Ministry of Urban Development

Department of Urban Development & Building Construction

Building Code and By - Laws Section

Babarmahal, Kathmandu

NBC Compliance Check List on Structural Analysis & Design for RCC

S.No.	General Informtion:	
1	Owner's Name:	
2	Address:	
3	Location of Building	
4	Occupancy Type of the Building as per Byelaws:	
5	Name of the Structural Designer:	
6	Nepal Engineeering Council No.:	
7	Contact Number of the Structural Designer:	
8	E-Mail ID of Designer:	
9	Name of the Consulting Firm:	

S. No.	Description	Input Data	Units	*Remarks*
A	**Geometrical Configuration of Building:**			
A.1	No. of Block		**no.**	
A.2	Number of Storeys Considered in the Design		**no.**	
A.3	Design Provision for Future Extension:	[ ] Yes [ ] No		
	(Future Extension No. of Additional Floors) If Yes			
A.4	Plan Shape of Individual Block			
A.5	**Story Height:**			
	i. Lower Basement		**m**	
	ii. Upper basement		**m**	
	iii. Ground Floor		**m**	
	iv. Typical Floor		**m**	
A.6	Total Height of Building Structure		**m**	
A.7	Height Considered of Fundamntal Time Period Calculation		**m**	
A.8	Length of Building (L)		**m**	
A.9	Width of Building (B)		**m**	
A.10	Height to Width Ratio of Building (H/W)			
A.11	Length to Width Ratio of Building (L/W)			
A.12	Parapet Height		**m**	
A.13	Wall Type (External & Internal)			
	i. External Wall + Plaster Thickness:		**mm**	
	ii. Internal Wall + Plaster Thickness:		**mm**	
	iii. Others...		**mm**	
A.14	External & Internal Wall Partition	[ ] Brick [ ] AAC [ ] Board [ ] Others		
A.15	No. of Column (Plinth Area):		**no.**	
A.16	No. of Lift:		**no.**	
A.17	Type of Lift Casing Material According to Construction Materials			
A.18	No. of Staircase:		**no.**	
A.19	Type of Staircase According to Construction Materials			
A.20	Roof System:			
B	**Defining Basic Material Properties of the Building.**			
B.1	**Material Properties**			
	a) Characteristics Strength of Concrete Grade:			
	i. Columns		**MPa**	***Clause 2.1 Annex : A***
	ii. Beams		**MPa**	
	iii. Slabs		**MPa**	
	iv. Shear Wall (If Applicable)		**MPa**	
	v. Foundations (If Applicable)		**MPa**	
	vi. Pile Foundations (If Applicable)		**MPa**	

	b) Characteristics Strength of Rebar Grade:				
	i. Flexural Reinforcement			**MPa**	***Clause 2.1 (A)***
	ii. Confinement Reinforcement (Ties)			**MPa**	
B.2	**Density of Materials:**				***NBC 101:1994***
	i. Weight Density of Concrete			**kN/m3**	
B.3	**Mechanical Properties of Construction Materials:**				***NBC 101:1994***
	i. Masonry Weight			**kN/m3**	
	ii. Rebar Weight per Unit			**kN/m3**	
	iii. Other…			**kN/m3**	
B.4	**Load Patterns Considered**				
	a) Dead Loads				***NBC 102:1994***
	Self-weight, Wall Load, Floor Finishing, Partition Load, Parapet Walls, Staircase Dead Load, Machinary Dead Load, Water Tank Load.	[ ] Yes [ ] No			
	Other …				
	b) Imposed Loads				***NBC 103:1994***
	Floor Live Loads (Non-Storage Type and Storage Type), Roof Live Load, Staircase Live Load.	[ ] Yes [ ] No			
	Others …				
	c) Wind Load	[ ] Yes [ ] No			***NBC 104:1994***
	If No				
	Note: For this Building, The Seismi Load was found larger than Wind Load. Hence, The Wind Load was not Accounted for Design of the Building.				
B.5	**Detailed Load Calculations**				***NBC 101:1994***
	i. Detailed Load Calculations	[ ] Yes [ ] No			
B.6	**Direction & Eccentricity**				***Clause 5.7***
	i. X Direction:	[ ] Yes [ ] No			
	ii. X Direction + Eccentricity:	[ ] Yes [ ] No			
	iii. X Direction - Eccentricity:	[ ] Yes [ ] No			
B.7	**Accidental Eccentricity**	**X-direction**	**Y-direction**		***Clause 5.7***
	i. Acc. Eccentricity Considered in X and Y-Direction			**%**	
B.8	**Story Range**				***From Software***
	i. Top Story :				
	ii. Bottom Story :				
B.9	**Load Combinations:**				***Clause 3.6***
	a) For Parallel System				***Clause 3.6.1***
	i. 1.2*DL+1.5*LL	[ ] Yes [ ] No			
	ii. DL + λLL ± EX	[ ] Yes [ ] No			
	iii. DL + λLL ± EY	[ ] Yes [ ] No			
	b) For Non-Parallel System				***Clause 3.6.2***
	i. 1.2*DL+1.5*LL	[ ] Yes [ ] No			
	ii. DL+ λLL ± (EX ± 0.3*EY)	[ ] Yes [ ] No			
	iii. DL+ λLL ± (EY ± 0.3*EX)	[ ] Yes [ ] No			
	c) Others				
	i.				
	ii.				
	iii.				
B.10	**Mass Source Considered for Seismic Weight**				***Clause 5.2 Table 5-1***
	i. Storage (0.6)	[ ] Yes [ ] No			
	ii. For Other Propose (0.3)	[ ] Yes [ ] No			
	iii. Roof (Nil)	[ ] Yes [ ] No			
B.11	**For System with Vertical Acceleration Consideration**				

