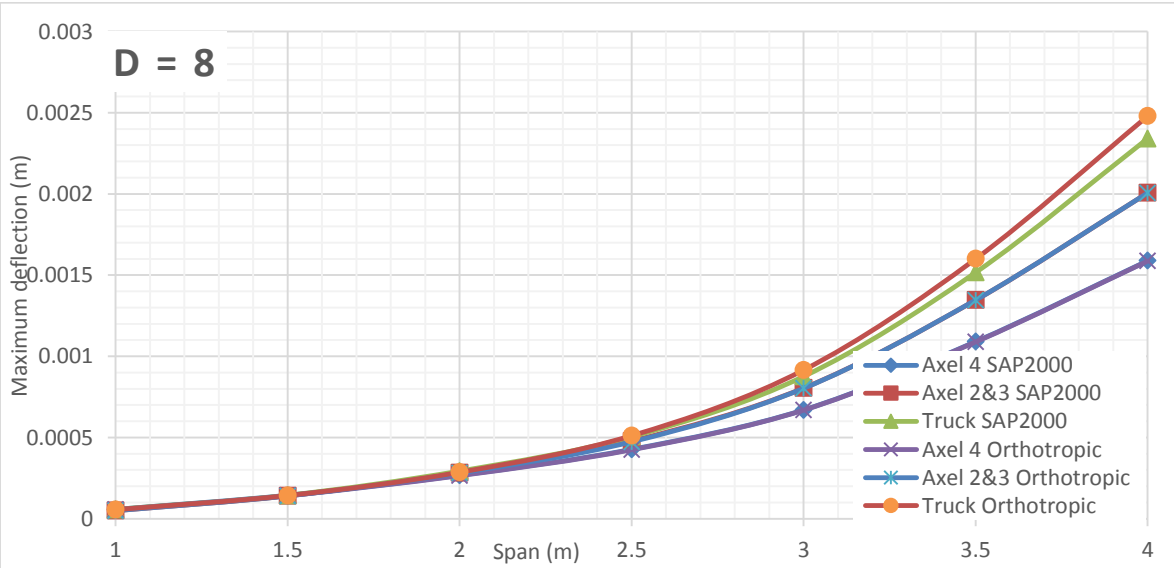

Figure 914 Deflection comparison between FEA and Orthotropic Plate Theory for D = 8 of alpha 8 (main bars perpendicular to traffic)

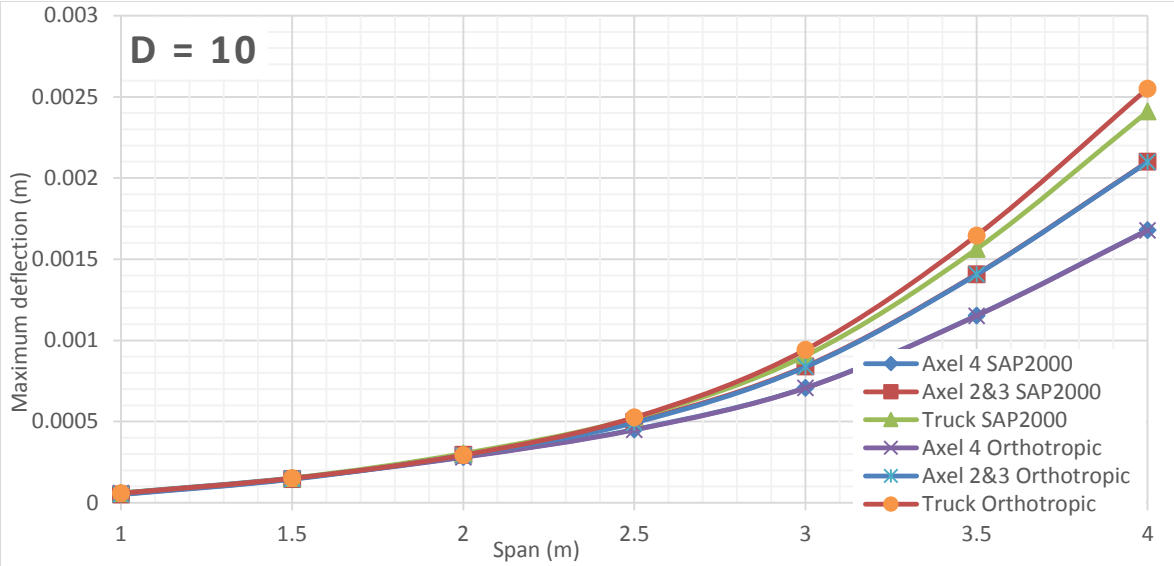

Figure 915 Deflection comparison between FEA and Orthotropic Plate Theory for D = 10 of alpha 8 (main bars perpendicular to traffic)

Alpha 8 Deflection VS Span Length for Different D Values (Main bars parallel to traffic)

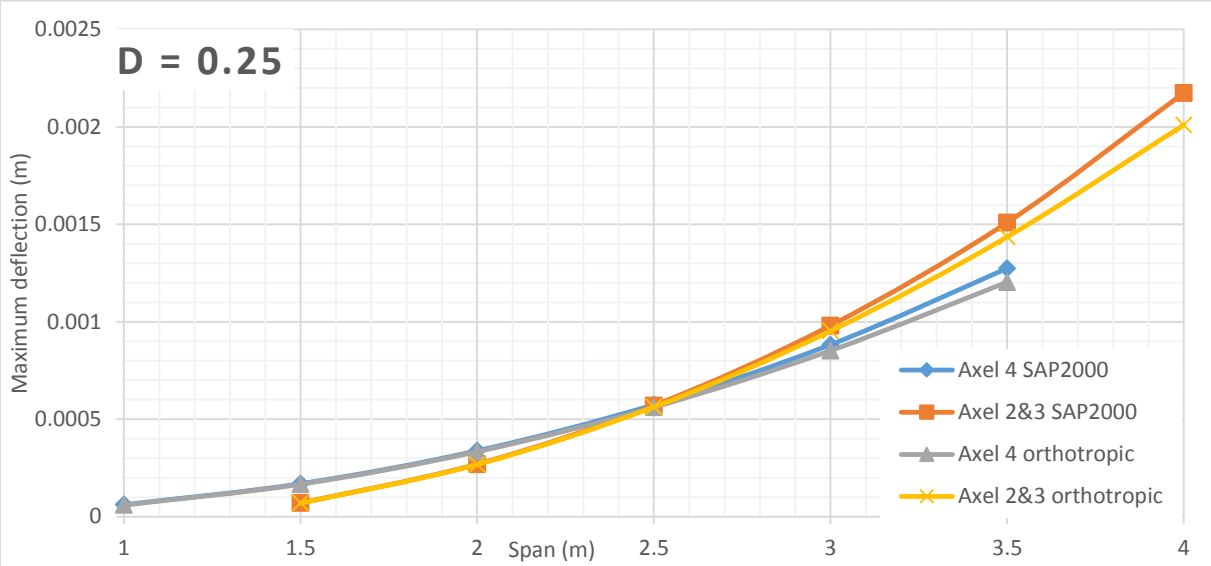

Figure 916 Deflection comparison between FEA and Orthotropic Plate Theory for D = 0.25 of alpha 8 (main bars parallel to traffic)

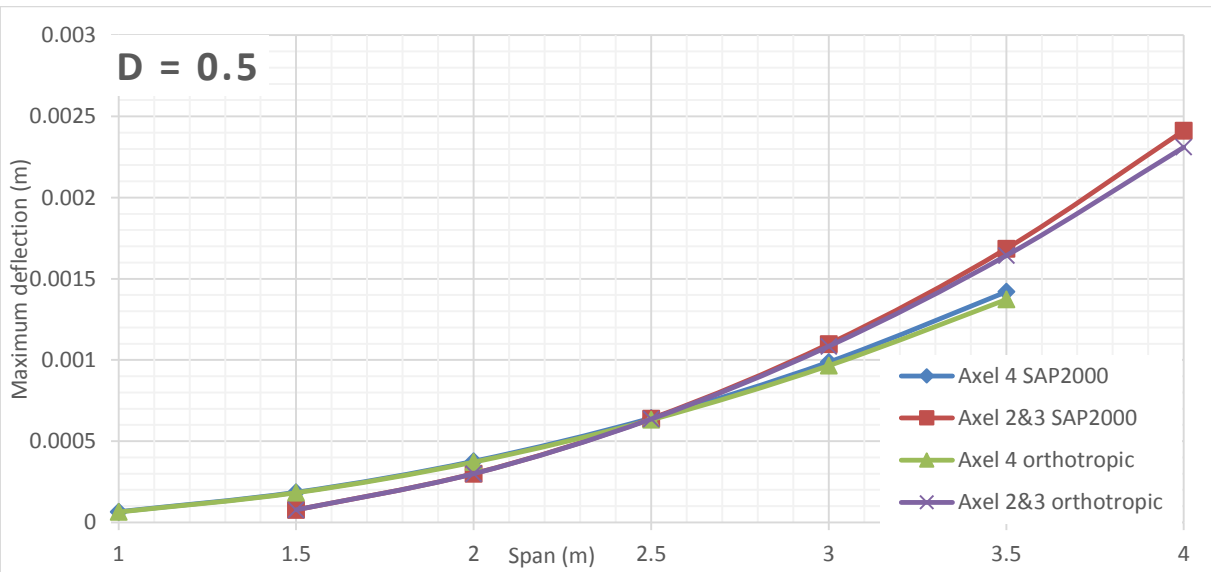

Figure 917 Deflection comparison between FEA and Orthotropic Plate Theory for D = 0.5 of alpha 8 (main bars parallel to traffic)

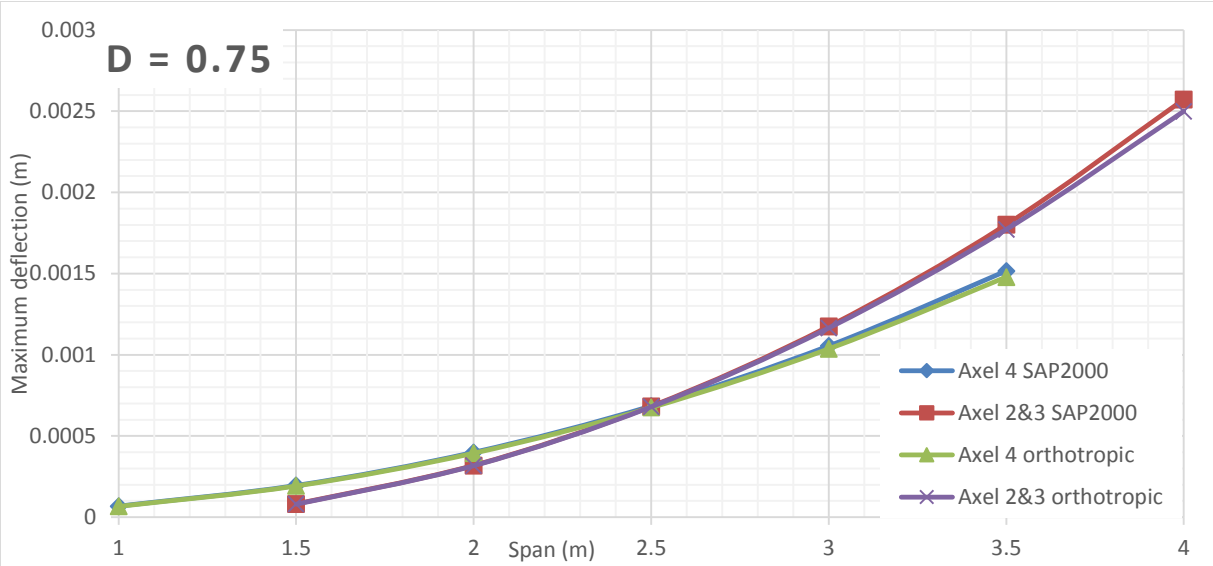

Figure 918 Deflection comparison between FEA and Orthotropic Plate Theory for D = 0.75 of alpha 8 (main bars parallel to traffic)

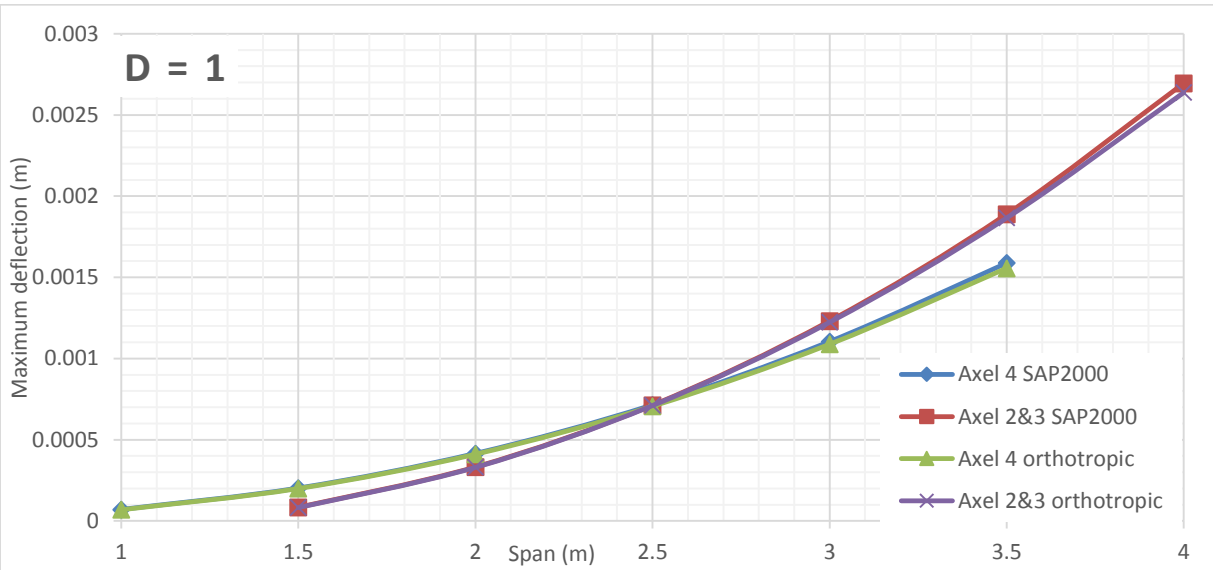

Figure 919 Deflection comparison between FEA and Orthotropic Plate Theory for D = 1 of alpha 8 (main bars parallel to traffic)

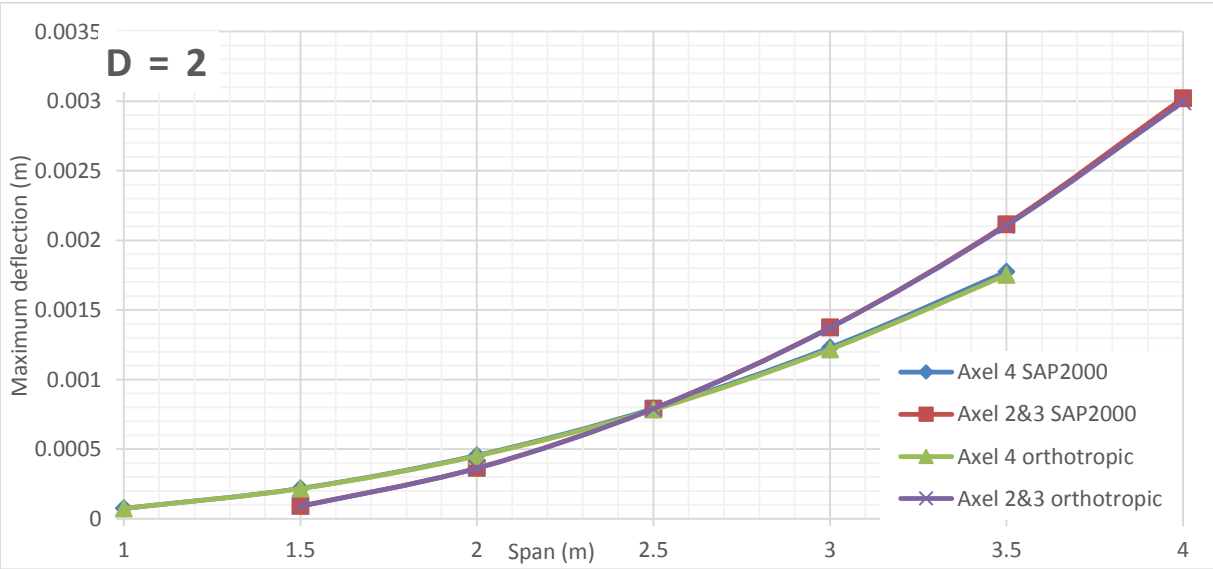

Figure 920 Deflection comparison between FEA and Orthotropic Plate Theory for D = 2 of alpha 8 (main bars parallel to traffic)

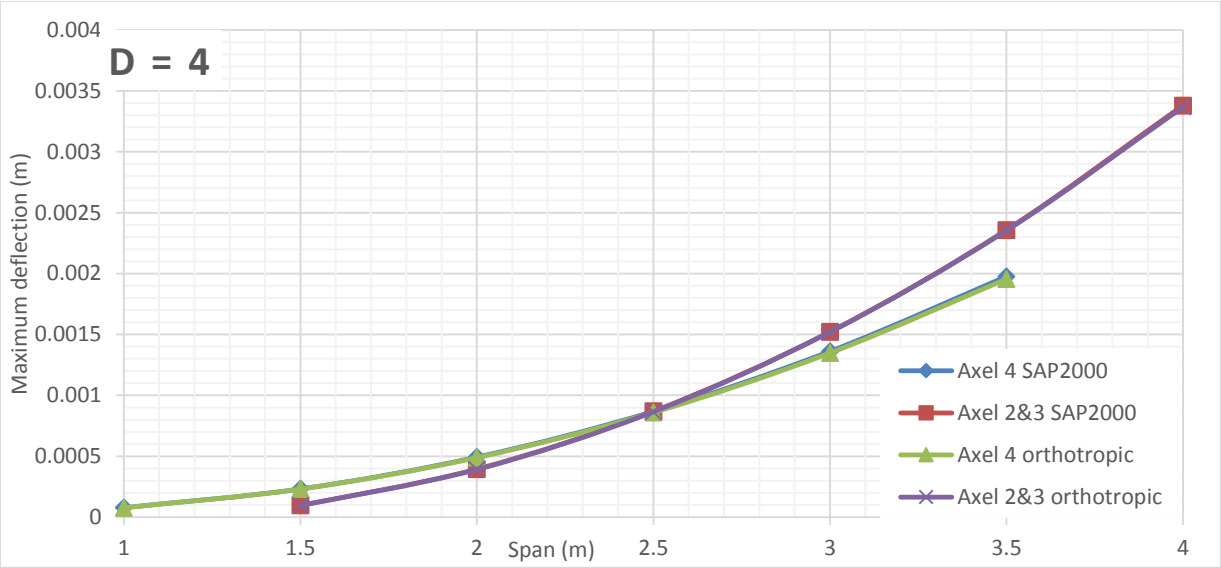

Figure 921 Deflection comparison between FEA and Orthotropic Plate Theory for D = 4 of alpha 8 (main bars parallel to traffic)

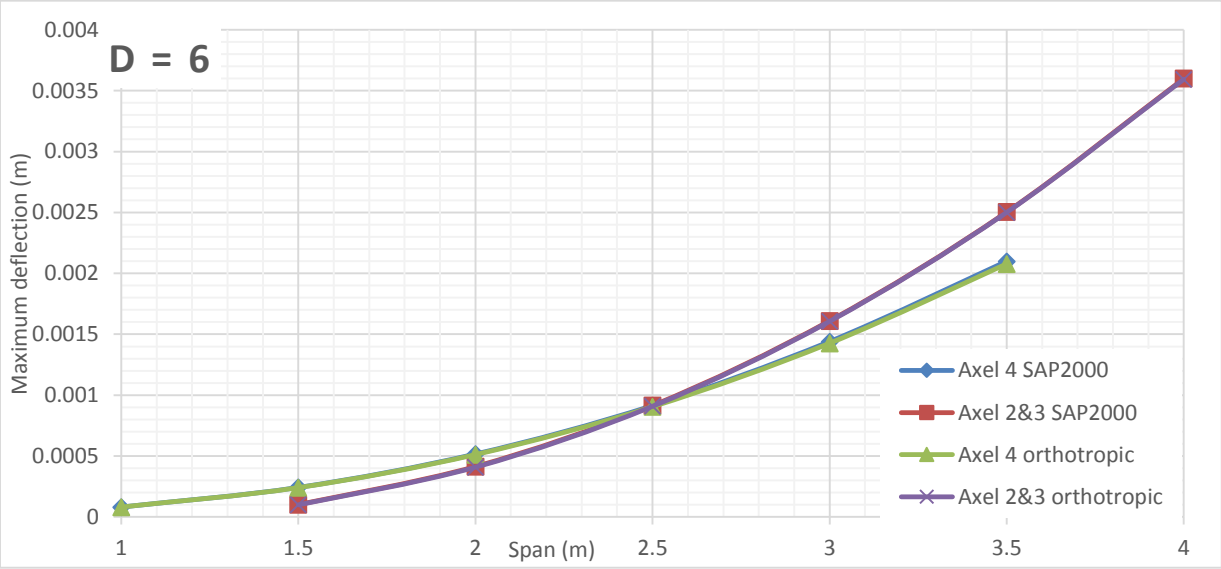

Figure 922 Deflection comparison between FEA and Orthotropic Plate Theory for D = 6 of alpha 8 (main bars parallel to traffic)

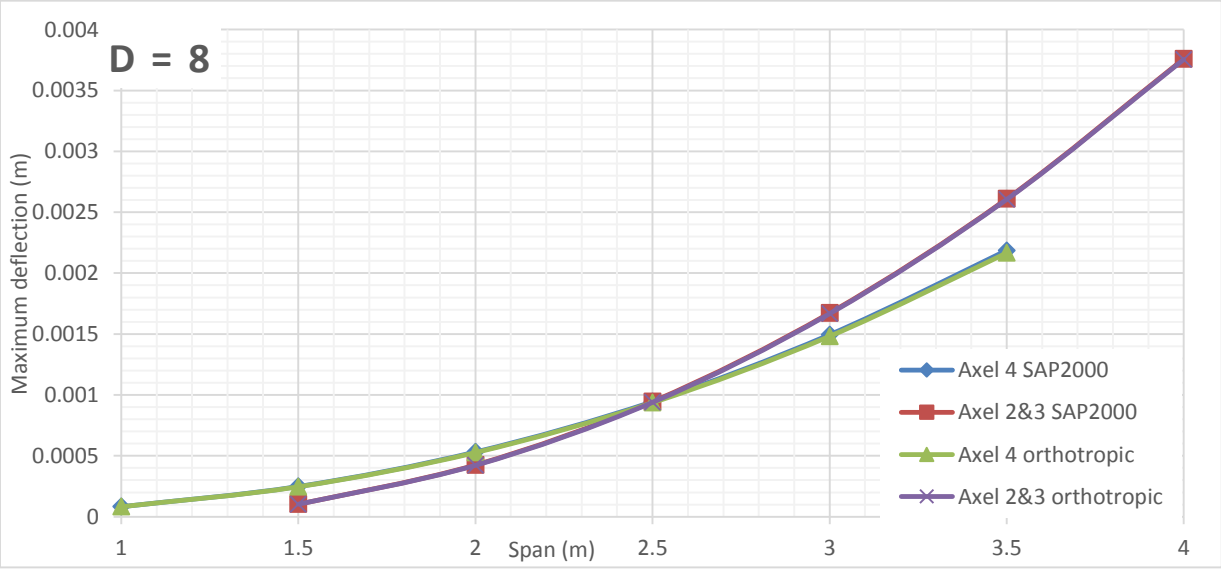

Figure 923 Deflection comparison between FEA and Orthotropic Plate Theory for D = 8 of alpha 8 (main bars parallel to traffic)

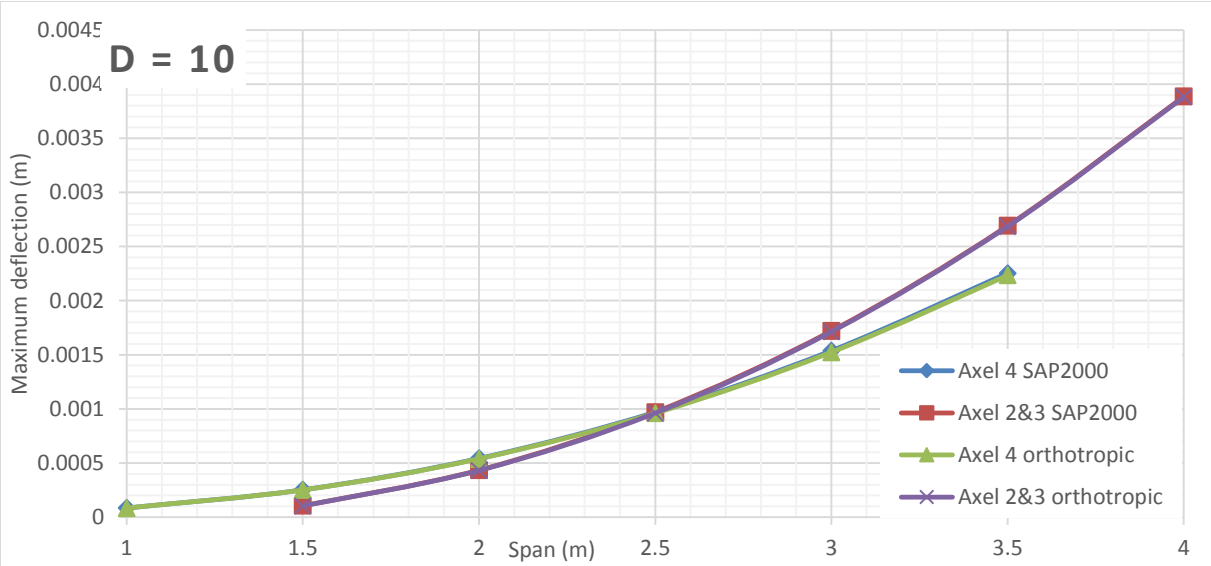

Figure 924 Deflection comparison between FEA and Orthotropic Plate Theory for D = 10 of alpha 8 (main bars parallel to traffic)

Alpha 10 Deflection VS Span Length for Different D Values (Main bars perpendicular to traffic)

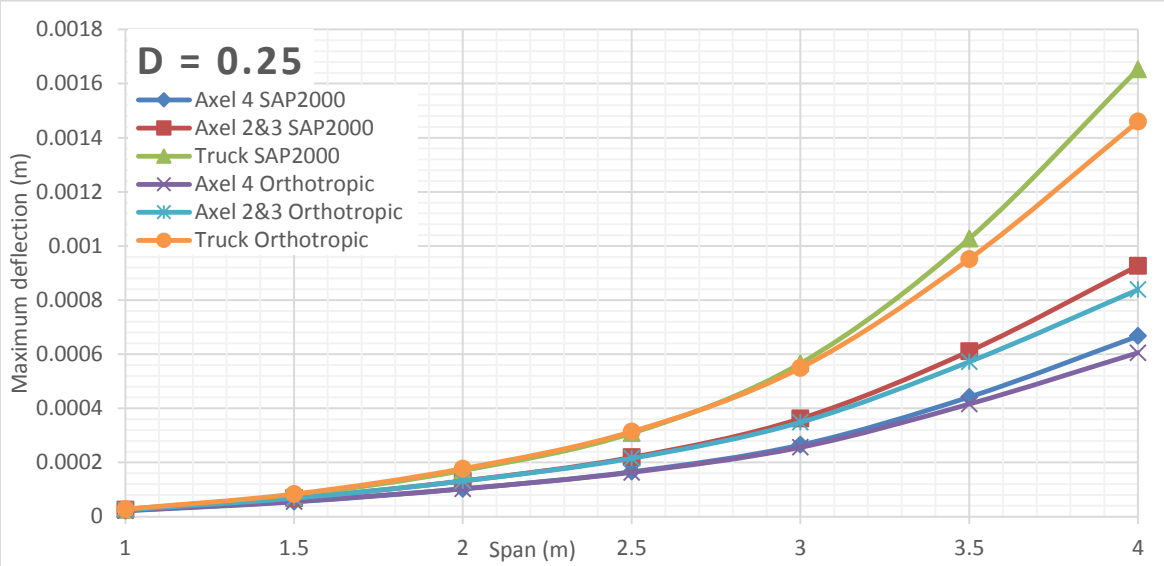

Figure 925 Deflection comparison between FEA and Orthotropic Plate Theory for D = 0.25 of alpha 10 (main bars perpendicular to traffic)

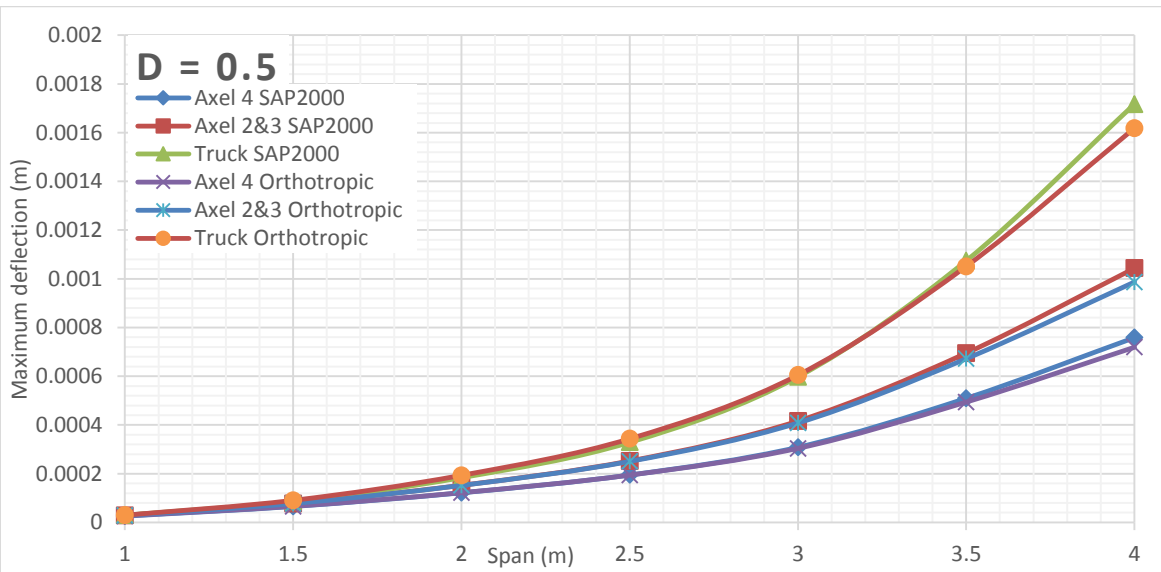

Figure 926 Deflection comparison between FEA and Orthotropic Plate Theory for D = 0.5 of alpha 10 (main bars perpendicular to traffic)

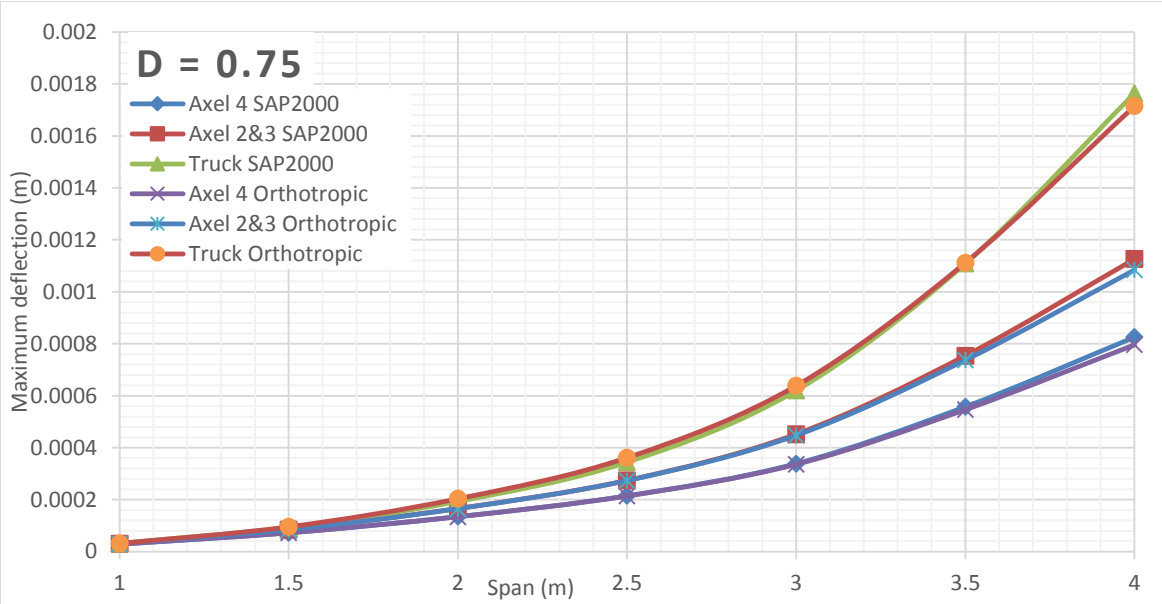

Figure 927 Deflection comparison between FEA and Orthotropic Plate Theory for D = 0.75 of alpha 10 (main bars perpendicular to traffic)

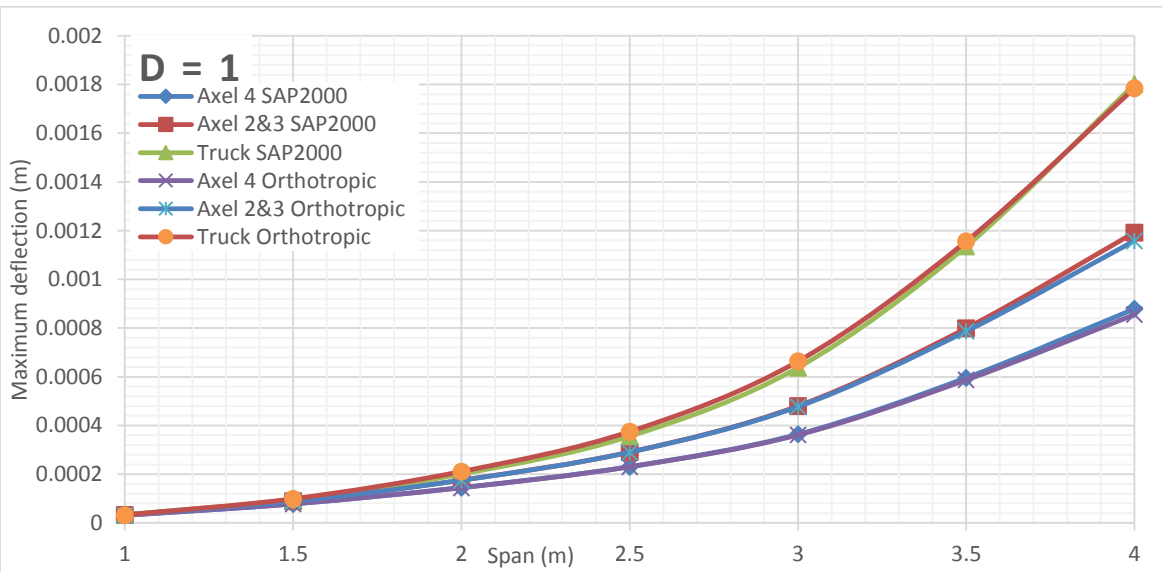

Figure 928 Deflection comparison between FEA and Orthotropic Plate Theory for D = 1 of alpha 10 (main bars perpendicular to traffic)

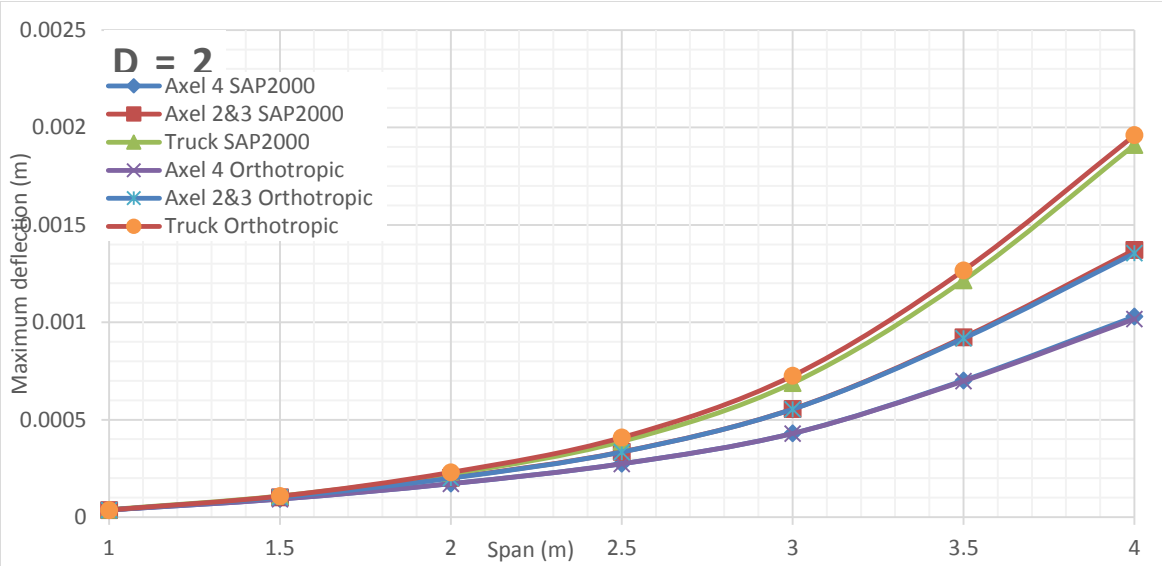

Figure 929 Deflection comparison between FEA and Orthotropic Plate Theory for D = 2 of alpha 10 (main bars perpendicular to traffic)

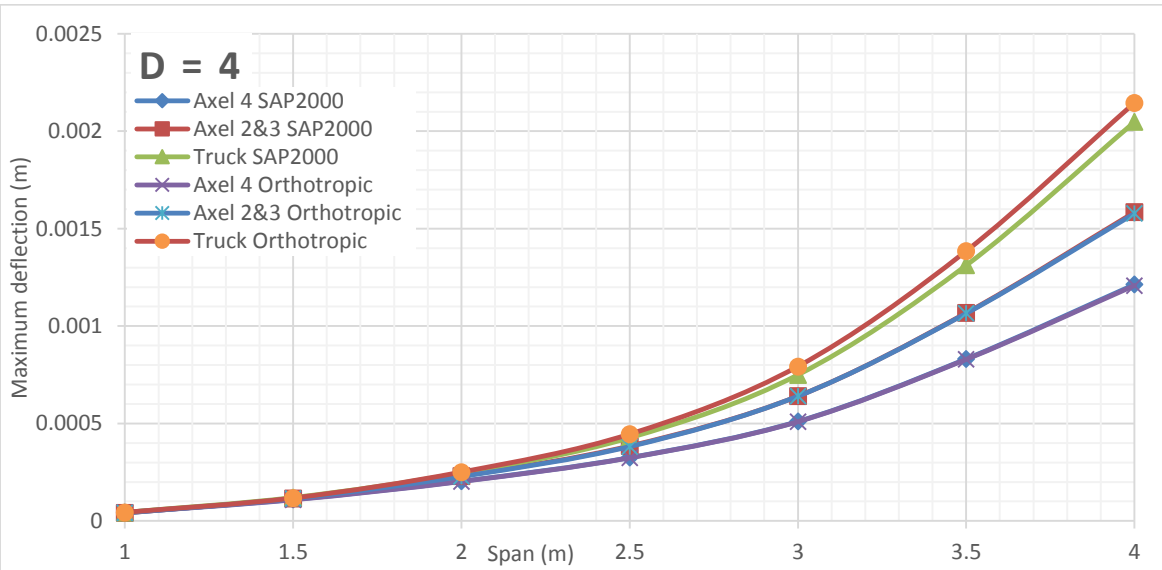

Figure 930 Deflection comparison between FEA and Orthotropic Plate Theory for D = 4 of alpha 10 (main bars perpendicular to traffic)

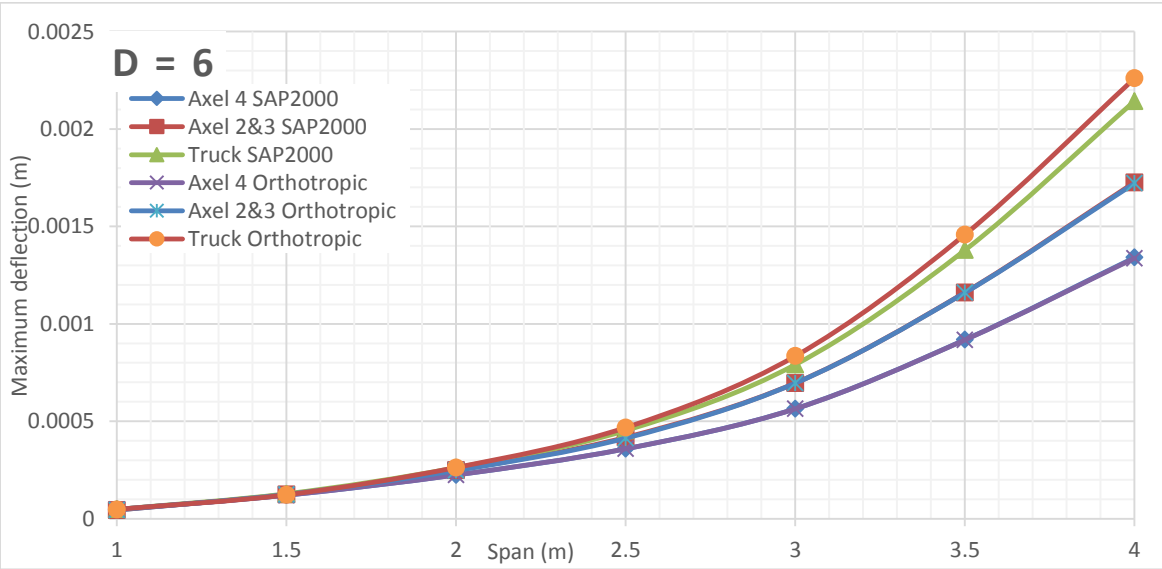

Figure 931 Deflection comparison between FEA and Orthotropic Plate Theory for D = 6 of alpha 10 (main bars perpendicular to traffic)

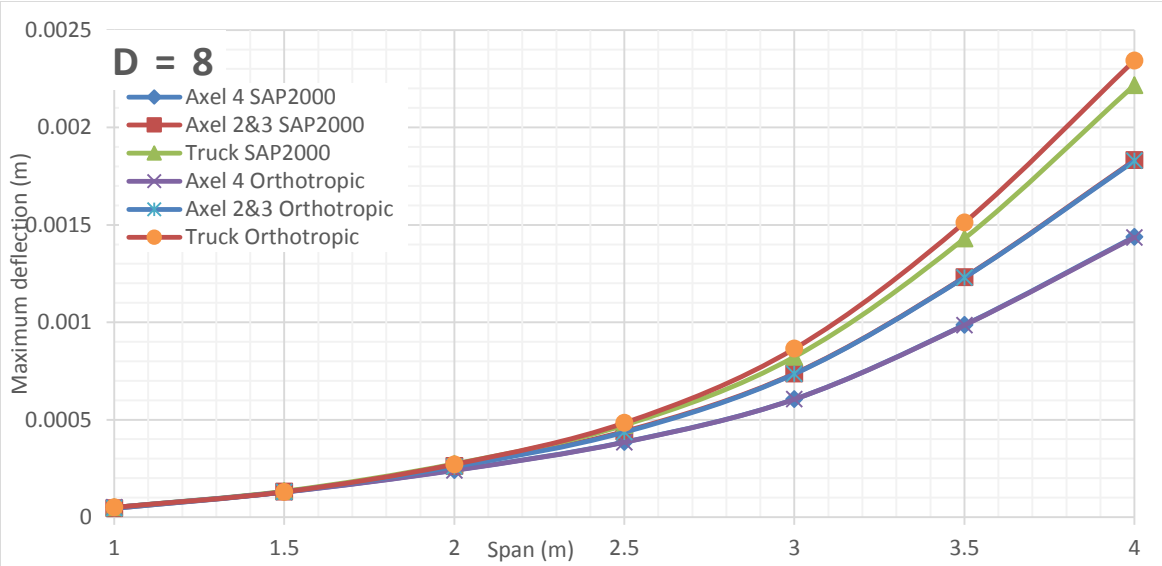

Figure 932 Deflection comparison between FEA and Orthotropic Plate Theory for D = 8 of alpha 10 (main bars perpendicular to traffic)

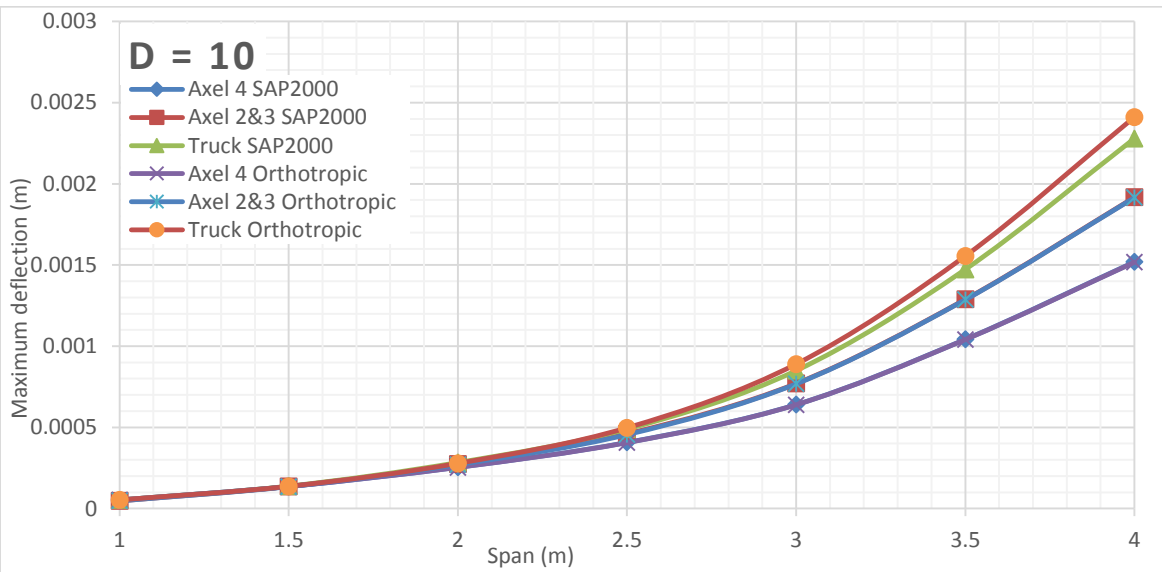

Figure 933 Deflection comparison between FEA and Orthotropic Plate Theory for D = 10 of alpha 10 (main bars perpendicular to traffic)

Alpha 10 Deflection VS Span Length for Different D Values (Main bars parallel to traffic)

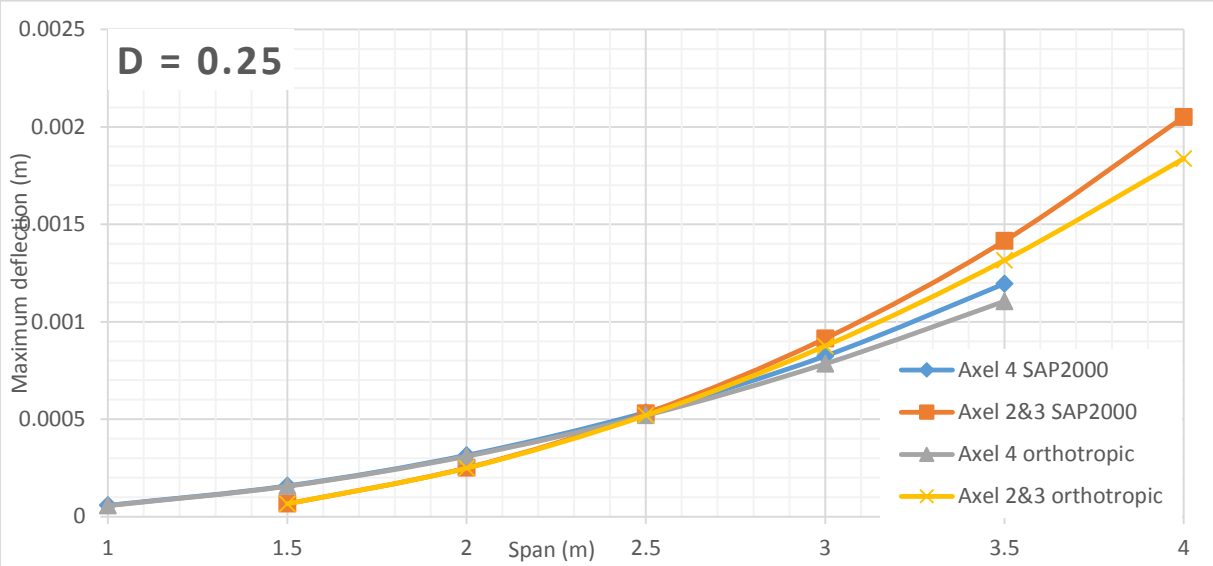

Figure 934 Deflection comparison between FEA and Orthotropic Plate Theory for D = 0.25 of alpha 10 (main bars parallel to traffic)

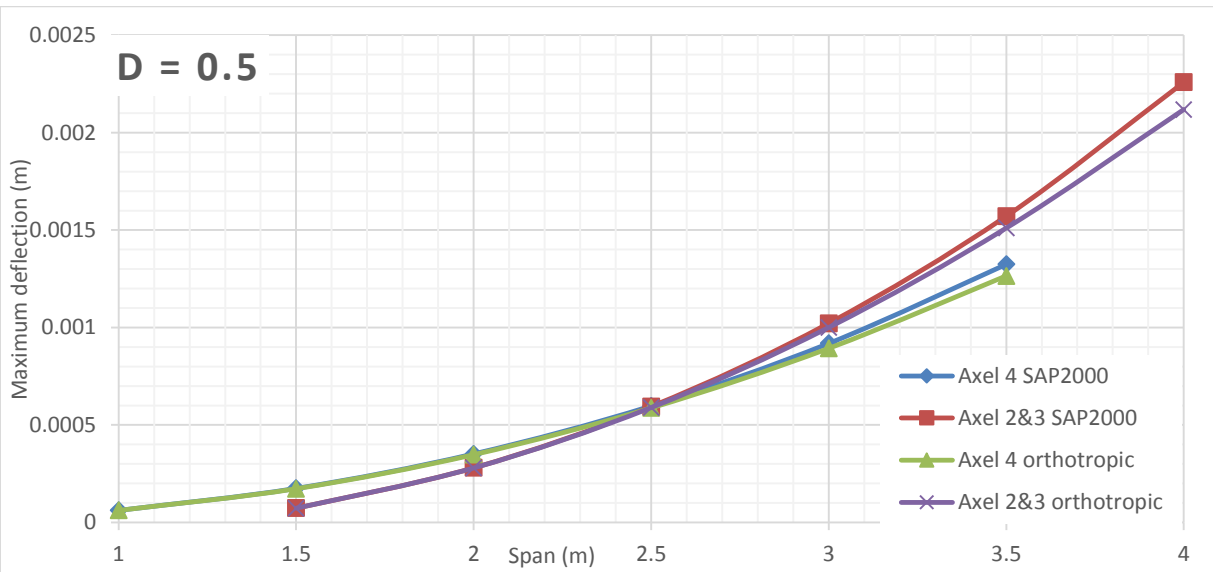

Figure 935 Deflection comparison between FEA and Orthotropic Plate Theory for D = 0.5 of alpha 10 (main bars parallel to traffic)

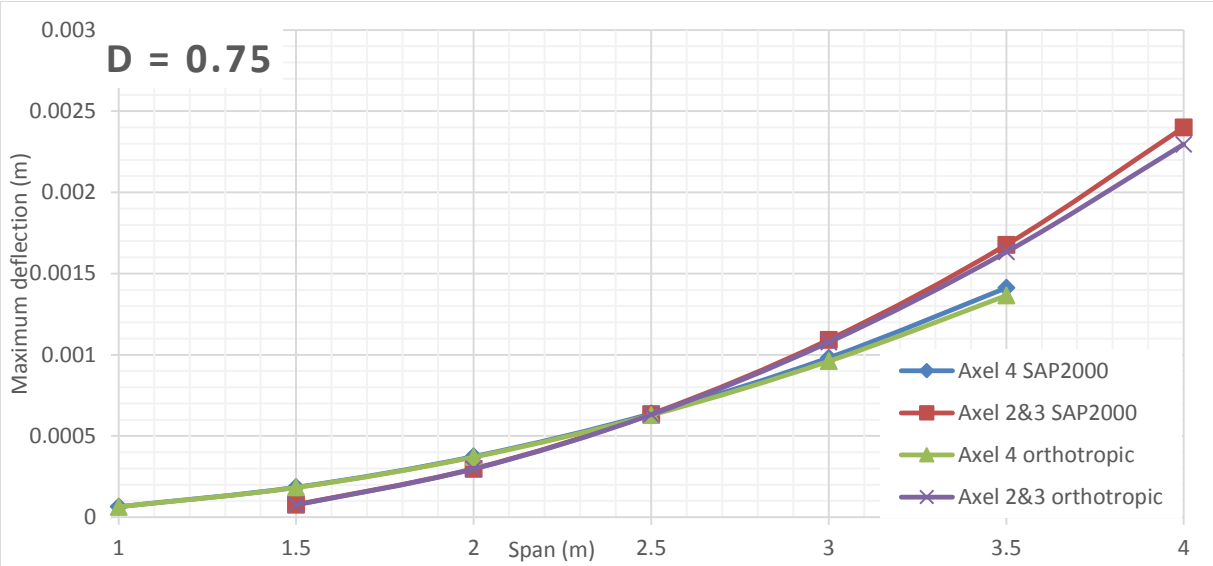

Figure 936 Deflection comparison between FEA and Orthotropic Plate Theory for D = 0.75 of alpha 10 (main bars parallel to traffic)

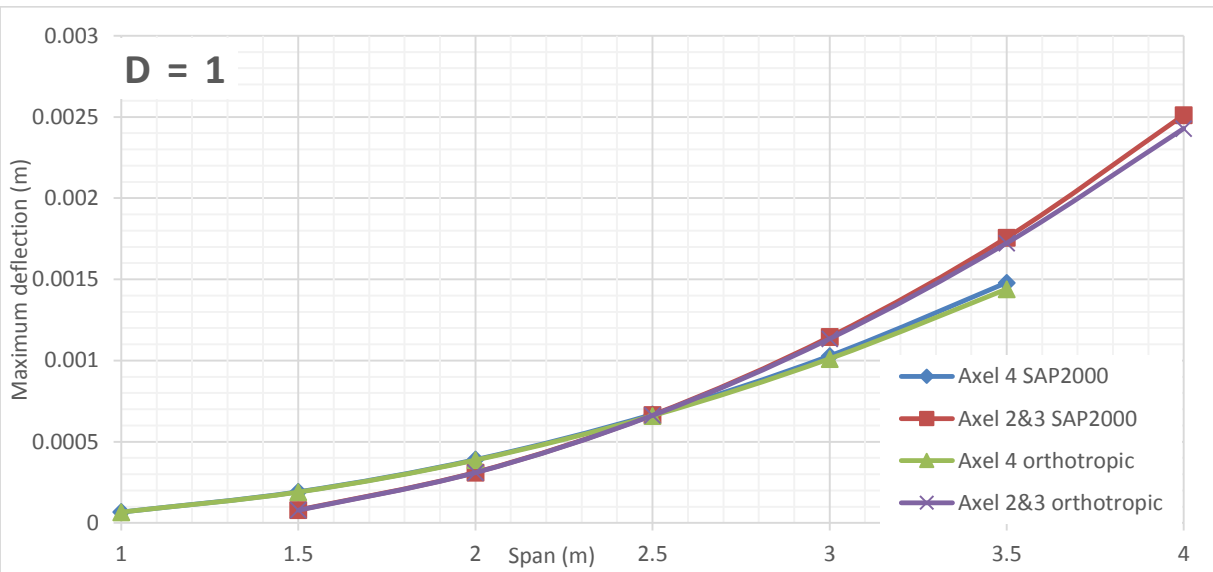

Figure 937 Deflection comparison between FEA and Orthotropic Plate Theory for D = 1 of alpha 10 (main bars parallel to traffic)

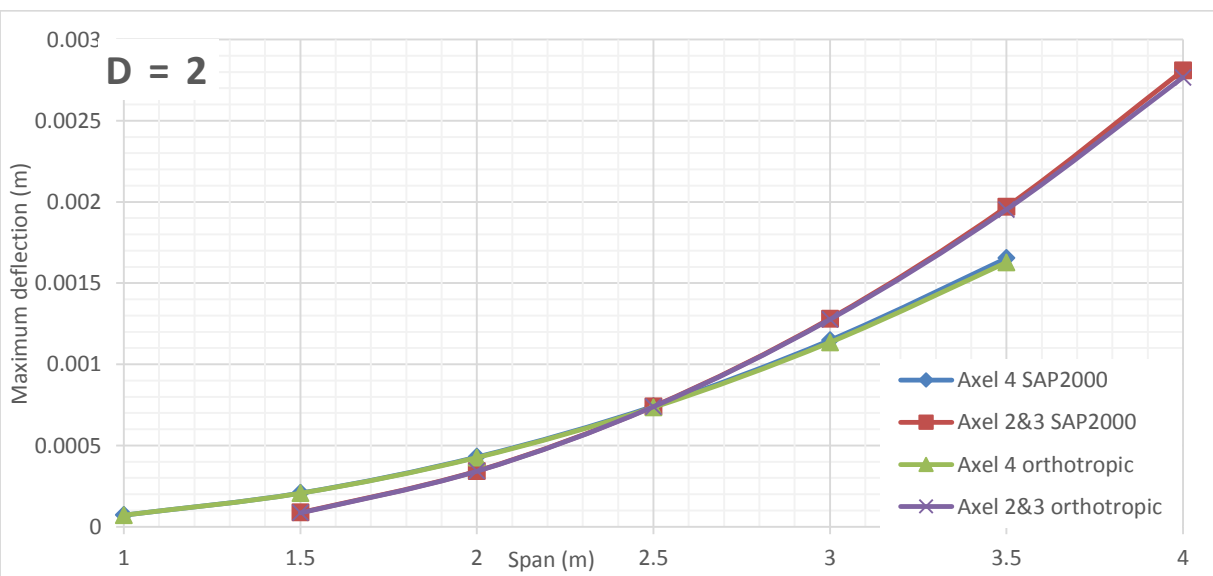

Figure 938 Deflection comparison between FEA and Orthotropic Plate Theory for D = 2 of alpha 10 (main bars parallel to traffic)

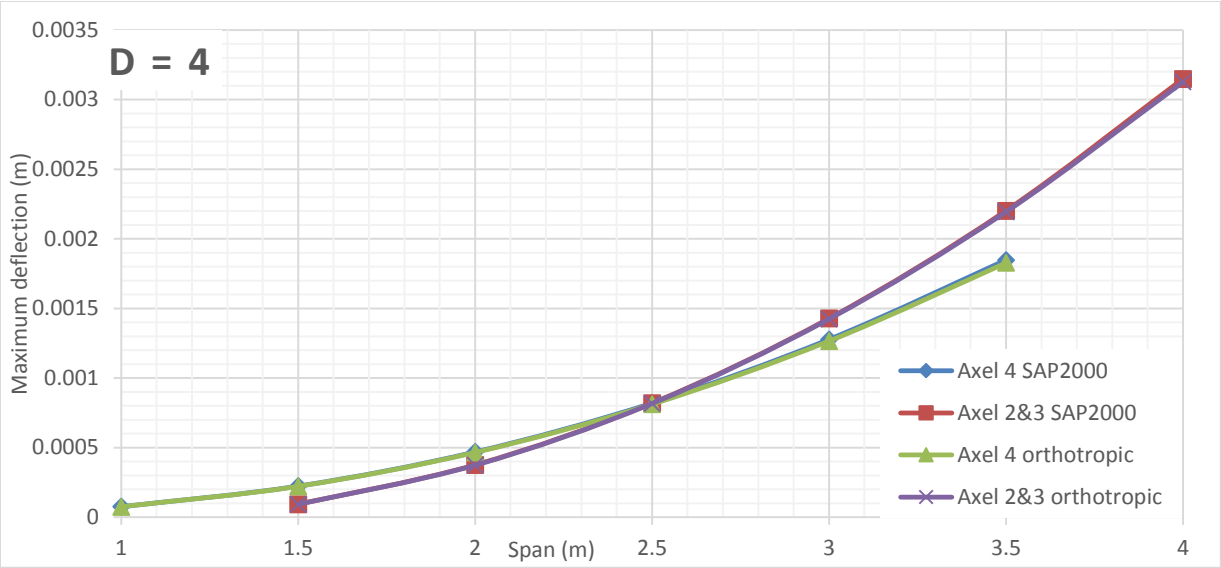

Figure 939 Deflection comparison between FEA and Orthotropic Plate Theory for D = 4 of alpha 10 (main bars parallel to traffic)

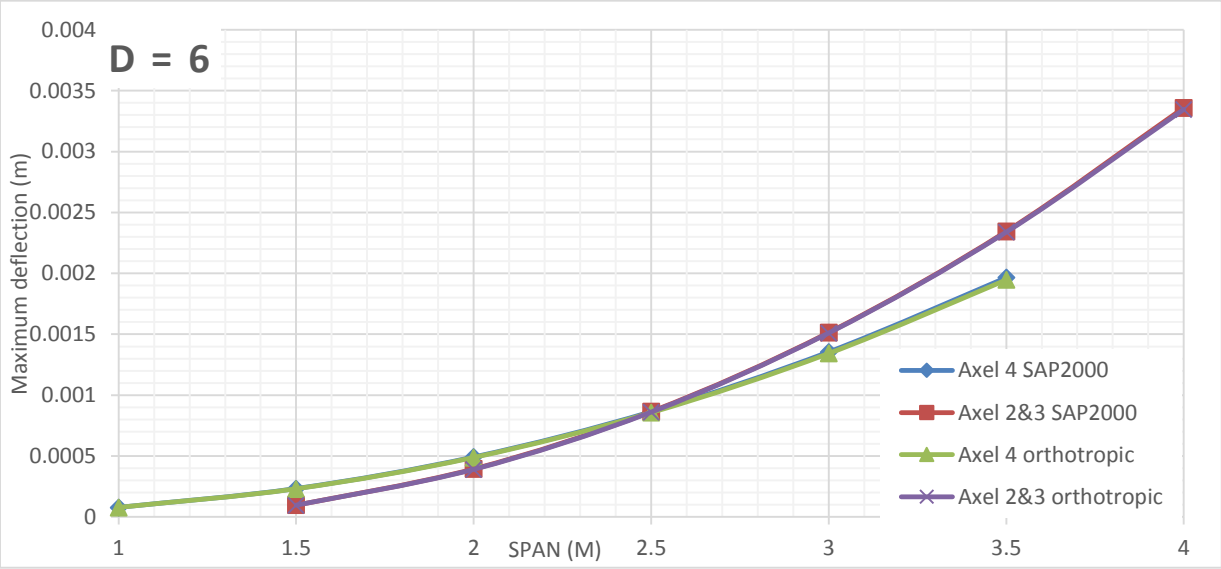

Figure 940 Deflection comparison between FEA and Orthotropic Plate Theory for D = 6 of alpha 10 (main bars parallel to traffic)

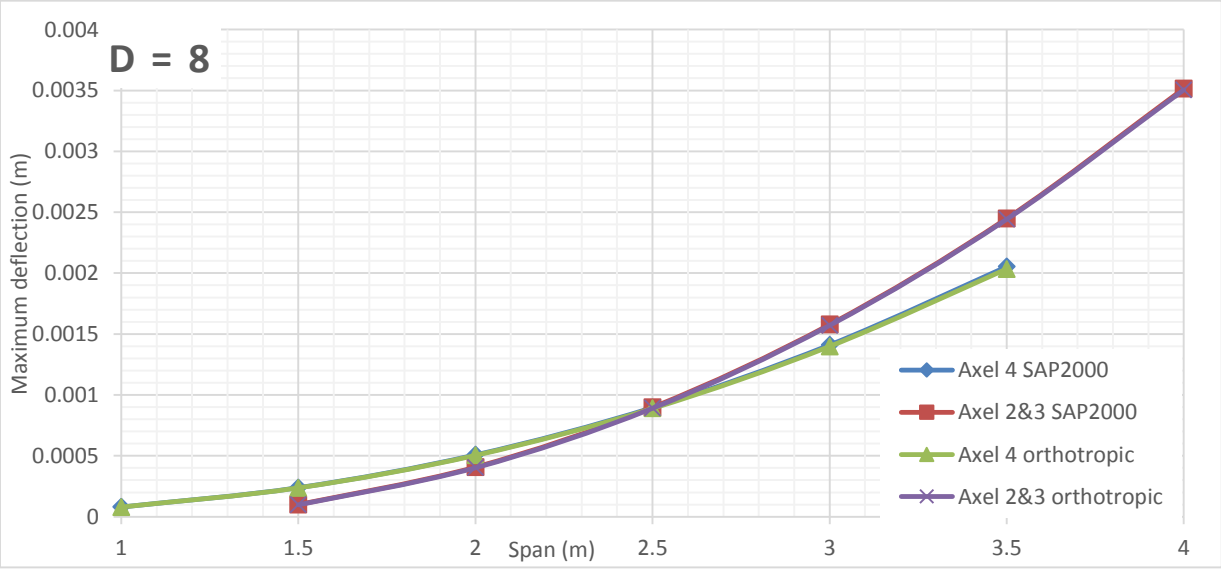

Figure 941 Deflection comparison between FEA and Orthotropic Plate Theory for D = 8 of alpha 10 (main bars parallel to traffic)

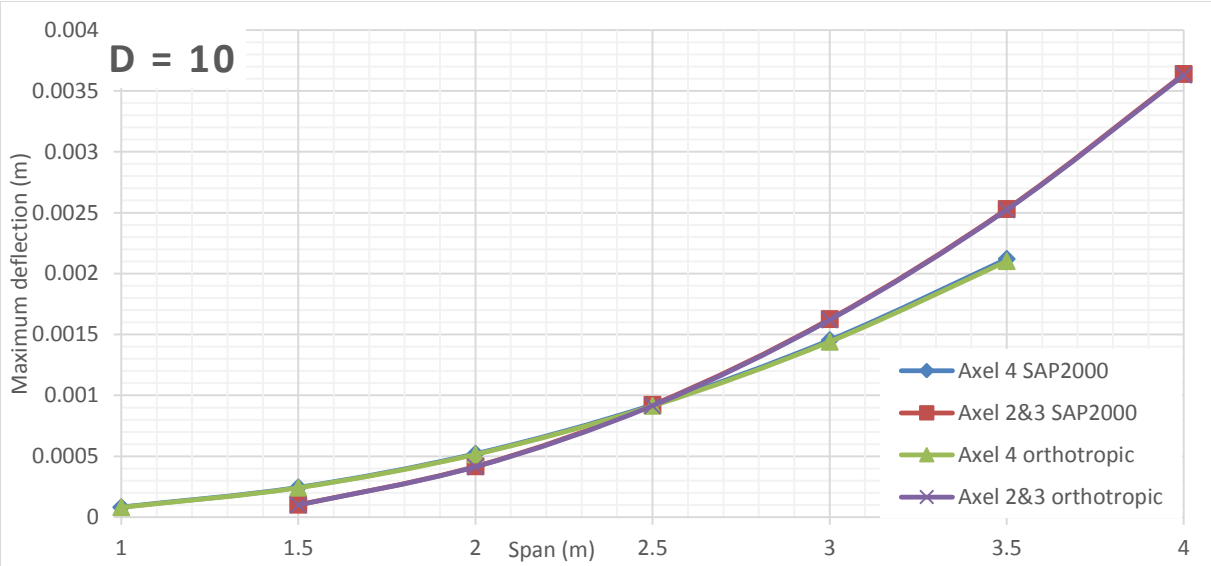

Figure 942 Deflection comparison between FEA and Orthotropic Plate Theory for D = 10 of alpha 10 (main bars parallel to traffic)

D.2.2 MAXIMUM DEFLECTION VS FLEXURAL RIGIDITY

Alpha 0.25 Deflection VS Flexural Rigidity for Different Span Length (Main bars perpendicular to traffic)

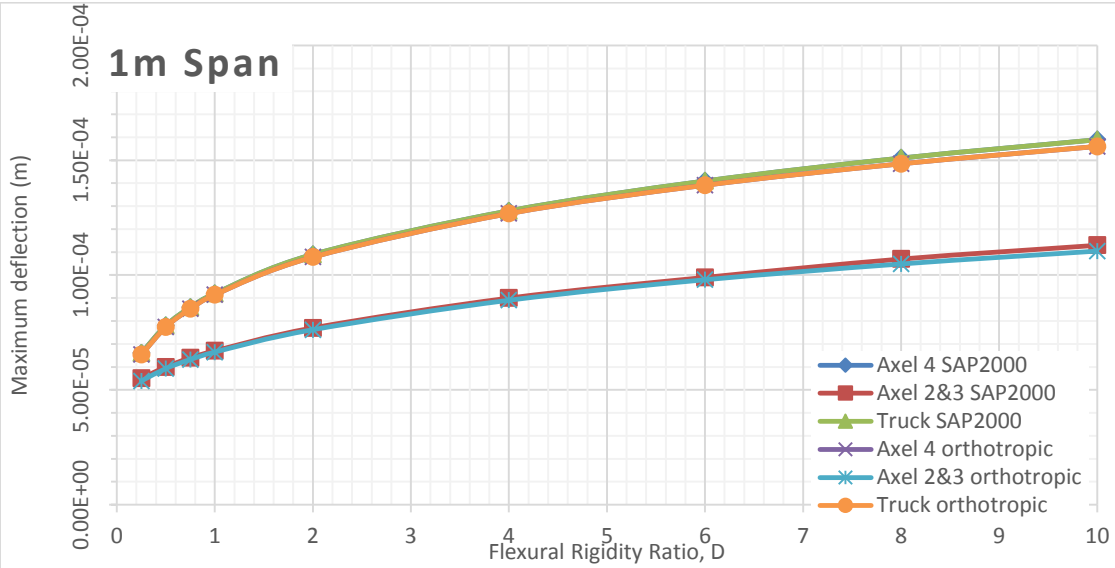

Figure 943 Deflection comparison between FEA and Orthotropic Plate Theory for 1 m span of alpha 0.25 (main bars perpendicular to traffic)

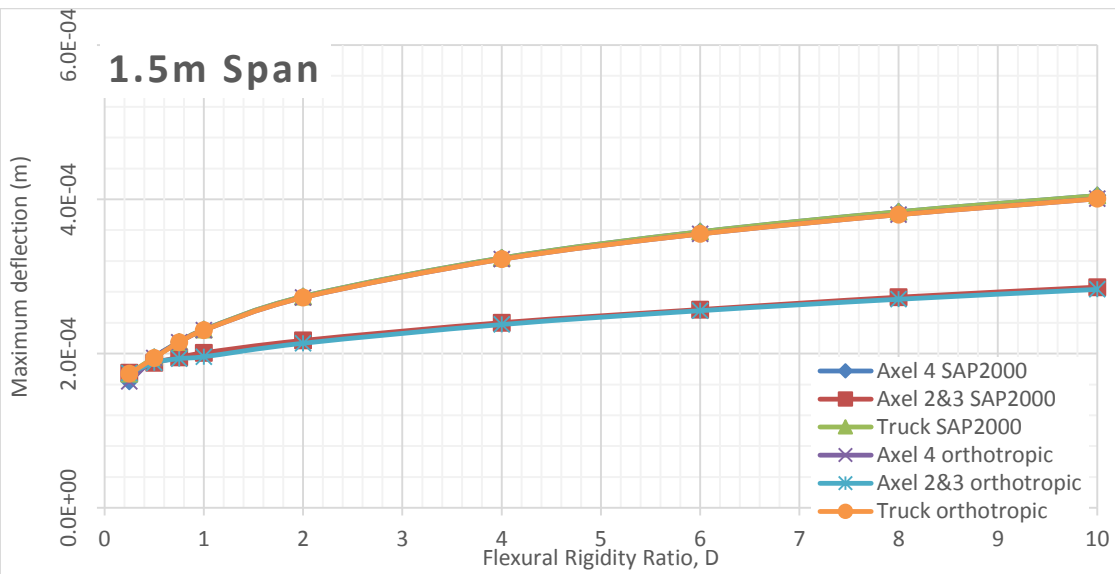

Figure 944 Deflection comparison between FEA and Orthotropic Plate Theory for 1.5 m span of alpha 0.25 (main bars perpendicular to traffic)

