FORCE-MOMENT INTERACTION DIAGRAM AND STRUCTURAL ANALYSIS OF CONCRETE BRIDGE BOX GIRDER IN FINITE ELEMENT

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I/We* hereby declare that I/We* have checked this thesis/project* and in my/our* opinion, this thesis/project* is adequate in terms of scope and quality for the award of the Bachelor Degree of Civil Engineering

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I hereby declare that the work in this thesis is based on my original work except for quotations and citations which have been duly acknowledged. I also declare that it has not been previously or concurrently submitted for any other degree at Universiti Malaysia Pahang or any other institutions.

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This study is especially dedicated to my beloved parents, brother and sisters, my relatives and fellow friends for their continuous support and care throughout my studies.

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LIST OF SYMBOLS

d	Outside Diameter
t	Thickness
d/t	Ratio for Local Buckling
A	Area of section
I	Moment of inertia
W_{pl}	Plastic modulus
i	Radius of gyration
N	Axial load
V	Shear force
M	Moment
I_T	Torsional Constants
$\gamma M0$	Partial factor for resistance of cross-sections whatever the class is
$\gamma M1$	Partial factor for resistance of members to instability assessed by member checks
λ	Slenderness value
$\emptyset$	Value to determine the reduction factor
X	Reduction factor
L_{cr}	Buckling Length
K_{zy}	Interaction factor

LIST OF ABBREVIATIONS

2D	Two Dimensional
CIVIFEM	Civil Finite Element Method
EC2	Eurocode 2
LatBuck	Lateral Buckling
ChckAxis	Check Axis
BMSHPRO	Beam and Shell Properties
CS	Coordinate System
LS	Load Step
DOF	Degree of Freedom
PRES	Pressure
GAUS	Gaussian
DENS	Density
ELASTIC	Elastic modulus
POISON	Poison ratio
LOAD	Point load
TEMP	Temperature
PDF	Probabilistic density function
CDF	Cumulative distribution function
MAXIMUMDEFLECTION /MAX_DEFLECTION	Maximum Deflection