	Is the Vertical Acceleration included in the load combination ?	[ ] Yes [ ] No			*Clause 4.3*
	If Yes				
B.12	**Modal Damping:**			**%**	*Clause 1.3*
C	**Calculation of Seismic Load as per (NBC 105:2020)**				
C.1	**Structural System:**	[ ] Equivalent Static Method (ESM)			*Clause 6*
		[ ] Modal Response Spectrum Method (MRSM)			*Clause 7*
C.2	Seismic Zoning Factor, (Z)				*Clause 4.1.4 / T. 4-5*
C.3	Type of Building				
C.4	Importance Class (I, II, III)	[ ] I [ ] II [ ] III			*Clause 4.1.5*
C.5	Importance Factor, (I)				*Table 4-6*
C.6	Height of the Building, (H)			**m**	
C.7	Type of Structure	[ ] Moment Resisting Concrete Frame Systems			*Clause 5.4.2*
		[ ] Moment Resisting Steel Frame Systems			
		[ ] Braced Frame Systems			
		[ ] Structural Wall Systems			
		[ ] Dual Systems			
C.8	Factor, k_t=				*Clause 5.1.2*
C.9	Approximate Fundamental Time Period Empirical Equation, $T_1=kt*H_{0.75}$			**sec**	
C.10	Amplification of Approximate Time Period, $T_1'=1.25*T1$			**sec**	*Clause 5.1.3*
C.11	Fundamental Time Period from Rayleigh's Formula, T_1			**sec**	*Clause 5.1.1*
C.12	Adopted Time Period, T_1 ***(Refer C.10)***			**sec**	*Clause 5.1.2*
C.14	**Spectral Shape Factor:**				
	i. Site Sub-Soil Type	**C**	**D**		*Clause 4.1.3*
	ii. Spectral Shape Factor, $C_h(T)$ for ESM	2.5	2.25		*Clause 4.1.2 Table 4-1*
	iii. The Lower Period of the Flat Part of the Spectrum, T_a for ESM	0			
	iv. The Lower Period of the Flat Part of the Spectrum, T_a for RSM	0.1	0.5		
	v. The Upper Period of the Flat Part of the Spectrum,T_c	1	2		
	vi. Peak Spectral Acceleration Normalized by PGA, α	2.5	2.25		
	vii. Coefficient that Controls the Descending Branch of the Spectrum, K	1.8	0.8		
C.15	**Calculation of Elastic Site Spectra**				
	a) Elastic Site Spectra for Horizontal Loading for Ultimate Limit State (ULS)				*Clause 4.1.1*
	C(T)= Ch(T)*Z*I=				
	b) Elastic Site Spectra for Horizontal Loading for Serviceabilty Limit State (SLS)				*Clause 4.2*
	$C_s(T)$= 0.20*C(T)=				
	c) Elastic Site Spectra for Vertical Loading,				*Clause 4.3*
	$C_v(T_v)$= (2/3)*C(T)=				
C.16	**Ductility & Overstrength Factors:**				
	a) Ultimate Limit State (ULS):				*Clause 5.3.1 / 5.4.1*
	i. Ductilty Factor for ULS, R_μ				*Table 5-2*
	ii. Overstrength Factor for ULS, Ω_μ				
	b) Serviceability Limit State (SLS):				*Clause 5.3.2 / 5.4.2*
	i. Ductilty Factor for SLS, R_s				*Table 5-2*
	ii. Overstrength Factor for SLS, Ω_s				
C.17	**Calculation of Horizontal Base Shear Coefficients:**				*Clause 6.1*
	a) For Ultimate Limit State (ULS), $C_d(T_1)= C(T1)/(R\mu*\Omega\mu)$		**(Seismic Coefficient)**		*Clause 6.1.1*
	b) Serviceabilty Limit State (SLS), $C_d(T_1)= Cs(T1)/\Omega s$		**(Seismic Coefficient)**		*Clause 6.1.2*
C.18	**Calculation of Horizontal Base Shear:**				
	a) Seismic Weight, W			**kN**	*(From ETABS)*
	b) For Ultimate Limit State (ULS), V= Cd(T1)*W			**kN**	*Clause 6.2*
	c) For Serviceabilty Limit State (SLS), V= Cd(T1)*W			**kN**	
C.19	**Exponent for Vertical Distribution of Seismic Forces**	**T**	**K**		*Clause 6.3*
	i. For Structure having Tie Period T ≤ 0.5 sec, k=1	0.5	1		