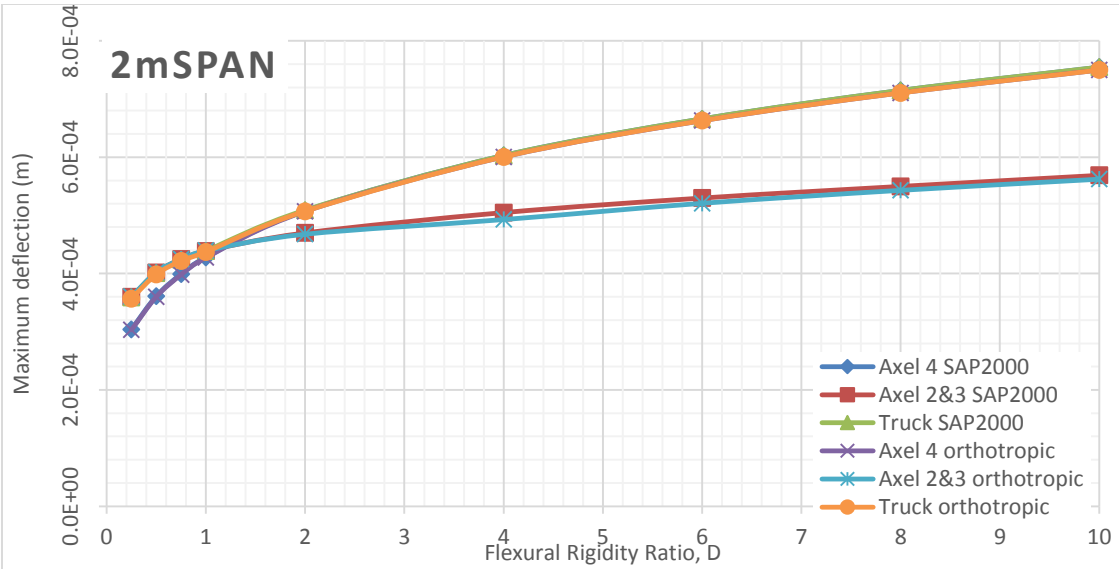

Figure 945 Deflection comparison between FEA and Orthotropic Plate Theory for 2 m span of alpha 0.25 (main bars perpendicular to traffic)

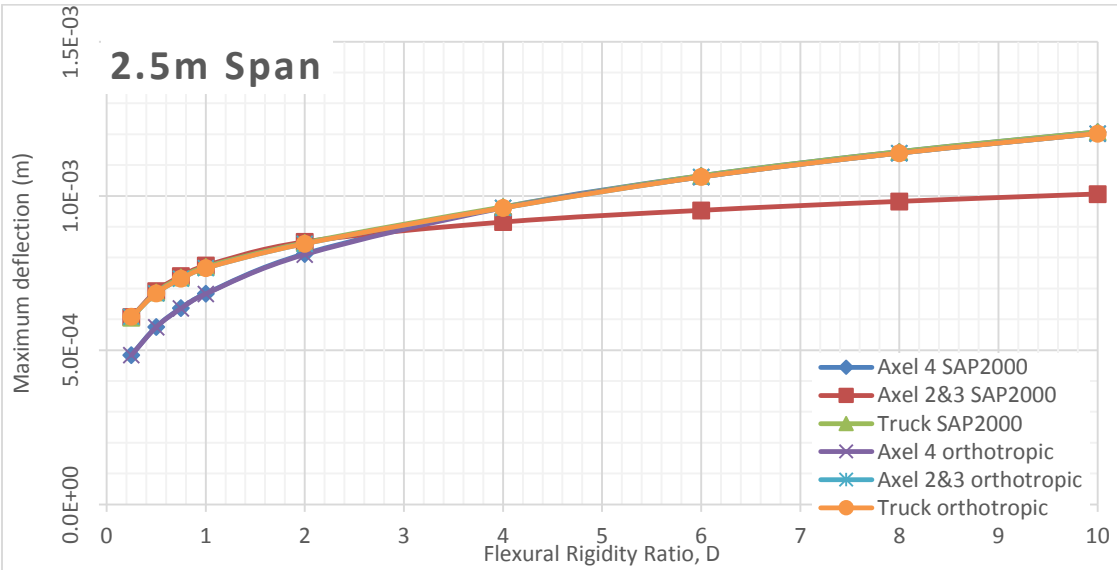

Figure 946 Deflection comparison between FEA and Orthotropic Plate Theory for 2.5 m span of alpha 0.25 (main bars perpendicular to traffic)

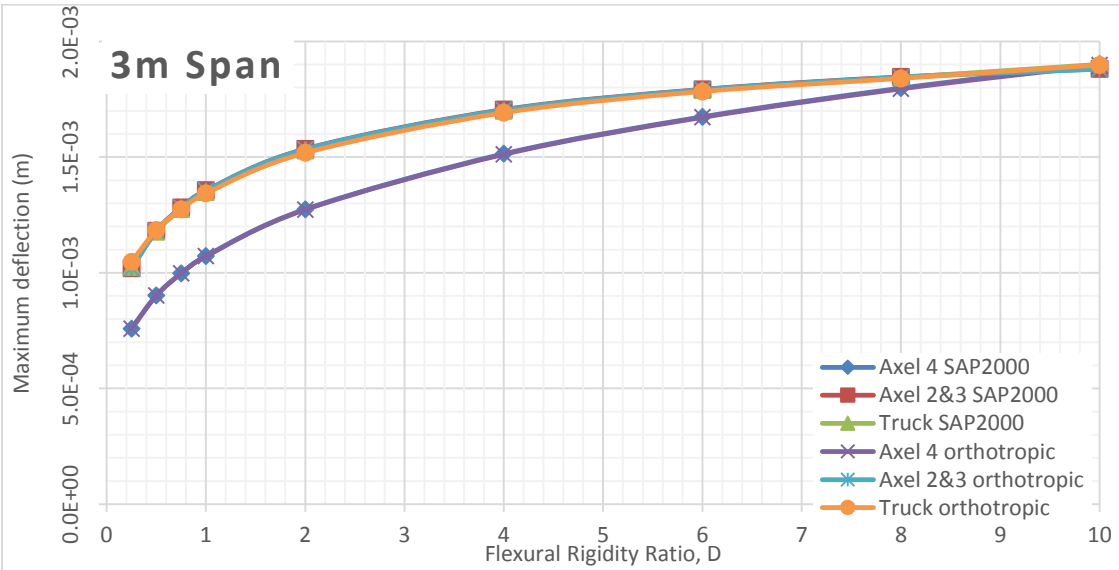

Figure 947 Deflection comparison between FEA and Orthotropic Plate Theory for 3 m span of alpha 0.25 (main bars perpendicular to traffic)

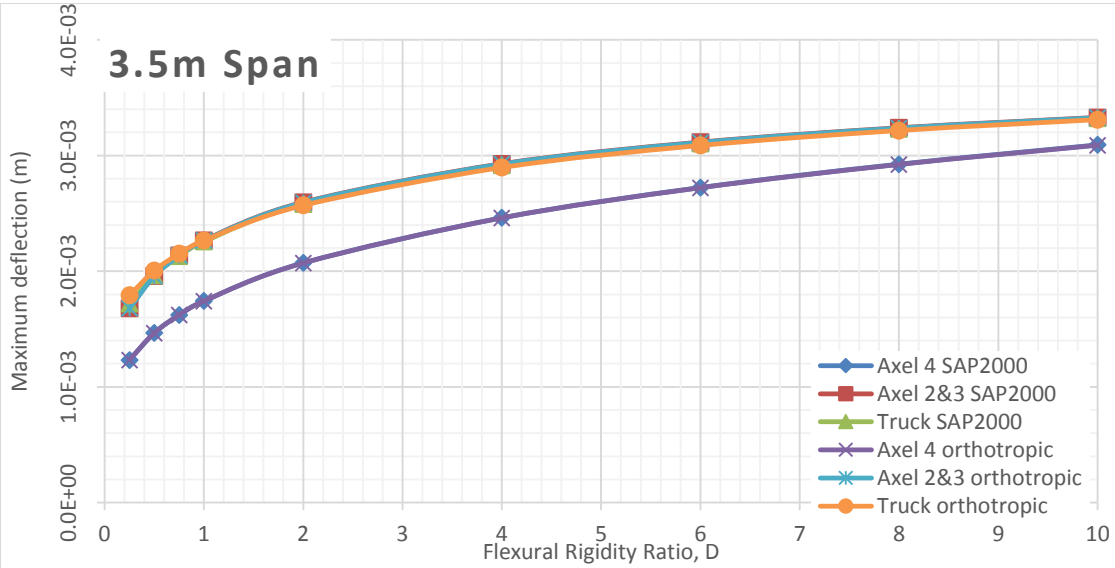

Figure 948 Deflection comparison between FEA and Orthotropic Plate Theory for 3.5 m span of alpha 0.25 (main bars perpendicular to traffic)

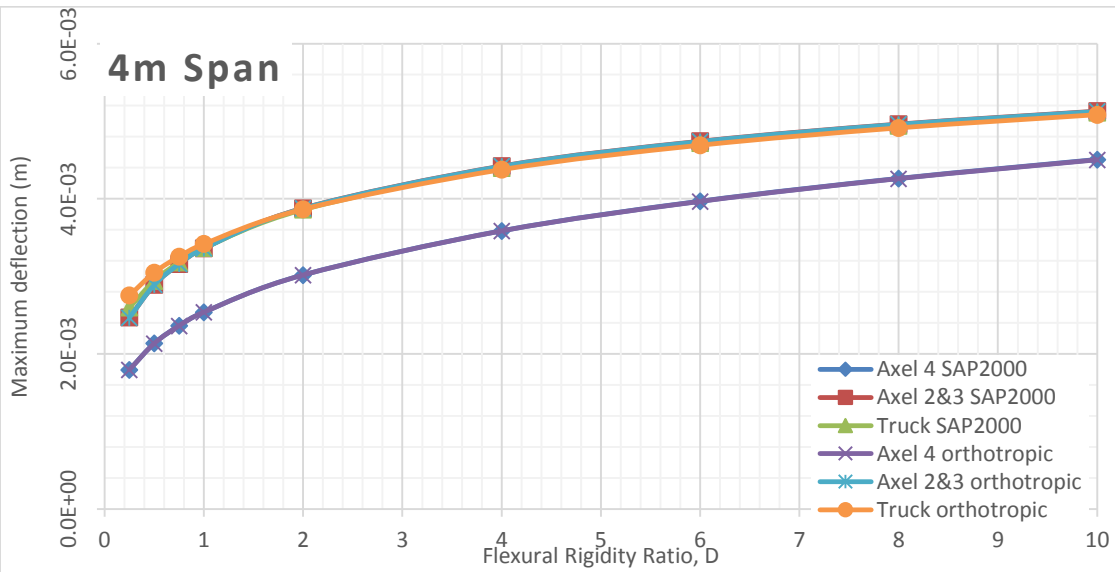

Figure 949 Deflection comparison between FEA and Orthotropic Plate Theory for 4 m span of alpha 0.25 (main bars perpendicular to traffic)

Alpha 0.25 Deflection VS Flexural Rigidity for Different Span Length (Main bars parallel to traffic)

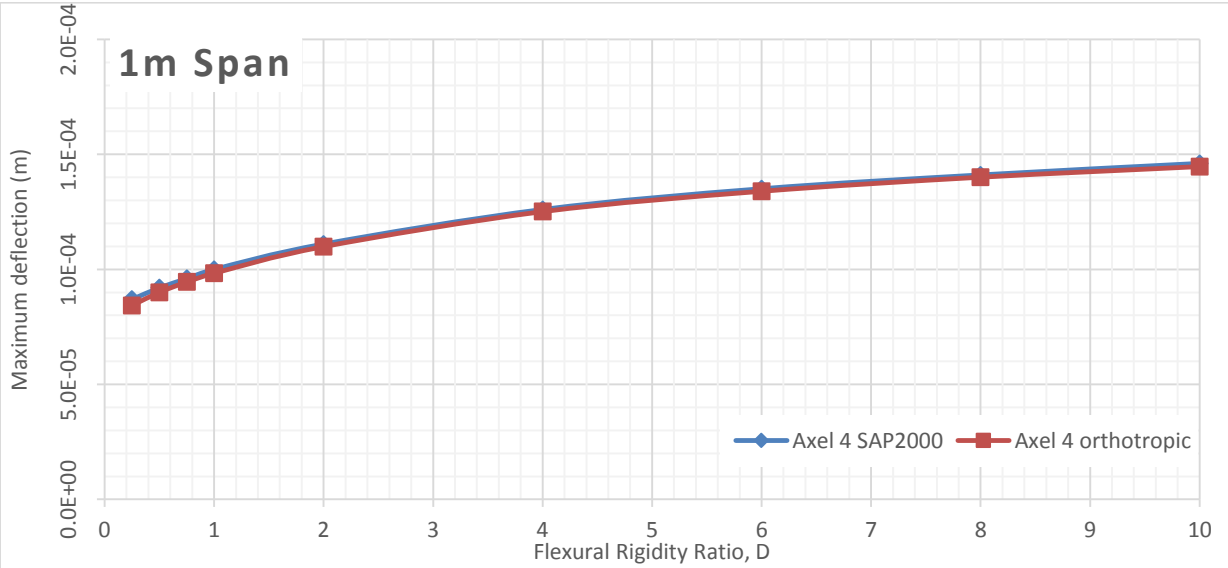

Figure 950 Deflection comparison between FEA and Orthotropic Plate Theory for 1 m span of alpha 0.25 (main bars parallel to traffic)

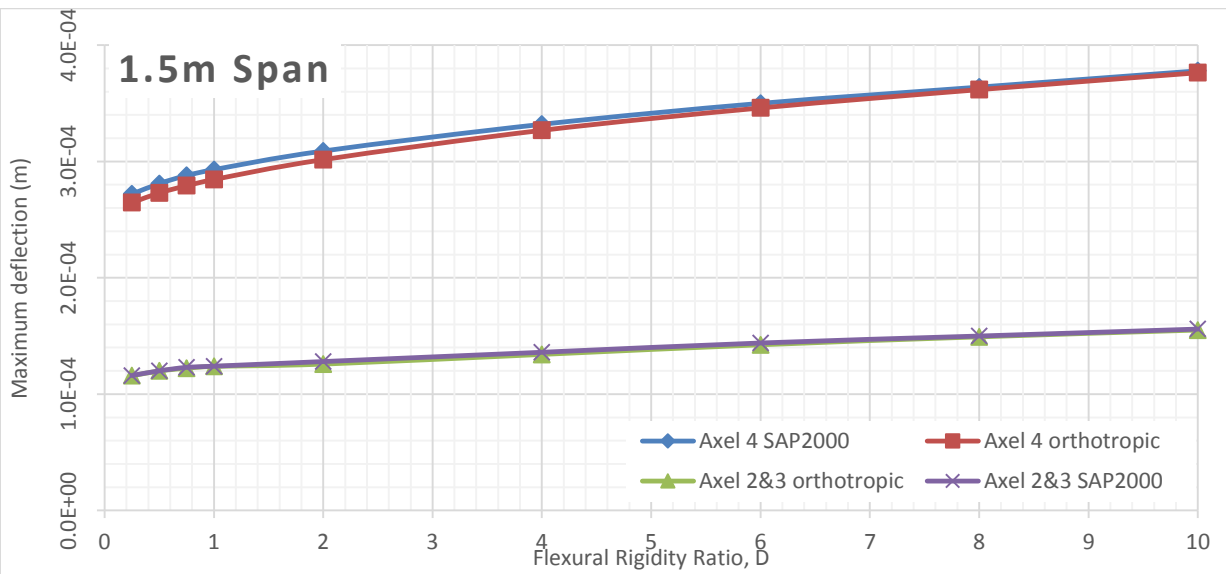

Figure 951 Deflection comparison between FEA and Orthotropic Plate Theory for 1.5 m span of alpha 0.25 (main bars parallel to traffic)

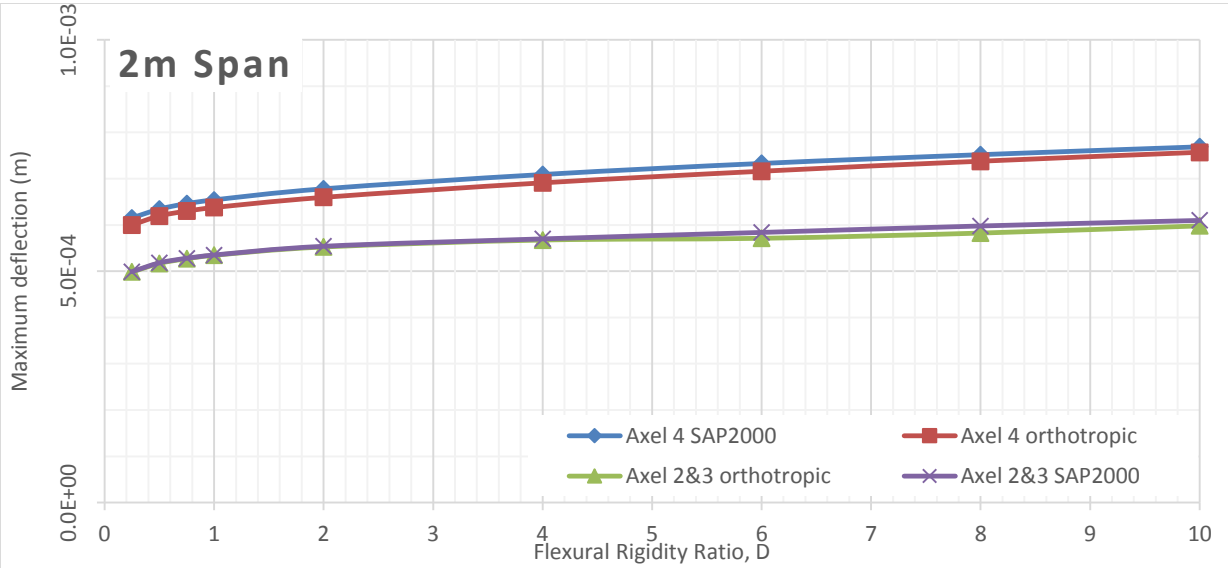

Figure 952 Deflection comparison between FEA and Orthotropic Plate Theory for 2 m span of alpha 0.25 (main bars parallel to traffic)

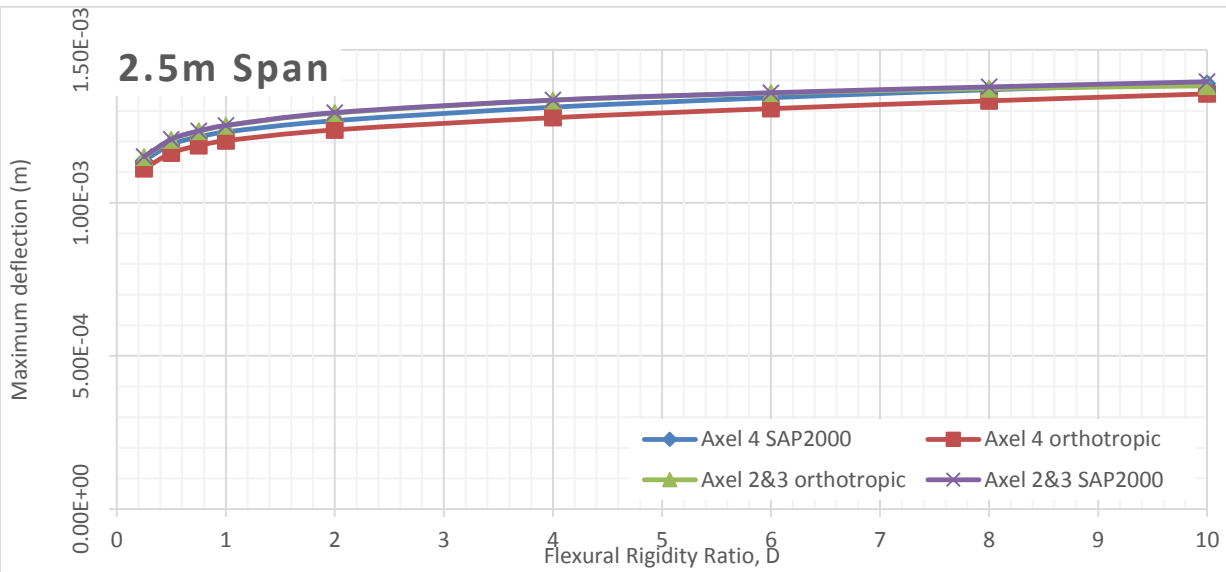

Figure 953 Deflection comparison between FEA and Orthotropic Plate Theory for 2.5 m span of alpha 0.25 (main bars parallel to traffic)

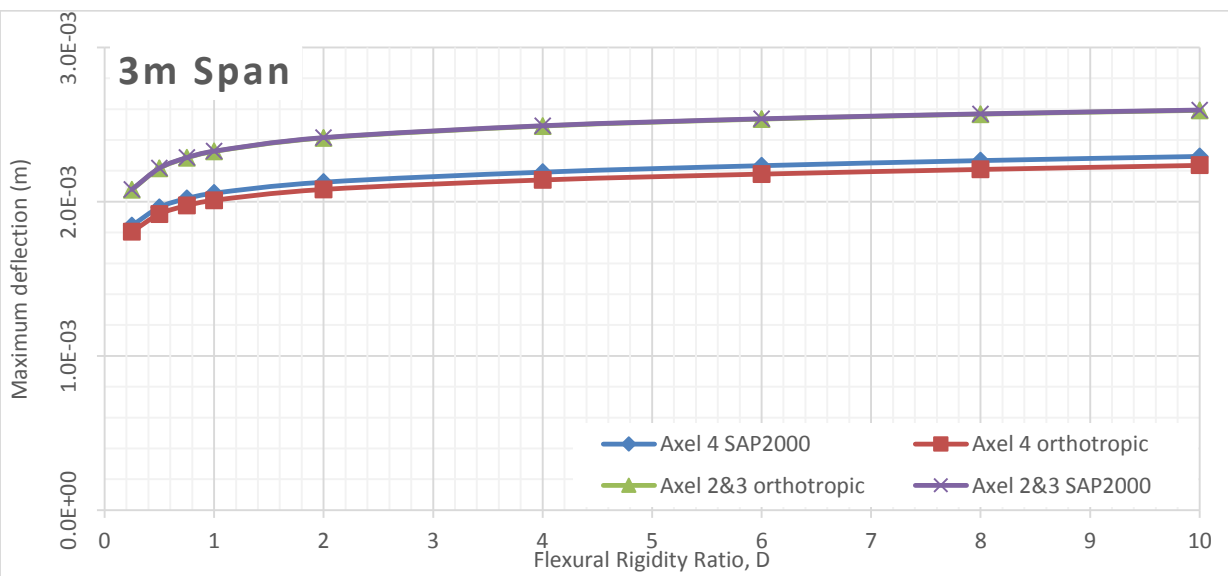

Figure 954 Deflection comparison between FEA and Orthotropic Plate Theory for 3 m span of alpha 0.25 (main bars parallel to traffic)

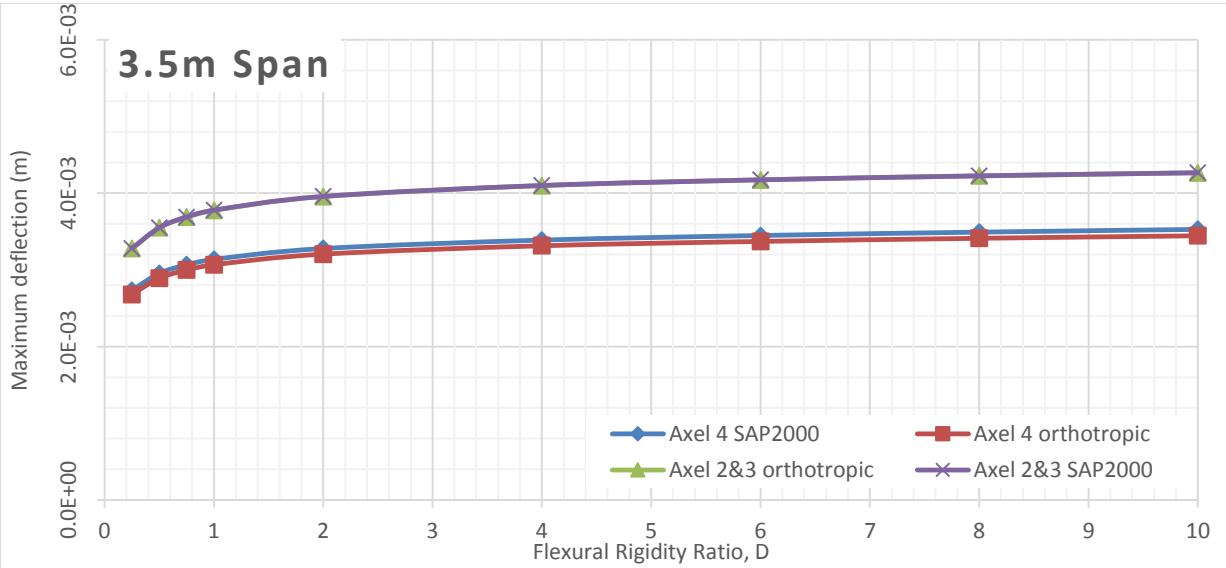

Figure 955 Deflection comparison between FEA and Orthotropic Plate Theory for 3.5 m span of alpha 0.25 (main bars parallel to traffic)

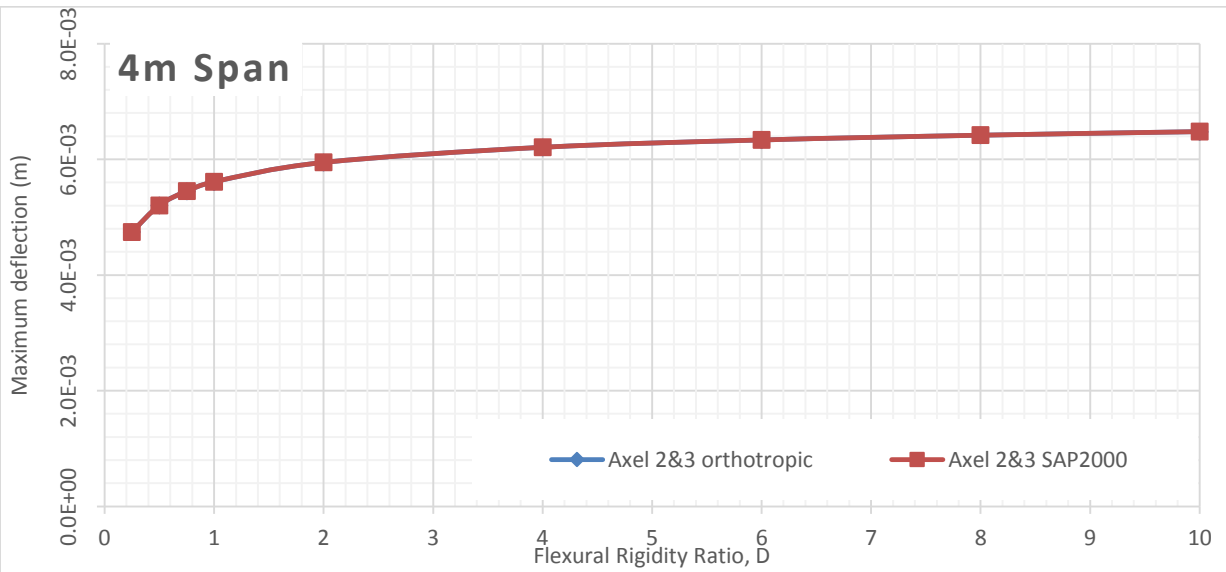

Figure 956 Deflection comparison between FEA and Orthotropic Plate Theory for 4 m span of alpha 0.25 (main bars parallel to traffic)

Alpha 0.5 Deflection VS Flexural Rigidity for Different Span Length (Main bars perpendicular to traffic)

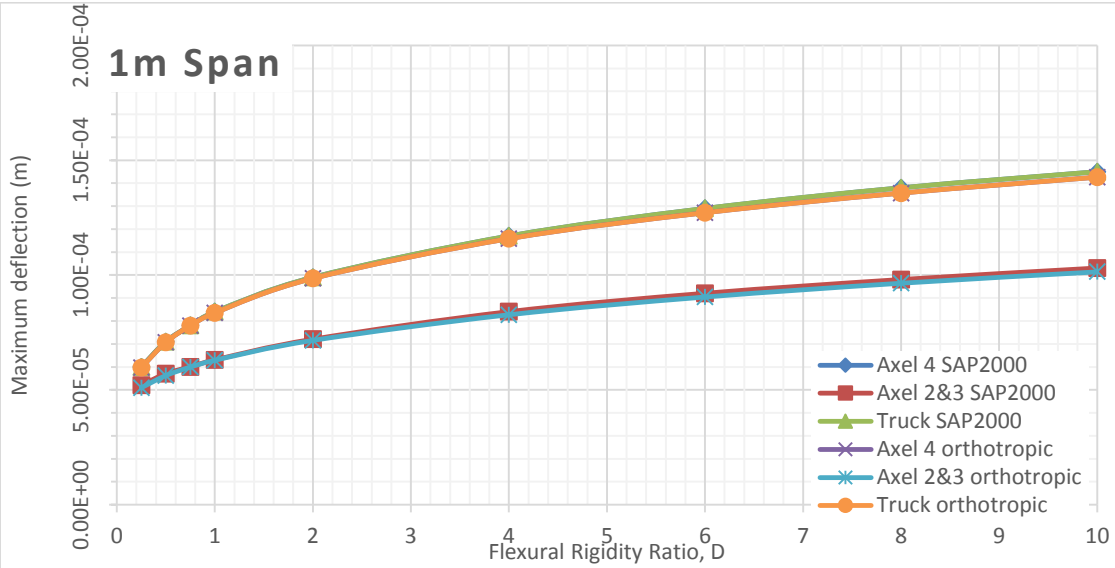

Figure 957 Deflection comparison between FEA and Orthotropic Plate Theory for 1 m span of alpha 0.5 (main bars perpendicular to traffic)

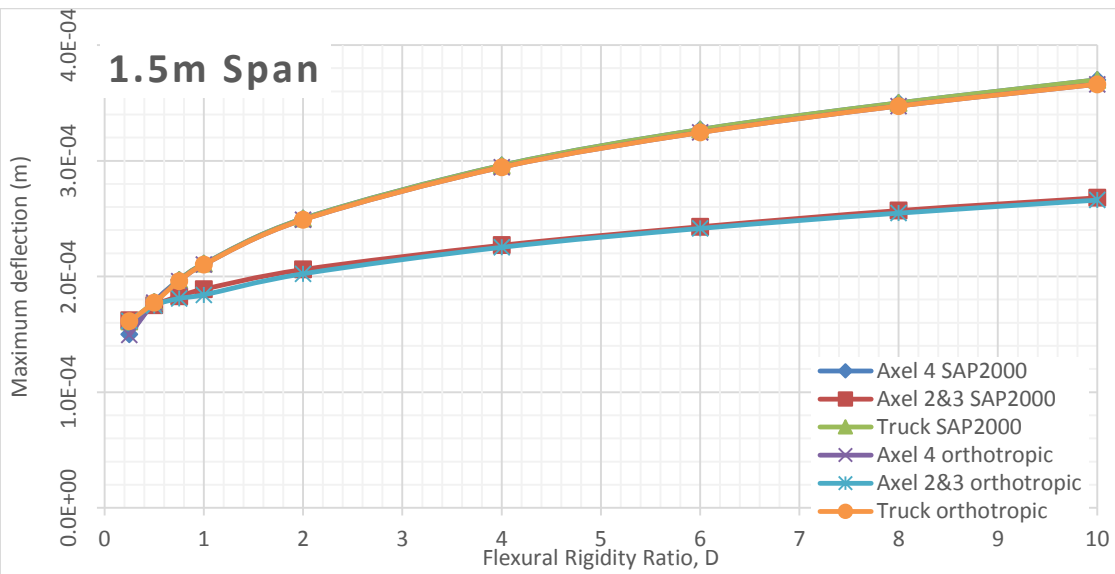

Figure 958 Deflection comparison between FEA and Orthotropic Plate Theory for 1.5 m span of alpha 0.5 (main bars perpendicular to traffic)

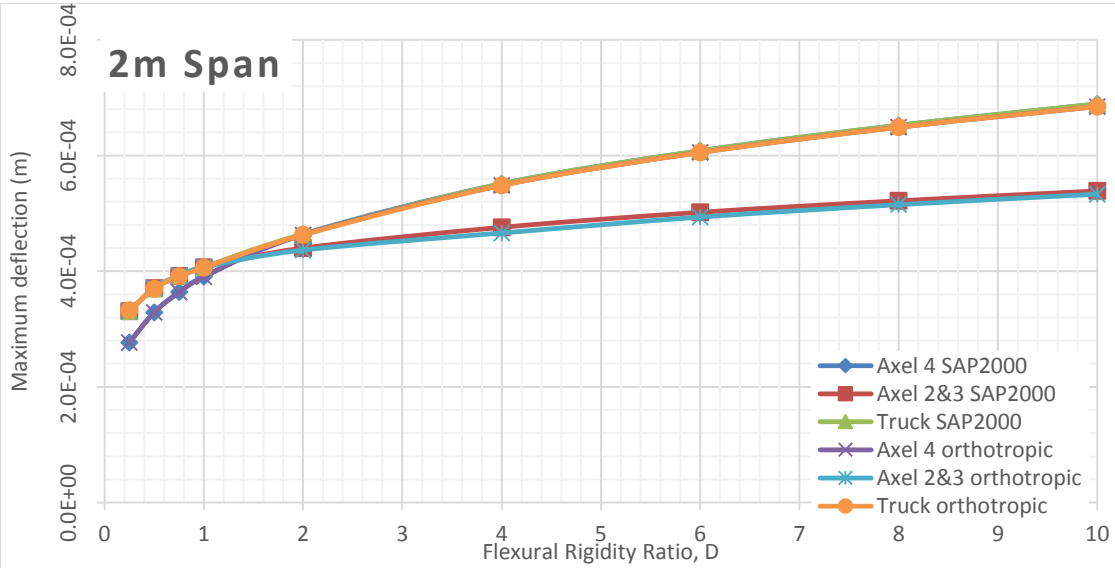

Figure 959 Deflection comparison between FEA and Orthotropic Plate Theory for 2 m span of alpha 0.5 (main bars perpendicular to traffic)

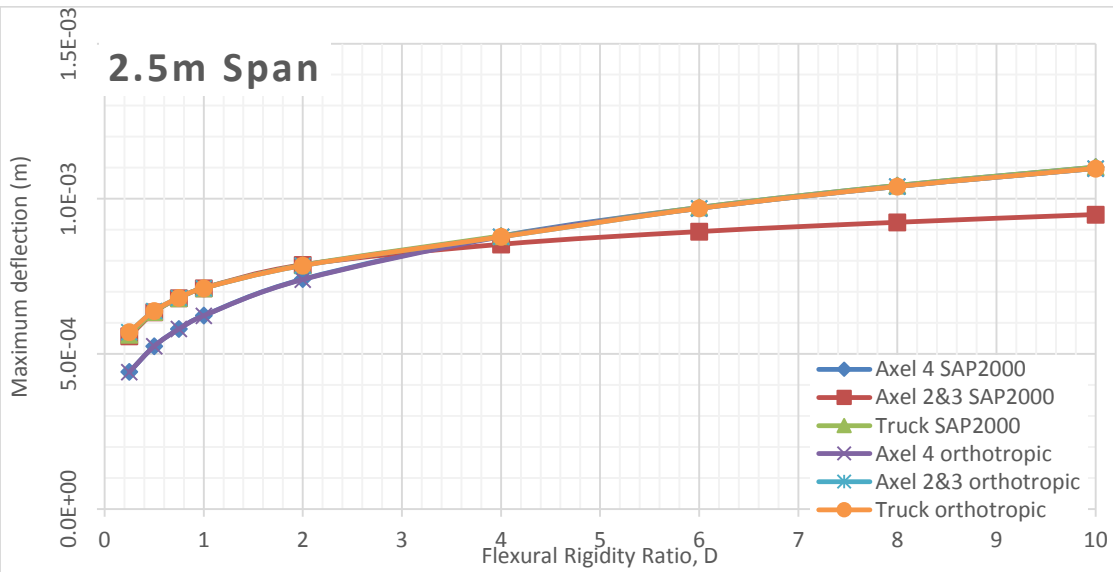

Figure 960 Deflection comparison between FEA and Orthotropic Plate Theory for 2.5 m span of alpha 0.5 (main bars perpendicular to traffic)

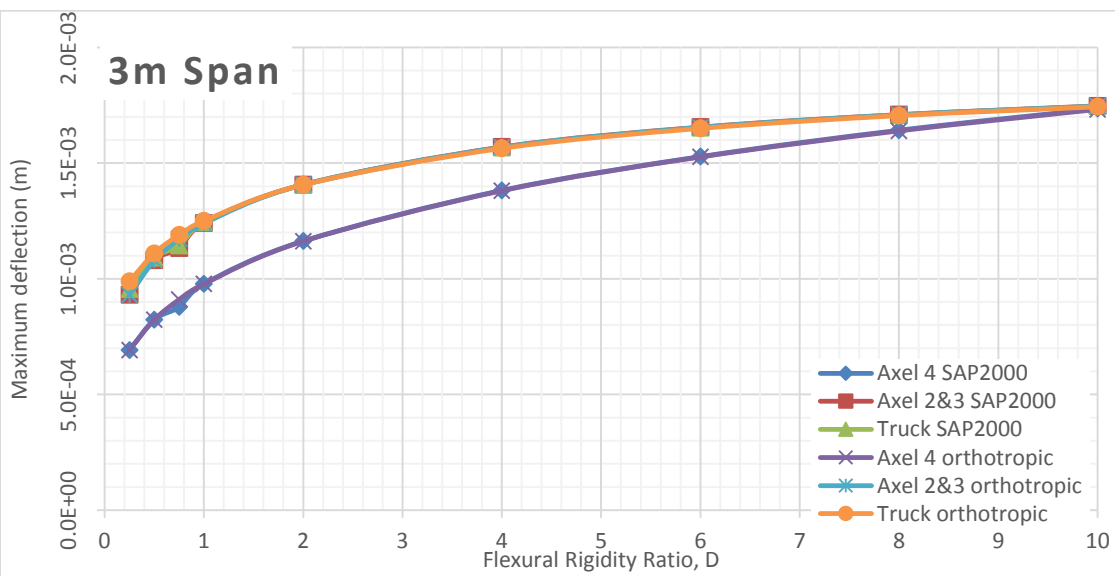

Figure 961 Deflection comparison between FEA and Orthotropic Plate Theory for 3 m span of alpha 0.5 (main bars perpendicular to traffic)

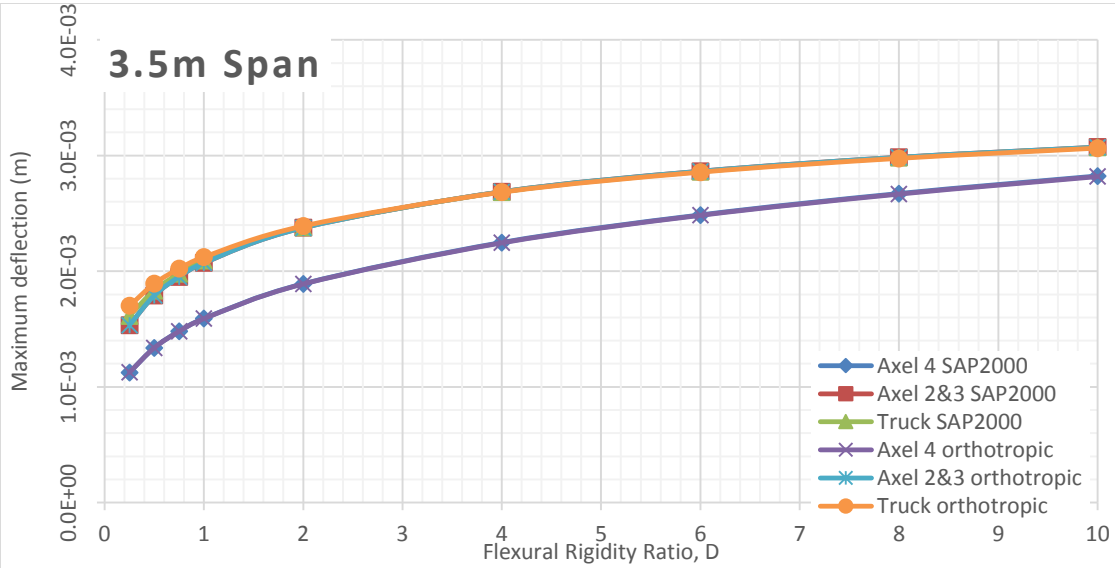

Figure 962 Deflection comparison between FEA and Orthotropic Plate Theory for 3.5 m span of alpha 0.5 (main bars perpendicular to traffic)

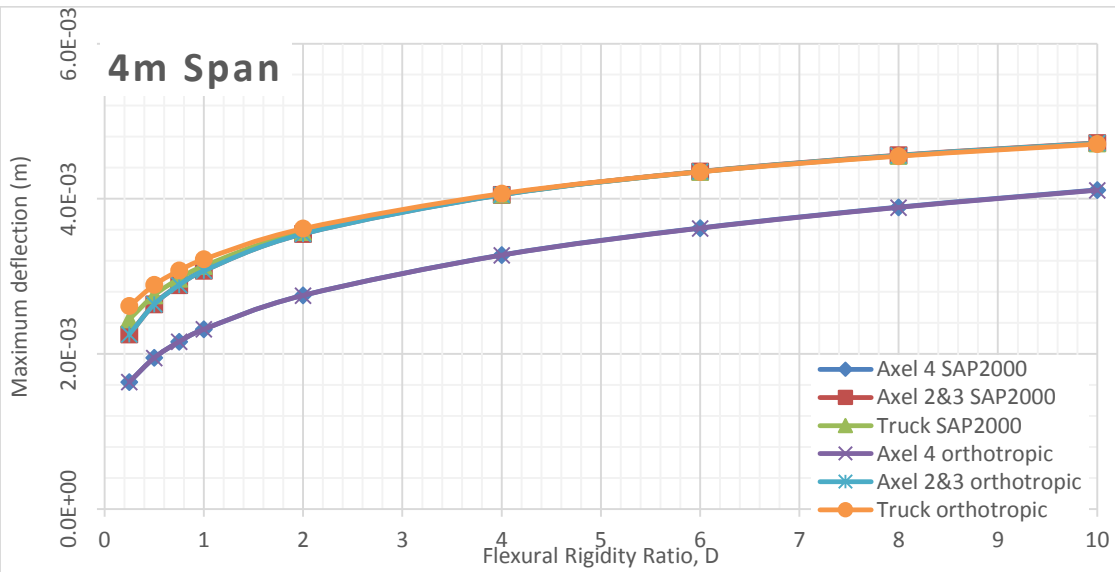

Figure 963 Deflection comparison between FEA and Orthotropic Plate Theory for 4 m span of alpha 0.5 (main bars perpendicular to traffic)

Alpha 0.5 Deflection VS Flexural Rigidity for Different Span Length (Main bars parallel to traffic)

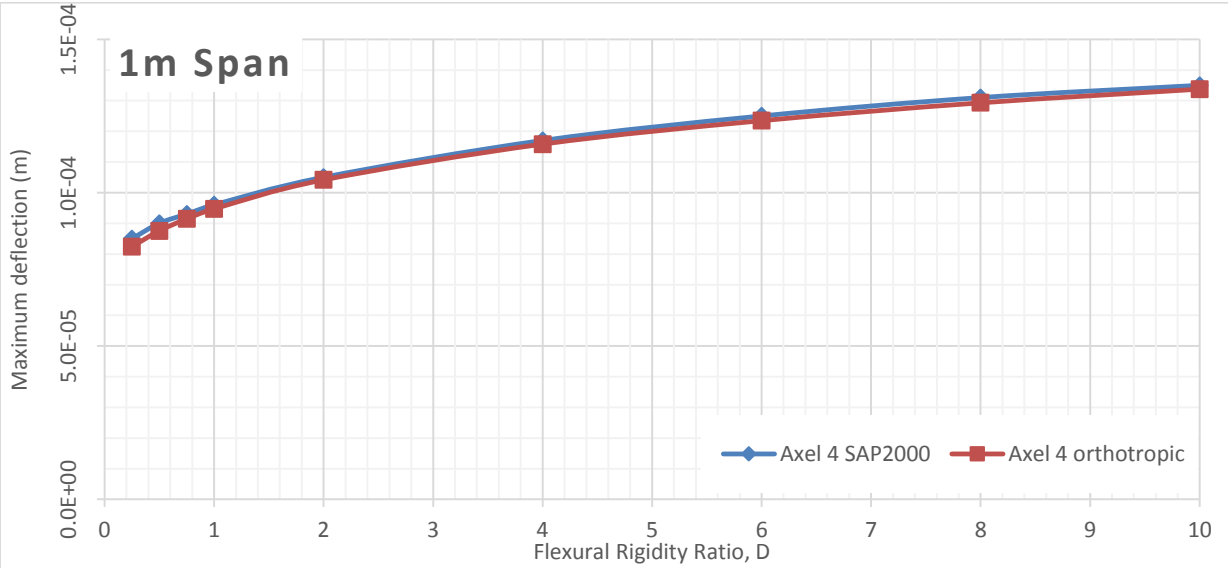

Figure 964 Deflection comparison between FEA and Orthotropic Plate Theory for 1 m span of alpha 0.5 (main bars parallel to traffic)

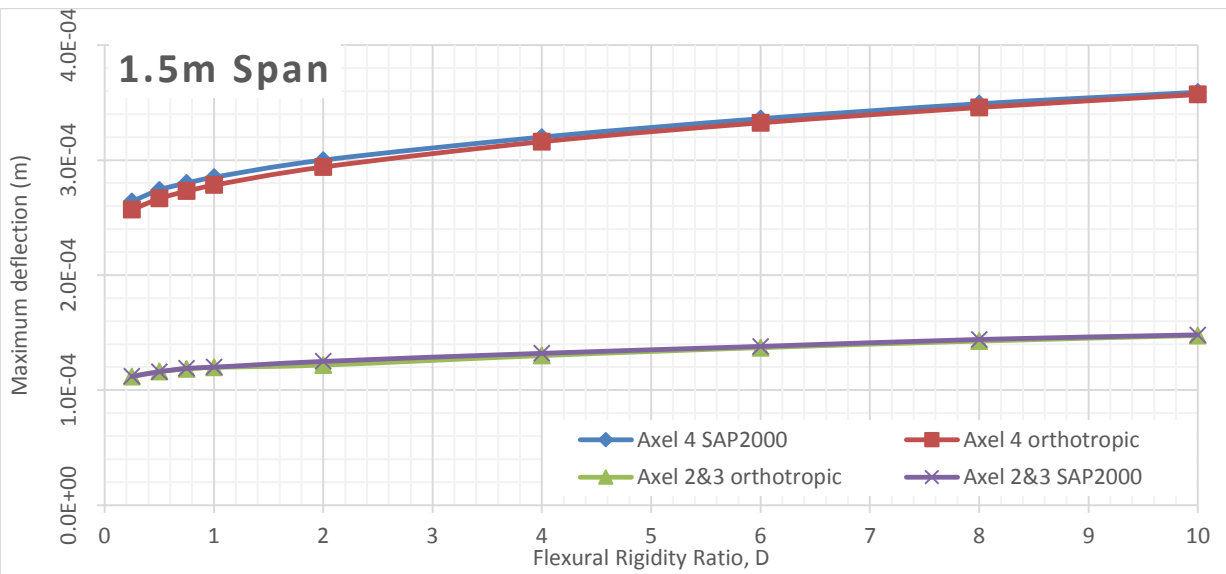

Figure 965 Deflection comparison between FEA and Orthotropic Plate Theory for 1.5 m span of alpha 0.5 (main bars parallel to traffic)

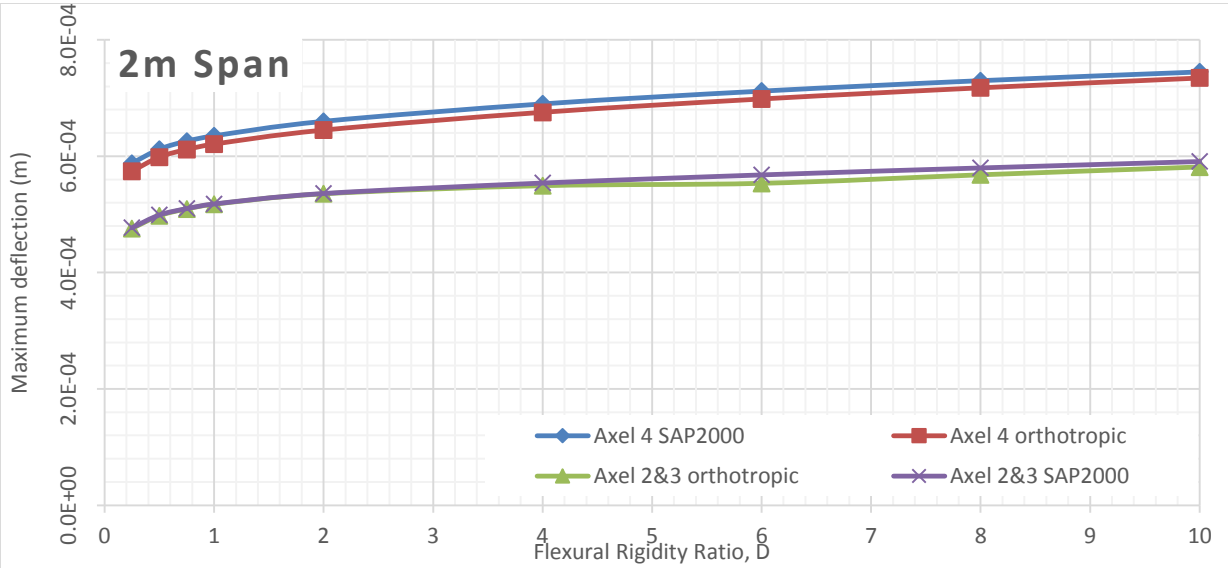

Figure 966 Deflection comparison between FEA and Orthotropic Plate Theory for 2 m span of alpha 0.5 (main bars parallel to traffic)

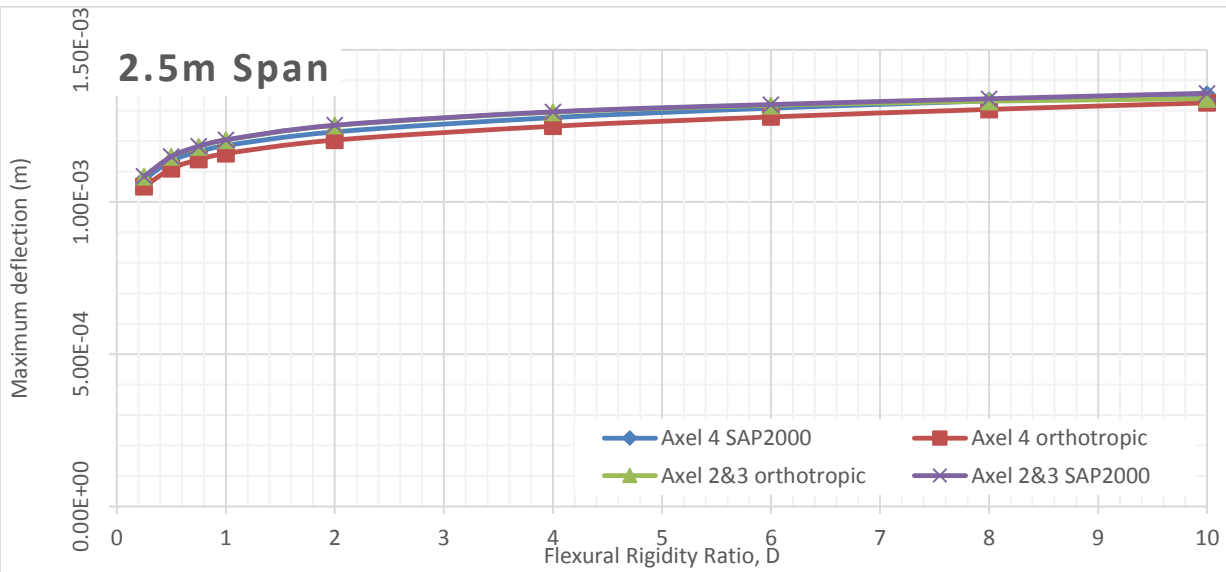

Figure 967 Deflection comparison between FEA and Orthotropic Plate Theory for 2.5 m span of alpha 0.5 (main bars parallel to traffic)

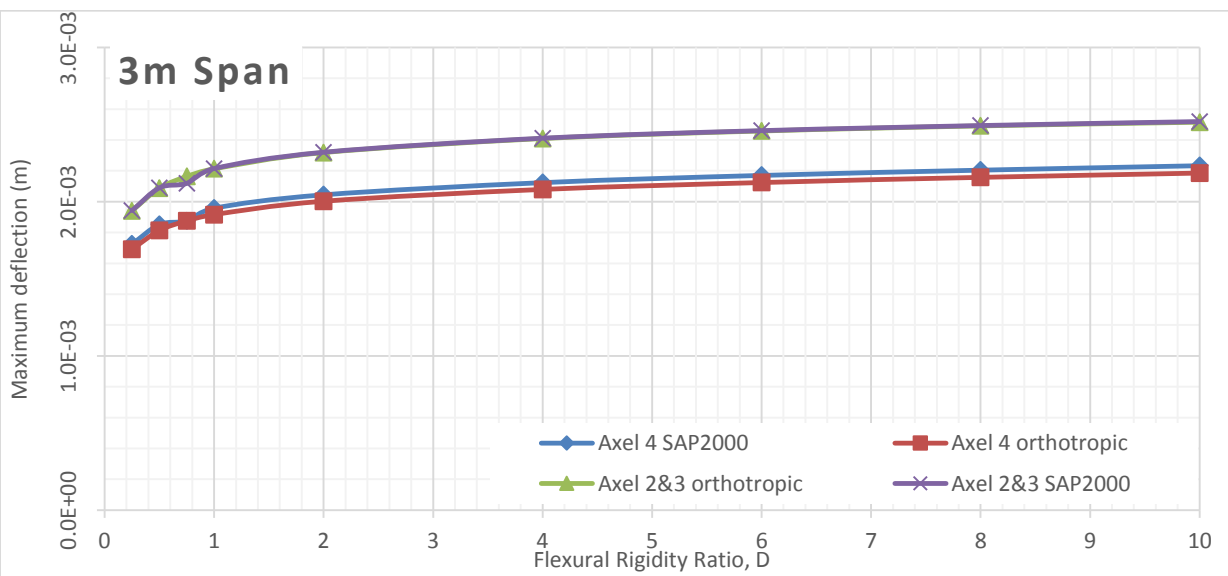

Figure 968 Deflection comparison between FEA and Orthotropic Plate Theory for 3 m span of alpha 0.5 (main bars parallel to traffic)

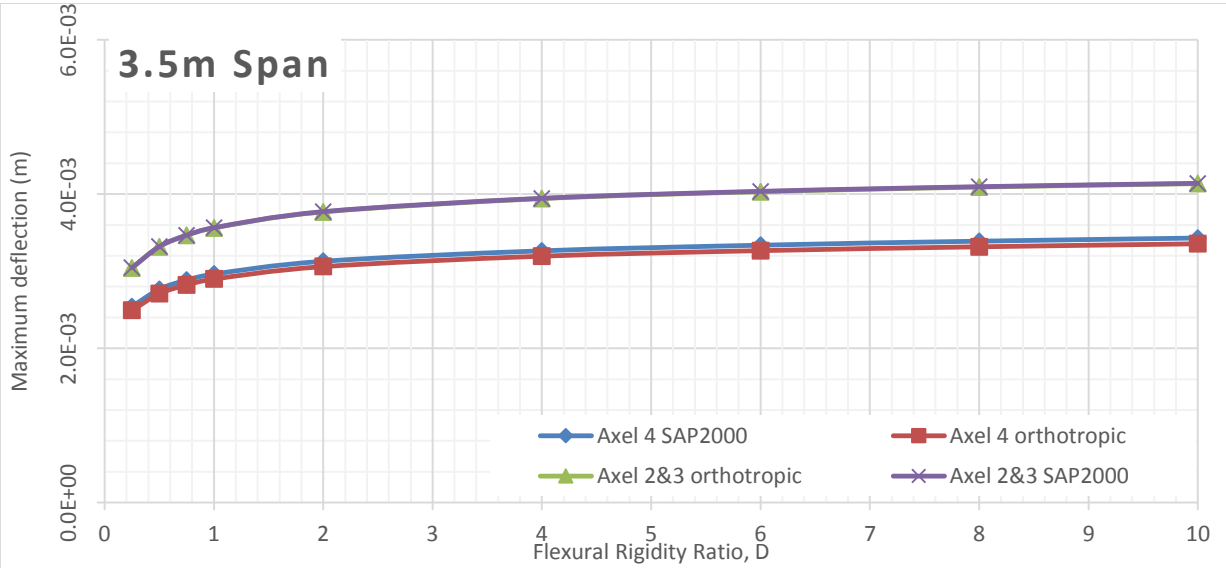

Figure 969 Deflection comparison between FEA and Orthotropic Plate Theory for 3.5 m span of alpha 0.5 (main bars parallel to traffic)

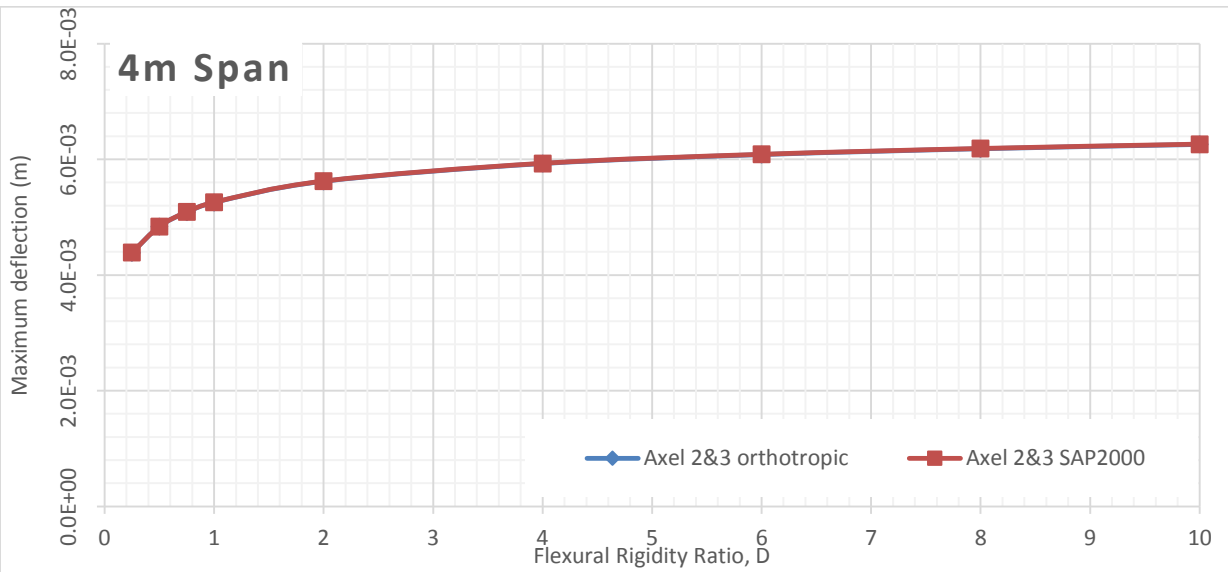

Figure 970 Deflection comparison between FEA and Orthotropic Plate Theory for 4 m span of alpha 0.5 (main bars parallel to traffic)

Alpha 0.75 Deflection VS Flexural Rigidity for Different Span Length (Main bars perpendicular to traffic)

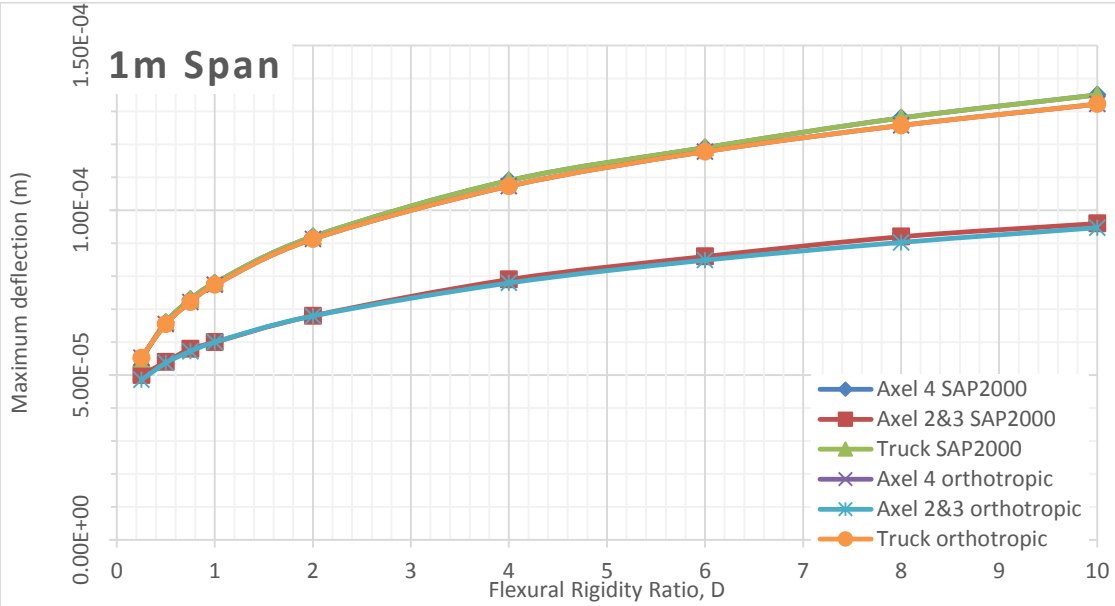

Figure 971 Deflection comparison between FEA and Orthotropic Plate Theory for 1 m span of alpha 0.75 (main bars perpendicular to traffic)

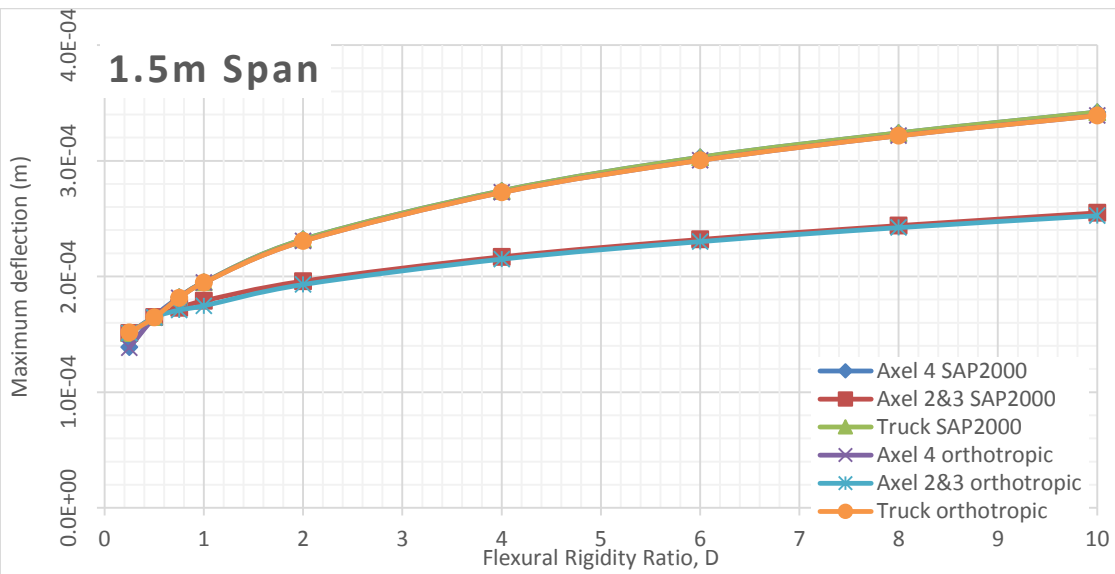

Figure 972 Deflection comparison between FEA and Orthotropic Plate Theory for 1.5 m span of alpha 0.75 (main bars perpendicular to traffic)

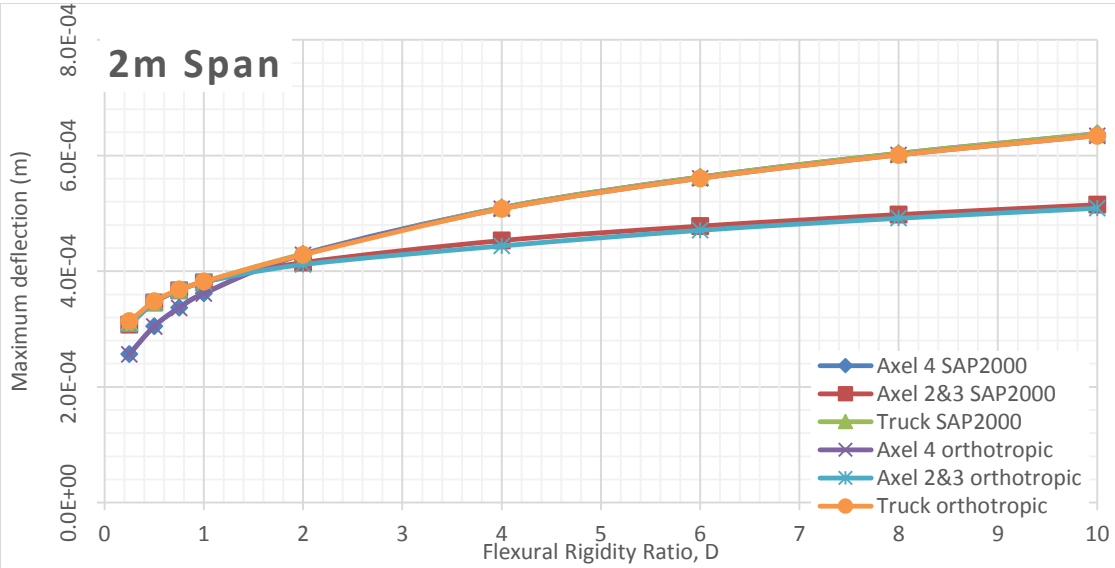

Figure 973 Deflection comparison between FEA and Orthotropic Plate Theory for 2 m span of alpha 0.75 (main bars perpendicular to traffic)

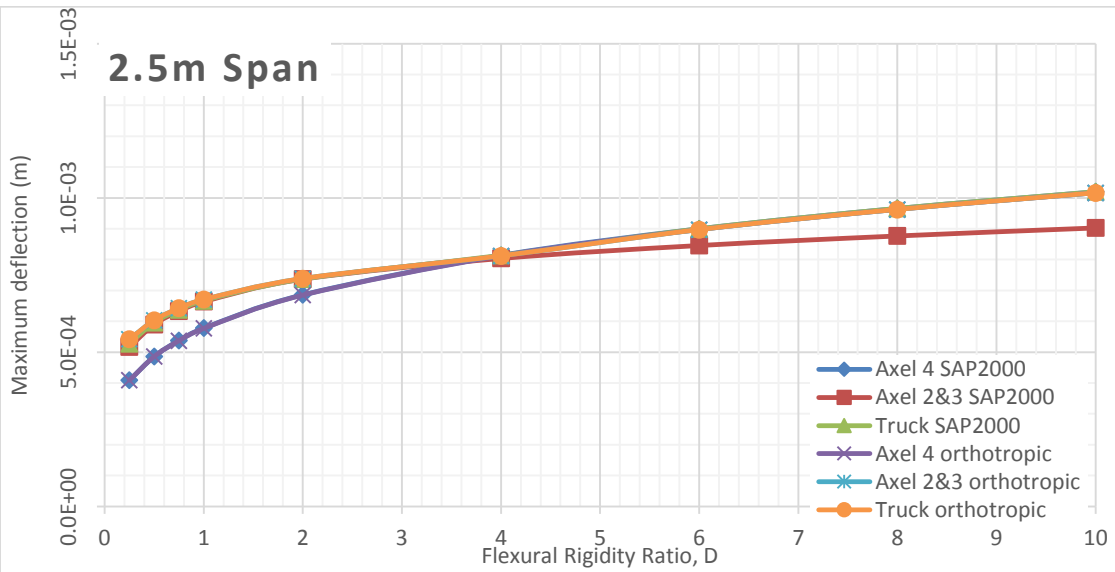

Figure 974 Deflection comparison between FEA and Orthotropic Plate Theory for 2.5 m span of alpha 0.75 (main bars perpendicular to traffic)

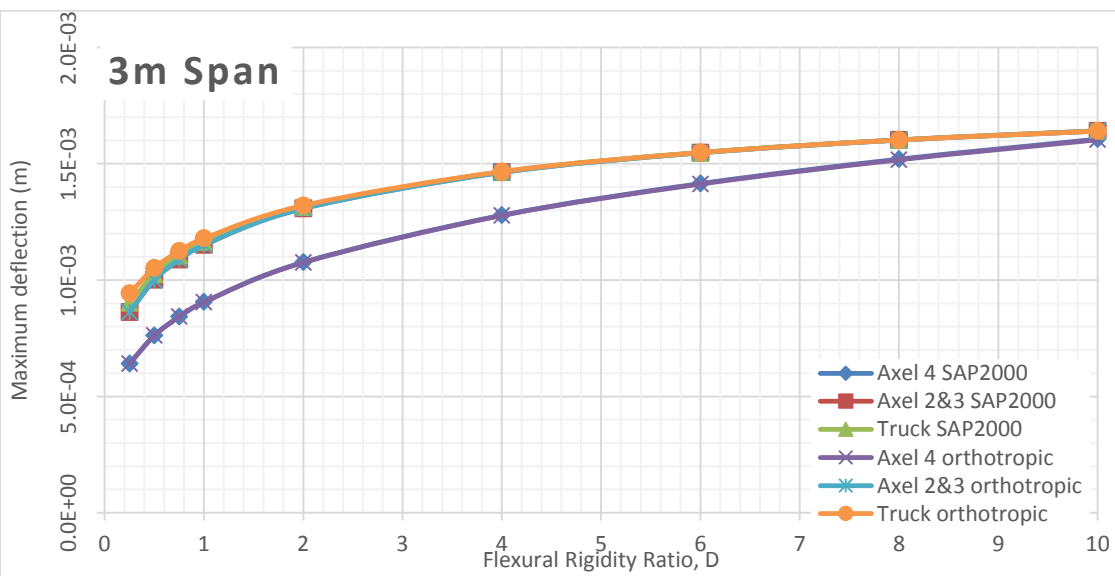

Figure 975 Deflection comparison between FEA and Orthotropic Plate Theory for 3 m span of alpha 0.75 (main bars perpendicular to traffic)

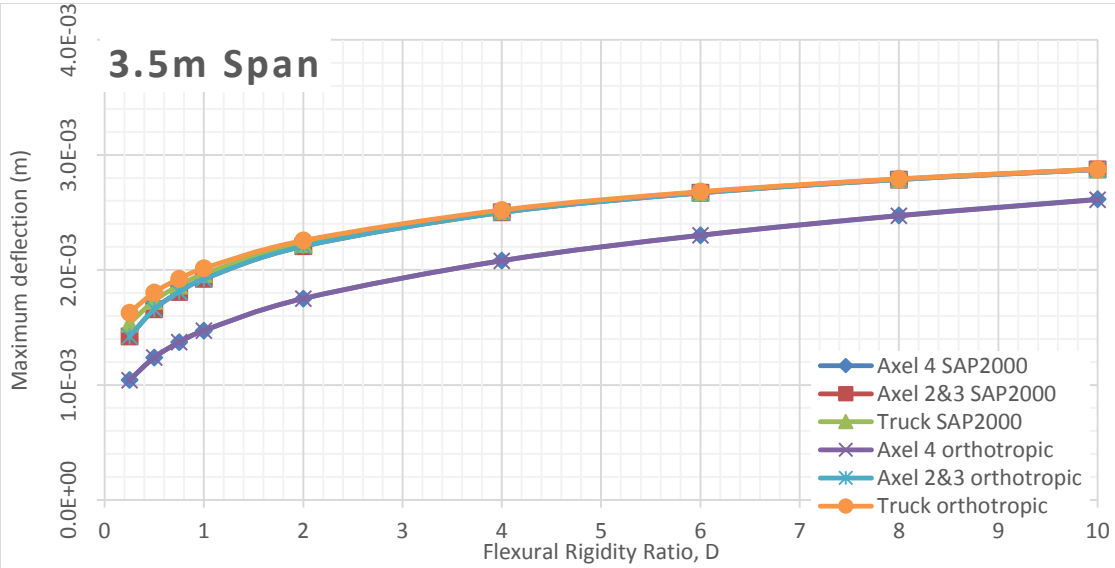

Figure 976 Deflection comparison between FEA and Orthotropic Plate Theory for 3.5 m span of alpha 0.75 (main bars perpendicular to traffic)