	ii. Exponent for Vertical Distribution of Seismic Forces, k			**k**	
	iii. For Structure having Tie Period T ≤ 2.5 sec, k=2	2.5	2		
C.20	**Initial Scale Factor for Scaling of Base Shear in MRSM**				
	Acceleration due to gravity (g) =	9810		**m/sec**	
	a) Ultimate Limit State:				***Clause***
	i. Factor in X-direction, SFx= Z*I*g/(RμxΩμ)				
	ii. Factor in Y-direction, SFy= Z*I*g/(RμxΩμ)				
	b) Serviceabilty Limit State:				
	i. Factor in X-Direction, SFx= 0.2*Z*I*g/(RμxΩμ)				
	ii. Factor in Y-Direction, SFy= 0.2*Z*I*g/(RμxΩμ)				
D	**Modeling of the Building**				
D.1	Software used for design of structure along with version :				***Version***
D.2	**Element Sizes:**				***From Software***
	i. Column Sizes				
	ii. Main Beam Sizes				
	iii. Secondary Beam Sizes				
	iv. Slab Thickness				
	v. Staircase Waist Slab Thickness				
	vi. Shear Wall Thickness (if applicable)				
D.3	**Types of Slabs:**	[ ] Slab [ ] Drop [ ] Ribbed [ ] Waffle			***From Software***
D.4	**Slab Modeling Type:**	[ ] S-Thin [ ] S-Thick [ ] Membr. [ ] Layered			***From Software***
D.5	**Property/Stiffness Modifiers:**				***Clause 3.4 Table 3-1***
	a) Columns:	**Flexural Stiff.**	**Shear Stiff.**		
	i. Shear Area in 2 Direction				
	ii. Shear Area in 3 Direction				
	iii. Moment of Interia about 2 Axis				
	vi. Moment of Interia about 3 Axis				
	b) Main Beams & Secondary Beams:	**Flexural Stiff.**	**Shear Stiff.**		***Clause 3.4 Table 3-1***
	i. Shear Area in 2 Direction				
	ii. Shear Area in 3 Direction				
	iii. Torsional Costant				
	iv. Moment of Interia about 2 Axis				
	v. Moment of Interia about 3 Axis				
	c) Shear Wall:	**Flexural Stiff.**	**Shear Stiff.**		***Clause 3.4 Table 3-1***
	Stiffness of Cracked or Un-Cracked	[ ] Cracked [ ] Un-Cracked			
	i. Membrane F11 Direction				
	ii. Membrane F22 Direction				
	iii. Membrane F12 Direction				
	iv. Bending M11 Direction				
	v. Bending M22 Direction				
	vi. Bending M12 Direction				
	vii. Shear V13 Direction				
	viii. Shear V23 Direction				
	Note: Please note that the modifiers for shear for both beam & column shall be taken as 1 since the modifiers are expressed in terms of shear modulus in ETABS, G=E/[2*(1+ μ)]=0.4*E				***SAP2000 &***
D.6	**Slab Diaphragm Type:**	[ ] Rigid [ ] Semi-Rigid			***Clause 5.5.2.3***

D.7	**Modal Combination Method:**	[ ] CQC [ ] SRSS			***Clause 7.4***
D.8	**Support Condition of the Foundation:**	[ ] Fixed [ ] Hinge [ ] Roller			***From Software***
E	**Result for Analysis of Building**				
E.1	**Auto Seismic User Coefficient**	**Weight**	**Base Shear**		
	i. EqX-ULS			**kN**	
	ii. EqY-ULS			**kN**	***From Software***
	iii. EqX-SLS			**kN**	
	iv. EqY-SLS			**kN**	
E.2	**Base Reaction**				
	a) For Ultimate Limit State:	**FX (kN**	**FY**		
	i. EqX-ULS (Linear Static)			**kN**	
	ii. EqY-ULS (Linear Static)			**kN**	***From Software***
	iii. RsX-ULS(Linear Response Spectrum)			**kN**	
	iv. RsY-ULS (Linear Response Spectrum)			**kN**	
	b) For Serviceability Limit State:	**FX**	**FY**		
	i. EqX-SLS (Linear Static)			**kN**	
	ii. EqY-SLS (Linear Static)			**kN**	***From Software***
	iii. RsX-SLS (Linear Response Spectrum)			**kN**	
	iv. RsY-SLS (Linear Response Spectrum)			**kN**	
E.3	**Final Scale Factor (When VR<V) (After Scaling):**				
	a) For Ultimate Limit State:				
	i. Factor in X - Direction= $(V_{ULS}/V_{R)}$*$SF_{initial, ULS}$			**kN**	
	ii. Factor in Y - Direction= $(V_{ULS}/V_{R)}$*$SF_{initial, ULS}$			**kN**	***Clause 7.5***
	b) For Serviceability Limit State:				
	i. Factor in X - Direction= $(V_{SLS}/V_{R,SLS})$*$SF_{initial, SLS}$			**kN**	
	ii. Factor in Y - Direction= $(V_{SLS}/V_{R,SLS})$*$SF_{initial, SLS}$			**kN**	
E.4	**Mass Participation Ratio**	**Acceleration Unit (mm/sec2)**			
	a) No. of Modes Considered				
	Modal	**Sum Ux**	**Sum Uy**		
	i. 1st Modes Considered			**mm/sec2**	
	ii. 2nd Modes Considered			**mm/sec2**	***Clause 7.3***
	iii. 3rd Modes Considered			**mm/sec2**	
	iv. Last Modes Considered for at least 90%			**mm/sec2**	
	b) The Modes with Natural Frequency less than 33 Hz			**Hz**	
E.5	**Story Displacement of Building**				
	a) For Ultimate Limit State: (ULS: 0.025 * H) Permissible	**Eq-X / Rs-X**	**Eq-Y / Rs-Y**		
	15th Floor			**mm**	
	14th Floor			**mm**	
	13th Floor			**mm**	
	12th Floor			**mm**	
	11th Floor			**mm**	
	10th Floor			**mm**	
	9th Floor			**mm**	***Clause 5.6.1***
	8th Floor			**mm**	
	7th Floor			**mm**	
	6th Floor			**mm**	
	5th Floor			**mm**	
	4th Floor			**mm**	
	3rd Floor			**mm**	
	2nd Floor			**mm**	
	1st Floor			**mm**	
	b) For Serviceabilty Limit State: (SLS: 0.006 * H) Permissible	**Eq-X / Rs-X**	**Eq-Y / Rs-Y**		
	15th Floor			**mm**	

	14th Floor			**mm**	
	13th Floor			**mm**	
	12th Floor			**mm**	
	11th Floor			**mm**	
	10th Floor			**mm**	
	9th Floor			**mm**	
	8th Floor			**mm**	***Clause 5.6.1***
	7th Floor			**mm**	
	6th Floor			**mm**	
	5th Floor			**mm**	
	4th Floor			**mm**	
	3rd Floor			**mm**	
	2nd Floor			**mm**	
	1st Floor			**mm**	
E.6	**Inter Story Deflection (Drifts)**				
	a) For Ultimate Limit State: (ULS: 0.025 Permissible)	**Eq-X / Rs-X**	**Eq-Y / Rs-Y**		
	15th Floor				
	14th Floor				
	13th Floor				
	12th Floor				
	11th Floor				
	10th Floor				
	9th Floor				***Clause 5.6.3***
	8th Floor				
	7th Floor				
	6th Floor				
	5th Floor				
	4th Floor				
	3rd Floor				
	2nd Floor				
	1st Floor				
	b) For Serviceabilty Limit State: (SLS: 0.006 Permissible)	**Eq-X / Rs-X**	**Eq-Y / Rs-Y**		
	15th Floor				
	14th Floor				
	13th Floor				
	12th Floor				
	11th Floor				
	10th Floor				
	9th Floor				***Clause 5.6.3***
	8th Floor				
	7th Floor				
	6th Floor				
	5th Floor				
	4th Floor				
	3rd Floor				
	2nd Floor				
	1st Floor				
E.7	**Weak Story for Ultimate Limit State (ULS)**	**> 80% EL(i+1)**			
		Lateral Strength			
	15th Floor			**kN**	
	14th Floor			**kN**	
	13th Floor			**kN**	
	12th Floor			**kN**	
	11th Floor			**kN**	
	10th Floor			**kN**	
	9th Floor			**kN**	***Clause 5.5.1.1***
	8th Floor			**kN**	