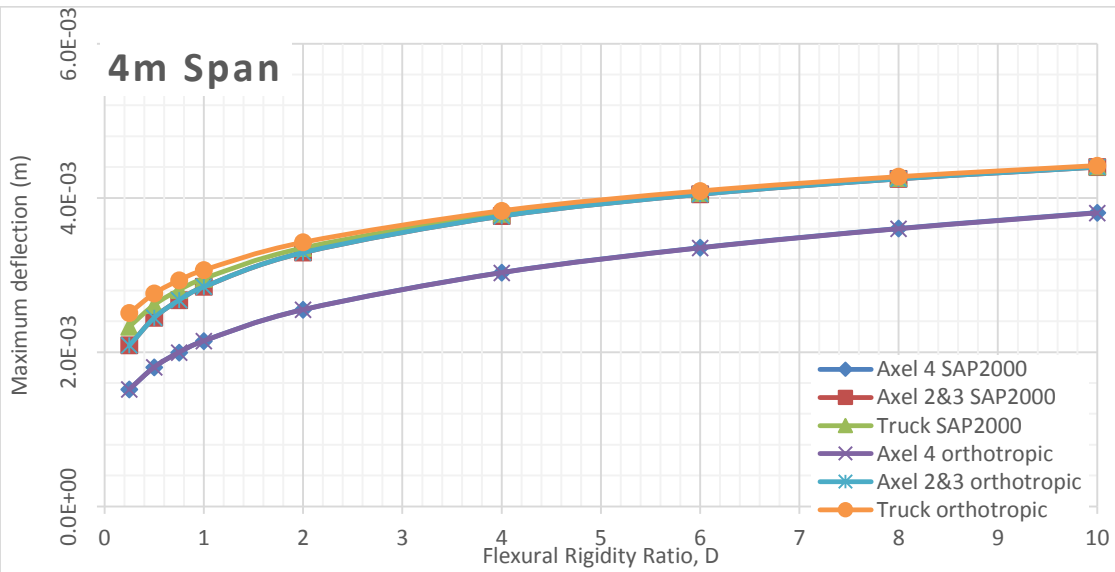

Figure 977 Deflection comparison between FEA and Orthotropic Plate Theory for 4 m span of alpha 0.75 (main bars perpendicular to traffic)

Alpha 0.75 Deflection VS Flexural Rigidity for Different Span Length (Main bars parallel to traffic)

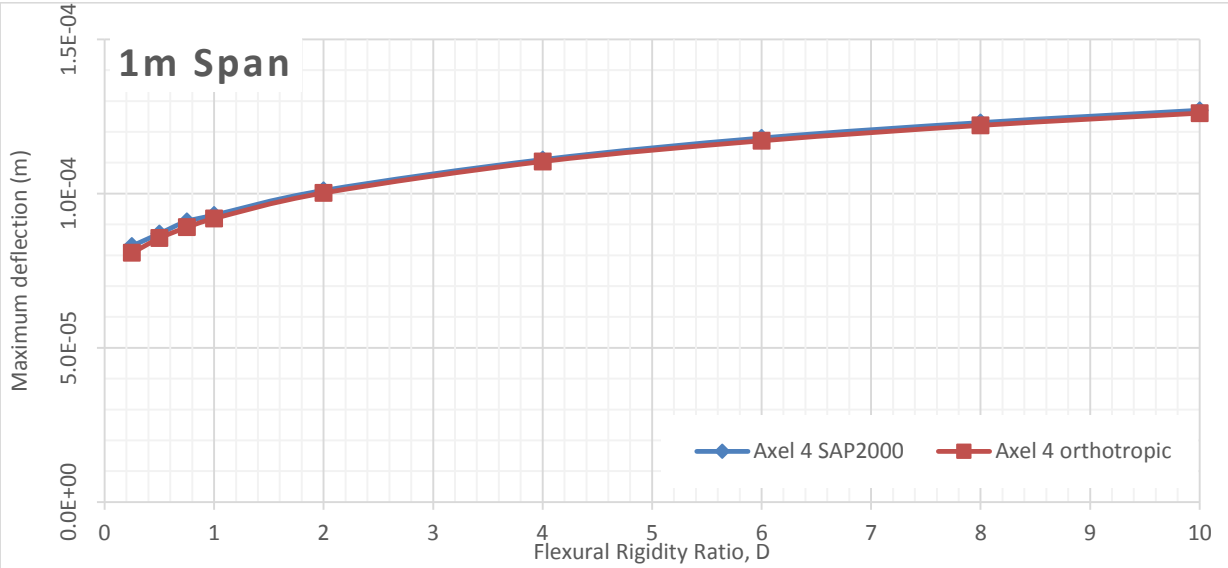

Figure 978 Deflection comparison between FEA and Orthotropic Plate Theory for 1 m span of alpha 0.75 (main bars parallel to traffic)

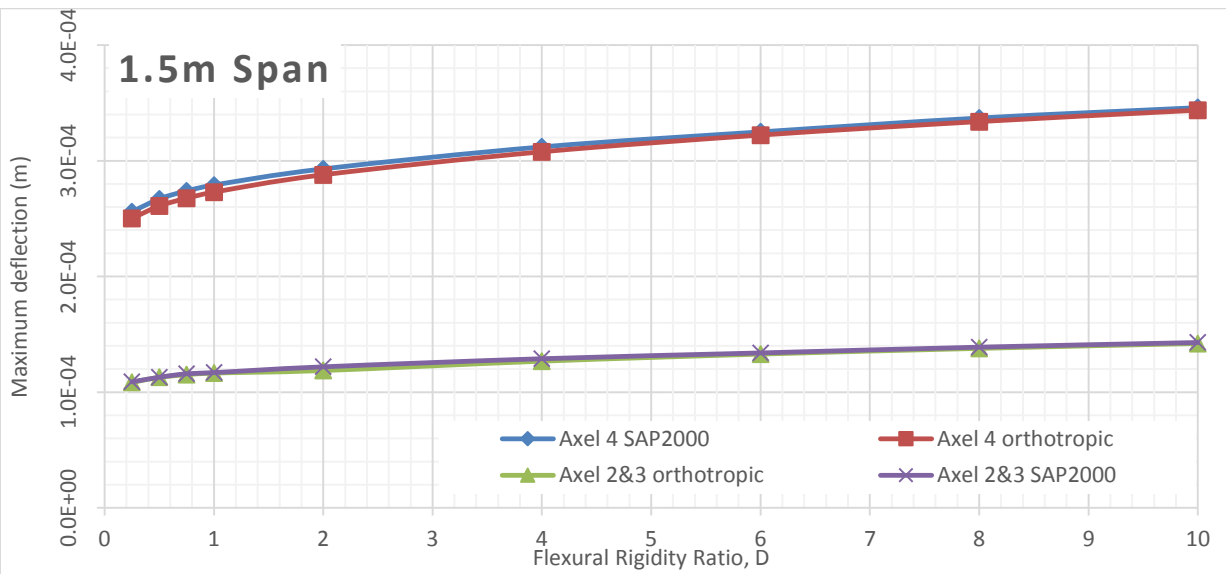

Figure 979 Deflection comparison between FEA and Orthotropic Plate Theory for 1.5 m span of alpha 0.75 (main bars parallel to traffic)

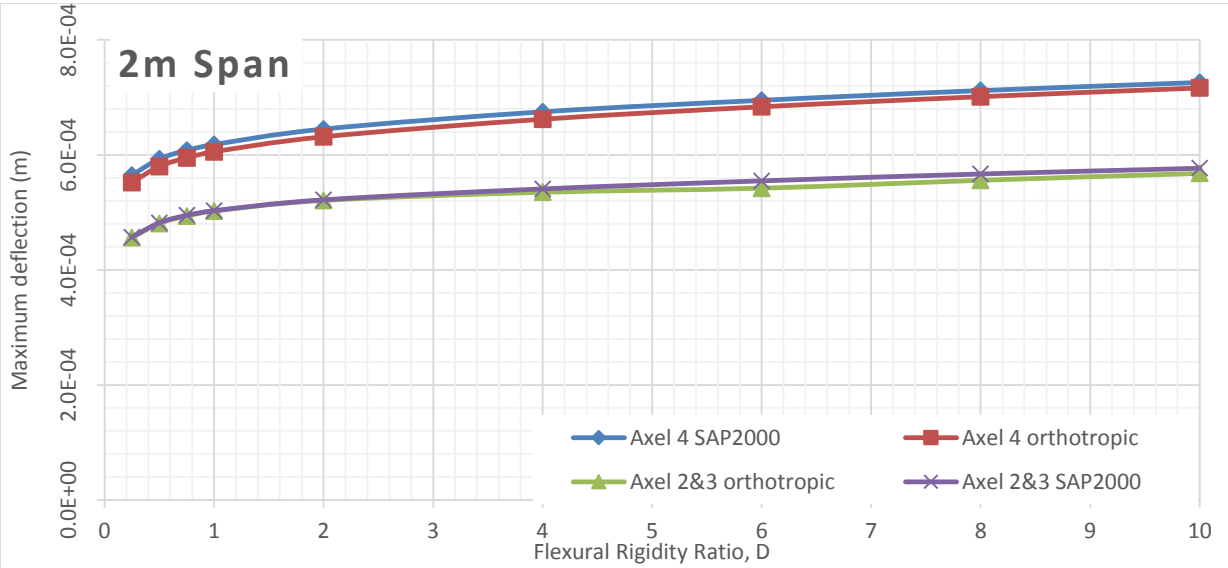

Figure 980 Deflection comparison between FEA and Orthotropic Plate Theory for 2 m span of alpha 0.75 (main bars parallel to traffic)

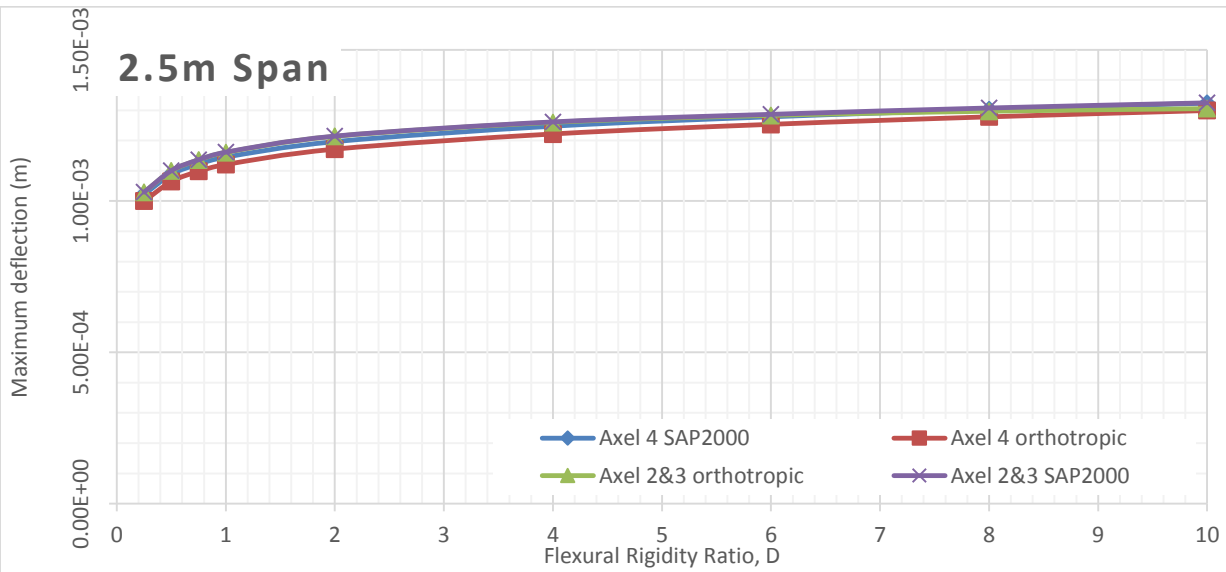

Figure 981 Deflection comparison between FEA and Orthotropic Plate Theory for 2.5 m span of alpha 0.75 (main bars parallel to traffic)

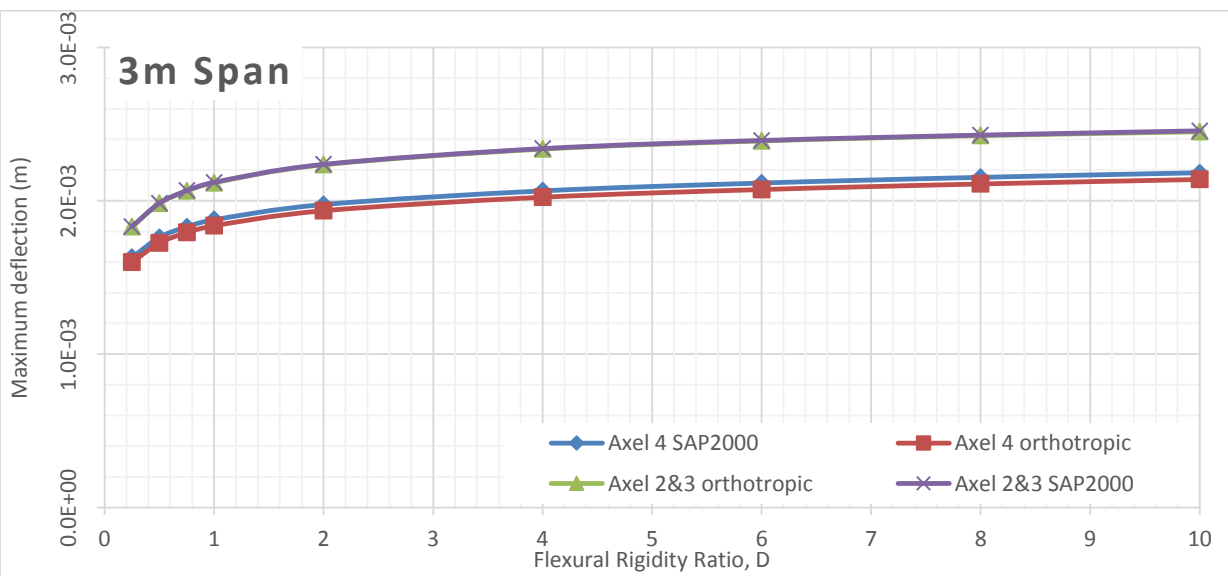

Figure 982 Deflection comparison between FEA and Orthotropic Plate Theory for 3 m span of alpha 0.75 (main bars parallel to traffic)

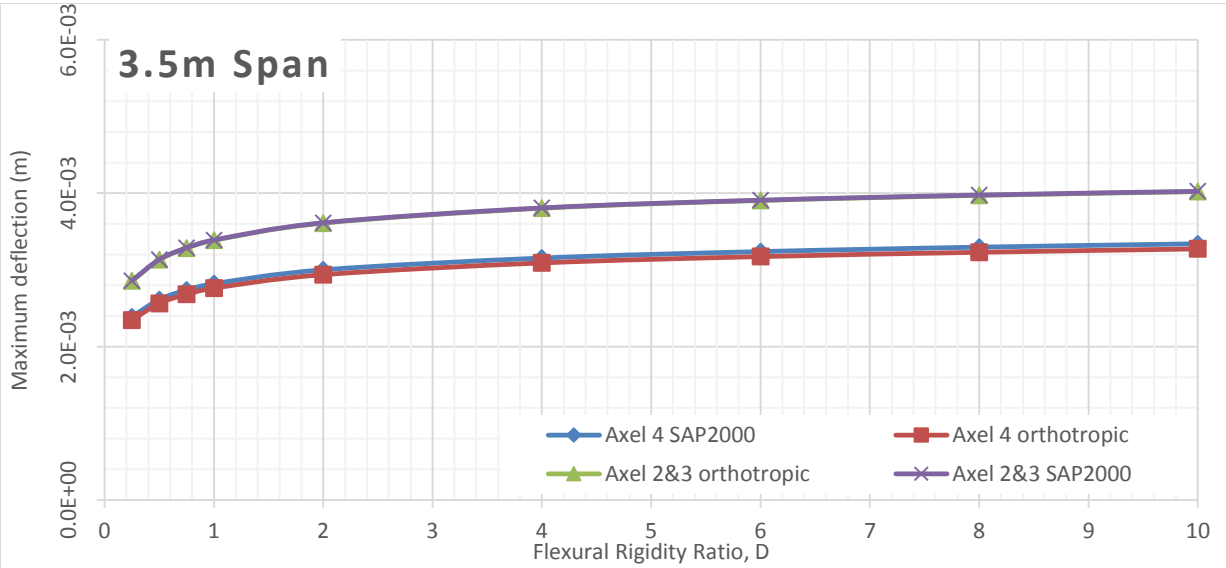

Figure 983 Deflection comparison between FEA and Orthotropic Plate Theory for 3.5 m span of alpha 0.75 (main bars parallel to traffic)

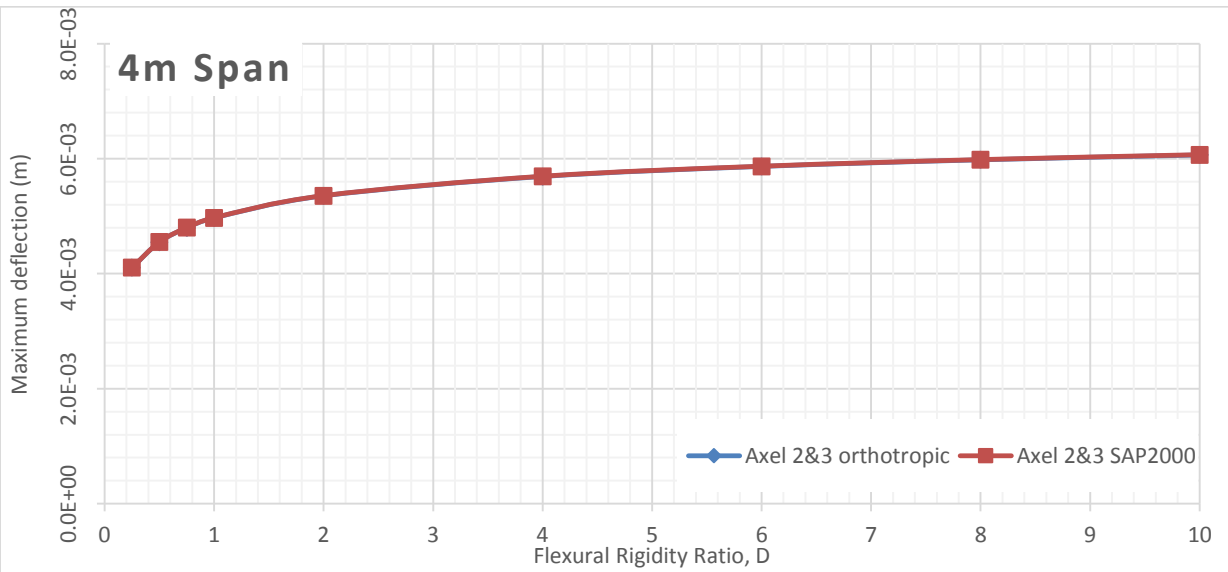

Figure 984 Deflection comparison between FEA and Orthotropic Plate Theory for 4 m span of alpha 0.75 (main bars parallel to traffic)

Alpha 1 Deflection VS Flexural Rigidity for Different Span Length (Main bars perpendicular to traffic)

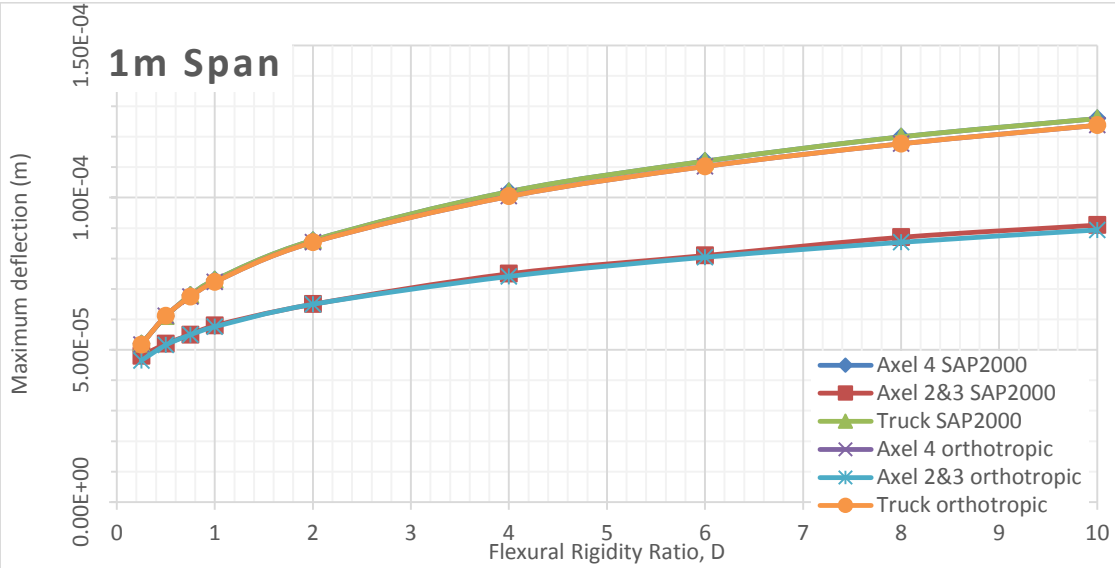

Figure 985 Deflection comparison between FEA and Orthotropic Plate Theory for 1 m span of alpha 1 (main bars perpendicular to traffic)

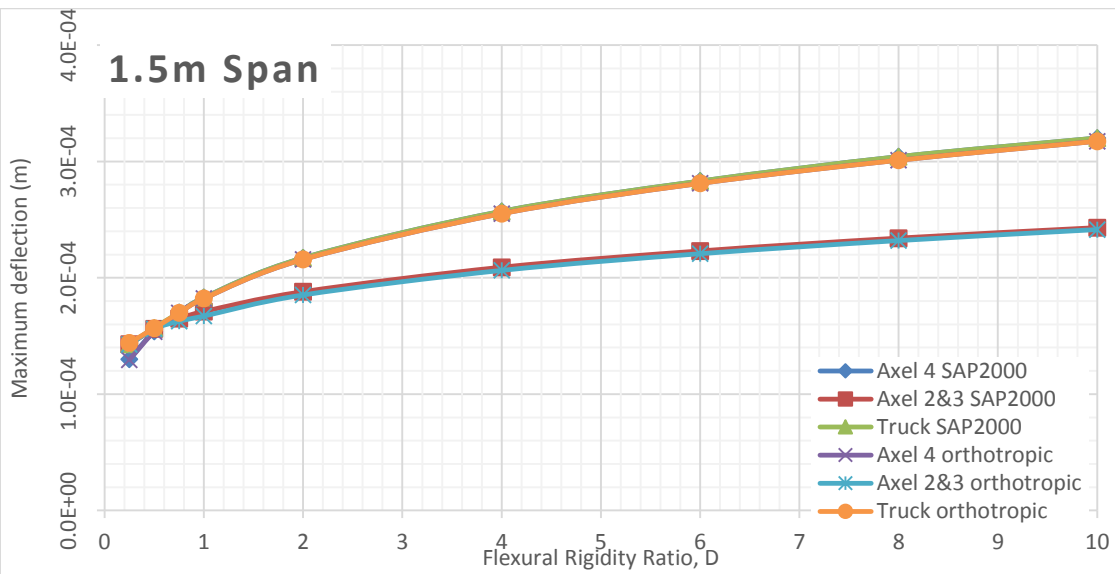

Figure 986 Deflection comparison between FEA and Orthotropic Plate Theory for 1.5 m span of alpha 1 (main bars perpendicular to traffic)

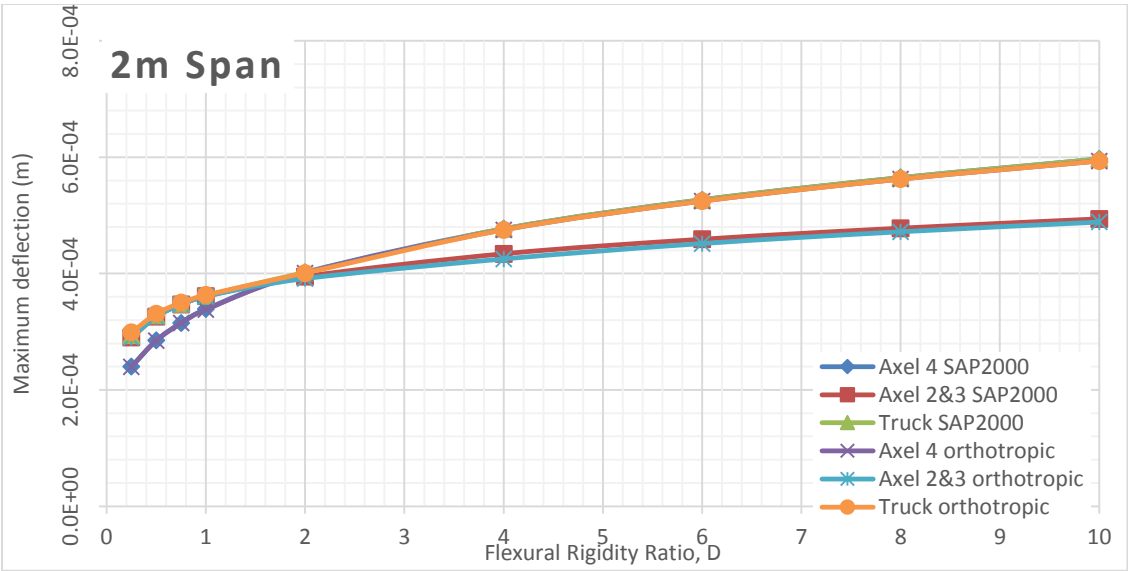

Figure 987 Deflection comparison between FEA and Orthotropic Plate Theory for 2 m span of alpha 1 (main bars perpendicular to traffic)

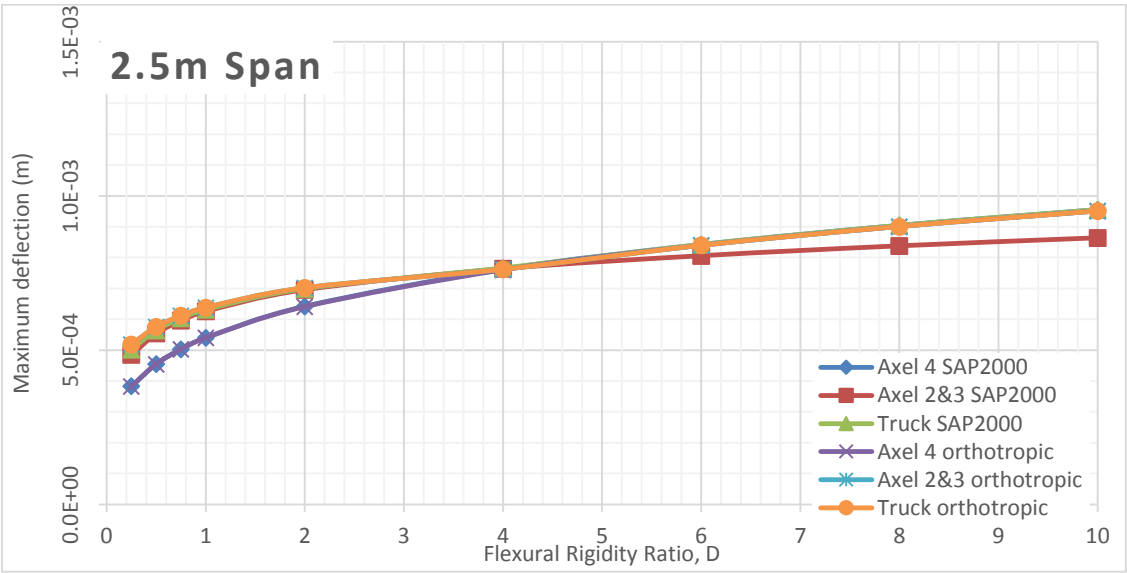

Figure 988 Deflection comparison between FEA and Orthotropic Plate Theory for 2.5 m span of alpha 1 (main bars perpendicular to traffic)

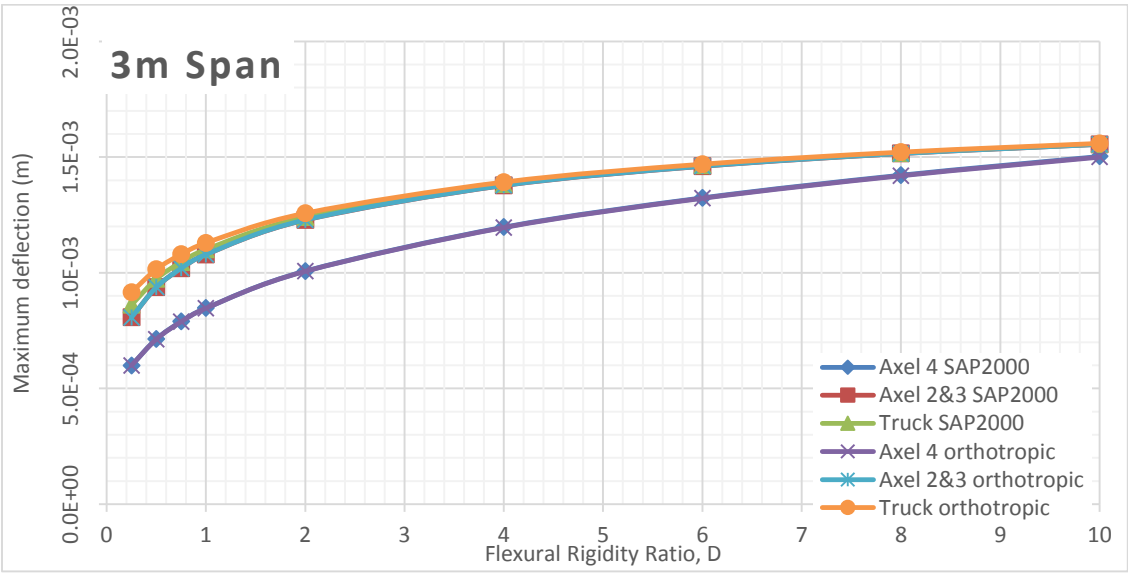

Figure 989 Deflection comparison between FEA and Orthotropic Plate Theory for 3 m span of alpha 1 (main bars perpendicular to traffic)

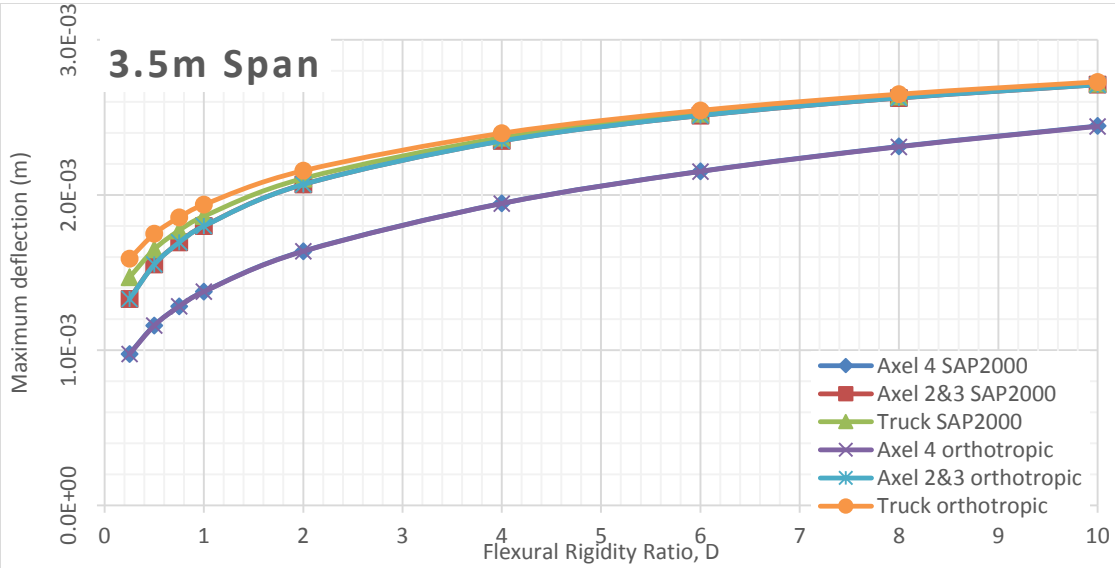

Figure 990 Deflection comparison between FEA and Orthotropic Plate Theory for 3.5 m span of alpha 1 (main bars perpendicular to traffic)

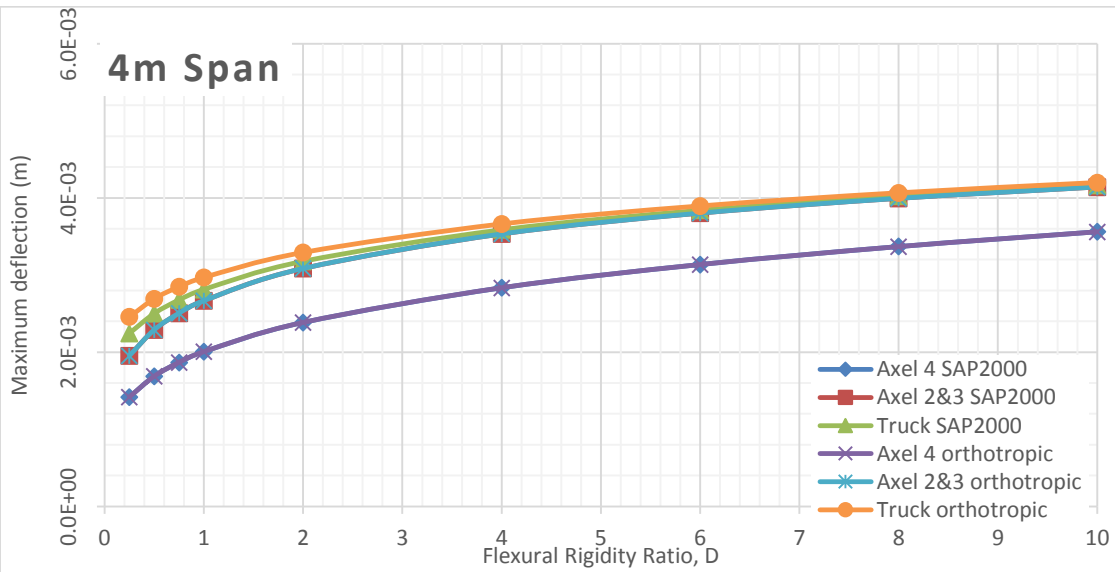

Figure 991 Deflection comparison between FEA and Orthotropic Plate Theory for 4 m span of alpha 1 (main bars perpendicular to traffic)

Alpha 1 Deflection VS Flexural Rigidity for Different Span Length (Main bars parallel to traffic)

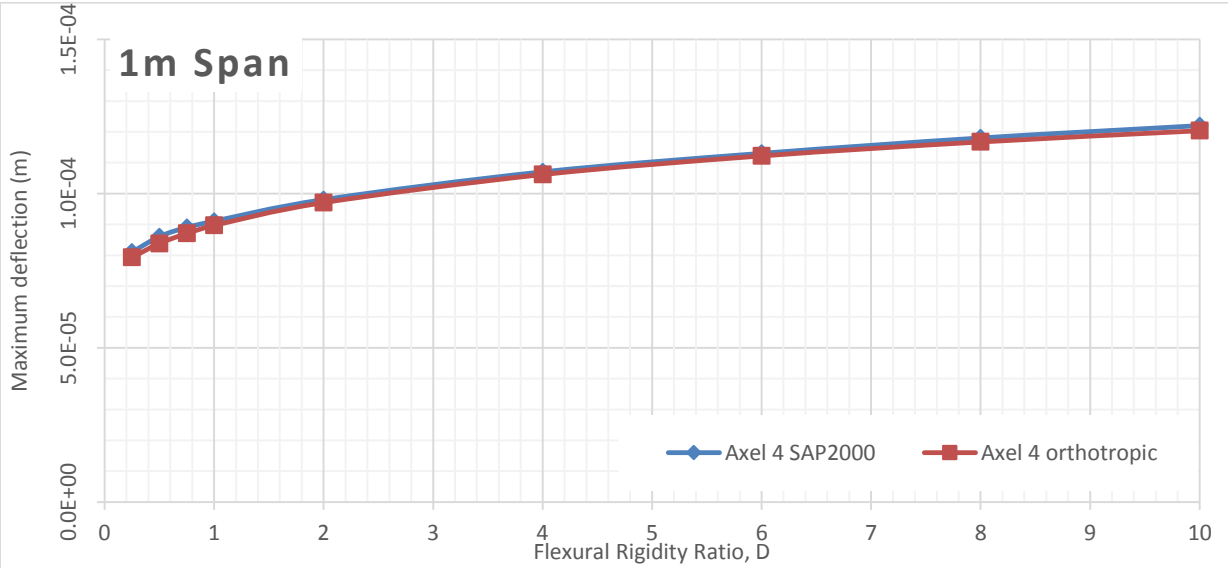

Figure 992 Deflection comparison between FEA and Orthotropic Plate Theory for 1 m span of alpha 1 (main bars parallel to traffic)

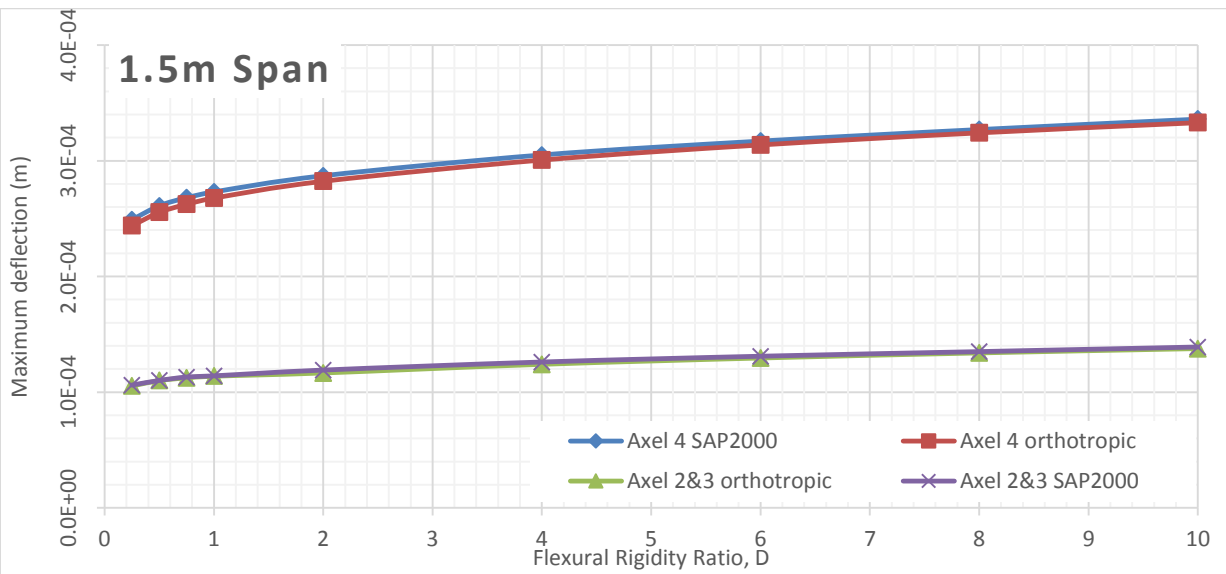

Figure 993 Deflection comparison between FEA and Orthotropic Plate Theory for 1.5 m span of alpha 1 (main bars parallel to traffic)

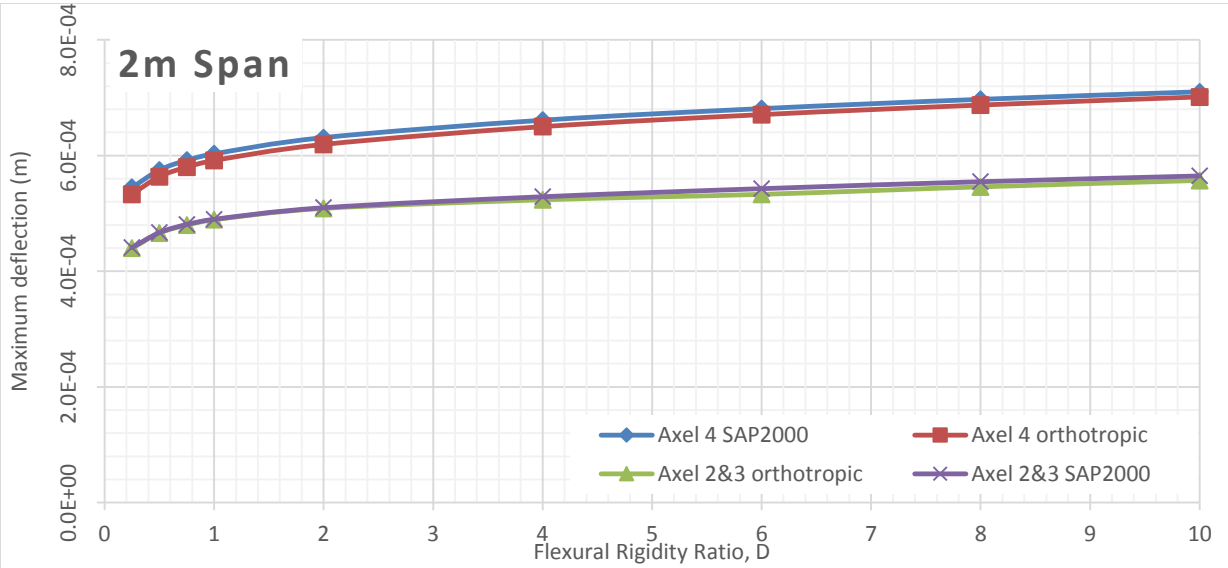

Figure 994 Deflection comparison between FEA and Orthotropic Plate Theory for 2 m span of alpha 1 (main bars parallel to traffic)

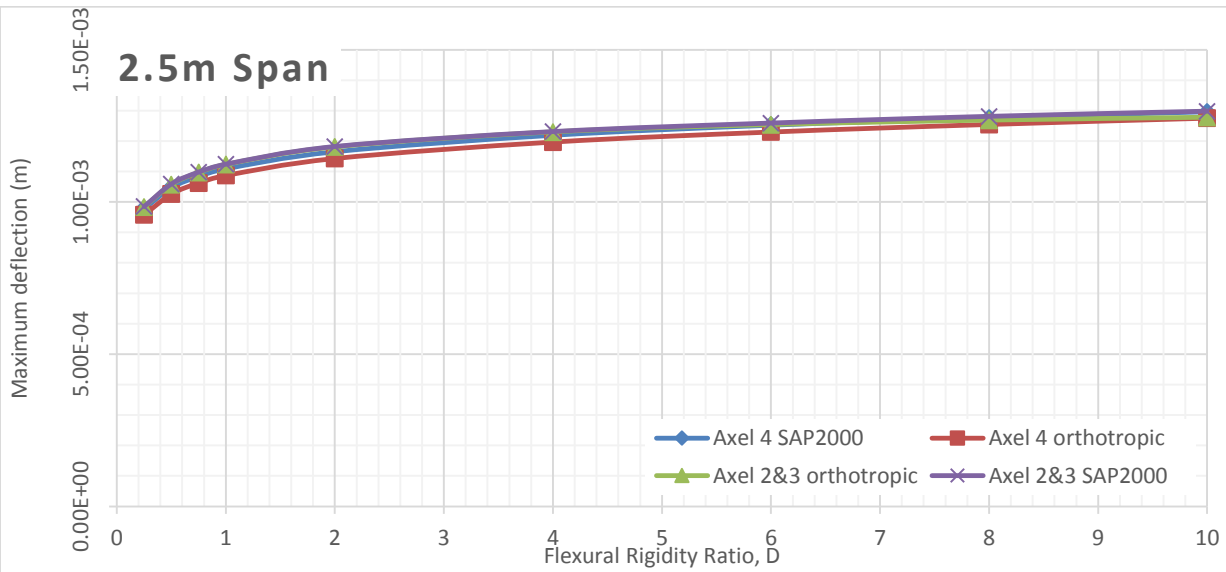

Figure 995 Deflection comparison between FEA and Orthotropic Plate Theory for 2.5 m span of alpha 1 (main bars parallel to traffic)

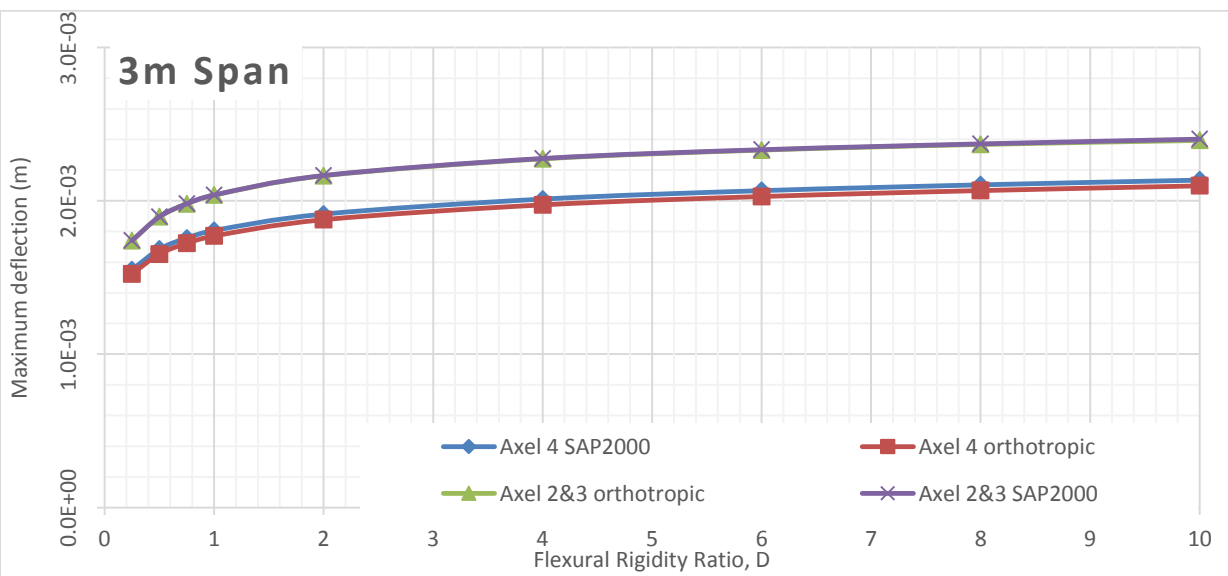

Figure 996 Deflection comparison between FEA and Orthotropic Plate Theory for 3 m span of alpha 1 (main bars parallel to traffic)

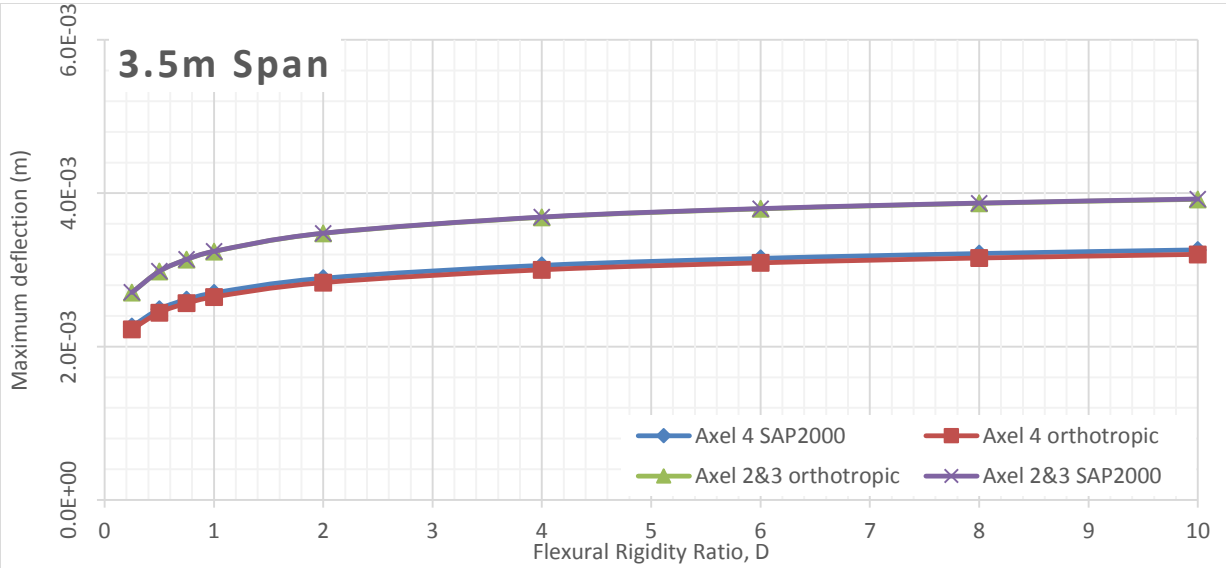

Figure 997 Deflection comparison between FEA and Orthotropic Plate Theory for 3.5 m span of alpha 1 (main bars parallel to traffic)

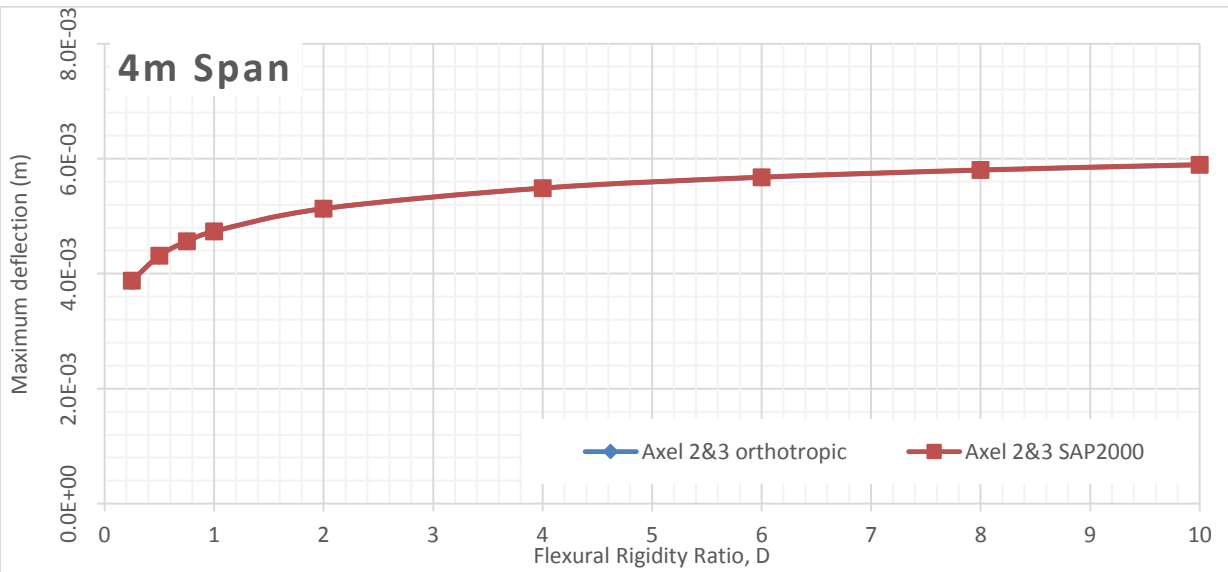

Figure 998 Deflection comparison between FEA and Orthotropic Plate Theory for 4 m span of alpha 1 (main bars parallel to traffic)

Alpha 2 Deflection VS Flexural Rigidity for Different Span Length (Main bars perpendicular to traffic)

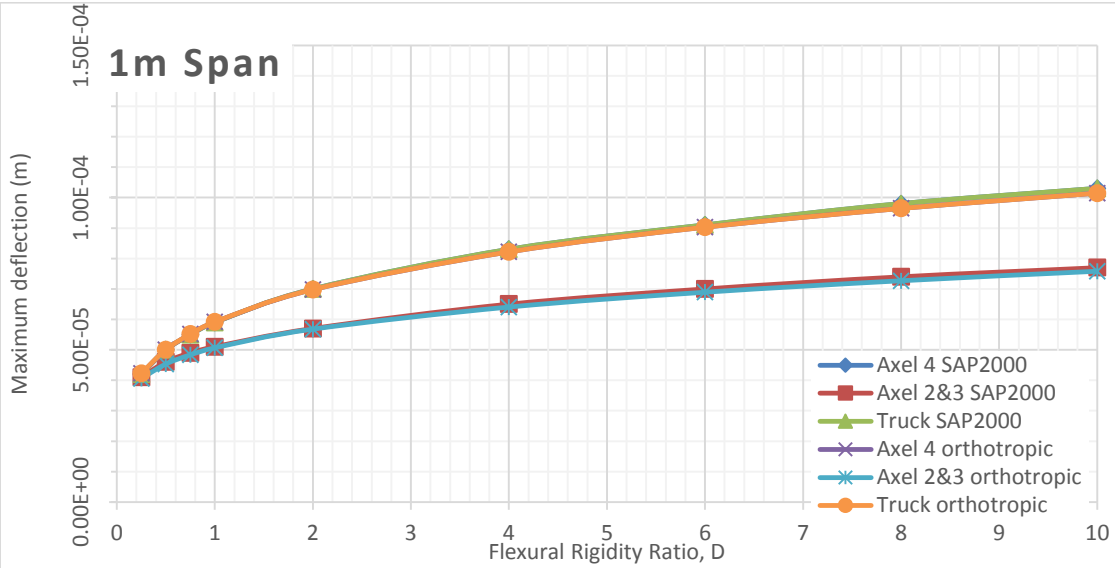

Figure 999 Deflection comparison between FEA and Orthotropic Plate Theory for 1 m span of alpha 2 (main bars perpendicular to traffic)

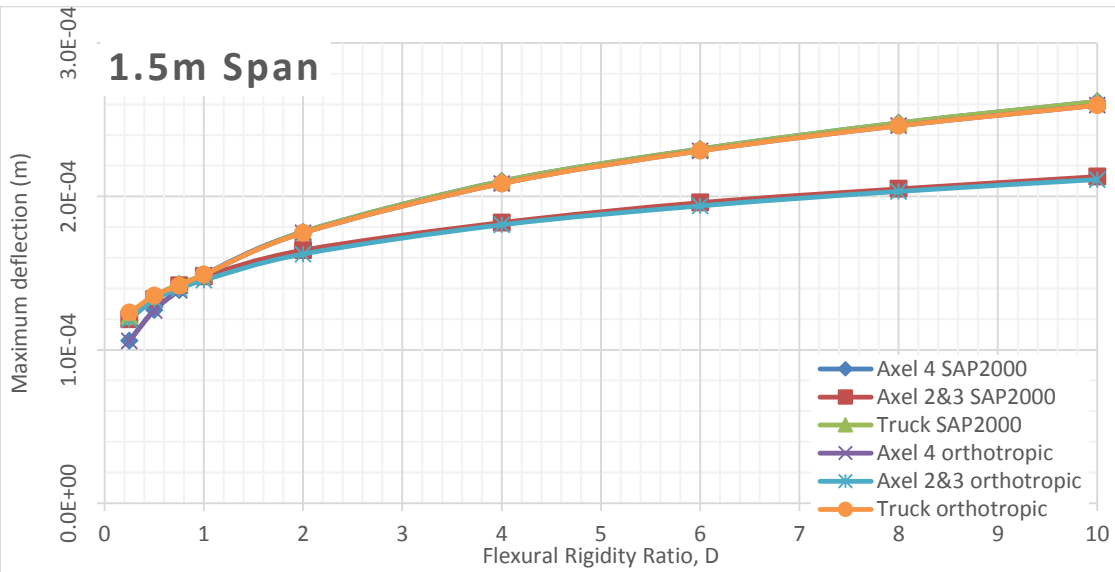

Figure 1000 Deflection comparison between FEA and Orthotropic Plate Theory for 1.5 m span of alpha 2 (main bars perpendicular to traffic)

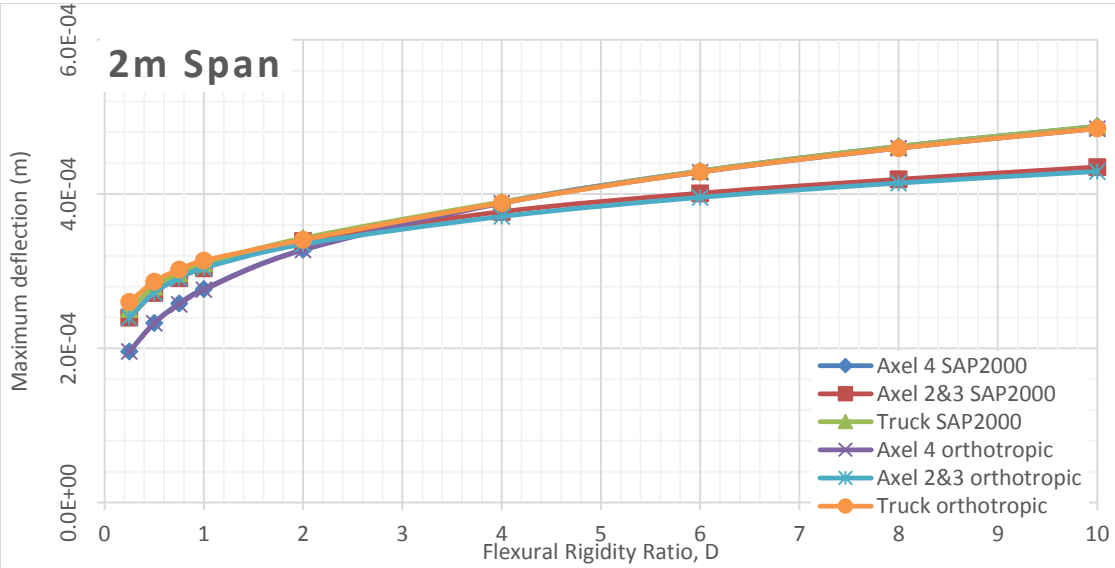

Figure 1001 Deflection comparison between FEA and Orthotropic Plate Theory for 2 m span of alpha 2 (main bars perpendicular to traffic)

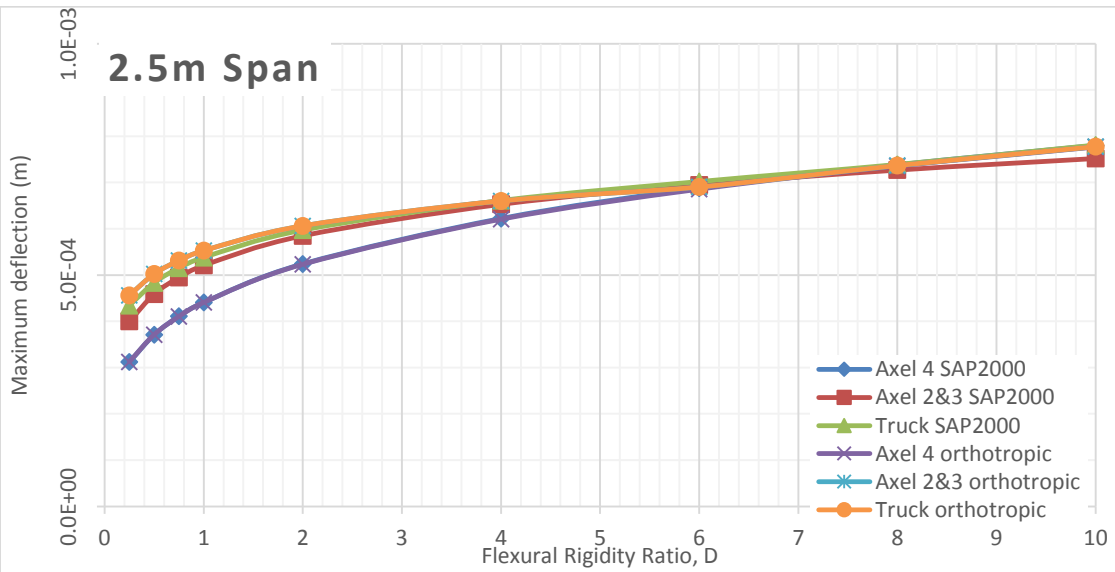

Figure 1002 Deflection comparison between FEA and Orthotropic Plate Theory for 2.5 m span of alpha 2 (main bars perpendicular to traffic)

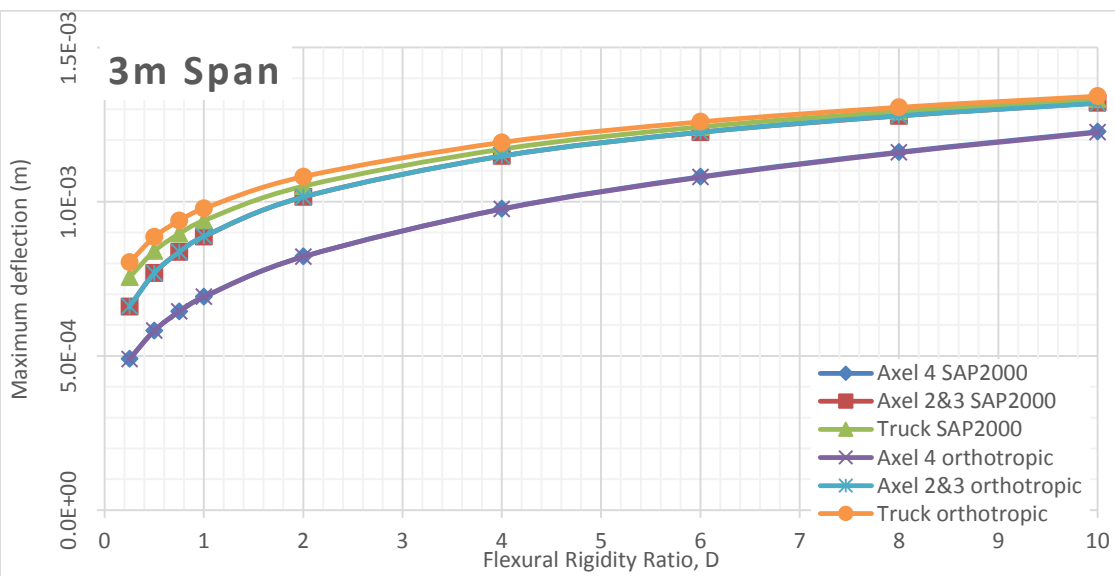

Figure 1003 Deflection comparison between FEA and Orthotropic Plate Theory for 3 m span of alpha 2 (main bars perpendicular to traffic)

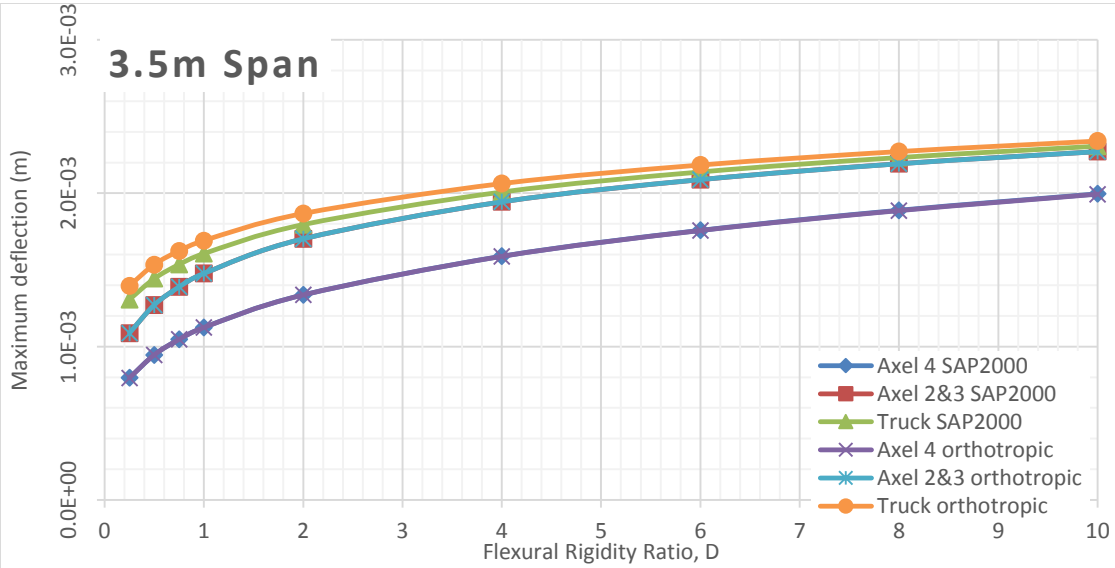

Figure 1004 Deflection comparison between FEA and Orthotropic Plate Theory for 3.5 m span of alpha 2 (main bars perpendicular to traffic)

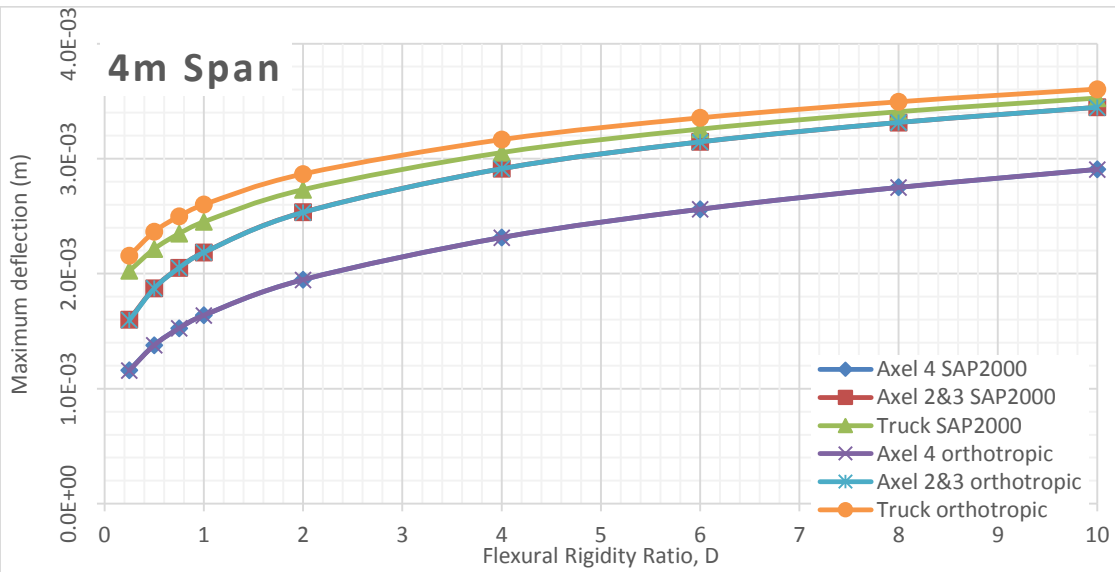

Figure 1005 Deflection comparison between FEA and Orthotropic Plate Theory for 4 m span of alpha 2 (main bars perpendicular to traffic)

Alpha 2 Deflection VS Flexural Rigidity for Different Span Length (Main bars parallel to traffic)

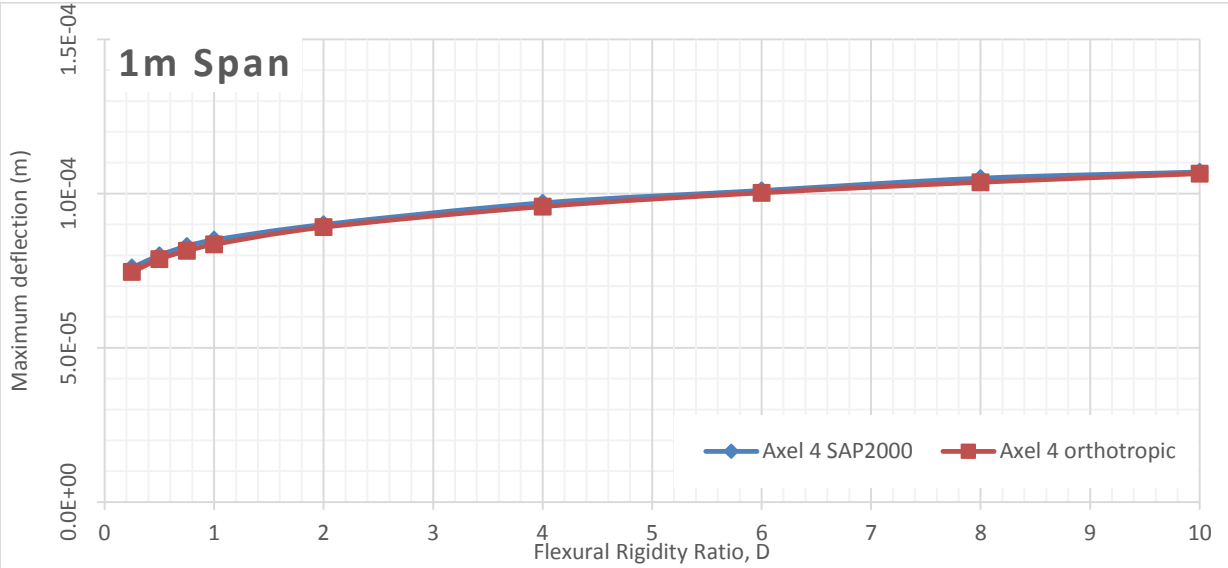

Figure 1006 Deflection comparison between FEA and Orthotropic Plate Theory for 1 m span of alpha 2 (main bars parallel to traffic)

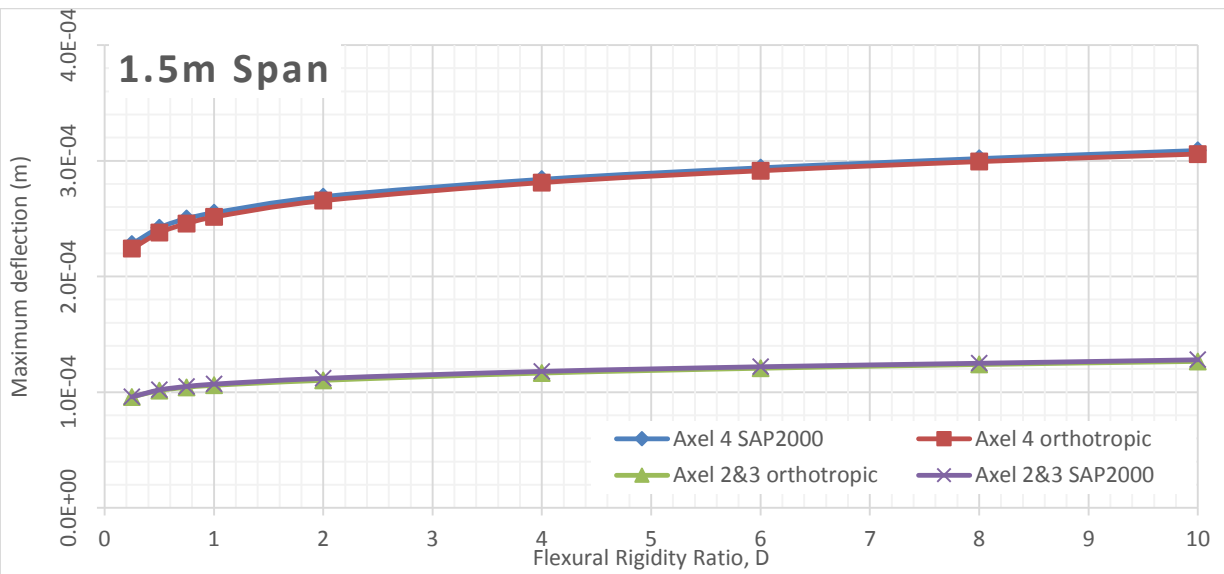

Figure 1007 Deflection comparison between FEA and Orthotropic Plate Theory for 1.5 m span of alpha 2 (main bars parallel to traffic)

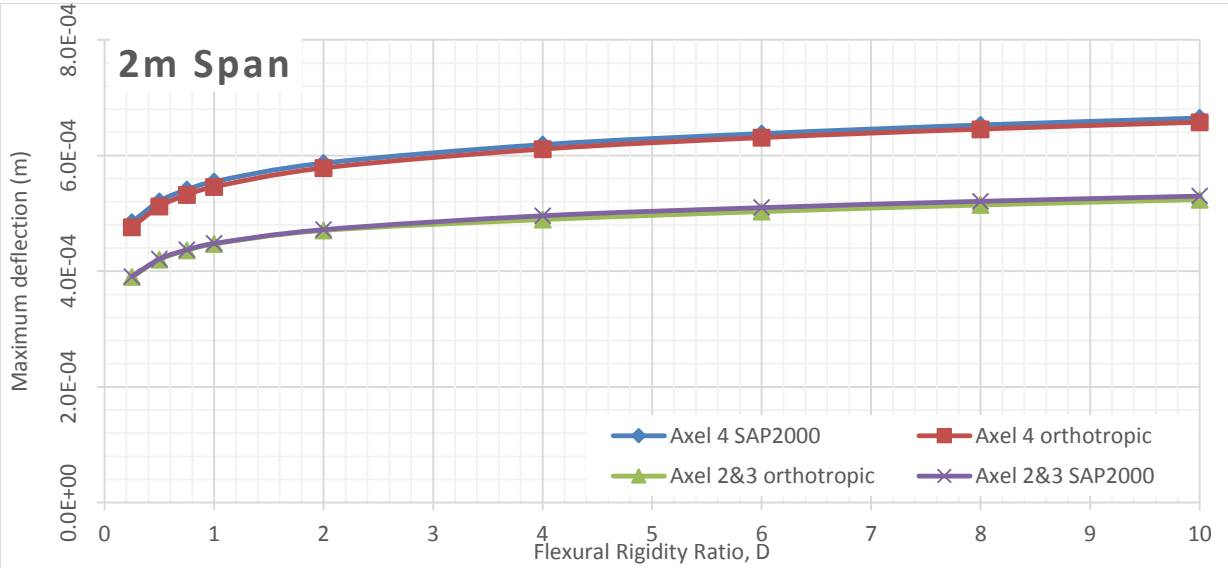

Figure 1008 Deflection comparison between FEA and Orthotropic Plate Theory for 2 m span of alpha 2 (main bars parallel to traffic)

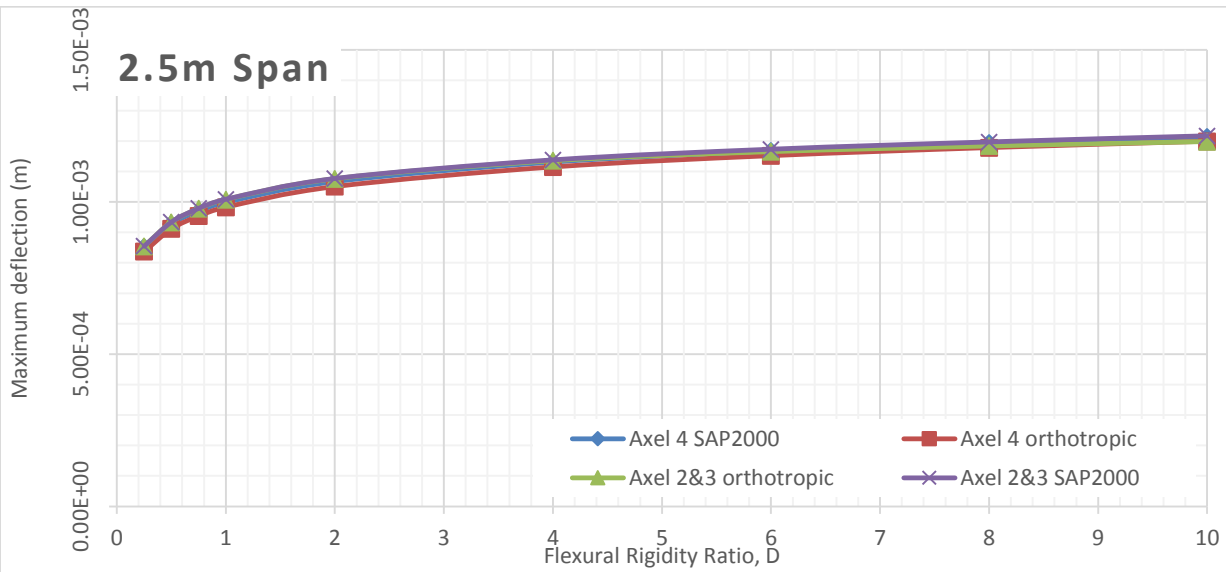

Figure 1009 Deflection comparison between FEA and Orthotropic Plate Theory for 2.5 m span of alpha 2 (main bars parallel to traffic)

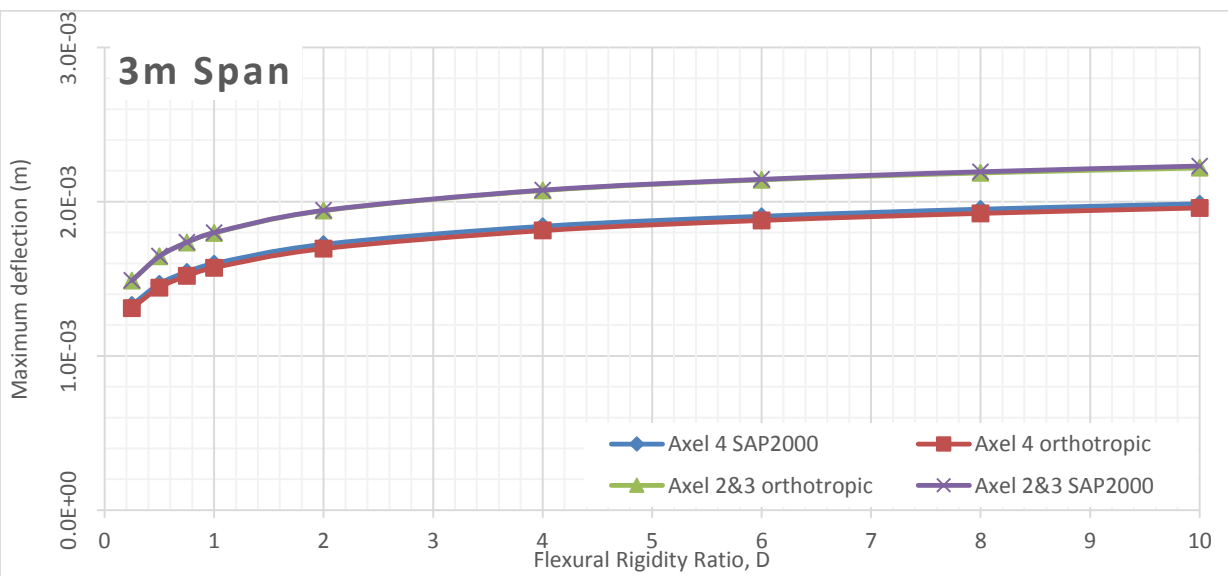

Figure 1010 Deflection comparison between FEA and Orthotropic Plate Theory for 3 m span of alpha 2 (main bars parallel to traffic)

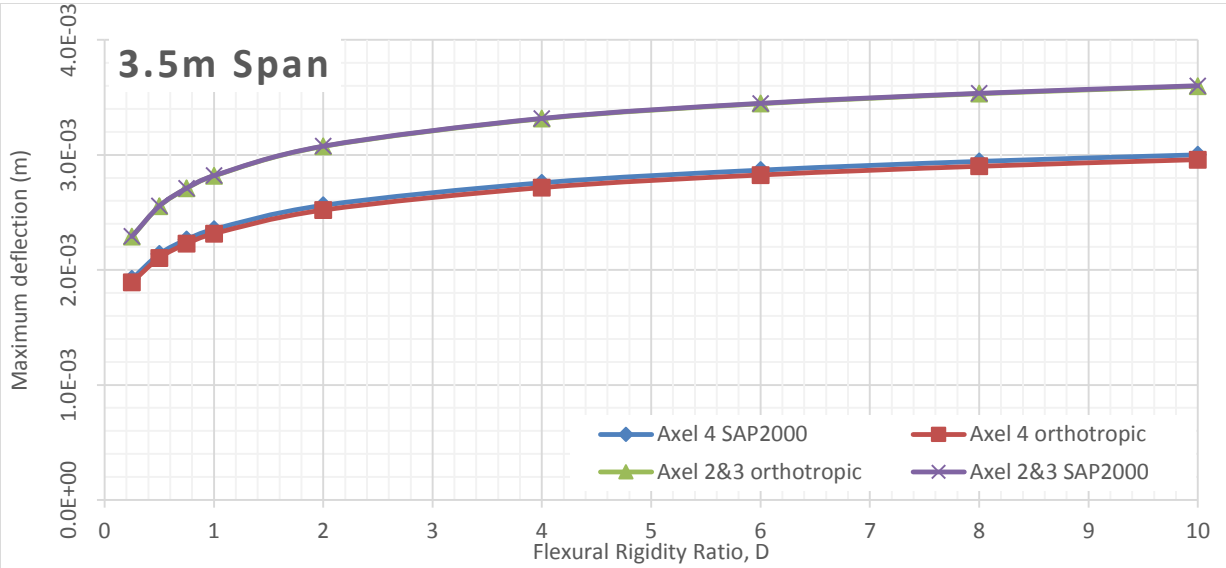

Figure 1011 Deflection comparison between FEA and Orthotropic Plate Theory for 3.5 m span of alpha 2 (main bars parallel to traffic)

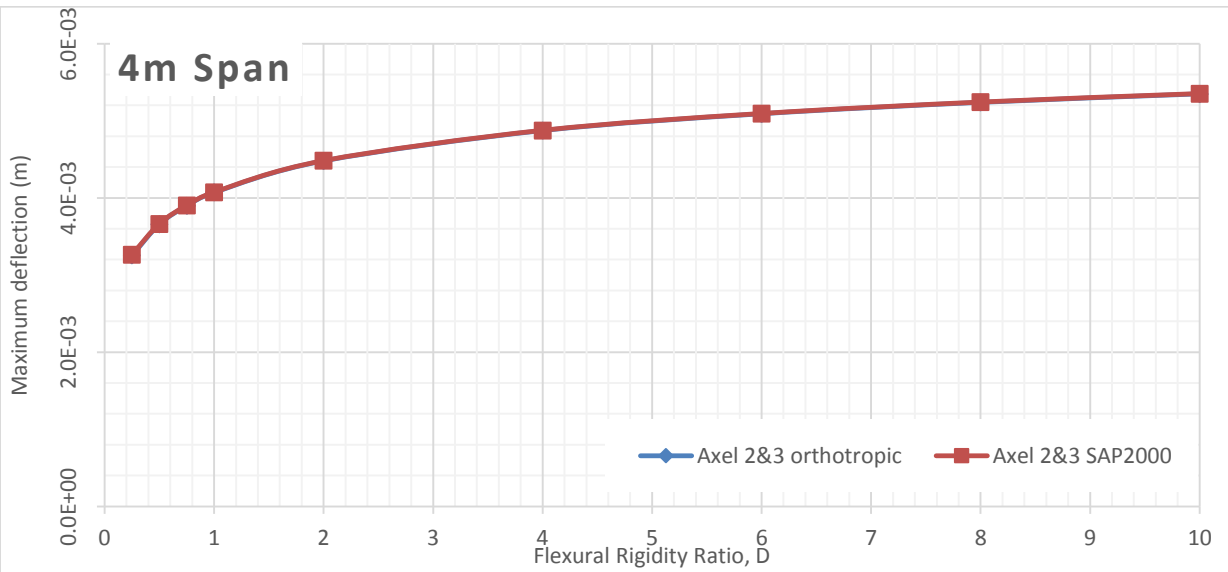

Figure 1012 Deflection comparison between FEA and Orthotropic Plate Theory for 4 m span of alpha 2 (main bars parallel to traffic)

Alpha 4 Deflection VS Flexural Rigidity for Different Span Length (Main bars perpendicular to traffic)

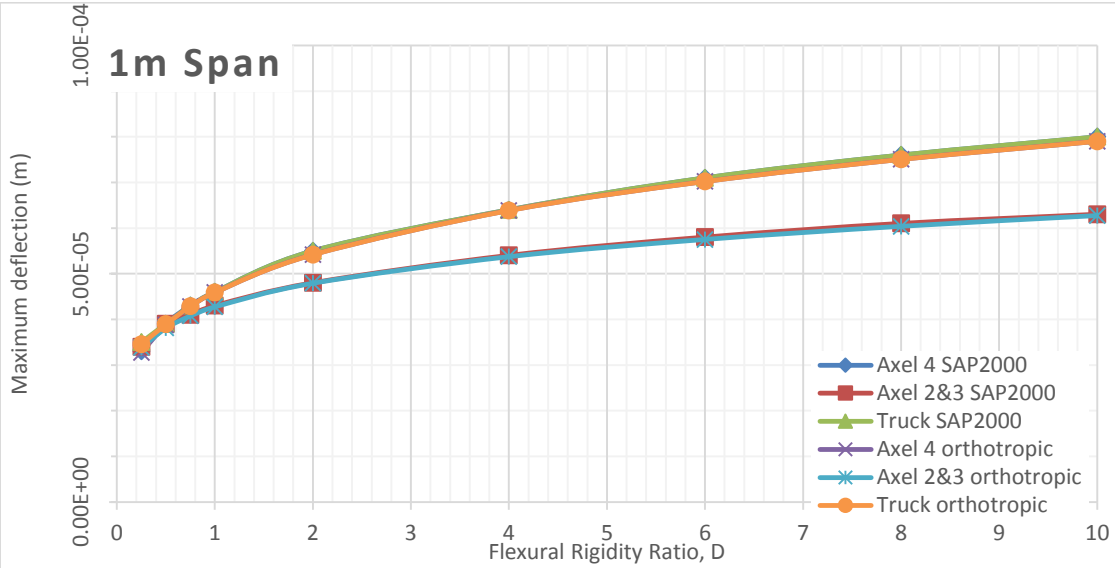

Figure 1013 Deflection comparison between FEA and Orthotropic Plate Theory for 1 m span of alpha 4 (main bars perpendicular to traffic)

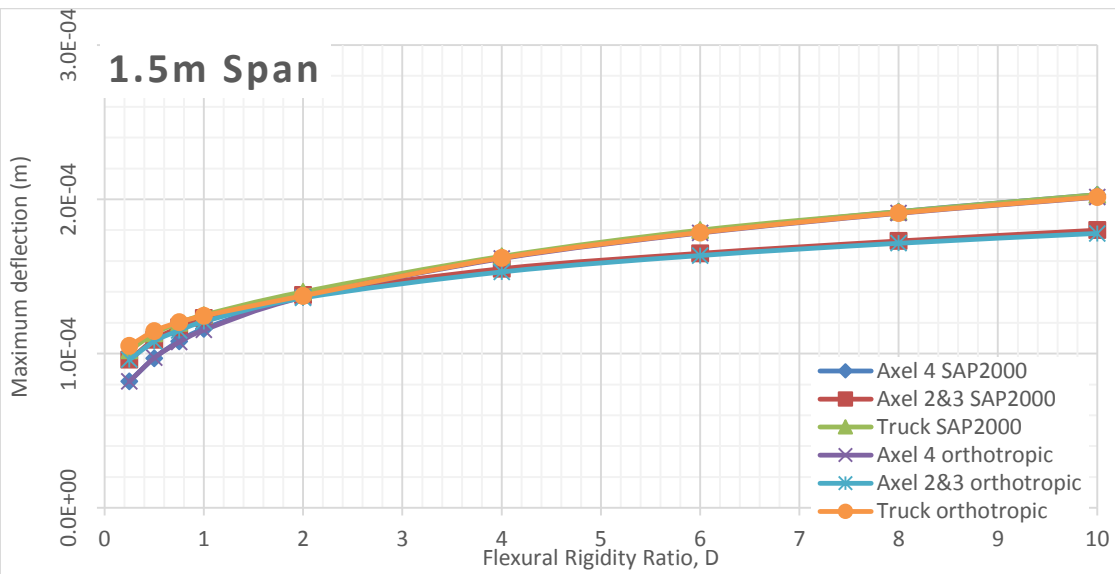

Figure 1014 Deflection comparison between FEA and Orthotropic Plate Theory for 1.5 m span of alpha 4 (main bars perpendicular to traffic)

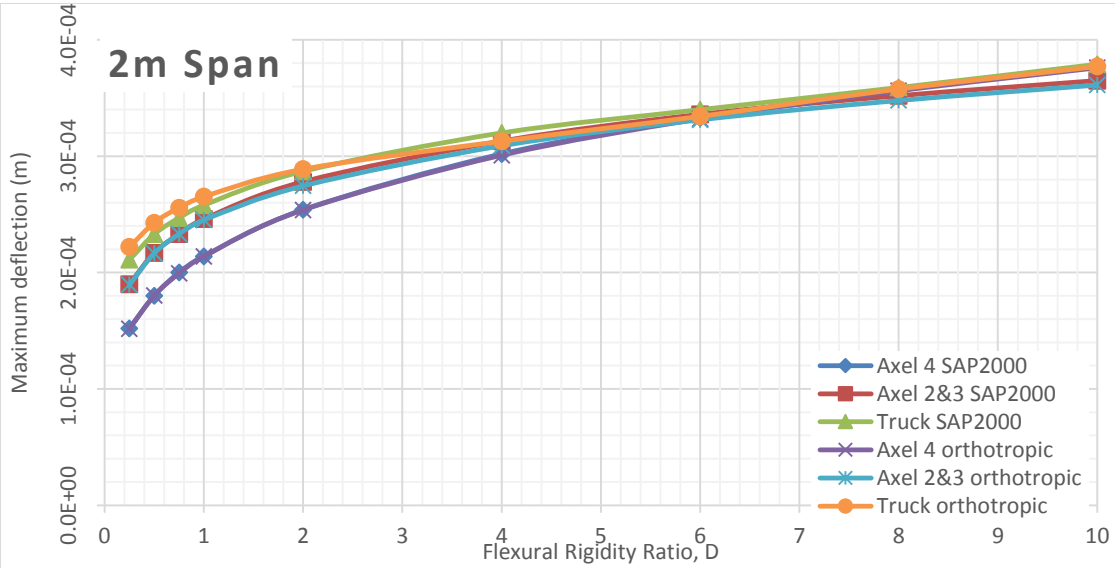

Figure 1015 Deflection comparison between FEA and Orthotropic Plate Theory for 2 m span of alpha 4 (main bars perpendicular to traffic)

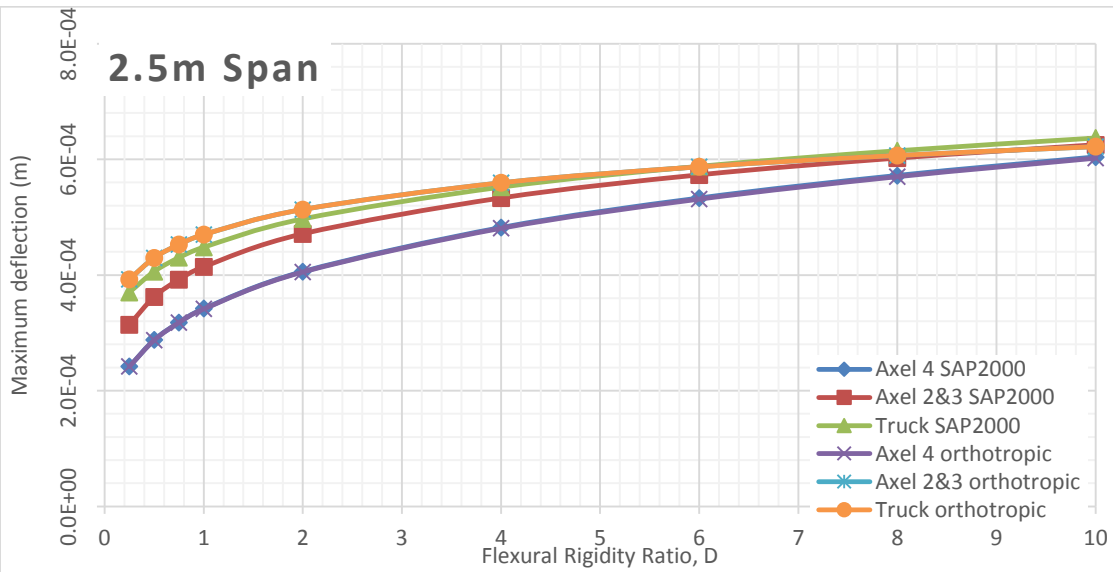

Figure 1016 Deflection comparison between FEA and Orthotropic Plate Theory for 2.5 m span of alpha 4 (main bars perpendicular to traffic)

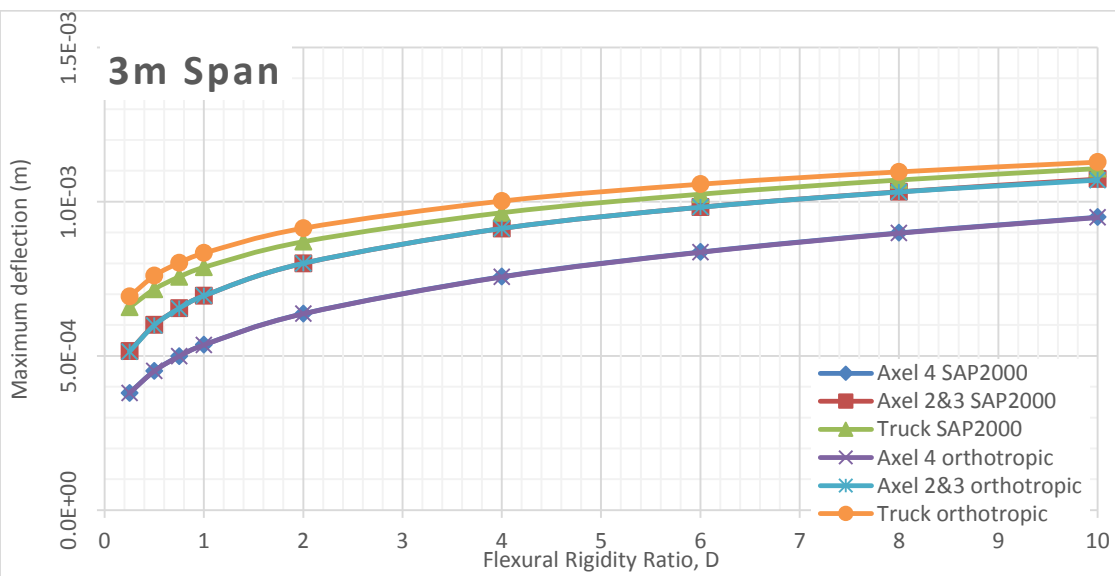

Figure 1017 Deflection comparison between FEA and Orthotropic Plate Theory for 3 m span of alpha 4 (main bars perpendicular to traffic)

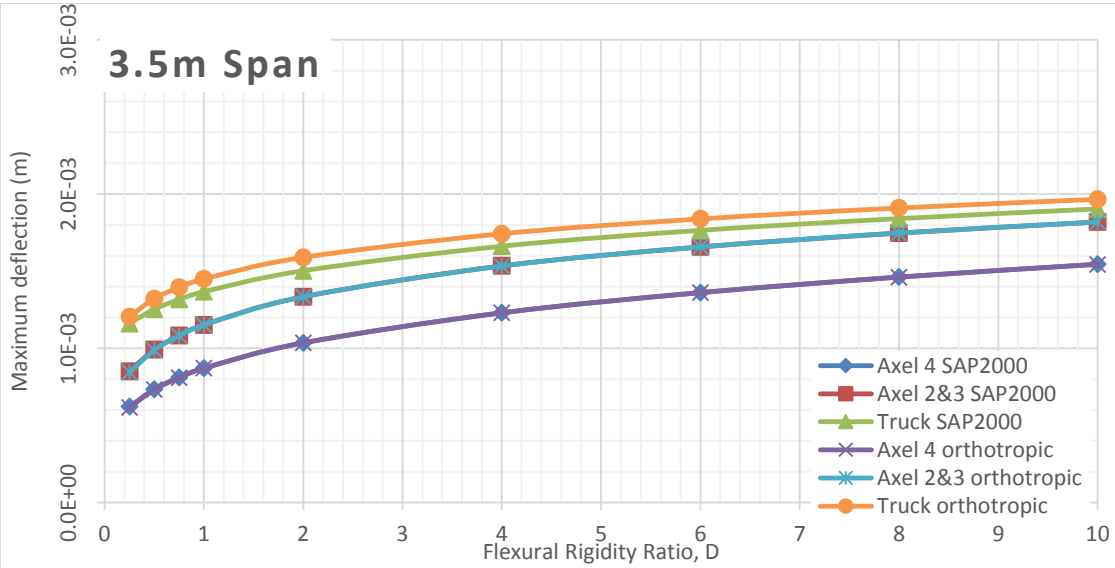

Figure 1018 Deflection comparison between FEA and Orthotropic Plate Theory for 3.5 m span of alpha 4 (main bars perpendicular to traffic)

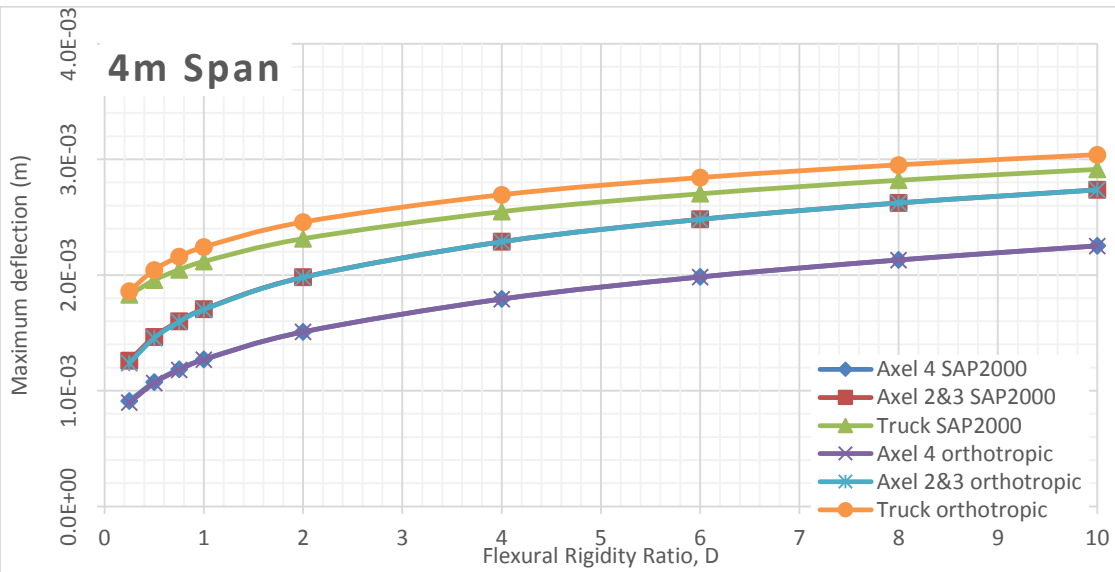

Figure 1019 Deflection comparison between FEA and Orthotropic Plate Theory for 4 m span of alpha 4 (main bars perpendicular to traffic)

Alpha 4 Deflection VS Flexural Rigidity for Different Span Length (Main bars parallel to traffic)

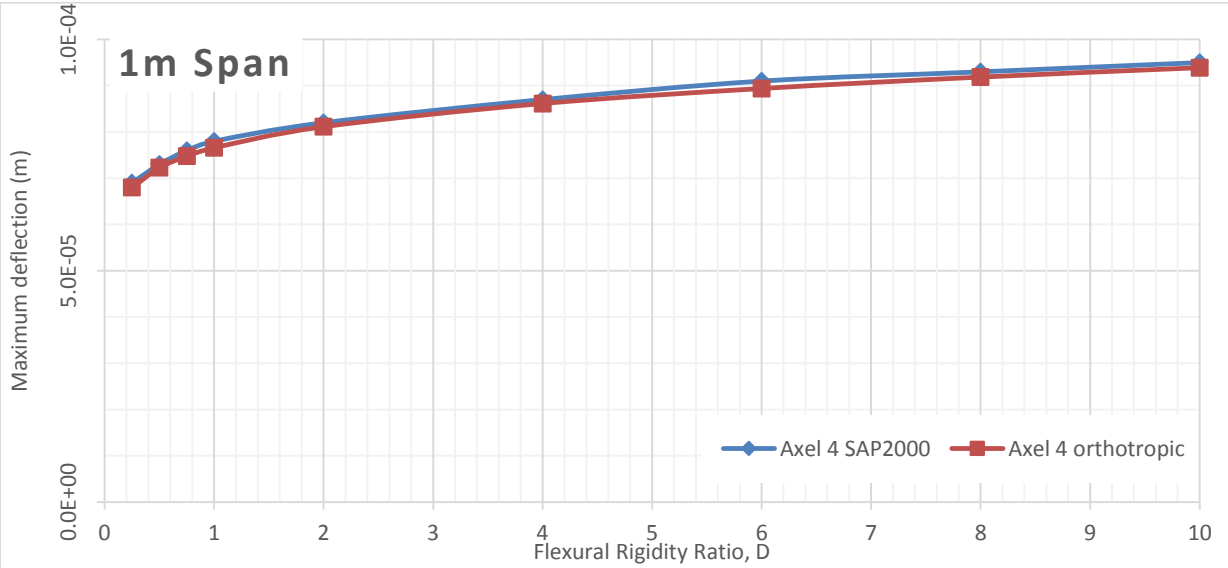

Figure 1020 Deflection comparison between FEA and Orthotropic Plate Theory for 1 m span of alpha 4 (main bars parallel to traffic)

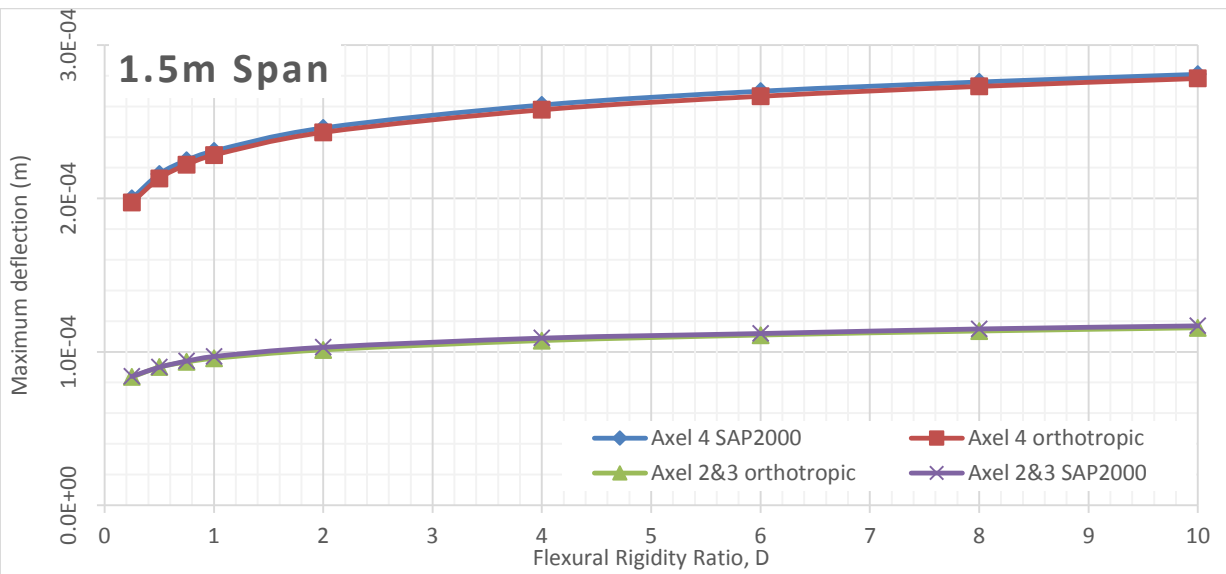

Figure 1021 Deflection comparison between FEA and Orthotropic Plate Theory for 1.5 m span of alpha 4 (main bars parallel to traffic)

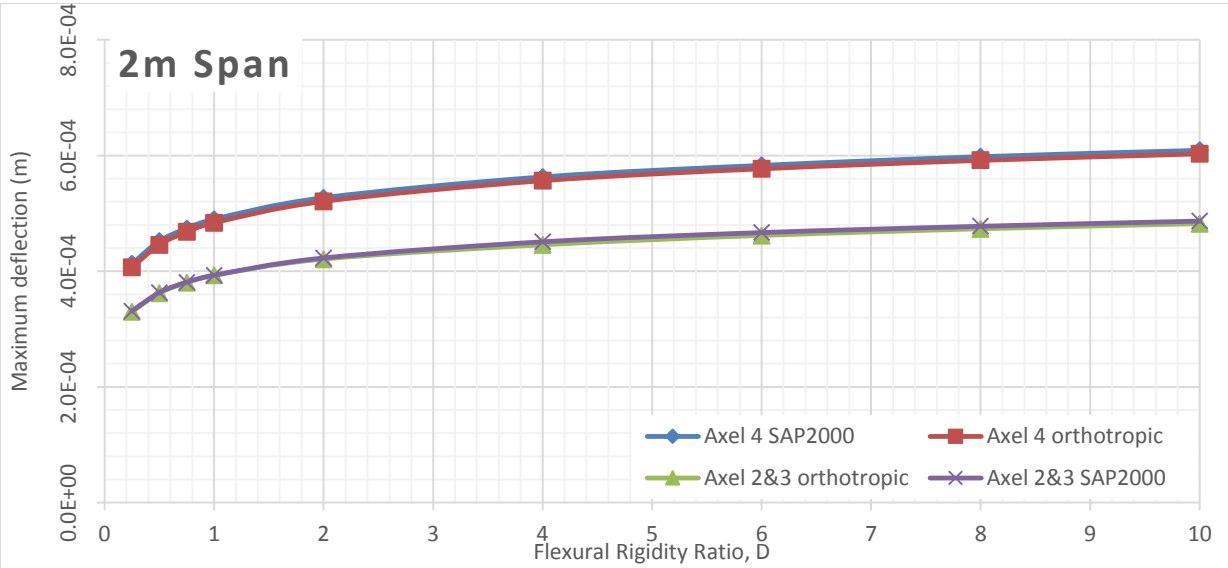

Figure 1022 Deflection comparison between FEA and Orthotropic Plate Theory for 2 m span of alpha 4 (main bars parallel to traffic)

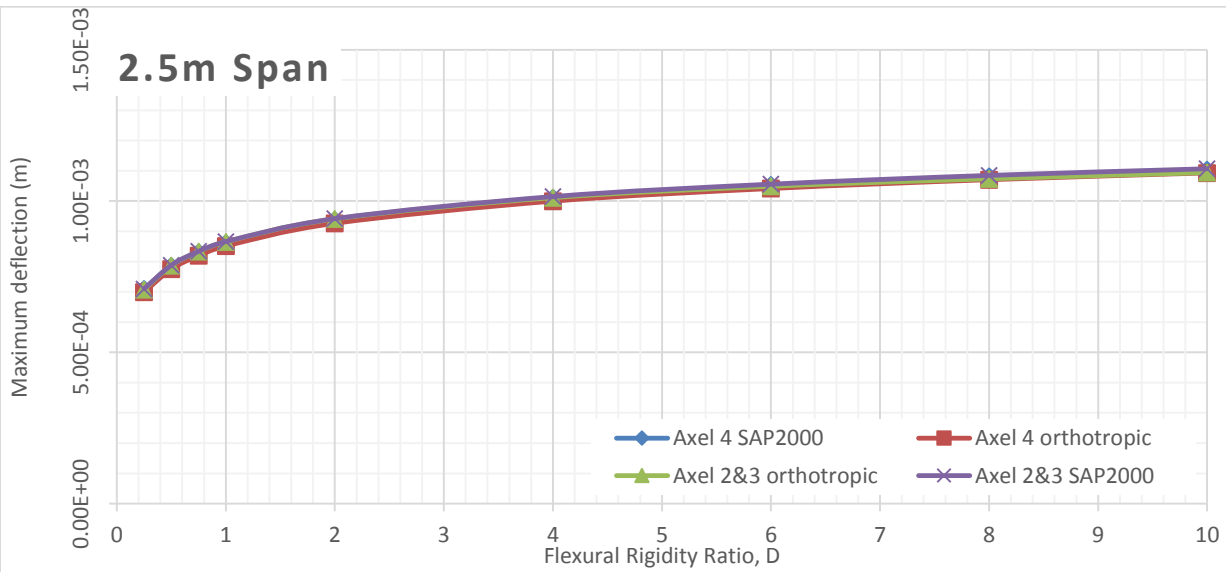

Figure 1023 Deflection comparison between FEA and Orthotropic Plate Theory for 2.5 m span of alpha 4 (main bars parallel to traffic)

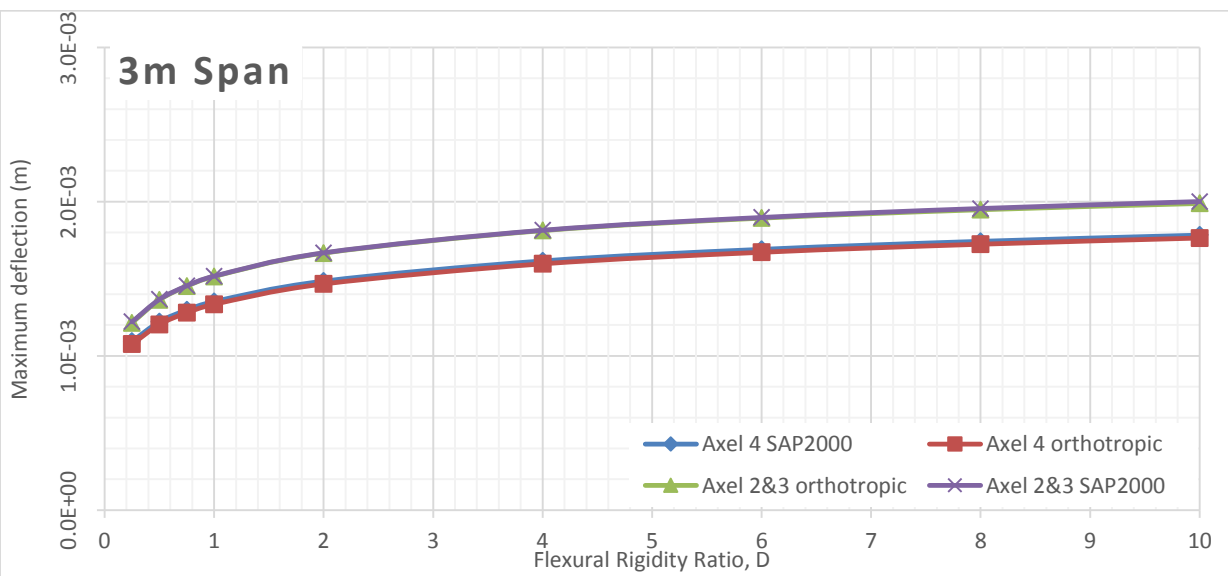

Figure 1024 Deflection comparison between FEA and Orthotropic Plate Theory for 3 m span of alpha 4 (main bars parallel to traffic)

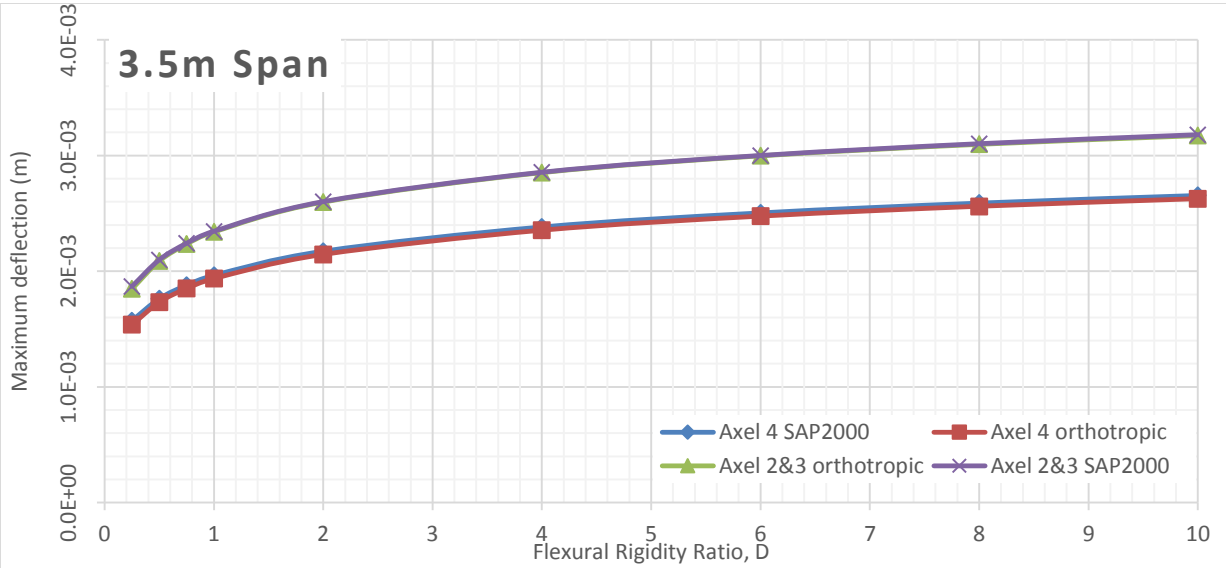

Figure 1025 Deflection comparison between FEA and Orthotropic Plate Theory for 3.5 m span of alpha 4 (main bars parallel to traffic)

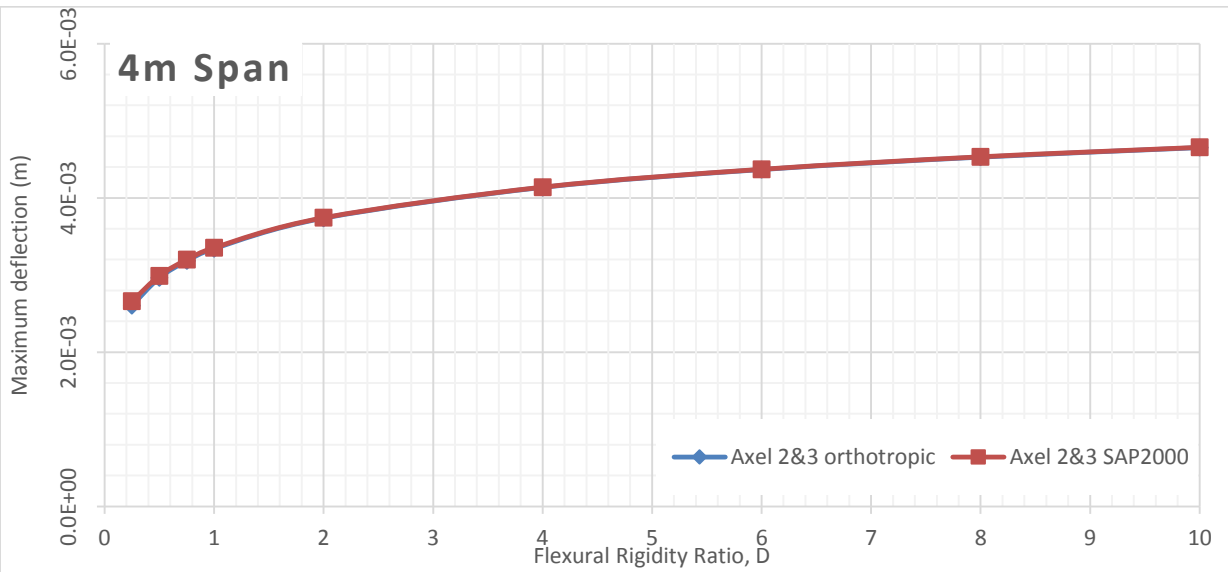

Figure 1026 Deflection comparison between FEA and Orthotropic Plate Theory for 4 m span of alpha 4 (main bars parallel to traffic)

Alpha 6 Deflection VS Flexural Rigidity for Different Span Length (Main bars perpendicular to traffic)

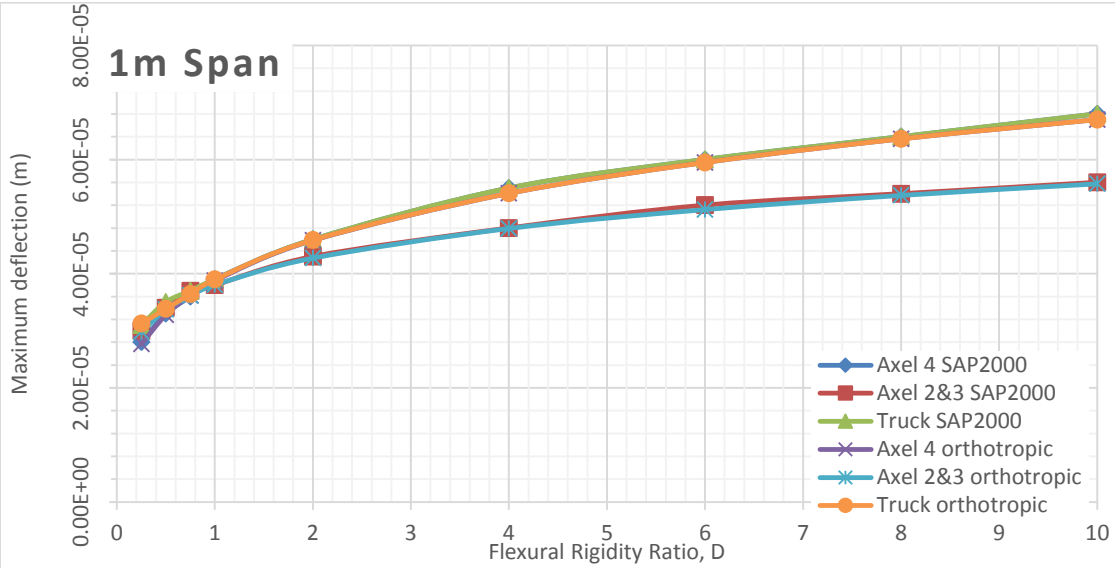

Figure 1027 Deflection comparison between FEA and Orthotropic Plate Theory for 1 m span of alpha 6 (main bars perpendicular to traffic)

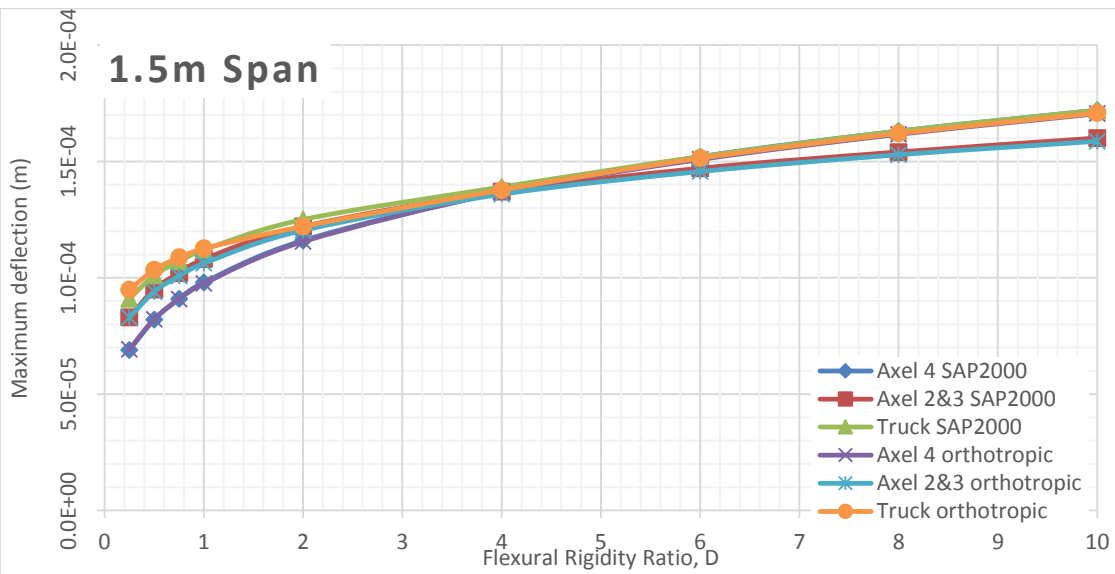

Figure 1028 Deflection comparison between FEA and Orthotropic Plate Theory for 1.5 m span of alpha 6 (main bars perpendicular to traffic)

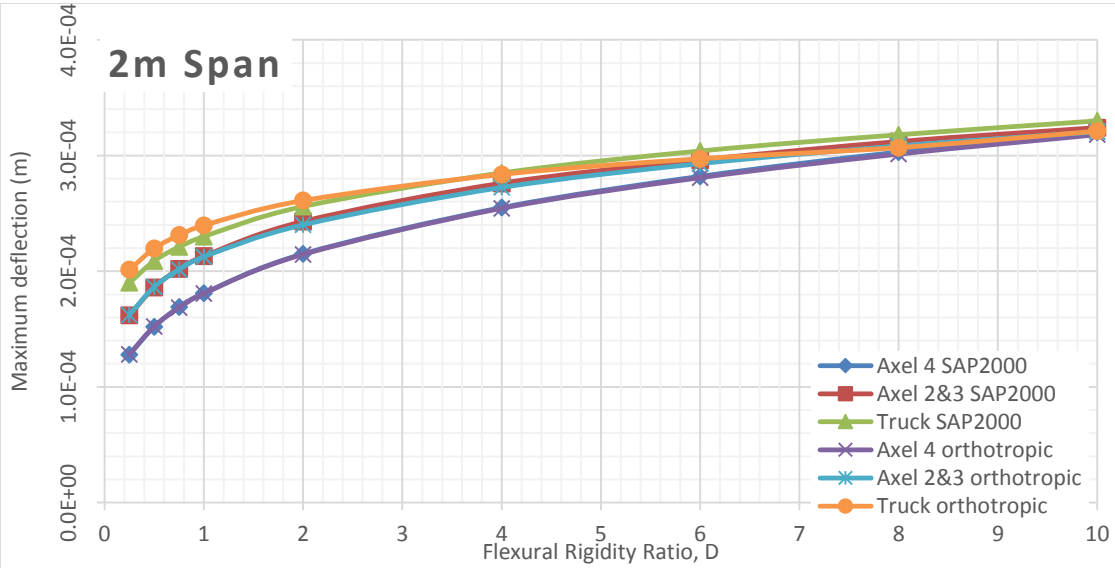

Figure 1029 Deflection comparison between FEA and Orthotropic Plate Theory for 2 m span of alpha 6 (main bars perpendicular to traffic)

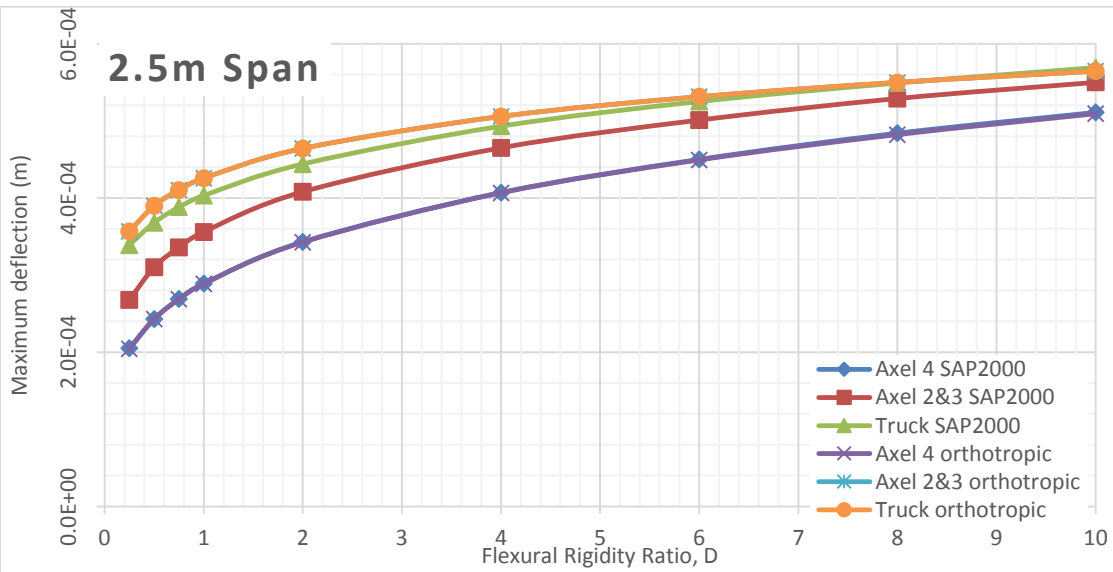

Figure 1030 Deflection comparison between FEA and Orthotropic Plate Theory for 2.5 m span of alpha 6 (main bars perpendicular to traffic)

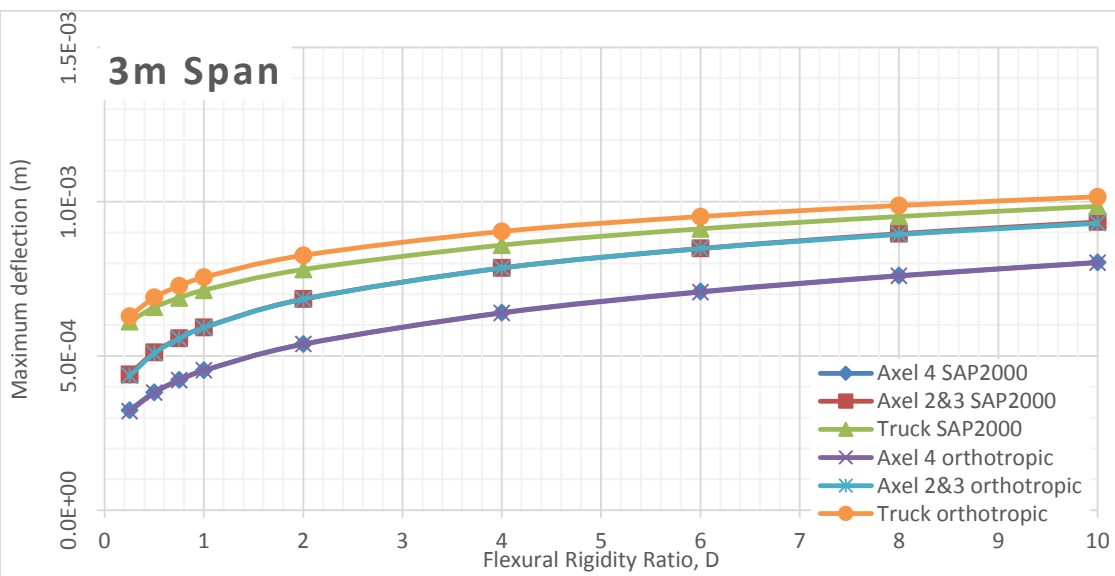

Figure 1031 Deflection comparison between FEA and Orthotropic Plate Theory for 3 m span of alpha 6 (main bars perpendicular to traffic)

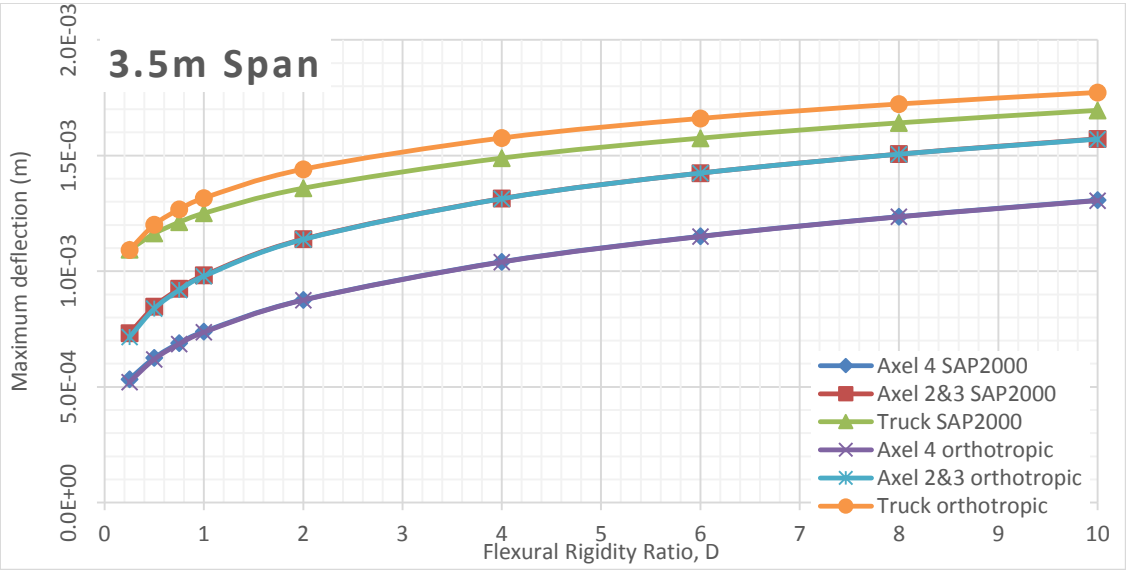

Figure 1032 Deflection comparison between FEA and Orthotropic Plate Theory for 3.5 m span of alpha 6 (main bars perpendicular to traffic)

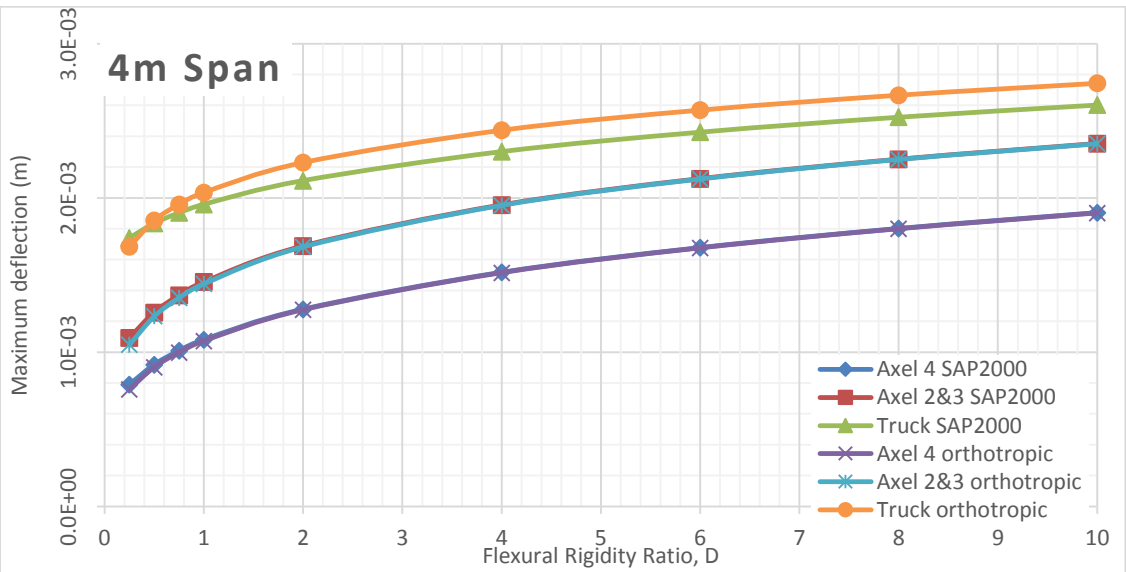

Figure 1033 Deflection comparison between FEA and Orthotropic Plate Theory for 4 m span of alpha 6 (main bars perpendicular to traffic)

Alpha 6 Deflection VS Flexural Rigidity for Different Span Length (Main bars parallel to traffic)

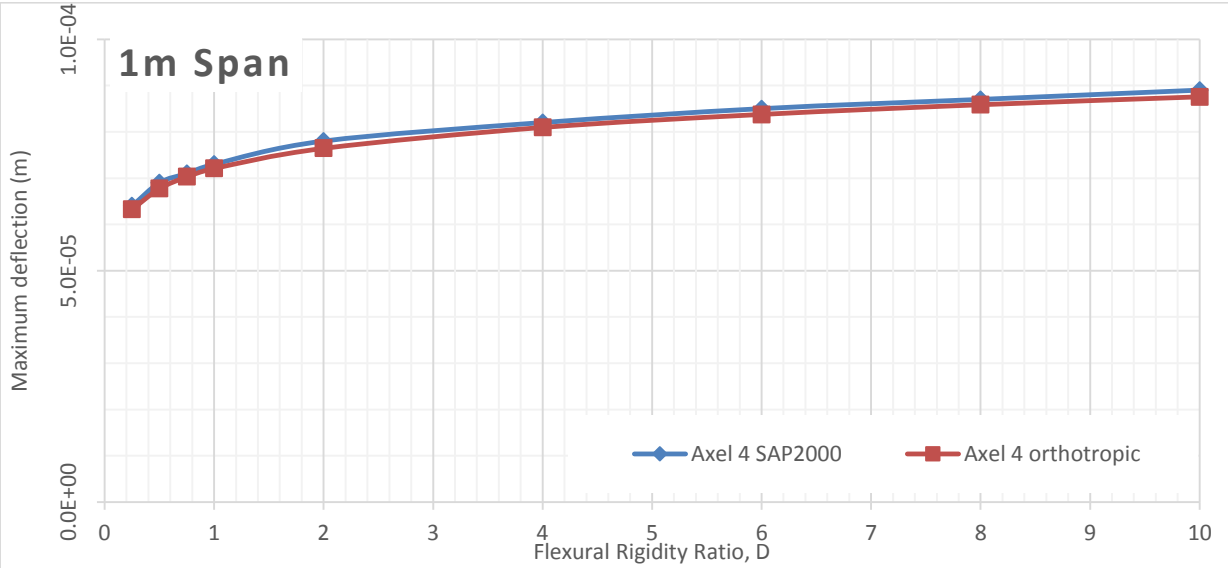

Figure 1034 Deflection comparison between FEA and Orthotropic Plate Theory for 1 m span of alpha 6 (main bars parallel to traffic)

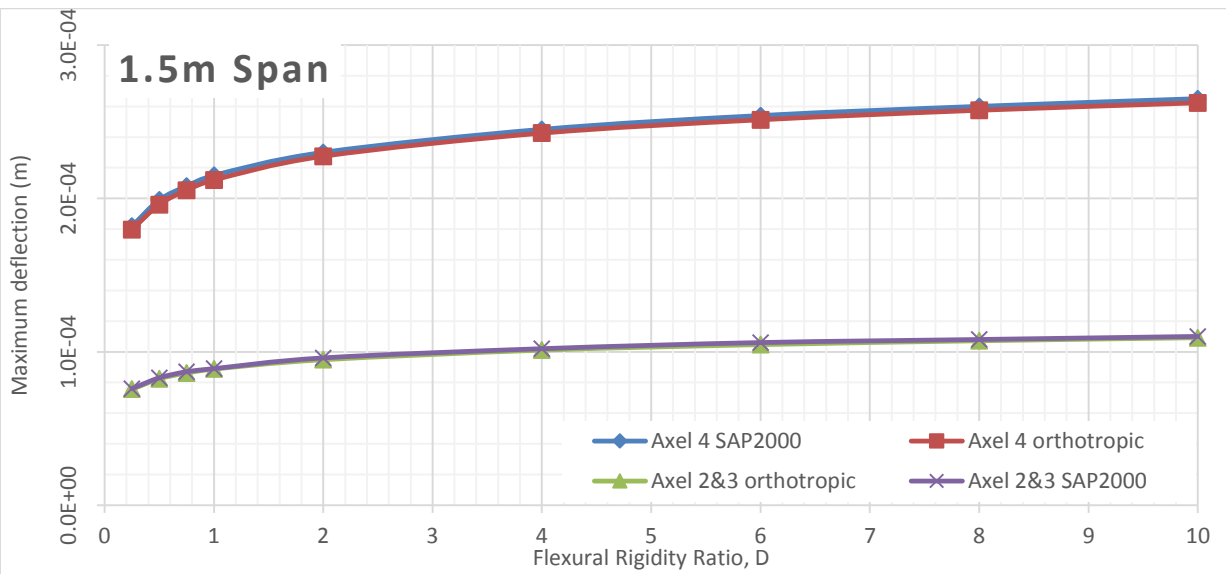

Figure 1035 Deflection comparison between FEA and Orthotropic Plate Theory for 1.5 m span of alpha 6 (main bars parallel to traffic)

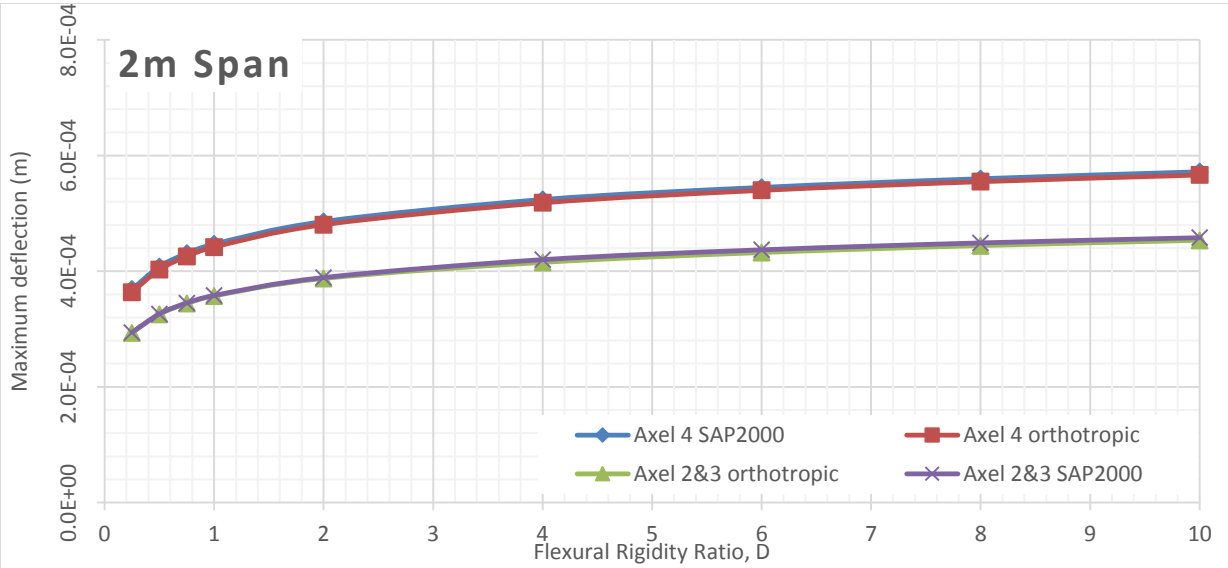

Figure 1036 Deflection comparison between FEA and Orthotropic Plate Theory for 2 m span of alpha 6 (main bars parallel to traffic)

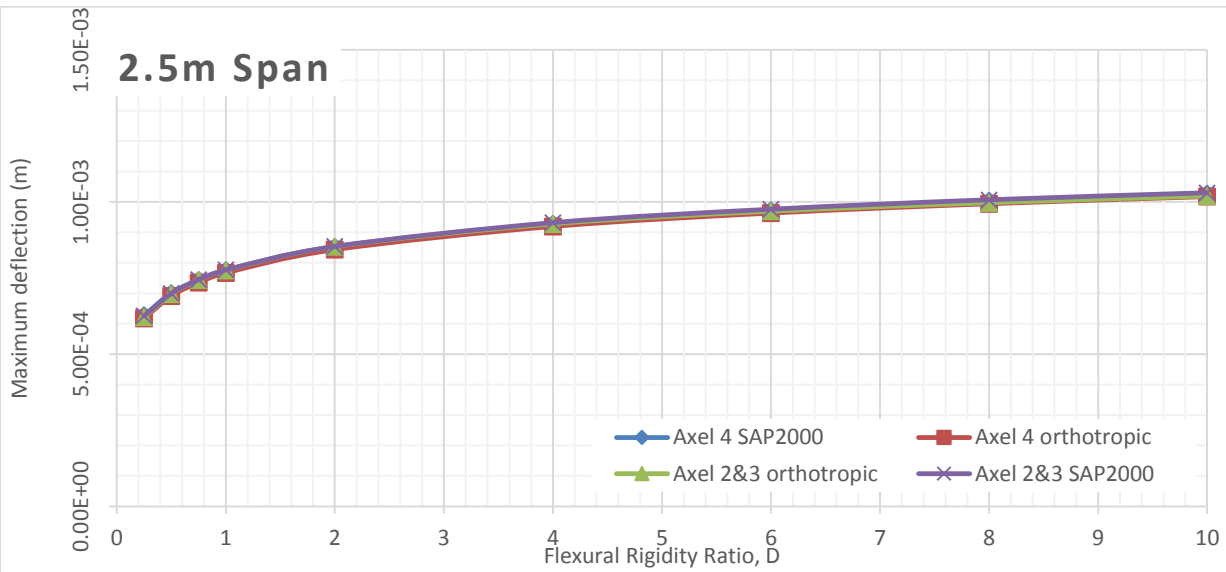

Figure 1037 Deflection comparison between FEA and Orthotropic Plate Theory for 2.5 m span of alpha 6 (main bars parallel to traffic)

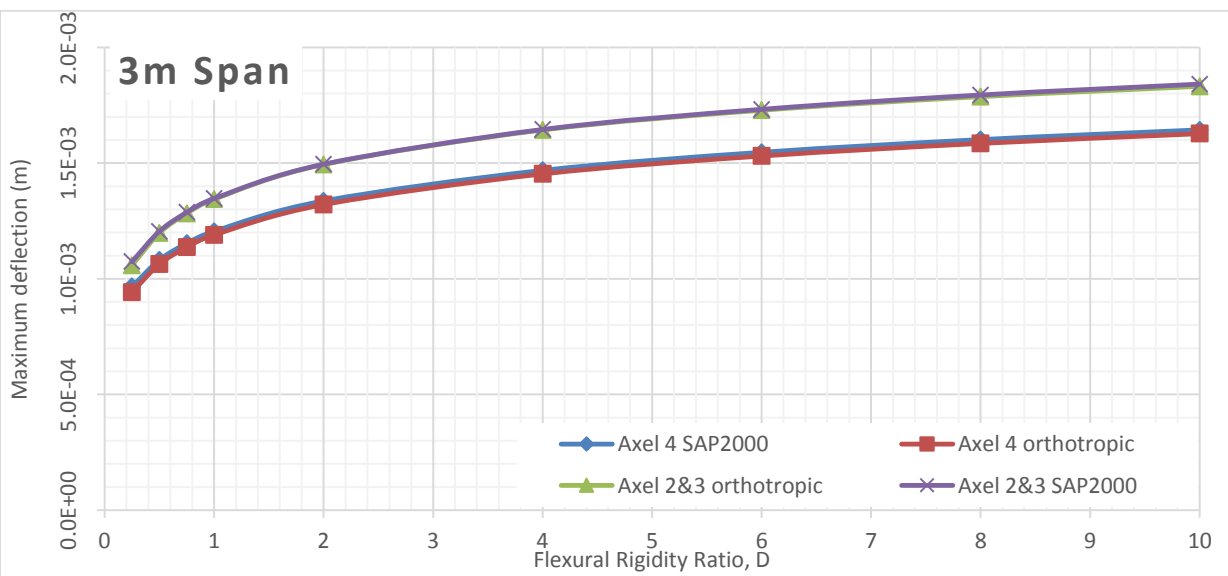

Figure 1038 Deflection comparison between FEA and Orthotropic Plate Theory for 3 m span of alpha 6 (main bars parallel to traffic)

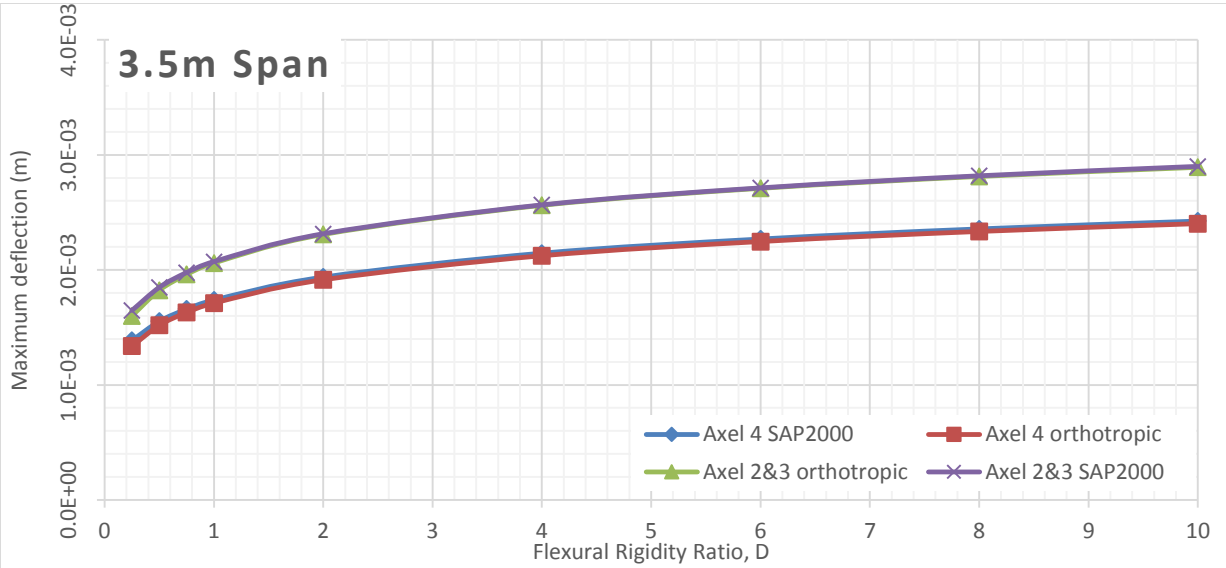

Figure 1039 Deflection comparison between FEA and Orthotropic Plate Theory for 3.5 m span of alpha 6 (main bars parallel to traffic)

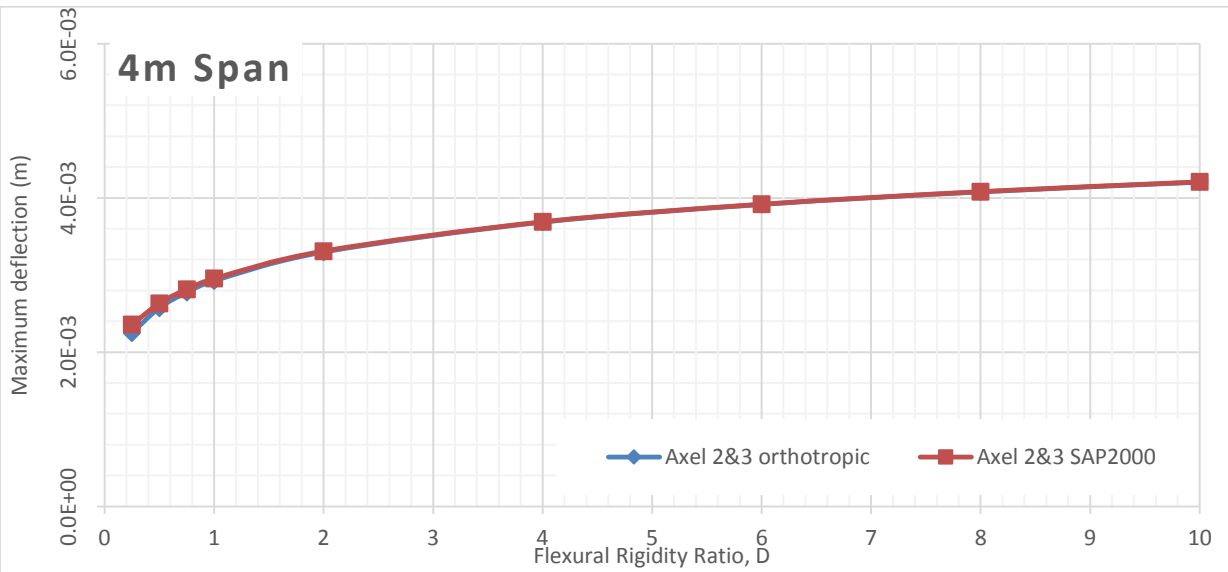

Figure 1040 Deflection comparison between FEA and Orthotropic Plate Theory for 4 m span of alpha 6 (main bars parallel to traffic)

Alpha 8 Deflection VS Flexural Rigidity for Different Span Length (Main bars perpendicular to traffic)

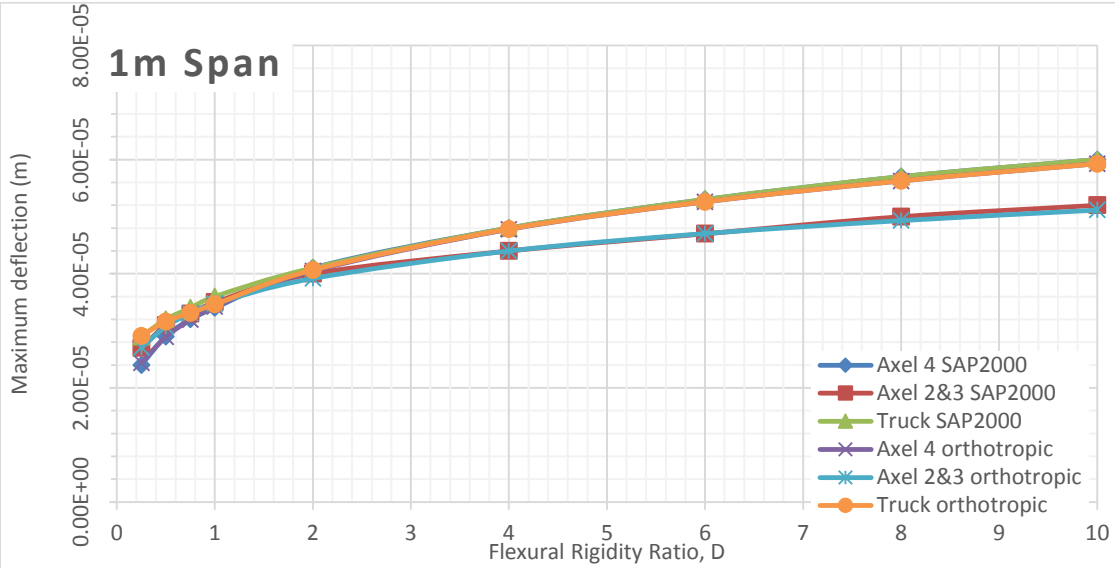

Figure 1041 Deflection comparison between FEA and Orthotropic Plate Theory for 1 m span of alpha 8 (main bars perpendicular to traffic)

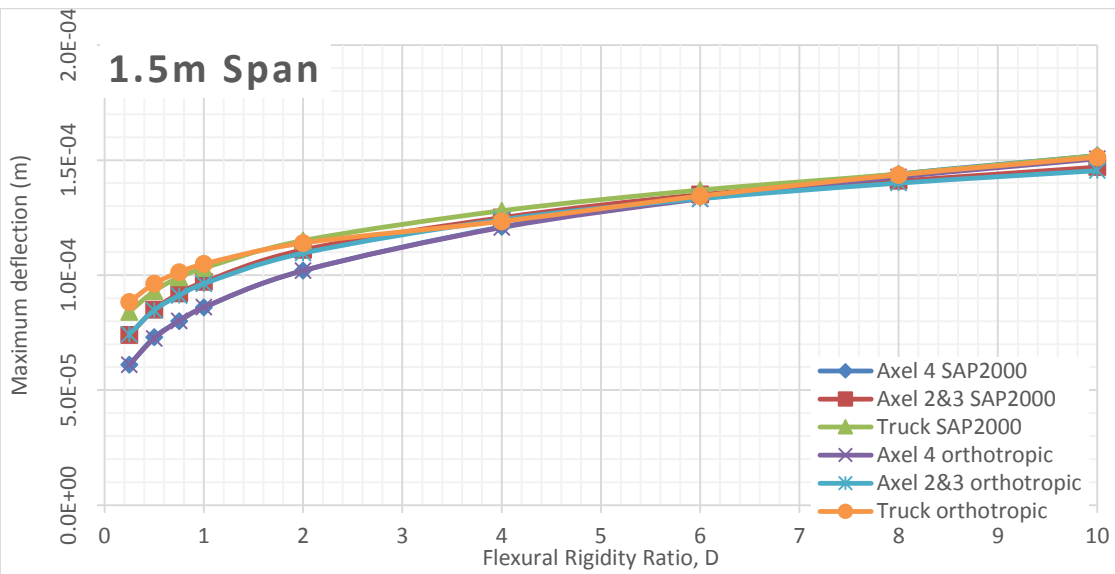

Figure 1042 Deflection comparison between FEA and Orthotropic Plate Theory for 1.5 m span of alpha 8 (main bars perpendicular to traffic)

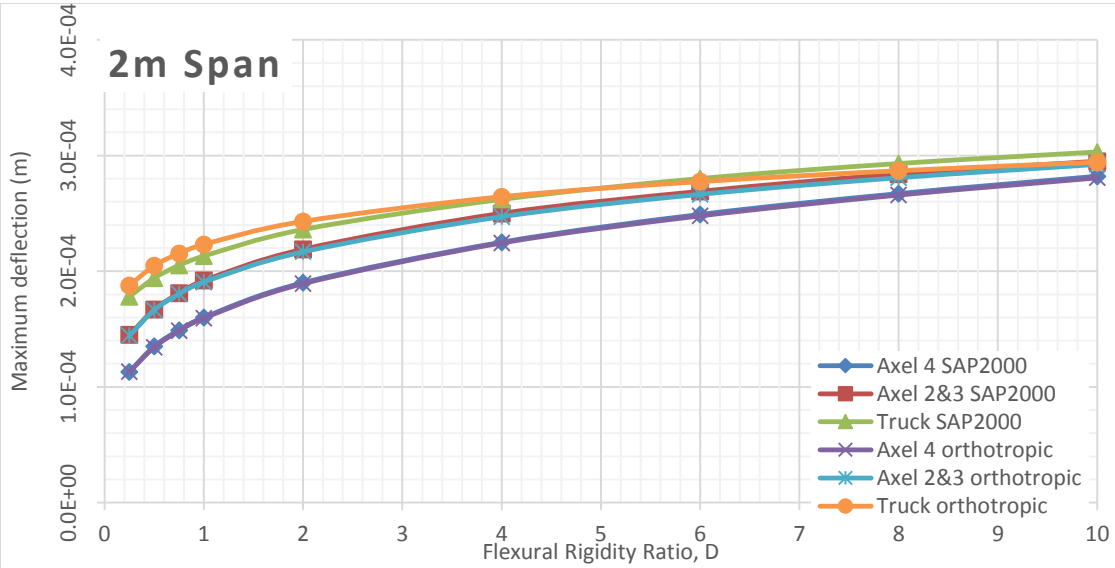

Figure 1043 Deflection comparison between FEA and Orthotropic Plate Theory for 2 m span of alpha 8 (main bars perpendicular to traffic)

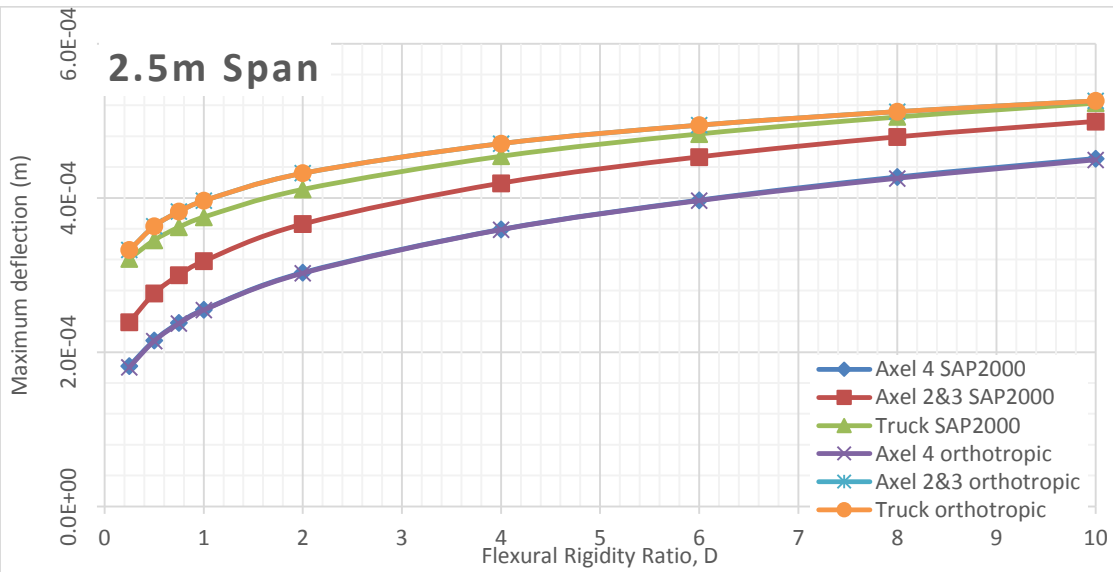

Figure 1044 Deflection comparison between FEA and Orthotropic Plate Theory for 2.5 m span of alpha 8 (main bars perpendicular to traffic)

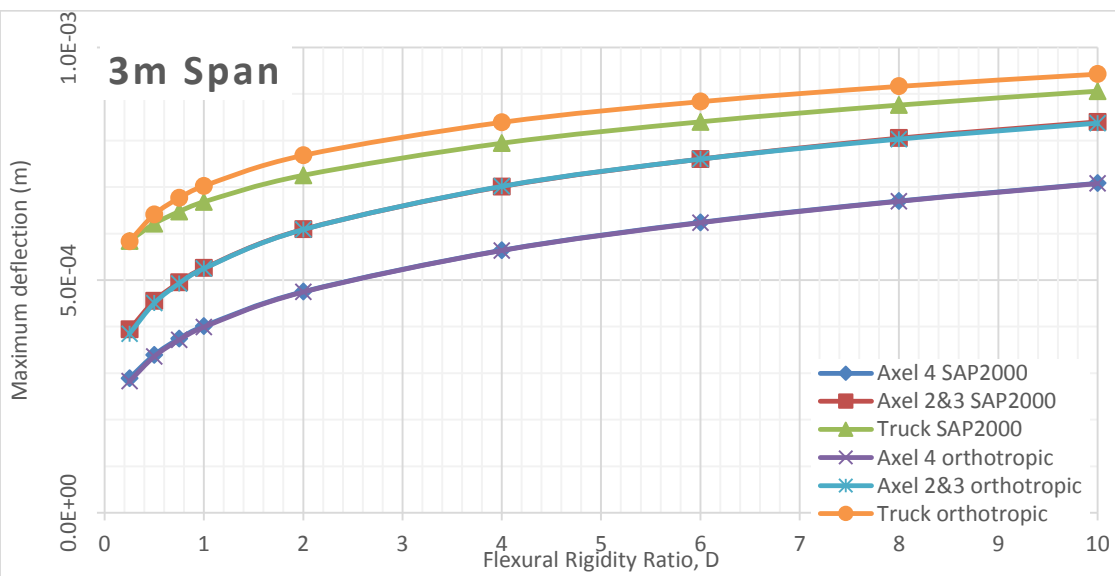

Figure 1045 Deflection comparison between FEA and Orthotropic Plate Theory for 3 m span of alpha 8 (main bars perpendicular to traffic)

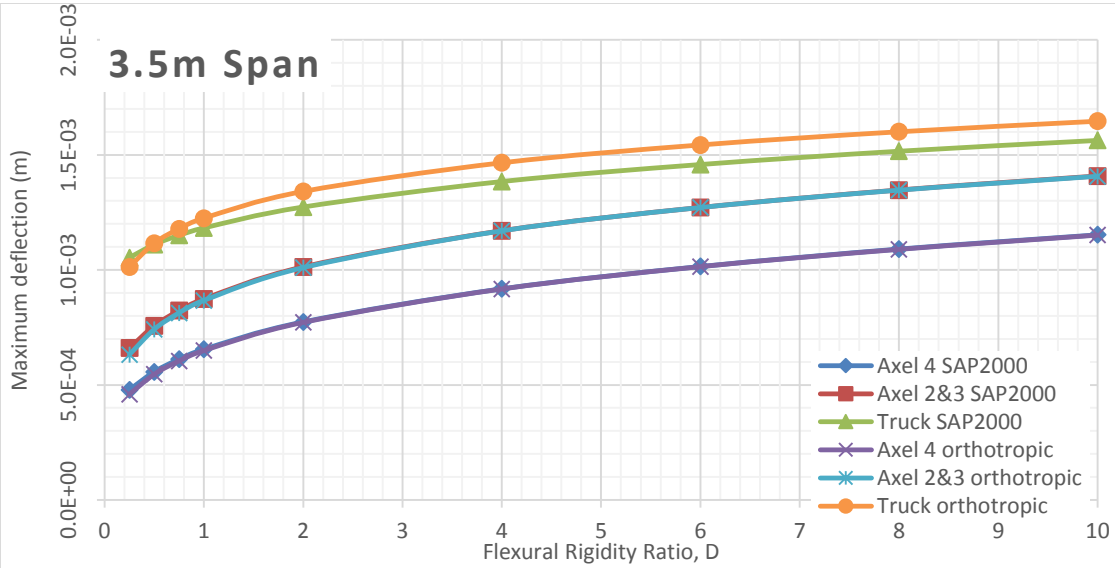

Figure 1046 Deflection comparison between FEA and Orthotropic Plate Theory for 3.5 m span of alpha 8 (main bars perpendicular to traffic)

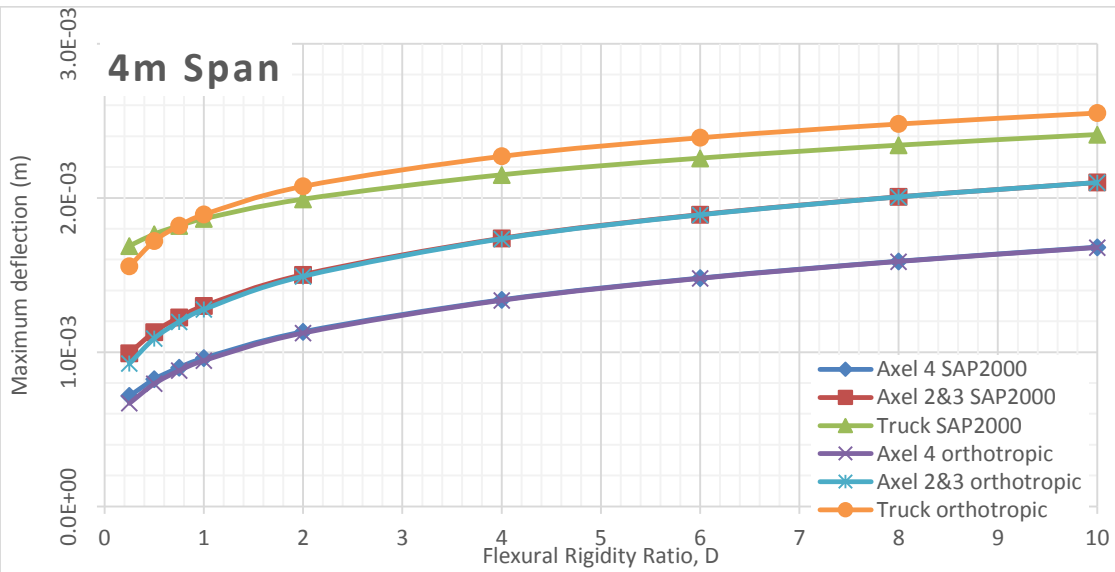

Figure 1047 Deflection comparison between FEA and Orthotropic Plate Theory for 4 m span of alpha 8 (main bars perpendicular to traffic)

Alpha 8 Deflection VS Flexural Rigidity for Different Span Length (Main bars parallel to traffic)

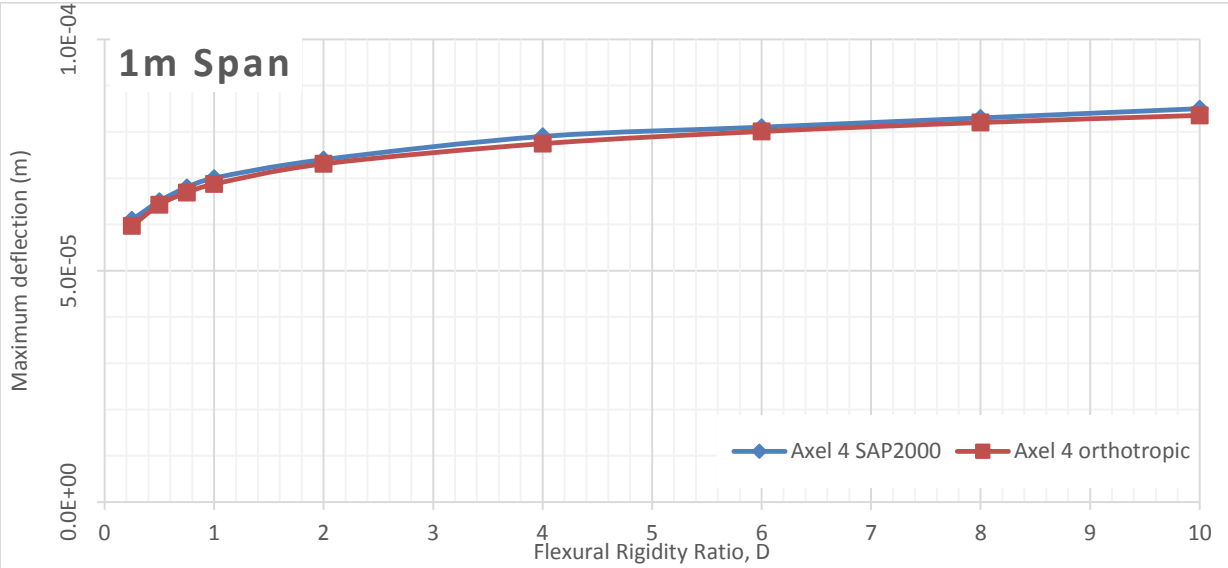

Figure 1048 Deflection comparison between FEA and Orthotropic Plate Theory for 1 m span of alpha 8 (main bars parallel to traffic)

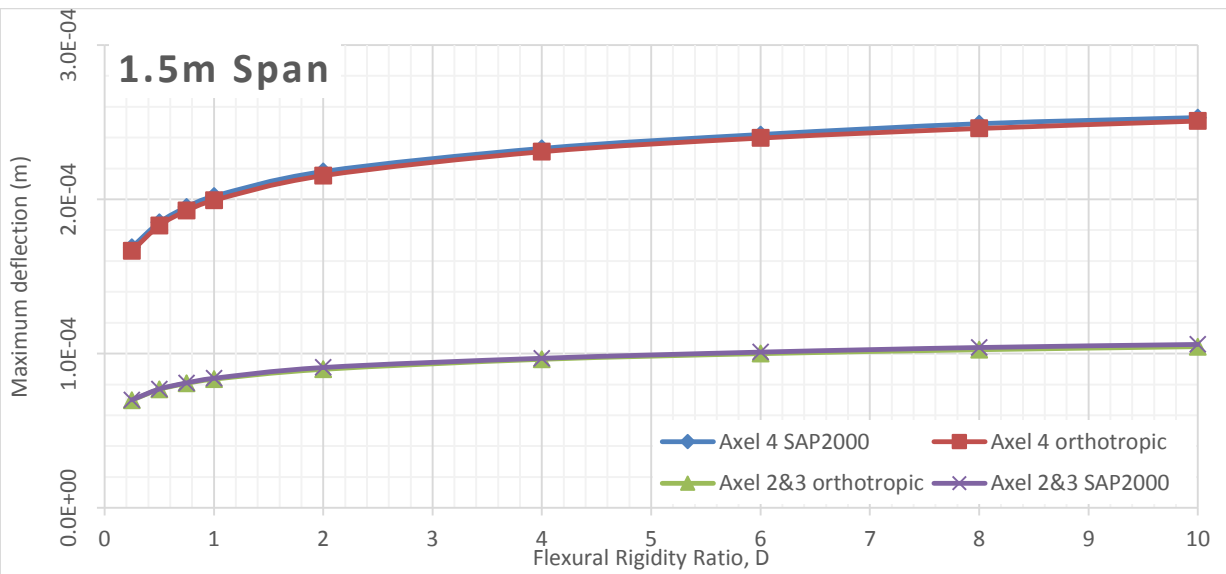

Figure 1049 Deflection comparison between FEA and Orthotropic Plate Theory for 1.5 m span of alpha 8 (main bars parallel to traffic)

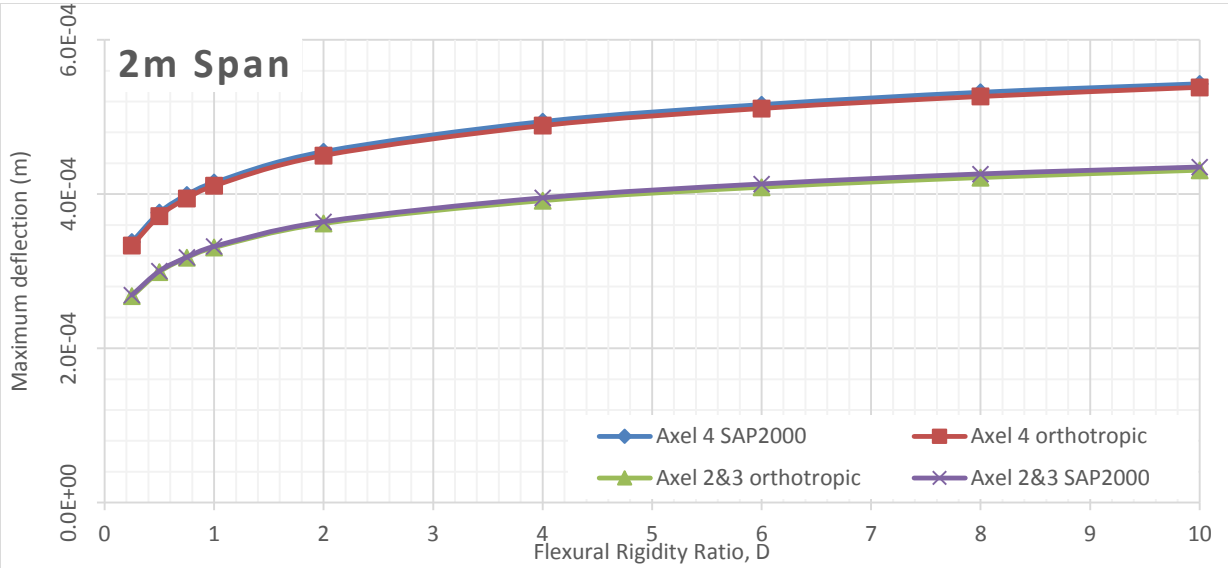

Figure 1050 Deflection comparison between FEA and Orthotropic Plate Theory for 2 m span of alpha 8 (main bars parallel to traffic)

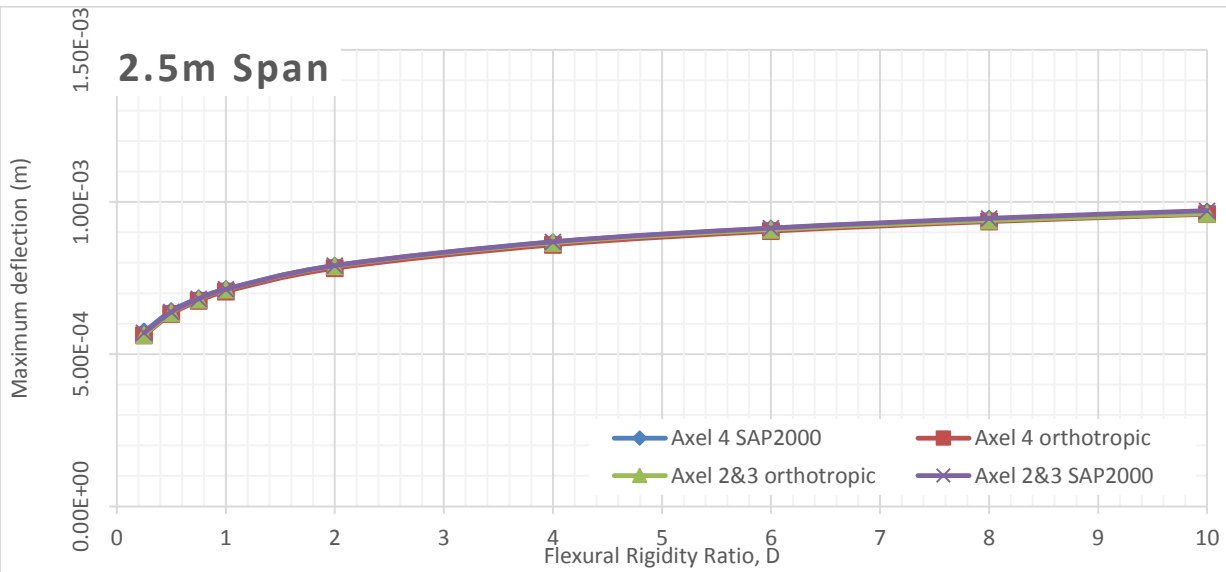

Figure 1051 Deflection comparison between FEA and Orthotropic Plate Theory for 2.5 m span of alpha 8 (main bars parallel to traffic)

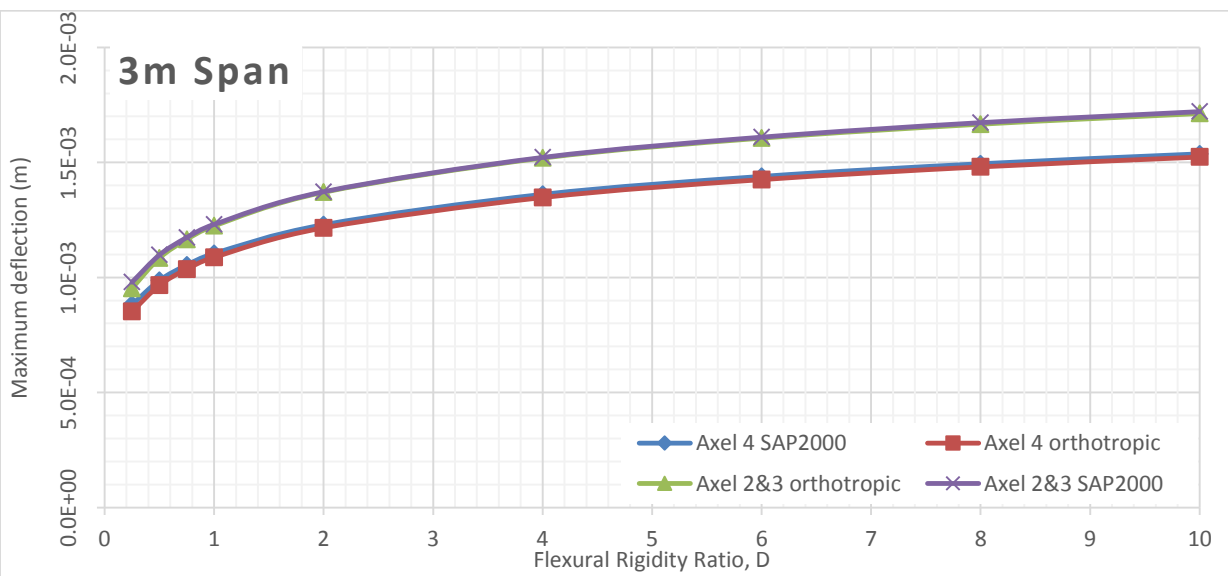

Figure 1052 Deflection comparison between FEA and Orthotropic Plate Theory for 3 m span of alpha 8 (main bars parallel to traffic)

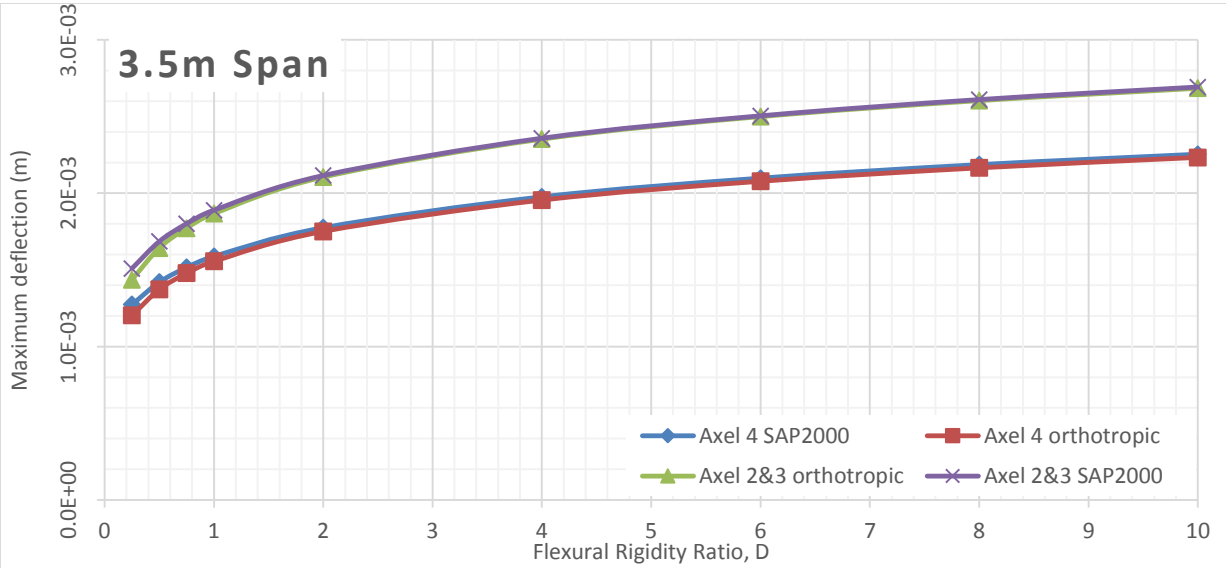

Figure 1053 Deflection comparison between FEA and Orthotropic Plate Theory for 3.5 m span of alpha 8 (main bars parallel to traffic)

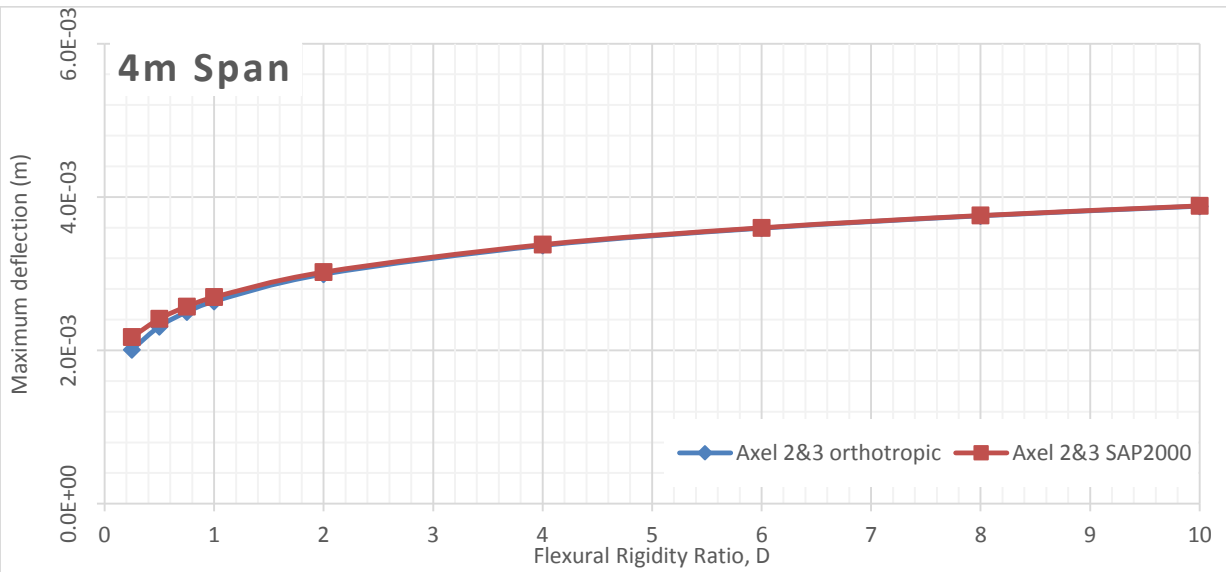

Figure 1054 Deflection comparison between FEA and Orthotropic Plate Theory for 4 m span of alpha 8 (main bars parallel to traffic)

Alpha 10 Deflection VS Flexural Rigidity for Different Span Length (Main bars perpendicular to traffic)

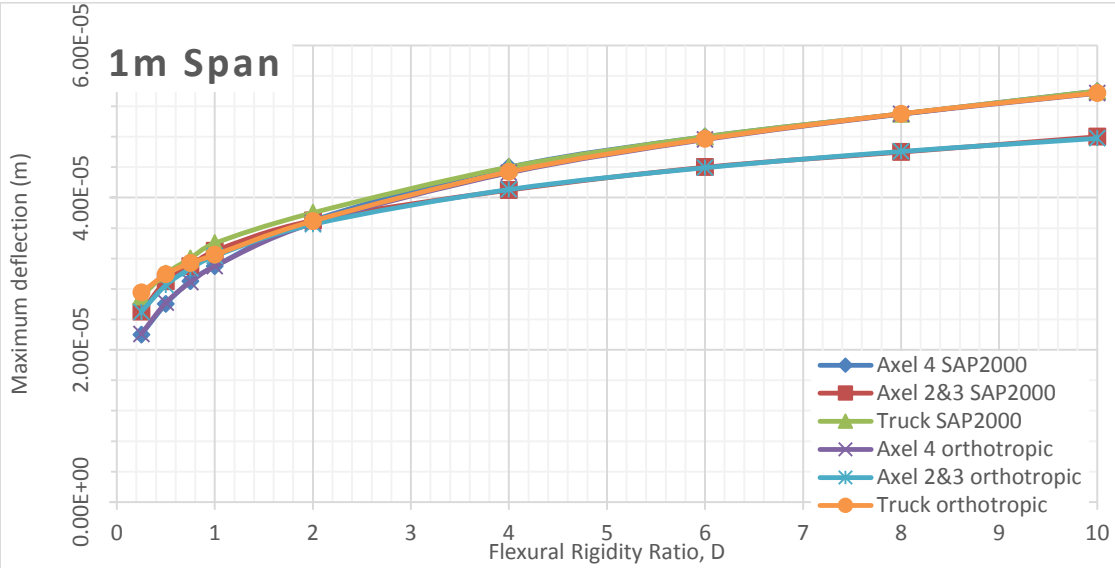

Figure 1055 Deflection comparison between FEA and Orthotropic Plate Theory for 1 m span of alpha 10 (main bars perpendicular to traffic)

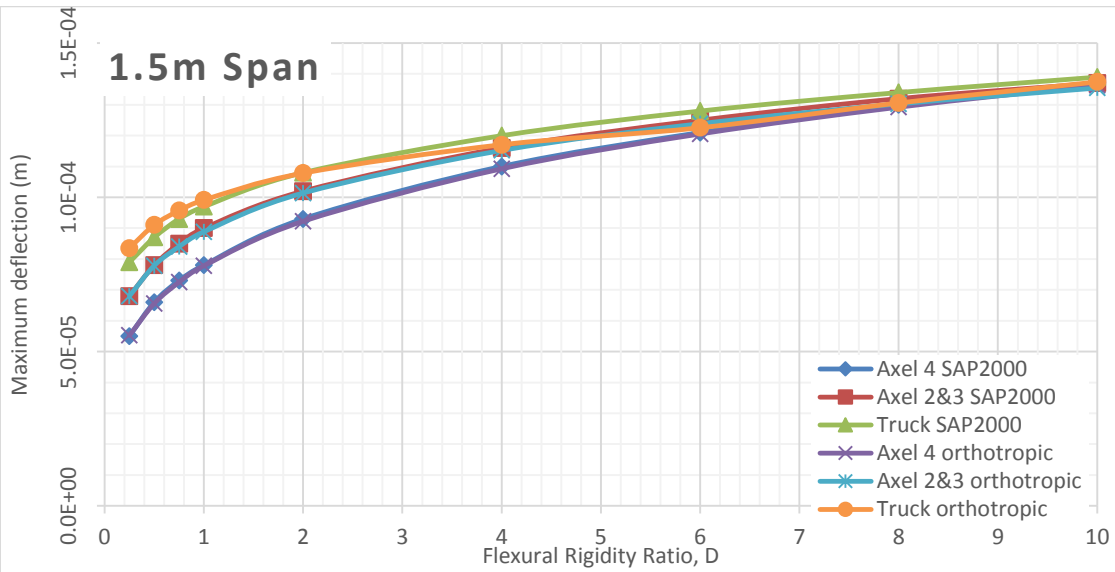

Figure 1056 Deflection comparison between FEA and Orthotropic Plate Theory for 1.5 m span of alpha 10 (main bars perpendicular to traffic)

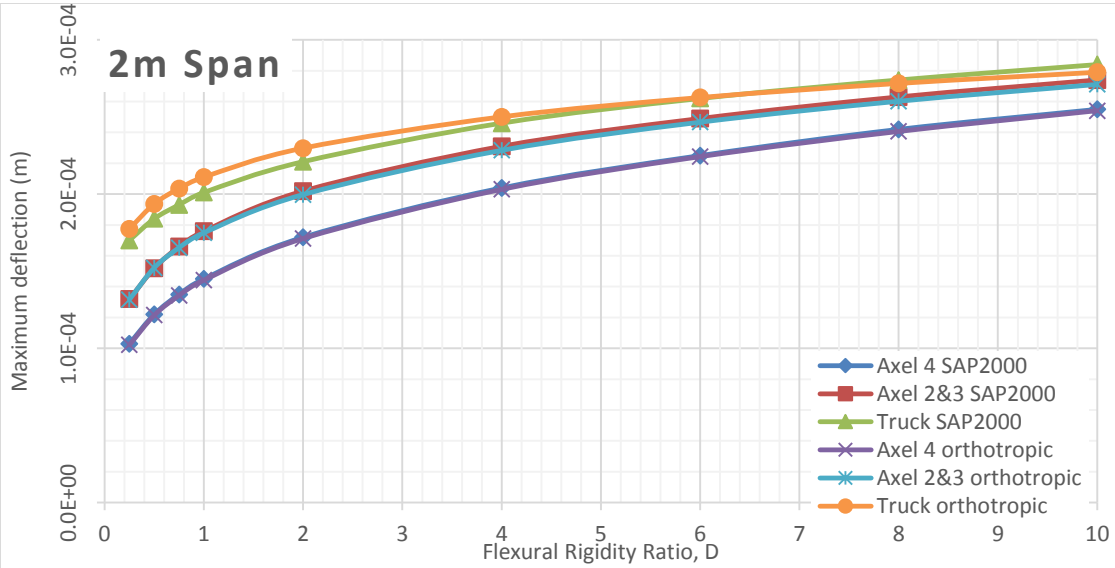

Figure 1057 Deflection comparison between FEA and Orthotropic Plate Theory for 2 m span of alpha 10 (main bars perpendicular to traffic)

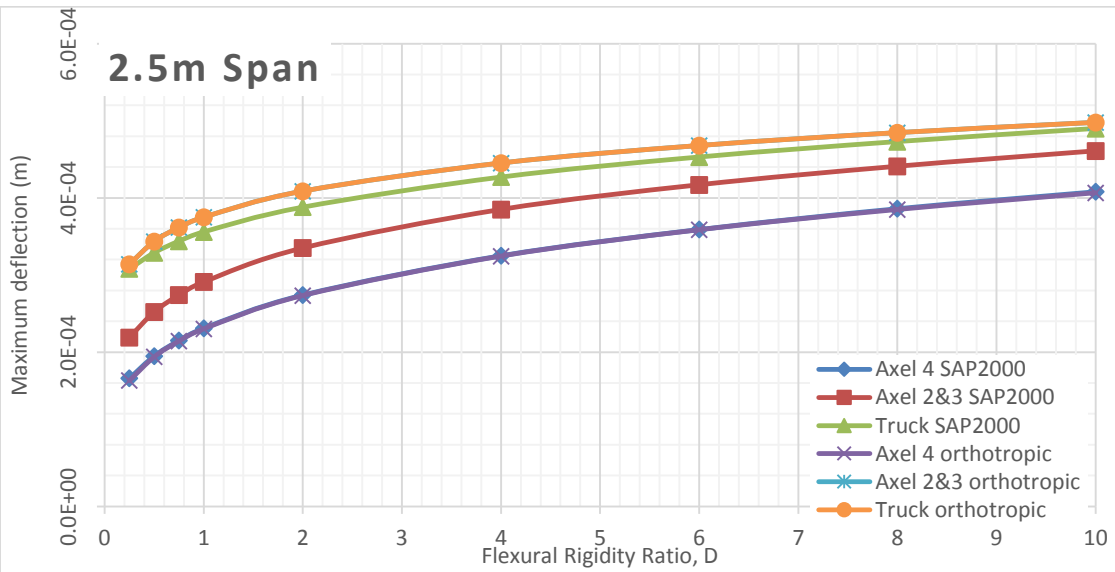

Figure 1058 Deflection comparison between FEA and Orthotropic Plate Theory for 2.5 m span of alpha 10 (main bars perpendicular to traffic)

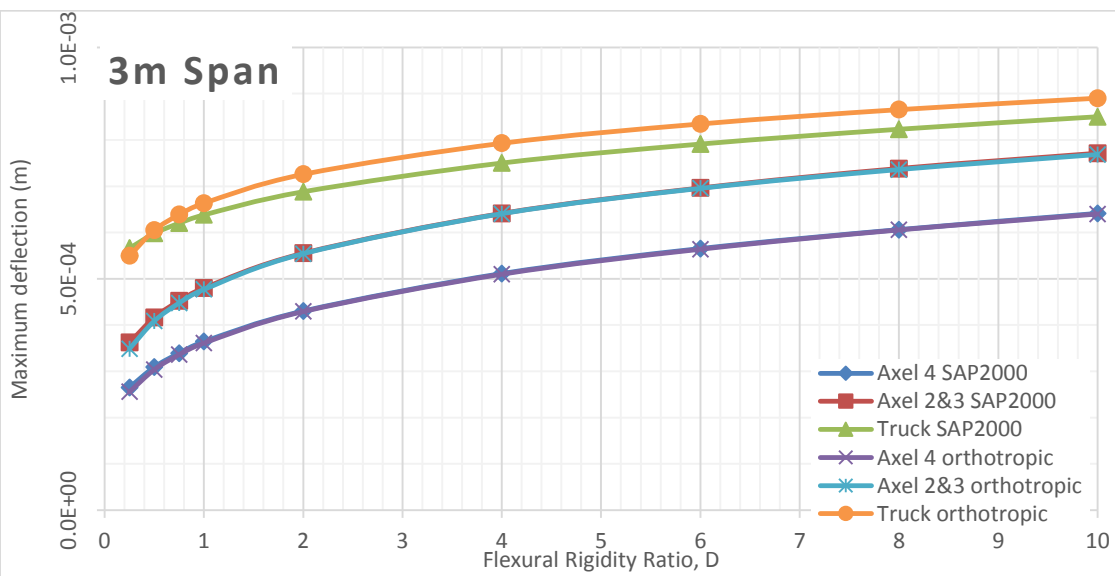

Figure 1059 Deflection comparison between FEA and Orthotropic Plate Theory for 3 m span of alpha 10 (main bars perpendicular to traffic)

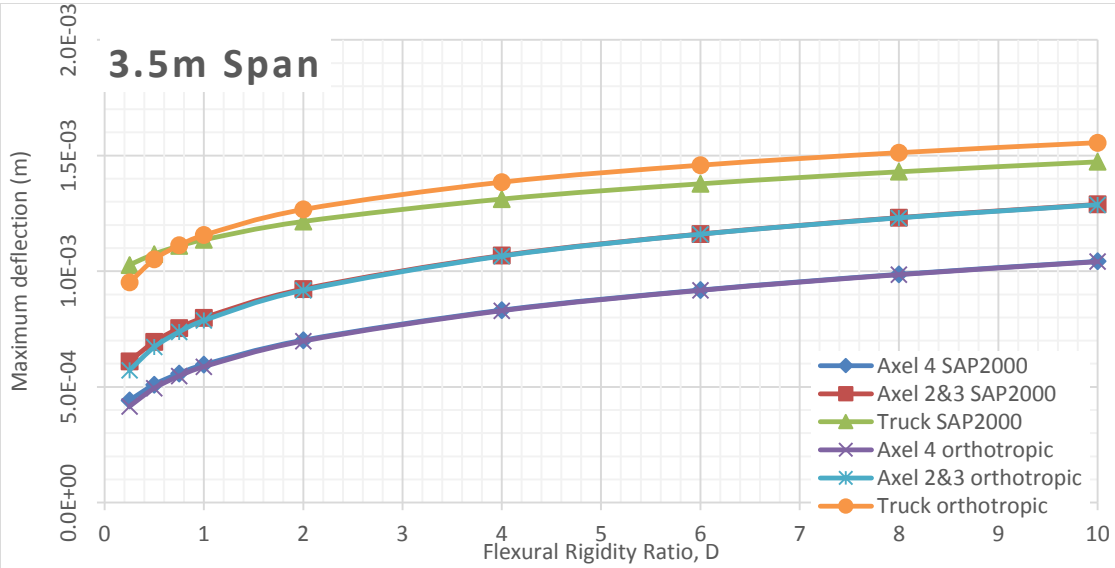

Figure 1060 Deflection comparison between FEA and Orthotropic Plate Theory for 3.5 m span of alpha 10 (main bars perpendicular to traffic)

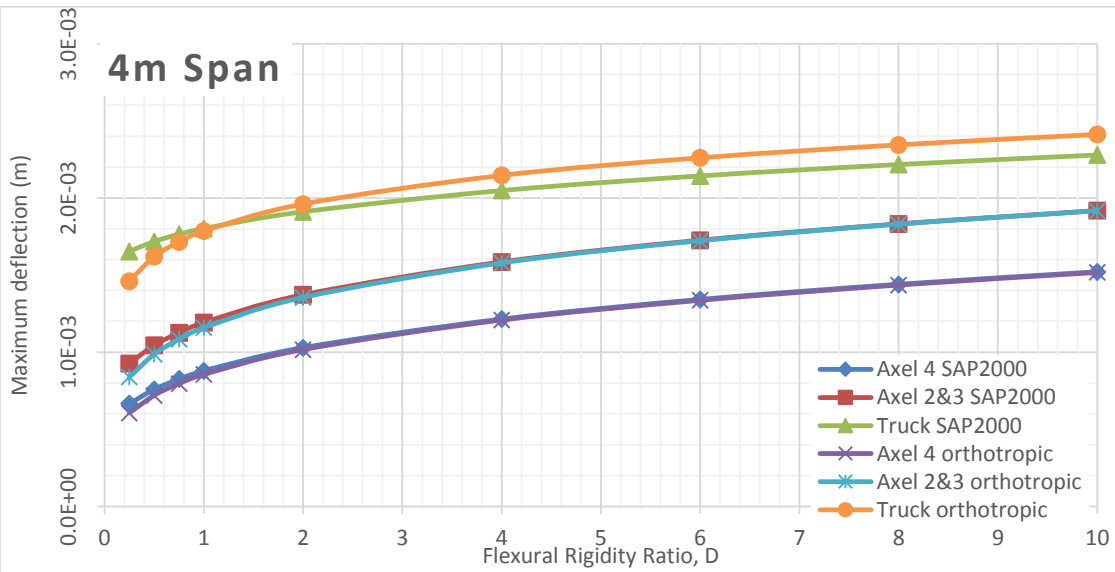

Figure 1061 Deflection comparison between FEA and Orthotropic Plate Theory for 4 m span of alpha 10 (main bars perpendicular to traffic)

Alpha 10 Deflection VS Flexural Rigidity for Different Span Length (Main bars parallel to traffic)

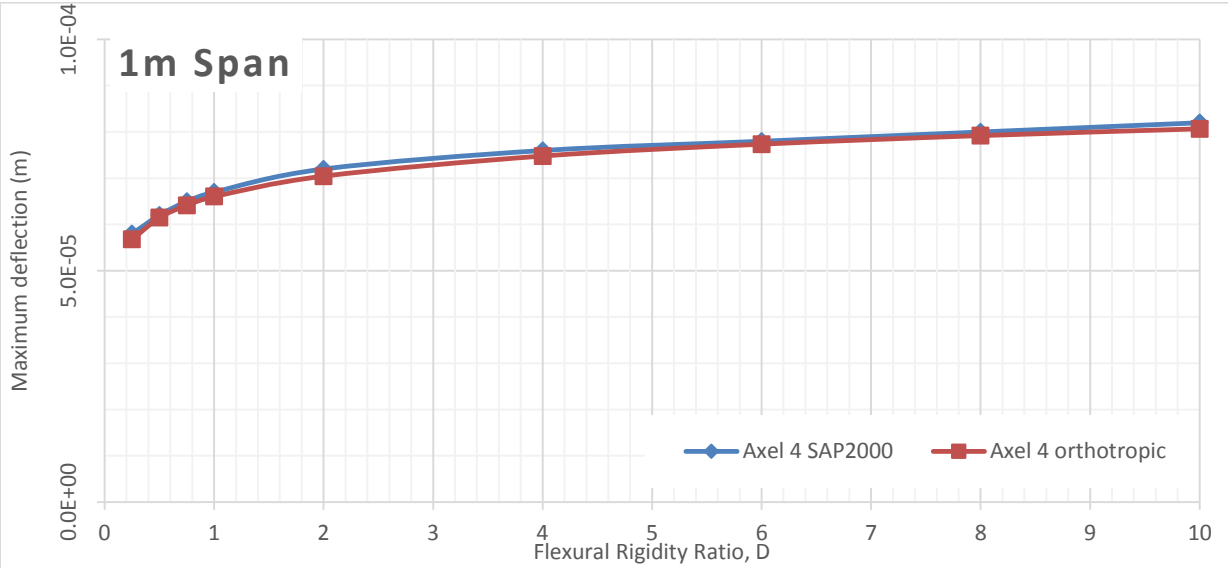

Figure 1062 Deflection comparison between FEA and Orthotropic Plate Theory for 1 m span of alpha 10 (main bars parallel to traffic)

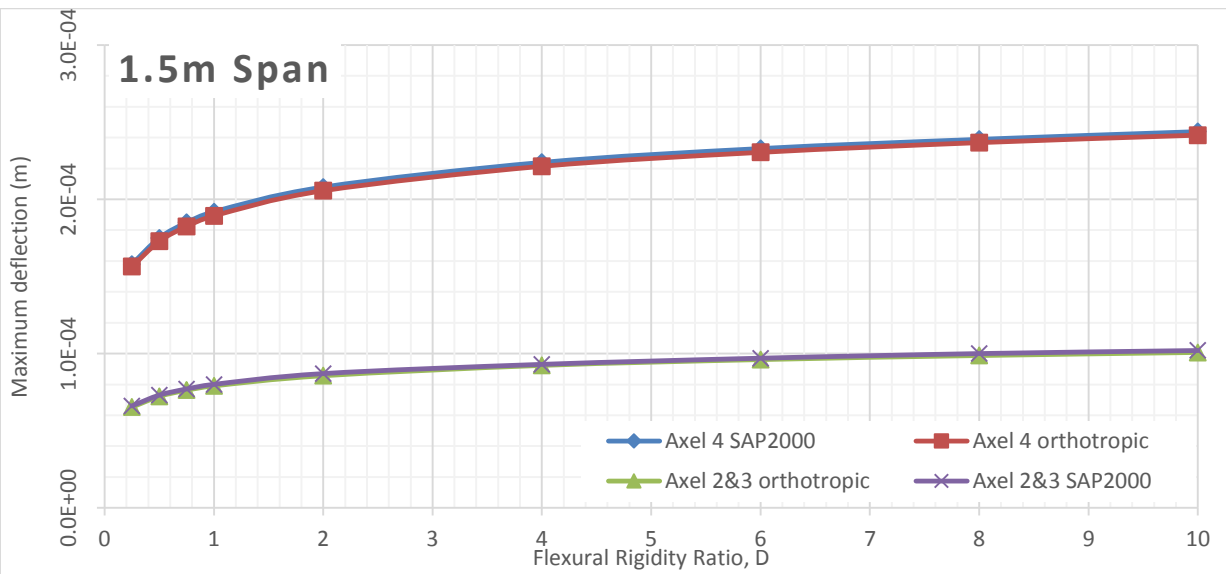

Figure 1063 Deflection comparison between FEA and Orthotropic Plate Theory for 1.5 m span of alpha 10 (main bars parallel to traffic)

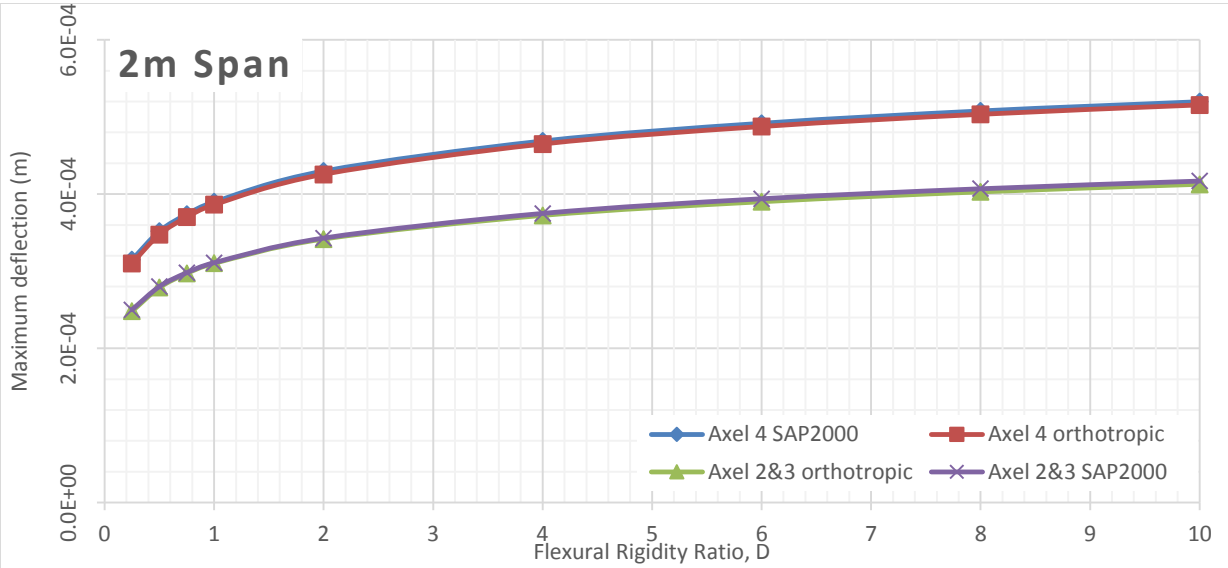

Figure 1064 Deflection comparison between FEA and Orthotropic Plate Theory for 2 m span of alpha 10 (main bars parallel to traffic)

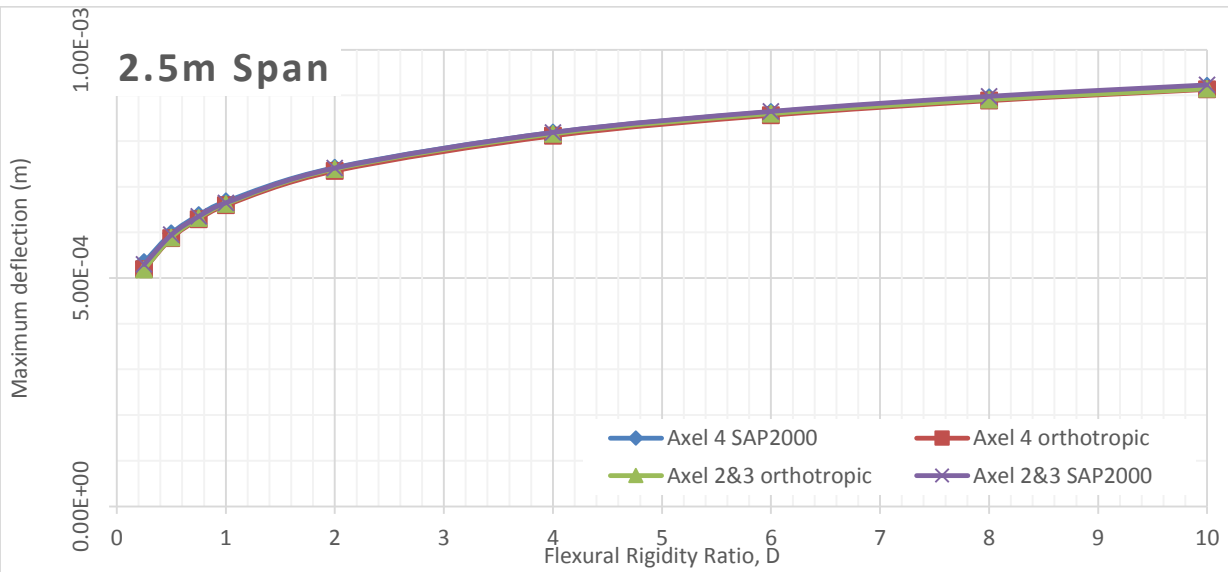

Figure 1065 Deflection comparison between FEA and Orthotropic Plate Theory for 2.5 m span of alpha 10 (main bars parallel to traffic)

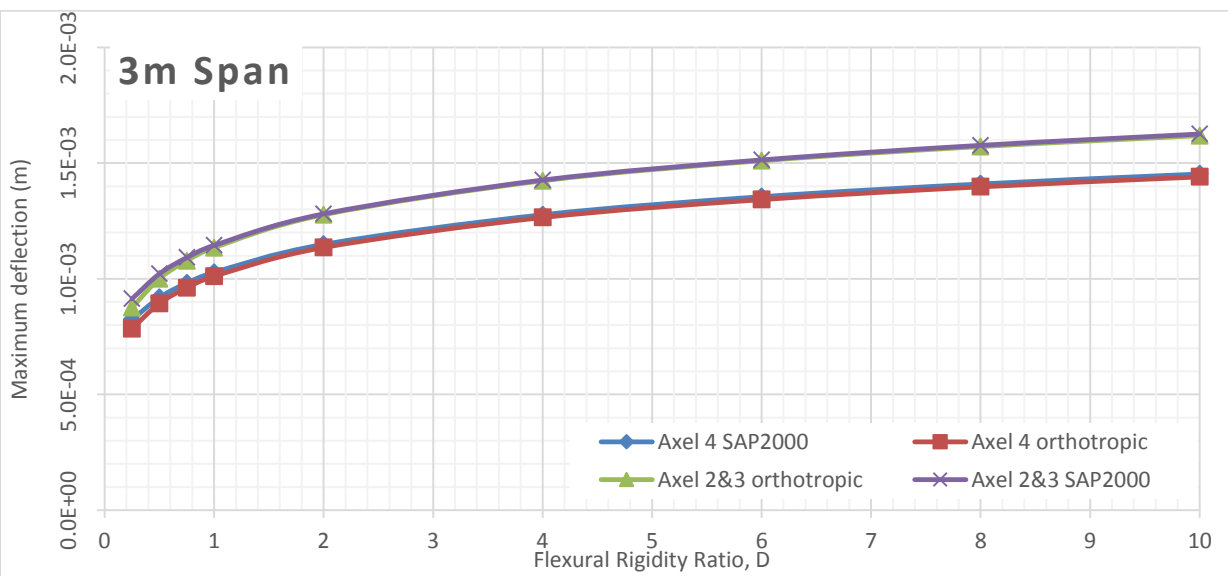

Figure 1066 Deflection comparison between FEA and Orthotropic Plate Theory for 3 m span of alpha 10 (main bars parallel to traffic)

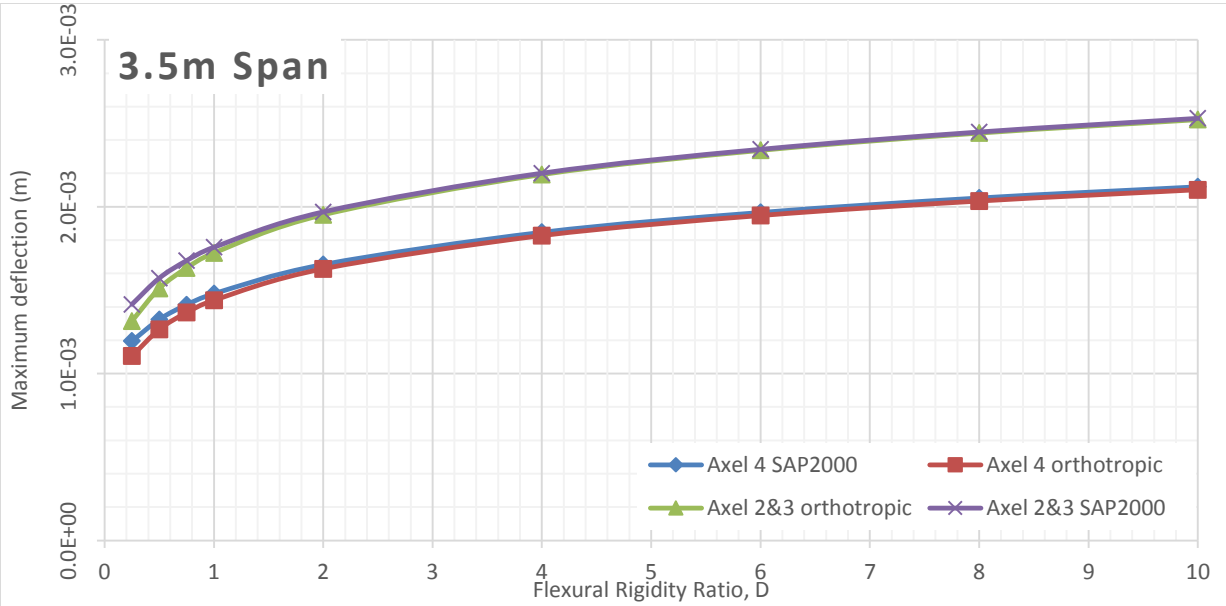

Figure 1067 Deflection comparison between FEA and Orthotropic Plate Theory for 3.5 m span of alpha 10 (main bars parallel to traffic)

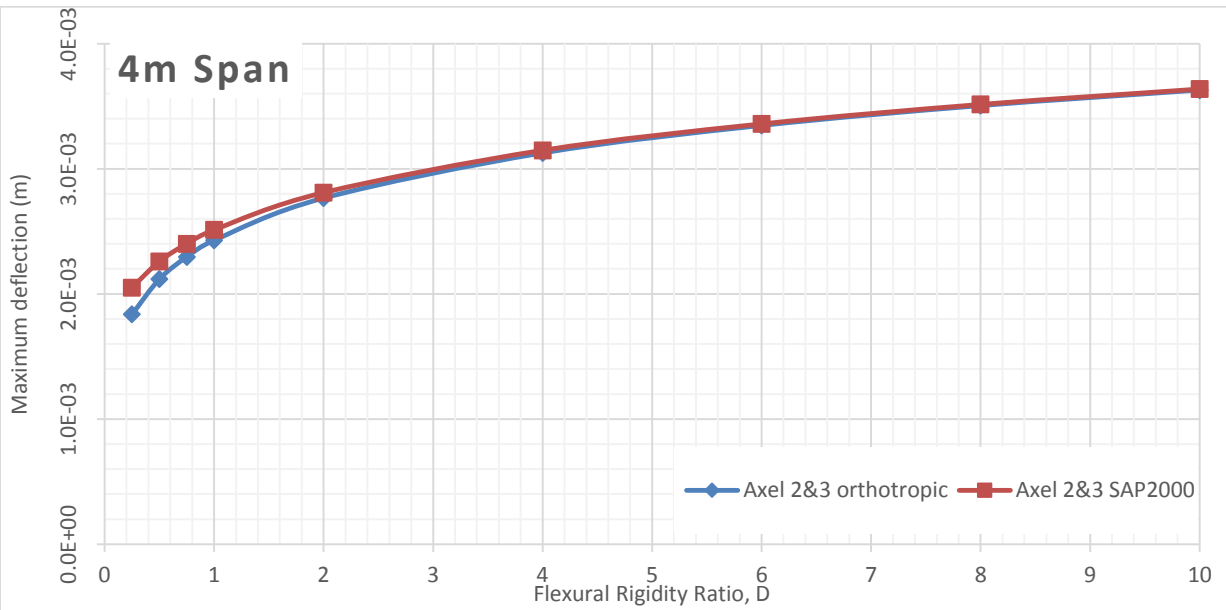

Figure 1068 Deflection comparison between FEA and Orthotropic Plate Theory for 4 m span of alpha 10 (main bars parallel to traffic)

E.1 Factored Bending Moment

E.1.1 BENDING MOMENT RESULTS TABLES

Alpha 0.25 Bending Moment Results

Table 280 Factored maximum moment results for alpha 0.25 (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Main bars perpendicular	1	10.6927	12.6817	14.0059	15.0245	17.7734	20.9820	23.0925	24.7007	26.0135
	1.5	13.3125	15.8001	17.4593	18.7376	22.1970	26.2556	28.9397	30.9937	32.6766
	2	15.1364	17.9700	19.8615	21.3196	25.2701	29.9146	32.9927	35.3523	37.2883
	2.5	16.9517	19.6406	21.7107	23.3071	27.6348	32.7287	36.1086	38.7021	40.8316
	3	18.5467	21.0188	23.2161	24.9248	29.5593	35.0184	38.6434	41.4268	43.7134
	3.5	18.6493	22.1482	24.4861	26.2897	31.1828	36.9497	40.7813	43.7245	46.1435
	4	20.5267	23.5864	25.5575	27.0280	31.0740	36.8336	40.6642	43.6088	46.0305

Table 281 Factored maximum moment results for alpha 0.25 (main bars parallel to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Main bars Parallel	1	15.3683	16.3694	17.0821	17.6531	19.3422	21.5991	22.8979	23.7940	24.4694
	1.5	21.9069	22.8706	23.5085	24.0089	25.4275	27.2309	28.5014	29.5062	30.4507
	2	28.0660	29.3238	30.0432	30.5659	31.9385	33.5882	34.7377	35.6553	36.4329
	2.5	33.4598	35.2886	36.2595	36.9184	38.4772	40.1420	41.2396	42.0988	42.8202
	3	38.0508	40.5782	41.9165	42.8054	44.7852	46.6674	47.8065	48.6630	49.3667
	3.5	41.9556	45.1922	46.9467	48.1181	50.6916	52.9886	54.2749	55.1948	55.9262
	4	48.47743	51.92395	53.70242	54.85171	57.24623	59.21711	60.37319	61.24375	61.95295

Alpha 0.5 Bending Moment Results

Table 282 Factored maximum moment results for alpha 0.5 (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Main bars perpendicular	1	9.7609	11.5768	12.7858	13.7158	16.2263	19.1578	21.0871	22.5580	23.7592
	1.5	12.1524	14.4234	15.9383	17.1054	20.2644	23.9718	26.4244	28.3021	29.8409
	2	13.8332	16.4043	18.1312	19.4625	23.0698	27.3119	30.1243	32.2808	34.0507
	2.5	15.6497	17.9293	19.8193	21.2767	25.2284	29.8808	32.9687	35.3388	37.2853
	3	17.1030	19.4137	20.4417	22.7535	26.9852	31.9710	35.2827	37.8260	39.9160
	3.5	17.0242	20.2184	22.3529	23.9995	28.4673	33.7340	37.2343	39.9236	42.1344
	4	18.8757	21.7059	23.5300	24.8915	28.3919	33.6281	37.1273	39.8179	42.0311

Table 283 Factored maximum moment results for alpha 0.5 (main bars parallel to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Main bars Parallel	1	14.9052	15.8334	16.4778	16.9874	18.4063	20.1617	21.3086	22.1734	22.8337
	1.5	21.1471	22.1606	22.8011	23.2900	24.6308	26.2758	27.4105	28.2993	29.0369
	2	26.8134	28.2038	28.9919	29.5536	30.9719	32.5833	33.6668	34.5159	35.2267
	2.5	31.6904	33.6526	34.7203	35.4498	37.1603	38.9110	40.0142	40.8544	41.5475
	3	35.8266	38.4292	39.0541	40.8152	42.9972	45.0662	46.2822	47.1721	47.8876
	3.5	39.3453	42.5824	44.3858	45.6131	48.3818	50.9183	52.3371	53.3372	54.1195
	4	45.3996	48.9436	50.4745	52.1115	54.8746	57.3009	58.6471	59.6029	60.3722

Alpha 0.75 Bending Moment Results

Table 284 Factored maximum moment results for alpha 0.75 (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Main bars perpendicular	1	9.0368	10.7181	11.8376	12.6989	15.0241	17.7405	19.5290	20.8932	22.0077
	1.5	11.2509	13.3536	14.7563	15.8370	18.7626	22.1970	24.4700	26.2106	27.6374
	2	12.9520	15.1875	16.7865	18.0192	21.3599	25.2894	27.8953	29.8941	31.5349
	2.5	14.6280	16.5994	18.3494	19.6989	23.3584	27.6677	30.5288	32.7252	34.5295
	3	15.9712	18.1549	19.6216	21.0662	24.9849	29.6029	32.6711	35.0279	36.9651
	3.5	15.7613	18.7187	20.6950	22.2197	26.3570	31.2351	34.4779	36.9699	39.0188
	4	17.5843	20.2376	21.9454	23.2227	26.5102	31.1371	34.3788	36.8718	38.9229

Table 285 Factored maximum moment results for alpha 0.75 (main bars parallel to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Main bars Parallel	1	14.5201	15.4001	15.9968	16.4633	17.7470	19.2979	20.3147	21.0658	21.6590
	1.5	20.4978	21.5538	22.2019	22.6865	23.9790	25.5146	26.5540	27.3613	28.0282
	2	25.7732	27.2554	28.0944	28.6870	30.1494	31.7462	32.7880	33.5909	34.2557
	2.5	30.2574	32.3015	33.4339	34.2125	36.0347	37.8593	38.9763	39.8099	40.4876
	3	34.0466	36.6872	38.1624	39.1729	41.4922	43.6981	44.9768	45.8977	46.6278
	3.5	37.2708	40.4909	42.3186	43.5785	46.4714	49.1716	50.6868	51.7485	52.5720
	4	42.9494	46.5382	48.5177	49.8562	52.8503	55.5512	57.0478	58.1032	58.9313

Alpha 1 Bending Moment Results

Table 286 Factored maximum moment results for alpha 1 (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Main bars perpendicular	1	8.4531	10.0260	11.0734	11.8793	14.0553	16.5982	18.2733	19.5514	20.5961
	1.5	10.5243	12.4913	13.8035	14.8147	17.5522	20.7667	22.8947	24.5248	25.8615
	2	12.2343	14.2067	15.7027	16.8560	19.9817	23.6593	26.0988	27.9704	29.5071
	2.5	13.7972	15.6176	17.1646	18.4272	21.8512	25.8840	28.5622	30.6186	32.3083
	3	15.0517	17.1315	18.4429	19.7061	23.3726	27.6942	30.5661	32.7727	34.5865
	3.5	14.7434	17.5099	19.3588	20.7852	24.6561	29.2210	32.2563	34.5892	36.5077
	4	16.5395	19.0476	20.6614	21.8707	24.9900	29.1293	32.1635	34.4973	36.4176

Table 287 Factored maximum moment results for alpha 1 (main bars parallel to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Main bars Parallel	1	14.1895	15.0368	15.5993	16.0342	17.2184	18.6198	19.5502	20.2427	20.7939
	1.5	19.9315	21.0235	21.6806	22.1648	23.4269	24.8848	25.8548	26.6022	27.2171
	2	24.8870	26.4349	27.3125	27.9297	29.4318	31.0265	32.0416	32.8127	33.4450
	2.5	29.0610	31.1557	32.3329	33.1466	35.0530	36.9401	38.0735	38.9068	39.5764
	3	32.5742	35.2313	36.7389	37.7808	40.1963	42.5052	43.8349	44.7833	45.5285
	3.5	35.5653	38.7599	40.5967	41.8752	44.8490	47.6651	49.2522	50.3619	51.2188
	4	40.9329	44.5364	46.5617	47.9489	51.1041	54.0070	55.6161	56.7416	57.6156

Alpha 2 Bending Moment Results

Table 288 Factored maximum moment results for alpha 2 (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Main bars perpendicular	1	6.9021	8.1869	9.0428	9.7014	11.4809	13.5630	14.9366	15.9861	16.8448
	1.5	8.6272	10.1998	11.2718	12.0980	14.3358	16.9658	18.7088	20.0451	21.1417
	2	10.2870	11.6267	12.8225	13.7647	16.3195	19.3276	21.3247	22.8581	24.1179
	2.5	11.5513	13.1421	14.1425	15.0476	17.8459	21.1440	23.3360	25.0203	26.4050
	3	12.5720	14.3663	15.5035	16.3617	19.0881	22.6220	24.9722	26.7790	28.2652
	3.5	12.0978	14.2990	15.8082	16.9732	20.1361	23.8686	26.3522	28.2623	29.8338
	4	13.7539	15.8563	17.2156	18.2413	20.9063	23.8757	26.2759	28.1863	29.7591

Table 289 Factored maximum moment results for alpha 2 (main bars parallel to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Main bars Parallel	1	13.1909	13.9822	14.4758	14.8445	15.8110	16.9078	17.6151	18.1538	18.5948
	1.5	18.2098	19.3886	20.0802	20.5744	21.7967	23.1030	23.9266	24.5442	25.0444
	2	22.3007	23.9686	24.9303	25.6069	27.2229	28.8500	29.8278	30.5422	31.1117
	2.5	25.6578	27.8263	29.0789	29.9621	32.0545	34.1066	35.3014	36.1541	36.8218
	3	28.4673	31.1027	32.6440	33.7332	36.3291	38.8643	40.3212	41.3473	42.1414
	3.5	30.8733	33.9260	35.7364	37.0231	40.1166	43.1555	44.8988	46.1207	47.0610
	4	35.3708	38.9043	40.9719	42.4298	45.8842	49.2090	51.0894	52.3959	53.3957

Alpha 4 Bending Moment Results

Table 290 Factored maximum moment results for alpha 4 (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Main bars perpendicular	1	5.3469	6.3429	7.0067	7.5178	8.8997	10.5196	11.5904	12.4099	13.0815
	1.5	6.9964	7.9203	8.7332	9.3740	11.1106	13.1542	14.5105	15.5515	16.4067
	2	8.2585	9.4127	10.1430	10.6925	12.6471	14.9834	16.5365	17.7300	18.7115
	2.5	9.2321	10.5672	11.4173	12.0590	13.8294	16.3904	18.0943	19.4048	20.4830
	3	10.0341	11.5102	12.4586	13.1760	15.0404	17.5353	19.3617	20.7671	21.9238
	3.5	9.6589	11.0963	12.2575	13.1567	15.6052	18.5012	20.4308	21.9160	23.1388
	4	11.0019	12.6405	13.7203	14.5457	16.7219	19.1813	20.7615	21.9450	23.0793

Table 291 Factored maximum moment results for alpha 4 (main bars parallel to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Main bars Parallel	1	11.9291	12.7071	13.1695	13.5025	14.3329	15.2242	15.7846	16.2029	16.5403
	1.5	16.0601	17.3067	18.0304	18.5457	19.7832	21.0292	21.7728	22.3117	22.7382
	2	19.2574	20.9696	21.9735	22.6838	24.3944	26.0908	27.0786	27.7801	28.3263
	2.5	21.8405	23.9609	25.2249	26.1272	28.3078	30.4852	31.7486	32.6400	33.3293
	3	24.0234	26.4811	27.9723	29.0470	31.6700	34.3196	35.8651	36.9564	37.7994
	3.5	25.9495	28.6728	30.3544	31.5784	34.6031	37.6960	39.5163	40.8065	41.8047
	4	29.5009	32.7173	34.6876	36.1134	39.6077	43.1366	45.1882	46.6308	47.7406

Alpha 6 Bending Moment Results

Table 292 Factored maximum moment results for alpha 6 (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Main bars perpendicular	1	4.5821	5.3618	5.9234	6.3560	7.5263	8.8999	9.8091	10.5058	11.0772
	1.5	6.0803	6.9268	7.4651	7.9246	9.3945	11.1257	12.2757	13.1592	13.8853
	2	7.1401	8.1765	8.8375	9.3353	10.6930	12.6715	13.9878	15.0000	15.8329
	2.5	7.9710	9.1488	9.9066	10.4803	11.9720	13.8606	15.3043	16.4153	17.3299
	3	8.6766	9.9561	10.7892	11.4221	13.0821	14.9487	16.3756	17.5667	18.5476
	3.5	8.3820	9.5968	10.4032	11.1401	13.1999	15.6465	17.2798	18.5381	19.5747
	4	9.5968	10.9565	11.8676	12.5717	14.4539	16.6102	18.0096	19.0630	19.9154

Table 293 Factored maximum moment results for alpha 6 (main bars parallel to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Main bars Parallel	1	11.0931	11.8764	12.3373	12.6649	13.4619	14.2867	14.7918	15.1640	15.4621
	1.5	14.6818	15.9439	16.6811	17.2020	18.4592	19.7085	20.4392	20.9604	21.3675
	2	17.4049	19.0854	20.0872	20.8022	22.5304	24.2610	25.2662	25.9759	26.5249
	2.5	19.6169	21.6303	22.8566	23.7423	25.9111	28.1093	29.3971	30.3077	31.0116
	3	21.5321	23.7928	25.1987	26.2265	28.7816	31.4105	32.9692	34.0770	34.9358
	3.5	23.2790	25.7137	27.2564	28.3973	31.2765	34.2904	36.0989	37.3927	38.3997
	4	26.3039	29.2016	31.0280	32.3735	35.7456	39.2417	41.3194	42.7954	43.9382

Alpha 8 Bending Moment Results

Table 294 Factored maximum moment results for alpha 8 (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Main bars perpendicular	1	4.1520	4.7296	5.2253	5.6072	6.6411	7.8556	8.6605	9.2776	9.7842
	1.5	5.4679	6.2550	6.7572	7.1314	8.2883	9.8180	10.8348	11.6164	12.2591
	2	6.4041	7.3537	7.9634	8.4234	9.6155	11.1812	12.3445	13.2396	13.9763
	2.5	7.1537	8.2165	8.9069	9.4316	10.8039	12.3438	13.5056	14.4877	15.2965
	3	7.8097	8.9473	9.6967	10.2690	11.7822	13.4930	14.5954	15.5034	16.3705
	3.5	7.5772	8.6435	9.3550	9.9056	11.6575	13.8097	15.2501	16.3612	17.2770
	4	8.7299	9.8990	10.6930	11.3108	12.9830	14.9234	16.1936	17.1542	17.9338

Table 295 Factored maximum moment results for alpha 8 (main bars parallel to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Main bars Parallel	1	10.4668	11.2612	11.7206	12.0484	12.8384	13.6385	14.1190	14.4690	14.7470
	1.5	13.6845	14.9405	15.6810	16.2063	17.4700	18.7296	19.4615	19.9799	20.3823
	2	16.1122	17.7407	18.7250	19.4330	21.1573	22.8956	23.9113	24.6286	25.1828
	2.5	18.1147	20.0149	21.1920	22.0507	24.1791	26.3607	27.6528	28.5701	29.2809
	3	19.8947	21.9784	23.2979	24.2735	26.7346	29.3097	30.8530	31.9586	32.8191
	3.5	21.5615	23.7623	25.1814	26.2431	28.9661	31.8763	33.6418	34.9184	35.9172
	4	24.2497	26.8723	28.5618	29.8218	33.0363	36.4412	38.4929	39.9666	41.1142

Alpha 10 Bending Moment Results

Table 296 Factored maximum moment results for alpha 10 (main bars perpendicular to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Main bars perpendicular	1	3.8316	4.3631	4.7275	5.0733	6.0099	7.1109	7.8410	8.4013	8.8615
	1.5	5.0200	5.7593	6.2324	6.5857	7.4996	8.8853	9.8070	10.5158	11.0988
	2	5.8734	6.7538	7.3229	7.7532	8.8730	10.1246	11.1724	11.9838	12.6518
	2.5	6.5727	7.5448	8.1821	8.6683	9.9472	11.3872	12.3122	13.1128	13.8459
	3	7.2009	8.2291	8.9131	9.4380	10.8362	12.4267	13.4560	14.2294	14.8545
	3.5	7.0170	7.9718	8.6142	9.1116	10.5658	12.5039	13.8051	14.8100	15.6392
	4	8.1361	9.1662	9.8724	10.4250	11.9356	13.7084	14.8786	15.7671	16.4901

Table 297 Factored maximum moment results for alpha 10 (main bars parallel to traffic)

		Maximum Moment (kN.m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Main bars Parallel	1	9.9679	10.7689	11.2330	11.5599	12.3492	13.1406	13.6096	13.9480	14.2150
	1.5	12.9136	14.1539	14.8914	15.4171	16.6835	17.9497	18.6857	19.2056	19.6079
	2	15.1417	16.7127	17.6738	18.3696	20.0786	21.8117	22.8318	23.5538	24.1121
	2.5	17.0155	18.8088	19.9353	20.7638	22.8398	24.9933	26.2764	27.1935	27.9059
	3	18.7205	20.6517	21.8916	22.8164	25.1784	27.6887	29.2047	30.2990	31.1543
	3.5	20.3472	22.3592	23.6728	24.6639	27.2381	30.0370	31.7552	33.0029	33.9863
	4	22.8035	25.1967	26.7624	27.9430	30.9970	34.2915	36.3002	37.7532	38.8926

E.1.2 MAXIMUM BENDING MOMENT VS SPAN LENGTH

Bending Moment VS Span Length for Different D Values (Main bars perpendicular to traffic)

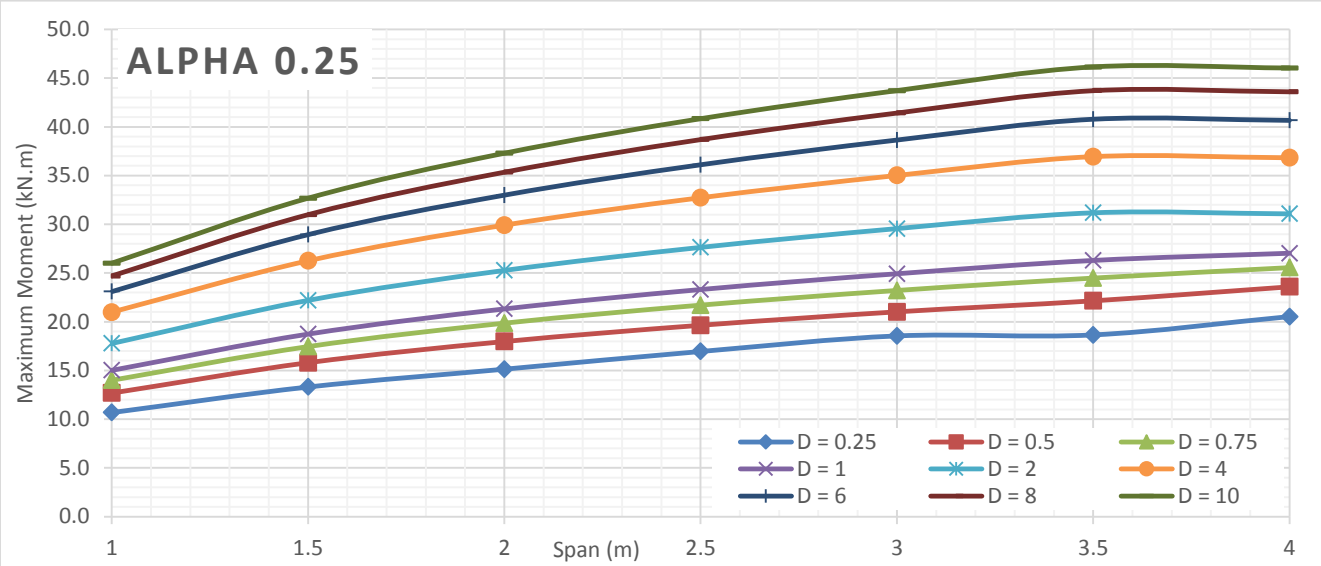

Figure 1069 Factored maximum moment results for alpha 0.25 at different D values (main bars perpendicular to traffic)

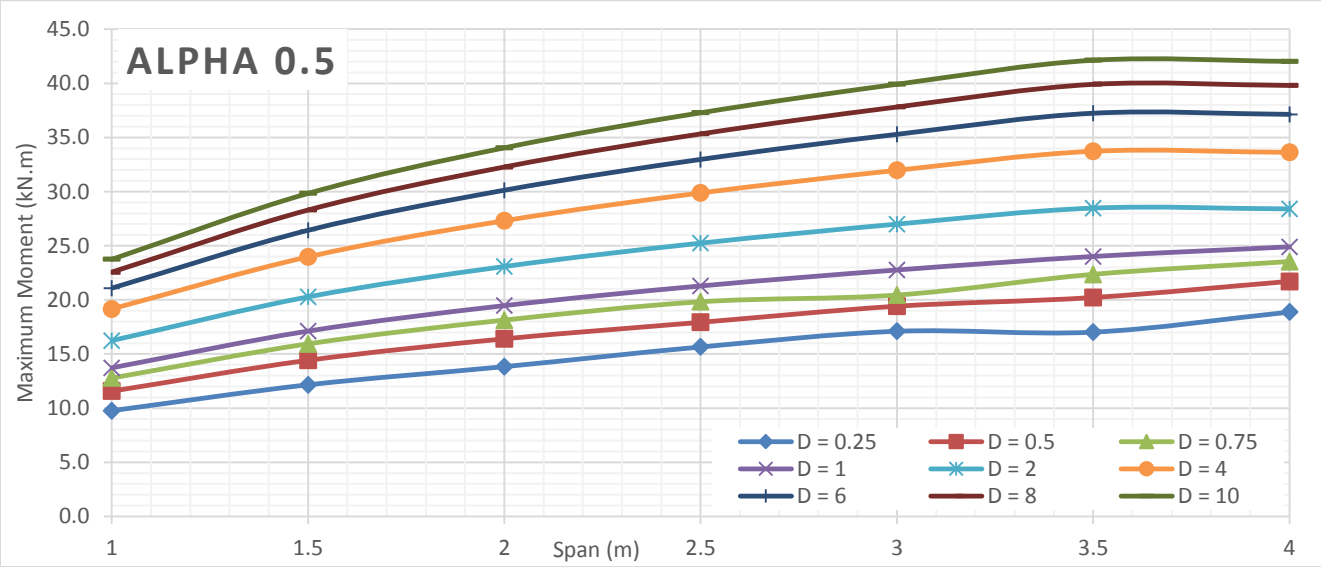

Figure 1070 Factored maximum moment results for alpha 0.5 at different D values (main bars perpendicular to traffic)

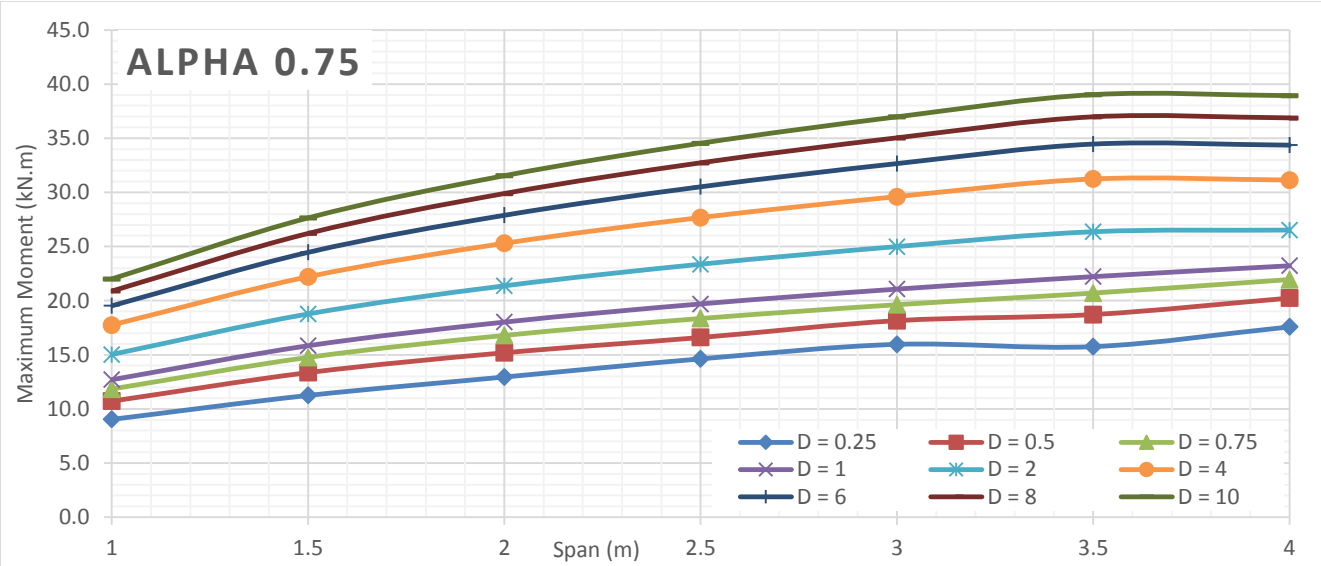

Figure 1071 Factored maximum moment results for alpha 0.75 at different D values (main bars perpendicular to traffic)

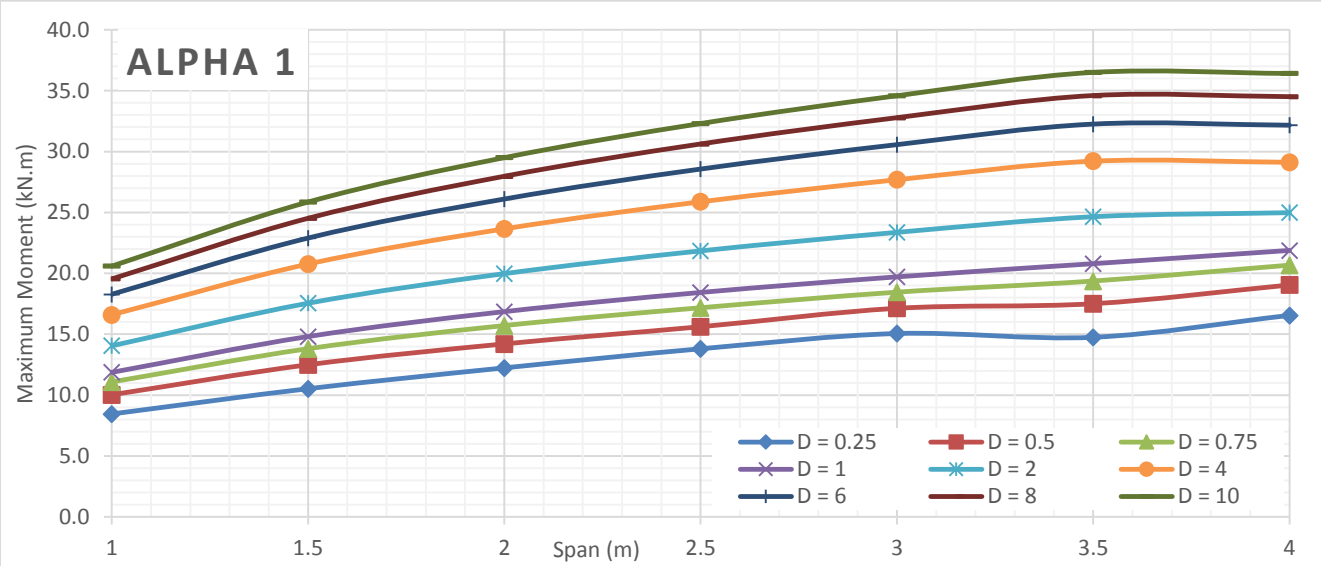

Figure 1072 Factored maximum moment results for alpha 1 at different D values (main bars perpendicular to traffic)

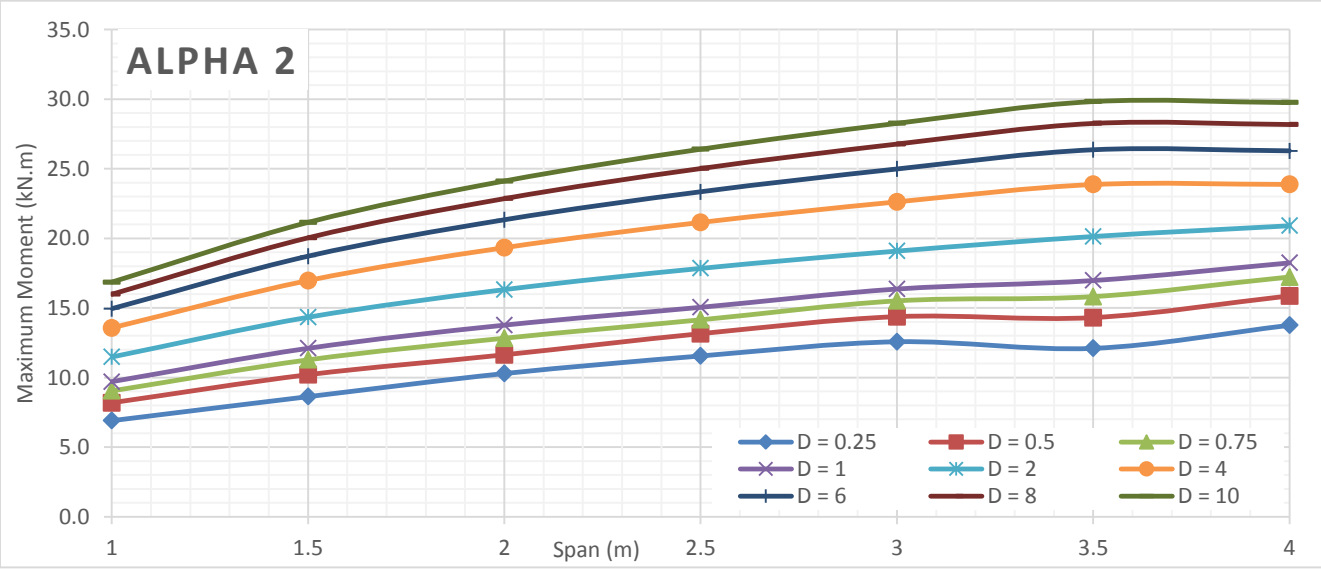

Figure 1073 Factored maximum moment results for alpha 2 at different D values (main bars perpendicular to traffic)

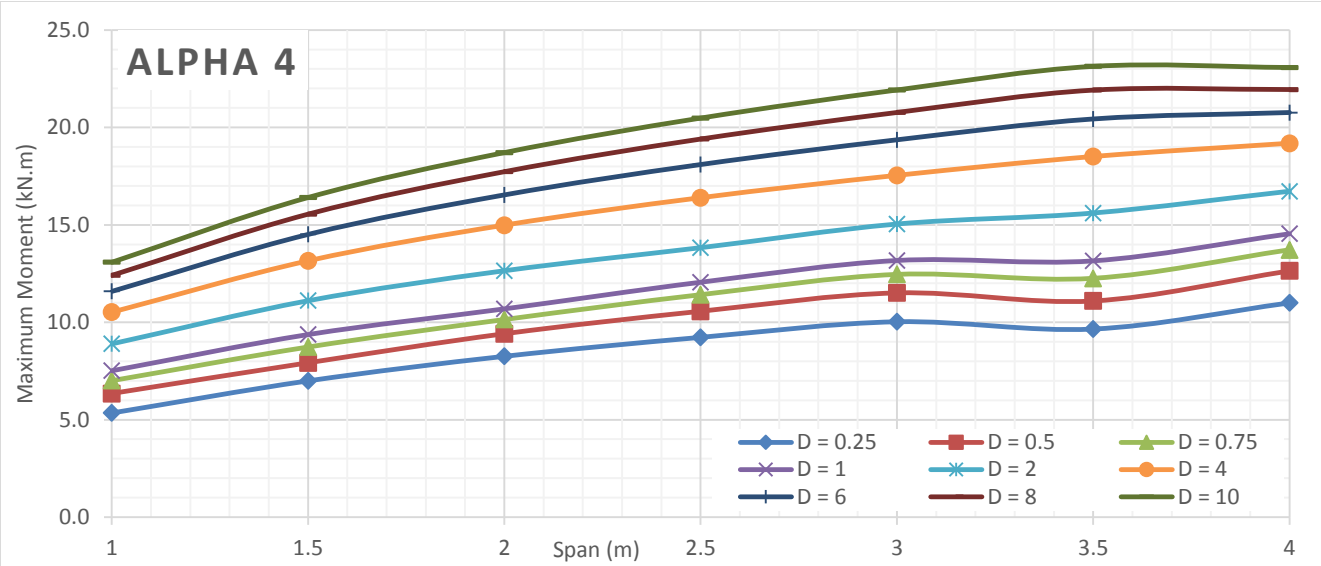

Figure 1074 Factored maximum moment results for alpha 4 at different D values (main bars perpendicular to traffic)

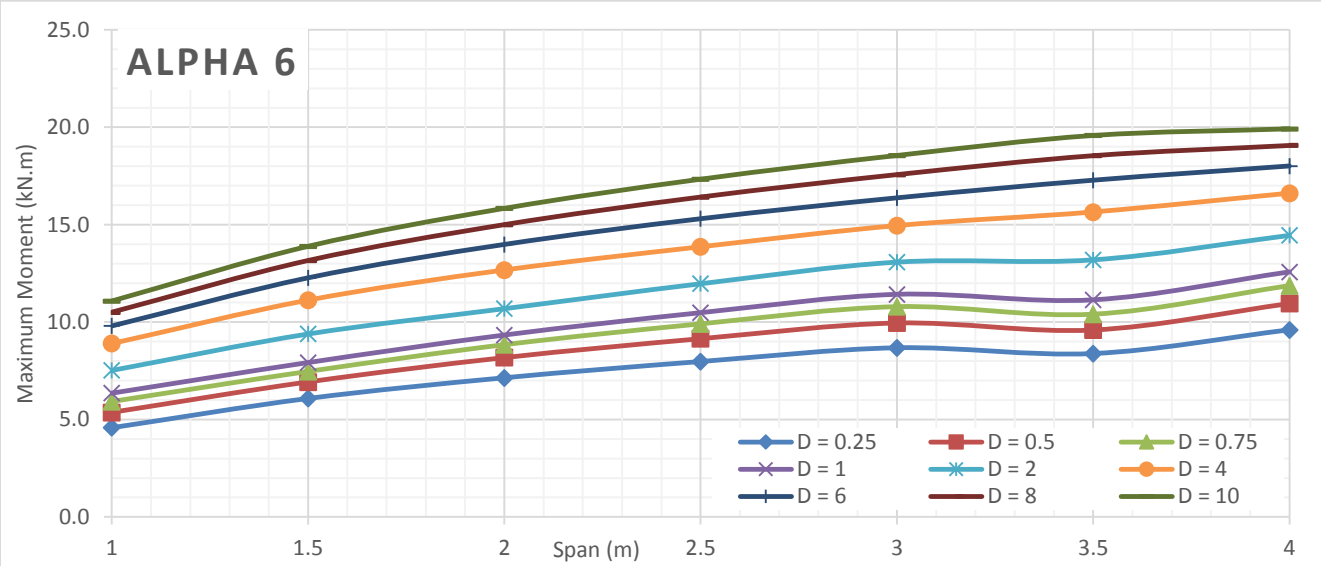

Figure 1075 Factored maximum moment results for alpha 6 at different D values (main bars perpendicular to traffic)

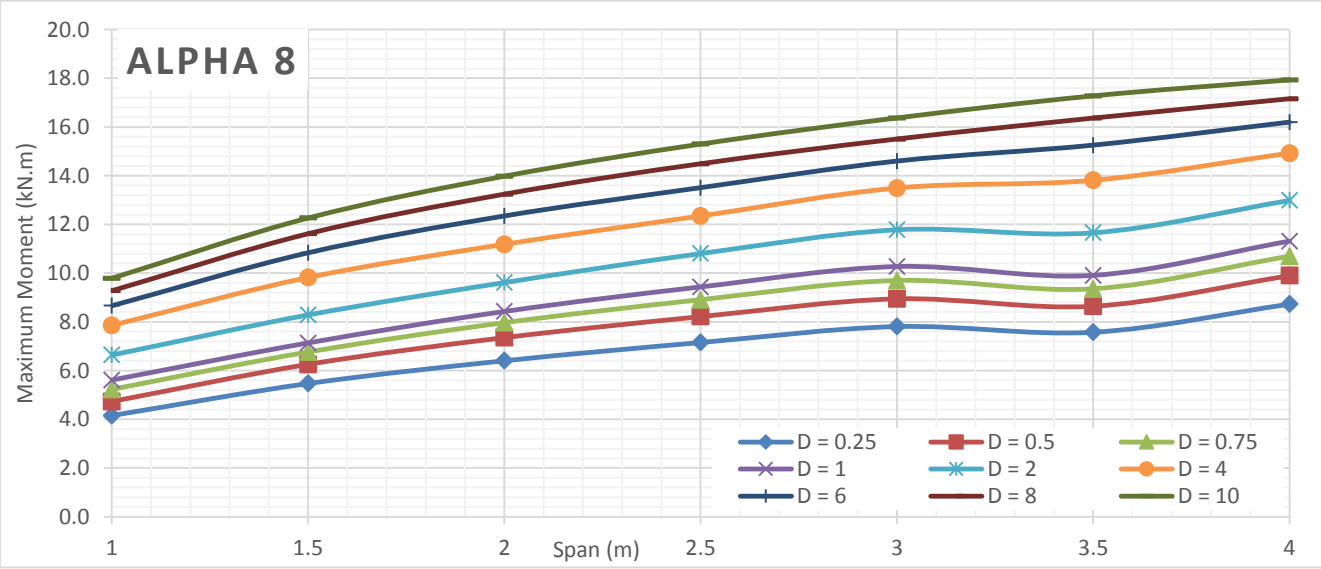

Figure 1076 Factored maximum moment results for alpha 8 at different D values (main bars perpendicular to traffic)

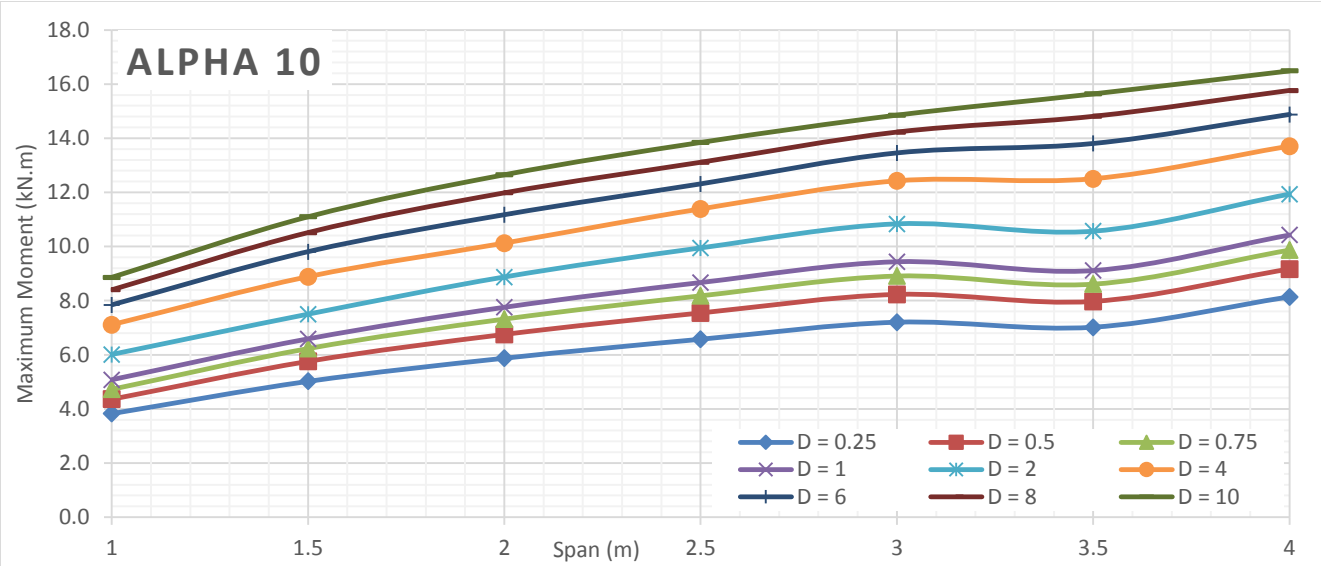

Figure 1077 Factored maximum moment results for alpha 10 at different D values (main bars perpendicular to traffic)

Bending Moment VS Span Length for Different D Values (Main bars parallel to traffic)

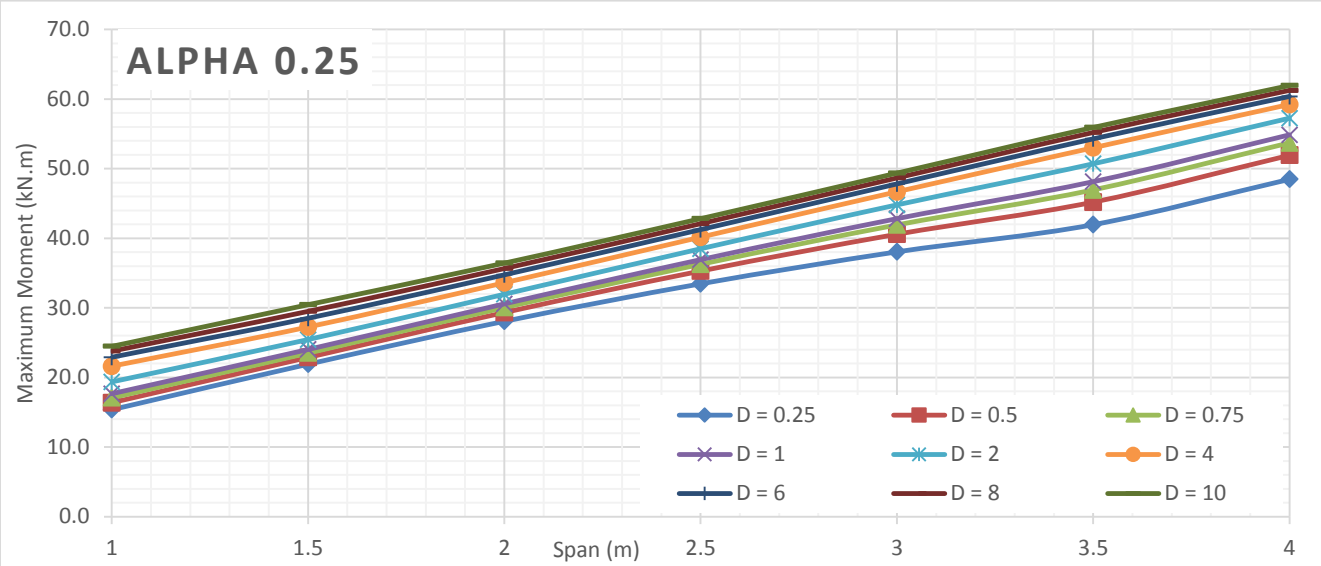

Figure 1078 Factored maximum moment results for alpha 0.25 at different D values (main bars parallel to traffic)

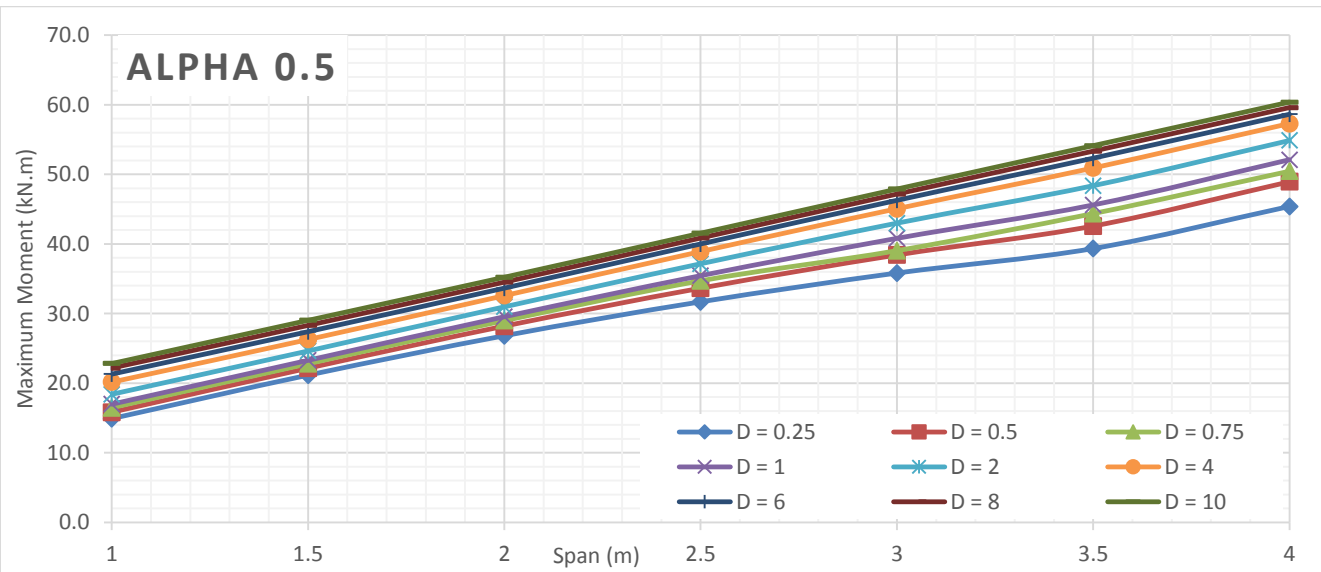

Figure 1079 Factored maximum moment results for alpha 0.5 at different D values (main bars parallel to traffic)

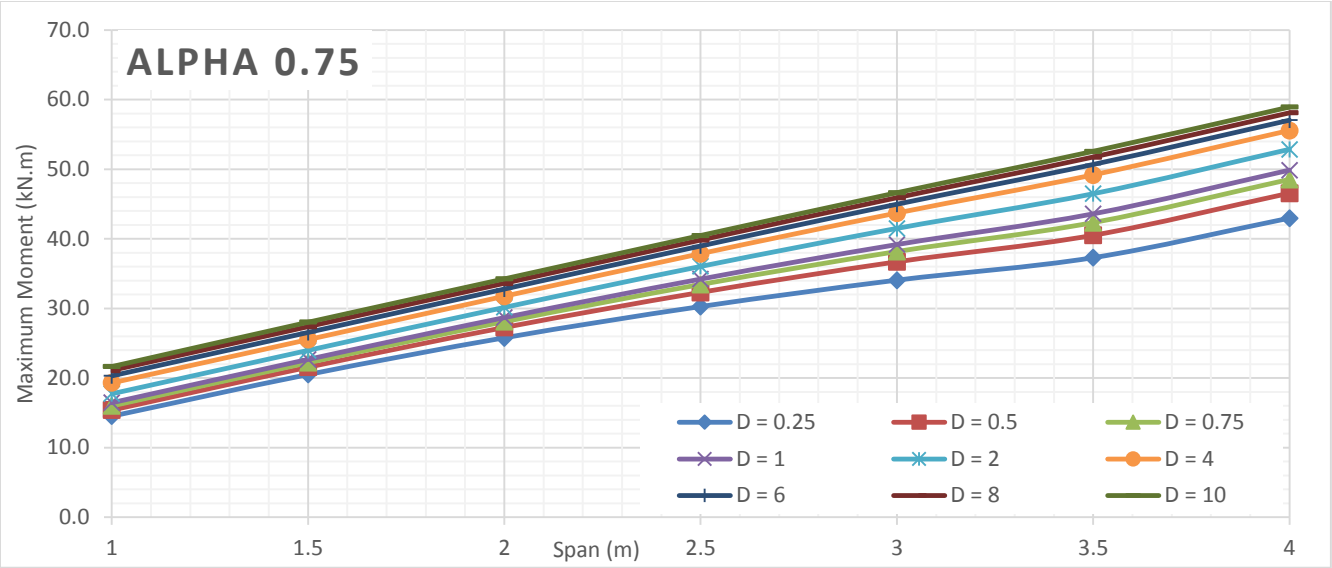

Figure 1080 Factored maximum moment results for alpha 0.75 at different D values (main bars parallel to traffic)

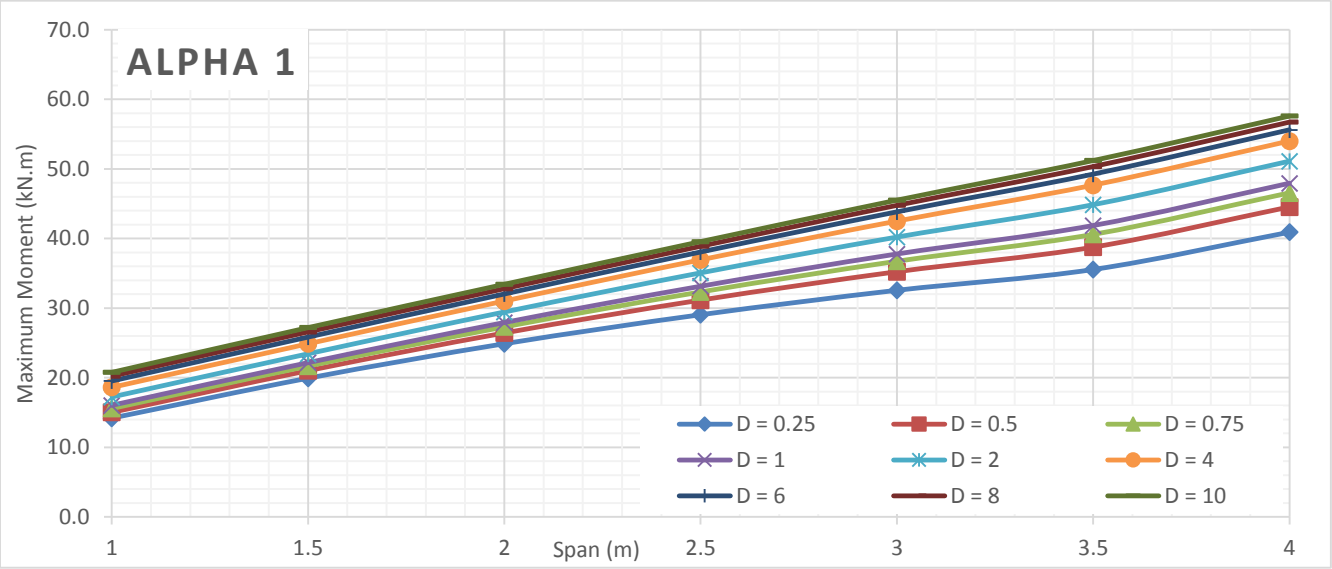

Figure 1081 Factored maximum moment results for alpha 1 at different D values (main bars parallel to traffic)

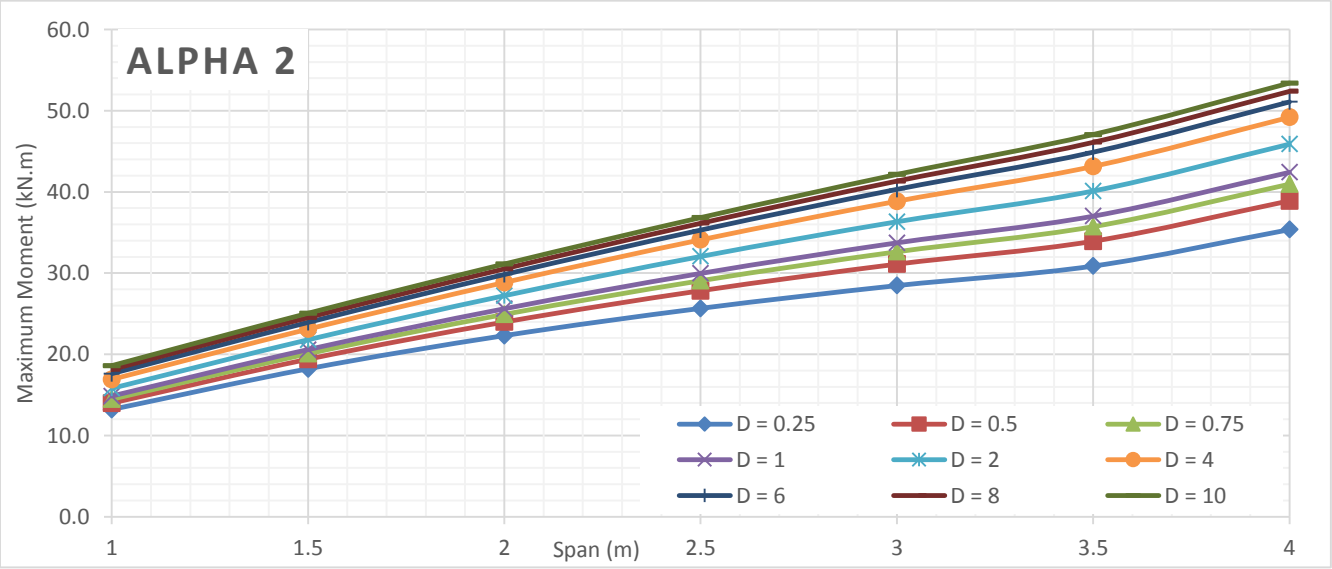

Figure 1082 Factored maximum moment results for alpha 2 at different D values (main bars parallel to traffic)

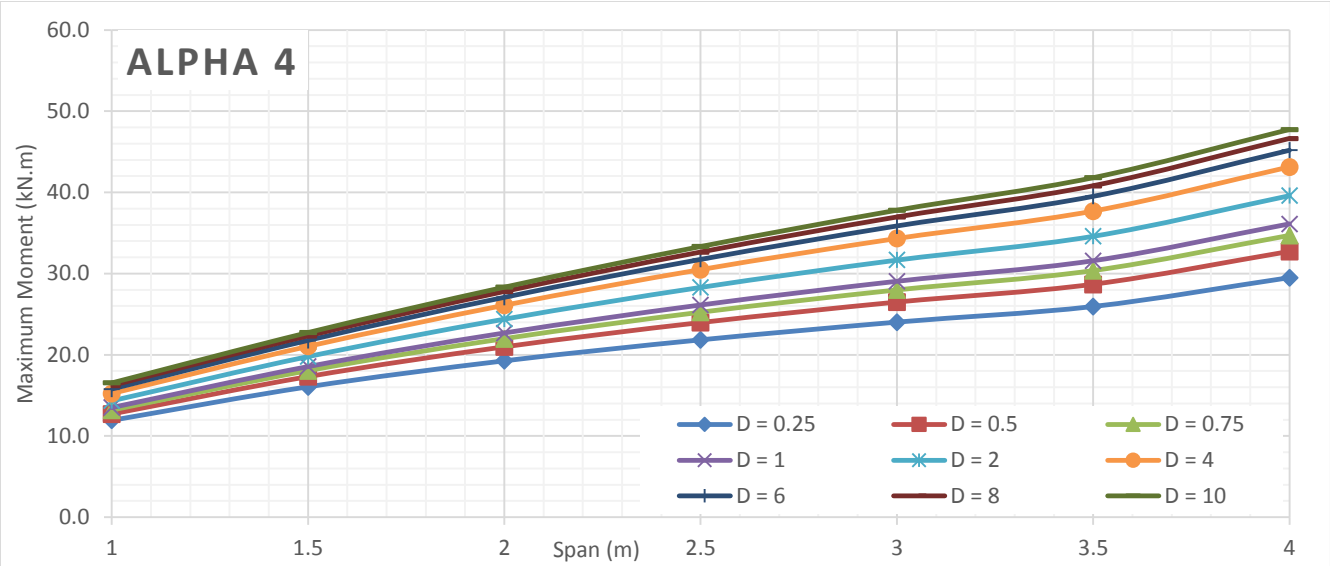

Figure 1083 Factored maximum moment results for alpha 4 at different D values (main bars parallel to traffic)

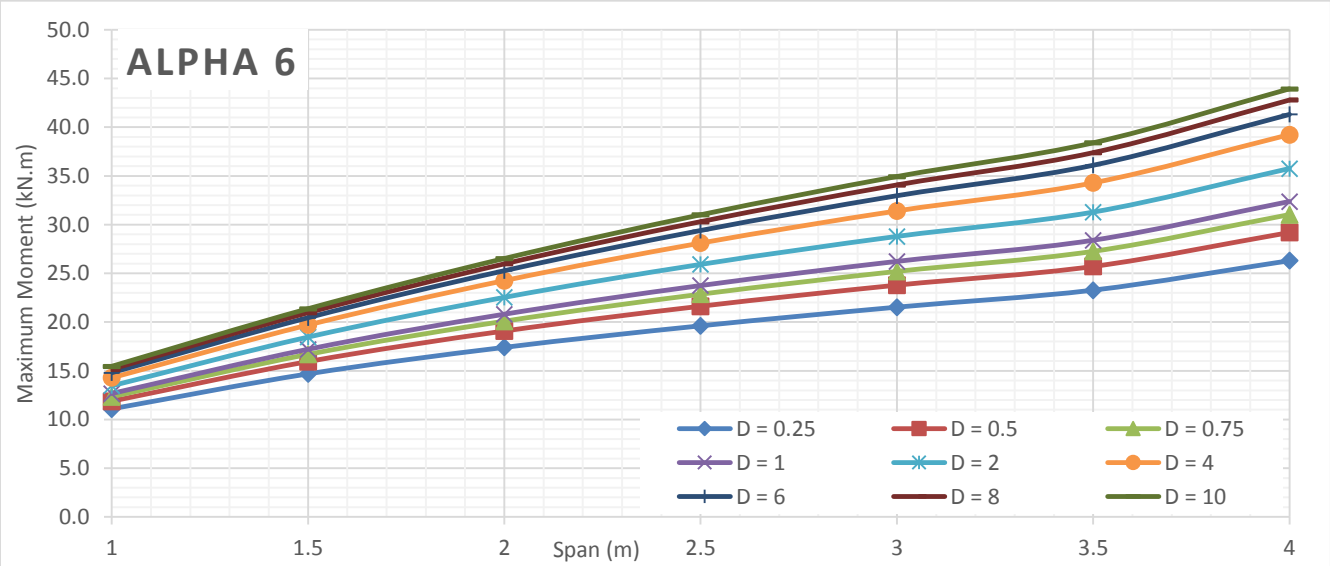

Figure 1084 Factored maximum moment results for alpha 6 at different D values (main bars parallel to traffic)

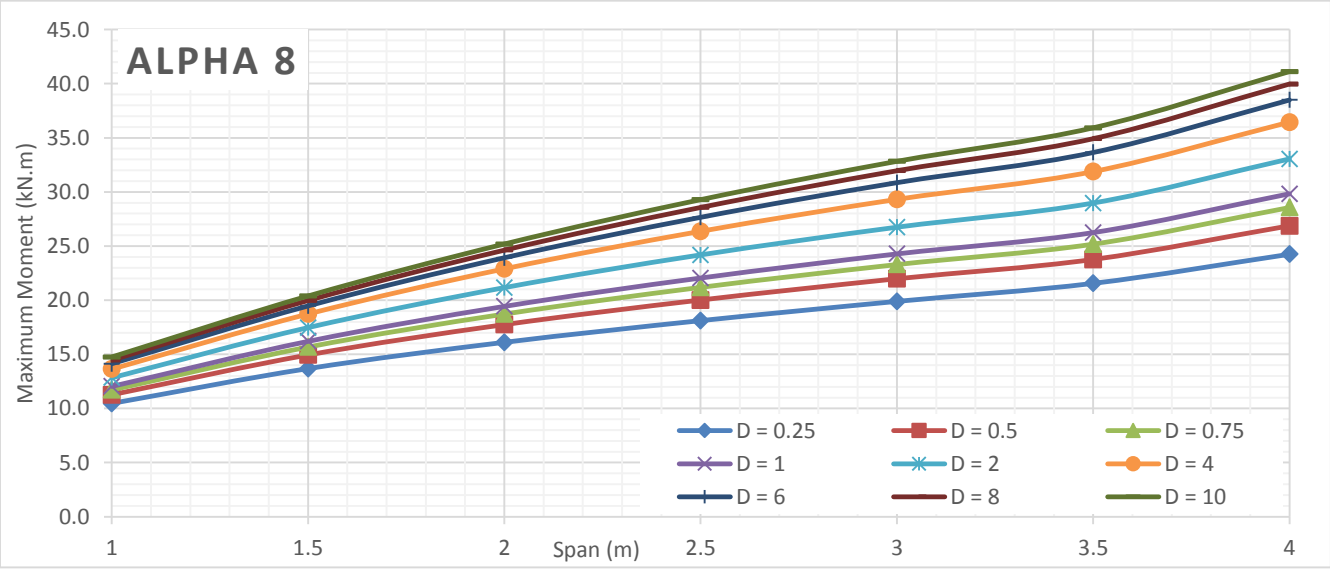

Figure 1085 Factored maximum moment results for alpha 8 at different D values (main bars parallel to traffic)

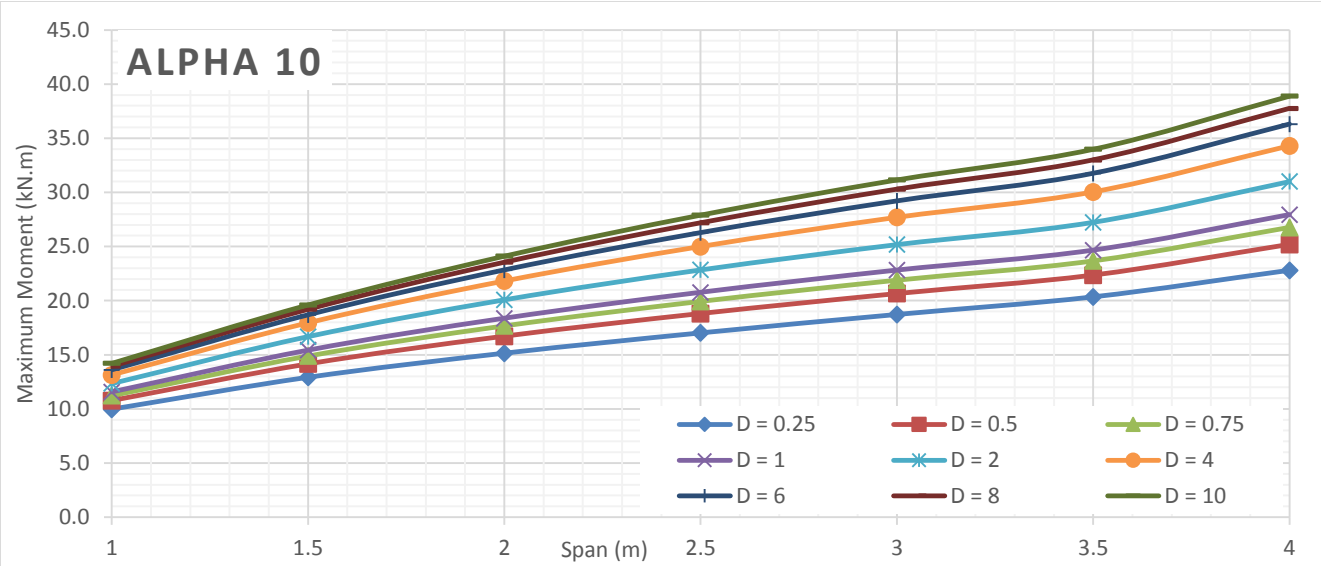

Figure 1086 Factored maximum moment results for alpha 10 at different D values (main bars parallel to traffic)

E.1.3 MAXIMUM BENDING MOMENT VS FLEXURAL RIGIDITY

Bending Moment VS Flexural Rigidity at Different Spans (Main bars perpendicular to traffic)

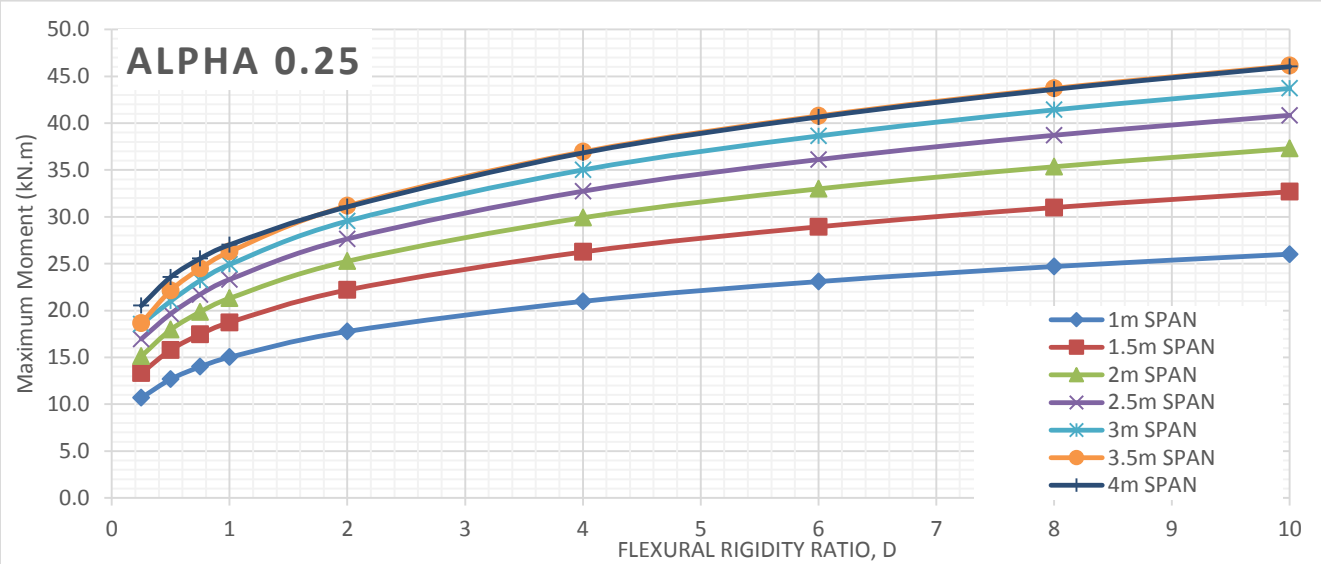

Figure 1087 Factored maximum moment results for alpha 0.25 at different span length (main bars perpendicular to traffic)

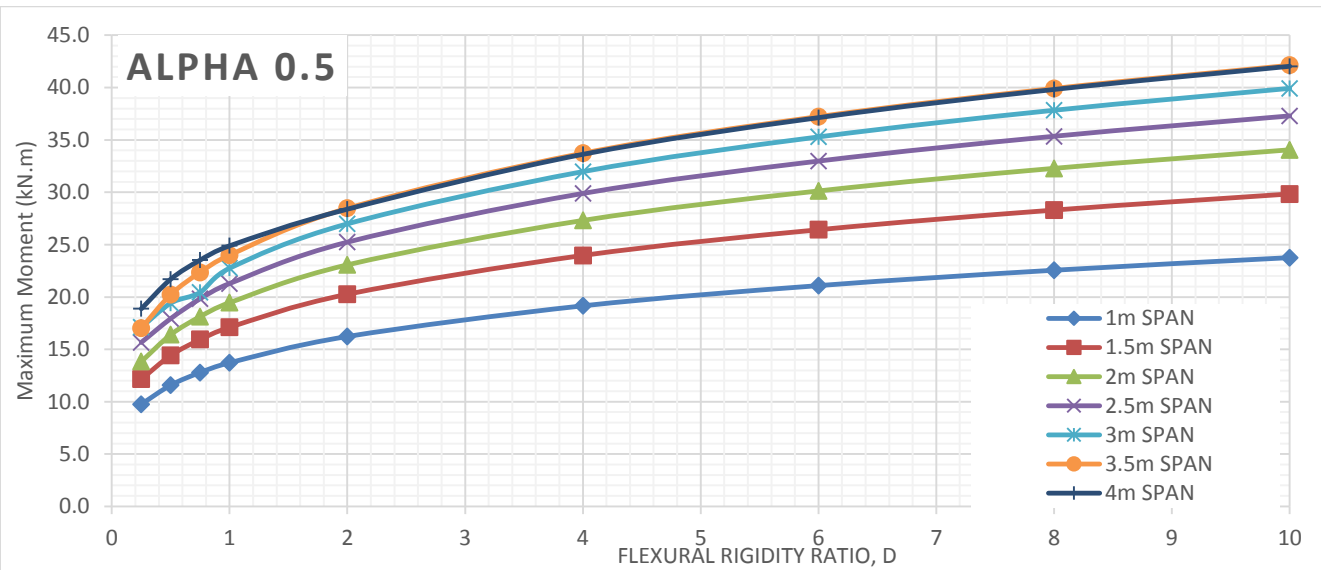

Figure 1088 Factored maximum moment results for alpha 0.5 at different span length (main bars perpendicular to traffic)

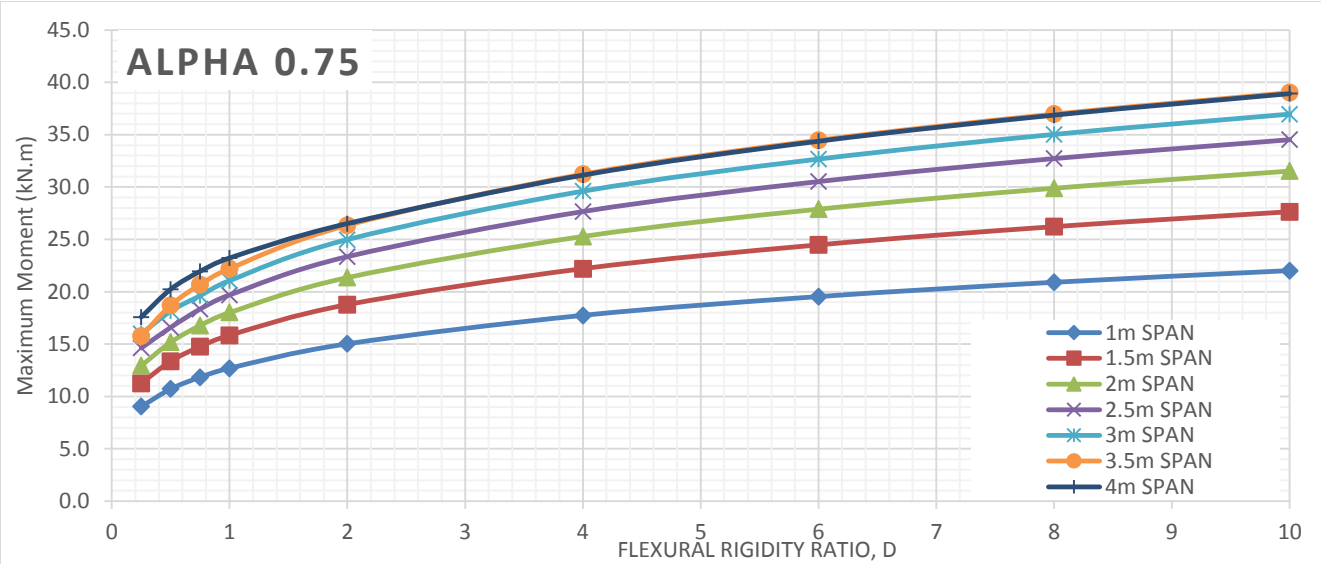

Figure 1089 Factored maximum moment results for alpha 0.75 at different span length (main bars perpendicular to traffic)

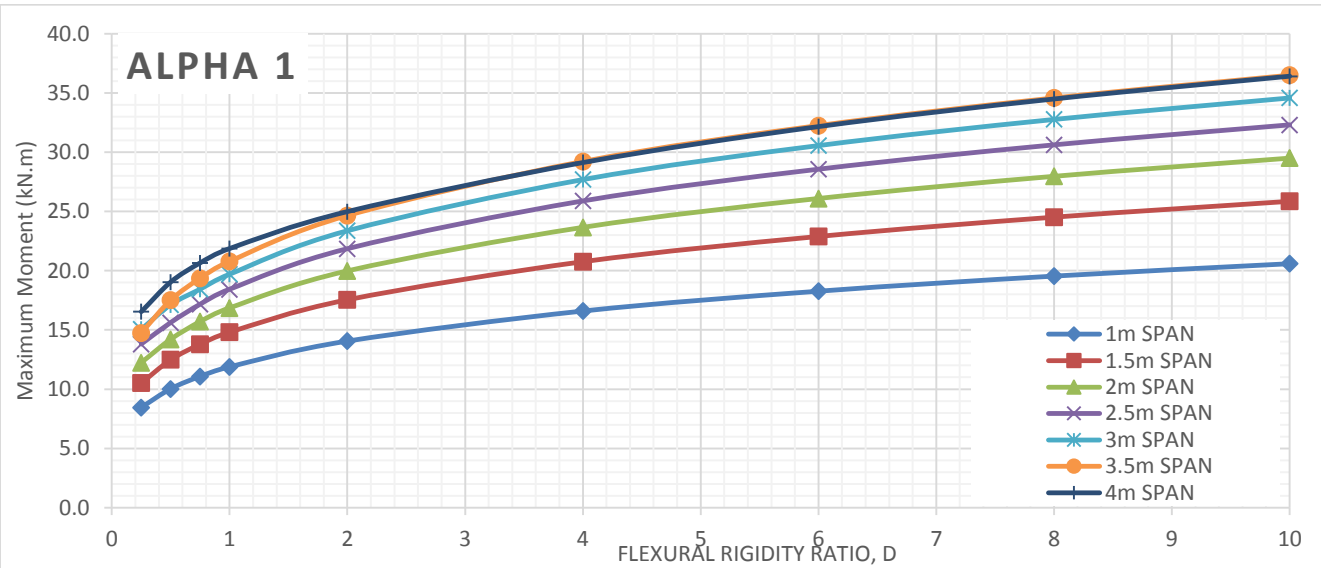

Figure 1090 Factored maximum moment results for alpha 1 at different span length (main bars perpendicular to traffic)

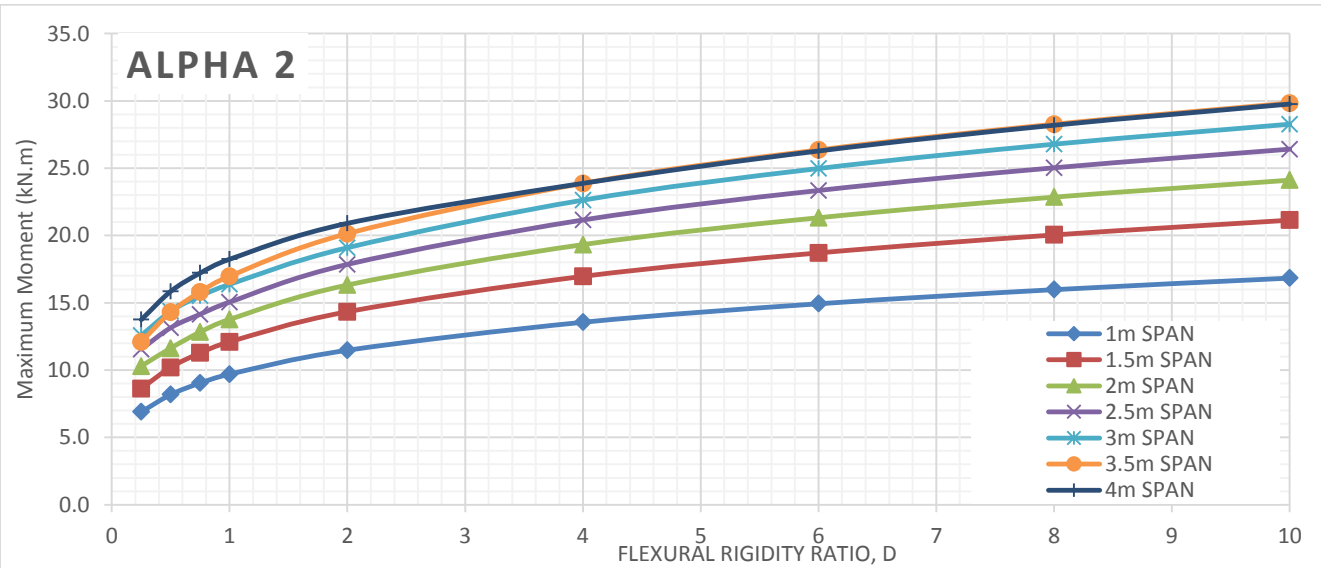

Figure 1091 Factored maximum moment results for alpha 2 at different span length (main bars perpendicular to traffic)

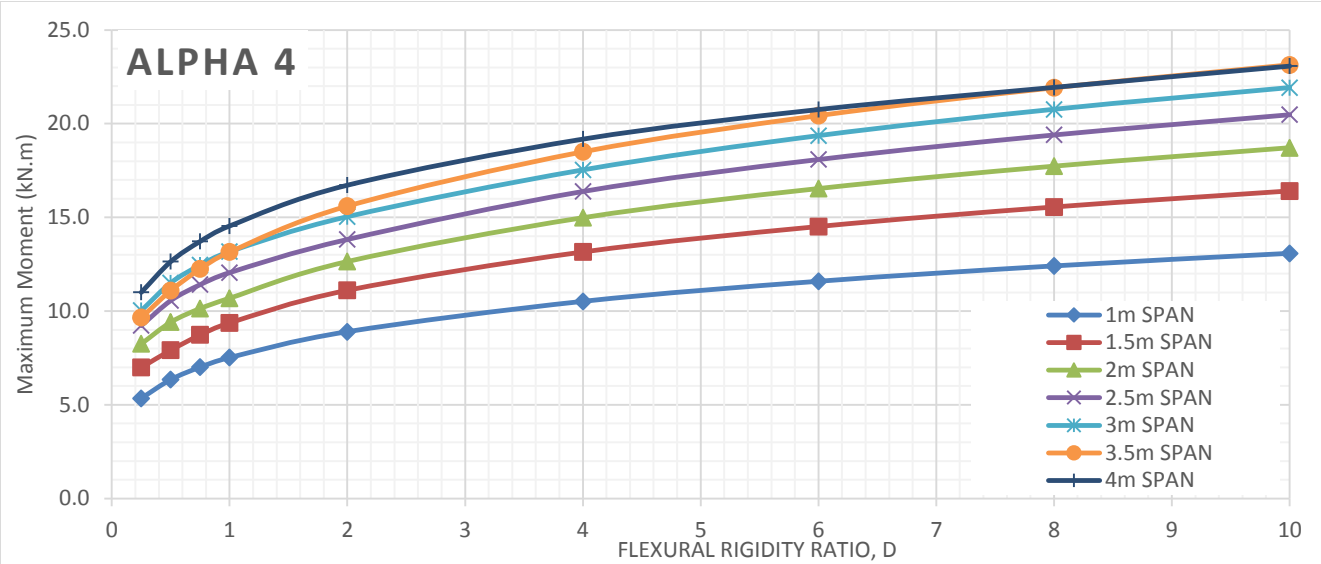

Figure 1092 Factored maximum moment results for alpha 4 at different span length (main bars perpendicular to traffic)

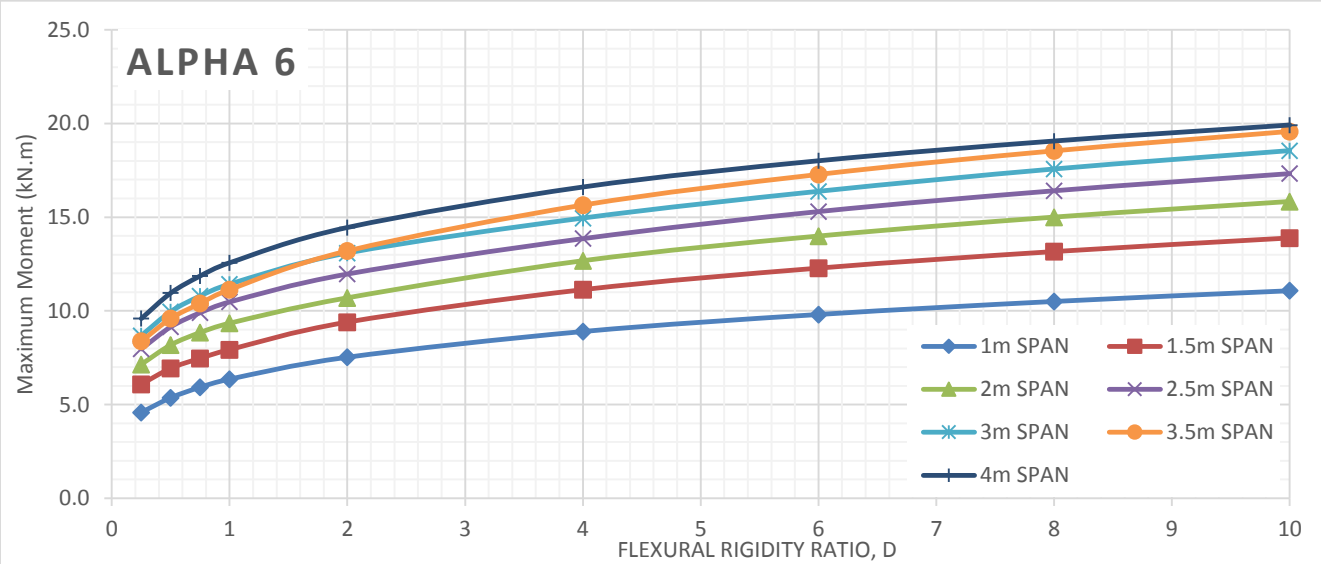

Figure 1093 Factored maximum moment results for alpha 6 at different span length (main bars perpendicular to traffic)

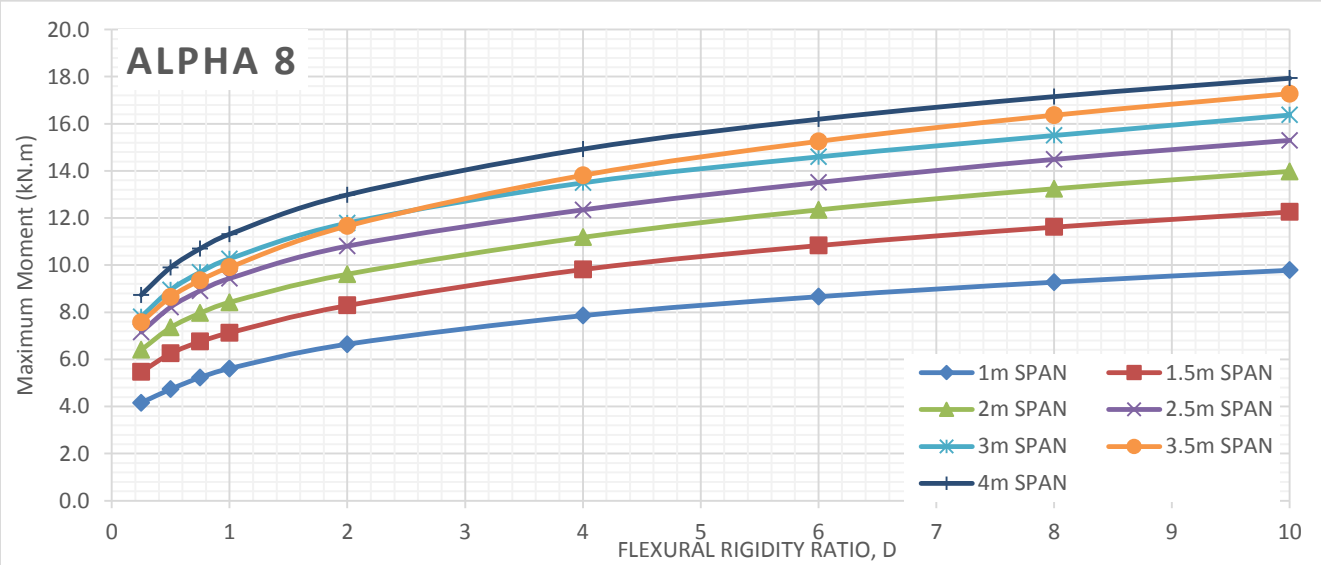

Figure 1094 Factored maximum moment results for alpha 8 at different span length (main bars perpendicular to traffic)

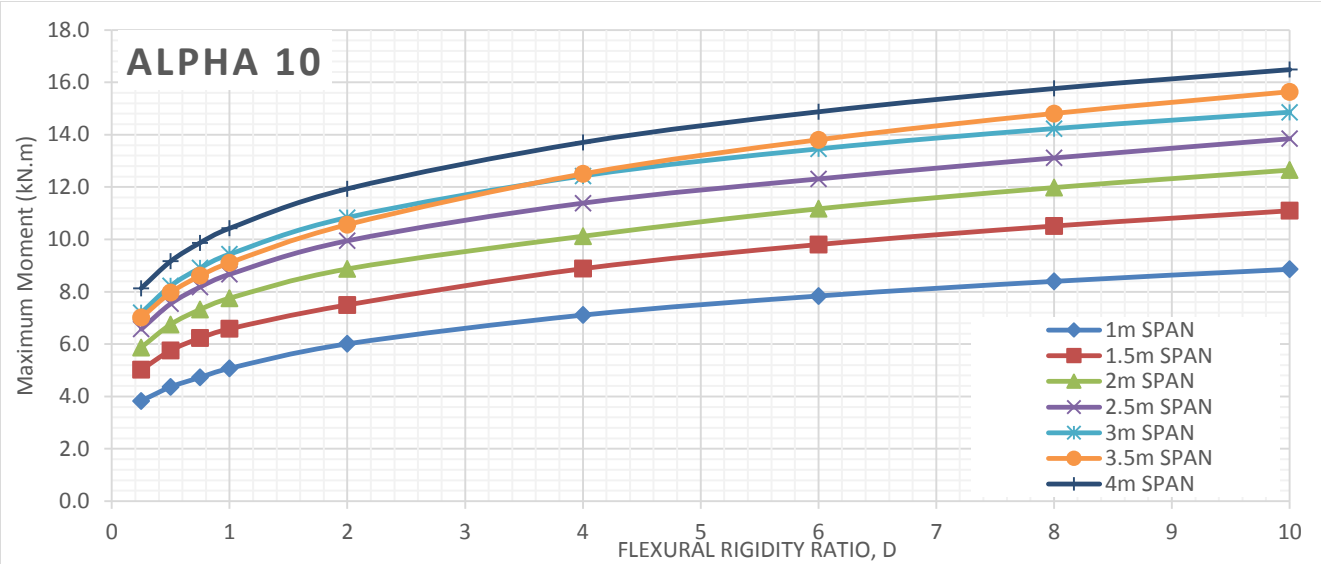

Figure 1095 Factored maximum moment results for alpha 10 at different span length (main bars perpendicular to traffic)

Bending Moment VS Flexural Rigidity at Different Spans (Main bars parallel to traffic)

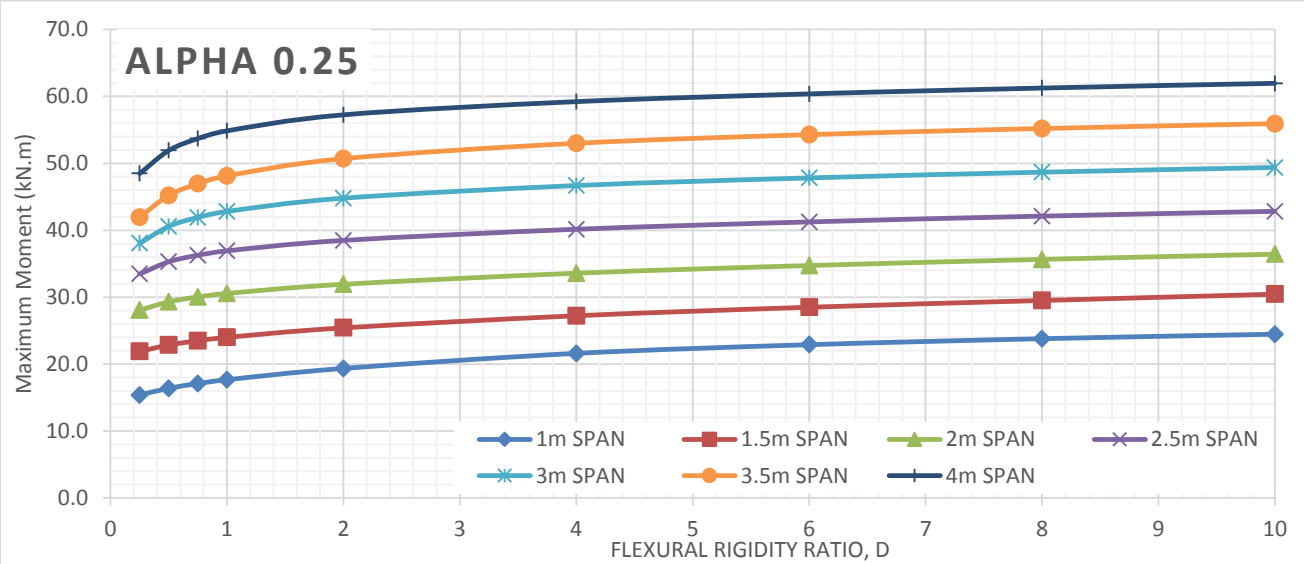

Figure 1096 Factored maximum moment results for alpha 0.25 at different span length (main bars parallel to traffic)

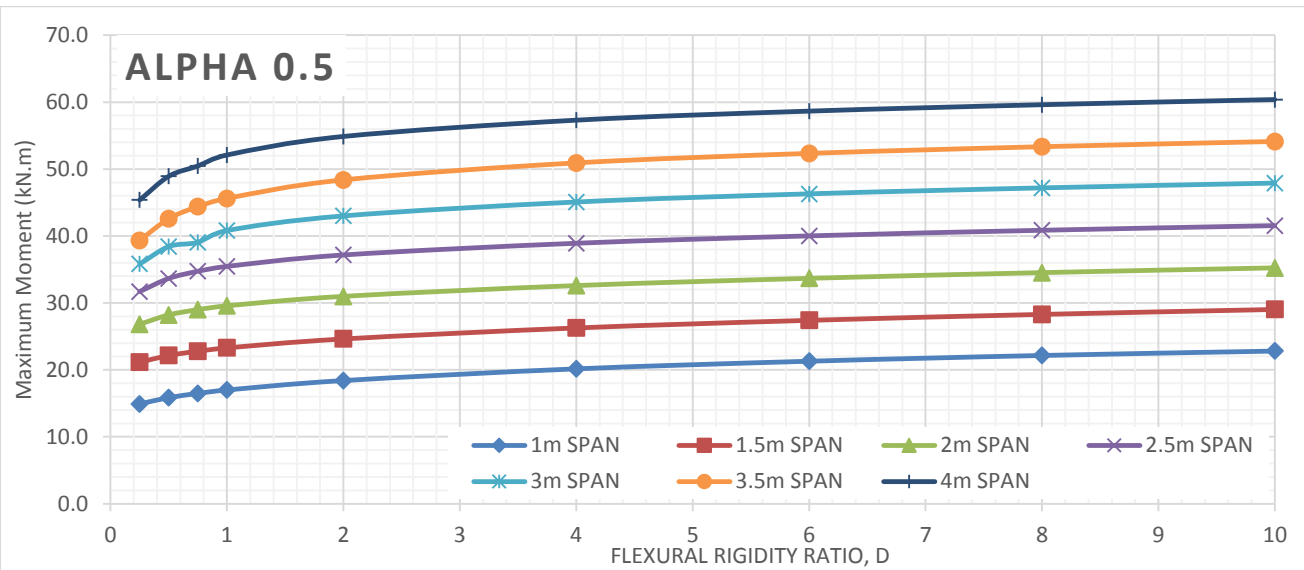

Figure 1097 Factored maximum moment results for alpha 0.5 at different span length (main bars parallel to traffic)

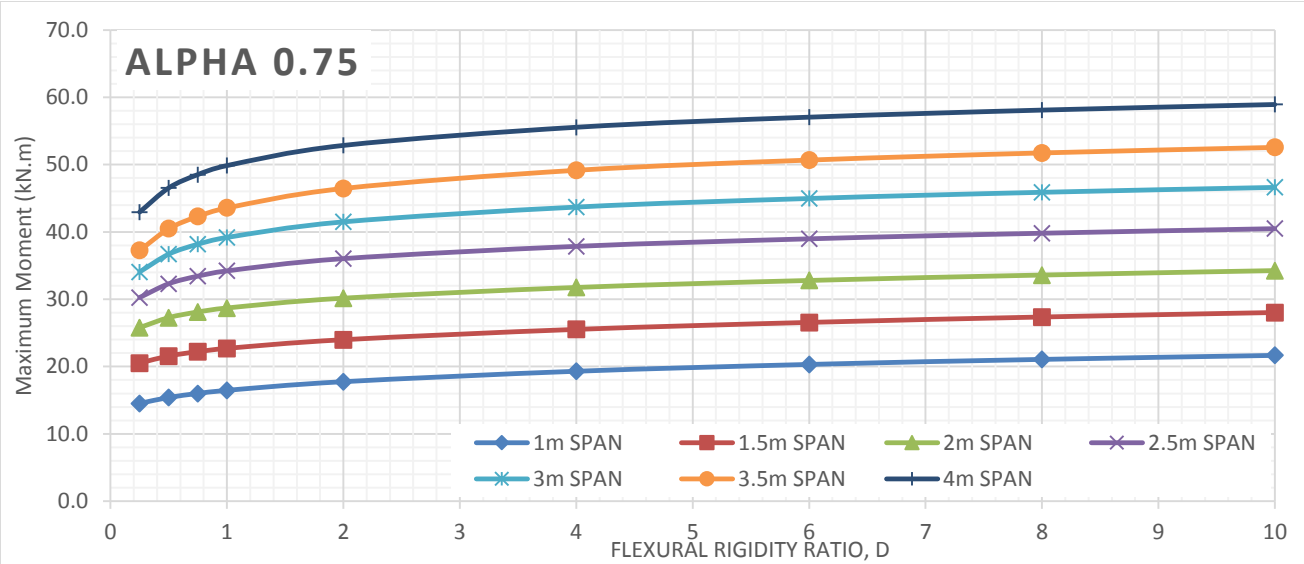

Figure 1098 Factored maximum moment results for alpha 0.75 at different span length (main bars parallel to traffic)

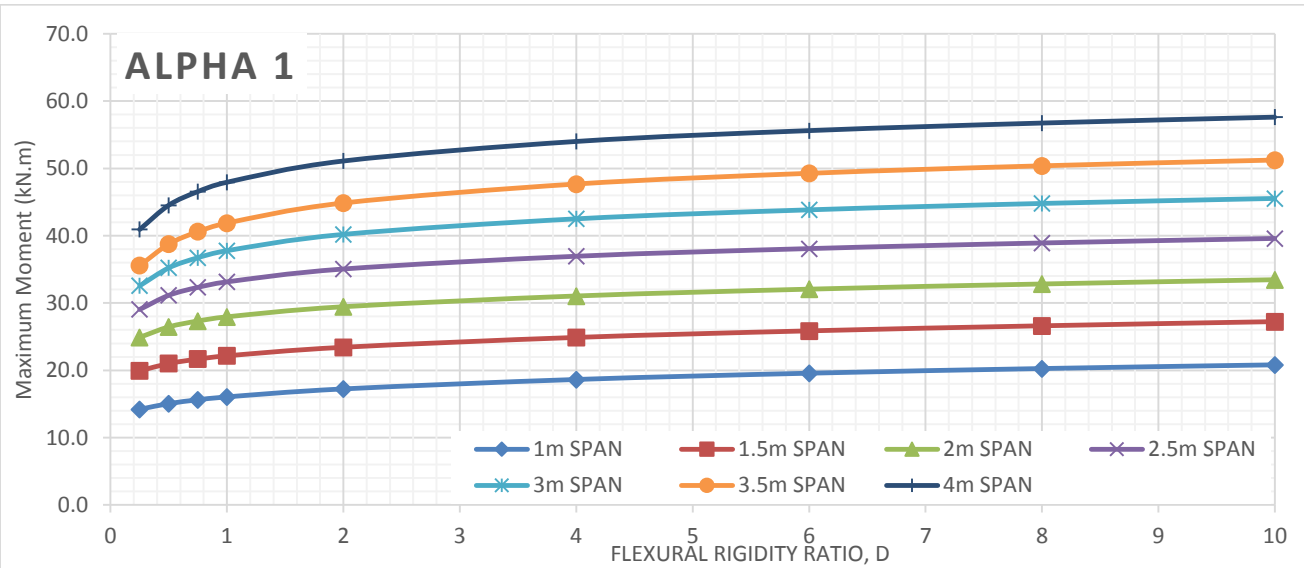

Figure 1099 Factored maximum moment results for alpha 1 at different span length (main bars parallel to traffic)

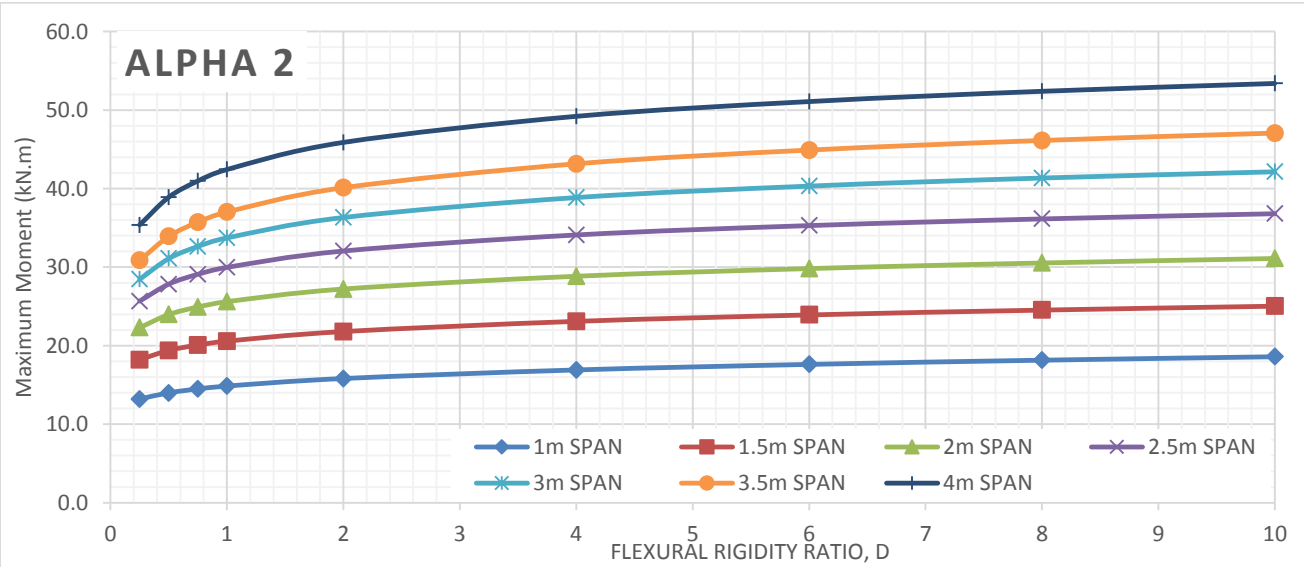

Figure 1100 Factored maximum moment results for alpha 2 at different span length (main bars parallel to traffic)

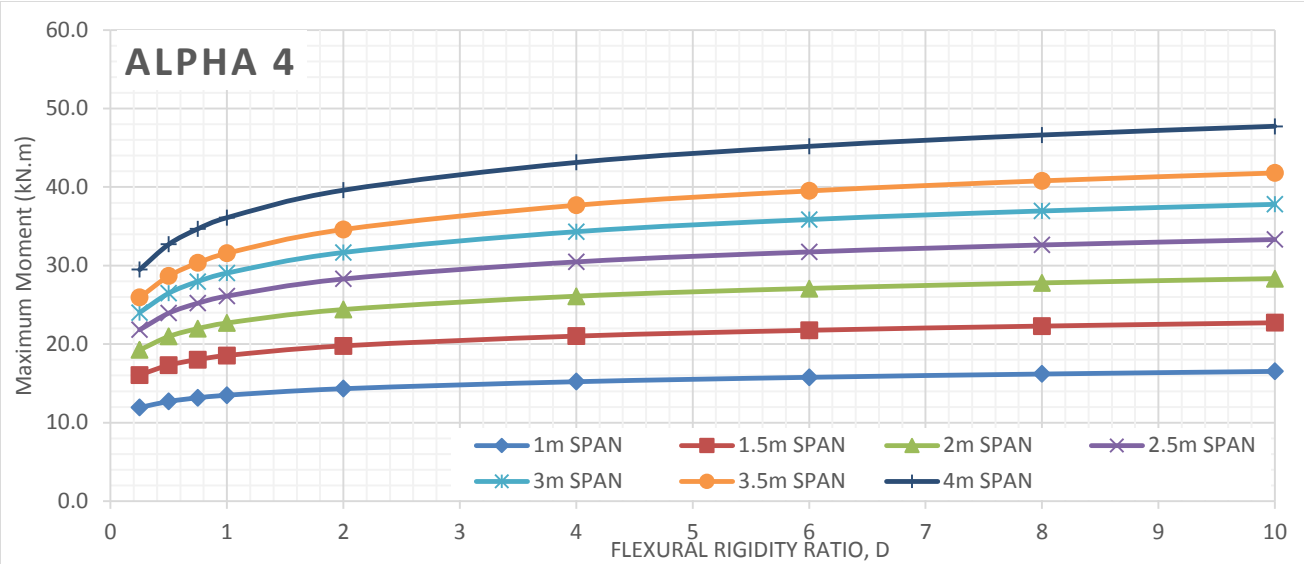

Figure 1101 Factored maximum moment results for alpha 4 at different span length (main bars parallel to traffic)

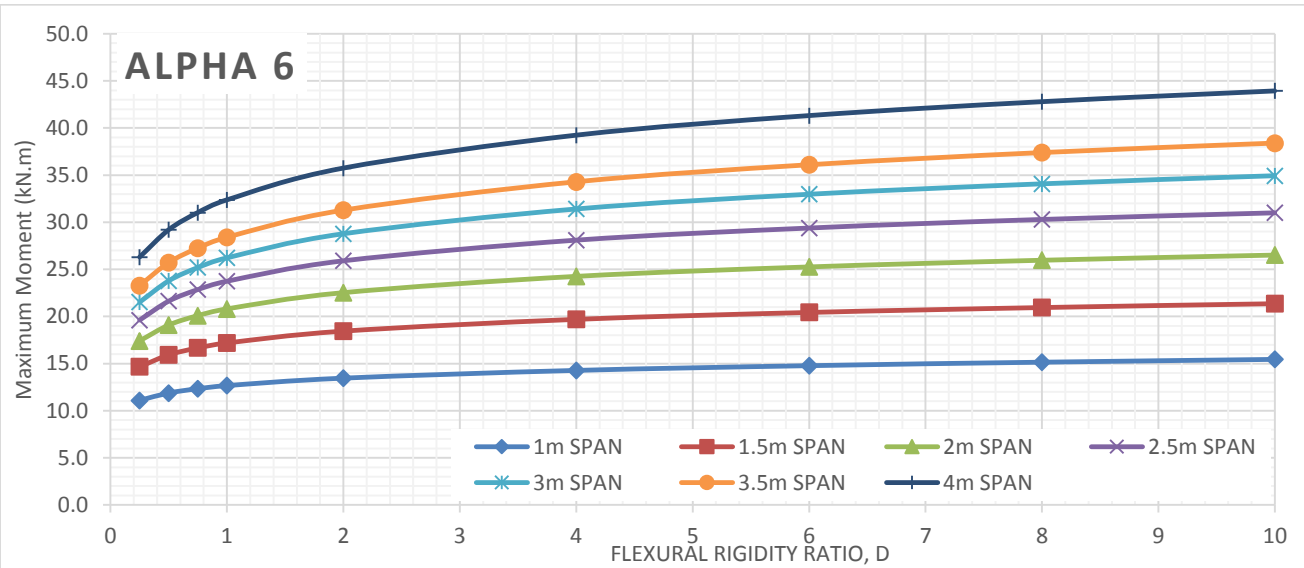

Figure 1102 Factored maximum moment results for alpha 6 at different span length (main bars parallel to traffic)

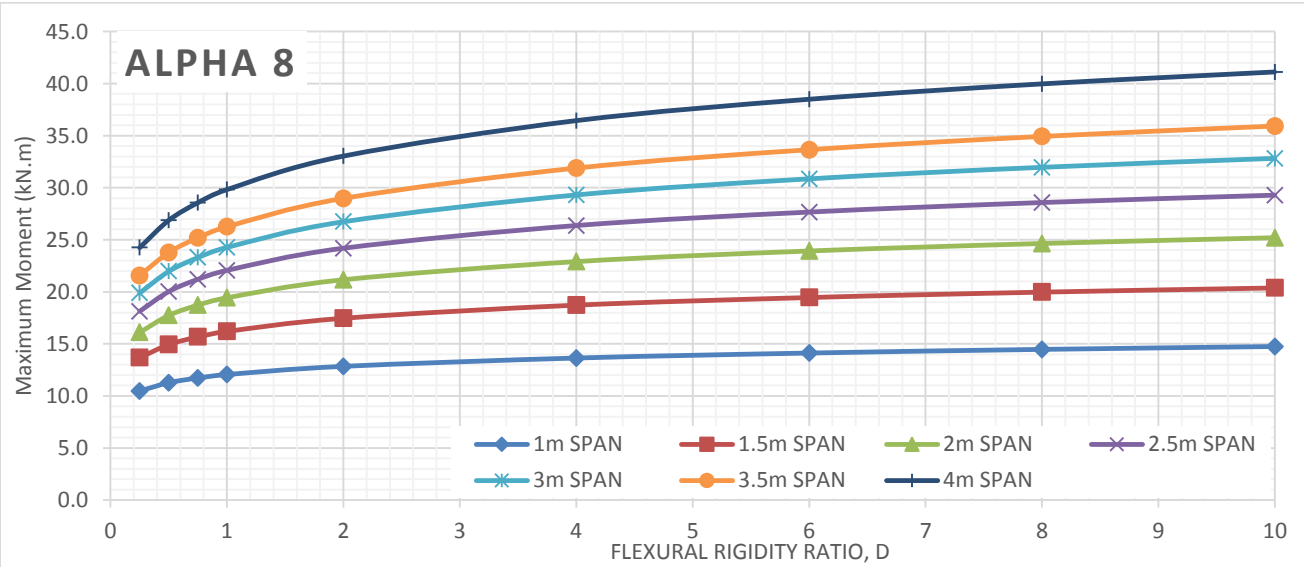

Figure 1103 Factored maximum moment results for alpha 8 at different span length (main bars parallel to traffic)

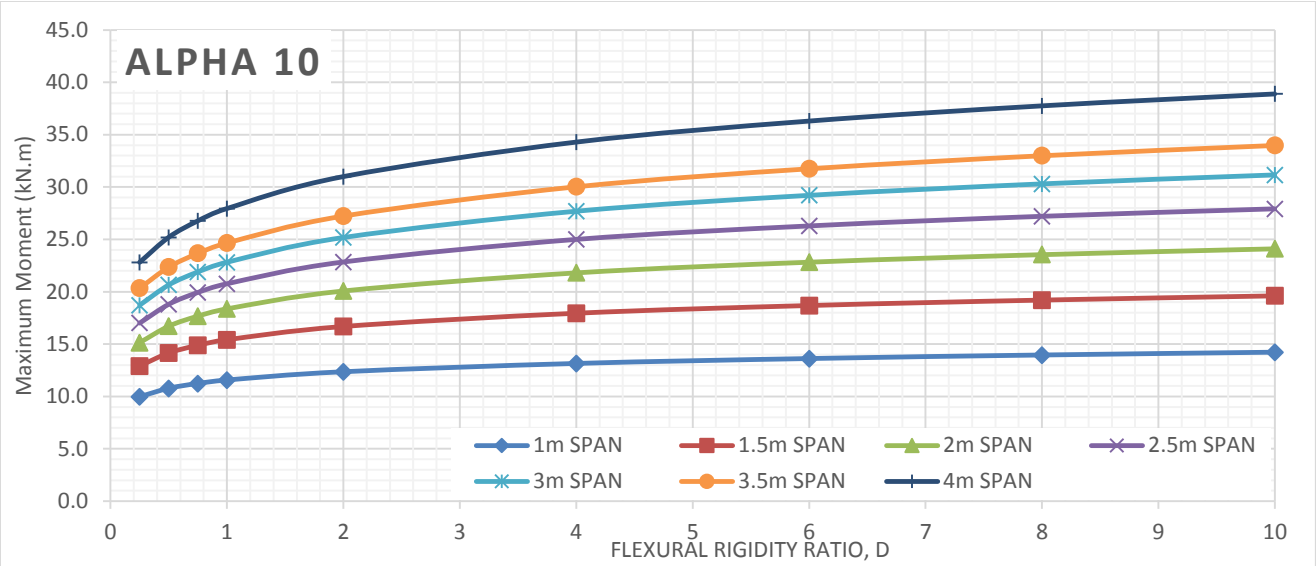

Figure 1104 Factored maximum moment results for alpha 10 at different span length (main bars parallel to traffic)

E.2 Factored Deflection

E.2.1 DEFLECTION RESULTS TABLES

Alpha 0.25 Deflection Results

Table 298 Factored maximum deflection results for alpha 0.25 (main bars perpendicular to traffic)

		Max Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Main bars perpendicular	1	6.60E-05	7.80E-05	8.60E-05	9.20E-05	1.09E-04	1.28E-04	1.41E-04	1.51E-04	1.59E-04
	1.5	1.64E-04	1.95E-04	2.15E-04	2.31E-04	2.74E-04	3.24E-04	3.58E-04	3.84E-04	4.05E-04
	2	3.34E-04	3.73E-04	3.99E-04	4.28E-04	5.08E-04	6.03E-04	6.66E-04	7.15E-04	7.55E-04
	2.5	5.64E-04	6.42E-04	6.87E-04	7.19E-04	8.12E-04	9.63E-04	1.07E-03	1.14E-03	1.21E-03
	3	8.52E-04	9.87E-04	1.07E-03	1.13E-03	1.28E-03	1.42E-03	1.51E-03	1.62E-03	1.71E-03
	3.5	1.40E-03	1.64E-03	1.79E-03	1.89E-03	2.17E-03	2.45E-03	2.60E-03	2.71E-03	2.78E-03
	4	2.06E-03	2.42E-03	2.64E-03	2.81E-03	3.24E-03	3.70E-03	3.96E-03	4.15E-03	4.29E-03

Table 299 Factored maximum deflection results for alpha 0.25 (main bars parallel to traffic)

		Max Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Main bars Parallel	1	7.83E-05	8.28E-05	8.64E-05	9.00E-05	9.99E-05	1.13E-04	1.22E-04	1.27E-04	1.31E-04
	1.5	2.45E-04	2.53E-04	2.59E-04	2.64E-04	2.78E-04	2.99E-04	3.15E-04	3.28E-04	3.40E-04
	2	5.54E-04	5.71E-04	5.81E-04	5.89E-04	6.10E-04	6.38E-04	6.60E-04	6.77E-04	6.92E-04
	2.5	1.02E-03	1.07E-03	1.09E-03	1.11E-03	1.14E-03	1.18E-03	1.21E-03	1.23E-03	1.25E-03
	3	1.74E-03	1.85E-03	1.91E-03	1.94E-03	2.02E-03	2.08E-03	2.12E-03	2.15E-03	2.17E-03
	3.5	2.74E-03	2.97E-03	3.08E-03	3.16E-03	3.31E-03	3.43E-03	3.49E-03	3.53E-03	3.57E-03
	4	3.97E-03	4.35E-03	4.56E-03	4.69E-03	4.97E-03	5.19E-03	5.30E-03	5.36E-03	5.42E-03

Alpha 0.5 Deflection Results

Table 300 Factored maximum deflection results for alpha 0.5 (main bars perpendicular to traffic)

		Max Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Main bars perpendicular	1	6.00E-05	7.10E-05	7.80E-05	8.40E-05	9.90E-05	1.17E-04	1.29E-04	1.38E-04	1.45E-04
	1.5	1.50E-04	1.78E-04	1.97E-04	2.11E-04	2.50E-04	2.96E-04	3.27E-04	3.50E-04	3.70E-04
	2	3.07E-04	3.45E-04	3.64E-04	3.91E-04	4.64E-04	5.51E-04	6.08E-04	6.52E-04	6.89E-04
	2.5	5.17E-04	5.89E-04	6.31E-04	6.61E-04	7.41E-04	8.80E-04	9.72E-04	1.04E-03	1.10E-03
	3	7.78E-04	9.03E-04	9.46E-04	1.04E-03	1.18E-03	1.31E-03	1.38E-03	1.48E-03	1.56E-03
	3.5	1.28E-03	1.50E-03	1.63E-03	1.73E-03	1.99E-03	2.25E-03	2.39E-03	2.49E-03	2.57E-03
	4	1.88E-03	2.21E-03	2.41E-03	2.57E-03	2.97E-03	3.39E-03	3.64E-03	3.81E-03	3.94E-03

Table 301 Factored maximum deflection results for alpha 0.5 (main bars parallel to traffic)

		Max Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Main bars Parallel	1	7.65E-05	8.10E-05	8.37E-05	8.64E-05	9.45E-05	1.05E-04	1.13E-04	1.18E-04	1.22E-04
	1.5	2.38E-04	2.47E-04	2.52E-04	2.57E-04	2.70E-04	2.88E-04	3.02E-04	3.14E-04	3.23E-04
	2	5.29E-04	5.51E-04	5.63E-04	5.72E-04	5.94E-04	6.21E-04	6.41E-04	6.57E-04	6.71E-04
	2.5	9.67E-04	1.02E-03	1.05E-03	1.07E-03	1.11E-03	1.15E-03	1.18E-03	1.20E-03	1.22E-03
	3	1.62E-03	1.75E-03	1.77E-03	1.85E-03	1.94E-03	2.01E-03	2.06E-03	2.08E-03	2.11E-03
	3.5	2.54E-03	2.77E-03	2.90E-03	2.98E-03	3.15E-03	3.30E-03	3.37E-03	3.42E-03	3.46E-03
	4	3.67E-03	4.05E-03	4.25E-03	4.39E-03	4.70E-03	4.96E-03	5.09E-03	5.17E-03	5.23E-03

Alpha 0.75 Deflection Results

Table 302 Factored maximum deflection results for alpha 0.75 (main bars perpendicular to traffic)

		Max Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Main bars perpendicular	1	5.50E-05	6.60E-05	7.30E-05	7.80E-05	9.20E-05	1.09E-04	1.19E-04	1.28E-04	1.35E-04
	1.5	1.40E-04	1.65E-04	1.82E-04	1.95E-04	2.32E-04	2.74E-04	3.03E-04	3.24E-04	3.42E-04
	2	2.86E-04	3.21E-04	3.41E-04	3.62E-04	4.30E-04	5.10E-04	5.63E-04	6.04E-04	6.38E-04
	2.5	4.80E-04	5.48E-04	5.88E-04	6.17E-04	6.86E-04	8.14E-04	9.00E-04	9.66E-04	1.02E-03
	3	7.20E-04	8.37E-04	9.09E-04	9.62E-04	1.09E-03	1.22E-03	1.29E-03	1.37E-03	1.45E-03
	3.5	1.19E-03	1.39E-03	1.51E-03	1.61E-03	1.84E-03	2.09E-03	2.23E-03	2.33E-03	2.40E-03
	4	1.74E-03	2.04E-03	2.24E-03	2.38E-03	2.75E-03	3.15E-03	3.38E-03	3.55E-03	3.68E-03

Table 303 Factored maximum deflection results for alpha 0.75 (main bars parallel to traffic)

		Max Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Main bars Parallel	1	7.47E-05	7.83E-05	8.19E-05	8.37E-05	9.09E-05	9.99E-05	1.06E-04	1.11E-04	1.14E-04
	1.5	2.30E-04	2.40E-04	2.47E-04	2.51E-04	2.64E-04	2.81E-04	2.93E-04	3.03E-04	3.11E-04
	2	5.09E-04	5.34E-04	5.47E-04	5.56E-04	5.81E-04	6.08E-04	6.26E-04	6.41E-04	6.53E-04
	2.5	9.20E-04	9.79E-04	1.01E-03	1.03E-03	1.08E-03	1.12E-03	1.15E-03	1.17E-03	1.19E-03
	3	1.53E-03	1.66E-03	1.73E-03	1.77E-03	1.87E-03	1.96E-03	2.00E-03	2.03E-03	2.05E-03
	3.5	2.39E-03	2.62E-03	2.75E-03	2.83E-03	3.02E-03	3.18E-03	3.27E-03	3.32E-03	3.36E-03
	4	3.43E-03	3.80E-03	4.01E-03	4.16E-03	4.48E-03	4.76E-03	4.90E-03	5.00E-03	5.07E-03

Alpha 1 Deflection Results

Table 304 Factored maximum deflection results for alpha 1 (main bars perpendicular to traffic)

		Max Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Main bars perpendicular	1	5.20E-05	6.10E-05	6.80E-05	7.30E-05	8.60E-05	1.02E-04	1.12E-04	1.20E-04	1.26E-04
	1.5	1.33E-04	1.54E-04	1.70E-04	1.83E-04	2.17E-04	2.57E-04	2.83E-04	3.04E-04	3.20E-04
	2	2.69E-04	3.03E-04	3.22E-04	3.39E-04	4.02E-04	4.77E-04	5.27E-04	5.65E-04	5.97E-04
	2.5	4.50E-04	5.14E-04	5.53E-04	5.81E-04	6.46E-04	7.62E-04	8.42E-04	9.04E-04	9.55E-04
	3	6.74E-04	7.83E-04	8.52E-04	9.02E-04	1.03E-03	1.15E-03	1.22E-03	1.28E-03	1.35E-03
	3.5	1.11E-03	1.30E-03	1.42E-03	1.50E-03	1.73E-03	1.96E-03	2.10E-03	2.19E-03	2.27E-03
	4	1.63E-03	1.91E-03	2.09E-03	2.23E-03	2.58E-03	2.95E-03	3.18E-03	3.34E-03	3.46E-03

Table 305 Factored maximum deflection results for alpha 1 (main bars parallel to traffic)

		Max Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Main bars Parallel	1	7.29E-05	7.74E-05	8.01E-05	8.19E-05	8.82E-05	9.63E-05	1.02E-04	1.06E-04	1.10E-04
	1.5	2.24E-04	2.35E-04	2.41E-04	2.46E-04	2.58E-04	2.75E-04	2.85E-04	2.94E-04	3.02E-04
	2	4.91E-04	5.18E-04	5.33E-04	5.43E-04	5.68E-04	5.95E-04	6.13E-04	6.27E-04	6.39E-04
	2.5	8.80E-04	9.42E-04	9.76E-04	9.98E-04	1.05E-03	1.10E-03	1.13E-03	1.15E-03	1.17E-03
	3	1.45E-03	1.58E-03	1.66E-03	1.70E-03	1.81E-03	1.90E-03	1.95E-03	1.98E-03	2.01E-03
	3.5	2.26E-03	2.49E-03	2.62E-03	2.71E-03	2.91E-03	3.08E-03	3.17E-03	3.23E-03	3.28E-03
	4	3.24E-03	3.61E-03	3.81E-03	3.96E-03	4.29E-03	4.59E-03	4.75E-03	4.85E-03	4.93E-03

Alpha 2 Deflection Results

Table 306 Factored maximum deflection results for alpha 2 (main bars perpendicular to traffic)

		Max Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Main bars perpendicular	1	4.20E-05	5.00E-05	5.50E-05	5.90E-05	7.00E-05	8.30E-05	9.10E-05	9.80E-05	1.03E-04
	1.5	1.11E-04	1.26E-04	1.39E-04	1.49E-04	1.77E-04	2.10E-04	2.31E-04	2.48E-04	2.62E-04
	2	2.23E-04	2.53E-04	2.70E-04	2.82E-04	3.28E-04	3.89E-04	4.30E-04	4.62E-04	4.88E-04
	2.5	3.71E-04	4.26E-04	4.60E-04	4.84E-04	5.43E-04	6.22E-04	6.88E-04	7.38E-04	7.80E-04
	3	5.52E-04	6.42E-04	6.99E-04	7.41E-04	8.48E-04	9.59E-04	1.02E-03	1.07E-03	1.10E-03
	3.5	9.09E-04	1.06E-03	1.16E-03	1.23E-03	1.42E-03	1.62E-03	1.75E-03	1.83E-03	1.90E-03
	4	1.34E-03	1.57E-03	1.71E-03	1.83E-03	2.12E-03	2.43E-03	2.63E-03	2.77E-03	2.88E-03

Table 307 Factored maximum deflection results for alpha 2 (main bars parallel to traffic)

		Max Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Main bars Parallel	1	6.84E-05	7.20E-05	7.47E-05	7.65E-05	8.10E-05	8.73E-05	9.09E-05	9.45E-05	9.63E-05
	1.5	2.05E-04	2.18E-04	2.25E-04	2.30E-04	2.42E-04	2.56E-04	2.65E-04	2.72E-04	2.78E-04
	2	4.37E-04	4.69E-04	4.87E-04	5.00E-04	5.28E-04	5.57E-04	5.74E-04	5.88E-04	5.99E-04
	2.5	7.67E-04	8.35E-04	8.73E-04	8.99E-04	9.60E-04	1.02E-03	1.05E-03	1.07E-03	1.09E-03
	3	1.24E-03	1.38E-03	1.45E-03	1.50E-03	1.62E-03	1.73E-03	1.79E-03	1.83E-03	1.86E-03
	3.5	1.92E-03	2.14E-03	2.27E-03	2.36E-03	2.57E-03	2.77E-03	2.88E-03	2.95E-03	3.01E-03
	4	2.73E-03	3.06E-03	3.26E-03	3.40E-03	3.75E-03	4.07E-03	4.26E-03	4.38E-03	4.47E-03

Alpha 4 Deflection Results

Table 308 Factored maximum deflection results for alpha 4 (main bars perpendicular to traffic)

		Max Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Main bars perpendicular	1	3.30E-05	3.90E-05	4.30E-05	4.60E-05	5.50E-05	6.40E-05	7.10E-05	7.60E-05	8.00E-05
	1.5	8.91E-05	1.01E-04	1.09E-04	1.16E-04	1.37E-04	1.62E-04	1.79E-04	1.92E-04	2.03E-04
	2	1.76E-04	2.02E-04	2.16E-04	2.28E-04	2.58E-04	3.02E-04	3.33E-04	3.58E-04	3.78E-04
	2.5	2.92E-04	3.36E-04	3.64E-04	3.84E-04	4.37E-04	4.95E-04	5.33E-04	5.72E-04	6.04E-04
	3	4.30E-04	5.01E-04	5.47E-04	5.81E-04	6.69E-04	7.63E-04	8.21E-04	8.62E-04	8.97E-04
	3.5	7.12E-04	8.29E-04	9.06E-04	9.64E-04	1.12E-03	1.28E-03	1.39E-03	1.46E-03	1.52E-03
	4	1.05E-03	1.22E-03	1.34E-03	1.42E-03	1.66E-03	1.91E-03	2.07E-03	2.19E-03	2.29E-03

Table 309 Factored maximum deflection results for alpha 4 (main bars parallel to traffic)

		Max Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Main bars Parallel	1	6.21E-05	6.57E-05	6.84E-05	7.02E-05	7.38E-05	7.83E-05	8.19E-05	8.37E-05	8.55E-05
	1.5	1.80E-04	1.94E-04	2.03E-04	2.08E-04	2.21E-04	2.35E-04	2.43E-04	2.48E-04	2.53E-04
	2	3.72E-04	4.07E-04	4.27E-04	4.41E-04	4.74E-04	5.07E-04	5.25E-04	5.38E-04	5.48E-04
	2.5	6.39E-04	7.07E-04	7.48E-04	7.76E-04	8.44E-04	9.10E-04	9.48E-04	9.74E-04	9.94E-04
	3	1.02E-03	1.14E-03	1.22E-03	1.27E-03	1.39E-03	1.52E-03	1.59E-03	1.63E-03	1.67E-03
	3.5	1.56E-03	1.75E-03	1.87E-03	1.96E-03	2.17E-03	2.39E-03	2.51E-03	2.59E-03	2.66E-03
	4	2.22E-03	2.50E-03	2.67E-03	2.80E-03	3.13E-03	3.46E-03	3.65E-03	3.79E-03	3.89E-03

Alpha 6 Deflection Results

Table 310 Factored maximum deflection results for alpha 6 (main bars perpendicular to traffic)

		Max Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Main bars perpendicular	1	2.80E-05	3.30E-05	3.60E-05	3.90E-05	4.60E-05	5.50E-05	6.00E-05	6.40E-05	6.80E-05
	1.5	7.71E-05	8.82E-05	9.47E-05	1.00E-04	1.16E-04	1.37E-04	1.52E-04	1.63E-04	1.72E-04
	2	1.50E-04	1.73E-04	1.88E-04	1.98E-04	2.26E-04	2.56E-04	2.82E-04	3.03E-04	3.20E-04
	2.5	2.49E-04	2.88E-04	3.12E-04	3.31E-04	3.79E-04	4.32E-04	4.65E-04	4.91E-04	5.11E-04
	3	3.68E-04	4.27E-04	4.65E-04	4.95E-04	5.72E-04	6.56E-04	7.09E-04	7.49E-04	7.81E-04
	3.5	6.12E-04	7.08E-04	7.72E-04	8.22E-04	9.52E-04	1.10E-03	1.19E-03	1.26E-03	1.31E-03
	4	9.13E-04	1.05E-03	1.14E-03	1.22E-03	1.41E-03	1.63E-03	1.78E-03	1.88E-03	1.97E-03

Table 311 Factored maximum deflection results for alpha 6 (main bars parallel to traffic)

		Max Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Main bars Parallel	1	5.76E-05	6.21E-05	6.39E-05	6.57E-05	7.02E-05	7.38E-05	7.65E-05	7.83E-05	8.01E-05
	1.5	1.64E-04	1.79E-04	1.87E-04	1.94E-04	2.07E-04	2.21E-04	2.29E-04	2.34E-04	2.39E-04
	2	3.32E-04	3.67E-04	3.88E-04	4.02E-04	4.37E-04	4.72E-04	4.91E-04	5.04E-04	5.15E-04
	2.5	5.65E-04	6.31E-04	6.70E-04	6.98E-04	7.68E-04	8.36E-04	8.76E-04	9.04E-04	9.25E-04
	3	8.98E-04	1.01E-03	1.08E-03	1.13E-03	1.25E-03	1.37E-03	1.45E-03	1.50E-03	1.54E-03
	3.5	1.38E-03	1.54E-03	1.65E-03	1.73E-03	1.93E-03	2.14E-03	2.27E-03	2.35E-03	2.42E-03
	4	1.97E-03	2.20E-03	2.35E-03	2.47E-03	2.77E-03	3.08E-03	3.28E-03	3.41E-03	3.52E-03

Alpha 8 Deflection Results

Table 312 Factored maximum deflection results for alpha 8 (main bars perpendicular to traffic)

		Max Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Main bars perpendicular	1	2.51E-05	2.90E-05	3.20E-05	3.40E-05	4.10E-05	4.80E-05	5.30E-05	5.70E-05	6.00E-05
	1.5	6.87E-05	7.89E-05	8.54E-05	9.01E-05	1.03E-04	1.21E-04	1.34E-04	1.44E-04	1.52E-04
	2	1.35E-04	1.55E-04	1.68E-04	1.78E-04	2.03E-04	2.32E-04	2.50E-04	2.67E-04	2.82E-04
	2.5	2.22E-04	2.56E-04	2.79E-04	2.95E-04	3.40E-04	3.89E-04	4.21E-04	4.45E-04	4.63E-04
	3	3.29E-04	3.80E-04	4.14E-04	4.40E-04	5.09E-04	5.86E-04	6.35E-04	6.73E-04	7.02E-04
	3.5	5.52E-04	6.33E-04	6.88E-04	7.30E-04	8.47E-04	9.78E-04	1.06E-03	1.13E-03	1.18E-03
	4	8.30E-04	9.44E-04	1.02E-03	1.09E-03	1.26E-03	1.45E-03	1.58E-03	1.68E-03	1.76E-03

Table 313 Factored maximum deflection results for alpha 8 (main bars parallel to traffic)

		Max Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Main bars Parallel	1	5.49E-05	5.85E-05	6.12E-05	6.30E-05	6.66E-05	7.11E-05	7.29E-05	7.47E-05	7.65E-05
	1.5	1.52E-04	1.67E-04	1.76E-04	1.82E-04	1.96E-04	2.10E-04	2.18E-04	2.24E-04	2.28E-04
	2	3.04E-04	3.38E-04	3.59E-04	3.74E-04	4.10E-04	4.45E-04	4.64E-04	4.79E-04	4.89E-04
	2.5	5.17E-04	5.78E-04	6.16E-04	6.43E-04	7.12E-04	7.81E-04	8.22E-04	8.50E-04	8.72E-04
	3	8.19E-04	9.18E-04	9.81E-04	1.03E-03	1.15E-03	1.27E-03	1.35E-03	1.40E-03	1.44E-03
	3.5	1.26E-03	1.41E-03	1.51E-03	1.58E-03	1.77E-03	1.97E-03	2.09E-03	2.18E-03	2.25E-03
	4	1.82E-03	2.02E-03	2.15E-03	2.25E-03	2.52E-03	2.82E-03	3.01E-03	3.14E-03	3.25E-03

Alpha 10 Deflection Results

Table 314 Factored maximum deflection results for alpha 10 (main bars perpendicular to traffic)

		Max Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Main bars perpendicular	1	2.32E-05	2.69E-05	2.90E-05	3.10E-05	3.70E-05	4.40E-05	4.80E-05	5.10E-05	5.40E-05
	1.5	6.31E-05	7.24E-05	7.89E-05	8.36E-05	9.47E-05	1.10E-04	1.21E-04	1.30E-04	1.37E-04
	2	1.23E-04	1.41E-04	1.54E-04	1.63E-04	1.88E-04	2.15E-04	2.31E-04	2.44E-04	2.55E-04
	2.5	2.03E-04	2.34E-04	2.54E-04	2.70E-04	3.11E-04	3.58E-04	3.87E-04	4.10E-04	4.28E-04
	3	3.03E-04	3.48E-04	3.78E-04	4.01E-04	4.64E-04	5.36E-04	5.82E-04	6.17E-04	6.44E-04
	3.5	5.11E-04	5.81E-04	6.30E-04	6.68E-04	7.71E-04	8.93E-04	9.70E-04	1.03E-03	1.08E-03
	4	7.75E-04	8.72E-04	9.41E-04	9.96E-04	1.15E-03	1.32E-03	1.44E-03	1.53E-03	1.60E-03

Table 315 Factored maximum deflection results for alpha 10 (main bars parallel to traffic)

		Max Deflection (m)								
	D / SPAN	0.25	0.5	0.75	1	2	4	6	8	10
Main bars Parallel	1	5.22E-05	5.58E-05	5.85E-05	6.03E-05	6.48E-05	6.84E-05	7.02E-05	7.20E-05	7.38E-05
	1.5	1.42E-04	1.58E-04	1.67E-04	1.73E-04	1.87E-04	2.02E-04	2.10E-04	2.15E-04	2.20E-04
	2	2.84E-04	3.17E-04	3.37E-04	3.51E-04	3.87E-04	4.22E-04	4.43E-04	4.57E-04	4.68E-04
	2.5	4.82E-04	5.38E-04	5.74E-04	6.01E-04	6.68E-04	7.37E-04	7.78E-04	8.06E-04	8.29E-04
	3	7.64E-04	8.54E-04	9.13E-04	9.57E-04	1.07E-03	1.19E-03	1.27E-03	1.32E-03	1.36E-03
	3.5	1.18E-03	1.31E-03	1.40E-03	1.47E-03	1.65E-03	1.84E-03	1.96E-03	2.05E-03	2.11E-03
	4	1.71E-03	1.89E-03	2.01E-03	2.10E-03	2.35E-03	2.63E-03	2.81E-03	2.94E-03	3.04E-03

E.2.2 MAXIMUM DEFLECTION VS SPAN LENGTH

Deflection VS Span Length for Different D Values (Main bars perpendicular to traffic)

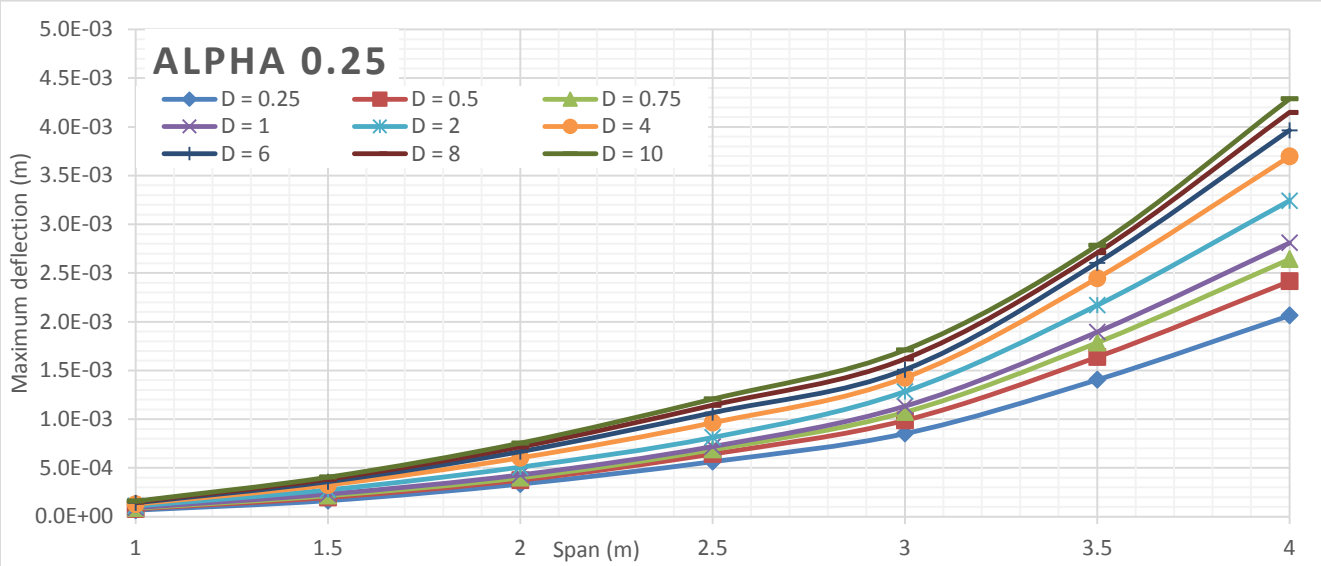

Figure 1105 Factored maximum deflection results for alpha 0.25 at different D values (main bars perpendicular to traffic)

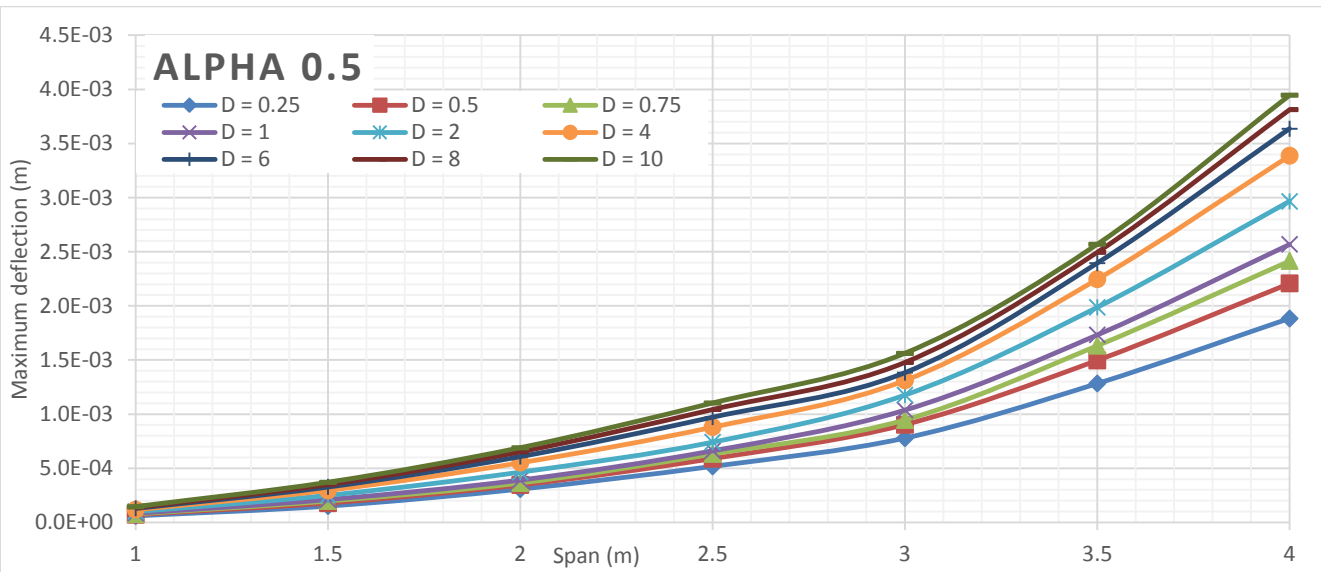

Figure 1106 Factored maximum deflection results for alpha 0.5 at different D values (main bars perpendicular to traffic)

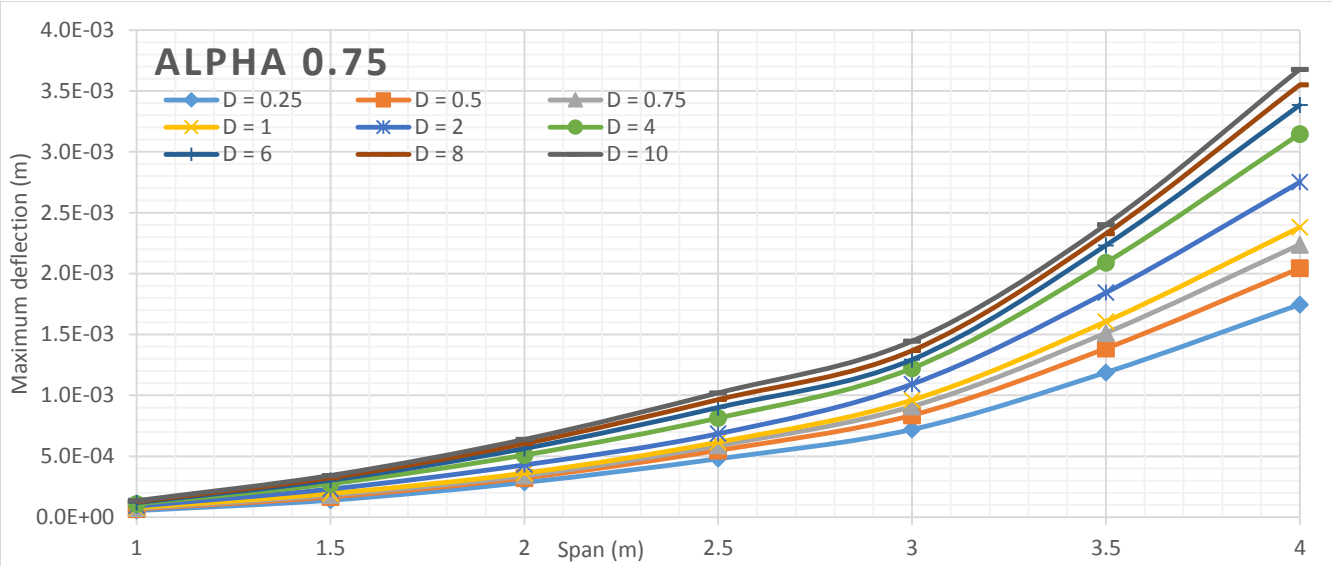

Figure 1107 Factored maximum deflection results for alpha 0.75 at different D values (main bars perpendicular to traffic)

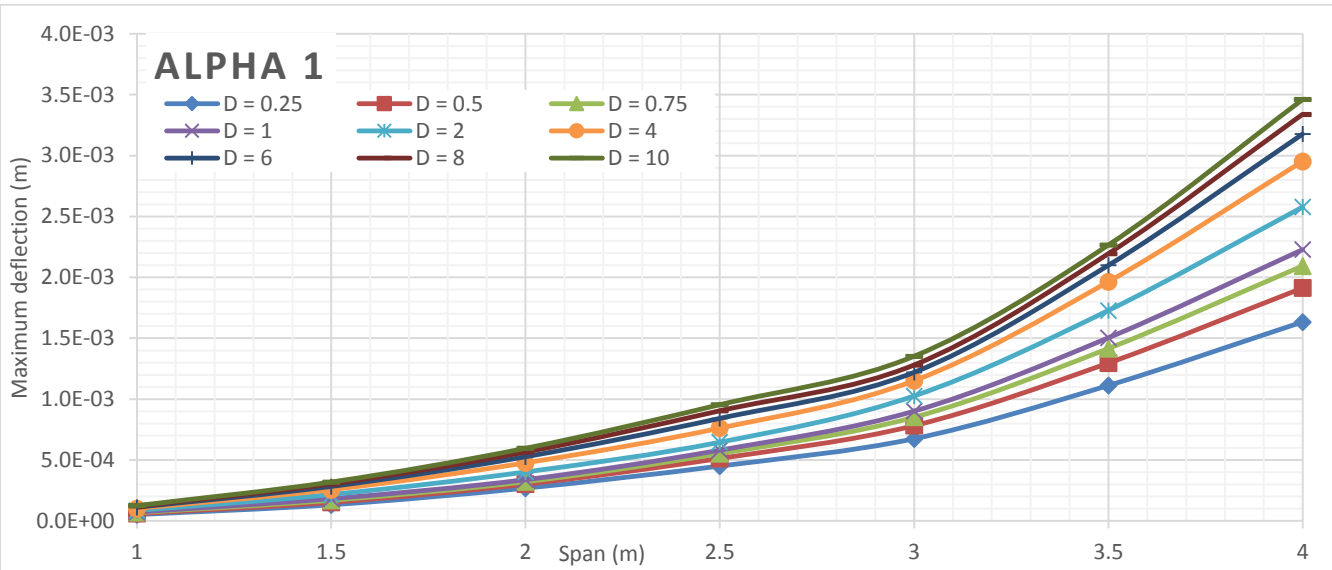

Figure 1108 Factored maximum deflection results for alpha 1 at different D values (main bars perpendicular to traffic)

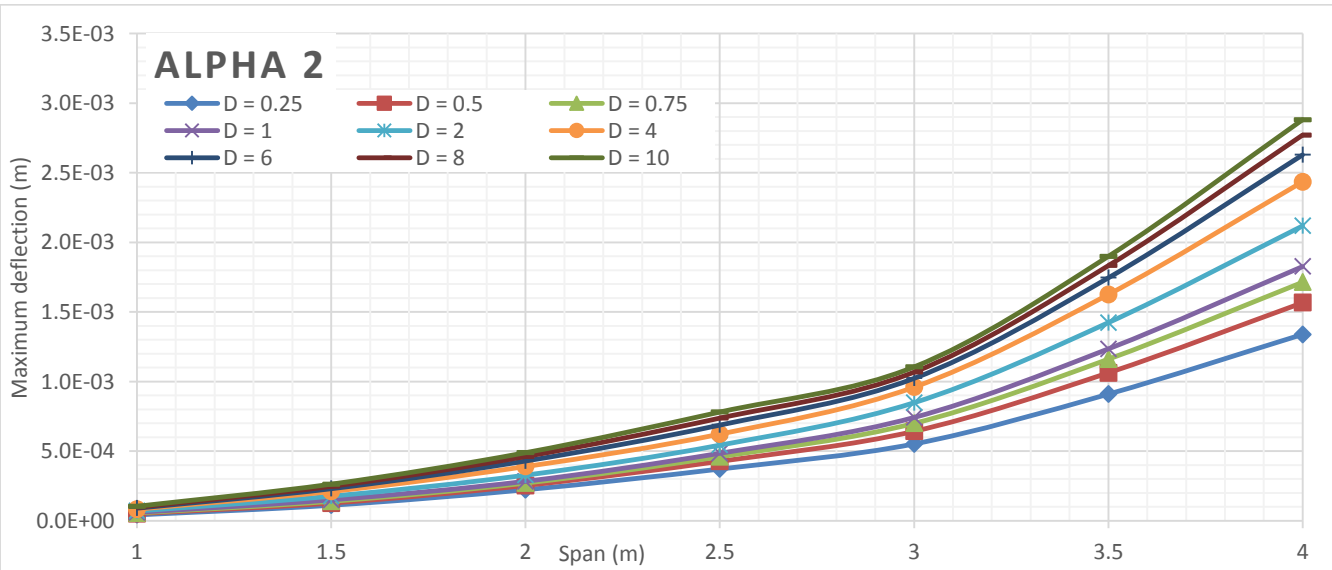

Figure 1109 Factored maximum deflection results for alpha 2 at different D values (main bars perpendicular to traffic)

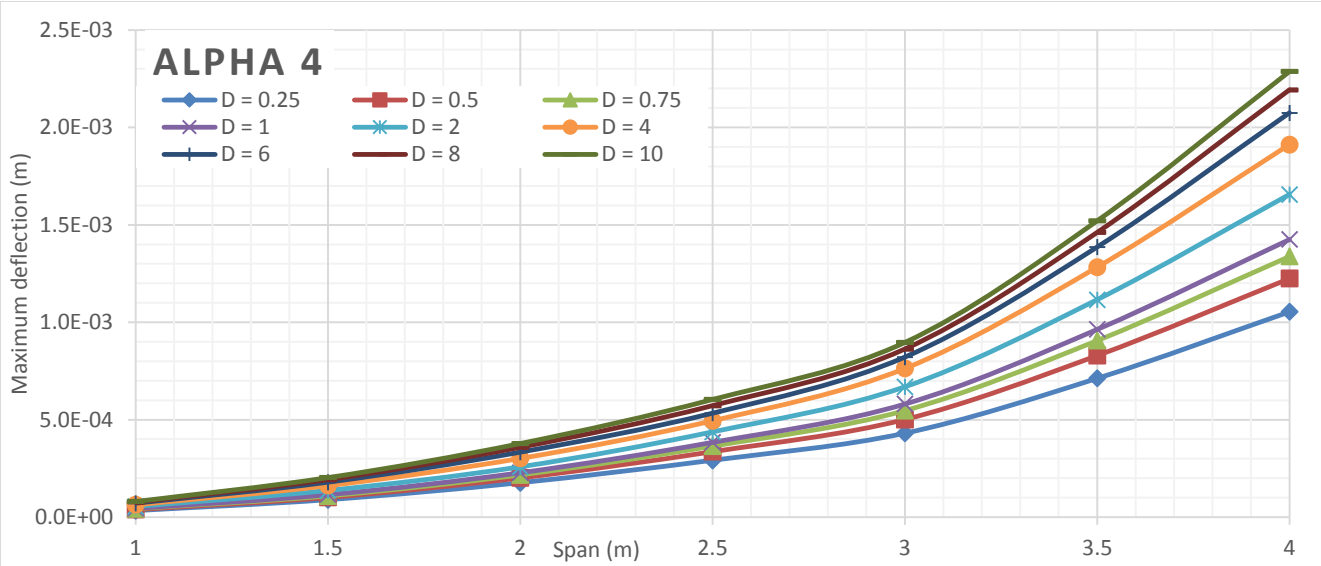

Figure 1110 Factored maximum deflection results for alpha 4 at different D values (main bars perpendicular to traffic)

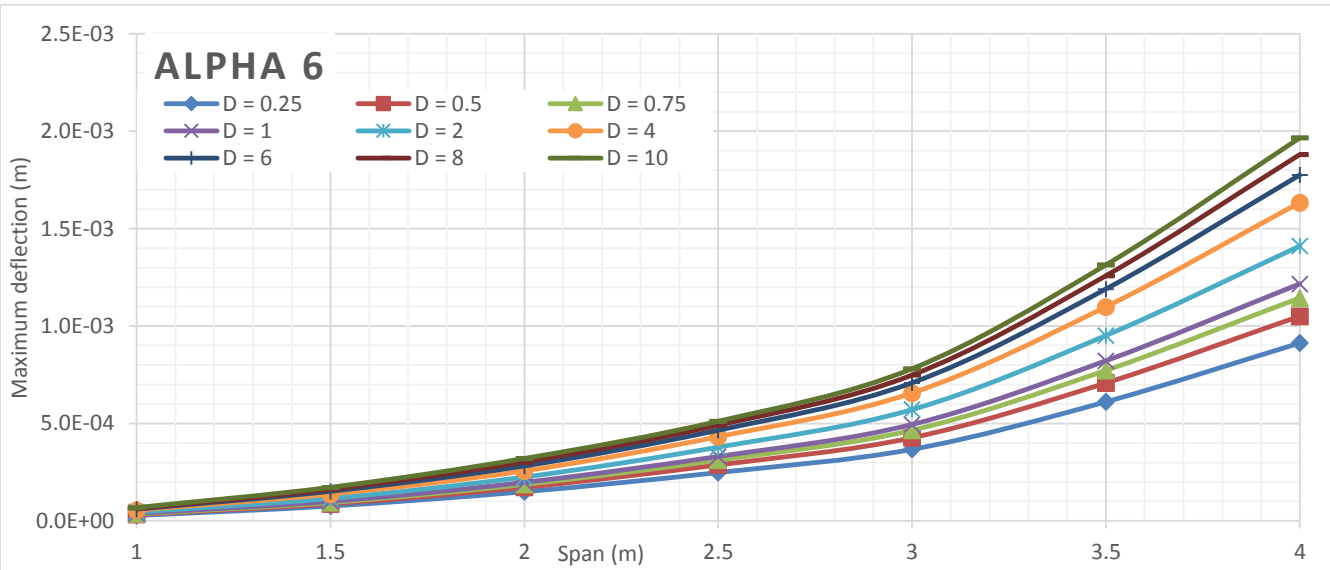

Figure 1111 Factored maximum deflection results for alpha 6 at different D values (main bars perpendicular to traffic)

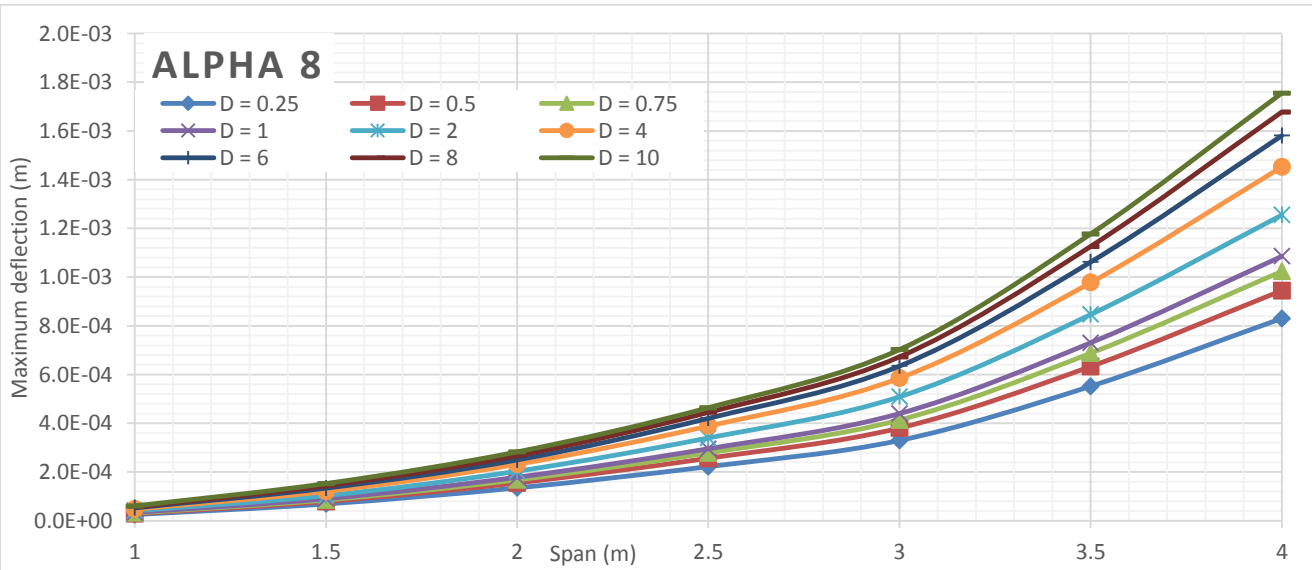

Figure 1112 Factored maximum deflection results for alpha 8 at different D values (main bars perpendicular to traffic)

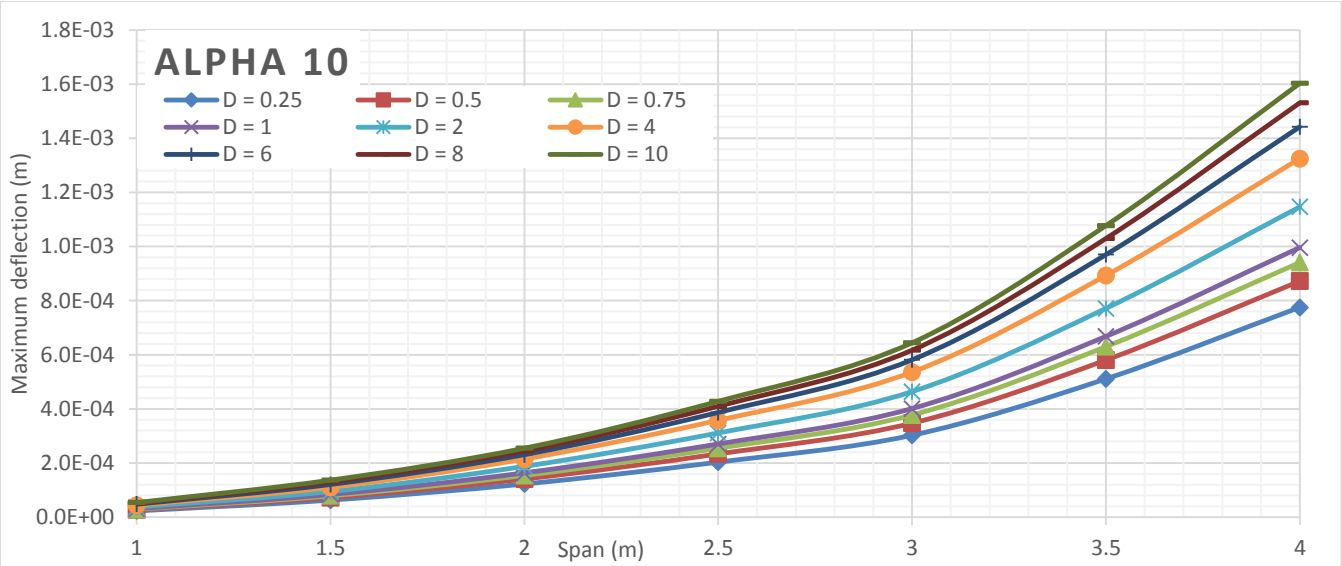

Figure 1113 Factored maximum deflection results for alpha 10 at different D values (main bars perpendicular to traffic)

Deflection VS Span Length for Different D Values (Main bars parallel to traffic)

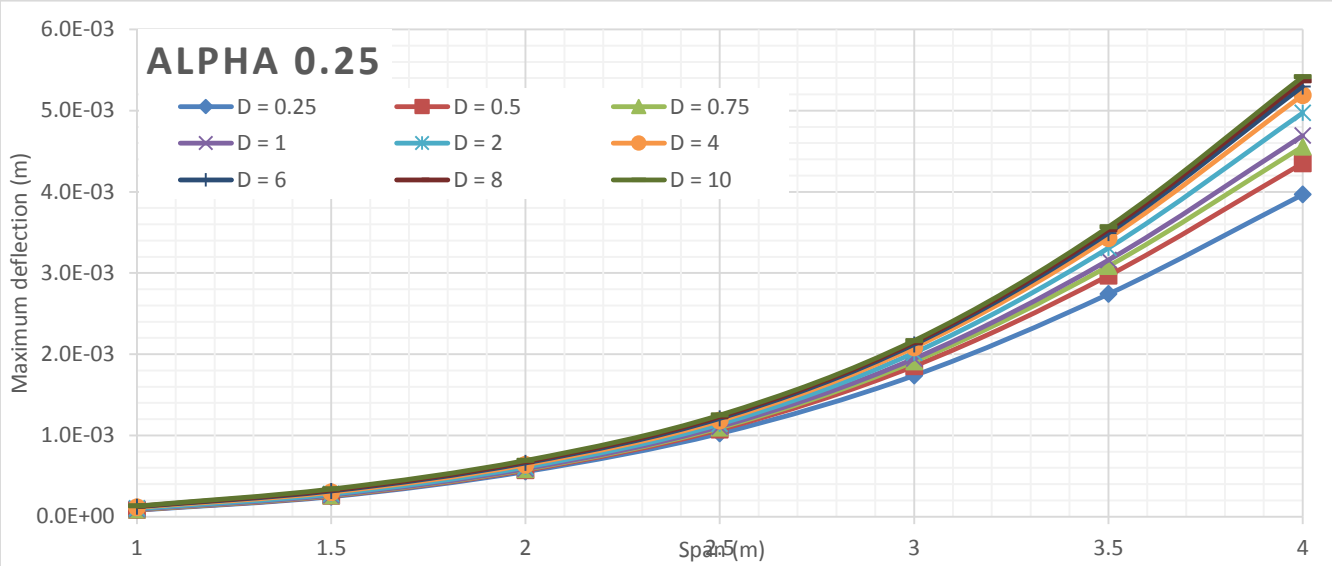

Figure 1114 Factored maximum deflection results for alpha 0.25 at different D values (main bars parallel to traffic)

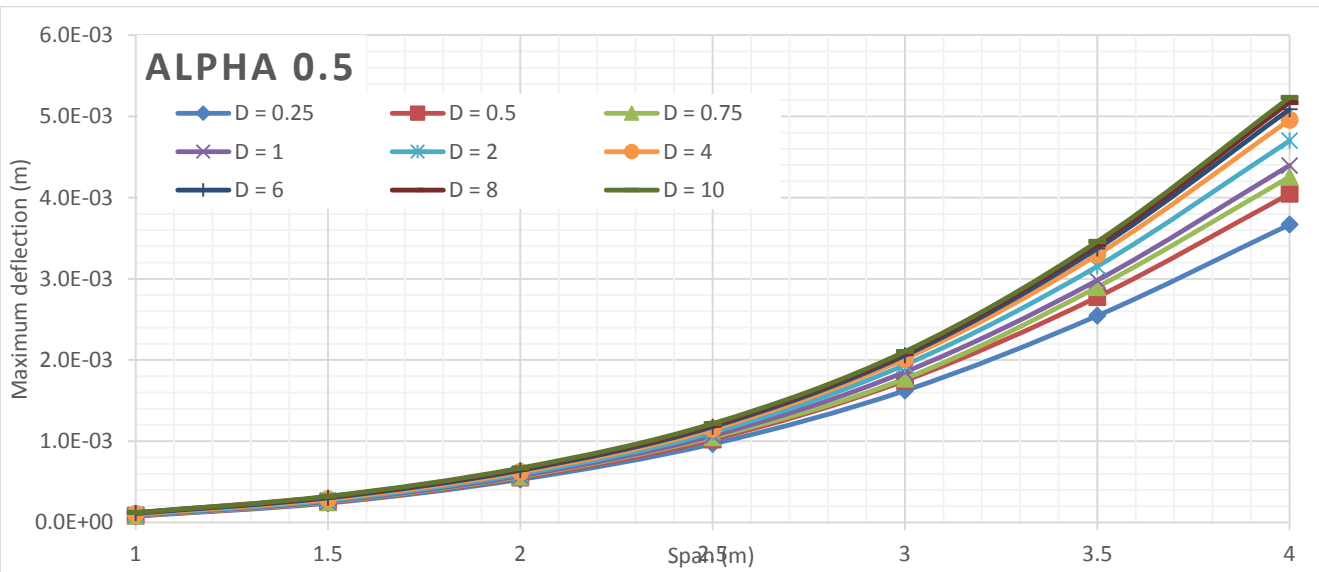

Figure 1115 Factored maximum deflection results for alpha 0.5 at different D values (main bars parallel to traffic)

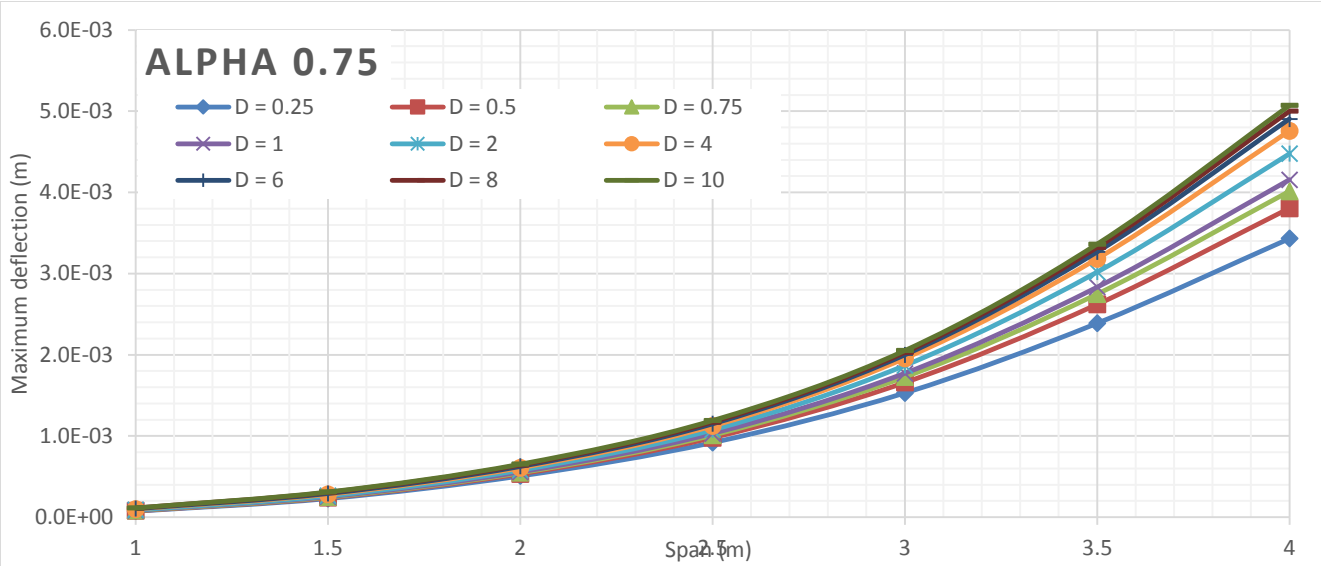

Figure 1116 Factored maximum deflection results for alpha 0.75 at different D values (main bars parallel to traffic)

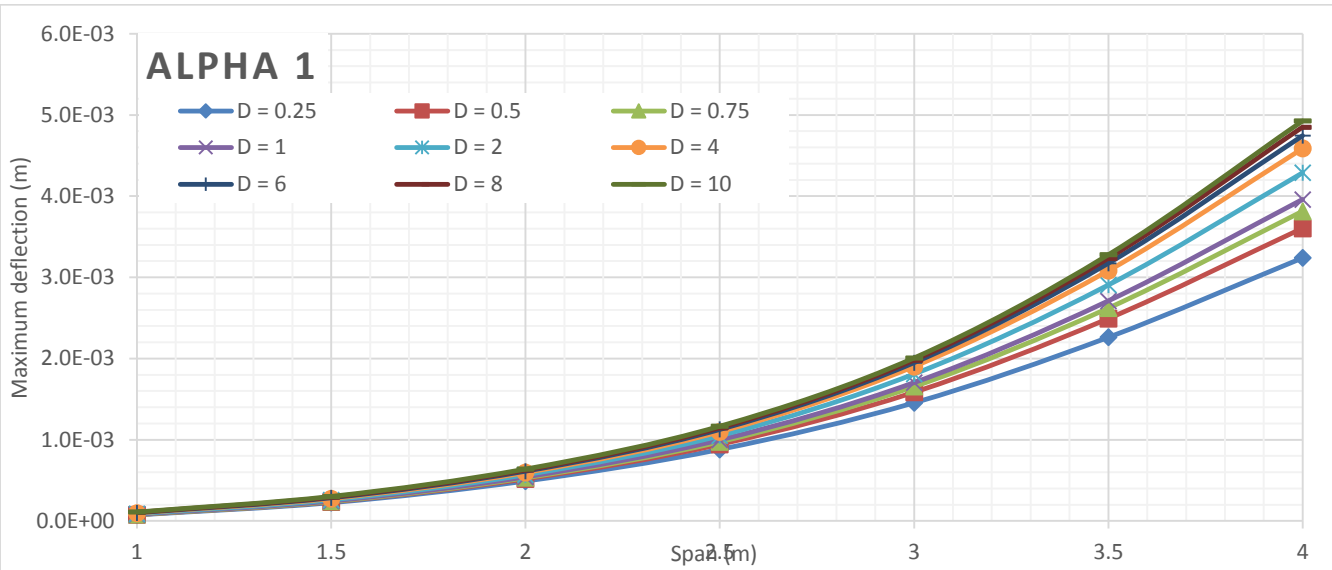

Figure 1117 Factored maximum deflection results for alpha 1 at different D values (main bars parallel to traffic)

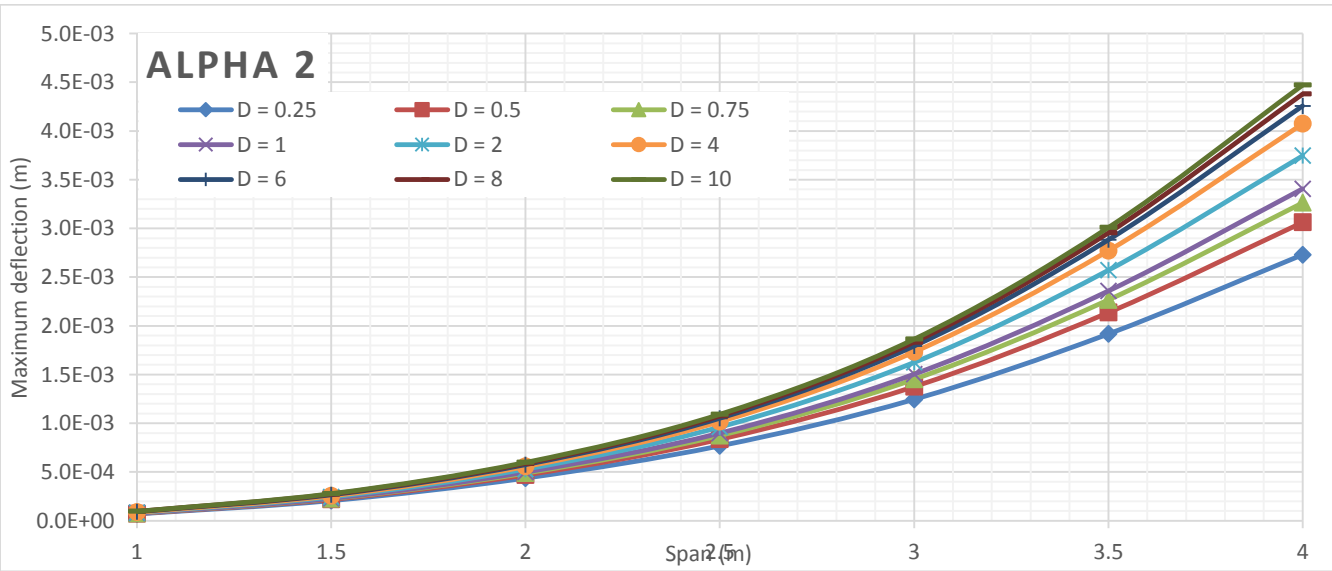

Figure 1118 Factored maximum deflection results for alpha 2 at different D values (main bars parallel to traffic)

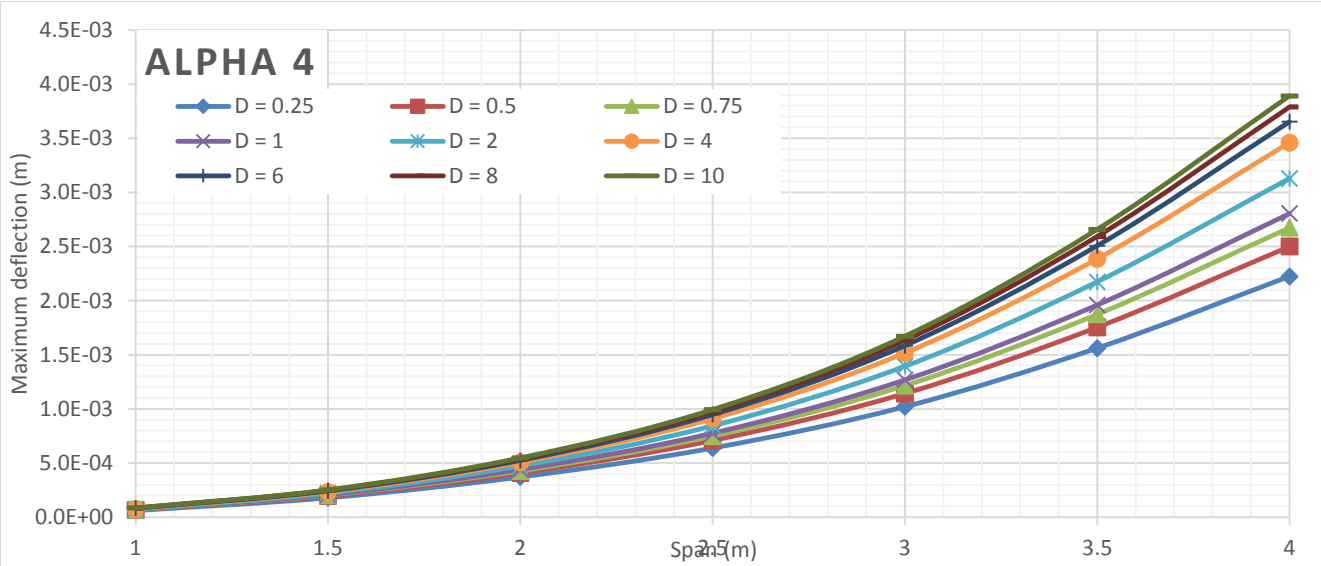

Figure 1119 Factored maximum deflection results for alpha 4 at different D values (main bars parallel to traffic)

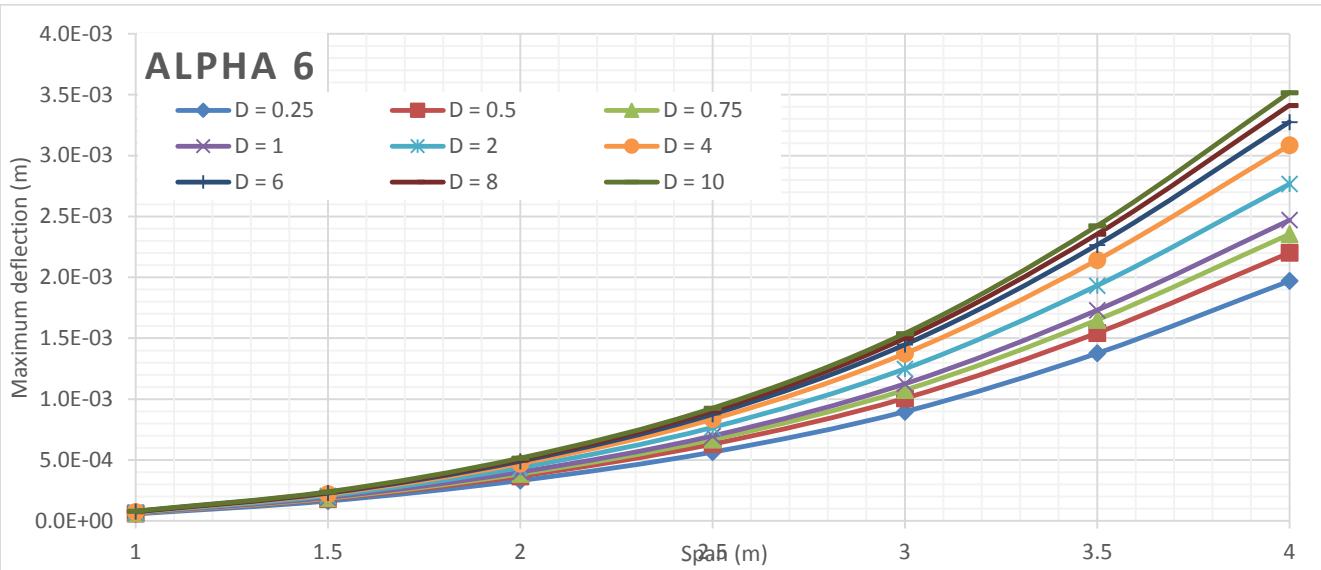

Figure 1120 Factored maximum deflection results for alpha 6 at different D values (main bars parallel to traffic)

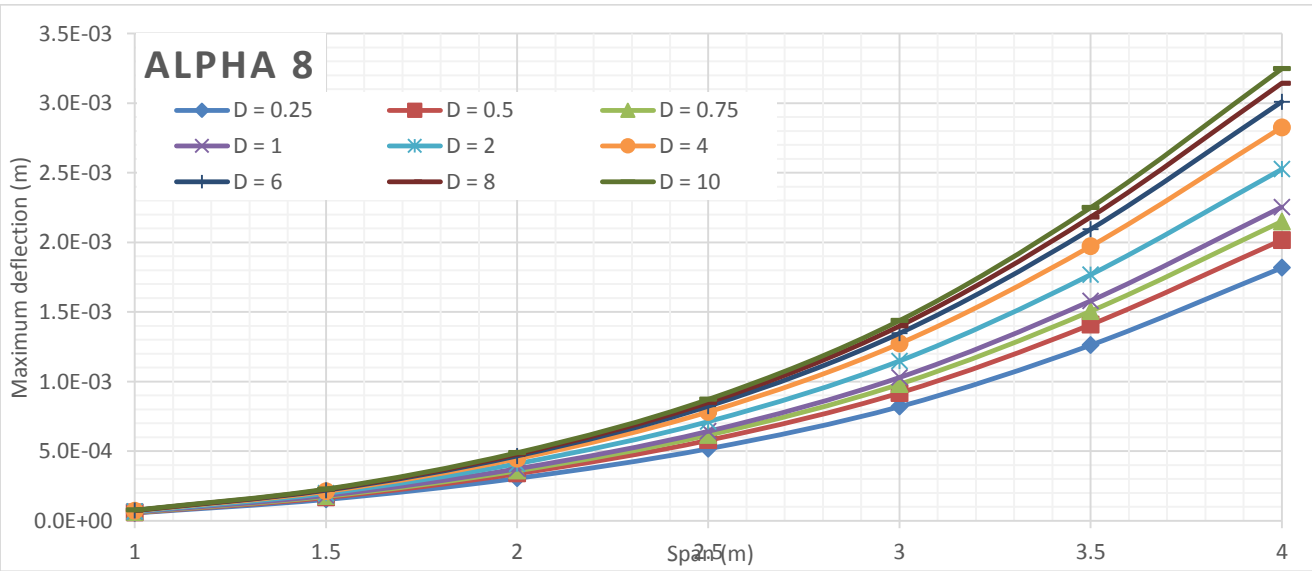

Figure 1121 Factored maximum deflection results for alpha 8 at different D values (main bars parallel to traffic)

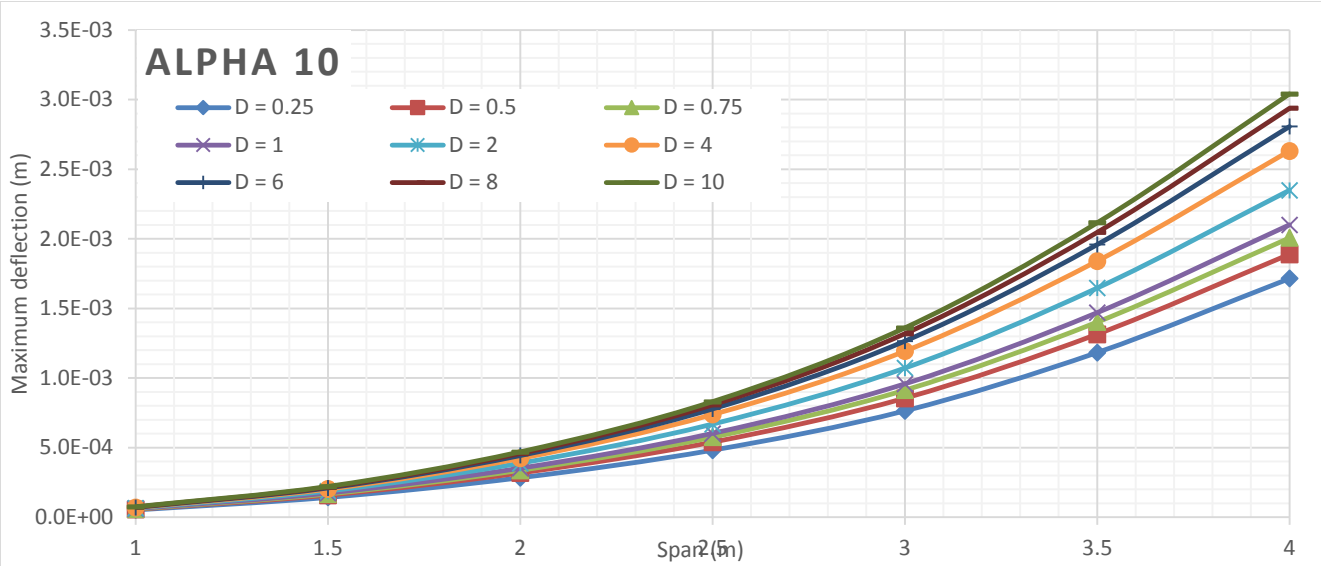

Figure 1122 Factored maximum deflection results for alpha 10 at different D values (main bars parallel to traffic)

E.2.3 MAXIMUM DEFLECTION VS FLEXURAL RIGIDITY

Deflection VS Flexural Rigidity for Different Spans (Main bars perpendicular to traffic)

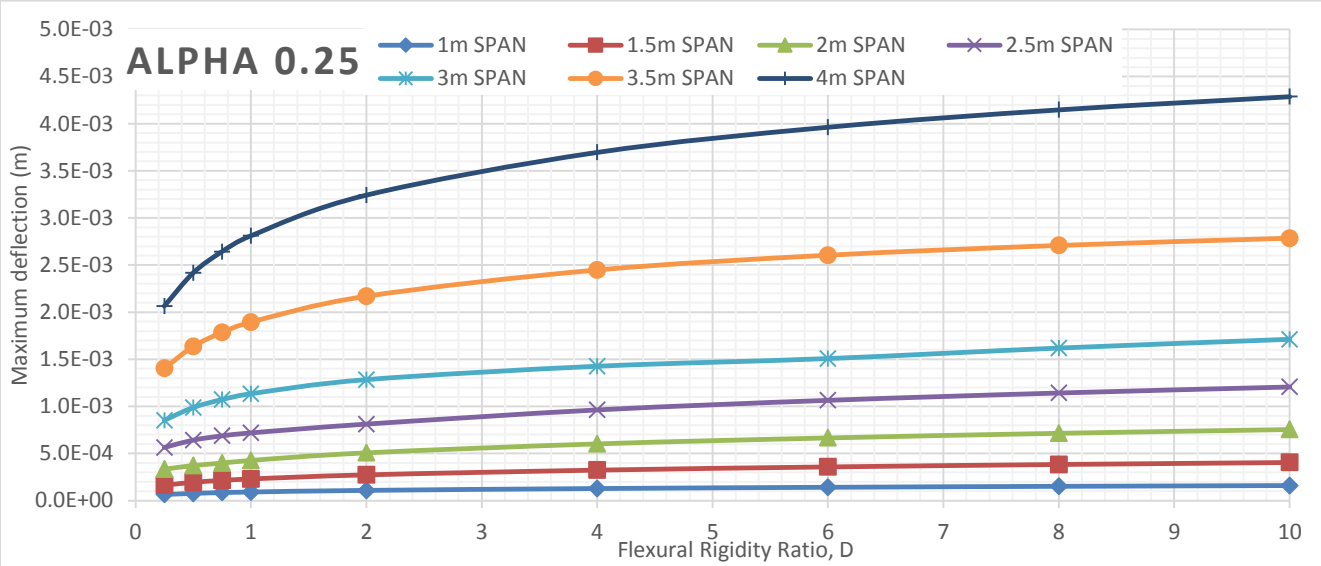

Figure 1123 Factored maximum deflection results for alpha 0.25 at different span length (main bars perpendicular to traffic)

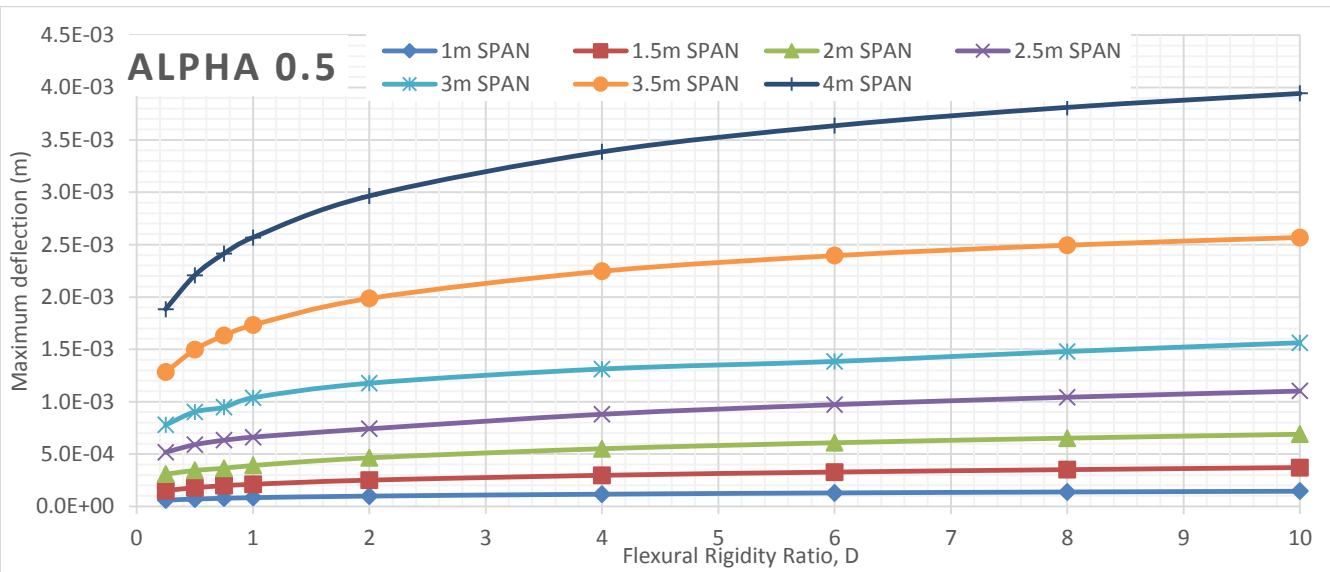

Figure 1124 Factored maximum deflection results for alpha 0.5 at different span length (main bars perpendicular to traffic)

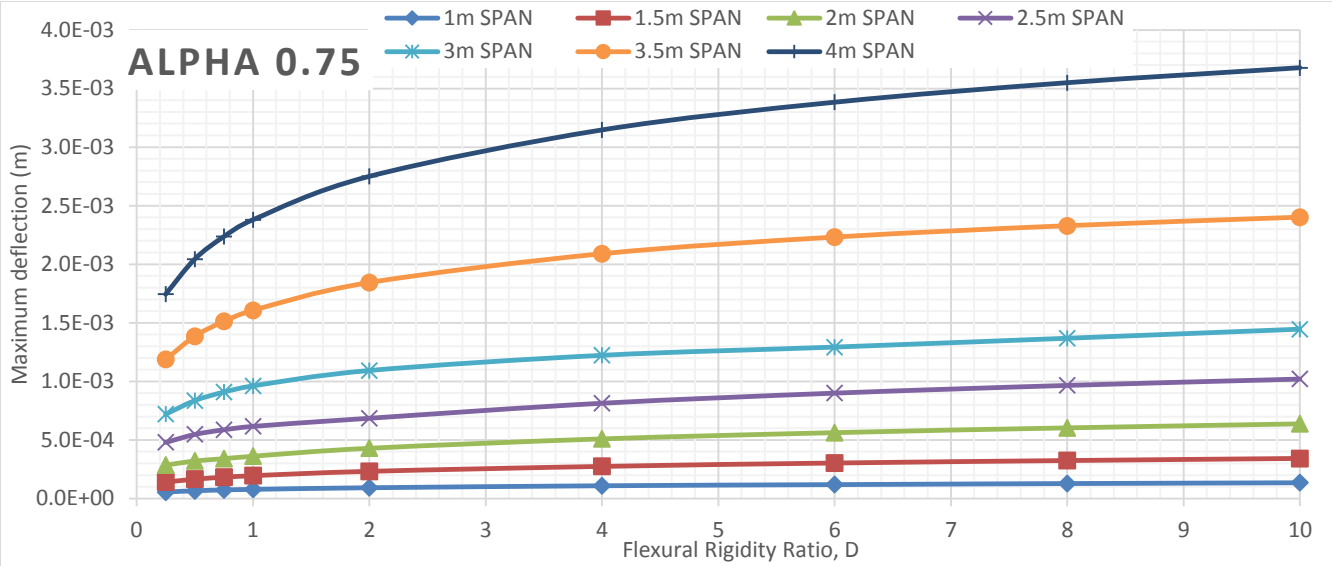

Figure 1125 Factored maximum deflection results for alpha 0.75 at different span length (main bars perpendicular to traffic)

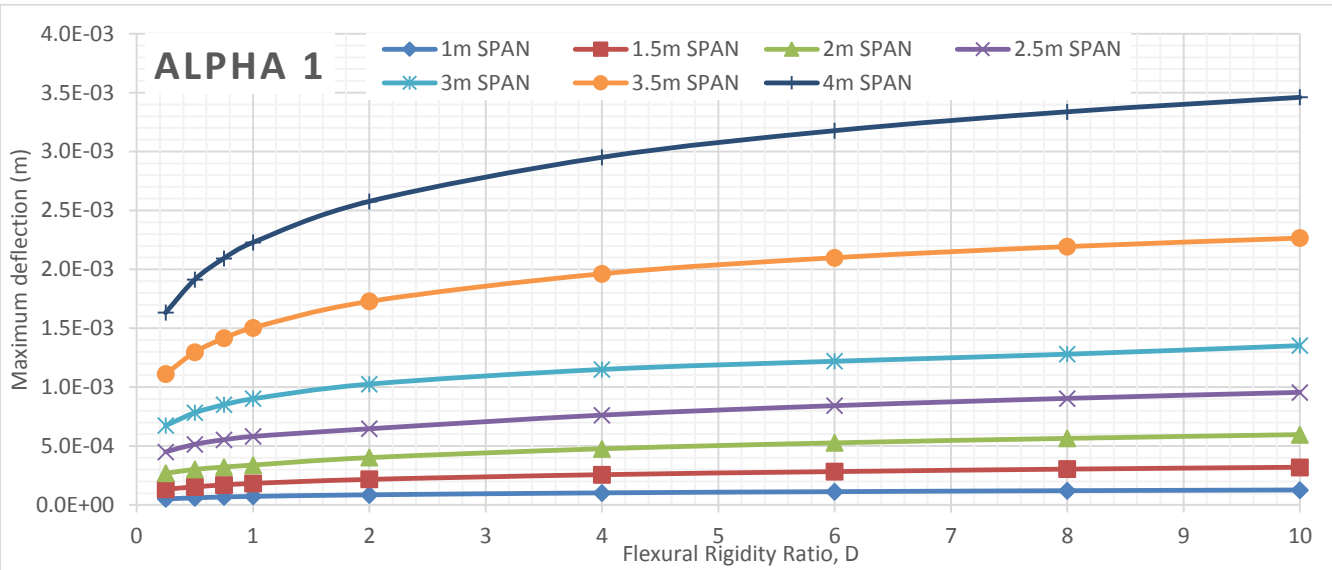

Figure 1126 Factored maximum deflection results for alpha 1 at different span length (main bars perpendicular to traffic)

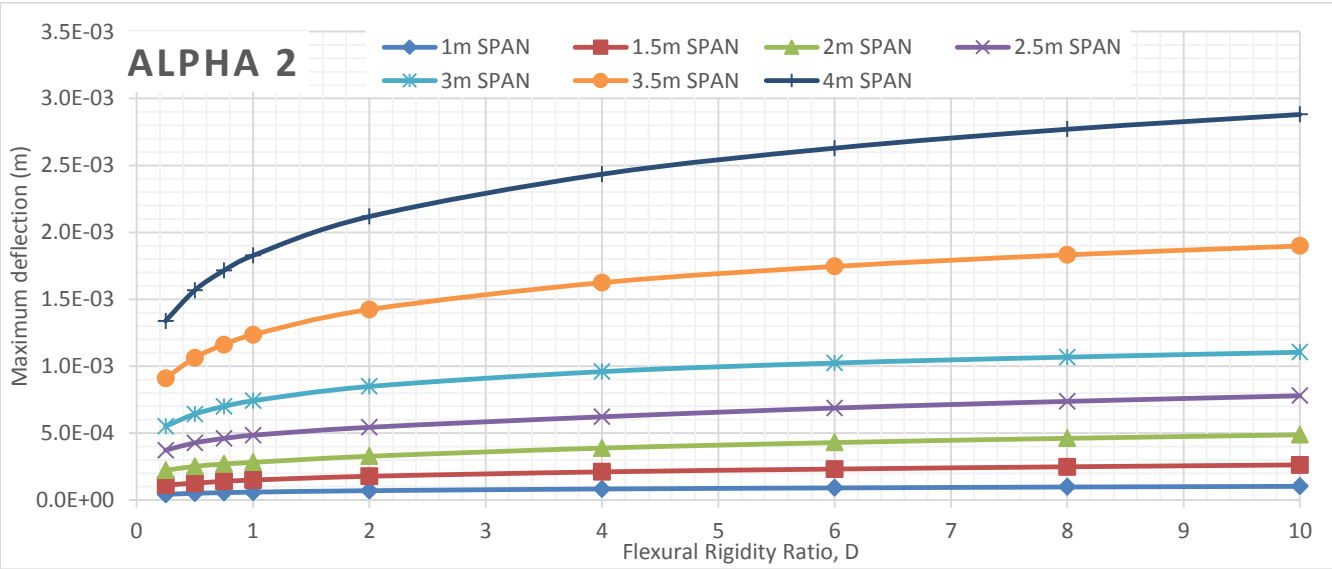

Figure 1127 Factored maximum deflection results for alpha 2 at different span length (main bars perpendicular to traffic)

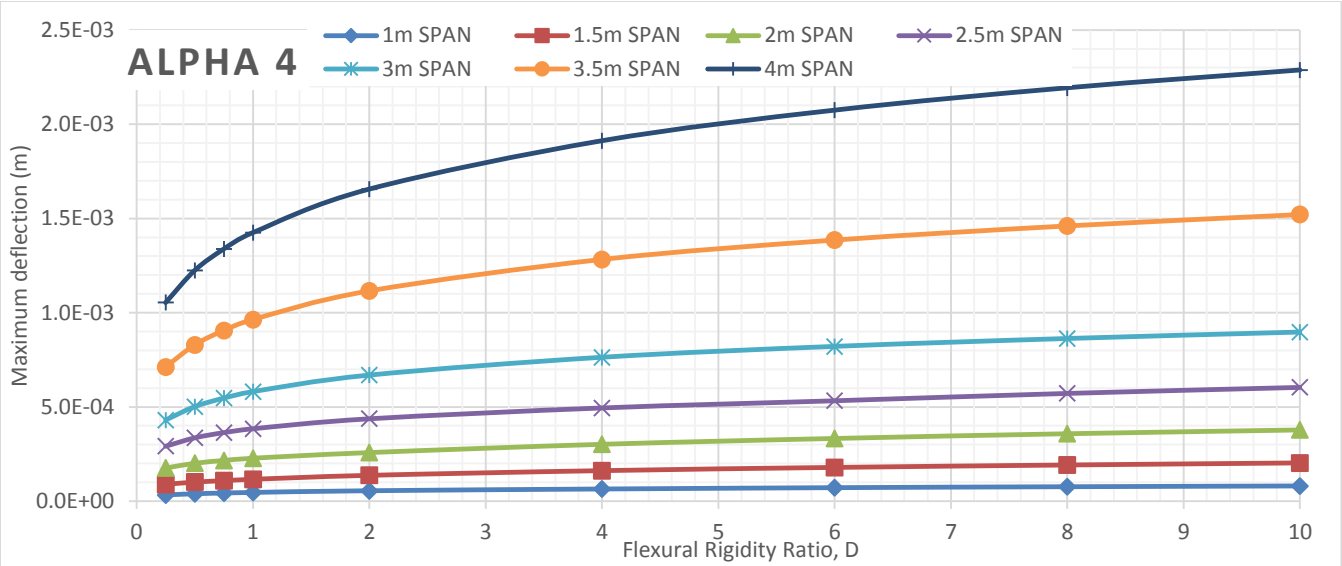

Figure 1128 Factored maximum deflection results for alpha 4 at different span length (main bars perpendicular to traffic)

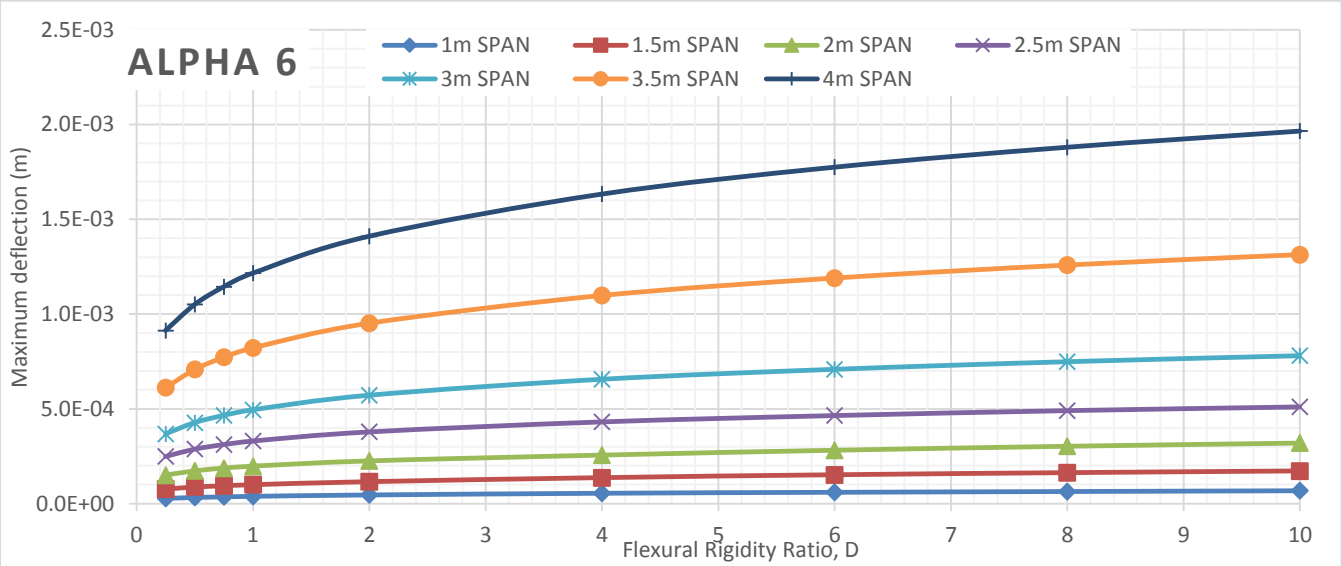

Figure 1129 Factored maximum deflection results for alpha 6 at different span length (main bars perpendicular to traffic)

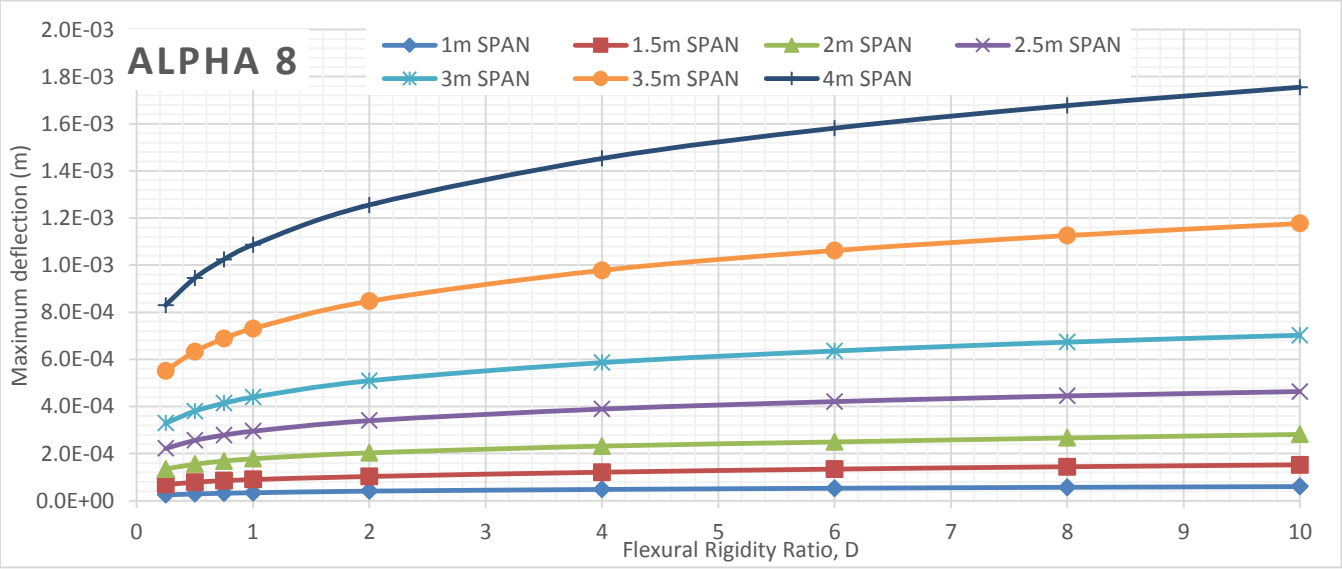

Figure 1130 Factored maximum deflection results for alpha 8 at different span length (main bars perpendicular to traffic)

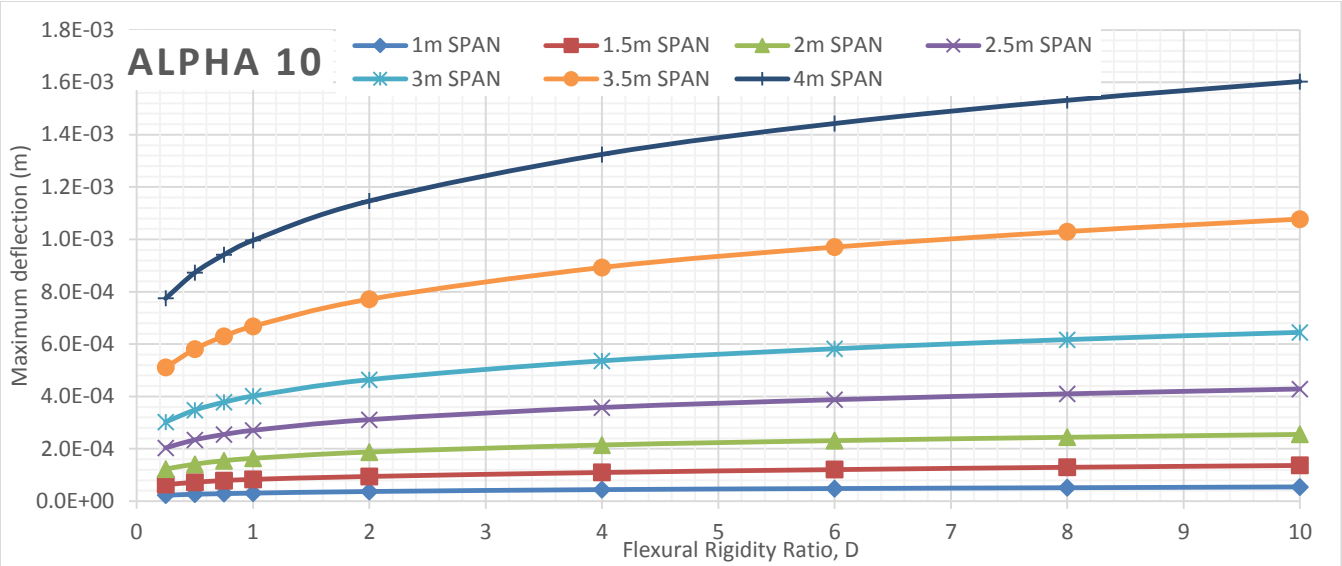

Figure 1131 Factored maximum deflection results for alpha 10 at different span length (main bars perpendicular to traffic)

Deflection VS Flexural Rigidity for Different Spans (Main bars parallel to traffic)

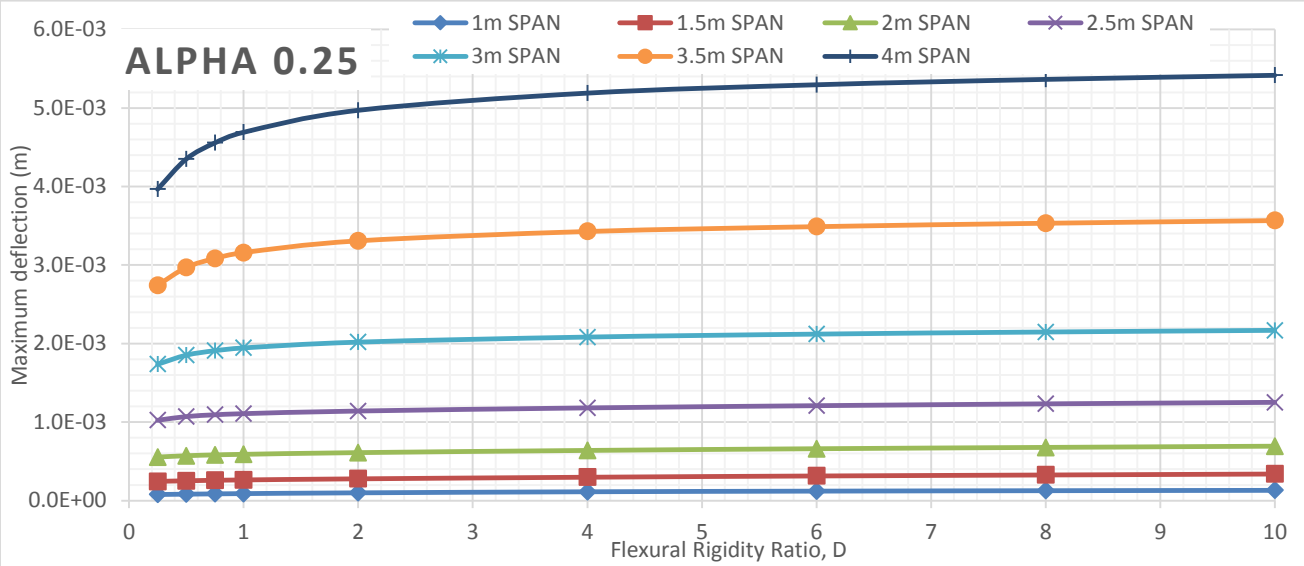

Figure 1132 Factored maximum deflection results for alpha 0.25 at different span length (main bars parallel to traffic)

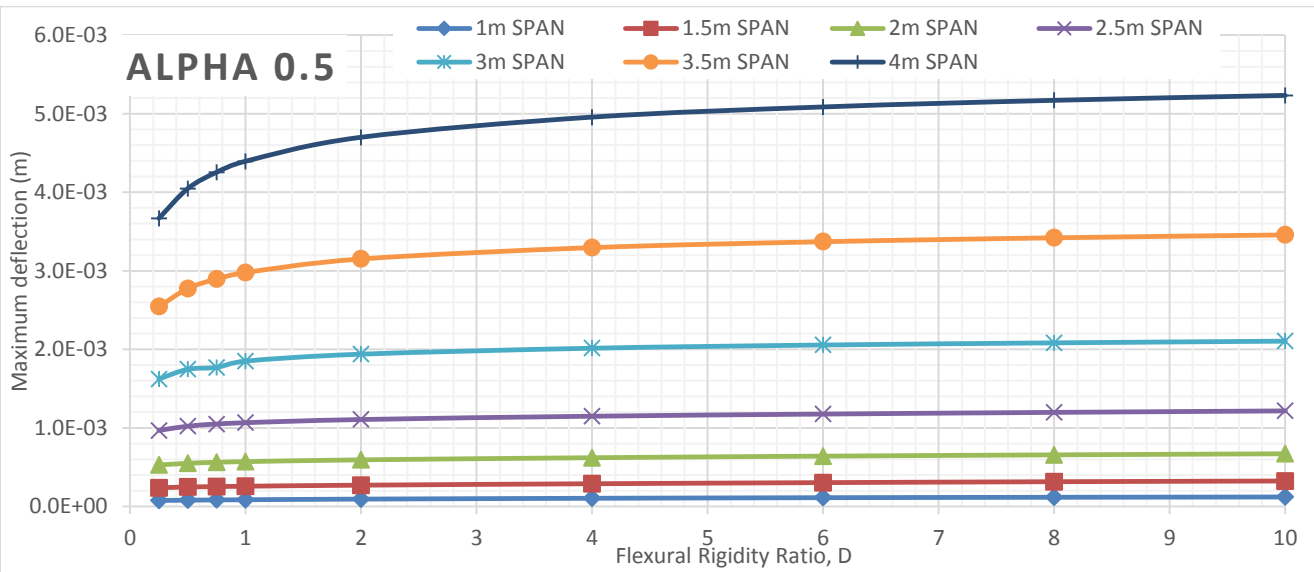

Figure 1133 Factored maximum deflection results for alpha 0.5 at different span length (main bars parallel to traffic)

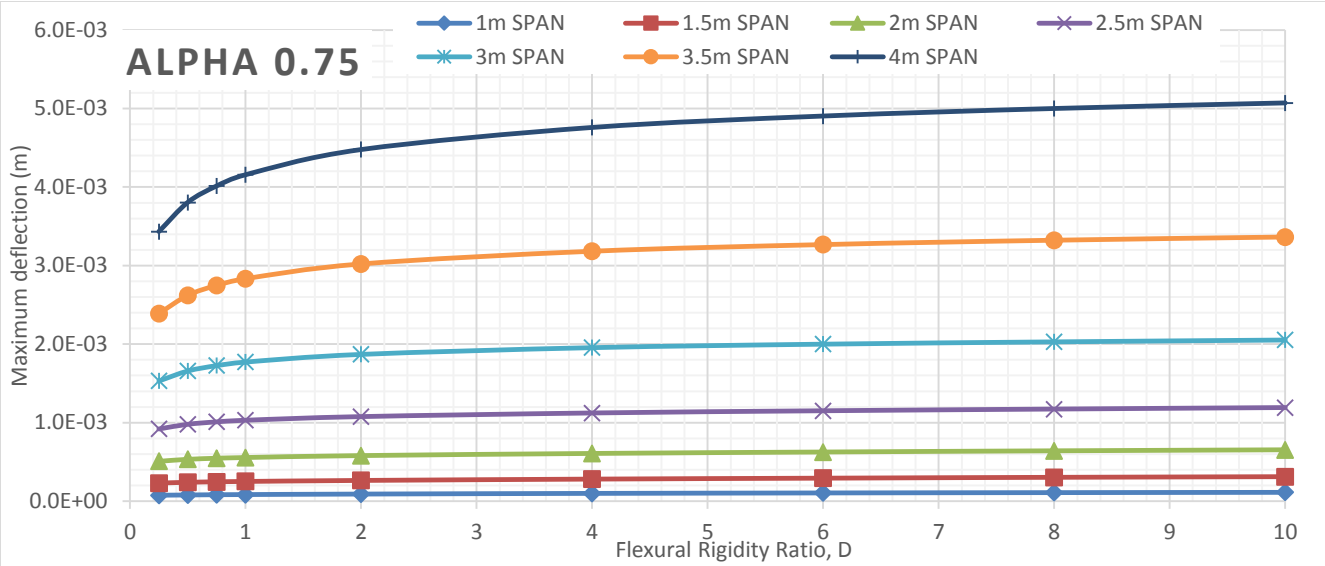

Figure 1134 Factored maximum deflection results for alpha 0.75 at different span length (main bars parallel to traffic)

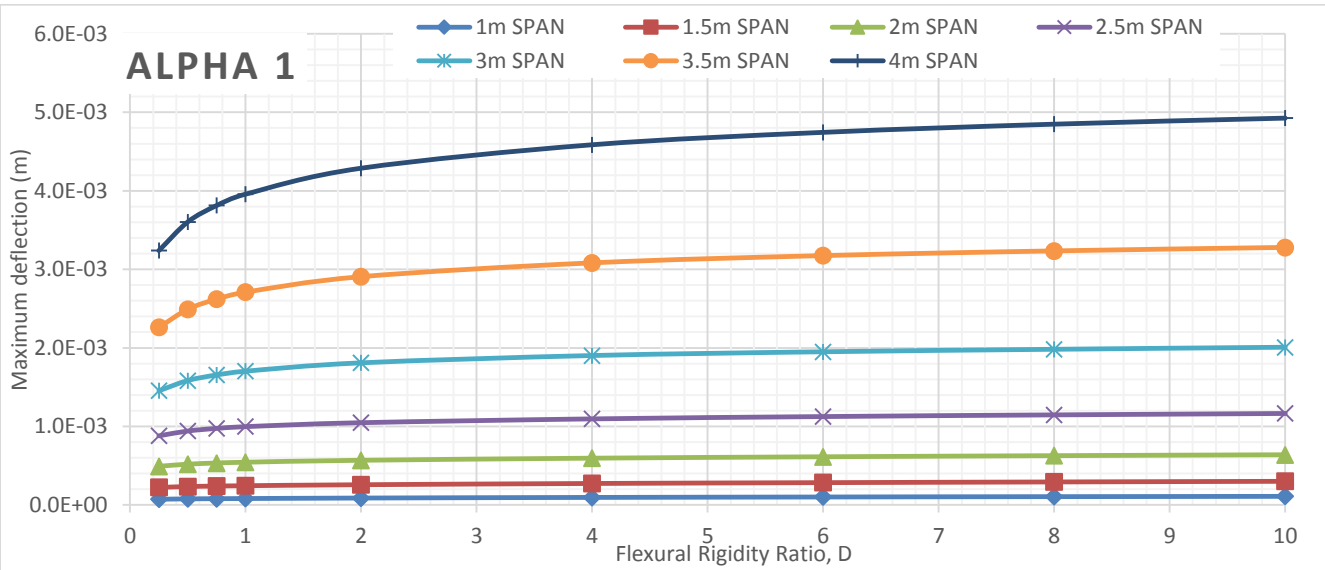

Figure 1135 Factored maximum deflection results for alpha 1 at different span length (main bars parallel to traffic)

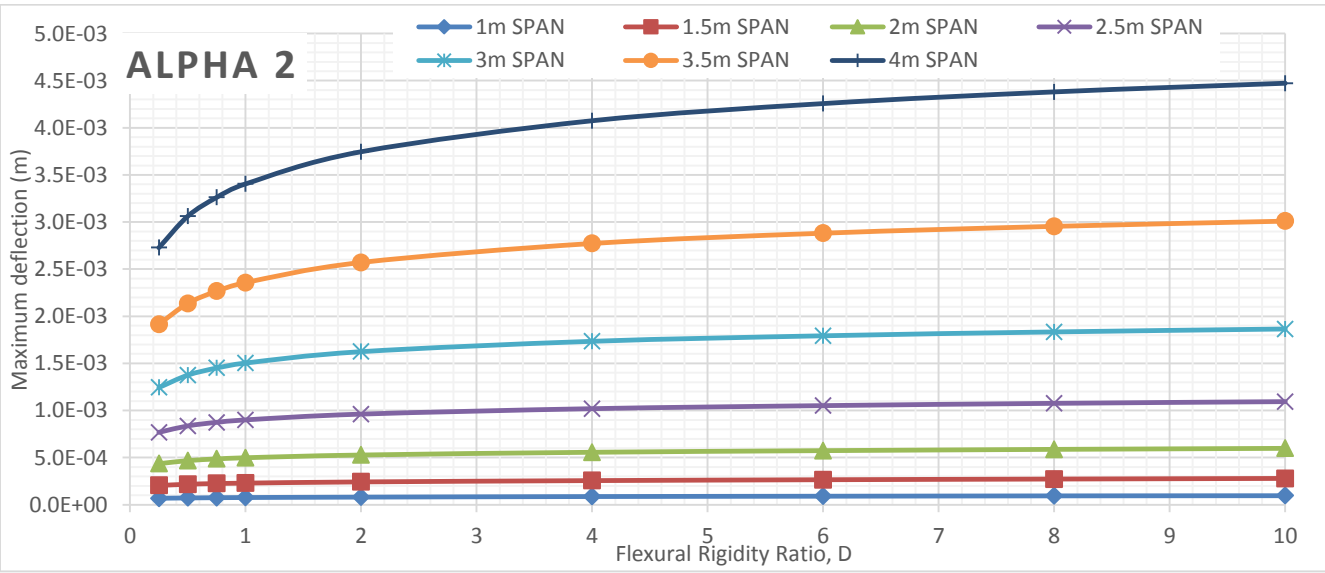

Figure 1136 Factored maximum deflection results for alpha 2 at different span length (main bars parallel to traffic)

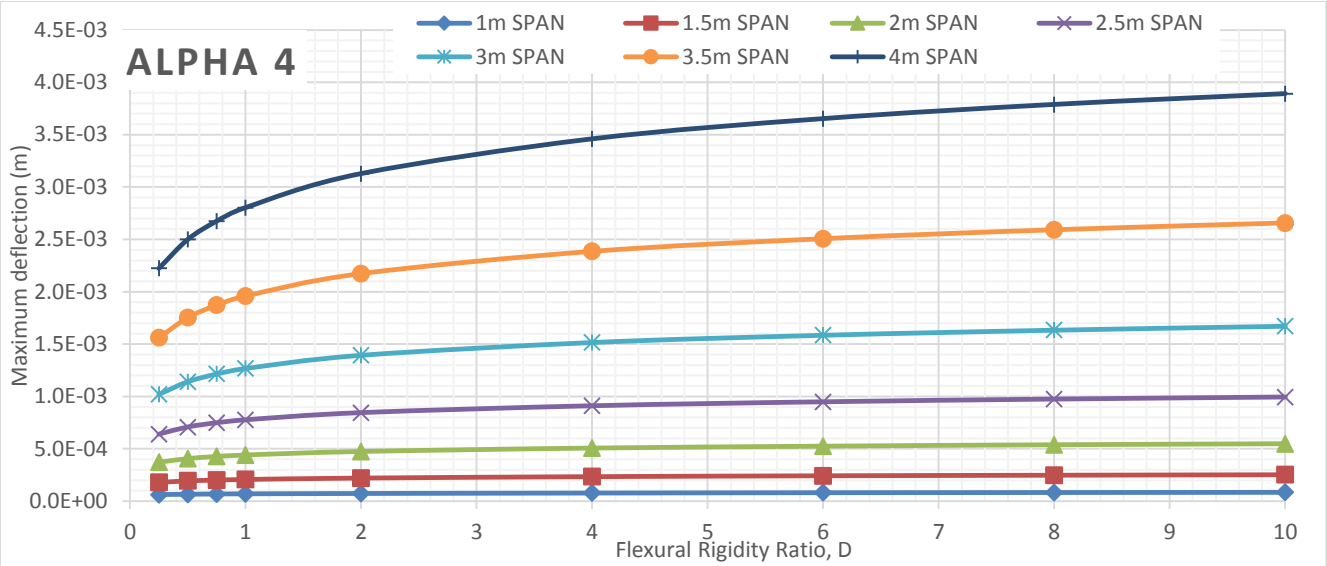

Figure 1137 Factored maximum deflection results for alpha 4 at different span length (main bars parallel to traffic)

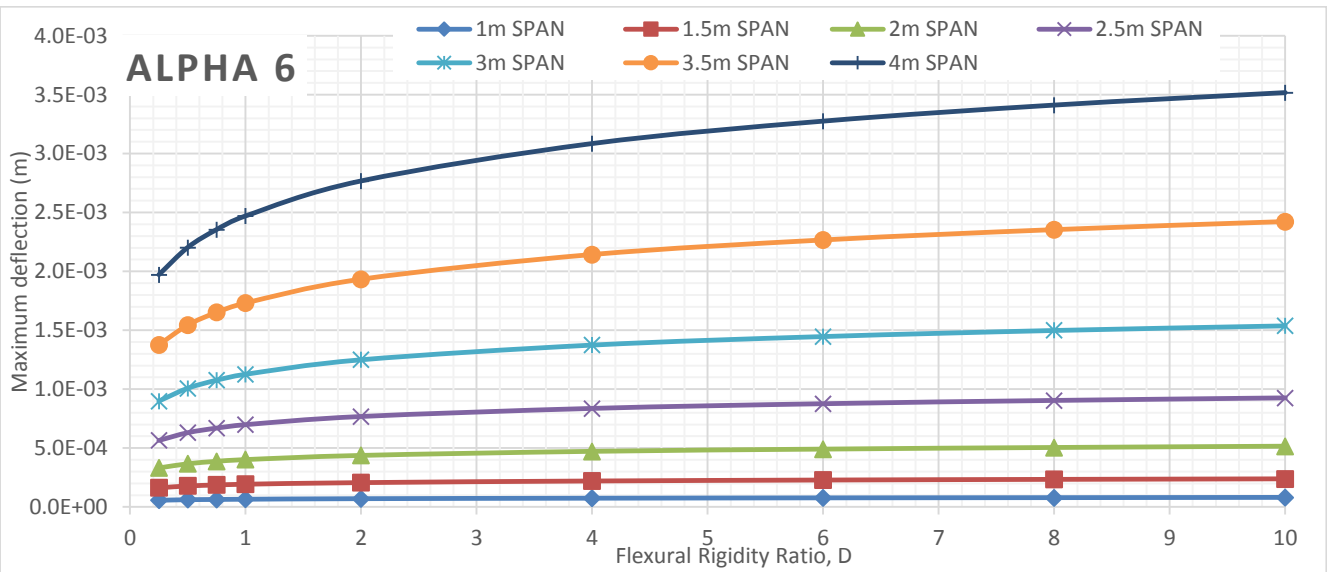

Figure 1138 Factored maximum deflection results for alpha 6 at different span length (main bars parallel to traffic)

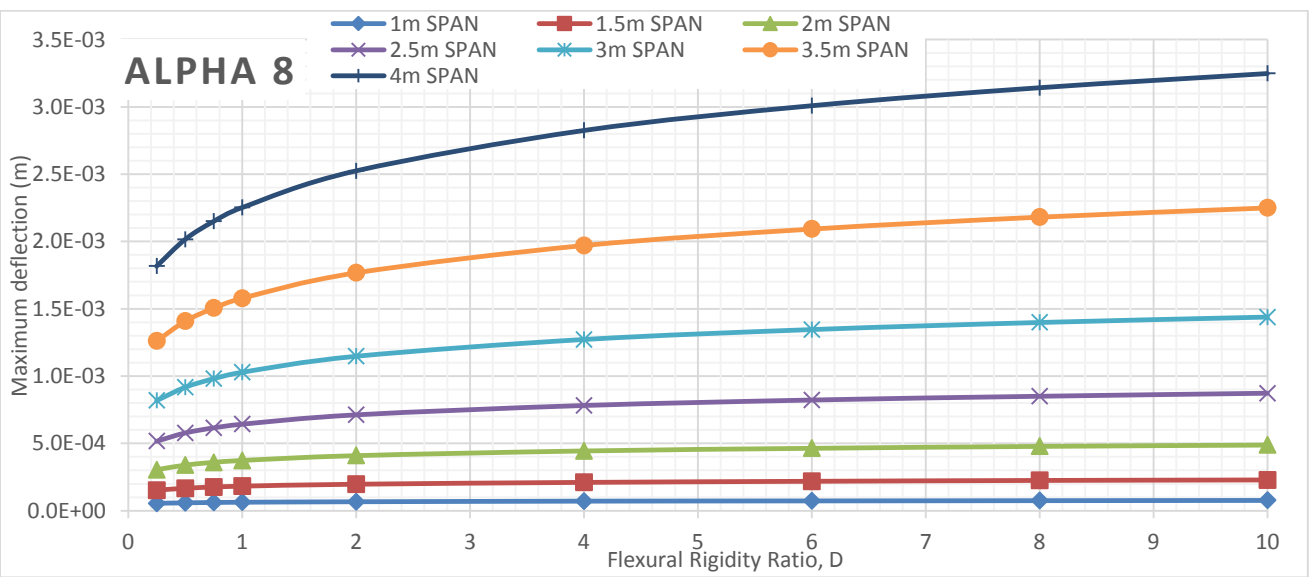

Figure 1139 Factored maximum deflection results for alpha 8 at different span length (main bars parallel to traffic)

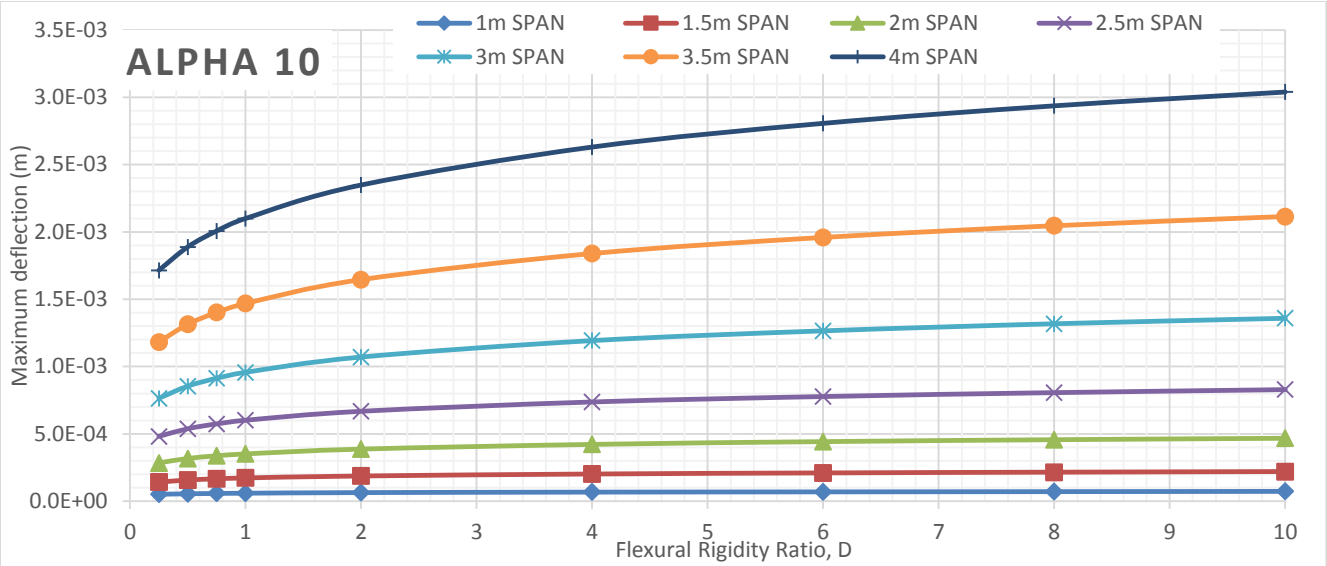

Figure 1140 Factored maximum deflection results for alpha 10 at different span length (main bars parallel to traffic)

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