	7th Floor			**kN**	
	6th Floor			**kN**	
	5th Floor			**kN**	
	4th Floor			**kN**	
	3rd Floor			**kN**	
	2nd Floor			**kN**	
	1st Floor			**kN**	
E.8	**Storey Stiffness (Soft Story)**	**Eq-X / Rs-X**	**Eq-Y / Rs-Y**		
		70% of (i±1)	**80% of (i±1)**		
	15th Floor			**kN/m**	
	14th Floor			**kN/m**	
	13th Floor			**kN/m**	
	12th Floor			**kN/m**	
	11th Floor			**kN/m**	
	10th Floor			**kN/m**	
	9th Floor			**kN/m**	***Clause 5.5.1.2***
	8th Floor			**kN/m**	
	7th Floor			**kN/m**	
	6th Floor			**kN/m**	
	5th Floor			**kN/m**	
	4th Floor			**kN/m**	
	3rd Floor			**kN/m**	
	2nd Floor			**kN/m**	
	1st Floor			**kN/m**	
E.9	**Mass Irregularity (Kg)**	**Kg**	**50% EL(i±1)**		
	15th Floor				
	14th Floor				
	13th Floor				
	12th Floor				
	11th Floor				
	10th Floor				
	9th Floor				***Clause 5.5.1.5***
	8th Floor				
	7th Floor			**kg**	
	6th Floor			**kg**	
	5th Floor			**kg**	
	4th Floor			**kg**	
	3rd Floor			**kg**	
	2nd Floor			**kg**	
	1st Floor			**kg**	
E.10	**Torsion Irregularity for Ultimate Limit State (ULS):**	**Eq-X / Rs-X**	**Eq-Y / Rs-Y**		
	Max Corner Displacement			**mm**	***Clause 5.5.2.1***
	Min Corner Displacement			**mm**	
	Ratio				
E.11	**Check for Re-entrant Corner Irregularity**	[ ] Yes	[ ] No		***Clause 5.5.2.2***
E.12	**Check for Diaphragm Discontinuity Irregularity**	[ ] Yes	[ ] No		***Clause 5.5.2.3***
E.13	**Check for Out-of-Plane Offset Irregularity**	[ ] Yes	[ ] No		***Clause 5.5.2.4***
E.14	**Dual System Check**	**X-Direction**	**Y-Direction**		***Clause 3.1***
	Percentage of Total Design Base Shear by Columns in X and Y Direction			**%**	
E.15	**Separation between Blocks (if applicable)**	[ ] Yes	[ ] No		
	If Yes	**Block A**	**Block B**		
	15th Floor			**mm**	
	14th Floor			**mm**	
	13th Floor			**mm**	
	12th Floor			**mm**	

	11th Floor			**mm**	
	10th Floor			**mm**	
	9th Floor			**mm**	***Clause 5.6.2***
	8th Floor			**mm**	
	7th Floor			**mm**	
	6th Floor			**mm**	
	5th Floor			**mm**	
	4th Floor			**mm**	
	3rd Floor			**mm**	
	2nd Floor			**mm**	
	1st Floor			**mm**	
F	**Geological Investigation and Design of Foundations**				
F.1	Geological Investigation Conducted	[ ] Yes	[ ] No		
	If Yes	***See Below***			
F.2	Name of the Consulting Firm:				
F.3	Name of Designer:				
F.4	NEC Council No.:				
F.5	Designer Master Degree:	[ ] Yes	[ ] No		
F.6	Allowable Bearing Capacity of Soil			**kN/m^2**	***Soil Report***
F.7	N-value:				
F.8	Type of Soil:				***Clause 4.1.3***
F.9	Water Table:				***Soil Report***
F.10	Liquefaction Potential:	[ ] Yes	[ ] No		
F.11	Adopted Value as per NBC 205, Table 3-1	[ ] Yes	[ ] No		***NBC 205 T:3-1***
F.12	Site Considertion as per NBC 108 ?	[ ] Yes	[ ] No		***NBC 108:1994***
	If No				
F.13	Terrain (Slope or Flat)				***NBC 108:1994***
F.14	Software used for design of foundation along with version :				***Version***
F.15	Foundation System	[ ] Mat [ ] Combined [ ] Isolated [ ] Strap [ ] Pile			
F.16	Calculated Maximum Pressure on Foundation:			**kN/m^2**	***From Software***
F.17	Thickness of Foundation			**mm**	
F.18	Punching Shear Ratio (Less than 1)				
G	**Design of Structural Elements of Concrete**				
G.1	**a) Reinforced Concrete Design Code:**				***Reference Code***
	i. Concrete Design Code Referred:	[ ] IS 456:2000			
	ii. Design & Detailing of Reinforced Concrete Structures:	[ ] NBC 105:2020 (Annex - A)			
	iii. Design of Structural Elements Foundation, Slab, Staircase, etc:	[ ] IS 456:2000			
	iv. Others...				
G.2	**Member Design**				
	a) Check for All Members Passed or Failed	[ ] Yes	[ ] No		***From Software***
	If No	**Design/Check Again**			
	i. Design of Columns	[ ] Yes	[ ] No		
	ii. Design of Beams	[ ] Yes	[ ] No		
	iii. Design of Shear Wall (if applicable)	[ ] Yes	[ ] No		***Clause 5.2/5.3 (A)***
G.3	Design of Tie/Plinth Beam	[ ] Yes	[ ] No		***Manual Calcuations***
G.4	Design of Critical Panel of Slabs	[ ] Yes	[ ] No		
G.5	Design of Cantilever Slabs (Without Beam Supports)	[ ] Yes	[ ] No		
G.6	Design of Waffle Slabs	[ ] Yes	[ ] No		
G.7	Design of Deep Beams	[ ] Yes	[ ] No		
G.8	Design of Corbel	[ ] Yes	[ ] No		
G.9	Design of Cantilever Beams	[ ] Yes	[ ] No		
G.10	Design of Staircases (Dog Legged, Open-well & Helical)	[ ] Yes	[ ] No		
G.11	Design of Foundations (Isolated, Combined, Strap Footing)	[ ] Yes	[ ] No		
G.12	Design of Pile Foundations	[ ] Yes	[ ] No		
G.13	Design of Retaining Wall	[ ] Yes	[ ] No		
G.14	**Deflection Check for Critical Beam (For Span< 6 m)**				***Manual Calcuation***
	Design of Long & Short Term Deflection and Crack Width	[ ] Yes	[ ] No		
G.15	Check for Column-Beam (C/B) Capacity Ratio	[ ] Yes	[ ] No		***Clause 4.4.4***

	If No	***Provide 3 Critical Samples***			***Manual Calcuation***
G.16	Check for Beam-Column Joints	[ ] Yes	[ ] No		***Clause 4.4***
G.17	Column Size on Basis of Horizontal Development Length			**mm**	***Clause 4.4.2***
G.18	Minimum Diameter of Transverse Rebar in Beam/Column on Basis of Lapping/Splicing Zone			**mm**	***Clause 4.5.1 (g)***
G.19	Minimum Diameter of Special Confining Column Ties For Rectangular/Square/Circular Column			**mm**	***Clause 4.3-(4.3.2/4.33)***
G.20	Design of Other Members:				
	Detailed Design of other Structural Members such as Roof Truss, Steel Structural Members etc (if any)	[ ] Yes	[ ] No		
G.22	**Check for Max. & Min. Percentage of Reinforcement**				
	i. Max. Percentage of Rebars provided in Columns			**%**	***Clause 4.2.2***
	ii. Max. Percentage of Rebars provided in Beams			**%**	
	iii. Max. Percentage of Rebars provided in Shear Walls			**%**	

I / We hereby certify that the proposed design of building (.....) and its various components comply all the requirements of Nepal National Building Code. I / We also affirm that the submitted checklist is done by the concerned Engineers and Architects duly registered in Nepal Engineering Council. The data made available in this checklist have been filled following the respective guidelines.

Owner's (Client) Name:
Signature:

Stamp

Designer's Name:
Signature:

Stamp

Design Checked By: