MAJOR PROJECT PART-II

REPORT

ON

"COMPARISION OF GIRDER SLAB SYSTEM AND CONVENTIONAL RCC STRUCTURE"

Submitted in partial fulfillment of the requirement for the award of Part time Degree of Master of Technology in Structural Engineering.

2016 -2017

:Guide:

Dr. Alok Verma

(Associate Professor)

: Submitted By:

Mr. Prafull Mungle

Roll No-2K14/STE/501

Department of Civil Engineering, Delhi Technological University, Delhi.

Delhi Technological University, Delhi.

(PART TIME DEGREE COURSE SESSION 2017-2018)

CERTIFICATE

I hereby declare that the project work entitled, **"Comparison of Girder Slab System and Conventional RCC structure"** submitted to Department of Civil Engineering, DTU is a record of an original work done by **Prafull B. Mungle** under the guidance of **Dr. Alok Verma,** Associate Professor, Department of Civil Engineering, DTU, and this project work has not performed the basis of the award of any Degree or Diploma / fellowship and similar project, if any.

Prafull B. Mungle

(2K14/STE/501)

ACKNOWLEDGEMENT

This is to certify that the project **"Comparison of Girder Slab System and Conventional RCC structure"** submitted by **Prafull B. Mungle,** in partial fulfillment of the requirements for award of the Part Time degree of **MASTER OF TECHNOLOGY (STRUCTURAL ENGINEERING)** to Delhi Technical University is the record of student's own work and was carried out under my supervision.

Date:

(Dr. Alok Verma)

Associate Professor,

CED, D.T.U

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UNIT-1

PROJECT AIM AND PROJECT WORK BRIEF IN MAJOR PROJECT PART-II

UNIT-I

PROJECT AIM AND PROJECT WORK BRIEF IN MAJOR PROJECT PART-II

The aim of this project is to introduce a new construction technique by combining the steel structural and precast structure known as a Girder Slab System.

In Major Project Part-II, we are carried out the brief study on **“Comparison of Girder slab system and RCC conventional structure”** both the structures are going to analyze and design. Our aim to conclude that the Girder slab system is economical or same as compare to conventional RCC structure by doing apple to apple comparison, we have considered the Hospital building G+5 of one floor area is 5235 sq.m for comparison. We will also elaborate its overall benefits in terms of structure life and cost factor with conventional RCC structure. So that it serves as a ready reference tool for engineers and manufacturers to suggest this system for their project.

UNIT II

INTRODUCTION OF GIRDER SLAB SYSTEM

UNIT-II

INTRODUCTION OF GIRDER SLAB SYSTEM

The Girder slab system denoted by Girder slab technology, it is a revolutionary structural system for High-rise residential and commercial construction which consist of Pre-Fabricated steel structure and precast concrete.

Shown here a Hospital building G+5 of the first project in India to utilize this new structural system. The heart of the system is an interior girder known as an open web die symmetrical beam or D-Beam girder or the I-Beam girder which supports precast hollow core slab units on its bottom flange or on its top flange respectively. The system develops composite action and able to get to support gravity load. The girder slab system design guide provides all the necessary engineering information required by architect and engineer. The composite design table provides design information for the various D-Beam profile and I-Beam profile as per design requirement.

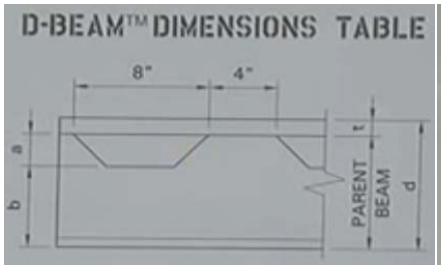
UNIT-II a

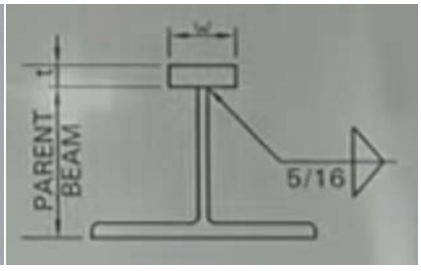
INTRODUCTION OF STEEL STRCURAL SYSTEM

It is a most important structural component of Girder Slab System.

FABRICATION METHOD FOR D-BEAM:

The D-Beam girder is fabricated by flame cutting a standard steel wide flange section in a saw tooth pattern producing two equal teeth. The structural steel contractor then welds a flat bar on to the web of a T. There pieces are cut to length to suit specific job requirements with a 250mm wide bottom flange and 75mm wide top flange.



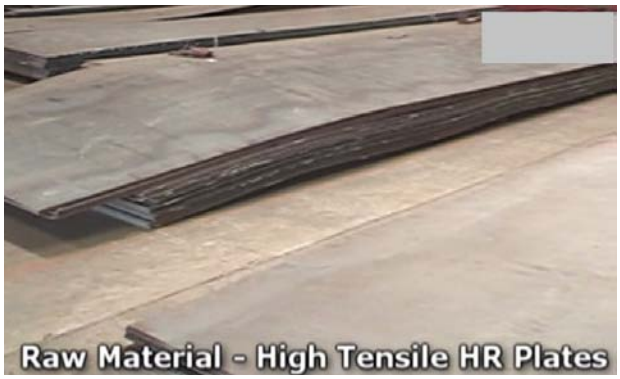


They can be easily inventory for immediate fabrication and delivery to the job site. After job fabrication, the girder slab system becomes a routine assembly of structural steel and precast concrete. An assembly screw assembles both the structural steel and the precast slab unit.

D-Beam tonnage is a small percentage of total steel on a typical building, the remaining tonnage consist of standard steel beam, girder, columns and cross bracing.

FABRICATION METHOD FOR I-BEAM:

The I-Beam is fabricated by using HR Plates of varying thickness and as per size coming in design. It is fabricated by using submerge arc welding (SAW) process of continuous welding.



H-BEAM SAW MACHINE

TYPES OF STEEL FRAME CONSTRUCTION USED IN GIRDER SLAB SYSTEM:

Bolted Steel Construction occurs when steel fabricators produce finished and painted steel components, which are then shipped to the site and simply bolted in place. This is the preferred method of steel construction, as the bulk of the fabrication can be done in workshops, with the right machinery, lighting, and work conditions. The size of the components are governed by the size of the truck or trailer they are shipped in, usually with a max length of 6m (20ft) for normal trucks or 12m (40ft) for long trailers. Since the only work to be done at site is lifting the steel members into place (with cranes) and bolting, the work at site is tremendously fast. **Pre-engineered buildings** are an example of bolted steel construction that is designed, fabricated, shipped and erected by one company to the owner.

ADVANTAGES OF STEEL STRUCTURES

Steel structures have the following advantages:

- They are **super-quick** to build at site, as a lot of work can be pre-fabricated at the factory.
- They are **flexible**, which makes them very good at resisting dynamic (changing) forces such as wind or earthquake forces.
- A wide range of **ready-made structural sections** are available, such as I, C, and angle sections.
- They can be made to take any kind of **shape**, and clad with any type of **material.**
- A wide range of **joining methods** is available, such as bolting, welding, and riveting.
- This immense strength is of great advantage to buildings. The other important feature of steel framing is its flexibility. It can bend without cracking, which is another great advantage, as a steel building can flex when it is pushed to one side by say, wind, or an earthquake. The third characteristic of steel is its plasticity or ductility. This means that when subjected to great force; it will not suddenly crack like glass, but slowly bend out of shape. This property allows steel buildings to bend out of shape, or deform, thus giving

warning to inhabitants to escape. Failure in steel frames is not sudden - a steel structure rarely collapses. Steel in most cases performs far better in earthquake than most other materials because of these properties.

DISADVANTAGES OF STEEL STRUCTURES

Steel structures have the following disadvantages:

- They lose strength at high temperatures, and are susceptible to fire.
- They are prone to corrosion in humid or marine environments.
- However one important property of steel is that it quickly loses its strength in a fire. At 500 degrees Celsius (930 degrees F), mild steel can lose almost half its strength. Therefore, steel in buildings must be protected from fire or high temperature; this is usually done by wrapping it with boards or spray-on material called fire protection.

UNIT-II b

INTRODUCTION OF PRECAST SYSTEM.

It is a most important structural component of Girder Slab System.

With the continuous evolution of the construction industry across the globe and introduction of modern computers for design it has been possible to design and construct various structural elements that can efficiently serve the client requirement and at the same time allow for planned construction and material and labor optimization. Hollow core slab is one such element that has replaced the conventional slab in most advanced countries and is being highly appreciated in Indian construction industry especially the Real Estate Industry.

Various codes are available in different countries for the design of precast hollow core slab. The design of these slabs in India can be carried out using IS:10297-1982 in conjunction with other relevant codes. However the design is dependent upon the geometry and support conditions of these slab's and hence an effort has been made in this project to club together all relevant information mentioned in Indian standards and other foreign codes and prepare a Microsoft Excel sheet as an automated design aid to the engineers and manufacturer's.

1.1) Hollow core slab

A hollow core slab is essentially a precast slab which is designed with an aim to remove extra concrete by providing tubular cores of various shapes and sizes. These slabs are pre-stressed so as to increase their load carrying capacity with minimum possible thickness thereby promoting light weight slabs and resulting in lighter beams and columns especially in high rise buildings. Thus hollow core slabs are not only lighter in comparison to their conventional cast in situ slabs but also more economical.

Figure (i)

Fig (i) shown above shows hollow core slabs of varying thickness and dimensions of hollow cores

Advantages of hollow core slab's:

i) No cracks for service loads: - Hollow core slabs are designed and manufactured using high grade concrete as applicable to pre-tensioned precast members and the use of high grade concrete results in a crack free section under normal service load.

ii) Longer spans and lower span to depth ratio: - Hollow core slabs are designed for no positive deflection under normal dead loads and very small deflection under imposed loads. This is practically achieved through proper pre-stressing of these slabs and thus it is possible to achieve as high as 20 m spans with depth of 450 mm. Thus in comparisons to normal unstressed slabs that require span/depth of 28:1, these hollow core pre-stressed slabs require span/depth of 45:1.

iii) Faster construction: - Hollow core slabs are manufactured in a factory and require only fitting at site. Thus they help in faster floor construction with no need of formwork removal and their ability to be used as soon as erected at site.

iv) Prestressed hollow core floors are highly engineered.

v) Structural products manufactured under factory controlled conditions.

vi) Reduced self-weight.

vii) Versatility for designers.

viii) Wide range of applications suitable for the residential.

ix) Healthcare, education, industrial and commercial markets.

x) Long spans without intermediate supports.

xi) High load capacity.

xii) Efficient span/depth-ratio leading to reduced story heights.

xiii) Safe working platform.

xiv) Excellent fire resistance.

xv) Smooth ready to paint soffit.

xvi) Excellent acoustic insulation and thermal properties.

xvii) Green product – reduced use of raw material.

xviii) Economical solution

xix) Reduction in number of site personnel

xx) High speed of erection

xxi) Easily adapted to enable heating and cooling of a building even without

xxii) burning fossil fuels

xxiii) Easily adapted to be highly efficient in distributing fresh and warm air,

xxiv) Electrical wiring, plumbing and sprinkler services throughout a building.

Application of hollow core slab's

Hollow core slabs are used in all applications where floors or roofs are required. HCS have also been utilized in constructing facades of industrial sheds and boundary wall. The use of hollow core slab's in the following areas:

Commercial buildings
Car parks
Cinema Halls
Auditoriums
Residential complexes
Private houses and villas
Industrial sheds (roof sheet supporting structures)

FIRE RESISTANCE, THERMAL RESISTANCE AND NOISE REDUCTION FOR PRECAST HOLLOW CORE SLAB

PRODUCT CCHARACTERISTICS

Fire resistance

HOLLOWCORE SLAB elements meet the very highest requirements for non-flammability and fire resistance.

For fire rating of prestresed concrete elements, reference is made to BS 8110:
Part 1: 1997, section 4.12.3.1.3.

Noise reduction and thermal resistance

Noise reduction and thermal resistance properties for HOLLOWCORE SLABS are according to the table below.

For details of noise reduction factors, reference is made to BS 8233, 1987

Slab type	R-value (m^2K/W)	U-value (W/m^2K)	Noise reduction (dB)
HCS 150	0.12	8.33	50
HCS 200	0.15	6.67	53
HCS 265	0.19	5.26	56
HCS 320	0.20	5.00	58
HCS 400	0.22	4.55	60
HCS 500	0.26	3.85	63
HCS 150+60	0.16	6.25	53
HCS 200+60	0.19	5.26	56
HCS 265+60	0.23	4.35	59
HCS 320+60	0.24	4.16	61
HCS 400+60	0.26	3.85	63
HCS 500+60	0.30	3.33	65
Solid slab t=210	0.13	7.62	56
Solid slab t=260	0.16	6.15	58
Solid slab t=325	0.20	4.92	61
Solid slab t=380	0.24	4.21	63
Solid slab t=460	0.29	3.48	65
Solid slab t=560	0.35	2.86	67

For easy reference the Hollowcore Slabs are compared with solid in-situ concrete slabs of different thicknesses

UNIT III

ERECTION METHODOLOGY OF GIRDER SLAB SYSTEM

UNIT-III

ERECTION METHODOLOGY OF GIRDER SLAB SYSTEM

The Precast slabs are readily available from many suppliers, the ends of factory slab with knockouts to aid in the installation and inspection of standard cement and sand grout. The precast slab is installed on the bottom flange D-Beam and top flange of I-Beam girders which permits installation from above in a level position eliminating knifing in a slab.

The installation is extremely fast because the D-Beams or I-Beams makes the installation self centering once the slab has been installed the knockouts are broken and debris is left in the core to ensure proper grout depth. The grout is pumped into the slab openings flowing around and through the open web of the D-beam and into the slab core. In I-beam, the grout is pumped into the slab openings flowing around over top flange. The composite action we got through shear studd welded at top flange of I-Beam where grout is pumped into the slab openings. The gout installation is completed by leveling it with standard cement finishes tools.

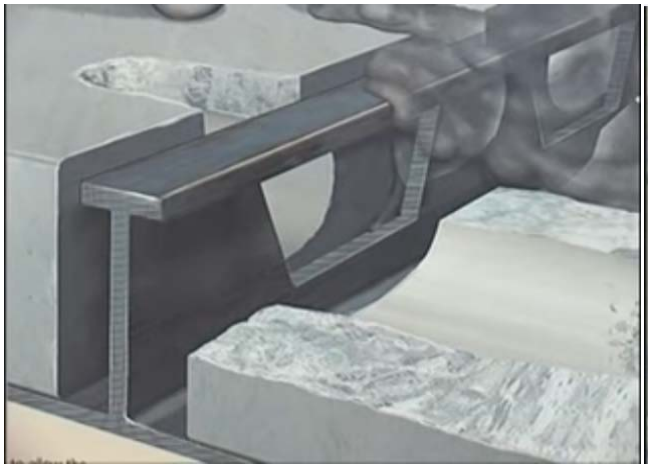
The prefab components which are assemble in place result in a structural steel for the low floor to floor height minimum 4m can be easily achieved with this system. The underside of the slab readymade for ceiling finish also simplifies the installation of duct work, plumbing, sprinklers and electrical conduit. Fire rating of the girder slab system is easily achieved by using drywall or spray fireproofing in accordance with underwriters laboratories.

Sequential erection procedure:

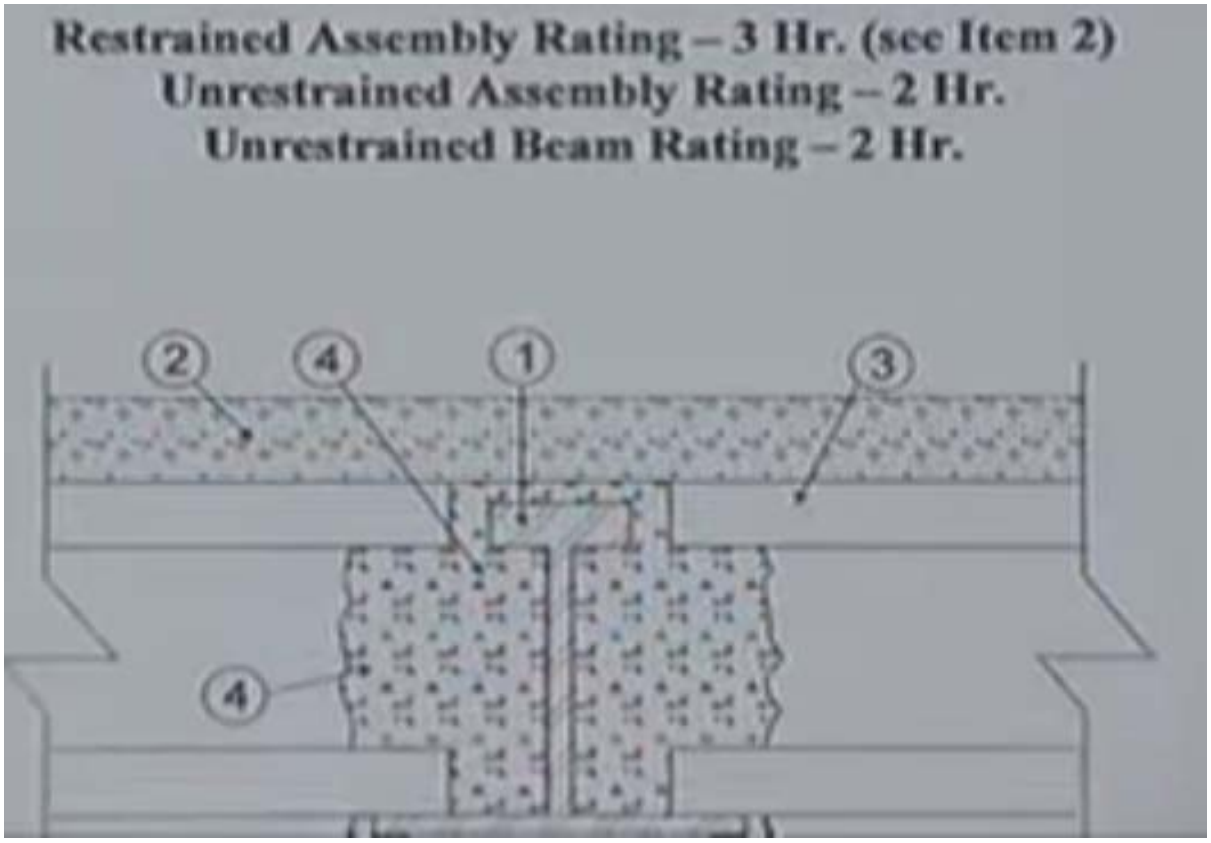
1) Erection of Pre-Fabricated steel structure with the help of cranes.

2) Erection of Precast Concrete System:

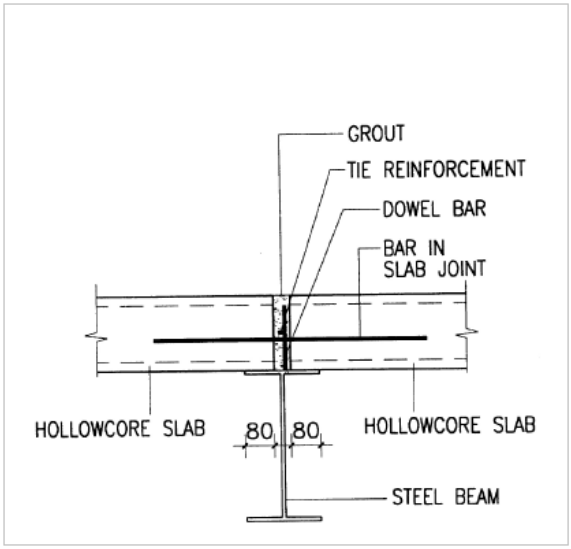
Erection of Hollow core slab on D-Beam bottom flange

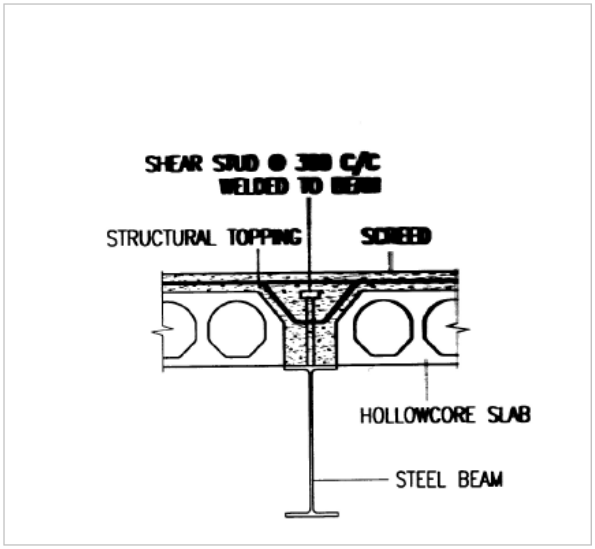






Restrained Assembly Rating – 3 Hr. (see Item 2)
Unrestrained Assembly Rating – 2 Hr.
Unrestrained Beam Rating – 2 Hr.
2
4
1
3
4

Erection of Hollow core slab on I-Beam Top flange





UNIT IV

INTRODUCTION OF RCC STRUCTURE

UNIT-IV

INTRODUCTION OF RCC STRUCTURE

The study of reinforced concrete design begins directly with a chapter on materials, followed by chapter dealing with design. The Concrete is a common structural material is, no doubt, well known. But, how common it is, and how much a part of our daily lives it plays, is perhaps not well known-or rather, not often realized. Structural concrete is used extensively in the construction of various kinds of buildings, stadia, auditorium, pavements, bridges, piers, breakwaters, berthing structures, dams cooling towers, bunkers and silos etc. It is the most commonly used construction material, consumed at a rate of approximately one tone for every living human being. “Man consumes no material except water in such tremendous quantities.

RCC structures: RCC (Reinforced Cement Concrete) is a construction technology which evolved with the evolution of different structural materials in the 18th century during the Industrial Revolution.

Industrial Revolution brought in new technology which helped in the manufacture of various materials. The Architect Le Corbusier used RCC for various constructions. He believed that any shape and form was possible; if RCC is to be used. RCC means Reinforced Cement Concrete, i.e., cement concrete reinforced with steel bars, steel plates, steel mesh etc to increase the tension withstanding capacity of the structure. Cement Concrete can take up immense compression but weak in tension whereas steel is good in withstanding both tension and compression.

Types of Concrete used in Industries:

1) Plain Concrete
2) Reinforced Concrete
3) Prestressed concrete
4) Fiber-Reinforced Concrete

1) **Plain Concrete:** The term plain concrete is used to describe any concrete mass used without any strengthening materials. The physical properties of plain concrete are very similar to stone and include the ability to withstand great pressure. Concrete is a combination construction material made of cement, ash, gravel, limestone, and

granite. Some types of concrete include sand, chemical mixtures, and water.

2) **Reinforced Concrete:** Reinforced concrete, or RCC, is concrete that contains embedded steel bars, plates, or fibers that strengthen the material. The capability to carry loads by these materials is magnified, and because of this RCC is used extensively in all construction. In fact, it has become the most commonly utilized construction material. Reinforced materials are embedded in the concrete in such a way that the two materials resist the applied forces together. The compressive strength of concrete and the tensile strength of steel form a strong bond to resist these stresses over a long span. Plain concrete is not suitable for most construction projects because it cannot easily withstand the stresses created by vibrations, wind, or other forces.

3) **Prestressed Concrete:** that has had internal stresses introduced to counteract, to the degree desired, the tensile stresses that will be imposed in service. The stress is usually imposed by tendons of individual hard-drawn wires, cables of hard-drawn wires, or bars of high strength alloy steel.

4) **Fiber Reinforced Concrete** can be defined as a composite material consisting of mixtures of cement, mortar or concrete and discontinuous, discrete, uniformly dispersed suitable fibers. Fiber reinforced concrete is of different types and properties with many advantages. Continuous meshes, woven fabrics and long wires or rods are not considered to be discrete fibers. Fiber reinforced concrete (FRC) is concrete containing fibrous material which increases its structural integrity. It contains short discrete fibers that are uniformly distributed and randomly oriented. Fibers include steel fibers, glass fibers, synthetic fibers and natural fibers. Within these different fibers that character of fiber reinforced concrete changes with varying concretes, fiber materials, geometries, distribution, orientation and densities.

UNIT V

MERITS AND DEMERITS OF GIRDER SLAB SYSTEM AND RCC CONVENTIONAL STRUCTURE

RCC FRAMED STRUCTURE	STEEL FRAMED STRCUTURE
Basically material used for taking load is Reinforced Cement Concrete.	Basically material used for taking load is Steel.
Cross Section areas of structural elements are large.	Cross Section areas of structural elements are small.
Less resistant to Earthquake and Wind.	More resistant to Earthquake and Wind.
Tensile strength of RCC structural elements is less as compared to Steel structural elements.	Tensile strength of Steel structural elements is more as compared to RCC structural elements.
It is more labor intensive.	It is less labor intensive and much work can be done in workshop.
Speed of construction is less.	Speed of construction is more.
It is less prone to corrosion, but if concrete is not properly done, it is equally prone to corrosion and not only that repairs are also very costly, sometimes more than original cost.	It is prone to corrosion.
Cost of repair is more and repair is cumbersome.	Cost of repair is less and repair is comparatively easy.
Technique of construction is not as important while determining life of structure.	Technique of construction is most important while determining life of structure.
Skilled as well as non skilled workers are needed for its construction.	Only Skilled worker are needed for its construction.
Weight of structural elements is more.	Weight of structural elements is less.
It is fire resistant.	It is not fire resistant.

Concreting needs care while constructing.	Joint needs care while constructing.
Quality control is difficult.	Better quality control.
Economical where formwork and labour are easily available.	Costly form of construction.
It is brittle as compared to steel structure. Hence, failure is sudden and hazardous.	It is ductile. Hence, failure is not sudden.

UNIT VI

FACTORS AFFECTING GIRDER SLAB SYSTEM AND RCC CONVENTIONAL STRUCTURE

1. **LIFE OF STRUCTURE:** Both Girder slab system and RCC structure can be designed for same life span by considering its material property, design assumption and safety factor. Both structure is having same structural stability if its design properly and as per codal provision.

2. **TRANSPORTATION:** In RCC Structure there is no problem in material transportation since overall structure cast in situ but As far as Girder Slab System, all steel structure is fabricated at plant and erected at site. So transportation cost and member length sometimes creates issue but it's very rare since in India 40 foot trailer is available for transport material at site.

3. **FIRE RESISTANT:** RCC structure itself fire resistant to some extent but there should be proper fire resistant arrangement should be in structure like fire sprinklers etc. GSS is more prone to fire since all superstructures is made from steel but it can be fire proofed for specific fire hour rating by applying fire proof paint on steel structure, false ceiling, and Hollow core slab itself fire resistant for 2 hours.

4. **SEISMIC RESISTANT:** RCC structure itself prone to earthquake due to its self weight. Also it's brittle in nature and can be sudden failure in earthquake. GSS made from steel structure which is known for ductility and strong in tension. Also its light weight and will better perform in earthquake.

5. **SCRAP VALUE:** RCC structure and reinforcement used in it has no value after demolition and dismantle. GSS is made from steel structure and its scrap value we can get always.

6. **SPEED OF CONSTRCUTION:** RCC structure speed of construction is very slow and time bound since construction is going sequentially. But GSS structure speed of construction is very speedy and can be started at any level since all fabrication of superstructure done at plant and at site it is just erected with the help of bolted connection.

UNIT VII

ANALYSIS AND DESIGN OF GIRDER SLAB SYSTEM

TABLE OF CONTENTS

SECTION 1
DESIGN INFORMATION

SECTION 1.1
APPLICABLE DESIGN CODES

This Design Calculation includes Design Information, Design Basis & Load data

This Design Calculation has been prepared using the IS 800:1984 code standards as per the working stress of design and serviciability criteria as per the IS800:2007 and the latest developments in engineering practices. A competent design engineer prepared the calculations and another competent engineer checked his work.

Design Information: This section contains the description of the building designed, design codes and material specifications used, design assumptions, loads and design sketches showing building Anchor Bolt Plan layouts.

APPLICABLE DESIGN CODES

Hot rolled and built up section are designed in accordance with:

* IS-800:1984**(Working Stress Method)** : Code of Pratice for General construction in Steel.
* IS-800:2007**(Limit Sate Method / Working Stress Method)** : Code of Pratice for General construction in Steel.

Loads are applied in accordance with:

* IS-875 (Part I) : code of practice for design Dead loads for building and structure.
* IS-875 (Part II) : code of practice for design Imposed loads for building and structure.
* IS-875 (Part III) : code of practice for design Wind loads for building and structure.
* IS-1893 (2002) : criteria for Earthquake resistante design of structures.

Welding is applied in accordance with:

Structural Steel Welding code of American Welding Society (AWS D1.1.98)

Manufacturing Tolerence is applied in accordance with:

Metal Building Manufacturing Association (MBMA).

* ALL CODE OF LATEST REVISION

SECTION 1.2
MATERIAL SPECIFICATIONS

MATERIAL SPECIFICATIONS

The following is the list of the material standards and specifications for which the building components have been designed

S.No.	Materials	Specifications	Steel Yields
1	Built-up Members	ASTM A 572 M Gr 50 Minimum thickness shall be as per design by continuos automatic submerged arc welding process on both side	Minimum yield strength of 345 Mpa ,Minimum tensile Strength of 450 Mpa.
2	Hot Rolled Secondary Members	IS : 2062 Gr. A	Fy = 250 MPa
3	Cold Formed Secondary Members	ASTM A 653 M Gr 50 .Minimum thickness shall be	Fy =345 MPa
4	Steel Tubes	Conform to IS : 1161	Fy = 250 MPa
5	Anchor Bolts	IS : 2062 Gr A.Nuts and lock nuts shall confirm to IS 1363 (Part 1 to 3) and washers shall confirm to IS 2016.	Fy = 250 MPa
6	High Strength Bolts for Primary Connections	IS 3757 Grade 8.8.Minimum bolt size 12 mm Dia/ASTM A 325	Grade 8.8
7	Machine Bolts for Secondary Connections	IS 3757 Grade 4.6.Minimum bolt size 12 mm Dia/ASTM A 307	Grade 4.6
8	Welding	70 ksi Electrode	Futs = 480 Mpa

SECTION 1.3

DESIGN ASSUMPTIONS & LOAD COMBINATIONS

DESIGN ASSUMPTIONS AND LOAD COMBINATIONS

a) DESIGN ASSUMPTIONS

1 The frame analysis has been done using STAAD PRO software.

2 The support condition has been considered Fixed Based.

3 The lateral stability has been provided through the frame action of the main frame.

4 The longitudinal stability has been provided thorugh the cross braced bays and longitudinal secondary beam.

b) LOAD COMBINATIONS

DL- DEAD LOAD / COLLATERAL LOAD
LL - LIVE LOAD
WL - WIND LOAD
EL - EARTHQUAKE LOAD

CODE - IS800:1984
WORKING STRESS METHOD LOAD COMBINATION

1 LOAD COMB - 1DL+1 LL
2 LOAD COMB- 1 DL+1 WL
3 LOAD COMB- 0.75 DL+0.75 LL+0.75 WL
4 LOAD COMB- 0.75 SL+0.75 DL+0.75 LL
5 LOAD COMB- SL+1 DL
6 LOAD COMB- SL+1 DL+1 LL+1 CR
7 LOAD COMB- 1 DL+1 LL+1 WL+1 CR
8 LOAD COMB- 1 DL+1 WL+1 CR
9 LOAD COMB- 1 SL+1 DL+1 CR

SECTION 1.4
DESIGN BASIS

DESIGN BASIS: HOSPITAL BUILDING (G+5)

a) FRAMING CONDITIONS:

Main Frames:

Frame Type	:	
Building Width	:	
Building Length	:	
Bay Spacing	:	MENTIONED IN DRAWING
Eave Height	:	
Roof slope	:	
Width Module	:	

1. DESCRIPTION OF GRAVITY LOAD : Mentioned in Separate sheet.

3.WIND LOAD

Basic Wind Speed = 39 m/s as per IS 875 Part III-1987

k1(Risk coefficient)	:	1.00
k2 (Category 2 , Class C)	:	1.024
k3 (Topography Factor)		1.00
INETRNAL PRESSURE COEFFICIENT (CPI)=		± 0.2

Design Wind speed **= K1 x K2 x K3 Vb = 1 x 1.024 x 1.0 x 39 = 39.93 m/s**

Design Wind pressure **= 0.6 x Vz^2 ≈ 0.956 kN/m2**

4.SEISMIC LOAD FOR ALL BLDGS : Seismic Zone II, as per IS1893-2002

Seismic coefficient : 0.10

c)LIMITNG DEFLECTION AND TOLERANCE

Vertical Deflection Criteria as per IS 800:2007 (Table 6)

BEAM	: L/240 for DL+LL
BEAM	: L/360 for LL
COLUMN	: H/240 for DL+WL or DL+EQ (HORIZONTAL)

Hospital Building

Following loads are considered:

A) DEAD LOAD

A	**1st to 5th Floor**	
i)	150 mm HCS	2.5 kN/m2
ii)	60mm screed concrete	1.2 kN/m2
iii)	False Ceiling/services load	0.5 kN/m2
iv)	Internal Partition load	0.5 kN/m2
	TOTAL	**4.7 kN/m2**
v)	AAC Wall Load (150mm thk)	8 kN/m
vi)	Structural steel members	Self weight
B	**Terrace Floor**	
i)	150 mm HCS	2.5 kN/m2
ii)	60mm screed concrete	1.2 kN/m2
iii)	False Ceiling/services load	0.5 kN/m2
iv)	Water proofing (150 mm)	3 kN/m2
	TOTAL	**7.2 kN/m2**
v)	Structural steel members	Self weight

B) LIVE LOAD

A	**1st Floor-OPD**	
i)	Blood Bank, LAB, Physiotherapy dept, OPD, Teaching room, Demo, Post Partum, washing room, laundry room, toilet, Eclampsia room, Neonatal, nurses, labour room, CSSD, Wards, Office, Nurses duty, student duty, Resident Doctor duty room, treatment room, Dept, Store room, Post & Pre operative, SICU, MICU, Dept. of Anaesthesia	3.0 kN/m2
ii)	Corridor, Waiting room, OT	4.0 kN/m2
B	**Typical Floor-Wards(2nd to 5th floor)**	
i)	Ward Area, toilet, LAB ,Office, Nurces duty, student duty, Resident Doctor duty room, treatment room, toilet, Dept, Demo, Store room	3.0 kN/m2
ii)	Corridor, Waiting room	4.0 kN/m2
C	**Terrace floor**	2.0 kN/m2

C) WIND LOAD

i)	Basic Wind Speed	39 m/s
ii)	Category	2
iii)	Class of structure	C

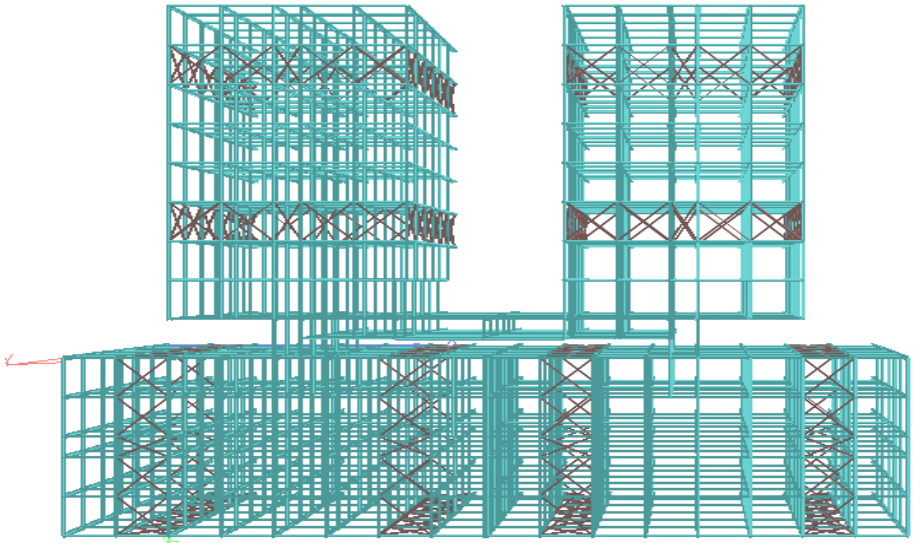
D) SEISMIC LOAD

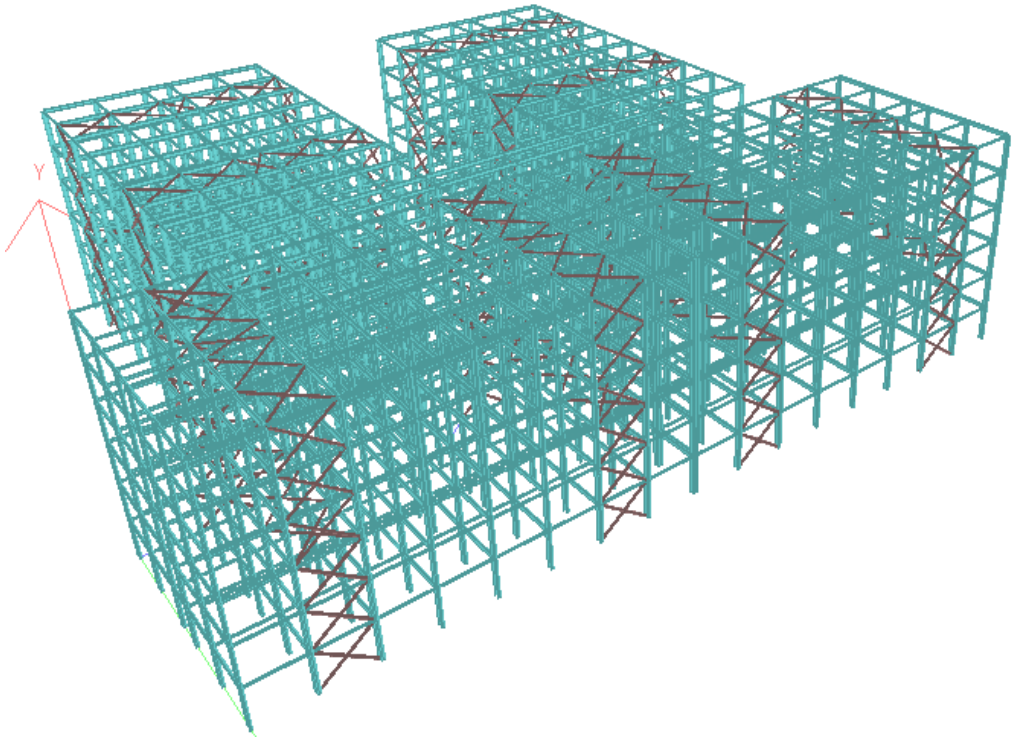
i)	Seismic Zone	2
ii)	Zone factor	0.1
iii)	Importance factor	**1.5**
iv)	Response Reduction factor	5
v)	Soil type	II (Medium)
vi)	Damping ratio	0.02
vii)	Seismic Weight for Dead load	100%
viii)	Seismic Weight for Live load (<=3 kN/m2)	25%
ix)	Seismic Weight for Live load (> 3 kN/m2)	50%

SECTION 2
DESIGN CALCULATIONS

SECTION 2.1

DESIGN INPUT AND OUTPUT OF MAIN STAAD FILE





3D RENDERED VIEW OF HOSPITAL BLDG

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*****************************************************
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*           STAAD.Pro V8i SELECTseries4             *
*           Version  20.07.09.31                    *
*           Proprietary Program of                  *
*           Bentley Systems, Inc.                   *
*           Date=    JUL 4, 2017                    *
*           Time=    12:18:24                       *
*                                                   *
*      USER ID:                                     *
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 1. STAAD SPACE
 2. START JOB INFORMATION
 3. JOB NAME MULTI STOREY HOSPITAL
 4. JOB REV R0
 5. ENGINEER NAME PRAFULL
 6. JOB PART MAJOR PROJECT PART-II
 7. END JOB INFORMATION
 8. INPUT WIDTH 79
 9. UNIT METER KN
10. JOINT COORDINATES
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1334. 2944 2945 2949 2950 2954 2955 2959 2960 2964 2965 2969 2970
1335. _GRID-2367 2974 2975 2977 2978 2980 2981 2983 2984 2986 2987 2989 2990 2994 -
1336. 2995 2999 3000 3004 3005 3009 3010 3014 3015 3019 3020 3022 3023 3025 3026 -
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1342. 3382 3385 3386 3389 3390 3393 3394 3397 TO 3408 3411 3412 3415 3416 3419 -
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1361. 4533 4534 4537 TO 4548
1362. _GRID-458 1197 1198 1201 1202 1205 1206 1209 1210 1213 1214 1217 TO 1228 1231 -
1363. 1232 1235 1236 1239 1240 1243 1244 1247 1248 1251 TO 1262 1265 1266 1269 -
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1367. 1384 1387 TO 1398 1401 1405 1409 1413 1417 1421 1423 1425 1427 1429 1431 -
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1369. 1485 1489 1491 1493 1495 1497 1499 1503 1507 1511 1515 1519 1523 1525 1527 -
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1374. 2288 2291 TO 2302 2305 2306 2309 2310 2313 2314 2317 2318 2321 2322 2325 -
1375. 2326 TO 2336 2339 2340 2343 2344 2347 2348 2351 2352 2355 2356 2359 TO 2370 -
1376. 2373 2374 2377 2378 2381 2382 2385 2386 2389 2390 2393 TO 2404 2407 2411 -
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1380. 2555 2559 2563 2565 2567 2569 2571 2573 2577 2581 2585
1381. _GRID-458 2589 2593 2597 2599 2601 2603 2605 2607 3173 3174 3177 3178 3181 -
1382. 3182 3185 3186 3189 3190 3193 TO 3204 3207 3208 3211 3212 3215 3216 3219 -
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1389. 3695 3699 3703 3705 3707 3709 3711 3713 3721 3725 3729 3733 3737 3739 3741 -
1390. 3743 3745 3747 3755 3759 3763 3767 3771 3773 3775 3777 3779 3781 4143 4144 -
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1398. 4645 4647 4649 4653 4657 4661 4665 4669 4673 4675 4677 4679 4681 4683 4687 -
1399. 4691 4695 4699 4703 4707 4709 4711 4713 4715 4717 4721
1400. _GRID-458 4725 4729 4733 4737 4741 4743 4745 4747 4749 4751 5008 TO 5019
1401. _GRID-9 3586 3590 3594 3598 3602 3606 3608 3610 3612 3620 3624 3628 3632 3636 -
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1409. 4752 5020 5022 5024 5026 5028 5030 5032 TO 5037
1410. _GRID-9' 3774 4844 4845 4847 4848 4850 4851 4853 4854 4856 4857 4859 4860 -
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1412. 5053 TO 5060 5064 TO 5067 5071 TO 5085 5089 TO 5092 5096 TO 5110 5114 TO 5117 -
1413. 5121 TO 5135 5139 TO 5142 5146 TO 5160 5164 TO 5167 5171 TO 5185

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_ZDIRECTIONBEAM 2901 2902 2906 2907 2911 2912 2916 2917 2921 2922 2926 2927 -
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3102 3106 3107 3126 3127 3131 3132 3136 3137 3141 3142 3146 3147 3151 3152 -
3171 3172 3175 3176 3179 3180 3183 3184 3187 3188 3191 3192 3205 3206 3209 -
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3689 3690 3693 3694 3697 3698 3701 3702 3715 3719 3720 3723 3724 3727 3728 -
3731 3732 3735 3736 3749 3753 3754 3757 3758 3761 3762 3765 3766
_ZDIRECTIONBEAM 3769 3770 3871 3872 3876 3877 3881 3882 3886 3887 3891 3892 -
3896 3897 3916 3917 3921 3922 3926 3927 3931 3932 3936 3937 3941 3942 3961 -
3962 3966 3967 3971 3972 3976 3977 3981 3982 3986 3987 4006 4007 4011 4012 -
4016 4017 4021 4022 4026 4027 4031 4032 4051 4052 4056 4057 4061 4062 4066 -
4067 4071 4072 4076 4077 4096 4097 4101 4102 4106 4107 4111 4112 4116 4117 -
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_ZDIRECTIONBEAM 4723 4724 4727 4728 4731 4732 4735 4736 4739 4740 5021 5023 -
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981 985 986 990 991 995 996 1015 1016 1020 1021 1025 1026 1030 1031 1035 -
1036 1040 1041 1060 1061 1065 1066 1070 1071 1075 1076 1080 1081 1085 1086 -
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1246 1249 1250 1263 1264 1267 1268 1271 1272 1275 1276 1279 1280 1283 1284 -
1297 1298 1301 1302 1305 1306 1309 1310 1313 1314 1317 1318 1331 1332 1335 -
1336 1339 1340 1343 1344 1347 1348 1351 1352 1365 1366 1369 1370 1373 1374 -
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1467 1468 1471 1472 1475 1476 1479 1480 1483 1484 1487 1488 1501 1502 1505 -
1506 1509 1510 1513 1514 1517 1518 1521 1522 1535 1536 1539 1540 1543 1544 -
1547 1548 1551 1552 1555 1556 1569 1570 1573 1574 1577 1578 1581 1582 1585 -
1586 1589 1590 1603 1604 1607 1608 1611 1612 1615 1616 1619 1620 1623 1624 -
1637 1638 1641 1642 1645 1646 1649 1650 1653 1654 1657 1658 1671 1672 1675 -
1676 1679 1680 1683 1684 1687 1688 1691 1692 1705 1706 1709 1710 1713 1714 -
1717 1718 1721 1722 1725 1726 1739 1740 1743 1744 1747 1748 1751 1752 1755 -
1756 1759 1760 1773 1774 1777 1778
_XDIRECTION 1781 1782 1785 1786 1789 1790 1793 1794 1931 1932 1936 1937 1941 -
1942 1946 1947 1951 1952 1956 1957 1976 1977 1981 1982 1986 1987 1991 1992 -
1996 1997 2001 2002 2021 2022 2026 2027 2031 2032 2036 2037 2041 2042 2046 -
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2116 2117 2121 2122 2126 2127 2131 2132 2136 2137 2156 2157 2161 2162 2166 -
2167 2171 2172 2176 2177 2181 2182 2201 2202 2205 2206 2209 2210 2213 2214 -
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1484. 2426 2439 2440 2443 2444 2447 2448 2451 2452 2455 2456 2459 2460 2473 2474 -
1485. 2477 2478 2481 2482 2485 2486 2489 2490 2493 2494 2507 2508 2511 2512 2515 -
1486. 2516 2519 2520 2523 2524 2527 2528 2541 2542 2545 2546 2549 2550 2553 2554 -
1487. 2557 2558 2561 2562 2575 2576 2579 2580 2583 2584 2587 2588 2591 2592 2595 -
1488. 2596 2609 2610 2613 2614 2617 2618 2621 2622 2625 2626 2629 2630 2643 2644 -
1489. 2647 2648 2651 2652 2655 2656 2659 2660 2663 2664 2677 2678 2681 2682 2685 -
1490. 2686 2689 2690 2693 2694 2697 2698 2711 2712 2715 2716 2719 2720 2723 2724 -
1491. 2727 2728 2731 2732 2745 2746 2749 2750 2753 2754 2757 2758
1492. _XDIRECTION 2761 2762 2765 2766 2779 2780 2783 2784 2787 2788 2791 2792 2795 -
1493. 2796 2799 2800 4861 4863 4868 4869 5040 5041 5043 5061 5062 5068 5069 5086 -
1494. 5087 5093 5094 5111 5112 5118 5119 5136 5137 5143 5144 5161 5162 5168 5169
1495. JOINT
1496. _BP1 73 TO 75 289 TO 291 469 470 481 482 553 554 565 566 637 649 721 TO 723 -
1497. 739 TO 741 847 848 859 860 931 932 943 944 1015 1027 1099 TO 1101 -
1498. 1117 TO 1119 1225 1226 1237 1238 1309 1310 1321 1322 1393 1394 1405 1406 -
1499. 1477 TO 1479 1495 TO 1497 1603 1604 1615 1616 1687 1688 1699 1700 1771 1772 -
1500. 1783 1784
1501. _BP2 145 TO 147 217 TO 219 473 474 477 478 557 558 561 562 641 645 -
1502. 727 TO 729 733 TO 735 851 852 855 856 935 936 939 940 1019 1023 1105 TO 1107 -
1503. 1111 TO 1113 1229 1230 1233 1234 1313 1314 1317 1318 1397 1398 1401 1402 -
1504. 1483 TO 1485 1489 TO 1491 1607 1608 1611 1612 1691 1692 1695 1696 1775 1776 -
1505. 1779 1780
1506. _BP3 2 3 362 363 550 570 633 653 716 717 746 747 928 948 1011 1031 1094 1095 -
1507. 1124 1125 1305 1306 1325 1326 1472 1473 1502 1503 1683 1684 1703 1704
1508. _BP4 1 361 465 466 485 486 549 569 715 745 843 844 863 864 927 947 1093 1123 -
1509. 1221 1222 1241 1242 1409 1410 1471 1501 1599 1600 1619 1620 1767 1768 1787 -
1510. 1788 1923 1936
1511. _BP5 1851 1853 1891 1898 1905 1907 1909 1940
1512. _BP6 634 638 642 646 650 654 1012 1016 1020 1024 1028 1032
1513. END GROUP DEFINITION
1514. DEFINE MATERIAL START
1515. ISOTROPIC STEEL
1516. E 2.05E+008
1517. POISSON 0.3
1518. DENSITY 76.9822
1519. ALPHA 1.2E-005
1520. DAMP 0.03
1521. END DEFINE MATERIAL
1522. MEMBER PROPERTY INDIAN
1523. 5054 TO 5058 5079 TO 5083 5104 TO 5108 5129 TO 5133 5154 TO 5158 5179 TO 5184 -
1524. 5185 TAPERED 0.312 0.005 0.312 0.163 0.006
1525. MEMBER PROPERTY INDIAN
1526. 1628 1630 1632 1634 1636 1662 1664 1666 1668 1670 1696 1698 1700 1702 1704 -
1527. 1730 1732 1734 1736 1738 1764 1766 1768 1770 1772 1798 1800 1802 1804 1806 -
1528. 2634 2636 2638 2640 2642 2668 2670 2672 2674 2676 2702 2704 2706 2708 2710 -
1529. 2736 2738 2740 2742 2744 2770 2772 2774 2776 2778 2804 2806 2808 2810 -
1530. 2812 TAPERED 0.395 0.006 0.395 0.225 0.01
1531. 4864 4871 5042 5044 5063 5070 5088 5095 5113 5120 5138 5145 5163 -
1532. 5170 TAPERED 0.395 0.006 0.395 0.225 0.01
1533. MEMBER PROPERTY INDIAN
1534. 177 178 534 535 978 979 993 994 1406 1418 1440 1452 1609 1621 1643 1655 1939 -
1535. 1940 1954 1955 1984 1985 1999 2000 2412 2424 2446 2458 2615 2627 2649 2661 -
1536. 2909 2910 2924 2925 2954 2955 2969 2970 3381 3382 3393 3394 3415 3416 3427 -
1537. 3428 3879 3880 3894 3895 3924 3925 3939 3940 4351 4352 4363 4364 4385 4386 -
1538. 4397 4398 TAPERED 0.532 0.008 0.532 0.325 0.016 0.325 0.016
1539. MEMBER PROPERTY INDIAN
1540. 1113 1114 1128 1129 1158 1159 1173 1174 1542 1554 1576 1588 1745 1757 1779 -
1541. 1791 2119 2120 2134 2135 2164 2165 2179 2180 2548 2560 2582 2594 2751 2763 -
1542. 2785 2797 3089 3090 3104 3105 3134 3135 3149 3150 3517 3518 3529 3530 3551 -
1543. 3552 3563 3564 4059 4060 4074 4075 4104 4105 4119 4120 4487 4488 4499 4500 -
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1544. 4521 4522 4533 4534 TAPERED 0.524 0.006 0.524 0.25 0.012
1545. MEMBER PROPERTY INDIAN
1546. 1857 1858 1867 1868 1879 1880 1887 1888 1897 1898 1909 1910 1913 TO 1916 1919 -
1547. 1920 1923 TO 1926 1929 1930 2863 TO 2866 2869 2870 2873 TO 2876 2879 2880 -
1548. 2883 TO 2886 2889 2890 2893 TO 2896 2899 2900 3833 TO 3836 3839 3840 3853 -
1549. 3854 TO 3856 3859 3860 4803 TO 4806 4809 4810 4823 TO 4826 4829 4830 4946 -
1550. 4947 TO 4949 4952 4953 4956 TO 4959 4962 4963 4990 TO 4993 4996 4997 5000 -
1551. 5001 TO 5003 5006 5007 TABLE ST PIP1143M
1552. MEMBER PROPERTY INDIAN
1553. 1023 1024 1038 1039 1068 1069 1083 1084 1474 1486 1508 1520 1677 1689 1711 -
1554. 1723 2029 2030 2044 2045 2074 2075 2089 2090 2480 2492 2514 2526 2683 2695 -
1555. 2717 2729 2999 3000 3014 3015 3044 3045 3059 3060 3449 3450 3461 3462 3483 -
1556. 3484 3495 3496 3969 3970 3984 3985 4014 4015 4029 4030 4419 4420 4431 4432 -
1557. 4453 4454 4465 4466 TAPERED 0.524 0.006 0.524 0.3 0.012
1558. MEMBER PROPERTY INDIAN
1559. 58 59 653 654 973 974 998 999 1402 1422 1436 1456 1605 1625 1639 1659 1934 -
1560. 1935 1959 1960 1979 1980 2004 2005 2408 2428 2442 2462 2611 2631 2645 2665 -
1561. 2904 2905 2929 2930 2949 2950 2974 2975 3377 3378 3397 3398 3411 3412 3431 -
1562. 3432 3874 3875 3899 3900 3919 3920 3944 3945 4347 4348 4367 4368 4381 4382 -
1563. 4401 4402 TAPERED 0.532 0.008 0.532 0.375 0.016
1564. MEMBER PROPERTY INDIAN
1565. 176 295 414 533 1938 1943 1948 1953 2908 2913 2918 2923 3878 3883 3888 -
1566. 3893 TAPERED 0.524 0.006 0.524 0.3 0.012
1567. 977 982 987 992 1022 1027 1032 1037 1983 1988 1993 1998 2028 2033 2038 2043 -
1568. 2953 2958 2963 2968 2998 3003 3008 3013 3923 3928 3933 3938 3968 3973 3978 -
1569. 3983 TAPERED 0.524 0.006 0.524 0.275 0.012
1570. 1067 1072 1077 1082 2073 2078 2083 2088 3043 3048 3053 3058 4013 4018 4023 -
1571. 4028 TAPERED 0.52 0.006 0.52 0.25 0.01
1572. 57 652 972 997 1017 1042 1062 1087 1107 1112 1117 1122 1127 1132 1152 1177 -
1573. 1933 1958 1978 2003 2023 2048 2068 2093 2113 2118 2123 2128 2133 2138 2158 -
1574. 2183 2903 2928 2948 2973 2993 3018 3038 3063 3083 3088 3093 3098 3103 3108 -
1575. 3128 3153 3704 3722 3734 3738 3772 3873 3898 3918 3943 3963 3988 4008 4033 -
1576. 4053 4058 4063 4068 4073 4078 4098 4123 4654 4674 4688 4692 4704 4708 4722 -
1577. 4742 5035 TO 5037 TAPERED 0.52 0.006 0.52 0.25 0.01
1578. 1157 1162 1167 1172 2163 2168 2173 2178 3133 3138 3143 3148 3756 3768 4103 -
1579. 4108 4113 4118 4726 4738 TAPERED 0.516 0.006 0.516 0.2 0.008
1580. 715 778 841 904 967 1000 1003 1006 1009 1012 1045 1048 1051 1054 1057 1090 -
1581. 1093 1096 1099 1102 1135 1138 1141 1144 1147 1180 1183 1186 1189 1192 1961 -
1582. 1964 1967 1970 1973 2006 2009 2012 2015 2018 2051 2054 2057 2060 2063 2096 -
1583. 2099 2102 2105 2108 2141 2144 2147 2150 2153 2186 2189 2192 2195 2198 2931 -
1584. 2934 2937 2940 2943 2976 2979 2982 2985 2988 3021 3024 3027 3030 3033 3066 -
1585. 3069 3072 3075 3078 3111 3114 3117 3120 3123 3156 3159 3162 3165 3168 3901 -
1586. 3904 3907 3910 3913 3946 3949 3952 3955 3958 3991 3994 3997 4000 4003 4036 -
1587. 4039 4042 4045 4048 4081 4084 4087 4090 4093 4126 4129 4132 4135 -
1588. 4138 TAPERED 0.412 0.005 0.412 0.175 0.006
1589. MEMBER PROPERTY INDIAN
1590. 1018 1019 1043 1044 1063 1064 1088 1089 1470 1490 1504 1524 1673 1693 1707 -
1591. 1727 2024 2025 2049 2050 2069 2070 2094 2095 2476 2496 2510 2530 2679 2699 -
1592. 2713 2733 2994 2995 3019 3020 3039 3040 3064 3065 3445 3446 3465 3466 3479 -
1593. 3480 3499 3500 3964 3965 3989 3990 4009 4010 4034 4035 4415 4416 4435 4436 -
1594. 4449 4450 4469 4470 TAPERED 0.524 0.006 0.524 0.3 0.012
1595. 1108 1109 1118 1119 1123 1124 1133 1134 1153 1154 1163 1164 1168 1169 1178 -
1596. 1179 1538 1546 1550 1558 1572 1580 1584 1592 1741 1749 1753 1761 1775 1783 -
1597. 1787 1795 2114 2115 2124 2125 2129 2130 2139 2140 2159 2160 2169 2170 2174 -
1598. 2175 2184 2185 2544 2552 2556 2564 2578 2586 2590 2598 2747 2755 2759 2767 -
1599. 2781 2789 2793 2801 3084 3085 3094 3095 3099 3100 3109 3110 3129 3130 3139 -
1600. 3140 3144 3145 3154 3155 3513 3514 3521 3522 3525 3526 3533 3534 3547 3548 -
1601. 3555 3556 3559 3560 3567 3568 4054 4055 4064 4065 4069 4070 4079 4080 4099 -
1602. 4100 4109 4110 4114 4115 4124 4125 4483 4484 4491 4492 4495 4496 4503 4504 -
1603. 4517 4518 4525 4526 4529 4530 4537 4538 TAPERED 0.52 0.006 0.52 0.225 0.01
1604. MEMBER PROPERTY INDIAN
1605. 296 297 415 416 983 984 988 989 1410 1414 1444 1448 1613 1617 1647 1651 1944 -
1606. 1945 1949 1950 1989 1990 1994 1995 2416 2420 2450 2454 2619 2623 2653 2657 -
1607. 2914 2915 2919 2920 2959 2960 2964 2965 3385 3386 3389 3390 3419 3420 3423 -
1608. 3424 3884 3885 3889 3890 3929 3930 3934 3935 4355 4356 4359 4360 4389 4390 -
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1609. 4393 4394 TAPERED 0.532 0.006 0.532 0.3 0.016
1610. 1028 1029 1033 1034 1073 1074 1078 1079 1478 1482 1512 1516 1681 1685 1715 -
1611. 1719 2034 2035 2039 2040 2079 2080 2084 2085 2484 2488 2518 2522 2687 2691 -
1612. 2721 2725 3004 3005 3009 3010 3049 3050 3054 3055 3453 3454 3457 3458 3487 -
1613. 3488 3491 3492 3974 3975 3979 3980 4019 4020 4024 4025 4423 4424 4427 4428 -
1614. 4457 4458 4461 4462 TAPERED 0.524 0.006 0.524 0.275 0.012
1615. 716 717 779 780 842 843 905 906 968 969 1001 1002 1004 1005 1007 1008 1010 -
1616. 1011 1013 1014 1046 1047 1049 1050 1052 1053 1055 1056 1058 1059 1091 1092 -
1617. 1094 1095 1097 1098 1100 1101 1103 1104 1424 1426 1428 1430 1432 1458 1460 -
1618. 1462 1464 1466 1492 1494 1496 1498 1500 1526 1528 1530 1532 1534 1627 1629 -
1619. 1631 1633 1635 1661 1663 1665 1667 1669 1695 1697 1699 1701 1703 1729 1731 -
1620. 1733 1735 1737 1962 1963 1965 1966 1968 1969 1971 1972 1974 1975 2007 2008 -
1621. 2010 2011 2013 2014 2016 2017 2019 2020 2052 2053 2055 2056 2058 2059 2061 -
1622. 2062 2064 2065 2097 2098 2100 2101 2103 2104 2106 2107 2109 2110 2430 2432 -
1623. 2434 2436 2438 2464 2466 2468 2470 2472 2498 2500 2502 2504 2506 2532 2534 -
1624. 2536 2538 2540 2633 2635 2637 2639 2641 2667 2669 2671 2673 2675 2701 2703 -
1625. 2705 2707 2709 2735 2737 2739 2741 2743 2932 2933 2935 2936 2938 2939 2941 -
1626. 2942 2944 2945 2977 2978 2980 2981 2983 2984 2986 2987 2989 2990 3022 3023 -
1627. 3025 3026 3028 3029 3031 3032 3034 3035 3067 3068 3070 3071 3073 3074 3076 -
1628. 3077 3079 3080 3399 TO 3408 3433 TO 3442 3467 TO 3476 3501 TO 3510 3902 3903 -
1629. 3905 3906 3908 3909 3911 3912 3914 3915 3947 3948 3950 3951 3953 3954 3956 -
1630. 3957 3959 3960 3992 3993 3995 3996 3998 3999 4001 4002 4004 4005 4037 4038 -
1631. 4040 4041 4043 4044 4046 4047 4049 4050 4369 TO 4378 4403 TO 4412 -
1632. 4437 TO 4446 4471 TO 4480 TAPERED 0.47 0.005 0.47 0.18 0.01
1633. 1136 1137 1139 1140 1142 1143 1145 1146 1148 1149 1181 1182 1184 1185 1187 -
1634. 1188 1190 1191 1193 1194 1560 1562 1564 1566 1568 1594 1596 1598 1600 1602 -
1635. 1763 1765 1767 1769 1771 1797 1799 1801 1803 1805 2142 2143 2145 2146 2148 -
1636. 2149 2151 2152 2154 2155 2187 2188 2190 2191 2193 2194 2196 2197 2199 2200 -
1637. 2566 2568 2570 2572 2574 2600 2602 2604 2606 2608 2769 2771 2773 2775 2777 -
1638. 2803 2805 2807 2809 2811 3112 3113 3115 3116 3118 3119 3121 3122 3124 3125 -
1639. 3157 3158 3160 3161 3163 3164 3166 3167 3169 3170 3535 TO 3544 3569 TO 3578 -
1640. 4082 4083 4085 4086 4088 4089 4091 4092 4094 4095 4127 4128 4130 4131 4133 -
1641. 4134 4136 4137 4139 4140 4505 TO 4514 4539 TO 4547 -
1642. 4548 TAPERED 0.47 0.005 0.47 0.175 0.01
1643. 1253 TO 1262 1287 TO 1296 1389 TO 1398 1457 1459 1461 1463 1465 1491 1493 -
1644. 1495 1497 1499 1593 1595 1597 1599 1601 2259 TO 2268 2293 TO 2302 -
1645. 2395 TO 2404 2463 2465 2467 2469 2471 2497 2499 2501 2503 2505 2599 2601 -
1646. 2603 2605 2607 3229 TO 3238 3263 TO 3272 3365 TO 3374 3637 3639 3641 3643 -
1647. 3645 3671 3673 3675 3677 3679 3775 3777 3779 3781 4199 TO 4208 4233 TO 4242 -
1648. 4335 TO 4344 4607 4609 4611 4613 4615 4641 4643 4645 4647 4649 4743 4745 -
1649. 4747 4749 4751 5010 5012 TAPERED 0.47 0.005 0.47 0.18 0.01
1650. 1219 TO 1228 1321 TO 1330 1355 TO 1364 1423 1425 1427 1429 1431 1525 1527 -
1651. 1529 1531 1533 1559 1561 1563 1565 1567 2225 TO 2234 2327 TO 2336 -
1652. 2361 TO 2370 2429 2431 2433 2435 2437 2531 2533 2535 2537 2539 2565 2567 -
1653. 2569 2571 2573 3195 TO 3204 3297 TO 3306 3331 TO 3340 3603 3605 3607 3609 -
1654. 3611 3705 3707 3709 3711 3713 3739 3741 3743 3745 3747 4165 TO 4174 4267 -
1655. 4268 TO 4276 4301 TO 4310 4573 4575 4577 4579 4581 4675 4677 4679 4681 4683 -
1656. 4709 4711 4713 4715 4717 5008 5014 5016 TAPERED 0.47 0.005 0.47 0.18 0.01
1657. 3606 3608 3610 3612 3640 3642 3644 3646 3674 3676 3678 3680 3708 3710 3712 -
1658. 3714 3742 3744 3746 3748 3776 3778 3780 3782 4574 4576 4578 4580 4582 4608 -
1659. 4610 4612 4614 4616 4642 4644 4646 4648 4650 4676 4678 4680 4682 4684 4710 -
1660. 4712 4714 4716 4718 4744 4746 4748 4750 4752 5020 5022 5024 5026 5028 -
1661. 5030 TAPERED 0.47 0.005 0.47 0.175 0.01
1662. 3602 3636 3654 3666 3670 3688 3700 4552 4572 4586 4606 4620 4624 4636 4640 -
1663. 4658 4670 5032 TO 5034 TAPERED 0.524 0.006 0.524 0.325 0.012
1664. 3586 3590 3594 3598 3620 3624 3628 3632 3658 3662 3692 3696 4556 4560 4564 -
1665. 4568 4590 4594 4598 4602 4628 4632 4662 -
1666. 4666 TAPERED 0.532 0.006 0.532 0.35 0.016
1667. 3726 3730 3760 3764 4696 4700 4730 4734 TAPERED 0.524 0.006 0.524 0.25 0.012
1668. 4862 4865 TO 4867 4870 4872 TO 4874 4918 4919 5060 5064 TO 5067 5071 TO 5075 -
1669. 5085 5089 TO 5092 5096 TO 5100 5110 5114 TO 5117 5121 TO 5125 5135 -
1670. 5139 TO 5142 5146 TO 5150 5160 5164 TO 5167 5171 TO 5174 -
1671. 5175 TAPERED 0.412 0.005 0.412 0.165 0.006
1672. 5038 5053 5076 5078 5101 5103 5126 5128 5151 5153 5176 -
1673. 5178 TAPERED 0.466 0.005 0.466 0.2 0.008

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1674. 3774 5039 5059 5077 5084 5102 5109 5127 5134 5152 5159 -
1675. 5177 TAPERED 0.462 0.005 0.462 0.175 0.006
1676. MEMBER PROPERTY INDIAN
1677. 1201 1202 1205 1206 1209 1210 1213 1214 1235 1236 1247 1248 1405 1409 1413 -
1678. 1417 1439 1451 2207 2208 2211 2212 2215 2216 2219 2220 2241 2242 2253 2254 -
1679. 2411 2415 2419 2423 2445 2457 3177 3178 3181 3182 3185 3186 3189 3190 3211 -
1680. 3212 3223 3224 3585 3589 3593 3597 3619 3631 4147 4148 4151 4152 4155 4156 -
1681. 4159 4160 4181 4182 4193 4194 4555 4559 4563 4567 4589 -
1682. 4601 TAPERED 0.532 0.006 0.532 0.35 0.016
1683. MEMBER PROPERTY INDIAN
1684. 1197 1198 1231 1232 1239 1240 1243 1244 1401 1435 1443 1447 2203 2204 2237 -
1685. 2238 2245 2246 2249 2250 2407 2441 2449 2453 3173 3174 3207 3208 3215 3216 -
1686. 3219 3220 3623 3627 4143 4144 4177 4178 4185 4186 4189 4190 4551 4585 4593 -
1687. 4597 5009 5011 TAPERED 0.532 0.006 0.532 0.3 0.016
1688. 1285 1286 1319 1320 1333 1334 1337 1338 1341 1342 1345 1346 1349 1350 1353 -
1689. 1354 1367 1368 1387 1388 1489 1523 1537 1541 1545 1549 1553 1557 1571 1591 -
1690. 2291 2292 2325 2326 2339 2340 2343 2344 2347 2348 2351 2352 2355 2356 2359 -
1691. 2360 2373 2374 2393 2394 2495 2529 2543 2547 2551 2555 2559 2563 2577 2597 -
1692. 3241 3242 3261 3262 3275 3276 3295 3296 3309 3310 3313 3314 3317 3318 3321 -
1693. 3322 3325 3326 3329 3330 3343 3344 3363 3364 3669 3703 3721 3725 3729 3733 -
1694. 3737 3771 4211 4212 4231 4232 4245 4246 4265 4266 4279 4280 4283 4284 4287 -
1695. 4288 4291 4292 4295 4296 4299 4300 4313 4314 4333 4334 4639 4673 4687 4691 -
1696. 4695 4699 4703 4707 4721 4741 5017 5019 TAPERED 0.52 0.006 0.52 0.275 0.01
1697. 1265 1266 1269 1270 1273 1274 1277 1278 1281 1282 1299 1300 1303 1304 1307 -
1698. 1308 1311 1312 1315 1316 1469 1473 1477 1481 1485 1503 1507 1511 1515 1519 -
1699. 2271 2272 2275 2276 2279 2280 2283 2284 2287 2288 2305 2306 2309 2310 2313 -
1700. 2314 2317 2318 2321 2322 2475 2479 2483 2487 2491 2509 2513 2517 2521 2525 -
1701. 3245 3246 3249 3250 3253 3254 3257 3258 3279 3280 3283 3284 3287 3288 3291 -
1702. 3292 3653 3657 3661 3665 3687 3691 3695 3699 4215 4216 4219 4220 4223 4224 -
1703. 4227 4228 4249 4250 4253 4254 4257 4258 4261 4262 4619 4623 4627 4631 4635 -
1704. 4653 4657 4661 4665 4669 5013 5015 TAPERED 0.532 0.006 0.532 0.3 0.016
1705. 1371 1372 1375 1376 1379 1380 1383 1384 1575 1579 1583 1587 2377 2378 2381 -
1706. 2382 2385 2386 2389 2390 2581 2585 2589 2593 3347 3348 3351 3352 3355 3356 -
1707. 3359 3360 3755 3759 3763 3767 4317 4318 4321 4322 4325 4326 4329 4330 4725 -
1708. 4729 4733 4737 TAPERED 0.516 0.006 0.516 0.2 0.008
1709. 3773 5018 TAPERED 0.47 0.006 0.47 0.2 0.01
1710. 1217 1218 1251 1252 1421 1455 2223 2224 2257 2258 2427 2461 3193 3194 3227 -
1711. 3228 3601 3635 4163 4164 4197 4198 4571 -
1712. 4605 TAPERED 0.524 0.006 0.524 0.3 0.012
1713. 4844 4847 4850 4857 4890 4897 4901 4904 4906 4907 4909 4914 5048 -
1714. 5049 TAPERED 0.52 0.006 0.52 0.225 0.01
1715. 4845 4848 4851 4854 4888 4889 4900 4902 4903 4905 4908 4911 5046 -
1716. 5047 TAPERED 0.524 0.006 0.524 0.25 0.012
1717. 4853 4856 4859 4860 4891 TO 4893 4898 4899 4910 4912 4913 4915 TO 4917 5050 -
1718. 5052 TAPERED 0.516 0.006 0.516 0.2 0.008
1719. 4894 TO 4896 TAPERED 0.524 0.006 0.524 0.275 0.012
1720. 1 2 120 121 239 240 358 359 477 478 596 597 970 971 975 976 980 981 985 986 -
1721. 990 991 995 996 1150 1151 1155 1156 1160 1161 1165 1166 1170 1171 1175 1176 -
1722. 1195 1196 1199 1200 1203 1204 1207 1208 1211 1212 1215 1216 1229 1230 1233 -
1723. 1234 1237 1238 1241 1242 1245 1246 1249 1250 1365 1366 1369 1370 1373 1374 -
1724. 1377 1378 1381 1382 1385 1386 1400 1404 1407 1408 1411 1412 1415 1416 1419 -
1725. 1420 1434 1438 1441 1442 1445 1446 1449 1450 1453 1454 1569 1570 1573 1574 -
1726. 1577 1578 1581 1582 1585 1586 1589 1590 1603 1604 1607 1608 1611 1612 1615 -
1727. 1616 1619 1620 1623 1624 1637 1638 1641 1642 1645 1646 1649 1650 1653 1654 -
1728. 1657 1658 1773 1774 1777 1778 1781 1782 1785 1786 1789 1790 1793 1794 1931 -
1729. 1932 1936 1937 1941 1942 1946 1947 1951 1952 1956 1957 1976 1977 1981 1982 -
1730. 1986 1987 1991 1992 1996 1997 2001 2002 2156 2157 2161 2162 2166 2167 2171 -
1731. 2172 2176 2177 2181 2182 2201 2202 2205 2206 2209 2210 2213 2214 2217 2218 -
1732. 2221 2222 2235 2236 2239 2240 2243 2244 2247 2248 2251 2252 2255 2256 2371 -
1733. 2372 2375 2376 2379 2380 2383 2384 2387 2388 2391 2392 2406 2410 2413 2414 -
1734. 2417 2418 2421 2422 2425 2426 2440 2444 2447 2448 2451 2452 2455 2456 2459 -
1735. 2460 2575 2576 2579 2580 2583 2584 2587 2588 2591 2592 2595 2596 2609 2610 -
1736. 2613 2614 2617 2618 2621 2622 2625 2626 2629 2630 2643 2644 2647 2648 2651 -
1737. 2652 2655 2656 2659 2660 2663 2664 2779 2780 2783 2784 2787 2788 2791 2792 -
1738. 2795 2796 2799 2800 TAPERED 0.162 0.004 0.162 0.165 0.006
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1739. 2901 2902 2906 2907 2911 2912 2916 2917 2921 2922 2926 2927 2946 2947 2951 -
1740. 2952 2956 2957 2961 2962 2966 2967 2971 2972 3126 3127 3131 3132 3136 3137 -
1741. 3141 3142 3146 3147 3151 3152 3171 3172 3175 3176 3179 3180 3183 3184 3187 -
1742. 3188 3191 3192 3205 3206 3209 3210 3213 3214 3217 3218 3221 3222 3225 3226 -
1743. 3341 3342 3345 3346 3349 3350 3353 3354 3357 3358 3361 3362 3375 3376 3379 -
1744. 3380 3383 3384 3387 3388 3391 3392 3395 3396 3409 3410 3413 3414 3417 3418 -
1745. 3421 3422 3425 3426 3429 3430 3545 3546 3549 3550 3553 3554 3557 3558 3561 -
1746. 3562 3565 3566 3583 3584 3587 3588 3591 3592 3595 3596 3599 3600 3617 3618 -
1747. 3621 3622 3625 3626 3629 3630 3633 3634 3753 3754 3757 3758 3761 3762 3765 -
1748. 3766 3769 3770 3871 3872 3876 3877 3881 3882 3886 3887 3891 3892 3896 3897 -
1749. 3916 3917 3921 3922 3926 3927 3931 3932 3936 3937 3941 3942 4096 4097 4101 -
1750. 4102 4106 4107 4111 4112 4116 4117 4121 4122 4141 4142 4145 4146 4149 4150 -
1751. 4153 4154 4157 4158 4161 4162 4175 4176 4179 4180 4183 4184 4187 4188 4191 -
1752. 4192 4195 4196 4311 4312 4315 4316 4319 4320 4323 4324 4327 4328 4331 4332 -
1753. 4345 4346 4349 4350 4353 4354 4357 4358 4361 4362 4365 4366 4379 4380 4383 -
1754. 4384 4387 4388 4391 4392 4395 4396 4399 4400 4515 4516 4519 4520 4523 4524 -
1755. 4527 4528 4531 4532 4535 4536 4549 4550 4553 4554 4557 4558 4561 4562 4565 -
1756. 4566 4569 4570 4583 4584 4587 4588 4591 4592 4595 4596 4599 4600 4603 4604 -
1757. 4719 4720 4723 4724 4727 4728 4731 4861 4863 -
1758. 4868 TAPERED 0.162 0.004 0.162 0.165 0.006
1759. 4869 5040 5041 5043 TAPERED 0.162 0.004 0.162 0.152 0.006
1760. 4732 4735 4736 4739 4740 TAPERED 0.162 0.004 0.162 0.15 0.006
1761. 1467 2473 2991 2992 2996 2997 3001 3002 3006 3007 3011 3012 3016 3017 3036 -
1762. 3037 3041 3042 3046 3047 3051 3052 3056 3057 3061 3062 3081 3082 3086 3087 -
1763. 3091 3092 3096 3097 3101 3102 3106 3107 3239 3240 3243 3244 3247 3248 3251 -
1764. 3252 3255 3256 3259 3260 3273 3274 3277 3278 3281 3282 3285 3286 3289 3290 -
1765. 3293 3294 3307 3308 3311 3312 3315 3316 3319 3320 3323 3324 3327 3328 3443 -
1766. 3444 3447 3448 3451 3452 3455 3456 3459 3460 3463 3464 3477 3478 3481 3482 -
1767. 3485 3486 3489 3490 3493 3494 3497 3498 3511 3512 3515 3516 3519 3520 3523 -
1768. 3524 3527 3528 3531 3532 3651 3652 3655 3656 3659 3660 3663 3664 3667 3668 -
1769. 3685 3686 3689 3690 3693 3694 3697 3698 3701 3702 3719 3720 3723 3724 3727 -
1770. 3728 3731 3732 3735 3736 3961 3962 3966 3967 3971 3972 3976 3977 3981 3982 -
1771. 3986 3987 4006 4007 4011 4012 4016 4017 4021 4022 4026 4027 4031 4032 4051 -
1772. 4052 4056 4057 4061 4062 4066 4067 4071 4072 4076 4077 4209 4210 4213 4214 -
1773. 4217 4218 4221 4222 4225 4226 4229 4230 4243 4244 4247 4248 4251 4252 4255 -
1774. 4256 4259 4260 4263 4264 4277 4278 4281 4282 4285 4286 4289 4290 4293 4294 -
1775. 4297 4298 4413 4414 4417 4418 4421 4422 4425 4426 4429 4430 4433 4434 4447 -
1776. 4448 4451 4452 4455 4456 4459 4460 4463 4464 4467 4468 4481 4482 4485 4486 -
1777. 4489 4490 4493 4494 4497 4498 4501 4502 4617 4618 4621 4622 4625 4626 4629 -
1778. 4630 4633 4634 4637 4638 4651 4652 4655 4656 4659 4660 4663 4664 4667 4668 -
1779. 4671 4672 4685 4686 4689 4690 4693 4694 4697 -
1780. 5111 TAPERED 0.287 0.004 0.287 0.165 0.006
1781. 5118 TAPERED 0.287 0.004 0.287 0.165 0.006
1782. 4698 4701 4702 4705 4706 TAPERED 0.287 0.004 0.287 0.152 0.006
1783. MEMBER PROPERTY INDIAN
1784. 1015 1016 1020 1021 1025 1026 1030 1031 1035 1036 1040 1041 1060 1061 1065 -
1785. 1066 1070 1071 1075 1076 1080 1081 1085 1086 1105 1106 1110 1111 1115 1116 -
1786. 1120 1121 1125 1126 1130 1131 1263 1264 1267 1268 1271 1272 1275 1276 1279 -
1787. 1280 1283 1284 1297 1298 1301 1305 1306 1309 1310 1313 1314 1317 1318 1331 -
1788. 1332 1335 1336 1339 1340 1343 1344 1347 1348 1351 1352 1468 1472 1475 1476 -
1789. 1479 1480 1483 1484 1487 1488 1502 1509 1510 1513 1514 1517 1518 1521 1522 -
1790. 1536 1540 1543 1544 1547 1548 1551 1552 1555 1556 1671 1672 1675 1676 1679 -
1791. 1680 1683 1684 1687 1688 1691 1692 1705 1706 1709 1713 1714 1717 1718 1721 -
1792. 1725 1726 1739 1740 1743 1744 1747 1748 1751 1752 1755 1756 1759 1760 2021 -
1793. 2022 2026 2027 2031 2032 2036 2037 2041 2042 2046 2047 2066 2067 2071 2072 -
1794. 2076 2077 2081 2082 2086 2087 2091 2092 2111 2112 2116 2117 2121 2122 2126 -
1795. 2127 2131 2132 2136 2137 2269 2270 2273 2274 2277 2278 2281 2282 2285 2286 -
1796. 2289 2290 2303 2304 2307 2311 2312 2315 2316 2319 2320 2323 2324 2337 2338 -
1797. 2341 2342 2345 2346 2349 2350 2353 2354 2357 2358 2474 2478 2481 2482 2485 -
1798. 2486 2489 2490 2493 2494 2508 2515 2516 2519 2520 2523 2524 2527 2528 2542 -
1799. 2546 2549 2550 2553 2554 2557 2558 2561 2562 2677 2678 2681 2682 2685 2686 -
1800. 2689 2690 2693 2694 2697 2698 2711 2712 2715 2719 2720 2723 2724 2727 2731 -
1801. 2732 2745 2746 2749 2750 2753 2754 2757 2758 2761 2762 2765 -
1802. 2766 TAPERED 0.262 0.004 0.262 0.165 0.006
1803. 1302 1399 1403 1433 1437 1471 1501 1505 1506 1535 1539 1710 1722 2308 2405 -

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1804. 2409 2439 2443 2477 2507 2511 2512 2541 2545 2716 2728 5061 5062 5068 5069 -
1805. 5086 5087 5093 5094 5112 5119 5136 5137 5143 5144 5161 5162 5168 -
1806. 5169 TAPERED 0.316 0.005 0.316 0.165 0.008
1807. 1610 1614 1618 1622 1644 1648 1652 1656 2616 2620 2624 2628 2650 2654 2658 -
1808. 2662 TAPERED 0.524 0.006 0.524 0.3 0.012
1809. 1606 1626 1640 1660 1674 1678 1682 1686 1690 1694 1708 1712 1716 1720 1724 -
1810. 1728 1742 1746 1750 1754 1758 1762 1776 1780 1784 1788 1792 1796 2612 2632 -
1811. 2646 2666 2680 2684 2688 2692 2696 2700 2714 2718 2722 2726 2730 2734 2748 -
1812. 2752 2756 2760 2764 2768 2782 2786 2790 2794 2798 -
1813. 2802 TAPERED 0.52 0.006 0.52 0.25 0.01
1814. 3579 3613 3647 3681 3715 3749 5021 5023 5025 5027 5029 -
1815. 5031 TAPERED 0.312 0.004 0.312 0.165 0.006
1816. MEMBER PROPERTY INDIAN
1817. 1819 TO 1830 1843 TO 1856 1869 1870 1885 1886 1899 1900 1911 1912 1917 1918 -
1818. 1921 1922 1927 1928 2825 TO 2836 2849 TO 2862 2867 2868 2871 2872 2877 2878 -
1819. 2881 2882 2887 2888 2891 2892 2897 2898 3795 3796 3799 3800 3803 3804 3819 -
1820. 3820 3823 3824 3827 3828 3831 3832 3837 3838 3851 3852 3857 3858 4765 4766 -
1821. 4769 4770 4773 4774 4789 4790 4793 4794 4797 4798 4801 4802 4807 4808 4821 -
1822. 4822 4827 4828 4926 TO 4931 4938 TO 4945 4950 4951 4954 4955 4960 4961 4970 -
1823. 4971 TO 4975 4982 TO 4989 4994 4995 4998 4999 5004 5005 TABLE ST PIP1651M
1824. 1807 TO 1818 1831 TO 1842 2813 TO 2824 2837 TO 2848 3783 3784 3787 3788 3791 -
1825. 3792 3807 3808 3811 3812 3815 3816 4753 4754 4757 4758 4761 4762 4777 4778 -
1826. 4781 4782 4785 4786 4920 TO 4925 4932 TO 4937 4964 TO 4969 4976 TO 4980 -
1827. 4981 TABLE ST PIP2191M
1828. CONSTANTS
1829. BETA 90 MEMB 57 TO 59 176 TO 178 295 TO 297 414 TO 416 533 TO 535 652 TO 654 -
1830. 972 TO 974 977 TO 979 982 TO 984 987 TO 989 992 TO 994 997 TO 999 -
1831. 1017 TO 1019 1022 TO 1024 1027 TO 1029 1032 TO 1034 1037 TO 1039 -
1832. 1042 TO 1044 1062 TO 1064 1067 TO 1069 1072 TO 1074 1077 TO 1079 -
1833. 1082 TO 1084 1087 TO 1089 1107 TO 1109 1112 TO 1114 1117 TO 1119 -
1834. 1122 TO 1124 1127 TO 1129 1132 TO 1134 1152 TO 1154 1157 TO 1159 -
1835. 1162 TO 1164 1167 TO 1169 1172 TO 1174 1177 TO 1179 1197 1198 1201 1202 1205 -
1836. 1206 1209 1210 1213 1214 1217 1218 1231 1232 1235 1236 1239 1240 1243 1244 -
1837. 1247 1248 1251 1252 1265 1266 1269 1270 1273 1274 1277 1278 1281 1282 1285 -
1838. 1286 1299 1300 1303 1304 1307 1308 1311 1312 1315 1316 1319 1320 1333 1334 -
1839. 1337 1338 1341 1342 1345 1346 1349 1350 1353 1354 1367 1368 1371 1372 1375 -
1840. 1376 1379 1380 1383 1384 1387 1388 1401 1402 1405 1406 1409 1410 1413 1414 -
1841. 1417 1418 1421 1422 1435 1436 1439 1440 1443 1444 1447 1448 1451 1452 1455 -
1842. 1456 1469 1470 1473 1474 1477 1478 1481 1482 1485 1486 1489 1490 1503 1504 -
1843. 1507 1508 1511 1512 1515 1516 1519 1520 1523 1524 1537 1538 1541 1542 1545 -
1844. 1546 1549 1550 1553 1554 1557 1558 1571 1572 1575 1576 1579 1580 1583 1584 -
1845. 1587 1588 1591 1592 1605 1606 1609 1610 1613 1614 1617 1618 1621 1622 1625 -
1846. 1626 1639 1640 1643 1644 1647 1648 1651 1652 1655 1656 1659 1660 1673 1674 -
1847. 1677 1678
1848. BETA 90 MEMB 1681 1682 1685 1686 1689 1690 1693 1694 1707 1708 1711 1712 1715 -
1849. 1716 1719 1720 1723 1724 1727 1728 1741 1742 1745 1746 1749 1750 1753 1754 -
1850. 1757 1758 1761 1762 1775 1776 1779 1780 1783 1784 1787 1788 1791 1792 1795 -
1851. 1796 1933 TO 1935 1938 TO 1940 1943 TO 1945 1948 TO 1950 1953 TO 1955 1958 -
1852. 1959 TO 1960 1978 TO 1980 1983 TO 1985 1988 TO 1990 1993 TO 1995 1998 TO 2000 -
1853. 2003 TO 2005 2023 TO 2025 2028 TO 2030 2033 TO 2035 2038 TO 2040 -
1854. 2043 TO 2045 2048 TO 2050 2068 TO 2070 2073 TO 2075 2078 TO 2080 -
1855. 2083 TO 2085 2088 TO 2090 2093 TO 2095 2113 TO 2115 2118 TO 2120 -
1856. 2123 TO 2125 2128 TO 2130 2133 TO 2135 2138 TO 2140 2158 TO 2160 -
1857. 2163 TO 2165 2168 TO 2170 2173 TO 2175 2178 TO 2180 2183 TO 2185 2203 2204 -
1858. 2207 2208 2211 2212 2215 2216 2219 2220 2223 2224 2237 2238 2241 2242 2245 -
1859. 2246 2249 2250 2253 2254 2257 2258 2271 2272 2275 2276 2279 2280 2283 2284 -
1860. 2287 2288 2291 2292 2305 2306 2309 2310 2313 2314 2317 2318 2321 2322 2325 -
1861. 2326 2339 2340 2343 2344 2347 2348 2351 2352 2355 2356 2359 2360 2373 2374 -
1862. 2377 2378 2381 2382 2385 2386 2389 2390 2393 2394 2407 2408 2411 2412 2415 -
1863. 2416 2419 2420 2423 2424 2427 2428 2441 2442 2445 2446 2449 2450 2453 2454 -
1864. 2457 2458 2461 2462 2475 2476 2479 2480 2483 2484 2487 2488 2491 2492 2495 -
1865. 2496 2509 2510 2513 2514 2517 2518 2521 2522 2525 2526 2529 2530 2543 2544 -
1866. 2547 2548 2551 2552 2555 2556
1867. BETA 90 MEMB 2559 2560 2563 2564 2577 2578 2581 2582 2585 2586 2589 2590 2593 -
1868. 2594 2597 2598 2611 2612 2615 2616 2619 2620 2623 2624 2627 2628 2631 2632 -
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1869. 2645 2646 2649 2650 2653 2654 2657 2658 2661 2662 2665 2666 2679 2680 2683 -
1870. 2684 2687 2688 2691 2692 2695 2696 2699 2700 2713 2714 2717 2718 2721 2722 -
1871. 2725 2726 2729 2730 2733 2734 2747 2748 2751 2752 2755 2756 2759 2760 2763 -
1872. 2764 2767 2768 2781 2782 2785 2786 2789 2790 2793 2794 2797 2798 2801 2802 -
1873. 4888 TO 4893
1874. MATERIAL STEEL ALL
1875. SUPPORTS
1876. 1 TO 3 73 TO 75 145 TO 147 217 TO 219 289 TO 291 361 TO 363 465 466 469 470 -
1877. 473 474 477 478 481 482 485 486 549 550 553 554 557 558 561 562 565 566 569 -
1878. 570 633 634 637 638 641 642 645 646 649 650 653 654 715 TO 717 721 TO 723 -
1879. 727 TO 729 733 TO 735 739 TO 741 745 TO 747 843 844 847 848 851 852 855 856 -
1880. 859 860 863 864 927 928 931 932 935 936 939 940 943 944 947 948 1011 1012 -
1881. 1015 1016 1019 1020 1023 1024 1027 1028 1031 1032 1093 TO 1095 1099 TO 1101 -
1882. 1105 TO 1107 1111 TO 1113 1117 TO 1119 1123 TO 1125 1221 1222 1225 1226 1229 -
1883. 1230 1233 1234 1237 1238 1241 1242 1305 1306 1309 1310 1313 1314 1317 1318 -
1884. 1321 1322 1325 1326 1393 1394 1397 1398 1401 1402 1405 1406 1409 1410 1471 -
1885. 1472 TO 1473 1477 TO 1479 1483 TO 1485 1489 TO 1491 1495 TO 1497 1501 TO 1503 -
1886. 1599 1600 1603 1604 1607 1608 1611 1612 1615 1616 1619 1620 1683 1684 1687 -
1887. 1688 1691 1692 1695 1696 1699 1700 1703 1704 1767 1768 1771 1772 1775 1776 -
1888. 1779 1780 1783 1784 1787 1788 1851 1853 1891 1898 1905 1907 1909 1923 1936 -
1889. 1940 FIXED
1890. MEMBER RELEASE
1891. 4864 4871 4918 4919 5042 5044 5063 5070 5074 5075 5088 5095 5099 5100 5113 -
1892. 5120 5124 5125 5138 5145 5149 5150 5163 5170 5174 5175 START MY MZ
1893. 3579 3613 3647 3681 3715 3749 4864 4871 5042 5044 5063 5070 5088 5095 5113 -
1894. 5120 5138 5145 5163 5170 END MY MZ
1895. 4865 4872 4918 4919 5064 5071 5074 5075 5089 5096 5099 5100 5114 5121 5124 -
1896. 5125 5139 5146 5149 5150 5164 5171 5174 5175 END FX MY MZ
1897. MEMBER TRUSS
1898. 1807 TO 1858 1867 TO 1870 1879 1880 1885 TO 1888 1897 TO 1900 1909 TO 1930 -
1899. 2813 TO 2900 3783 3784 3787 3788 3791 3792 3795 3796 3799 3800 3803 3804 -
1900. 3807 3808 3811 3812 3815 3816 3819 3820 3823 3824 3827 3828 3831 TO 3840 -
1901. 3851 TO 3860 4753 4754 4757 4758 4761 4762 4765 4766 4769 4770 4773 4774 -
1902. 4777 4778 4781 4782 4785 4786 4789 4790 4793 4794 4797 4798 4801 TO 4810 -
1903. 4821 TO 4830 4920 TO 5007
1904. DEFINE 1893 LOAD
1905. ZONE 0.1 RF 5 I 1.5 SS 2 ST 2 DM 0.02
1906. ********************************************************************************
1907. SELFWEIGHT 1
1908. MEMBER WEIGHT
1909. 715 778 841 904 967 1000 1003 1006 1009 1012 1045 1048 1051 1054 1057 1090 -
1910. 1093 1096 1099 1102 1135 1138 1141 1144 1147 1961 1964 1967 1970 1973 2006 -
1911. 2009 2012 2015 2018 2051 2054 2057 2060 2063 2096 2099 2102 2105 2108 2141 -
1912. 2144 2147 2150 2153 2931 2934 2937 2940 2943 2976 2979 2982 2985 2988 3021 -
1913. 3024 3027 3030 3033 3066 3069 3072 3075 3078 3111 3114 3117 3120 3123 3901 -
1914. 3904 3907 3910 3913 3946 3949 3952 3955 3958 3991 3994 3997 4000 4003 4036 -
1915. 4039 4042 4045 4048 4081 4084 4087 4090 4093 UNI 14.1
1916. ***
1917. 716 717 779 780 842 843 905 906 968 969 1001 1002 1004 1005 1007 1008 1010 -
1918. 1011 1013 1014 1046 1047 1049 1050 1052 1053 1055 1056 1058 1059 1091 1092 -
1919. 1094 1095 1097 1098 1100 1101 1103 1104 1136 1137 1139 1140 1142 1143 1145 -
1920. 1146 1148 1149 1219 TO 1228 1253 TO 1262 1287 TO 1296 1321 TO 1330 -
1921. 1355 TO 1364 1423 TO 1432 1457 TO 1466 1491 TO 1500 1525 TO 1534 -
1922. 1559 TO 1568 1627 TO 1636 1661 TO 1670 1695 TO 1704 1729 TO 1738 -
1923. 1763 TO 1772 1962 1963 1965 1966 1968 1969 1971 1972 1974 1975 2007 2008 -
1924. 2010 2011 2013 2014 2016 2017 2019 2020 2052 2053 2055 2056 2058 2059 2061 -
1925. 2062 2064 2065 2097 2098 2100 2101 2103 2104 2106 2107 2109 2110 2142 2143 -
1926. 2145 2146 2148 2149 2151 2152 2154 2155 2225 TO 2234 2259 TO 2268 -
1927. 2293 TO 2302 2327 TO 2336 2361 TO 2370 2429 TO 2438 2463 TO 2472 -
1928. 2497 TO 2506 2531 TO 2540 2565 TO 2574 2633 TO 2642 2667 TO 2676 -
1929. 2701 TO 2710 2735 TO 2744 2769 TO 2778 2932 2933 2935 2936 2938 2939 2941 -
1930. 2942 2944 2945 2977 2978 2980 2981 2983 2984 2986 2987 2989 2990 3022 3023 -
1931. 3025 3026 3028 3029 3031 3032 3034 3035 3067 3068 3070 3071 3073 3074 3076 -
1932. 3077 3079 3080 3112 3113 3115 3116 3118 3119 3121 3122 3124 3125 -
1933. 3195 TO 3204 3229 TO 3238 3263 TO 3272 3297 TO 3306 3331 TO 3340 -
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1934. 3399 TO 3408 3433 TO 3442 3467 TO 3476 3501 TO 3510 3535 TO 3544 3603 3605 -
1935. 3606 TO 3612 3637 3639 TO 3646 3671 3673 UNI 28.2
1936. 3674 TO 3680 3705 3707 TO 3714 3739 3741 TO 3748 3902 3903 3905 3906 3908 -
1937. 3909 3911 3912 3914 3915 3947 3948 3950 3951 3953 3954 3956 3957 3959 3960 -
1938. 3992 3993 3995 3996 3998 3999 4001 4002 4004 4005 4037 4038 4040 4041 4043 -
1939. 4044 4046 4047 4049 4050 4082 4083 4085 4086 4088 4089 4091 4092 4094 4095 -
1940. 4165 TO 4174 4199 TO 4208 4233 TO 4242 4267 TO 4276 4301 TO 4310 -
1941. 4369 TO 4378 4403 TO 4412 4437 TO 4446 4471 TO 4480 4505 TO 4514 -
1942. 4573 TO 4582 4607 TO 4616 4641 TO 4650 4675 TO 4684 4709 TO 4718 5008 5010 -
1943. 5012 5014 5016 5020 5022 5024 5026 5028 UNI 28.2
1944. ***
1945. 1 2 120 121 239 240 358 359 477 478 596 597 715 TO 717 778 TO 780 841 TO 843 -
1946. 904 TO 906 967 TO 971 975 976 980 981 985 986 990 991 995 996 1000 TO 1016 -
1947. 1020 1021 1025 1026 1030 1031 1035 1036 1040 1041 1045 TO 1061 1065 1066 -
1948. 1070 1071 1075 1076 1080 1081 1085 1086 1090 TO 1106 1110 1111 1115 1116 -
1949. 1120 1121 1125 1126 1130 1131 1135 TO 1149 1195 1196 1199 1200 1203 1204 -
1950. 1207 1208 1211 1212 1215 1216 1219 TO 1230 1233 1234 1237 1238 1241 1242 -
1951. 1245 1246 1249 1250 1253 TO 1264 1267 1268 1271 1272 1275 1276 1279 1280 -
1952. 1283 1284 1287 TO 1298 1301 1302 1305 1306 1309 1310 1313 1314 1317 1318 -
1953. 1321 TO 1332 1335 1336 1339 1340 1343 1344 1347 1348 1351 1352 1355 TO 1364 -
1954. 1399 1400 1403 1404 1407 1408 1411 1412 1415 1416 1419 1420 1423 TO 1434 -
1955. 1437 1438 1441 1442 1445 1446 1449 1450 1453 1454 1457 TO 1468 1471 1472 -
1956. 1475 1476 1479 1480 1483 1484 1487 1488 1491 TO 1502 1505 1506 1509 1510 -
1957. 1513 1514 1517 1518 1521 1522 1525 TO 1536 1539 1540 1543 1544 1547 1548 -
1958. 1551 1552 1555 1556 1559 TO 1568 1603 1604 1607 1608 1611 1612 1615 1616 -
1959. 1619 1620 1623 1624 1627 TO 1638 1641 1642 1645 1646 1649 1650 1653 1654 -
1960. 1657 1658 1661 TO 1672 1675 1676 1679 1680 1683 1684 1687 1688 1691 1692 -
1961. 1695 TO 1706 1709 1710 1713 1714 1717 1718 1721 1722 1725 1726 1729 TO 1740 -
1962. 1743 1744 1747 1748 1751 1752 1755 1756 1759 1760 1763 TO 1772 UNI 8
1963. 1931 1932 1936 1937 1941 1942 1946 1947 1951 1952 1956 1957 1961 TO 1977 1981 -
1964. 1982 1986 1987 1991 1992 1996 1997 2001 2002 2006 TO 2022 2026 2027 2031 -
1965. 2032 2036 2037 2041 2042 2046 2047 2051 TO 2067 2071 2072 2076 2077 2081 -
1966. 2082 2086 2087 2091 2092 2096 TO 2112 2116 2117 2121 2122 2126 2127 2131 -
1967. 2132 2136 2137 2141 TO 2155 2201 2202 2205 2206 2209 2210 2213 2214 2217 -
1968. 2218 2221 2222 2225 TO 2236 2239 2240 2243 2244 2247 2248 2251 2252 2255 -
1969. 2256 2259 TO 2270 2273 2274 2277 2278 2281 2282 2285 2286 2289 2290 2293 -
1970. 2294 TO 2304 2307 2308 2311 2312 2315 2316 2319 2320 2323 2324 2327 TO 2338 -
1971. 2341 2342 2345 2346 2349 2350 2353 2354 2357 2358 2361 TO 2370 2405 2406 -
1972. 2409 2410 2413 2414 2417 2418 2421 2422 2425 2426 2429 TO 2440 2443 2444 -
1973. 2447 2448 2451 2452 2455 2456 2459 2460 2463 TO 2474 2477 2478 2481 2482 -
1974. 2485 2486 2489 2490 2493 2494 2497 TO 2508 2511 2512 2515 2516 2519 2520 -
1975. 2523 2524 2527 2528 2531 TO 2542 2545 2546 2549 2550 2553 2554 2557 2558 -
1976. 2561 2562 2565 TO 2574 2609 2610 2613 2614 2617 2618 2621 2622 2625 2626 -
1977. 2629 2630 2633 TO 2644 2647 2648 2651 2652 2655 2656 2659 2660 2663 2664 -
1978. 2667 TO 2678 2681 2682 2685 2686 2689 2690 2693 2694 2697 2698 2701 TO 2712 -
1979. 2715 2716 2719 2720 2723 2724 2727 2728 2731 2732 2735 TO 2746 2749 2750 -
1980. 2753 2754 2757 2758 2761 2762 2765 2766 2769 TO 2778 2901 2902 2906 2907 -
1981. 2911 2912 2916 2917 2921 2922 2926 2927 UNI 8
1982. 2931 TO 2947 2951 2952 2956 2957 2961 2962 2966 2967 2971 2972 2976 TO 2992 -
1983. 2996 2997 3001 3002 3006 3007 3011 3012 3016 3017 3021 TO 3037 3041 3042 -
1984. 3046 3047 3051 3052 3056 3057 3061 3062 3066 TO 3082 3086 3087 3091 3092 -
1985. 3096 3097 3101 3102 3106 3107 3111 TO 3125 3171 3172 3175 3176 3179 3180 -
1986. 3183 3184 3187 3188 3191 3192 3195 TO 3206 3209 3210 3213 3214 3217 3218 -
1987. 3221 3222 3225 3226 3229 TO 3240 3243 3244 3247 3248 3251 3252 3255 3256 -
1988. 3259 3260 3263 TO 3274 3277 3278 3281 3282 3285 3286 3289 3290 3293 3294 -
1989. 3297 TO 3308 3311 3312 3315 3316 3319 3320 3323 3324 3327 3328 3331 TO 3340 -
1990. 3375 3376 3379 3380 3383 3384 3387 3388 3391 3392 3395 3396 3399 TO 3410 -
1991. 3413 3414 3417 3418 3421 3422 3425 3426 3429 3430 3433 TO 3444 3447 3448 -
1992. 3451 3452 3455 3456 3459 3460 3463 3464 3467 TO 3478 3481 3482 3485 3486 -
1993. 3489 3490 3493 3494 3497 3498 3501 TO 3512 3515 3516 3519 3520 3523 3524 -
1994. 3527 3528 3531 3532 3535 TO 3544 3579 3583 3584 3587 3588 3591 3592 3595 -
1995. 3596 3599 3600 3603 3605 TO 3613 3617 3618 3621 3622 3625 3626 3629 3630 -
1996. 3633 3634 3637 3639 TO 3647 3651 3652 3655 3656 3659 3660 3663 3664 3667 -
1997. 3668 3671 3673 TO 3681 3685 3686 3689 3690 3693 3694 3697 3698 3701 3702 -
1998. 3705 3707 TO 3715 3719 3720 3723 3724 3727 3728 3731 3732 3735 3736 3739 -
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1999. 3741 TO 3748 3871 3872 3876 3877 3881 3882 3886 3887 3891 3892 3896 3897 -
2000. 3901 TO 3917 3921 3922 3926 3927 3931 UNI 8
2001. 3932 3936 3937 3941 3942 3946 TO 3962 3966 3967 3971 3972 3976 3977 3981 3982 -
2002. 3986 3987 3991 TO 4007 4011 4012 4016 4017 4021 4022 4026 4027 4031 4032 -
2003. 4036 TO 4052 4056 4057 4061 4062 4066 4067 4071 4072 4076 4077 4081 TO 4095 -
2004. 4141 4142 4145 4146 4149 4150 4153 4154 4157 4158 4161 4162 4165 TO 4176 -
2005. 4179 4180 4183 4184 4187 4188 4191 4192 4195 4196 4199 TO 4210 4213 4214 -
2006. 4217 4218 4221 4222 4225 4226 4229 4230 4233 TO 4244 4247 4248 4251 4252 -
2007. 4255 4256 4259 4260 4263 4264 4267 TO 4278 4281 4282 4285 4286 4289 4290 -
2008. 4293 4294 4297 4298 4301 TO 4310 4345 4346 4349 4350 4353 4354 4357 4358 -
2009. 4361 4362 4365 4366 4369 TO 4380 4383 4384 4387 4388 4391 4392 4395 4396 -
2010. 4399 4400 4403 TO 4414 4417 4418 4421 4422 4425 4426 4429 4430 4433 4434 -
2011. 4437 TO 4448 4451 4452 4455 4456 4459 4460 4463 4464 4467 4468 4471 TO 4482 -
2012. 4485 4486 4489 4490 4493 4494 4497 4498 4501 4502 4505 TO 4514 4549 4550 -
2013. 4553 4554 4557 4558 4561 4562 4565 4566 4569 4570 4573 TO 4584 4587 4588 -
2014. 4591 4592 4595 4596 4599 4600 4603 4604 4607 TO 4618 4621 4622 4625 4626 -
2015. 4629 4630 4633 4634 4637 4638 4641 TO 4652 4655 4656 4659 4660 4663 4664 -
2016. 4667 4668 4671 4672 4675 TO 4686 4689 4690 4693 4694 4697 4698 4701 4702 -
2017. 4705 4706 4709 TO 4718 5008 5010 5012 5014 5016 5020 TO 5029 5061 TO 5066 -
2018. 5068 TO 5076 5078 5086 TO 5091 5093 TO 5101 5103 5111 TO 5116 5118 TO 5126 -
2019. 5128 5136 TO 5141 UNI 8
2020. 5143 TO 5151 5153 5161 TO 5166 5168 TO 5176 5178 UNI 8
2021. ****
2022. 1150 1151 1175 1176 1180 1183 1186 1189 1192 1365 1366 1385 1386 1569 1570 -
2023. 1589 1590 1773 1774 1793 1794 1798 1800 1802 1804 1806 2156 2157 2181 2182 -
2024. 2186 2189 2192 2195 2198 2371 2372 2391 2392 2575 2576 2595 2596 2779 2780 -
2025. 2799 2800 2804 2806 2808 2810 2812 3126 3127 3151 3152 3156 3159 3162 3165 -
2026. 3168 3341 3342 3361 3362 3545 3546 3565 3566 3749 3769 3770 3776 3778 3780 -
2027. 3782 4096 4097 4121 4122 4126 4129 4132 4135 4138 4311 4312 4331 4332 4515 -
2028. 4516 4535 4536 4719 4720 4739 4740 4744 4746 4748 4750 4752 4861 4868 5030 -
2029. 5031 5040 UNI 1.8
2030. ****
2031. 1181 1182 1184 1185 1187 1188 1190 1191 1193 1194 1389 TO 1398 1593 TO 1602 -
2032. 1797 TO 1806 2187 2188 2190 2191 2193 2194 2196 2197 2199 2200 2395 TO 2404 -
2033. 2599 TO 2608 2803 TO 2812 3157 3158 3160 3161 3163 3164 3166 3167 3169 3170 -
2034. 3365 TO 3374 3569 TO 3578 3773 3775 TO 3782 4127 4128 4130 4131 4133 4134 -
2035. 4136 4137 4139 4140 4335 TO 4344 4539 TO 4548 4743 TO 4752 5018 -
2036. 5030 UNI 43.2
2037. ****
2038. 1180 1183 1186 1189 1192 2186 2189 2192 2195 2198 3156 3159 3162 3165 3168 -
2039. 4126 4129 4132 4135 4138 UNI 21.6
2040. ****
2041. 5059 5060 5064 TO 5067 5071 TO 5078 5084 5085 5089 TO 5092 5096 TO 5103 5109 -
2042. 5110 5114 TO 5117 5121 TO 5128 5134 5135 5139 TO 5142 5146 TO 5153 5159 5160 -
2043. 5164 TO 5167 5171 TO 5178 UNI 7.05
2044. ****
2045. 3774 4862 4865 TO 4867 4870 4872 TO 4874 4918 4919 5038 5039 5053 UNI 10.8
2046. ******************
2047. ****LL***
2048. *****25%*******
2049. 715 778 904 967 1000 1003 1009 1012 1045 1048 1054 1057 1090 1093 1099 1102 -
2050. 1135 1138 1144 1147 1961 1964 1970 1973 2006 2009 2015 2018 2051 2054 2060 -
2051. 2063 2096 2099 2105 2108 2141 2144 2150 2153 2931 2934 2940 2943 2976 2979 -
2052. 2985 2988 3021 3024 3030 3033 3066 3069 3075 3078 3111 3114 3120 3123 3946 -
2053. 3949 3955 3958 3991 3994 4000 4003 4036 4039 4045 4048 4081 4084 4090 -
2054. 4093 UNI 2.25
2055. 716 717 779 780 905 906 968 969 1001 1002 1004 1005 1010 1011 1013 1014 1046 -
2056. 1047 1049 1050 1055 1056 1058 1059 1091 1092 1094 1095 1100 1101 1103 1104 -
2057. 1136 1137 1139 1140 1145 1146 1148 1149 1219 TO 1222 1225 TO 1228 -
2058. 1253 TO 1256 1259 TO 1262 1287 TO 1290 1293 TO 1296 1321 TO 1324 -
2059. 1327 TO 1330 1355 TO 1358 1361 TO 1364 1423 TO 1426 1429 TO 1432 -
2060. 1457 TO 1460 1463 TO 1466 1491 TO 1494 1497 TO 1500 1525 TO 1528 -
2061. 1531 TO 1534 1559 TO 1562 1565 TO 1568 1627 TO 1630 1633 TO 1636 -
2062. 1661 TO 1664 1667 TO 1670 1695 TO 1698 1701 TO 1704 1729 TO 1732 -
2063. 1735 TO 1738 1763 TO 1766 1769 TO 1772 1962 1963 1965 1966 1971 1972 1974 -
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2064. 1975 2007 2008 2010 2011 2016 2017 2019 2020 2052 2053 2055 2056 2061 2062 -
2065. 2064 2065 2097 2098 2100 2101 2106 2107 2109 2110 2142 2143 2145 2146 2151 -
2066. 2152 2154 2155 2225 TO 2228 2231 TO 2234 2259 TO 2262 2265 TO 2268 -
2067. 2293 TO 2296 2299 TO 2302 2327 TO 2330 2333 TO 2336 2361 TO 2364 -
2068. 2367 TO 2370 2429 TO 2432 2435 TO 2438 2463 TO 2466 2469 TO 2472 -
2069. 2497 TO 2500 2503 TO 2506 2531 TO 2534 2537 TO 2540 2565 TO 2568 -
2070. 2571 TO 2574 2633 TO 2636 2639 TO 2642 2667 TO 2670 2673 TO 2676 -
2071. 2701 TO 2704 2707 TO 2710 2735 TO 2738 2741 TO 2744 2769 TO 2772 -
2072. 2775 TO 2778 2932 2933 2935 2936 2941 2942 2944 2945 2977 2978 2980 2981 -
2073. 2986 2987 2989 2990 3022 3023 3025 3026 UNI 4.5
2074. 3031 3032 3034 3035 3067 3068 3070 3071 3076 3077 3079 3080 3112 3113 3115 -
2075. 3116 3121 3122 3124 3125 3195 TO 3198 3201 TO 3204 3229 TO 3232 3235 TO 3238 -
2076. 3263 TO 3266 3269 TO 3272 3297 TO 3300 3303 TO 3306 3331 TO 3334 -
2077. 3337 TO 3340 3399 TO 3402 3405 TO 3408 3433 TO 3436 3439 TO 3442 -
2078. 3467 TO 3470 3473 TO 3476 3501 TO 3504 3507 TO 3510 3535 TO 3538 -
2079. 3541 TO 3544 3603 3605 3606 3609 TO 3612 3637 3639 3640 3643 TO 3646 3671 -
2080. 3673 3674 3677 TO 3680 3705 3707 3708 3711 TO 3714 3739 3741 3742 -
2081. 3745 TO 3748 3947 3948 3950 3951 3956 3957 3959 3960 3992 3993 3995 3996 -
2082. 4001 4002 4004 4005 4037 4038 4040 4041 4046 4047 4049 4050 4082 4083 4085 -
2083. 4086 4091 4092 4094 4095 4199 TO 4202 4205 TO 4208 4233 TO 4236 4239 TO 4242 -
2084. 4267 TO 4270 4273 TO 4276 4301 TO 4304 4307 TO 4310 4403 TO 4406 -
2085. 4409 TO 4412 4437 TO 4440 4443 TO 4446 4471 TO 4474 4477 TO 4480 -
2086. 4505 TO 4508 4511 TO 4514 4607 TO 4610 4613 TO 4616 4641 TO 4644 -
2087. 4647 TO 4650 4675 TO 4678 4681 TO 4684 4709 TO 4712 4715 TO 4718 5008 5010 -
2088. 5012 5014 5016 5020 5022 5024 5026 5028 UNI 4.5
2089. ****50%***
2090. 842 843 1007 1008 1052 1053 1097 1098 1142 1143 1223 1224 1257 1258 1291 1292 -
2091. 1325 1326 1359 1360 1427 1428 1461 1462 1495 1496 1529 1530 1563 1564 1631 -
2092. 1632 1665 1666 1699 1700 1733 1734 1767 1768 1968 1969 2013 2014 2058 2059 -
2093. 2103 2104 2148 2149 2229 2230 2263 2264 2297 2298 2331 2332 2365 2366 2433 -
2094. 2434 2467 2468 2501 2502 2535 2536 2569 2570 2637 2638 2671 2672 2705 2706 -
2095. 2739 2740 2773 2774 2938 2939 2983 2984 3028 3029 3073 3074 3118 3119 3199 -
2096. 3200 3233 3234 3267 3268 3301 3302 3335 3336 3403 3404 3437 3438 3471 3472 -
2097. 3505 3506 3539 3540 3607 3608 3641 3642 3675 3676 3709 3710 3743 3744 3902 -
2098. 3903 3905 3906 3908 3909 3911 3912 3914 3915 3953 3954 3998 3999 4043 4044 -
2099. 4088 4089 4165 TO 4174 4203 4204 4237 4238 4271 4272 4305 4306 4369 TO 4378 -
2100. 4407 4408 4441 4442 4475 4476 4509 4510 4573 TO 4582 4611 4612 4645 4646 -
2101. 4679 4680 4713 4714 UNI 12
2102. 841 1006 1051 1096 1141 1967 2012 2057 2102 2147 2937 2982 3027 3072 3117 -
2103. 3901 3904 3907 3910 3913 3952 3997 4042 4087 UNI 6
2104. ****25%*****
2105. 1180 1183 1186 1189 1192 2186 2189 2192 2195 2198 3156 3159 3162 3165 3168 -
2106. 4126 4129 4132 4135 4138 UNI 1.5
2107. 1181 1182 1184 1185 1187 1188 1190 1191 1193 1194 1389 TO 1398 1593 TO 1602 -
2108. 1797 TO 1806 2187 2188 2190 2191 2193 2194 2196 2197 2199 2200 2395 TO 2404 -
2109. 2599 TO 2608 2803 TO 2812 3157 3158 3160 3161 3163 3164 3166 3167 3169 3170 -
2110. 3365 TO 3374 3569 TO 3578 3773 3775 TO 3782 4127 4128 4130 4131 4133 4134 -
2111. 4136 4137 4139 4140 4335 TO 4344 4539 TO 4548 4743 TO 4752 5018 5030 UNI 3
2112. 5059 5060 5064 TO 5067 5071 TO 5078 5084 5085 5089 TO 5092 5096 TO 5103 5109 -
2113. 5110 5114 TO 5117 5121 TO 5128 5134 5135 5139 TO 5142 5146 TO 5153 5159 5160 -
2114. 5164 TO 5167 5171 TO 5178 UNI 1.5
2115. 3774 4862 4865 TO 4867 4870 4872 TO 4874 4918 4919 5038 5039 5053 UNI 0.75
2116. ********************************************************************************
2117. ********************************************************************************
2118. LOAD 1 LOADTYPE NONE  TITLE EQ1
2119. 1893 LOAD X 1
2120. PERFORM ANALYSIS
```

P R O B L E M S T A T I S T I C S

NUMBER OF JOINTS	**1603**	**NUMBER OF MEMBERS**	**4091**
NUMBER OF PLATES	**0**	**NUMBER OF SOLIDS**	**0**

NUMBER OF SURFACES 0 NUMBER OF SUPPORTS 224

SOLVER USED IS THE IN-CORE ADVANCED SOLVER

TOTAL PRIMARY LOAD CASES = 1, TOTAL DEGREES OF FREEDOM = 8274

```
 *********************************************************
 *                                                       *
 * TIME PERIOD FOR X 1893 LOADING =    0.98237 SEC       *
 * SA/G PER 1893=    1.938, LOAD FACTOR= 1.000           *
 *      FACTOR V  PER 1893=    0.0291 X 302069.78        *
 *                                                       *
 *********************************************************
```

```
2121. CHANGE
2122. LOAD 2 LOADTYPE NONE  TITLE EQ2
2123. 1893 LOAD X -1.
2124. PERFORM ANALYSIS
```

```
 *********************************************************
 *                                                       *
 * TIME PERIOD FOR X 1893 LOADING =    0.98237 SEC       *
 * SA/G PER 1893=    1.938, LOAD FACTOR=-1.000           *
 *      FACTOR V  PER 1893=    0.0291 X 302069.78        *
 *                                                       *
 *********************************************************
```

```
2125. CHANGE
2126. LOAD 3 LOADTYPE NONE  TITLE EQ3
2127. 1893 LOAD Z 1
2128. PERFORM ANALYSIS
```

```
 *********************************************************
 *                                                       *
 * TIME PERIOD FOR Z 1893 LOADING =    0.98237 SEC       *
 * SA/G PER 1893=    1.938, LOAD FACTOR= 1.000           *
 *      FACTOR V  PER 1893=    0.0291 X 302069.78        *
 *                                                       *
 *********************************************************
```

```
2129. CHANGE
2130. LOAD 4 LOADTYPE NONE  TITLE EQ4
2131. 1893 LOAD Z -1.
2132. PERFORM ANALYSIS
```

```
 *********************************************************
 *                                                       *
 * TIME PERIOD FOR Z 1893 LOADING =    0.98237 SEC       *
 * SA/G PER 1893=    1.938, LOAD FACTOR=-1.000           *
 *      FACTOR V  PER 1893=    0.0291 X 302069.78        *
 *                                                       *
 *********************************************************
```

```
CHANGE
LOAD 5 LOADTYPE NONE  TITLE DL
SELFWEIGHT Y -1
MEMBER LOAD
****SLAB DEAD LOAD************************************************
****150MM AAC WALL-2.5KN/SQM********
****60MM SCREED CONCRETE-1.2KN/SQM****
****FALSE CEILING  SERVICE-0.5KN/SQM
**** INTERNAL PARTITION LOAD - 0.5 KN/SQM
***TOTAL DEAD LOAD=4.7KN/SQM = 4.7*6=28.2KN/M****
715 778 841 904 967 1000 1003 1006 1009 1012 1045 1048 1051 1054 1057 1090 -
1093 1096 1099 1102 1135 1138 1141 1144 1147 1628 1630 1632 1634 1636 1662 -
1664 1666 1668 1670 1696 1698 1700 1702 1704 1730 1732 1734 1736 1738 1764 -
1766 1768 1770 1772 1961 1964 1967 1970 1973 2006 2009 2012 2015 2018 2051 -
2054 2057 2060 2063 2096 2099 2102 2105 2108 2141 2144 2147 2150 2153 2634 -
2636 2638 2640 2642 2668 2670 2672 2674 2676 2702 2704 2706 2708 2710 2736 -
2738 2740 2742 2744 2770 2772 2774 2776 2778 2931 2934 2937 2940 2943 2976 -
2979 2982 2985 2988 3021 3024 3027 3030 3033 3066 3069 3072 3075 3078 3111 -
3114 3117 3120 3123 3901 3904 3907 3910 3913 3946 3949 3952 3955 3958 3991 -
3994 3997 4000 4003 4036 4039 4042 4045 4048 4081 4084 4087 4090 -
4093 UNI GY -14.1
716 717 779 780 842 843 905 906 968 969 1001 1002 1004 1005 1007 1008 1010 -
1011 1013 1014 1046 1047 1049 1050 1052 1053 1055 1056 1058 1059 1091 1092 -
1094 1095 1097 1098 1100 1101 1103 1104 1136 1137 1139 1140 1142 1143 1145 -
1146 1148 1149 1219 TO 1228 1253 TO 1262 1287 TO 1296 1321 TO 1330 -
1355 TO 1364 1423 TO 1432 1457 TO 1466 1491 TO 1500 1525 TO 1534 -
1559 TO 1568 1627 1629 1631 1633 1635 1661 1663 1665 1667 1669 1695 1697 -
1699 1701 1703 1729 1731 1733 1735 1737 1763 1765 1767 1769 1771 1962 1963 -
1965 1966 1968 1969 1971 1972 1974 1975 2007 2008 2010 2011 2013 2014 2016 -
2017 2019 2020 2052 2053 2055 2056 2058 2059 2061 2062 2064 2065 2097 2098 -
2100 2101 2103 2104 2106 2107 2109 2110 2142 2143 2145 2146 2148 2149 2151 -
2152 2154 2155 2225 TO 2234 2259 TO 2268 2293 TO 2302 2327 TO 2336 -
2361 TO 2370 2429 TO 2438 2463 TO 2472 2497 TO 2506 2531 TO 2540 -
2565 TO 2574 2633 2635 2637 2639 2641 2667 2669 2671 2673 2675 2701 2703 -
2705 2707 2709 2735 2737 2739 2741 2743 2769 2771 2773 2775 2777 2932 2933 -
2935 2936 2938 2939 2941 2942 2944 2945 2977 2978 2980 2981 2983 2984 2986 -
2987 2989 2990 3022 3023 3025 3026 3028 3029 3031 3032 3034 3035 3067 3068 -
3070 3071 3073 3074 3076 3077 3079 3080 3112 3113 3115 3116 3118 3119 3121 -
3122 3124 3125 3195 TO 3204 3229 TO 3238 3263 TO 3272 3297 TO 3306 -
3331 TO 3340 3399 TO 3408 3433 UNI GY -28.2
3434 TO 3442 3467 TO 3476 3501 TO 3510 3535 TO 3544 3603 3605 TO 3612 3637 -
3639 TO 3646 3671 3673 UNI GY -28.2
3674 TO 3680 3705 3707 TO 3714 3739 3741 TO 3748 3902 3903 3905 3906 3908 -
3909 3911 3912 3914 3915 3947 3948 3950 3951 3953 3954 3956 3957 3959 3960 -
3992 3993 3995 3996 3998 3999 4001 4002 4004 4005 4037 4038 4040 4041 4043 -
4044 4046 4047 4049 4050 4082 4083 4085 4086 4088 4089 4091 4092 4094 4095 -
4165 TO 4174 4199 TO 4208 4233 TO 4242 4267 TO 4276 4301 TO 4310 -
4369 TO 4378 4403 TO 4412 4437 TO 4446 4471 TO 4480 4505 TO 4514 -
4573 TO 4582 4607 TO 4616 4641 TO 4650 4675 TO 4684 4709 TO 4718 5008 5010 -
5012 5014 5016 5020 5022 5024 5026 5028 UNI GY -28.2
**************************
****EXTERNAL WALL LOAD*********************************************************
****DENSITY=12KN/SQM********
****FLOOR HT.= 4.4 M *****WALL THK=150MM************
******LOAD=12*0.15*4.4=8 KN/M*****************************
1 2 120 121 239 240 358 359 477 478 596 597 715 TO 717 778 TO 780 841 TO 843 -
904 TO 906 967 TO 971 975 976 980 981 985 986 990 991 995 996 1000 TO 1016 -
1020 1021 1025 1026 1030 1031 1035 1036 1040 1041 1045 TO 1061 1065 1066 -
1070 1071 1075 1076 1080 1081 1085 1086 1090 TO 1106 1110 1111 1115 1116 -
1120 1121 1125 1126 1130 1131 1135 TO 1149 1195 1196 1199 1200 1203 1204 -
1207 1208 1211 1212 1215 1216 1219 TO 1230 1233 1234 1237 1238 1241 1242 -
1245 1246 1249 1250 1253 TO 1264 1267 1268 1271 1272 1275 1276 1279 1280 -
1283 1284 1287 TO 1298 1301 1302 1305 1306 1309 1310 1313 1314 1317 1318 -
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2196. 1321 TO 1332 1335 1336 1339 1340 1343 1344 1347 1348 1351 1352 1355 TO 1364 -
2197. 1399 1400 1403 1404 1407 1408 1411 1412 1415 1416 1419 1420 1423 TO 1434 -
2198. 1437 1438 1441 1442 1445 1446 1449 1450 1453 1454 1457 TO 1468 1471 1472 -
2199. 1475 1476 1479 1480 1483 1484 1487 1488 1491 TO 1502 1505 1506 1509 1510 -
2200. 1513 1514 1517 1518 1521 1522 1525 TO 1536 1539 1540 1543 1544 1547 1548 -
2201. 1551 1552 1555 1556 1559 TO 1568 1603 1604 1607 1608 1611 1612 1615 1616 -
2202. 1619 1620 1623 1624 1627 TO 1638 1641 1642 1645 1646 1649 1650 1653 1654 -
2203. 1657 1658 1661 TO 1672 1675 1676 1679 1680 1683 1684 1687 1688 1691 1692 -
2204. 1695 TO 1706 1709 1710 1713 1714 1717 1718 1721 1722 1725 1726 1729 TO 1740 -
2205. 1743 1744 1747 1748 1751 1752 1755 1756 1759 1760 1763 TO 1772 UNI GY -8
2206. 1931 1932 1936 1937 1941 1942 1946 1947 1951 1952 1956 1957 1961 TO 1977 1981 -
2207. 1982 1986 1987 1991 1992 1996 1997 2001 2002 2006 TO 2022 2026 2027 2031 -
2208. 2032 2036 2037 2041 2042 2046 2047 2051 TO 2067 2071 2072 2076 2077 2081 -
2209. 2082 2086 2087 2091 2092 2096 TO 2112 2116 2117 2121 2122 2126 2127 2131 -
2210. 2132 2136 2137 2141 TO 2155 2201 2202 2205 2206 2209 2210 2213 2214 2217 -
2211. 2218 2221 2222 2225 TO 2236 2239 2240 2243 2244 2247 2248 2251 2252 2255 -
2212. 2256 2259 TO 2270 2273 2274 2277 2278 2281 2282 2285 2286 2289 2290 2293 -
2213. 2294 TO 2304 2307 2308 2311 2312 2315 2316 2319 2320 2323 2324 2327 TO 2338 -
2214. 2341 2342 2345 2346 2349 2350 2353 2354 2357 2358 2361 TO 2370 2405 2406 -
2215. 2409 2410 2413 2414 2417 2418 2421 2422 2425 2426 2429 TO 2440 2443 2444 -
2216. 2447 2448 2451 2452 2455 2456 2459 2460 2463 TO 2474 2477 2478 2481 2482 -
2217. 2485 2486 2489 2490 2493 2494 2497 TO 2508 2511 2512 2515 2516 2519 2520 -
2218. 2523 2524 2527 2528 2531 TO 2542 2545 2546 2549 2550 2553 2554 2557 2558 -
2219. 2561 2562 2565 TO 2574 2609 2610 2613 2614 2617 2618 2621 2622 2625 2626 -
2220. 2629 2630 2633 TO 2644 2647 2648 2651 2652 2655 2656 2659 2660 2663 2664 -
2221. 2667 TO 2678 2681 2682 2685 2686 2689 2690 2693 2694 2697 2698 2701 TO 2712 -
2222. 2715 2716 2719 2720 2723 2724 2727 2728 2731 2732 2735 TO 2746 2749 2750 -
2223. 2753 2754 2757 2758 2761 2762 2765 2766 2769 TO 2778 2901 2902 2906 2907 -
2224. 2911 2912 2916 2917 2921 2922 2926 2927 UNI GY -8
2225. 2931 TO 2947 2951 2952 2956 2957 2961 2962 2966 2967 2971 2972 2976 TO 2992 -
2226. 2996 2997 3001 3002 3006 3007 3011 3012 3016 3017 3021 TO 3037 3041 3042 -
2227. 3046 3047 3051 3052 3056 3057 3061 3062 3066 TO 3082 3086 3087 3091 3092 -
2228. 3096 3097 3101 3102 3106 3107 3111 TO 3125 3171 3172 3175 3176 3179 3180 -
2229. 3183 3184 3187 3188 3191 3192 3195 TO 3206 3209 3210 3213 3214 3217 3218 -
2230. 3221 3222 3225 3226 3229 TO 3240 3243 3244 3247 3248 3251 3252 3255 3256 -
2231. 3259 3260 3263 TO 3274 3277 3278 3281 3282 3285 3286 3289 3290 3293 3294 -
2232. 3297 TO 3308 3311 3312 3315 3316 3319 3320 3323 3324 3327 3328 3331 TO 3340 -
2233. 3375 3376 3379 3380 3383 3384 3387 3388 3391 3392 3395 3396 3399 TO 3410 -
2234. 3413 3414 3417 3418 3421 3422 3425 3426 3429 3430 3433 TO 3444 3447 3448 -
2235. 3451 3452 3455 3456 3459 3460 3463 3464 3467 TO 3478 3481 3482 3485 3486 -
2236. 3489 3490 3493 3494 3497 3498 3501 TO 3512 3515 3516 3519 3520 3523 3524 -
2237. 3527 3528 3531 3532 3535 TO 3544 3579 3583 3584 3587 3588 3591 3592 3595 -
2238. 3596 3599 3600 3603 3605 TO 3613 3617 3618 3621 3622 3625 3626 3629 3630 -
2239. 3633 3634 3637 3639 TO 3647 3651 3652 3655 3656 3659 3660 3663 3664 3667 -
2240. 3668 3671 3673 TO 3681 3685 3686 3689 3690 3693 3694 3697 3698 3701 3702 -
2241. 3705 3707 TO 3715 3719 3720 3723 3724 3727 3728 3731 3732 3735 3736 3739 -
2242. 3741 TO 3748 3871 3872 3876 3877 3881 3882 3886 3887 3891 3892 3896 3897 -
2243. 3901 TO 3917 3921 3922 3926 3927 3931 UNI GY -8
2244. 3932 3936 3937 3941 3942 3946 TO 3962 3966 3967 3971 3972 3976 3977 3981 3982 -
2245. 3986 3987 3991 TO 4007 4011 4012 4016 4017 4021 4022 4026 4027 4031 4032 -
2246. 4036 TO 4052 4056 4057 4061 4062 4066 4067 4071 4072 4076 4077 4081 TO 4095 -
2247. 4141 4142 4145 4146 4149 4150 4153 4154 4157 4158 4161 4162 4165 TO 4176 -
2248. 4179 4180 4183 4184 4187 4188 4191 4192 4195 4196 4199 TO 4210 4213 4214 -
2249. 4217 4218 4221 4222 4225 4226 4229 4230 4233 TO 4244 4247 4248 4251 4252 -
2250. 4255 4256 4259 4260 4263 4264 4267 TO 4278 4281 4282 4285 4286 4289 4290 -
2251. 4293 4294 4297 4298 4301 TO 4310 4345 4346 4349 4350 4353 4354 4357 4358 -
2252. 4361 4362 4365 4366 4369 TO 4380 4383 4384 4387 4388 4391 4392 4395 4396 -
2253. 4399 4400 4403 TO 4414 4417 4418 4421 4422 4425 4426 4429 4430 4433 4434 -
2254. 4437 TO 4448 4451 4452 4455 4456 4459 4460 4463 4464 4467 4468 4471 TO 4482 -
2255. 4485 4486 4489 4490 4493 4494 4497 4498 4501 4502 4505 TO 4514 4549 4550 -
2256. 4553 4554 4557 4558 4561 4562 4565 4566 4569 4570 4573 TO 4584 4587 4588 -
2257. 4591 4592 4595 4596 4599 4600 4603 4604 4607 TO 4618 4621 4622 4625 4626 -
2258. 4629 4630 4633 4634 4637 4638 4641 TO 4652 4655 4656 4659 4660 4663 4664 -
2259. 4667 4668 4671 4672 4675 TO 4686 4689 4690 4693 4694 4697 4698 4701 4702 -
2260. 4705 4706 4709 TO 4718 5008 5010 5012 5014 5016 5020 TO 5029 5061 TO 5066 -
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2261. 5068 TO 5076 5078 5086 TO 5091 5093 TO 5101 5103 5111 TO 5116 5118 TO 5126 -
2262. 5128 5136 TO 5141 UNI GY -8
2263. 5143 TO 5151 5153 5161 TO 5166 5168 TO 5176 5178 UNI GY -8
2264. ******TERRACE LOAD********************
2265. *********PARAPET LOAD=12*0.15*1=1.8 KN/M*******************************
2266. 1150 1151 1175 1176 1180 1183 1186 1189 1192 1365 1366 1385 1386 1569 1570 -
2267. 1589 1590 1773 1774 1793 1794 1798 1800 1802 1804 1806 2156 2157 2181 2182 -
2268. 2186 2189 2192 2195 2198 2371 2372 2391 2392 2575 2576 2595 2596 2779 2780 -
2269. 2799 2800 2804 2806 2808 2810 2812 3126 3127 3151 3152 3156 3159 3162 3165 -
2270. 3168 3341 3342 3361 3362 3545 3546 3565 3566 3749 3769 3770 3776 3778 3780 -
2271. 3782 4096 4097 4121 4122 4126 4129 4132 4135 4138 4311 4312 4331 4332 4515 -
2272. 4516 4535 4536 4719 4720 4739 4740 4744 4746 4748 4750 4752 4861 4868 5030 -
2273. 5031 5040 UNI GY -1.8
2274. ****150MM AAC WALL-2.5KN/SQM********
2275. ****60MM SCREED CONCRETE-1.2KN/SQM****
2276. ****FALSE CEILING  SERVICE-0.5KN/SQM
2277. **** WATER PROOFING 150MM THK - 0.15*20 = 3 KN/SQM
2278. ***TOTAL DEAD LOAD=7.2KN/SQM = 7.2X6 = 43.2 KN/M****
2279. 1181 1182 1184 1185 1187 1188 1190 1191 1193 1194 1389 TO 1398 1593 TO 1602 -
2280. 1797 1799 1801 1803 1805 2187 2188 2190 2191 2193 2194 2196 2197 2199 2200 -
2281. 2395 TO 2404 2599 TO 2608 2803 2805 2807 2809 2811 3157 3158 3160 3161 3163 -
2282. 3164 3166 3167 3169 3170 3365 TO 3374 3569 TO 3578 3773 3775 TO 3782 4127 -
2283. 4128 4130 4131 4133 4134 4136 4137 4139 4140 4335 TO 4344 4539 TO 4548 4743 -
2284. 4744 TO 4752 5018 5030 UNI GY -43.2
2285. 1180 1183 1186 1189 1192 1798 1800 1802 1804 1806 2186 2189 2192 2195 2198 -
2286. 2804 2806 2808 2810 2812 3156 3159 3162 3165 3168 4126 4129 4132 4135 -
2287. 4138 UNI GY -21.6
2288. 5059 5060 5064 TO 5067 5071 TO 5078 5084 5085 5089 TO 5092 5096 TO 5103 5109 -
2289. 5110 5114 TO 5117 5121 TO 5128 5134 5135 5139 TO 5142 5146 TO 5153 5159 5160 -
2290. 5164 TO 5167 5171 TO 5178 UNI GY -7.05
2291. 3774 4862 4865 TO 4867 4870 4872 TO 4874 4918 4919 5038 5039 5053 UNI GY -10.8
2292. *****LIVE LOAD***************
2293. LOAD 6 LOADTYPE NONE  TITLE LL
2294. MEMBER LOAD
2295. ***3 KN/SQM*****************************************
2296. 715 778 904 967 1000 1003 1009 1012 1045 1048 1054 1057 1090 1093 1099 1102 -
2297. 1135 1138 1144 1147 1628 1630 1634 1636 1662 1664 1668 1670 1696 1698 1702 -
2298. 1704 1730 1732 1736 1738 1764 1766 1770 1772 1961 1964 1970 1973 2006 2009 -
2299. 2015 2018 2051 2054 2060 2063 2096 2099 2105 2108 2141 2144 2150 2153 2634 -
2300. 2636 2640 2642 2668 2670 2674 2676 2702 2704 2708 2710 2736 2738 2742 2744 -
2301. 2770 2772 2776 2778 2931 2934 2940 2943 2976 2979 2985 2988 3021 3024 3030 -
2302. 3033 3066 3069 3075 3078 3111 3114 3120 3123 3946 3949 3955 3958 3991 3994 -
2303. 4000 4003 4036 4039 4045 4048 4081 4084 4090 4093 UNI GY -9
2304. 716 717 779 780 905 906 968 969 1001 1002 1004 1005 1010 1011 1013 1014 1046 -
2305. 1047 1049 1050 1055 1056 1058 1059 1091 1092 1094 1095 1100 1101 1103 1104 -
2306. 1136 1137 1139 1140 1145 1146 1148 1149 1219 TO 1222 1225 TO 1228 -
2307. 1253 TO 1256 1259 TO 1262 1287 TO 1290 1293 TO 1296 1321 TO 1324 -
2308. 1327 TO 1330 1355 TO 1358 1361 TO 1364 1423 TO 1426 1429 TO 1432 -
2309. 1457 TO 1460 1463 TO 1466 1491 TO 1494 1497 TO 1500 1525 TO 1528 -
2310. 1531 TO 1534 1559 TO 1562 1565 TO 1568 1627 1629 1633 1635 1661 1663 1667 -
2311. 1669 1695 1697 1701 1703 1729 1731 1735 1737 1763 1765 1769 1771 1962 1963 -
2312. 1965 1966 1971 1972 1974 1975 2007 2008 2010 2011 2016 2017 2019 2020 2052 -
2313. 2053 2055 2056 2061 2062 2064 2065 2097 2098 2100 2101 2106 2107 2109 2110 -
2314. 2142 2143 2145 2146 2151 2152 2154 2155 2225 TO 2228 2231 TO 2234 -
2315. 2259 TO 2262 2265 TO 2268 2293 TO 2296 2299 TO 2302 2327 TO 2330 -
2316. 2333 TO 2336 2361 TO 2364 2367 TO 2370 2429 TO 2432 2435 TO 2438 -
2317. 2463 TO 2466 2469 TO 2472 2497 TO 2500 2503 TO 2506 2531 TO 2534 -
2318. 2537 TO 2540 2565 TO 2568 2571 TO 2574 2633 2635 2639 2641 2667 2669 2673 -
2319. 2675 2701 2703 2707 2709 2735 2737 2741 2743 2769 2771 2775 2777 2932 2933 -
2320. 2935 2936 2941 2942 2944 2945 2977 2978 2980 2981 2986 2987 2989 2990 3022 -
2321. 3023 3025 3026 UNI GY -18
2322. 3031 3032 3034 3035 3067 3068 3070 3071 3076 3077 3079 3080 3112 3113 3115 -
2323. 3116 3121 3122 3124 3125 3195 TO 3198 3201 TO 3204 3229 TO 3232 3235 TO 3238 -
2324. 3263 TO 3266 3269 TO 3272 3297 TO 3300 3303 TO 3306 3331 TO 3334 -
2325. 3337 TO 3340 3399 TO 3402 3405 TO 3408 3433 TO 3436 3439 TO 3442 -
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3467 TO 3470 3473 TO 3476 3501 TO 3504 3507 TO 3510 3535 TO 3538 -
3541 TO 3544 3603 3605 3606 3609 TO 3612 3637 3639 3640 3643 TO 3646 3671 -
3673 3674 3677 TO 3680 3705 3707 3708 3711 TO 3714 3739 3741 3742 -
3745 TO 3748 3947 3948 3950 3951 3956 3957 3959 3960 3992 3993 3995 3996 -
4001 4002 4004 4005 4037 4038 4040 4041 4046 4047 4049 4050 4082 4083 4085 -
4086 4091 4092 4094 4095 4199 TO 4202 4205 TO 4208 4233 TO 4236 4239 TO 4242 -
4267 TO 4270 4273 TO 4276 4301 TO 4304 4307 TO 4310 4403 TO 4406 -
4409 TO 4412 4437 TO 4440 4443 TO 4446 4471 TO 4474 4477 TO 4480 -
4505 TO 4508 4511 TO 4514 4607 TO 4610 4613 TO 4616 4641 TO 4644 -
4647 TO 4650 4675 TO 4678 4681 TO 4684 4709 TO 4712 4715 TO 4718 5008 5010 -
5012 5014 5016 5020 5022 5024 5026 5028 UNI GY -18
***4 KN/SQM*****************************************
842 843 1007 1008 1052 1053 1097 1098 1142 1143 1223 1224 1257 1258 1291 1292 -
1325 1326 1359 1360 1427 1428 1461 1462 1495 1496 1529 1530 1563 1564 1631 -
1665 1699 1733 1767 1968 1969 2013 2014 2058 2059 2103 2104 2148 2149 2229 -
2230 2263 2264 2297 2298 2331 2332 2365 2366 2433 2434 2467 2468 2501 2502 -
2535 2536 2569 2570 2637 2671 2705 2739 2773 2938 2939 2983 2984 3028 3029 -
3073 3074 3118 3119 3199 3200 3233 3234 3267 3268 3301 3302 3335 3336 3403 -
3404 3437 3438 3471 3472 3505 3506 3539 3540 3607 3608 3641 3642 3675 3676 -
3709 3710 3743 3744 3902 3903 3905 3906 3908 3909 3911 3912 3914 3915 3953 -
3954 3998 3999 4043 4044 4088 4089 4165 TO 4174 4203 4204 4237 4238 4271 -
4272 4305 4306 4369 TO 4378 4407 4408 4441 4442 4475 4476 4509 4510 4573 -
4574 TO 4582 4611 4612 4645 4646 4679 4680 4713 4714 UNI GY -24
841 1006 1051 1096 1141 1632 1666 1700 1734 1768 1967 2012 2057 2102 2147 -
2638 2672 2706 2740 2774 2937 2982 3027 3072 3117 3901 3904 3907 3910 3913 -
3952 3997 4042 4087 UNI GY -12
***2 KN/SQM*****************************************
1180 1183 1186 1189 1192 2186 2189 2192 2195 2198 3156 3159 3162 3165 3168 -
4126 4129 4132 4135 4138 UNI GY -6
1181 1182 1184 1185 1187 1188 1190 1191 1193 1194 1389 TO 1398 1593 TO 1602 -
1797 1799 1801 1803 1805 2187 2188 2190 2191 2193 2194 2196 2197 2199 2200 -
2395 TO 2404 2599 TO 2608 2803 2805 2807 2809 2811 3157 3158 3160 3161 3163 -
3164 3166 3167 3169 3170 3365 TO 3374 3569 TO 3578 3773 3775 TO 3782 4127 -
4128 4130 4131 4133 4134 4136 4137 4139 4140 4335 TO 4344 4539 TO 4548 4743 -
4744 TO 4752 5018 5030 UNI GY -12
1798 1800 1802 1804 1806 2804 2806 2808 2810 2812 5059 5060 5064 TO 5067 5071 -
5072 TO 5078 5084 5085 5089 TO 5092 5096 TO 5103 5109 5110 5114 TO 5117 5121 -
5122 TO 5128 5134 5135 5139 TO 5142 5146 TO 5153 5159 5160 5164 TO 5167 5171 -
5172 TO 5178 UNI GY -6
3774 4862 4865 TO 4867 4870 4872 TO 4874 4918 4919 5038 5039 5053 UNI GY -3
*****WIND LOAD*********
LOAD 7 LOADTYPE NONE  TITLE WL1
MEMBER LOAD
57 652 972 997 2928 2973 3873 3918 UNI GX 2.85
1017 1042 3018 3963 UNI GX 3.125
1062 1087 3063 4008 UNI GX 3.3
1107 1132 1152 1177 3108 3153 4053 4098 UNI GX 3.6
176 533 977 992 2929 2930 2974 2975 3193 3194 3227 3228 3397 3398 3431 3432 -
3601 3602 3635 3636 3874 3875 3919 3920 4143 4144 4177 4178 4347 4348 4381 -
4382 4551 4552 4585 4586 UNI GX 5.7
1022 1037 3019 3020 3261 3262 3465 3466 3669 3670 3964 3965 4211 4212 4415 -
4416 4619 4620 UNI GX 6.25
1067 1082 3064 3065 3295 3296 3499 3500 3703 3704 4009 4010 4245 4246 4449 -
4450 4653 4654 UNI GX 6.6
1112 1127 1157 1172 3109 3110 3154 3155 3329 3330 3363 3364 3533 3534 3567 -
3568 3737 3738 3771 3772 4054 4055 4099 4100 4279 4280 4313 4314 4483 4484 -
4517 4518 4687 4688 4721 4722 UNI GX 7.2
295 414 982 987 UNI GX 4.35
1027 1032 UNI GX 4.8
1072 1077 UNI GX 5
1117 1122 1162 1167 UNI GX 5.45
LOAD 8 LOADTYPE NONE  TITLE WL2
MEMBER LOAD
1933 1958 1978 2003 2903 2948 3898 3943 UNI GX -2.85
2023 2048 2993 3988 UNI GX -3.125
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2068 2093 3038 4033 UNI GX -3.3
2113 2138 2158 2183 3083 3128 4078 4123 UNI GX -3.6
1938 1953 1983 1998 2904 2905 2949 2950 3173 3174 3207 3208 3377 3378 3411 -
3412 3899 3900 3944 3945 4163 4164 4197 4198 4367 4368 4401 4402 4571 4572 -
4605 4606 5009 5011 UNI GX -5.7
2028 2043 2994 2995 3241 3242 3445 3446 3989 3990 4231 4232 4435 4436 4639 -
4640 5013 UNI GX -6.25
2073 2088 3039 3040 3275 3276 3479 3480 4034 4035 4265 4266 4469 4470 4673 -
4674 5015 UNI GX -6.6
2118 2133 2163 2178 3084 3085 3129 3130 3309 3310 3343 3344 3513 3514 3547 -
3548 4079 4080 4124 4125 4299 4300 4333 4334 4503 4504 4537 4538 4707 4708 -
4741 4742 5017 5019 UNI GX -7.2
1943 1948 1988 1993 UNI GX -4.35
2033 2038 UNI GX -4.8
2078 2083 UNI GX -5
2123 2128 2168 2173 UNI GX -5.45
LOAD 9 LOADTYPE NONE  TITLE WL3
MEMBER LOAD
652 997 1626 1660 1958 2003 2632 2666 UNI GZ -2.85
1042 1694 2048 2700 UNI GZ -3.125
1087 1728 2093 2734 UNI GZ -3.3
1132 1177 1762 1796 2138 2183 2768 2802 UNI GZ -3.6
653 654 998 999 1217 1218 1251 1252 1421 1422 1455 1456 1625 1659 1959 1960 -
2004 2005 2223 2224 2257 2258 2427 2428 2461 2462 2631 2665 UNI GZ -5.7
1043 1044 1285 1286 1489 1490 1693 2049 2050 2291 2292 2495 2496 -
2699 UNI GZ -6.25
1088 1089 1319 1320 1523 1524 1727 2094 2095 2325 2326 2529 2530 -
2733 UNI GZ -6.6
1133 1134 1178 1179 1353 1354 1387 1388 1557 1558 1591 1592 1761 1795 2139 -
2140 2184 2185 2359 2360 2393 2394 2563 2564 2597 2598 2767 -
2801 UNI GZ -7.2
LOAD 10 LOADTYPE NONE  TITLE WL4
MEMBER LOAD
57 972 1933 1978 2903 2928 2948 2973 3873 3898 3918 3943 UNI GZ 2.85
1017 2023 2993 3018 3963 3988 UNI GZ 3.125
1062 2068 3038 3063 4008 4033 UNI GZ 3.3
1107 1152 2113 2158 3083 3108 3128 3153 4053 4078 4098 4123 UNI GZ 3.6
58 59 973 974 1934 1935 1979 1980 2908 2923 2953 2968 3878 3893 3923 -
3938 UNI GZ 5.7
1018 1019 2024 2025 2998 3013 3968 3983 UNI GZ 6.25
1063 1064 2069 2070 3043 3058 4013 4028 UNI GZ 6.6
1108 1109 1153 1154 2114 2115 2159 2160 3088 3103 3133 3148 4058 4073 4103 -
4118 UNI GZ 7.2
2913 2918 2958 2963 3883 3888 3928 3933 UNI GZ 4.35
3003 3008 3973 3978 UNI GZ 4.8
3048 3053 4018 4023 UNI GZ 5
3093 3098 3138 3143 4063 4068 4108 4113 UNI GZ 5.45
********************************************************************************
***********LOAD COMBINATIONS FOR STEEL DESIGN*********************************
********************************************************************************
*** LOAD COMBINATIONS ***
LOAD COMB 101 1DL+1LL
5 1.0 6 1.0
LOAD COMB 102 1EQ1+1DL
1 1.0 5 1.0
LOAD COMB 103 1EQ2+1DL
2 1.0 5 1.0
LOAD COMB 104 1EQ3+1DL
3 1.0 5 1.0
LOAD COMB 105 1EQ4+1DL
4 1.0 5 1.0
LOAD COMB 106 1DL+1WL1
5 1.0 7 1.0
LOAD COMB 107 1DL+1WL2
5 1.0 8 1.0
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2456. LOAD COMB 108 1DL+1WL3
2457. 5 1.0 9 1.0
2458. LOAD COMB 109 1DL+1WL4
2459. 5 1.0 10 1.0
2460. LOAD COMB 110 0.75EQ1+0.75DL+0.75 LL
2461. 1 0.75 5 0.75 6 0.75
2462. LOAD COMB 111 0.75EQ2+0.75DL+0.75LL
2463. 2 0.75 5 0.75 6 0.75
2464. LOAD COMB 112 0.75EQ3+0.75DL+0.75LL
2465. 3 0.75 5 0.75 6 0.75
2466. LOAD COMB 113 0.75EQ4+0.75DL+0.75LL
2467. 4 0.75 5 0.75 6 0.75
2468. LOAD COMB 114 0.75DL+0.75LL+0.75WL1
2469. 5 0.75 6 0.75 7 0.75
2470. LOAD COMB 115 0.75DL+0.75LL+0.75WL2
2471. 5 0.75 6 0.75 8 0.75
2472. LOAD COMB 116 0.75DL+0.75LL+0.75WL3
2473. 5 0.75 6 0.75 9 0.75
2474. LOAD COMB 117 0.75DL+0.75LL+0.75WL4
2475. 5 0.75 6 0.75 10 0.75
2476. ************************************************************
2477. PERFORM ANALYSIS


2478. LOAD LIST 101 TO 117
2479. PARAMETER 1
2480. CODE INDIAN
2481. BEAM 1 MEMB 1 2 57 TO 59 120 121 176 TO 178 239 240 295 TO 297 358 359 414 -
2482. 415 TO 416 477 478 533 TO 535 596 597 652 TO 654 715 TO 717 778 TO 780 841 -
2483. 842 TO 843 904 TO 906 967 TO 1806 1931 TO 2812 2901 TO 3579 3583 TO 3603 3605 -
2484. 3606 TO 3613 3617 TO 3637 3639 TO 3647 3651 TO 3671 3673 TO 3681 3685 TO 3705 -
2485. 3707 TO 3715 3719 TO 3739 3741 TO 3749 3753 TO 3782 3871 TO 4752 4844 4845 -
2486. 4847 4848 4850 4851 4853 4854 4856 4857 4859 TO 4874 4888 TO 4919 -
2487. 5008 TO 5044 5046 TO 5050 5052 TO 5185
2488. FYLD 345000 MEMB 1 2 57 TO 59 120 121 176 TO 178 239 240 295 TO 297 358 359 -
2489. 414 TO 416 477 478 533 TO 535 596 597 652 TO 654 715 TO 717 778 TO 780 841 -
2490. 842 TO 843 904 TO 906 967 TO 1806 1931 TO 2812 2901 TO 3579 3583 TO 3603 3605 -
2491. 3606 TO 3613 3617 TO 3637 3639 TO 3647 3651 TO 3671 3673 TO 3681 3685 TO 3705 -
2492. 3707 TO 3715 3719 TO 3739 3741 TO 3749 3753 TO 3782 3871 TO 4752 4844 4845 -
2493. 4847 4848 4850 4851 4853 4854 4856 4857 4859 TO 4874 4888 TO 4919 -
2494. 5008 TO 5044 5046 TO 5050 5052 TO 5185
2495. FYLD 250000 MEMB 1807 TO 1858 1867 TO 1870 1879 1880 1885 TO 1888 -
2496. 1897 TO 1900 1909 TO 1930 2813 TO 2900 3783 3784 3787 3788 3791 3792 3795 -
2497. 3796 3799 3800 3803 3804 3807 3808 3811 3812 3815 3816 3819 3820 3823 3824 -
2498. 3827 3828 3831 TO 3840 3851 TO 3860 4753 4754 4757 4758 4761 4762 4765 4766 -
2499. 4769 4770 4773 4774 4777 4778 4781 4782 4785 4786 4789 4790 4793 4794 4797 -
2500. 4798 4801 TO 4810 4821 TO 4830 4920 TO 5007
2501. MAIN 180 MEMB 1 2 57 TO 59 120 121 176 TO 178 239 240 295 TO 297 358 359 414 -
2502. 415 TO 416 477 478 533 TO 535 596 597 652 TO 654 715 TO 717 778 TO 780 841 -
2503. 842 TO 843 904 TO 906 967 TO 1806 1931 TO 2812 2901 TO 3579 3583 TO 3603 3605 -
2504. 3606 TO 3613 3617 TO 3637 3639 TO 3647 3651 TO 3671 3673 TO 3681 3685 TO 3705 -
2505. 3707 TO 3715 3719 TO 3739 3741 TO 3749 3753 TO 3782 3871 TO 4752 4844 4845 -
2506. 4847 4848 4850 4851 4853 4854 4856 4857 4859 TO 4874 4888 TO 4919 -
2507. 5008 TO 5044 5046 TO 5050 5052 TO 5185
2508. MAIN 250 MEMB 1807 TO 1858 1867 TO 1870 1879 1880 1885 TO 1888 1897 TO 1900 -
2509. 1909 TO 1930 2813 TO 2900 3783 3784 3787 3788 3791 3792 3795 3796 3799 3800 -
2510. 3803 3804 3807 3808 3811 3812 3815 3816 3819 3820 3823 3824 3827 3828 3831 -
2511. 3832 TO 3840 3851 TO 3860 4753 4754 4757 4758 4761 4762 4765 4766 4769 4770 -
2512. 4773 4774 4777 4778 4781 4782 4785 4786 4789 4790 4793 4794 4797 4798 4801 -
2513. 4802 TO 4810 4821 TO 4830 4920 TO 5007
2514. RATIO 1 ALL
2515. UNL 1 MEMB 1 2 120 121 239 240 358 359 477 478 596 597 715 TO 717 778 TO 780 -
2516. 841 TO 843 904 TO 906 967 TO 971 975 976 980 981 985 986 990 991 995 996 -
2517. 1000 TO 1016 1020 1021 1025 1026 1030 1031 1035 1036 1040 1041 1045 TO 1061 -
2518. 1065 1066 1070 1071 1075 1076 1080 1081 1085 1086 1090 TO 1106 1110 1111 -
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2519. 1115 1116 1120 1121 1125 1126 1130 1131 1135 TO 1151 1155 1156 1160 1161 -
2520. 1165 1166 1170 1171 1175 1176 1180 TO 1196 1199 1200 1203 1204 1207 1208 -
2521. 1211 1212 1215 1216 1219 TO 1230 1233 1234 1237 1238 1241 1242 1245 1246 -
2522. 1249 1250 1253 TO 1264 1267 1268 1271 1272 1275 1276 1279 1280 1283 1284 -
2523. 1287 TO 1298 1301 1302 1305 1306 1309 1310 1313 1314 1317 1318 1321 TO 1332 -
2524. 1335 1336 1339 1340 1343 1344 1347 1348 1351 1352 1355 TO 1366 1369 1370 -
2525. 1373 1374 1377 1378 1381 1382 1385 1386 1389 TO 1400 1403 1404 1407 1408 -
2526. 1411 1412 1415 1416 1419 1420 1423 TO 1434 1437 1438 1441 1442 1445 1446 -
2527. 1449 1450 1453 1454 1457 TO 1468 1471 1472 1475 1476 1479 1480 1483 1484 -
2528. 1487 1488 1491 TO 1502 1505 1506 1509 1510 1513 1514 1517 1518 1521 1522 -
2529. 1525 TO 1536 1539 1540 1543 1544 1547 1548 1551 1552 1555 1556 1559 TO 1570 -
2530. 1573 1574 1577 1578 1581 1582 1585 1586 1589 1590 1593 TO 1604 1607 1608 -
2531. 1611 1612 1615 1616 1619 1620 1623 1624 1627 TO 1638 1641 1642 1645 1646 -
2532. 1649 1650 1653 1654 1657 1658 1661 TO 1672 1675 1676 1679 1680 1683 1684 -
2533. 1687
2534. UNL 1 MEMB 5061 5062 5086 5087 5111 5112 5136 5137 5161 5162
2535. UNL 1 MEMB 4861 4863 4866 4867 4873 4874 5038 5039 5053 5065 5066 5072 5073 -
2536. 5076 TO 5078 5090 5091 5097 5098 5101 TO 5103 5115 5116 5122 5123 -
2537. 5126 TO 5128 5140 5141 5147 5148 5151 TO 5153 5165 5166 5172 5173 -
2538. 5176 TO 5178
2539. UNL 1 MEMB 2901 2902 2906 2907 2911 2912 2916 2917 2921 2922 2926 2927 2931 -
2540. 2932 TO 2947 2951 2952 2956 2957 2961 2962 2966 2967 2971 2972 2976 TO 2992 -
2541. 2996 2997 3001 3002 3006 3007 3011 3012 3016 3017 3021 TO 3037 3041 3042 -
2542. 3046 3047 3051 3052 3056 3057 3061 3062 3066 TO 3082 3086 3087 3091 3092 -
2543. 3096 3097 3101 3102 3106 3107 3111 TO 3127 3131 3132 3136 3137 3141 3142 -
2544. 3146 3147 3151 3152 3156 TO 3172 3175 3176 3179 3180 3183 3184 3187 3188 -
2545. 3191 3192 3195 TO 3206 3209 3210 3213 3214 3217 3218 3221 3222 3225 3226 -
2546. 3229 TO 3240 3243 3244 3247 3248 3251 3252 3255 3256 3259 3260 3263 TO 3274 -
2547. 3277 3278 3281 3282 3285 3286 3289 3290 3293 3294 3297 TO 3308 3311 3312 -
2548. 3315 3316 3319 3320 3323 3324 3327 3328 3331 TO 3342 3345 3346 3349 3350 -
2549. 3353 3354 3357 3358 3361 3362 3365 TO 3376 3379 3380 3383 3384 3387 3388 -
2550. 3391 3392 3395 3396 3399 TO 3410 3413 3414 3417 3418 3421 3422 3425 3426 -
2551. 3429 3430 3433 TO 3444 3447 3448 3451 3452 3455 3456 3459 3460 3463 3464 -
2552. 3467 TO 3478 3481 3482 3485 3486 3489 3490 3493 3494 3497 3498 3501 TO 3512 -
2553. 3515 3516 3519 3520 3523 3524 3527 3528 3531 3532 3535 TO 3546 3549 3550 -
2554. 3553 3554 3557 3558 3561 3562 3565 3566 3569 TO 3579 3583 3584 3587 3588 -
2555. 3591 3592 3595 3596 3599 3600 3603 3605 TO 3613 3617 3618 3621 3622 3625 -
2556. 3626 3629 3630 3633 3634 3637 3639 TO 3647 3651 3652 3655 3656 3659 3660 -
2557. 3663 3871 3872 3876 3877 3881 3882 3886 3887 3891
2558. UNL 1 MEMB 3892 3896 5008 5010 5020 TO 5023 5025
2559. UNL 1 MEMB 3897 3901 TO 3917 3921 3922 3926 3927 3931 3932 3936 3937 3941 -
2560. 3942 3946 TO 3962 3966 3967 3971 3972 3976 3977 3981 3982 3986 3987 3991 -
2561. 3992 TO 4007 4011 4012 4016 4017 4021 4022 4026 4027 4031 4032 4036 TO 4052 -
2562. 4056 4057 4061 4062 4066 4067 4071 4072 4076 4077 4081 TO 4097 4101 4102 -
2563. 4106 4107 4111 4112 4116 4117 4121 4122 4126 TO 4142 4145 4146 4149 4150 -
2564. 4153 4154 4157 4158 4161 4162 4165 TO 4176 4179 4180 4183 4184 4187 4188 -
2565. 4191 4192 4195 4196 4199 TO 4210 4213 4214 4217 4218 4221 4222 4225 4226 -
2566. 4229 4230 4233 TO 4244 4247 4248 4251 4252 4255 4256 4259 4260 4263 4264 -
2567. 4267 TO 4278 4281 4282 4285 4286 4289 4290 4293 4294 4297 4298 4301 TO 4312 -
2568. 4315 4316 4319 4320 4323 4324 4327 4328 4331 4332 4335 TO 4346 4349 4350 -
2569. 4353 4354 4357 4358 4361 4362 4365 4366 4369 TO 4380 4383 4384 4387 4388 -
2570. 4391 4392 4395 4396 4399 4400 4403 TO 4414 4417 4418 4421 4422 4425 4426 -
2571. 4429 4430 4433 4434 4437 TO 4448 4451 4452 4455 4456 4459 4460 4463 4464 -
2572. 4467 4468 4471 TO 4482 4485 4486 4489 4490 4493 4494 4497 4498 4501 4502 -
2573. 4505 TO 4516 4519 4520 4523 4524 4527 4528 4531 4532 4535 4536 4539 TO 4550 -
2574. 4553 4554 4557 4558 4561 4562 4565 4566 4569 4570 4573 TO 4584 4587 4588 -
2575. 4591 4592 4595 4596 4599 4600 4603 4604 4607 TO 4618 4621 4622 4625 4626 -
2576. 4629 4630 4633
2577. UNL 1 MEMB 1931 1932 1936 1937 1941 1942 1946 1947 1951 1952 1956 1957 1961 -
2578. 1962 TO 1977 1981 1982 1986 1987 1991 1992 1996 1997 2001 2002 2006 TO 2022 -
2579. 2026 2027 2031 2032 2036 2037 2041 2042 2046 2047 2051 TO 2067 2071 2072 -
2580. 2076 2077 2081 2082 2086 2087 2091 2092 2096 TO 2112 2116 2117 2121 2122 -
2581. 2126 2127 2131 2132 2136 2137 2141 TO 2157 2161 2162 2166 2167 2171 2172 -
2582. 2176 2177 2181 2182 2186 TO 2202 2205 2206 2209 2210 2213 2214 2217 2218 -
2583. 2221 2222 2225 TO 2236 2239 2240 2243 2244 2247 2248 2251 2252 2255 2256 -
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2584. 2259 TO 2270 2273 2274 2277 2278 2281 2282 2285 2286 2289 2290 2293 TO 2304 -
2585. 2307 2308 2311 2312 2315 2316 2319 2320 2323 2324 2327 TO 2338 2341 2342 -
2586. 2345 2346 2349 2350 2353 2354 2357 2358 2361 TO 2372 2375 2376 2379 2380 -
2587. 2383 2384 2387 2388 2391 2392 2395 TO 2406 2409 2410 2413 2414 2417 2418 -
2588. 2421 2422 2425 2426 2429 TO 2440 2443 2444 2447 2448 2451 2452 2455 2456 -
2589. 2459 2460 2463 TO 2474 2477 2478 2481 2482 2485 2486 2489 2490 2493 2494 -
2590. 2497 TO 2508 2511 2512 2515 2516 2519 2520 2523 2524 2527 2528 2531 TO 2542 -
2591. 2545 2546 2549 2550 2553 2554 2557 2558 2561 2562 2565 TO 2576 2579 2580 -
2592. 2583 2584 2587 2588 2591 2592 2595 2596 2599 TO 2610 2613 2614 2617 2618 -
2593. 2621 2622 2625 2626 2629 2630 2633 TO 2644 2647 2648 2651 2652 2655 2656 -
2594. 2659 2660 2663 2664 2667 TO 2678 2681 2682 2685 2686 2689 2690 2693 4868 -
2595. 4869 5068 5069 5093 5094 5118 5119 5143 5144 5168
2596. UNL 1 MEMB 5169
2597. UNL 1 MEMB 1688 1691 1692 1695 TO 1706 1709 1710 1713 1714 1717 1718 1721 -
2598. 1722 1725 1726 1729 TO 1740 1743 1744 1747 1748 1751 1752 1755 1756 1759 -
2599. 1760 1763 TO 1774 1777 1778 1781 1782 1785 1786 1789 1790 1793 1794 1797 -
2600. 1798 TO 1806 2694 2697 2698 2701 TO 2712 2715 2716 2719 2720 2723 2724 2727 -
2601. 2728 2731 2732 2735 TO 2746 2749 2750 2753 2754 2757 2758 2761 2762 2765 -
2602. 2766 2769 TO 2780 2783 2784 2787 2788 2791 2792 2795 2796 2799 2800 2803 -
2603. 2804 TO 2812 3664 3667 3668 3671 3673 TO 3681 3685 3686 3689 3690 3693 3694 -
2604. 3697 3698 3701 3702 3705 3707 TO 3715 3719 3720 3723 3724 3727 3728 3731 -
2605. 3732 3735 3736 3739 3741 TO 3749 3753 3754 3757 3758 3761 3762 3765 3766 -
2606. 3769 3770 3773 TO 3782 4634 4637 4638 4641 TO 4652 4655 4656 4659 4660 4663 -
2607. 4664 4667 4668 4671 4672 4675 TO 4686 4689 4690 4693 4694 4697 4698 4701 -
2608. 4702 4705 4706 4709 TO 4720 4723 4724 4727 4728 4731 4732 4735 4736 4739 -
2609. 4740 4743 TO 4752 4862 4864 4865 4870 TO 4872 4918 4919 5012 5014 5016 5018 -
2610. 5024 5026 TO 5031 5040 TO 5044 5054 TO 5060 5063 5064 5067 5070 5071 5074 -
2611. 5075 5079 TO 5085 5088 5089 5092 5095 5096 5099 5100 5104 TO 5110 5113 5114 -
2612. 5117 5120 5121 5124 5125 5129 TO 5135 5138 5139 5142 5145 5146 5149 5150 -
2613. 5154 TO 5160 5163 5164 5167 5170 5171 5174 5175 5179 TO 5185
2614. LY 2 MEMB 1 2 120 121 239 240 358 359 477 478 596 597 715 TO 717 778 TO 780 -
2615. 841 TO 843 904 TO 906 967 TO 971 975 976 980 981 985 986 990 991 995 996 -
2616. 1000 TO 1016 1020 1021 1025 1026 1030 1031 1035 1036 1040 1041 1045 TO 1061 -
2617. 1065 1066 1070 1071 1075 1076 1080 1081 1085 1086 1090 TO 1106 1110 1111 -
2618. 1115 1116 1120 1121 1125 1126 1130 1131 1135 TO 1151 1155 1156 1160 1161 -
2619. 1165 1166 1170 1171 1175 1176 1180 TO 1196 1199 1200 1203 1204 1207 1208 -
2620. 1211 1212 1215 1216 1219 TO 1230 1233 1234 1237 1238 1241 1242 1245 1246 -
2621. 1249 1250 1253 TO 1264 1267 1268 1271 1272 1275 1276 1279 1280 1283 1284 -
2622. 1287 TO 1298 1301 1302 1305 1306 1309 1310 1313 1314 1317 1318 1321 TO 1332 -
2623. 1335 1336 1339 1340 1343 1344 1347 1348 1351 1352 1355 TO 1366 1369 1370 -
2624. 1373 1374 1377 1378 1381 1382 1385 1386 1389 TO 1400 1403 1404 1407 1408 -
2625. 1411 1412 1415 1416 1419 1420 1423 TO 1434 1437 1438 1441 1442 1445 1446 -
2626. 1449 1450 1453 1454 1457 TO 1468 1471 1472 1475 1476 1479 1480 1483 1484 -
2627. 1487 1488 1491 TO 1502 1505 1506 1509 1510 1513 1514 1517 1518 1521 1522 -
2628. 1525 TO 1536 1539 1540 1543 1544 1547 1548 1551 1552 1555 1556 1559 TO 1570 -
2629. 1573 1574 1577 1578 1581 1582 1585 1586 1589 1590 1593 TO 1604 1607 1608 -
2630. 1611 1612 1615 1616 1619 1620 1623 1624 1627 TO 1638 1641 1642 1645 1646 -
2631. 1649 1650 1653 1654 1657 1658 1661 TO 1672 1675 1676 1679 1680 1683 1684 -
2632. 1687
2633. LY 2 MEMB 5061 5062 5086 5087 5111 5112 5136 5137 5161 5162
2634. LY 2 MEMB 4861 4863 4866 4867 4873 4874 5038 5039 5053 5065 5066 5072 5073 -
2635. 5076 TO 5078 5090 5091 5097 5098 5101 TO 5103 5115 5116 5122 5123 -
2636. 5126 TO 5128 5140 5141 5147 5148 5151 TO 5153 5165 5166 5172 5173 -
2637. 5176 TO 5178
2638. LY 2 MEMB 2901 2902 2906 2907 2911 2912 2916 2917 2921 2922 2926 2927 2931 -
2639. 2932 TO 2947 2951 2952 2956 2957 2961 2962 2966 2967 2971 2972 2976 TO 2992 -
2640. 2996 2997 3001 3002 3006 3007 3011 3012 3016 3017 3021 TO 3037 3041 3042 -
2641. 3046 3047 3051 3052 3056 3057 3061 3062 3066 TO 3082 3086 3087 3091 3092 -
2642. 3096 3097 3101 3102 3106 3107 3111 TO 3127 3131 3132 3136 3137 3141 3142 -
2643. 3146 3147 3151 3152 3156 TO 3172 3175 3176 3179 3180 3183 3184 3187 3188 -
2644. 3191 3192 3195 TO 3206 3209 3210 3213 3214 3217 3218 3221 3222 3225 3226 -
2645. 3229 TO 3240 3243 3244 3247 3248 3251 3252 3255 3256 3259 3260 3263 TO 3274 -
2646. 3277 3278 3281 3282 3285 3286 3289 3290 3293 3294 3297 TO 3308 3311 3312 -
2647. 3315 3316 3319 3320 3323 3324 3327 3328 3331 TO 3342 3345 3346 3349 3350 -
2648. 3353 3354 3357 3358 3361 3362 3365 TO 3376 3379 3380 3383 3384 3387 3388 -
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2649. 3391 3392 3395 3396 3399 TO 3410 3413 3414 3417 3418 3421 3422 3425 3426 -
2650. 3429 3430 3433 TO 3444 3447 3448 3451 3452 3455 3456 3459 3460 3463 3464 -
2651. 3467 TO 3478 3481 3482 3485 3486 3489 3490 3493 3494 3497 3498 3501 TO 3512 -
2652. 3515 3516 3519 3520 3523 3524 3527 3528 3531 3532 3535 TO 3546 3549 3550 -
2653. 3553 3554 3557 3558 3561 3562 3565 3566 3569 TO 3579 3583 3584 3587 3588 -
2654. 3591 3592 3595 3596 3599 3600 3603 3605 TO 3613 3617 3618 3621 3622 3625 -
2655. 3626 3629 3630 3633 3634 3637 3639 TO 3647 3651 3652 3655 3656 3659 3660 -
2656. 3663 3871 3872 3876 3877 3881 3882 3886 3887 3891
2657. LY 2 MEMB 3892 3896 5008 5010 5020 TO 5023 5025
2658. LY 2 MEMB 3897 3901 TO 3917 3921 3922 3926 3927 3931 3932 3936 3937 3941 3942 -
2659. 3946 TO 3962 3966 3967 3971 3972 3976 3977 3981 3982 3986 3987 3991 TO 4007 -
2660. 4011 4012 4016 4017 4021 4022 4026 4027 4031 4032 4036 TO 4052 4056 4057 -
2661. 4061 4062 4066 4067 4071 4072 4076 4077 4081 TO 4097 4101 4102 4106 4107 -
2662. 4111 4112 4116 4117 4121 4122 4126 TO 4142 4145 4146 4149 4150 4153 4154 -
2663. 4157 4158 4161 4162 4165 TO 4176 4179 4180 4183 4184 4187 4188 4191 4192 -
2664. 4195 4196 4199 TO 4210 4213 4214 4217 4218 4221 4222 4225 4226 4229 4230 -
2665. 4233 TO 4244 4247 4248 4251 4252 4255 4256 4259 4260 4263 4264 4267 TO 4278 -
2666. 4281 4282 4285 4286 4289 4290 4293 4294 4297 4298 4301 TO 4312 4315 4316 -
2667. 4319 4320 4323 4324 4327 4328 4331 4332 4335 TO 4346 4349 4350 4353 4354 -
2668. 4357 4358 4361 4362 4365 4366 4369 TO 4380 4383 4384 4387 4388 4391 4392 -
2669. 4395 4396 4399 4400 4403 TO 4414 4417 4418 4421 4422 4425 4426 4429 4430 -
2670. 4433 4434 4437 TO 4448 4451 4452 4455 4456 4459 4460 4463 4464 4467 4468 -
2671. 4471 TO 4482 4485 4486 4489 4490 4493 4494 4497 4498 4501 4502 4505 TO 4516 -
2672. 4519 4520 4523 4524 4527 4528 4531 4532 4535 4536 4539 TO 4550 4553 4554 -
2673. 4557 4558 4561 4562 4565 4566 4569 4570 4573 TO 4584 4587 4588 4591 4592 -
2674. 4595 4596 4599 4600 4603 4604 4607 TO 4618 4621 4622 4625 4626 4629 4630 -
2675. 4633
2676. LY 2 MEMB 1931 1932 1936 1937 1941 1942 1946 1947 1951 1952 1956 1957 1961 -
2677. 1962 TO 1977 1981 1982 1986 1987 1991 1992 1996 1997 2001 2002 2006 TO 2022 -
2678. 2026 2027 2031 2032 2036 2037 2041 2042 2046 2047 2051 TO 2067 2071 2072 -
2679. 2076 2077 2081 2082 2086 2087 2091 2092 2096 TO 2112 2116 2117 2121 2122 -
2680. 2126 2127 2131 2132 2136 2137 2141 TO 2157 2161 2162 2166 2167 2171 2172 -
2681. 2176 2177 2181 2182 2186 TO 2202 2205 2206 2209 2210 2213 2214 2217 2218 -
2682. 2221 2222 2225 TO 2236 2239 2240 2243 2244 2247 2248 2251 2252 2255 2256 -
2683. 2259 TO 2270 2273 2274 2277 2278 2281 2282 2285 2286 2289 2290 2293 TO 2304 -
2684. 2307 2308 2311 2312 2315 2316 2319 2320 2323 2324 2327 TO 2338 2341 2342 -
2685. 2345 2346 2349 2350 2353 2354 2357 2358 2361 TO 2372 2375 2376 2379 2380 -
2686. 2383 2384 2387 2388 2391 2392 2395 TO 2406 2409 2410 2413 2414 2417 2418 -
2687. 2421 2422 2425 2426 2429 TO 2440 2443 2444 2447 2448 2451 2452 2455 2456 -
2688. 2459 2460 2463 TO 2474 2477 2478 2481 2482 2485 2486 2489 2490 2493 2494 -
2689. 2497 TO 2508 2511 2512 2515 2516 2519 2520 2523 2524 2527 2528 2531 TO 2542 -
2690. 2545 2546 2549 2550 2553 2554 2557 2558 2561 2562 2565 TO 2576 2579 2580 -
2691. 2583 2584 2587 2588 2591 2592 2595 2596 2599 TO 2610 2613 2614 2617 2618 -
2692. 2621 2622 2625 2626 2629 2630 2633 TO 2644 2647 2648 2651 2652 2655 2656 -
2693. 2659 2660 2663 2664 2667 TO 2678 2681 2682 2685 2686 2689 2690 2693 4868 -
2694. 4869 5068 5069 5093 5094 5118 5119 5143 5144 5168
2695. LY 2 MEMB 5169
2696. LY 2 MEMB 1688 1691 1692 1695 TO 1706 1709 1710 1713 1714 1717 1718 1721 1722 -
2697. 1725 1726 1729 TO 1740 1743 1744 1747 1748 1751 1752 1755 1756 1759 1760 -
2698. 1763 TO 1774 1777 1778 1781 1782 1785 1786 1789 1790 1793 1794 1797 TO 1806 -
2699. 2694 2697 2698 2701 TO 2712 2715 2716 2719 2720 2723 2724 2727 2728 2731 -
2700. 2732 2735 TO 2746 2749 2750 2753 2754 2757 2758 2761 2762 2765 2766 2769 -
2701. 2770 TO 2780 2783 2784 2787 2788 2791 2792 2795 2796 2799 2800 2803 TO 2812 -
2702. 3664 3667 3668 3671 3673 TO 3681 3685 3686 3689 3690 3693 3694 3697 3698 -
2703. 3701 3702 3705 3707 TO 3715 3719 3720 3723 3724 3727 3728 3731 3732 3735 -
2704. 3736 3739 3741 TO 3749 3753 3754 3757 3758 3761 3762 3765 3766 3769 3770 -
2705. 3773 TO 3782 4634 4637 4638 4641 TO 4652 4655 4656 4659 4660 4663 4664 4667 -
2706. 4668 4671 4672 4675 TO 4686 4689 4690 4693 4694 4697 4698 4701 4702 4705 -
2707. 4706 4709 TO 4720 4723 4724 4727 4728 4731 4732 4735 4736 4739 4740 4743 -
2708. 4744 TO 4752 4862 4864 4865 4870 TO 4872 4918 4919 5012 5014 5016 5018 5024 -
2709. 5026 TO 5031 5040 TO 5044 5054 TO 5060 5063 5064 5067 5070 5071 5074 5075 -
2710. 5079 TO 5085 5088 5089 5092 5095 5096 5099 5100 5104 TO 5110 5113 5114 5117 -
2711. 5120 5121 5124 5125 5129 TO 5135 5138 5139 5142 5145 5146 5149 5150 5154 -
2712. 5155 TO 5160 5163 5164 5167 5170 5171 5174 5175 5179 TO 5185
2713. KZ 0.7 MEMB 1807 TO 1858 1867 TO 1870 1879 1880 1885 TO 1888 1897 TO 1900 -
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2714. 1909 TO 1930 2813 TO 2900 3783 3784 3787 3788 3791 3792 3795 3796 3799 3800 -
2715. 3803 3804 3807 3808 3811 3812 3815 3816 3819 3820 3823 3824 3827 3828 3831 -
2716. 3832 TO 3840 3851 TO 3860 4753 4754 4757 4758 4761 4762 4765 4766 4769 4770 -
2717. 4773 4774 4777 4778 4781 4782 4785 4786 4789 4790 4793 4794 4797 4798 4801 -
2718. 4802 TO 4810 4821 TO 4830 4920 TO 5007
2719. KY 0.7 MEMB 1807 TO 1858 1867 TO 1870 1879 1880 1885 TO 1888 1897 TO 1900 -
2720. 1909 TO 1930 2813 TO 2900 3783 3784 3787 3788 3791 3792 3795 3796 3799 3800 -
2721. 3803 3804 3807 3808 3811 3812 3815 3816 3819 3820 3823 3824 3827 3828 3831 -
2722. 3832 TO 3840 3851 TO 3860 4753 4754 4757 4758 4761 4762 4765 4766 4769 4770 -
2723. 4773 4774 4777 4778 4781 4782 4785 4786 4789 4790 4793 4794 4797 4798 4801 -
2724. 4802 TO 4810 4821 TO 4830 4920 TO 5007
2725. CHECK CODE ALL
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STAAD.Pro CODE CHECKING - (IS-800:1984) v1.1
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ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
1	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.845	102
		2.83 T	-0.08	30.63	6.00
2	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.2	0.838	103
		53.02 T	-0.06	27.18	0.00
57	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.903	101
		699.78 C	9.43	-39.64	4.36
58	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.949	103
		2331.47 C	-26.27	17.63	0.00
59	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.940	102
		2319.65 C	25.16	17.62	0.00
120	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.849	106
		20.66 C	-0.16	27.92	6.00
121	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.815	103
		0.65 T	-0.08	29.52	0.00
176	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.885	101
		1252.42 C	11.02	-0.78	4.36
177	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.960	101
		2237.51 C	-0.14	4.03	0.00

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION

178	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.958	101
		2234.62 C	-0.20	4.01	0.00
239	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.839	102
		2.00 T	-0.02	30.59	6.00
240	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.827	103
		2.21 T	-0.03	30.10	0.00
295	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.754	101
		1015.56 C	11.06	25.75	4.36
296	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.952	101
		1812.65 C	-0.12	39.52	4.36
297	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.949	101
		1809.21 C	-0.02	39.53	4.36
358	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.840	102
		1.99 T	0.03	30.58	6.00
359	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.827	103
		2.21 T	0.04	30.09	0.00
414	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.754	101
		1015.64 C	11.06	-25.73	4.36

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
415	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.952	101
		1813.08 C	-0.11	-39.40	4.36
416	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.949	101
		1809.67 C	-0.02	-39.42	4.36
477	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.850	106
		20.67 C	0.16	27.97	6.00
478	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.814	103
		1.44 T	0.08	29.48	0.00
533	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.885	101
		1252.42 C	11.02	0.79	4.36
534	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.961	101
		2237.53 C	-0.16	-4.47	0.00
535	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.959	101
		2234.72 C	-0.21	-4.43	0.00
596	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.843	102
		2.83 T	0.06	30.60	6.00
597	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.2	0.836	103
		53.21 T	0.05	27.16	0.00

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
652	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.903	101
		699.86 C	9.43	39.65	4.36
653	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.946	103
		2325.47 C	-26.09	-18.12	0.00
654	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.938	102
		2315.61 C	25.01	-18.08	0.00
715	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.886	104
		8.09 T	0.04	108.09	6.00
716	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.862	105
		2.20 T	-0.04	187.51	0.00
717	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.863	105
		2.10 T	0.05	187.74	0.00
778	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.877	105
		3.20 T	0.03	107.14	0.00
779	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.851	105
		4.33 T	0.05	184.97	0.00
780	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.849	105
		4.20 T	-0.01	185.05	0.00

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
841	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.656	104
		0.56 T	0.01	80.19	3.15
842	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.610	104
		2.17 T	0.00	132.97	3.15
843	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.611	104
		2.04 T	0.01	133.09	3.15
904	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.877	104
		3.20 T	0.03	107.16	6.00
905	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.851	104
		4.32 T	0.05	185.12	6.00
906	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.850	104
		4.19 T	-0.01	185.19	6.00
967	TAP ERED		(INDIAN SECTIONS)		

		PASS	7.1.2 BEND C	0.885	105
		8.09 T	0.04	108.07	0.00
968	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.863	104
		2.18 T	-0.04	187.67	6.00
969	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.864	104
		2.09 T	0.05	187.88	6.00

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
970	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.911	102
		3.46 C	-0.32	31.88	6.00
971	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.2	0.811	102
		46.33 T	-0.20	26.25	6.00
972	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.860	105
		517.86 C	-12.12	74.67	0.00
973	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.684	103
		1825.60 C	-0.92	53.51	0.00
974	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.689	102
		1828.04 C	2.39	53.58	0.00
975	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.875	102
		0.89 C	-0.37	30.76	6.00
976	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.849	102
		1.06 C	-0.28	30.04	6.00
977	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.875	101
		1037.93 C	-12.01	-1.62	0.00
978	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.795	101
		1853.41 C	0.37	1.22	0.00

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
979	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.792	101
		1846.10 C	0.17	-3.64	4.36
980	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.868	102
		0.29 C	-0.10	31.36	6.00
981	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.856	102
		0.28 C	-0.09	30.96	6.00
982	TAP ERED		(INDIAN SECTIONS)		

		PASS	IS-7.1.1(A)	0.758		101
		843.40 C	-12.09	-32.74		0.00
983	TAP ERED		(INDIAN SECTIONS)			
		PASS	IS-7.1.1(A)	0.806		101
		1505.68 C	0.25	-54.36		0.00
984	TAP ERED		(INDIAN SECTIONS)			
		PASS	IS-7.1.1(A)	0.802		101
		1502.62 C	-0.01	-54.34		0.00
985	TAP ERED		(INDIAN SECTIONS)			
		PASS	IS-7.1.1(A)	0.869		102
		0.29 C	0.11	31.36		6.00
986	TAP ERED		(INDIAN SECTIONS)			
		PASS	IS-7.1.1(A)	0.857		102
		0.28 C	0.10	30.96		6.00
987	TAP ERED		(INDIAN SECTIONS)			
		PASS	IS-7.1.1(A)	0.758		101
		843.46 C	-12.09	32.69		0.00

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
988	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.806	101
		1506.00 C	0.25	54.02	0.00
989	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.802	101
		1502.98 C	-0.01	54.02	0.00
990	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.875	102
		0.69 C	0.37	30.78	6.00
991	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.847	102
		0.51 C	0.28	30.06	6.00
992	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.875	101
		1037.92 C	-12.01	1.58	0.00
993	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.795	101
		1853.43 C	0.37	-1.54	0.00
994	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.792	101
		1846.20 C	0.19	3.85	4.36
995	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.910	102
		3.45 C	0.32	31.85	6.00
996	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.2	0.811	102
		46.26 T	0.19	26.24	6.00

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
997	TAP ERED		(INDIAN SECTIONS)		

		PASS	IS-7.1.1(B)	0.861		104
		517.92 C	-12.12	-74.69		0.00
998	TAP ERED		(INDIAN SECTIONS)			
		PASS	IS-7.1.1(A)	0.683		103
		1822.27 C	-0.92	-53.77		0.00
999	TAP ERED		(INDIAN SECTIONS)			
		PASS	IS-7.1.1(A)	0.688		102
		1826.06 C	2.26	-53.82		0.00
1000	TAP ERED		(INDIAN SECTIONS)			
		PASS	IS-7.1.1(A)	0.954		105
		1.10 C	-0.03	116.39		0.00
1001	TAP ERED		(INDIAN SECTIONS)			
		PASS	IS-7.1.1(A)	0.969		105
		4.54 C	-0.05	209.65		0.00
1002	TAP ERED		(INDIAN SECTIONS)			
		PASS	IS-7.1.1(A)	0.971		105
		4.01 C	0.07	210.10		0.00
1003	TAP ERED		(INDIAN SECTIONS)			
		PASS	7.1.2 BEND C	0.952		104
		0.70 T	0.00	116.61		6.00
1004	TAP ERED		(INDIAN SECTIONS)			
		PASS	IS-7.1.1(A)	0.925		105
		2.53 C	0.04	200.64		0.00
1005	TAP ERED		(INDIAN SECTIONS)			
		PASS	IS-7.1.1(A)	0.924		105
		1.63 C	0.02	200.84		0.00

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
1006	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.751	104
		0.42 T	0.00	91.98	3.15
1007	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.691	104
		0.96 T	-0.01	150.43	3.15
1008	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.692	104
		1.92 T	0.04	150.55	3.15
1009	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.952	105
		0.70 T	0.00	116.59	0.00
1010	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.926	104
		2.53 C	0.04	200.83	6.00
1011	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.925	104
		1.64 C	0.02	201.02	6.00
1012	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.954	104
		1.10 C	-0.02	116.42	6.00
1013	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.969	104
		4.54 C	-0.05	209.85	6.00
1014	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.972	104
		4.02 C	0.07	210.27	6.00

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
1015	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.744	102
		3.89 C	-0.68	43.85	6.00
1016	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.2	0.470	101
		54.02 T	0.01	25.01	0.00
1017	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.700	105
		407.44 C	-10.25	60.76	0.00
1018	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.940	103
		1290.17 C	5.43	-70.82	4.35
1019	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.953	102
		1295.58 C	-6.54	-71.34	4.35
1020	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.785	102
		11.08 C	-0.72	45.30	6.00
1021	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.733	103
		15.80 C	-0.20	44.00	0.00
1022	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.705	101
		818.80 C	12.57	-0.71	4.35
1023	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.951	101
		1472.58 C	0.28	7.63	0.00

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
1024	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.949	101
		1470.43 C	0.14	8.43	0.00
1025	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.739	102
		10.61 C	-0.21	45.04	6.00
1026	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.712	103
		8.86 C	-0.09	44.14	0.00
1027	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.655	104
		440.21 C	12.28	89.81	4.35
1028	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.926	101
		1190.60 C	-0.14	45.92	4.35
1029	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.928	101
		1187.83 C	-0.52	45.67	4.35
1030	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.740	102

		10.68 C	0.21	45.13	6.00
1031	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.713	103
		8.96 C	0.09	44.23	0.00
1032	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.655	105
		440.24 C	12.28	-89.78	4.35

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
1033	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.926	101
		1190.81 C	-0.15	-45.59	4.35
1034	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.928	101
		1188.07 C	-0.52	-45.41	4.35
1035	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.795	102
		11.57 C	0.72	45.82	6.00
1036	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.740	103
		14.90 C	0.20	44.57	0.00
1037	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.705	106
		619.66 C	24.85	0.42	4.35
1038	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.951	101
		1472.61 C	0.30	-7.90	0.00
1039	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.949	101
		1470.51 C	0.14	-8.70	0.00
1040	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.743	102
		3.89 C	0.68	43.76	6.00
1041	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.2	0.472	109
		43.01 T	-0.31	24.72	6.00

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
1042	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.700	104
		407.49 C	-10.25	-60.77	0.00
1043	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.940	103
		1288.77 C	5.42	71.05	4.35
1044	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.947	102
		1295.21 C	-5.75	71.52	4.35
1045	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.957	105

		1.94 T	0.03	116.97	0.00
1046	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.973	105
		3.61 C	0.01	211.13	0.00
1047	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.970	105
		0.35 C	-0.01	211.22	0.00
1048	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.958	104
		1.56 C	0.04	116.71	6.00
1049	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.912	105
		1.11 T	0.07	198.08	0.00
1050	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.910	105
		8.04 T	-0.03	198.13	0.00

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
1051	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.723	104
		0.83 T	0.07	87.96	3.15
1052	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.666	104
		1.83 C	0.06	144.24	3.15
1053	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.663	104
		5.22 T	0.02	144.38	3.15
1054	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.958	105
		1.55 C	0.04	116.68	0.00
1055	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.912	104
		1.11 T	0.07	198.25	6.00
1056	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.911	104
		8.02 T	-0.01	198.35	6.00
1057	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.958	104
		1.95 T	0.03	117.00	6.00
1058	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.974	104
		3.62 C	0.01	211.29	6.00
1059	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.971	104
		0.35 C	0.02	211.41	6.00

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
1060	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.836	102

		3.56 C	-1.57	45.17	6.00
1061	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.2	0.571	102
		32.13 T	1.45	26.32	0.00
1062	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.682	103
		281.87 C	-18.02	33.74	0.00
1063	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.655	103
		870.62 C	9.92	-33.43	4.36
1064	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.668	102
		876.19 C	-11.38	-32.98	4.36
1065	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.910	102
		1.52 C	-1.41	50.98	6.00
1066	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.877	102
		2.82 C	-1.33	49.15	6.00
1067	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.853	103
		473.86 C	-26.88	0.17	0.00
1068	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.938	102
		781.37 C	37.92	41.59	0.00

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
1069	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.938	102
		835.85 C	37.90	-31.74	0.00
1070	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.790	102
		1.54 C	-0.17	49.73	6.00
1071	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.749	103
		3.58 T	-0.17	47.31	0.00
1072	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.895	103
		379.75 C	-27.56	-21.56	0.00
1073	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.948	103
		639.25 C	-35.19	-40.70	0.00
1074	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.955	102
		636.38 C	35.70	-40.92	0.00
1075	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.786	102
		1.52 C	0.09	49.85	6.00
1076	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.744	102
		1.26 C	0.09	47.24	6.00
1077	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.897	103
		379.78 C	-27.69	21.51	0.00

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
1078	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.951	103
		639.37 C	-35.40	40.51	0.00
1079	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.957	102
		636.48 C	35.92	40.56	0.00
1080	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.923	102
		1.16 C	1.42	51.81	6.00
1081	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.885	102
		1.76 C	1.34	49.68	6.00
1082	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.871	103
		473.85 C	-27.72	-0.22	0.00
1083	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.958	102
		781.63 C	39.61	-41.59	0.00
1084	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.959	102
		835.07 C	39.73	31.40	0.00
1085	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.842	102
		3.59 C	1.65	45.07	6.00
1086	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.2	0.578	102
		33.32 T	-1.54	26.13	0.00

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
1087	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.682	103
		281.87 C	-17.99	-33.76	0.00
1088	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.654	103
		869.35 C	9.87	33.59	4.36
1089	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.660	102
		875.86 C	-10.15	33.17	4.36
1090	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.917	105
		0.18 C	0.07	111.62	0.00
1091	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.925	105
		3.41 C	0.04	200.52	0.00
1092	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.925	105
		2.95 C	-0.10	200.20	0.00
1093	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.907	104
		0.14 C	0.07	110.45	6.00

1094	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.861	104
		6.59 C	0.07	185.53	6.00
1095	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.859	104
		5.80 C	0.02	185.79	6.00

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
1096	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.618	104
		0.74 T	0.08	74.96	3.15
1097	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.572	104
		0.68 T	0.06	124.23	3.15
1098	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.574	105
		1.56 T	-0.11	124.15	0.00
1099	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.906	105
		0.14 C	0.06	110.42	0.00
1100	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.860	104
		0.96 T	0.10	186.60	6.00
1101	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.858	105
		5.78 C	-0.02	185.59	0.00
1102	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.917	104
		0.18 C	0.07	111.64	6.00
1103	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.926	104
		3.41 C	0.04	200.65	6.00
1104	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.924	104
		2.95 C	-0.03	200.36	6.00

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
1105	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.866	102
		6.56 C	-2.07	44.12	6.00
1106	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.2	0.661	102
		24.84 T	1.95	30.37	0.00
1107	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.641	103
		179.05 C	19.28	-32.45	4.35
1108	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.822	103
		526.29 C	-4.90	45.93	0.00

1109	TAP ERED		(INDIAN SECTIONS)			
		PASS	IS-7.1.1(A)	0.842		102
		532.22 C	5.54	46.00		0.00
1110	TAP ERED		(INDIAN SECTIONS)			
		PASS	IS-7.1.1(A)	0.669		102
		4.00 C	-1.89	32.67		6.00
1111	TAP ERED		(INDIAN SECTIONS)			
		PASS	IS-7.1.1(A)	0.598		103
		3.91 C	-1.78	28.73		0.00
1112	TAP ERED		(INDIAN SECTIONS)			
		PASS	IS-7.1.1(B)	0.788		103
		303.20 C	28.16	-2.80		4.35
1113	TAP ERED		(INDIAN SECTIONS)			
		PASS	IS-7.1.1(B)	0.821		102
		520.79 C	-24.82	-32.30		4.35

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
1114	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.789	103
		519.62 C	23.06	-32.03	4.35
1115	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.502	102
		2.06 C	-0.24	30.78	6.00
1116	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.463	106
		23.43 C	0.02	26.61	0.00
1117	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.859	103
		238.76 C	29.84	21.92	4.35
1118	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.899	102
		425.83 C	-19.18	26.92	4.35
1119	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.894	102
		413.99 C	-18.78	29.87	4.35
1120	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.492	102
		2.04 C	0.13	30.72	6.00
1121	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.462	106
		23.43 C	0.00	26.61	0.00
1122	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.860	103
		238.73 C	29.90	-21.87	4.35

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
1123	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.900	102
		425.87 C	-19.23	-26.86	4.35

1124	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.894	102
		413.99 C	-18.83	-29.59	4.35
1125	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.663	102
		3.59 C	1.90	32.28	6.00
1126	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.595	103
		5.08 C	1.78	28.35	0.00
1127	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.793	103
		302.93 C	28.44	2.85	4.35
1128	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.832	102
		520.94 C	-25.42	32.30	4.35
1129	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.798	103
		519.58 C	23.58	32.09	4.35
1130	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.873	102
		6.61 C	2.17	44.00	6.00
1131	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.2	0.667	102
		23.96 T	-2.06	30.21	0.00

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
1132	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.641	103
		179.05 C	19.25	32.49	4.35
1133	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.820	103
		525.60 C	-4.84	-46.09	0.00
1134	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.832	102
		531.73 C	5.02	-46.11	0.00
1135	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.838	105
		8.16 T	0.13	101.49	0.00
1136	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.864	102
		13.61 T	-4.02	146.85	0.00
1137	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.856	103
		13.63 T	3.84	146.82	0.00
1138	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.836	104
		4.91 T	0.12	101.38	6.00
1139	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.788	104
		12.21 T	0.12	166.30	6.00
1140	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.784	104
		12.10 T	0.03	166.33	6.00

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
1141	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.469	104
		2.83 T	0.14	56.26	3.15
1142	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.426	104
		4.26 T	0.11	89.59	3.15
1143	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.428	105
		4.19 T	-0.15	89.49	0.00
1144	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.836	105
		4.91 T	0.11	101.37	0.00
1145	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.787	105
		12.20 T	0.12	166.15	0.00
1146	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.783	105
		12.12 T	-0.03	166.22	0.00
1147	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.839	104
		8.16 T	0.14	101.51	6.00
1148	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.873	102
		13.59 T	-4.24	146.78	6.00
1149	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.868	103
		13.62 T	4.14	146.71	6.00

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
1150	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.448	102
		5.73 C	-0.84	13.19	6.00
1151	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.2	0.217	109
		8.65 T	-0.48	6.02	6.00
1152	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.600	103
		78.53 C	12.75	-64.66	4.35
1153	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.813	102
		66.38 C	-6.02	-123.40	4.35
1154	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.807	103
		66.32 C	5.75	-123.52	4.35
1155	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.320	106
		16.18 C	0.15	9.23	0.00
1156	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.2	0.165	102
		14.01 T	0.18	4.60	0.00
1157	TAP ERED		(INDIAN SECTIONS)		

		PASS	IS-7.1.1(A)	0.715	106
		146.43 C	9.23	0.19	4.35
1158	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.399	103
		280.17 C	13.50	3.44	0.00

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
1159	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.402	102
		280.45 C	-13.72	3.21	0.00
1160	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.272	106
		13.02 C	0.05	8.17	0.00
1161	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.148	103
		4.72 C	0.09	4.54	6.00
1162	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.796	102
		112.68 C	-12.69	-25.36	0.00
1163	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.653	102
		201.24 C	9.01	61.90	4.35
1164	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.631	103
		204.55 C	11.10	-45.18	0.00
1165	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.271	106
		13.02 C	-0.02	8.19	0.00
1166	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.148	103
		4.74 C	-0.07	4.60	6.00
1167	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.800	102
		112.71 C	-12.79	25.36	0.00

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
1168	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.656	102
		201.25 C	9.15	-61.77	4.35
1169	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.635	103
		204.54 C	11.25	45.22	0.00
1170	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.322	106
		16.25 C	-0.13	9.36	0.00
1171	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.2	0.180	102
		14.06 T	-0.19	5.14	0.00
1172	TAP ERED		(INDIAN SECTIONS)		

		PASS	IS-7.1.1(A)	0.716	106
		146.47 C	9.36	-0.17	4.35
1173	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.423	103
		280.11 C	14.82	-3.70	0.00
1174	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.430	102
		280.42 C	-15.27	-3.31	0.00
1175	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.447	102
		5.74 C	0.84	13.15	6.00
1176	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.2	0.218	109
		7.90 T	-0.48	6.11	6.00

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
1177	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.600	103
		78.53 C	12.74	64.68	4.35
1178	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.814	102
		66.33 C	-6.04	123.33	4.35
1179	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.817	103
		66.67 C	6.16	123.39	4.35
1180	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.753	101
		31.02 C	0.01	86.43	6.00
1181	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.800	101
		50.85 C	0.01	158.93	6.00
1182	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.803	101
		50.10 C	0.07	159.04	6.00
1183	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.757	101
		30.95 C	-0.01	86.85	0.00
1184	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.880	102
		272.31 C	0.58	121.01	6.00
1185	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.875	103
		268.12 C	-0.53	120.93	6.00

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
1186	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.368	104
		9.12 C	0.18	41.74	3.15
1187	TAP ERED		(INDIAN SECTIONS)		

		PASS	IS-7.1.1(A)	0.594	102
		292.33 C	0.25	59.18	3.15
1188	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.590	103
		288.24 C	-0.30	59.17	0.00
1189	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.756	101
		30.95 C	0.00	86.86	6.00
1190	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.880	102
		272.86 C	0.58	120.94	0.00
1191	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.876	103
		268.69 C	-0.60	120.93	0.00
1192	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.753	101
		31.02 C	0.00	86.42	0.00
1193	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.800	101
		50.83 C	0.01	158.82	0.00
1194	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.803	101
		50.05 C	-0.07	159.06	0.00

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
1195	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.838	103
		7.89 C	-0.07	29.41	0.00
1196	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.817	102
		8.48 C	-0.06	28.60	6.00
1197	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.738	105
		1107.35 C	0.36	156.17	0.00
1198	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.980	101
		1705.84 C	9.93	-68.77	4.36
1199	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.817	103
		0.29 T	-0.08	29.62	0.00
1200	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.814	102
		3.79 T	-0.07	29.52	6.00
1201	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.913	101
		2233.33 C	-0.06	2.07	0.00
1202	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.967	101
		2308.63 C	6.55	-0.23	4.36
1203	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.825	102
		0.01 C	-0.02	30.05	6.00

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
1204	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.825	103
		2.08 T	-0.02	30.05	0.00
1205	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.775	101
		1815.83 C	-0.15	43.57	4.36
1206	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.776	101
		1817.76 C	-0.18	44.34	4.36
1207	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.825	102
		0.02 C	0.03	30.03	6.00
1208	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.825	103
		2.09 T	0.03	30.04	0.00
1209	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.778	101
		1821.32 C	-0.15	-43.83	4.36
1210	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.776	101
		1817.21 C	-0.18	-43.33	4.36
1211	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.817	103
		1.68 T	0.08	29.58	0.00
1212	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.817	103
		1.51 T	0.08	29.59	0.00

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
1213	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.923	101
		2255.68 C	-0.13	-2.41	0.00
1214	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.922	101
		2254.94 C	0.01	-2.69	0.00
1215	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.836	103
		7.10 C	0.06	29.46	0.00
1216	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.804	102
		8.89 C	0.04	28.13	6.00
1217	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.872	101
		1249.60 C	-0.17	65.98	4.36
1218	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.872	101
		1250.89 C	0.00	66.27	4.36
1219	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.856	104
		15.74 T	0.01	186.50	6.00
1220	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.883	104

		15.47 T	0.05	192.00	6.00
1221	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.850	105
		6.23 T	0.01	185.02	0.00

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
1222	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.861	105
		5.59 T	0.04	187.19	0.00
1223	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.633	104
		2.93 T	0.03	137.65	3.15
1224	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.648	104
		2.29 T	0.00	141.13	3.15
1225	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.852	104
		8.61 T	0.02	185.64	6.00
1226	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.864	104
		8.18 T	0.01	188.13	6.00
1227	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.864	105
		13.04 T	0.01	188.26	0.00
1228	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.876	105
		13.03 T	0.00	190.94	0.00
1229	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.911	103
		12.07 C	-0.30	30.86	0.00
1230	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.836	103
		7.13 C	-0.25	28.90	0.00

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
1231	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.610	105
		919.31 C	-0.23	128.53	0.00
1232	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.850	101
		1412.69 C	-13.44	81.34	0.00
1233	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.862	102
		1.77 C	-0.33	30.28	6.00
1234	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.854	102
		1.70 C	-0.30	30.08	6.00
1235	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.757	101

	1848.80 C	-0.04	-2.35	0.00	
1236	TAP ERED	(INDIAN SECTIONS)			
	PASS	IS-7.1.1(A)	0.821	101	
	1915.19 C	-10.24	-4.28	0.00	
1237	TAP ERED	(INDIAN SECTIONS)			
	PASS	IS-7.1.1(A)	0.864	102	
	0.64 C	-0.11	31.13	6.00	
1238	TAP ERED	(INDIAN SECTIONS)			
	PASS	IS-7.1.1(A)	0.862	102	
	0.58 C	-0.10	31.11	6.00	
1239	TAP ERED	(INDIAN SECTIONS)			
	PASS	IS-7.1.1(A)	0.805	101	
	1508.42 C	-0.12	-53.46	0.00	

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
1240	TAP ERED	(INDIAN SECTIONS)			
	PASS	IS-7.1.1(A)	0.806	101	
	1510.26 C	-0.28	-53.22	0.00	
1241	TAP ERED	(INDIAN SECTIONS)			
	PASS	IS-7.1.1(A)	0.863	102	
	0.63 C	0.11	31.13	6.00	
1242	TAP ERED	(INDIAN SECTIONS)			
	PASS	IS-7.1.1(A)	0.863	102	
	0.57 C	0.11	31.11	6.00	
1243	TAP ERED	(INDIAN SECTIONS)			
	PASS	IS-7.1.1(A)	0.806	101	
	1513.73 C	-0.12	51.85	0.00	
1244	TAP ERED	(INDIAN SECTIONS)			
	PASS	IS-7.1.1(A)	0.805	101	
	1509.62 C	-0.28	52.41	0.00	
1245	TAP ERED	(INDIAN SECTIONS)			
	PASS	7.1.2 BEND C	0.860	103	
	0.43 T	0.37	30.33	0.00	
1246	TAP ERED	(INDIAN SECTIONS)			
	PASS	IS-7.1.1(A)	0.858	102	
	0.44 C	0.31	30.38	6.00	
1247	TAP ERED	(INDIAN SECTIONS)			
	PASS	IS-7.1.1(A)	0.765	101	
	1869.24 C	-0.16	3.26	0.00	
1248	TAP ERED	(INDIAN SECTIONS)			
	PASS	IS-7.1.1(A)	0.766	101	
	1868.50 C	-0.27	3.90	0.00	

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
1249	TAP ERED	(INDIAN SECTIONS)			
	PASS	IS-7.1.1(A)	0.909	103	
	10.71 C	0.31	30.95	0.00	
1250	TAP ERED	(INDIAN SECTIONS)			
	PASS	IS-7.1.1(A)	0.833	103	

		7.08 C	0.24	28.81	0.00
1251	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.753	101
		1039.83 C	-0.46	-82.34	0.00
1252	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.750	101
		1041.02 C	0.00	-81.94	0.00
1253	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.945	105
		0.20 C	0.10	204.99	0.00
1254	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.954	104
		0.56 C	0.19	206.10	6.00
1255	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.921	105
		0.14 C	0.05	200.36	0.00
1256	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.938	104
		0.81 T	0.06	203.84	6.00
1257	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.716	104
		0.37 T	0.08	155.31	3.15

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
1258	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.730	104
		0.57 C	0.00	158.95	3.15
1259	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.932	104
		2.32 C	0.05	202.15	6.00
1260	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.944	104
		2.96 C	0.02	204.85	6.00
1261	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.919	105
		0.44 C	0.05	199.78	0.00
1262	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.933	105
		0.41 C	0.00	203.29	0.00
1263	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.745	103
		15.55 C	-0.65	42.54	0.00
1264	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.626	103
		8.26 C	-0.43	36.95	0.00
1265	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.503	105
		720.00 C	0.49	-112.19	4.35
1266	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.680	101
		1114.92 C	-10.65	77.86	0.00

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/	CRITICAL COND/	RATIO/	LOADING/

		FX	MY	MZ	LOCATION
1267	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.2	0.845	102
		41.59 T	-0.72	47.10	6.00
1268	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.2	0.788	102
		16.22 T	-0.50	47.24	6.00
1269	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.743	101
		1467.78 C	0.40	1.44	0.00
1270	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.803	101
		1515.46 C	6.97	0.91	4.35
1271	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.2	0.803	102
		34.45 T	-0.23	47.72	6.00
1272	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.792	103
		13.20 C	-0.17	48.32	0.00
1273	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.648	101
		1196.22 C	0.54	-52.51	0.00
1274	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.648	101
		1197.63 C	0.45	-51.87	0.00
1275	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.2	0.801	102
		34.61 T	0.18	47.81	6.00

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
1276	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.790	103
		13.17 C	0.13	48.40	0.00
1277	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.646	101
		1200.54 C	0.54	46.77	0.00
1278	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.645	101
		1196.62 C	0.46	48.00	0.00
1279	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.2	0.837	102
		39.33 T	0.68	47.06	6.00
1280	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.794	103
		11.15 C	0.51	46.98	0.00
1281	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.754	101
		1485.33 C	0.29	-3.32	0.00
1282	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.753	101
		1484.57 C	0.42	-2.04	0.00
1283	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.743	103
		12.75 C	0.70	42.50	0.00

1284	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.558	102
		0.03 T	0.45	33.56	6.00

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
1285	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.811	101
		822.13 C	0.65	76.62	4.35
1286	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.804	101
		823.24 C	0.00	76.40	4.35
1287	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.946	105
		1.07 T	0.04	205.86	0.00
1288	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.955	105
		1.74 T	0.51	203.54	0.00
1289	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.933	104
		0.98 T	0.06	202.73	6.00
1290	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.953	104
		0.81 C	0.12	206.45	6.00
1291	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.688	104
		0.22 C	0.09	149.14	3.15
1292	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.700	104
		1.53 C	0.02	152.00	3.15
1293	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.919	105
		0.74 C	0.05	199.77	0.00

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
1294	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.937	105
		0.50 C	0.04	203.67	0.00
1295	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.889	105
		1.42 T	0.06	193.33	0.00
1296	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.906	105
		1.59 T	0.04	197.05	0.00
1297	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.817	103
		11.06 C	-1.47	43.47	0.00
1298	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.700	103
		7.24 C	-1.49	36.35	0.00

1299	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.471	103
		464.38 C	18.29	-63.16	4.36
1300	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.623	103
		627.18 C	28.96	-59.14	4.36
1301	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.876	102
		3.88 C	-1.36	48.77	6.00
1302	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.733	102
		1.10 C	-1.58	66.43	6.00

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
1303	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.733	102
		795.82 C	-46.63	0.42	4.36
1304	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.887	103
		835.40 C	61.05	4.02	4.36
1305	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.841	102
		0.81 C	-0.24	52.73	6.00
1306	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.854	103
		0.32 T	-0.23	53.72	0.00
1307	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.741	102
		642.10 C	45.38	-39.89	0.00
1308	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.743	103
		646.12 C	-45.58	-39.22	0.00
1309	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.827	102
		0.68 C	0.04	52.84	6.00
1310	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.845	102
		1.58 T	0.13	53.67	6.00
1311	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.735	102
		644.16 C	45.70	34.99	0.00

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
1312	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.739	103
		643.91 C	-45.88	36.57	0.00
1313	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.929	102
		2.06 C	1.32	52.59	6.00

1314	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.922	102
		0.77 T	1.39	52.08	6.00
1315	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.727	102
		814.37 C	45.34	-0.12	0.00
1316	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.725	103
		814.54 C	-44.80	1.25	0.00
1317	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.846	103
		13.46 C	1.64	44.14	0.00
1318	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.675	102
		3.17 T	1.58	35.17	6.00
1319	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.686	103
		460.86 C	-13.99	-53.20	0.00
1320	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.634	104
		517.89 C	0.03	99.96	4.36

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
1321	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.899	105
		1.64 C	-0.02	195.41	0.00
1322	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.917	105
		0.29 T	0.89	191.96	0.00
1323	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.889	104
		3.79 C	0.07	192.26	6.00
1324	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.911	104
		5.96 C	0.21	195.49	6.00
1325	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.598	104
		4.04 T	0.05	129.87	3.15
1326	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.604	104
		2.53 T	-0.02	131.58	3.15
1327	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.876	105
		5.00 C	0.05	189.36	0.00
1328	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.893	105
		4.27 C	0.07	193.10	0.00
1329	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.846	104
		4.06 T	0.08	183.69	6.00

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION

1330	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.850	104
		3.81 T	0.03	184.90	6.00
1331	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.848	103
		20.25 C	-1.91	41.93	0.00
1332	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.2	0.711	102
		7.31 T	-1.87	35.88	6.00
1333	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.574	102
		308.50 C	-12.89	-51.25	4.35
1334	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.762	103
		400.44 C	21.34	-48.06	4.35
1335	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.674	102
		2.41 C	-1.95	32.96	6.00
1336	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.717	102
		3.48 C	-1.76	36.57	6.00
1337	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.748	102
		532.89 C	-24.45	-5.72	4.35
1338	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.914	103
		553.48 C	34.00	-2.17	4.35

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
1339	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.579	109
		3.32 C	2.16	25.60	6.00
1340	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.561	103
		3.80 C	-0.31	33.99	0.00
1341	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.793	102
		418.28 C	-25.22	34.17	4.35
1342	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.801	102
		420.06 C	-25.67	33.91	4.35
1343	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.583	109
		3.46 C	2.15	25.86	6.00
1344	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.541	103
		3.85 C	0.06	33.93	0.00
1345	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.788	102
		419.13 C	-25.28	-32.42	4.35
1346	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.800	102
		418.80 C	-25.75	-33.43	4.35
1347	TAP ERED		(INDIAN SECTIONS)		

		PASS	IS-7.1.1(A)	0.652	102
		0.13 C	1.81	32.50	6.00

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
1348	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.670	102
		2.05 C	1.94	32.72	6.00
1349	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.716	102
		538.37 C	-22.87	3.34	4.35
1350	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.714	102
		538.76 C	-22.94	2.50	4.35
1351	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.880	103
		17.71 C	2.15	43.09	0.00
1352	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.726	102
		5.46 T	2.21	35.23	6.00
1353	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.600	103
		301.53 C	-14.29	-53.00	0.00
1354	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.539	102
		304.45 C	10.89	-51.96	0.00
1355	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.2	0.811	105
		17.58 T	-0.07	175.69	0.00
1356	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.2	0.843	105
		19.77 T	1.36	170.83	0.00

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
1357	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.790	104
		10.32 T	0.09	171.33	6.00
1358	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.808	104
		6.49 T	0.31	173.40	6.00
1359	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.445	104
		7.30 T	0.04	96.52	3.15
1360	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.2	0.454	105
		9.99 T	-0.15	97.22	0.00
1361	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.778	105
		10.61 T	0.07	168.99	0.00
1362	TAP ERED		(INDIAN SECTIONS)		

		PASS	7.1.2 BEND C	0.794		105
		11.66 T	0.10	172.10		0.00
1363	TAP ERED		(INDIAN SECTIONS)			
		PASS	IS-7.1.2	0.782		104
		14.69 T	0.06	169.87		6.00
1364	TAP ERED		(INDIAN SECTIONS)			
		PASS	7.1.2 BEND C	0.780		104
		13.91 T	0.01	169.85		6.00
1365	TAP ERED		(INDIAN SECTIONS)			
		PASS	IS-7.1.1(A)	0.465		103
		14.23 C	-0.75	12.99		0.00

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
1366	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.380	103
		8.61 C	-0.58	11.08	0.00
1367	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.698	103
		139.32 C	11.93	-109.86	4.35
1368	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.726	103
		173.23 C	13.00	-104.09	4.35
1369	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.281	103
		39.18 C	0.74	3.17	6.00
1370	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.186	103
		16.81 C	0.76	2.47	6.00
1371	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.697	103
		270.21 C	6.56	-1.06	0.00
1372	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.744	102
		272.82 C	-7.77	-3.78	0.00
1373	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.237	103
		33.93 C	0.12	4.04	6.00
1374	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.167	103
		15.44 C	0.28	3.33	6.00

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
1375	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.886	104
		199.71 C	-0.02	99.39	4.35
1376	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.890	104
		200.05 C	0.15	99.17	4.35
1377	TAP ERED		(INDIAN SECTIONS)		

		PASS	IS-7.1.1(A)	0.256		103
		33.98 C	-0.35	4.08		6.00
1378	TAP ERED		(INDIAN SECTIONS)			
		PASS	IS-7.1.1(A)	0.152		103
		15.43 C	-0.07	3.39		6.00
1379	TAP ERED		(INDIAN SECTIONS)			
		PASS	IS-7.1.1(B)	0.861		105
		199.73 C	-0.02	-95.98		4.35
1380	TAP ERED		(INDIAN SECTIONS)			
		PASS	IS-7.1.1(B)	0.888		105
		199.35 C	0.14	-98.93		4.35
1381	TAP ERED		(INDIAN SECTIONS)			
		PASS	IS-7.1.1(A)	0.307		103
		39.59 C	-0.97	3.36		6.00
1382	TAP ERED		(INDIAN SECTIONS)			
		PASS	IS-7.1.1(A)	0.180		103
		17.05 C	-0.54	2.84		6.00
1383	TAP ERED		(INDIAN SECTIONS)			
		PASS	IS-7.1.1(A)	0.716		102
		272.15 C	-6.99	1.79		0.00

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
1384	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.713	102
		272.38 C	-6.74	3.20	0.00
1385	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.492	103
		13.25 C	0.95	13.52	0.00
1386	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.2	0.344	102
		5.07 T	0.61	10.56	6.00
1387	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.680	103
		137.44 C	11.78	105.84	4.35
1388	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.628	102
		138.03 C	-9.07	104.26	4.35
1389	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.793	101
		54.31 C	0.01	160.96	6.00
1390	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.825	101
		51.65 C	-0.01	168.53	6.00
1391	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.796	101
		54.25 C	0.00	161.62	0.00
1392	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.803	101
		49.83 C	-0.01	164.17	0.00

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION

1393	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.408	101
		26.21 C	0.01	83.07	3.15
1394	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.403	101
		22.79 C	0.03	82.74	0.00
1395	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.814	101
		52.12 C	0.01	166.03	6.00
1396	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.806	101
		49.96 C	-0.01	164.79	6.00
1397	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.817	101
		52.40 C	-0.01	166.71	0.00
1398	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.823	101
		51.50 C	0.02	168.08	0.00
1399	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.603	103
		8.04 C	-0.06	61.43	0.00
1400	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.855	103
		11.21 C	-0.04	29.70	0.00
1401	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.817	101
		1379.95 C	-10.89	-70.52	4.36

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
1402	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.941	103
		2323.09 C	-25.30	17.57	0.00
1403	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.624	103
		3.31 T	-0.10	64.56	0.00
1404	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.816	103
		2.91 T	-0.06	29.63	0.00
1405	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.970	101
		2302.78 C	-7.60	-1.96	4.36
1406	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.958	101
		2232.28 C	0.29	4.05	0.00
1407	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.824	103
		0.96 T	-0.02	30.04	0.00
1408	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.827	103
		0.02 T	-0.02	30.14	0.00
1409	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.776	101
		1819.41 C	-0.23	43.91	4.36
1410	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.950	101

		1809.16 C	-0.30	39.51	4.36

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
1411	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.825	103
		0.97 T	0.03	30.03	0.00
1412	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.828	103
		0.04 T	0.03	30.13	0.00
1413	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.777	101
		1820.72 C	-0.23	-43.74	4.36
1414	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.951	101
		1809.67 C	-0.30	-39.43	4.36
1415	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.816	103
		1.30 T	0.08	29.58	0.00
1416	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.815	103
		1.34 T	0.06	29.57	0.00
1417	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.922	101
		2255.68 C	0.16	-2.31	0.00
1418	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.959	101
		2234.81 C	0.29	-4.39	0.00
1419	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.806	103
		9.14 C	0.05	28.14	0.00

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
1420	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.835	102
		6.85 C	0.05	29.47	6.00
1421	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.872	101
		1248.98 C	0.17	66.05	4.36
1422	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.940	103
		2318.98 C	-25.03	-18.09	0.00
1423	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.867	104
		15.79 T	-0.07	188.37	6.00
1424	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.869	105
		1.95 T	-0.06	188.90	0.00
1425	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.855	105

		6.17 T	-0.04	185.97	0.00
1426	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.855	105
		4.09 T	0.02	186.21	0.00
1427	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.642	104
		2.72 T	-0.04	139.63	3.15
1428	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.619	104
		2.06 T	-0.04	134.54	3.15

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
1429	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.859	104
		8.45 T	-0.01	187.06	6.00
1430	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.855	104
		4.10 T	0.01	186.30	6.00
1431	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.872	105
		13.08 T	-0.01	189.86	0.00
1432	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.870	104
		1.95 T	-0.07	189.03	6.00
1433	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.641	103
		5.14 C	-0.30	64.31	0.00
1434	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.884	102
		10.53 C	-0.28	30.13	6.00
1435	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.752	101
		1146.35 C	16.07	83.07	0.00
1436	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.691	103
		1830.75 C	-2.51	53.52	0.00
1437	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.669	103
		2.26 C	-0.39	67.11	0.00

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
1438	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.861	103
		2.68 C	-0.33	30.12	0.00
1439	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.819	101
		1908.85 C	10.21	-2.70	0.00
1440	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.794	101

		1848.71 C	-0.68	1.33	0.00
1441	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.863	103
		1.10 C	-0.10	31.09	0.00
1442	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.868	103
		1.83 C	-0.12	31.13	0.00
1443	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.808	101
		1511.76 C	-0.46	-53.56	0.00
1444	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.805	101
		1502.56 C	-0.52	-54.30	0.00
1445	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.865	103
		1.09 C	0.12	31.09	0.00
1446	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.867	103
		1.81 C	0.11	31.12	0.00

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
1447	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.808	101
		1513.15 C	-0.46	52.11	0.00
1448	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.805	101
		1502.99 C	-0.52	54.05	0.00
1449	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.862	103
		0.82 C	0.33	30.39	0.00
1450	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.863	103
		1.69 C	0.34	30.33	0.00
1451	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.766	101
		1869.25 C	-0.40	3.55	0.00
1452	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.794	101
		1846.28 C	0.59	3.86	4.36
1453	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.830	102
		6.35 C	0.23	28.82	6.00
1454	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.905	102
		9.97 C	0.29	30.96	6.00
1455	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.752	101
		1039.24 C	0.46	-82.17	0.00

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION

1456	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.689	103
		1829.14 C	-2.27	-53.82	0.00
1457	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.962	105
		0.06 C	-0.31	206.88	0.00
1458	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.976	105
		4.07 C	-0.05	211.47	0.00
1459	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.934	104
		1.58 T	-0.09	202.84	6.00
1460	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.931	105
		1.74 C	-0.01	202.29	0.00
1461	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.726	104
		0.01 T	-0.09	157.52	3.15
1462	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.702	104
		1.84 T	-0.09	152.27	3.15
1463	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.939	104
		2.58 C	-0.04	203.77	6.00
1464	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.931	104
		1.71 C	-0.02	202.39	6.00

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
1465	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.929	105
		0.39 C	-0.07	201.76	0.00
1466	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.978	104
		4.06 C	-0.07	211.63	6.00
1467	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.857	103
		1.45 C	-0.43	58.71	0.00
1468	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.737	102
		13.24 C	-0.67	42.21	6.00
1469	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.629	101
		906.83 C	13.20	80.67	0.00
1470	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.956	103
		1297.19 C	6.82	-71.40	4.35
1471	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.2	0.800	103
		13.12 T	-0.62	79.57	0.00
1472	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.2	0.840	103
		38.83 T	-0.69	47.19	0.00
1473	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.808	101
		1509.50 C	-8.27	-2.51	4.35

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
1474	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.951	101
		1468.30 C	0.49	8.39	0.00
1475	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.789	102
		10.08 C	-0.15	48.61	6.00
1476	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.2	0.795	103
		32.11 T	-0.23	47.46	0.00
1477	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.650	101
		1199.10 C	0.40	-52.72	0.00
1478	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.926	101
		1190.97 C	0.34	-42.62	0.00
1479	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.792	102
		10.24 C	0.16	48.72	6.00
1480	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.2	0.794	103
		32.48 T	0.18	47.56	0.00
1481	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.646	101
		1200.02 C	0.40	47.15	0.00
1482	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.926	101
		1191.30 C	0.34	42.39	0.00

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
1483	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.795	102
		7.97 C	0.54	47.28	6.00
1484	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.832	102
		31.49 C	0.73	45.60	6.00
1485	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.755	101
		1485.35 C	0.56	-2.91	0.00
1486	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.953	101
		1470.58 C	0.61	-8.60	0.00
1487	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.563	103
		1.82 C	0.46	33.56	0.00
1488	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.739	102
		10.90 C	0.69	42.52	6.00

1489	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.810	101
		821.61 C	-0.65	76.52	4.35
1490	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.949	103
		1297.87 C	5.77	71.64	4.35
1491	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.976	105
		1.32 T	-0.56	207.72	0.00

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
1492	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.975	105
		0.73 C	-0.01	212.27	0.00
1493	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.950	104
		0.25 T	-0.15	205.76	6.00
1494	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.916	105
		7.48 T	0.03	199.40	0.00
1495	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.696	104
		0.80 C	-0.05	151.03	3.15
1496	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.671	104
		4.45 T	-0.05	145.67	3.15
1497	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.928	105
		0.56 C	-0.04	201.82	0.00
1498	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.915	104
		7.45 T	0.00	199.49	6.00
1499	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.897	105
		1.51 T	-0.03	195.26	0.00
1500	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.979	104
		0.75 C	-0.08	212.46	6.00

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
1501	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.715	103
		2.54 C	-1.74	63.29	0.00
1502	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.813	103
		5.44 T	-1.47	44.64	0.00
1503	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.629	102
		508.21 C	-33.74	-62.97	4.36

1504	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.670	103
		877.39 C	11.66	-32.65	4.36
1505	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.837	103
		2.95 C	-1.52	77.38	0.00
1506	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.757	103
		6.19 C	-1.70	67.48	0.00
1507	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.883	102
		833.03 C	-61.38	0.84	4.36
1508	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.961	103
		828.70 C	-40.05	-31.87	0.00
1509	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.854	102
		3.56 T	-0.20	53.89	6.00

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
1510	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.846	103
		4.61 C	-0.24	52.52	0.00
1511	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.743	103
		644.10 C	-45.50	-40.30	0.00
1512	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.954	103
		636.23 C	-35.69	-40.79	0.00
1513	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.848	102
		3.71 T	0.10	54.03	6.00
1514	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.833	103
		4.67 C	0.06	52.65	0.00
1515	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.736	103
		643.85 C	-45.82	35.28	0.00
1516	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.957	103
		636.62 C	-35.91	40.56	0.00
1517	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.922	103
		1.65 C	1.39	51.84	0.00
1518	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.932	103
		4.69 C	1.32	52.47	0.00

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION

1519	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.727	103
		814.46 C	-45.33	0.21	0.00
1520	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.957	103
		834.66 C	-39.52	31.51	0.00
1521	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.675	103
		0.45 T	1.59	35.18	0.00
1522	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.841	102
		10.77 C	1.65	44.16	6.00
1523	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.685	102
		460.42 C	14.00	-52.92	0.00
1524	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.661	103
		878.10 C	10.16	33.05	4.36
1525	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.945	105
		1.04 C	-0.99	196.99	0.00
1526	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.928	105
		3.04 C	0.09	200.89	0.00
1527	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.907	104
		4.96 C	-0.17	195.16	6.00

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
1528	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.863	105
		1.61 T	0.07	187.38	0.00
1529	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.604	104
		3.26 T	-0.06	131.15	3.15
1530	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.577	104
		1.53 T	-0.06	125.17	3.15
1531	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.882	105
		4.60 C	-0.01	191.15	0.00
1532	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.863	105
		5.96 C	0.04	186.48	0.00
1533	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.850	104
		3.95 T	-0.08	184.64	6.00
1534	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.928	104
		2.96 C	-0.07	201.08	6.00
1535	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.693	103
		0.37 C	-2.34	57.58	0.00
1536	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.2	0.867	103
		13.29 T	-1.95	45.08	0.00

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
1537	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.795	102
		324.70 C	-24.99	-51.70	4.35
1538	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.847	103
		532.93 C	-5.79	45.88	0.00
1539	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.636	103
		4.42 C	-2.26	51.57	0.00
1540	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.721	103
		0.13 T	-1.84	36.80	0.00
1541	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.928	102
		551.00 C	-34.27	-5.37	4.35
1542	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.802	102
		517.71 C	-23.85	-32.22	4.35
1543	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.555	102
		1.78 C	-0.27	34.07	6.00
1544	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.542	103
		4.13 C	-0.31	32.70	0.00
1545	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.786	103
		419.64 C	24.67	34.78	4.35

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
1546	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.885	103
		413.96 C	18.42	29.75	4.35
1547	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.543	102
		1.72 C	0.12	34.05	6.00
1548	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.523	103
		4.06 C	0.08	32.67	0.00
1549	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.780	103
		418.87 C	24.74	-32.63	4.35
1550	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.885	103
		414.18 C	18.45	-29.62	4.35
1551	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.673	102
		4.08 C	1.87	33.05	6.00
1552	TAP ERED		(INDIAN SECTIONS)		

		PASS	7.1.2 BEND C	0.649	103
		1.28 T	1.80	32.43	0.00
1553	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.706	103
		538.40 C	22.37	3.06	4.35
1554	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.804	102
		519.42 C	-23.91	32.17	4.35

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
1555	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.725	103
		1.11 T	2.19	35.24	0.00
1556	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.873	102
		13.41 C	2.17	43.12	6.00
1557	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.599	102
		301.26 C	14.31	-52.69	0.00
1558	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.834	103
		533.30 C	-5.04	-46.07	0.00
1559	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.2	0.876	105
		18.39 T	-1.56	176.61	0.00
1560	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.856	102
		13.55 T	-3.84	146.96	0.00
1561	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.807	104
		8.61 T	-0.26	173.70	6.00
1562	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.787	104
		12.30 T	0.03	167.05	6.00
1563	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.447	104
		6.08 T	-0.07	96.88	3.15

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
1564	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.429	104
		4.32 T	-0.09	90.32	3.15
1565	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.782	105
		11.28 T	-0.02	170.23	0.00
1566	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.788	105
		12.12 T	0.06	167.06	0.00
1567	TAP ERED		(INDIAN SECTIONS)		

		PASS	7.1.2 BEND C	0.785		104
		14.35 T	-0.10	170.17		6.00
1568	TAP ERED		(INDIAN SECTIONS)			
		PASS	7.1.2 BEND C	0.868		102
		13.55 T	-4.15	146.66		6.00
1569	TAP ERED		(INDIAN SECTIONS)			
		PASS	IS-7.1.1(A)	0.416		103
		2.15 C	-0.47	13.63		0.00
1570	TAP ERED		(INDIAN SECTIONS)			
		PASS	IS-7.1.1(A)	0.452		102
		7.78 C	-0.80	13.20		6.00
1571	TAP ERED		(INDIAN SECTIONS)			
		PASS	IS-7.1.1(A)	0.753		102
		140.95 C	-15.05	-109.74		4.35
1572	TAP ERED		(INDIAN SECTIONS)			
		PASS	IS-7.1.1(A)	0.813		102
		66.78 C	-5.95	-123.53		4.35

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
1573	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.175	102
		8.85 C	0.69	3.65	0.00
1574	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.253	102
		30.47 C	0.80	3.09	0.00
1575	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.735	103
		270.48 C	7.82	-2.06	0.00
1576	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.406	102
		265.09 C	-14.59	2.28	0.00
1577	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.132	102
		5.95 C	0.21	3.46	0.00
1578	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.211	102
		24.55 C	0.16	4.15	0.00
1579	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.906	104
		200.49 C	0.33	100.25	4.35
1580	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.638	102
		204.50 C	-11.34	-45.27	0.00
1581	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.128	102
		5.97 C	-0.14	3.51	0.00

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
1582	TAP ERED		(INDIAN SECTIONS)		

		PASS	IS-7.1.1(A)	0.224		102
		24.65 C	-0.31	4.19		0.00
1583	TAP ERED		(INDIAN SECTIONS)			
		PASS	IS-7.1.1(B)	0.880		105
		199.67 C	0.33	-96.78		4.35
1584	TAP ERED		(INDIAN SECTIONS)			
		PASS	IS-7.1.1(B)	0.643		102
		204.55 C	-11.53	45.29		0.00
1585	TAP ERED		(INDIAN SECTIONS)			
		PASS	IS-7.1.1(A)	0.159		102
		8.60 C	-0.60	2.95		0.00
1586	TAP ERED		(INDIAN SECTIONS)			
		PASS	IS-7.1.1(A)	0.278		102
		31.24 C	-0.94	3.46		0.00
1587	TAP ERED		(INDIAN SECTIONS)			
		PASS	IS-7.1.1(A)	0.719		102
		272.52 C	-7.06	1.85		0.00
1588	TAP ERED		(INDIAN SECTIONS)			
		PASS	IS-7.1.1(B)	0.413		102
		265.35 C	-15.03	-2.08		0.00
1589	TAP ERED		(INDIAN SECTIONS)			
		PASS	IS-7.1.1(A)	0.343		103
		0.75 C	0.63	10.57		0.00
1590	TAP ERED		(INDIAN SECTIONS)			
		PASS	IS-7.1.1(A)	0.471		102
		7.44 C	0.93	13.54		6.00

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
1591	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.679	102
		137.33 C	-11.80	105.49	4.35
1592	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.818	102
		66.85 C	-6.18	123.26	4.35
1593	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.794	101
		54.15 C	-0.02	161.08	6.00
1594	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.802	101
		49.84 C	-0.05	159.10	6.00
1595	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.792	101
		53.70 C	0.03	160.61	0.00
1596	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.879	102
		271.27 C	0.55	121.05	6.00
1597	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.406	101
		25.50 C	-0.01	82.86	3.15
1598	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.593	102
		291.11 C	0.27	59.19	0.00
1599	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.812	101
		51.67 C	-0.01	165.71	6.00

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
1600	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.880	102
		271.86 C	0.59	121.01	0.00
1601	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.819	101
		52.23 C	0.01	167.00	0.00
1602	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.802	101
		49.79 C	0.05	159.05	0.00
1603	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.2	0.837	102
		52.68 T	-0.06	27.19	6.00
1604	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.846	103
		2.72 T	-0.09	30.65	0.00
1605	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.950	102
		2333.59 C	26.29	17.72	0.00
1606	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.958	105
		686.50 C	5.02	111.88	0.00
1607	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.814	103
		2.90 T	-0.08	29.48	0.00
1608	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.834	103
		3.18 T	-0.09	30.17	0.00

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
1609	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.961	101
		2239.81 C	0.40	4.08	0.00
1610	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.876	101
		1255.93 C	-9.63	-0.12	4.36
1611	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.825	103
		1.25 T	-0.03	30.05	0.00
1612	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.840	103
		2.69 T	-0.02	30.63	0.00
1613	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.953	101
		1813.53 C	-0.34	39.51	4.36
1614	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.846	105
		921.12 C	4.85	138.67	0.00
1615	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.826	103

		1.27 T	0.04	30.04	0.00
1616	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.841	103
		2.71 T	0.03	30.62	0.00
1617	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.953	101
		1813.26 C	-0.34	-39.41	4.36

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
1618	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.846	104
		920.81 C	4.85	-138.71	0.00
1619	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.813	103
		1.93 T	0.08	29.44	0.00
1620	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.833	103
		2.83 T	0.09	30.14	0.00
1621	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.960	101
		2237.87 C	0.34	-4.41	0.00
1622	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.875	101
		1254.92 C	-9.60	0.14	4.36
1623	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.2	0.836	102
		53.24 T	0.04	27.16	6.00
1624	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.844	103
		2.72 T	0.07	30.61	0.00
1625	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.947	102
		2328.01 C	26.11	-17.99	0.00
1626	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.958	104
		685.96 C	5.02	-111.90	0.00

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
1627	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.874	105
		2.04 T	0.17	189.04	0.00
1628	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.2	0.648	104
		11.99 T	0.05	142.19	6.00
1629	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.856	105
		4.23 T	0.04	186.27	0.00
1630	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.638	105

		1.69 T	0.01	140.92	0.00
1631	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.622	104
		2.17 T	0.10	134.65	3.15
1632	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.555	104
		0.33 T	0.12	122.06	3.15
1633	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.857	104
		4.21 T	0.04	186.39	6.00
1634	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.638	104
		1.69 T	0.01	140.94	6.00
1635	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.875	104
		2.02 T	0.17	189.13	6.00

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
1636	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.2	0.648	105
		11.98 T	0.04	142.18	0.00
1637	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.2	0.812	103
		46.00 T	-0.21	26.26	0.00
1638	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.919	103
		3.92 C	-0.39	31.91	0.00
1639	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.684	102
		1827.61 C	0.93	53.56	0.00
1640	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.950	105
		568.73 C	12.07	89.94	0.00
1641	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.856	103
		2.72 C	-0.29	30.06	0.00
1642	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.886	103
		3.06 C	-0.42	30.74	0.00
1643	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.798	101
		1855.80 C	-0.97	1.27	0.00
1644	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.800	104
		784.76 C	13.56	-104.21	0.00

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
1645	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.863	103

		1.99 C	-0.09	30.99	0.00
1646	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.878	103
		2.47 C	-0.11	31.42	0.00
1647	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.808	101
		1506.61 C	-0.80	-54.34	0.00
1648	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.769	104
		525.09 C	13.61	-140.21	0.00
1649	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.863	103
		1.98 C	0.10	30.99	0.00
1650	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.878	103
		2.47 C	0.12	31.41	0.00
1651	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.808	101
		1506.25 C	-0.79	54.05	0.00
1652	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.769	105
		524.77 C	13.61	140.17	0.00
1653	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.854	103
		1.90 C	0.29	30.09	0.00

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
1654	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.885	103
		2.82 C	0.41	30.76	0.00
1655	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.797	101
		1853.85 C	-0.93	-1.51	0.00
1656	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.800	105
		783.73 C	13.59	104.19	0.00
1657	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.2	0.811	103
		46.02 T	0.21	26.24	0.00
1658	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.917	103
		3.91 C	0.39	31.88	0.00
1659	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.684	102
		1824.46 C	0.93	-53.69	0.00
1660	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.950	104
		568.18 C	12.07	-89.95	0.00
1661	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.989	105
		4.51 C	0.35	211.46	0.00
1662	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.713	105
		3.00 T	0.43	155.02	0.00

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
1663	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.935	105
		2.47 C	0.12	202.16	0.00
1664	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.697	104
		1.99 C	0.19	152.66	6.00
1665	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.708	104
		1.03 T	0.22	152.30	3.15
1666	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.613	104
		2.25 T	0.26	133.96	3.15
1667	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.935	104
		2.47 C	0.12	202.32	6.00
1668	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.697	105
		1.99 C	0.19	152.63	0.00
1669	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.990	104
		4.51 C	0.35	211.55	6.00
1670	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.713	104
		3.00 T	0.43	155.02	6.00
1671	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.2	0.471	101
		53.91 T	0.01	25.04	6.00

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
1672	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.756	103
		4.87 C	-0.78	43.96	0.00
1673	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.942	102
		1292.12 C	-5.43	-71.05	4.35
1674	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.813	105
		445.32 C	10.14	84.30	0.00
1675	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.745	102
		12.58 C	-0.20	45.19	6.00
1676	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.815	103
		13.36 C	-0.78	46.62	0.00
1677	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.955	101
		1474.99 C	0.42	7.73	0.00
1678	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.986	101
		818.99 C	-9.98	-1.24	4.35

1679	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.715	102
		6.68 C	-0.09	44.67	6.00
1680	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.746	103
		10.55 C	-0.21	45.48	0.00

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
1681	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.929	101
		1194.74 C	0.46	-42.80	0.00
1682	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.938	104
		432.20 C	-9.75	120.40	4.35
1683	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.717	102
		6.96 C	0.09	44.77	6.00
1684	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.748	103
		10.62 C	0.21	45.58	0.00
1685	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.929	101
		1194.25 C	0.46	42.53	0.00
1686	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.938	105
		431.84 C	-9.76	-120.35	4.35
1687	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.745	102
		10.57 C	0.20	45.53	6.00
1688	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.827	103
		13.90 C	0.78	47.28	0.00
1689	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.954	101
		1473.02 C	0.40	-7.92	0.00

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
1690	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.985	101
		817.97 C	-9.98	1.27	4.35
1691	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.2	0.469	101
		53.98 T	-0.01	24.92	6.00
1692	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.754	103
		4.88 C	0.78	43.85	0.00
1693	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.941	102
		1290.43 C	-5.42	71.10	4.35

1694	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.812	104
		444.77 C	10.14	-84.31	0.00
1695	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.998	105
		3.40 C	0.41	213.04	0.00
1696	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.723	105
		0.19 C	0.55	156.49	0.00
1697	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.924	105
		1.46 T	0.19	199.63	0.00
1698	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.694	104
		0.40 T	0.24	152.08	6.00

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
1699	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.686	104
		1.22 C	0.35	146.11	3.15
1700	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.571	104
		0.05 T	0.39	123.88	3.15
1701	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.924	104
		1.56 T	0.19	199.79	6.00
1702	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.694	105
		0.39 T	0.24	152.05	0.00
1703	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.998	104
		3.34 C	0.42	213.08	6.00
1704	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.722	104
		0.20 C	0.55	156.48	6.00
1705	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.2	0.565	103
		30.86 T	1.39	26.38	6.00
1706	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.864	103
		5.64 C	-1.84	45.30	0.00
1707	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.656	102
		872.55 C	-9.91	-33.22	4.36

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
1708	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.717	105
		319.65 C	-8.95	-85.66	4.36

1709	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.794	103
		5.83 C	-1.22	43.94	0.00
1710	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.734	103
		5.87 C	-1.89	63.90	0.00
1711	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.970	103
		787.69 C	-40.27	41.69	0.00
1712	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.916	102
		475.87 C	-29.67	-0.79	4.36
1713	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.754	103
		5.32 C	-0.17	46.91	0.00
1714	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.804	103
		6.15 C	-0.19	49.93	0.00
1715	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.943	102
		640.49 C	34.82	-40.64	0.00
1716	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.929	102
		385.34 C	28.86	-22.43	0.00

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	**TABLE**	**RESULT/ FX**	**CRITICAL COND/ MY**	**RATIO/ MZ**	**LOADING/ LOCATION**
1717	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.750	103
		5.39 C	0.10	47.01	0.00
1718	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.799	103
		6.24 C	0.10	50.06	0.00
1719	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.946	102
		639.92 C	35.08	40.49	0.00
1720	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.931	102
		384.96 C	28.99	22.28	0.00
1721	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.863	103
		4.54 C	1.30	48.13	0.00
1722	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.740	103
		5.33 C	1.89	64.58	0.00
1723	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.992	103
		785.21 C	-42.20	-41.67	0.00
1724	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.935	102
		477.42 C	30.53	-0.90	0.00
1725	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.2	0.569	103
		31.96 T	-1.46	26.15	6.00

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
1726	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.871	103
		5.64 C	1.94	45.18	0.00
1727	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.655	102
		870.83 C	-9.86	33.34	4.36
1728	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.716	104
		319.10 C	-8.93	85.66	4.36
1729	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.952	105
		3.34 C	0.51	202.24	0.00
1730	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.677	105
		0.68 T	0.68	145.76	0.00
1731	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.877	104
		6.63 C	0.32	186.96	6.00
1732	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.661	104
		1.32 C	0.39	143.75	6.00
1733	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.592	104
		0.75 T	0.38	125.78	3.15
1734	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.484	104
		1.17 T	0.40	104.57	3.15

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
1735	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.877	104
		1.11 T	0.35	187.95	6.00
1736	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.661	105
		1.33 C	0.38	143.72	0.00
1737	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.952	104
		3.34 C	0.51	202.24	6.00
1738	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.677	104
		0.69 T	0.67	145.74	6.00
1739	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.2	0.648	103
		23.10 T	1.81	30.43	6.00
1740	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.899	103
		9.17 C	-2.36	44.37	0.00
1741	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.827	102
		528.67 C	5.01	45.95	0.00
1742	TAP ERED		(INDIAN SECTIONS)		

		PASS	IS-7.1.1(B)	0.644	102
		184.85 C	18.65	35.53	0.00
1743	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.610	102
		3.53 C	-1.80	29.43	6.00

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
1744	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.666	103
		2.32 C	-2.01	32.09	0.00
1745	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.820	103
		521.16 C	24.72	-32.40	4.35
1746	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.830	102
		304.20 C	-30.12	-3.03	4.35
1747	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.457	102
		2.39 C	-0.25	27.82	6.00
1748	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.479	103
		2.37 C	-0.24	29.23	0.00
1749	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.873	102
		417.11 C	-17.89	29.78	4.35
1750	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.885	102
		242.78 C	-31.22	20.58	4.35
1751	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.450	102
		2.39 C	0.13	27.90	6.00
1752	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.469	108
		3.12 C	0.84	25.40	0.00

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
1753	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.875	103
		424.50 C	18.31	-26.89	4.35
1754	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.890	102
		242.26 C	-31.48	-20.41	4.35
1755	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.605	102
		5.26 C	1.80	28.86	6.00
1756	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.658	103
		2.08 C	2.01	31.57	0.00
1757	TAP ERED		(INDIAN SECTIONS)		

		PASS	IS-7.1.1(B)	0.835		103
		519.34 C	25.63	32.40		4.35
1758	TAP ERED		(INDIAN SECTIONS)			
		PASS	IS-7.1.1(B)	0.849		102
		302.74 C	-31.01	3.12		4.35
1759	TAP ERED		(INDIAN SECTIONS)			
		PASS	IS-7.1.2	0.651		103
		21.97 T	-1.91	30.24		6.00
1760	TAP ERED		(INDIAN SECTIONS)			
		PASS	IS-7.1.1(A)	0.906		103
		9.66 C	2.48	44.14		0.00
1761	TAP ERED		(INDIAN SECTIONS)			
		PASS	IS-7.1.1(A)	0.823		102
		527.27 C	4.84	-46.02		0.00

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
1762	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.646	104
		199.44 C	-10.01	80.38	4.35
1763	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.872	103
		13.85 T	4.17	147.23	0.00
1764	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.2	0.595	105
		7.05 T	0.69	127.40	0.00
1765	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.800	104
		12.14 T	0.32	167.08	6.00
1766	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.592	104
		4.80 T	0.39	128.63	6.00
1767	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.442	104
		4.21 T	0.41	90.19	3.15
1768	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.349	104
		1.96 T	0.44	74.64	3.15
1769	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.799	105
		12.12 T	0.31	166.93	0.00
1770	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.592	105
		4.78 T	0.39	128.61	0.00

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
1771	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.880	103
		13.81 T	4.39	147.02	6.00
1772	TAP ERED		(INDIAN SECTIONS)		

		PASS	IS-7.1.2	0.594	104
		7.05 T	0.67	127.35	6.00
1773	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.2	0.227	103
		7.24 T	-0.13	7.52	6.00
1774	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.515	103
		11.36 C	-1.21	14.34	0.00
1775	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.835	103
		65.82 C	6.82	-123.69	4.35
1776	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.609	102
		79.86 C	-13.29	-63.57	4.35
1777	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.2	0.153	103
		6.24 T	0.16	4.76	6.00
1778	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.2	0.278	102
		22.01 T	0.97	5.87	0.00
1779	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.422	102
		282.44 C	-14.72	3.54	0.00

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
1780	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.520	103
		149.88 C	17.52	0.37	0.36
1781	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.131	102
		0.85 T	0.11	4.48	0.00
1782	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.2	0.177	102
		18.14 T	0.00	5.30	0.00
1783	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.635	103
		201.97 C	-8.24	62.22	4.35
1784	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.687	103
		115.64 C	22.11	-27.00	0.00
1785	TAP ERED		(INDIAN SECTIONS)		
		PASS	7.1.2 BEND C	0.134	102
		0.81 T	-0.07	4.68	0.00
1786	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.326	103
		22.72 C	-0.27	8.27	6.00
1787	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.656	103
		201.00 C	-9.15	-61.85	4.35
1788	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.687	103
		115.21 C	22.13	27.00	0.00

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
1789	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.2	0.165	102
		2.72 T	-0.17	5.43	0.00
1790	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.377	103
		27.04 C	-1.03	7.34	6.00
1791	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(B)	0.439	102
		280.43 C	-15.75	-3.71	0.00
1792	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.580	103
		149.23 C	20.39	-0.36	0.00
1793	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.2	0.219	102
		8.55 T	0.05	7.36	0.00
1794	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.478	103
		10.80 C	0.98	13.21	0.00
1795	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.814	103
		64.79 C	6.10	123.50	4.35
1796	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.597	102
		79.34 C	-12.76	63.57	4.35
1797	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.802	101
		51.01 C	-0.05	158.79	6.00

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
1798	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.449	105
		21.46 C	0.48	92.66	0.00
1799	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.879	103
		273.74 C	-0.46	121.29	6.00
1800	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.493	104
		26.94 C	0.14	103.50	6.00
1801	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.600	103
		293.98 C	-0.47	59.07	0.00
1802	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.240	104
		9.47 C	0.53	48.46	3.15
1803	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.882	103
		274.51 C	-0.55	121.19	0.00
1804	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.499	105
		26.87 C	0.36	103.50	0.00
1805	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.801	101

		50.99 C	-0.02	158.82	0.00
1806	TAP ERED		(INDIAN SECTIONS)		
		PASS	IS-7.1.1(A)	0.456	104
		21.42 C	0.78	92.61	6.00

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
1807 ST	PIP2191M		(INDIAN SECTIONS)		
		PASS	COMPRESSION	0.843	103
		358.09 C	0.00	0.00	0.00
1808 ST	PIP2191M		(INDIAN SECTIONS)		
		PASS	COMPRESSION	0.805	102
		341.63 C	0.00	0.00	0.00
1809 ST	PIP2191M		(INDIAN SECTIONS)		
		PASS	COMPRESSION	0.805	103
		341.82 C	0.00	0.00	0.00
1810 ST	PIP2191M		(INDIAN SECTIONS)		
		PASS	COMPRESSION	0.844	102
		358.39 C	0.00	0.00	0.00
1811 ST	PIP2191M		(INDIAN SECTIONS)		
		PASS	COMPRESSION	0.768	103
		325.94 C	0.00	0.00	0.00
1812 ST	PIP2191M		(INDIAN SECTIONS)		
		PASS	COMPRESSION	0.756	102
		321.24 C	0.00	0.00	0.00
1813 ST	PIP2191M		(INDIAN SECTIONS)		
		PASS	COMPRESSION	0.757	103
		321.62 C	0.00	0.00	0.00
1814 ST	PIP2191M		(INDIAN SECTIONS)		
		PASS	COMPRESSION	0.768	102
		326.23 C	0.00	0.00	0.00
1815 ST	PIP2191M		(INDIAN SECTIONS)		
		PASS	COMPRESSION	0.793	103
		336.66 C	0.00	0.00	0.00

ALL UNITS ARE - KN METE (UNLESS OTHERWISE Noted)

MEMBER	TABLE	RESULT/ FX	CRITICAL COND/ MY	RATIO/ MZ	LOADING/ LOCATION
1816 ST	PIP2191M		(INDIAN SECTIONS)		
		PASS	COMPRESSION	0.793	102
		336.93 C	0.00	0.00	0.00
1817 ST	PIP2191M		(INDIAN SECTIONS)		
		PASS	COMPRESSION	0.795	103
		337.58 C	0.00	0.00	0.00
1818 ST	PIP2191M		(INDIAN SECTIONS)		
		PASS	COMPRESSION	0.794	102
		337.06 C	0.00	0.00	0.00
1819 ST	PIP1651M		(INDIAN SECTIONS)		
		PASS	COMPRESSION	0.909	103
		195.00 C	0.00	0.00	0.00
1820 ST	PIP1651M		(INDIAN SECTIONS)		
		PASS	COMPRESSION	0.905	102

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 5184      TAP ERED                (INDIAN SECTIONS)
                      PASS     7.1.2 BEND C       0.253       104
                   1.25 T         -1.60           9.77       0.20
 5185      TAP ERED                (INDIAN SECTIONS)
                      PASS     IS-7.1.1(A)        0.452       105
                   1.58 C         -0.95          30.19       0.00


************** END OF TABULATED RESULT OF DESIGN **************


2726. STEEL TAKE OFF LIST ALL

 STEEL TAKE-OFF
 --------------

    PROFILE                  LENGTH(METE)      WEIGHT(KN  )

 Tapered   MembNo:      1      3328.63           661.117
 Tapered   MembNo:     57       661.96           407.673
 Tapered   MembNo:     58       278.72           343.304
 Tapered   MembNo:    176       801.32           629.211
 Tapered   MembNo:    177       278.72           308.973
 Tapered   MembNo:    296       975.52           946.231
 Tapered   MembNo:    715       651.60           205.663
 Tapered   MembNo:    716      3686.38          1660.155
 Tapered   MembNo:    977       431.15           318.629
 Tapered   MembNo:   1015      1607.99           368.886
 Tapered   MembNo:   1108       618.41           357.049
 Tapered   MembNo:   1113       374.53           259.489
 Tapered   MembNo:   1136      1186.98           525.414
 Tapered   MembNo:   1157       370.18           176.681
 Tapered   MembNo:   1201       418.08           457.023
 Tapered   MembNo:   1285       557.44           364.760
 Tapered   MembNo:   1302       156.00            49.718
 Tapered   MembNo:   1467      1673.99           396.914
 Tapered   MembNo:   1628       409.80           212.944
 ST  PIP2191M                   711.74           206.014
 ST  PIP1651M                  1254.79           233.764
 ST  PIP1143M                   759.91            90.674
 Tapered   MembNo:   3579        72.00            17.626
 Tapered   MembNo:   3602        87.10            72.416
 Tapered   MembNo:   3773         6.00             3.095
 Tapered   MembNo:   3774       116.22            38.919
 Tapered   MembNo:   4698        30.00             6.753
 Tapered   MembNo:   4732        30.00             5.543
 Tapered   MembNo:   4862       280.38            85.905
 Tapered   MembNo:   4869        13.35             2.491
 Tapered   MembNo:   5038       116.22            48.760
 Tapered   MembNo:   5054        90.00            23.945
                                          ----------------
                                TOTAL =       9485.739


************ END OF DATA FROM INTERNAL STORAGE ************


2727. FINISH


           *********** END OF THE STAAD.Pro RUN ***********
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SECTION 2.2
Anchor Bolt & Base Plate Design

PROJECT:-		**DESIGN**	**BP3**
BLDG. NAME:-	**HOSPITAL BLDG**	**DETAIL A.B**	**F1**
CLIENT:-		**NODE NO.**	
LOCATION:-		**FRAME NO.**	

SECTION SIZES:

Depth of Web of column, d_w =	500	mm
Thickness of column web, t_w =	8	mm
Width of column flange, b_f =	375	mm
Thickness of column flange, t_f =	16	mm

BASE PLATE DETAILS:

Yield stress of Plate, F_y =	345	Mpa	
Length of Base Plate, L =	880	mm	=880
Width of Base Plate, B =	670		
Thickness of Base Plate, t =	36.0	mm	
Cantilever along Length from centre of P1/2 Sti	166	mm	B
Cantilever along Width from Centre stiff =	335	mm	= 330

ANCHOR BOLT DETAILS:

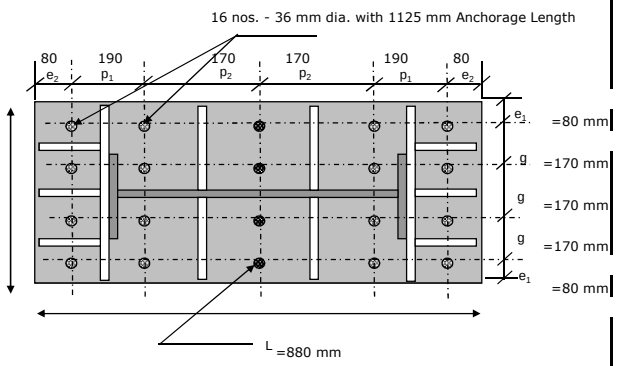
Dia. Of Anchor Bolt near to flanges, d_b =	36	mm	
Anchorage length Of bolt, l =	1125	mm	> 1080
No. of Bolts nearer to both flanges, N1 =	16		
Spacing of Bolts, g =	170.00	mm	
Spacing of Bolts, p_1 =	190.00	mm	
Spacing of Bolts, p_2 =	170.00	mm	
Edge Distance of Bolts, e_1 =	80.00	mm	
Edge Distance of Bolts, e_2 =	80.00	mm	
Diameter Of Anchor Bolt at centre, d'$_b$ =	16	mm	
Anchorage length Of bolt at Centre, l' =	600	mm	> 480
No. of Bolts at centre, N2 =	4		
Grade of Bolts =	4.6		

STIFFENER DETAILS:

Thickness of stiffener, ts =	8	mm
width of stiffener, w =	50	mm
Height of stiffener, h =	335	mm

Pedestal Details:

Grade of Concrete =	M 30		
Maximum Bearing Pressure, F_b =	8.48	Mpa	IS 456:2000 Cl. 34.4
Length of Pedetsal =	980	mm	
Width of Pedetsal =	770	mm	



Upward Force	" -ve "
Downward Force	" +ve "
Anticlockwise Moment	"-ve "
Clockwise Moment	" +ve "

LOAD COMB.	Shear Fx, KN	Vertical Fy, KN	Shear Fz, KN	Moment My, KNm	Moment Mz, KNm	Moment Mr, KNm	Shear Fr, KN
104 1EQ3+1DL	-55.89	1140.491	-54.445	2.773	-187.092	**189.1**	**79.0**
104 1EQ3+1DL	-14.033	2601.847	-301.463	18.296	-25.521	**17.8**	**302.0**
104 1EQ3+1DL	19	-617.145	-221.93	-26.449	-23.306	**188.1**	**223.0**
104 1EQ3+1DL	13.773	2586.689	-307.164	-17.086	-27.31	**189.1**	**309.0**

Provide Base Plate 880 mm x 670 mm x 36 mm with 16 nos. 36 dia. nearer to the flanges & 4 nos.16 dia. at the centre with 8 mm thk. Siffeners

CALCULATIONS FOR TENSION IN BOLTS

CASE I : 104 1EQ3+1DL SP 40 PAGE NO-24

Compressive Force P= 1140.491 M= 187.092

Calculating the value of Y

1/2 x Fb x(L-e2)^2 xK x B x (1-1/3 K) - P x (L/2 - e2) - Mz = 0

1/2x8.49 x800^2x K x670x(1-1/3K)-1140.491x1000x360-187.092x 10^6 =0

K^2- 3K +0.986=0

K1= 2.624 OR K2= 0.376

Y=Kx(L-e_2)= 2.625x800 OR Y= 0.376x800

Y= 2099.55 OR 300.45

300.45

Tension in bolts due to Major Moment, T1 =1/2xFbxYxB ± P=

Tension in bolts due to Major Moment, T_1 = -286.5 KN T = -270.2 KN

Tension in bolts due to Minor Moment, T_2 = 16.3 KN **Compressive For**

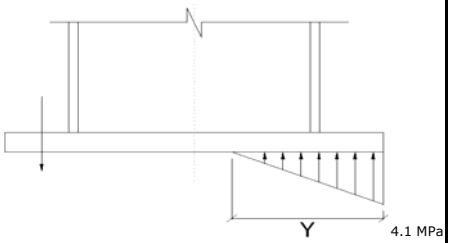
Total Tension in bolts, T = -270.2 KN

Total Shear in bolts, S = 79.0 KN

Check for Base Plate Under Bearing Pressure

(P/(B x L)) ± (6 x Mz / B x L^2) ± (6 x My / L x B^2) < F_b

4.1 MPa **[HENCE SAFE]**



PROJECT:-		DESIGN	BP3
BLDG. NAME:-	HOSPITAL BLDG	DETAIL A.B	F1
CLIENT:-		NODE NO.	
LOCATION:-		FRAME NO.	

CASE II : 104 1EQ3+1DL

Compressive Force P= 2601.847 M= 25.521

Calculating the value of Y

1/2 x Fb x(L-e2)^2 xK x B x (1-1/3 K) - P x (L/2 - e2) - Mz = 0

1/2x8.49 x800^2x K x670x(1-1/3K)-2601.847x1000x360-25.521x 10^6 =0

K^2- 3K +1.587=0

K1= 2.314 OR K2= 0.686

Y=Kx(L-e2)= 2.315x800 OR Y= 0.686x800

Y= 1851.51 OR 548.49

548.49

Tension in bolts due to Major Moment, T1 =1/2xFbxYxB ± P=

Tension in bolts due to Major Moment, T_1 = -1042.8 KN T = -935.2 KN

Tension in bolts due to Minor Moment, T_2 = 107.6 KN **Compressive Force**

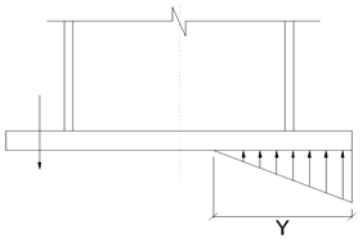
Total Tension in bolts, T = -935.2 KN

Total Shear in bolts, S = 302.0 KN

Check for Base Plate Under Bearing Pressure

$(P/(B \times L)) \pm (6 \times Mz / B \times L^2) \pm (6 \times My / L \times B^2) < F_b$

4.4 MPa **[HENCE SAFE]**



4.4 MPa

CASE III : 104 1EQ3+1DL

Tensile Force P= 617.145 M= 23.306

Calculating the value of Y

1/2 x Fb x(L-e2)^2 xK x B x (1-1/3 K) + P x (L/2 - e2) - Mz = 0

1/2x8.49 x800^2x K x670x(1-1/3K)-617.145x1000x360-23.306x 10^6 =0

K^2- 3K +-0.328=0

K1= 3.106 OR K2= -0.106

Y=Kx(L-e2)= 3.106x800 OR Y= -0.106x800

Y= 2484.48 OR -84.48

Y VALUE BEYOND BASE PLATE, THUS IGNORED

Tension in bolts due to Major Moment, T1 =1/2xFbxYxB ± P=

Tension in bolts due to Major Moment, T_1 = 617.1 KN

Tension in bolts due to Minor Moment, T_2 = 155.6 KN T = 772.8 KN

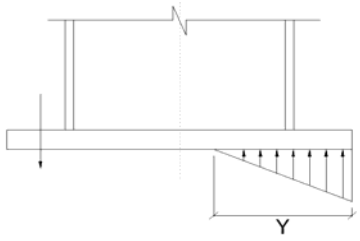
Total Tension in bolts, T = 772.7 KN **Tensile Force**

Total Shear in bolts, S = 223.0 KN

Check for Base Plate Under Bearing Pressure

$(P/(B \times L)) \pm (6 \times Mz / B \times L^2) \pm (6 \times My / L \times B^2) < F_b$

-0.4 MPa **[HENCE SAFE]**



-0.4 MPa

CASE IV : 104 1EQ3+1DL

Compressive Force P= 2586.689 M= 27.31

Calculating the value of Y

1/2 x Fb x(L-e2)^2 xK x B x (1-1/3 K) - P x (L/2 - e2) - Mz = 0

1/2x8.49 x800^2x K x670x(1-1/3K)-2586.689x1000x360-27.31x 10^6 =0

K^2- 3K +1.581=0

K1= 2.318 OR K2= 0.682

Y=Kx(L-e2)= 2.319x800 OR Y= 0.682x800

Y= 1854.47 OR 545.53

545.53

Tension in bolts due to Major Moment, T1 =1/2xFbxYxB ± P=

Tension in bolts due to Major Moment, T_1 = -1036.1 KN

Tension in bolts due to Minor Moment, T_2 = 0.0 KN T = -1036.1 KN

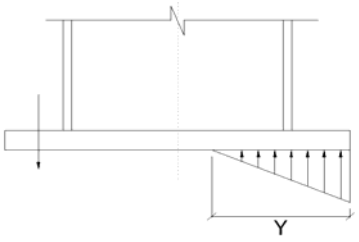
Total Tension in bolts, T = -1036.1 KN **Compressive Force**

Total Shear in bolts, S = 309.0 KN

Check for Base Plate Under Bearing Pressure

$(P/(B \times L)) \pm (6 \times Mz / B \times L^2) \pm (6 \times My / L \times B^2) < F_b$

3.8 MPa **[HENCE SAFE]**



3.8 MPa

MAXIMUM FORCE IN BOLTS = 772.7 KN

Maximum force in each bolt in tension = 92.7 KN CASE 3

ζ_{vf}, cal = Calculated Shear Stress in Bolt in Kg/cm^2

σ_{tf}, cal = Calculated Axial Stress in Bolt in Kg/cm^2

ζ_{vf} = Permissible Shear in Bolt = 80 N/mm2

σ_{tf} = Permissible Axial Tension in Bolt = 120 N/mm2

Factor for Permissible Stresses = 1

Check: **IS800-1984-CL: 8.9.4.5**

$$\frac{\zeta_{vf,\ cal}}{\zeta vf} + \frac{\sigma_{tf,\ cal}}{\sigma tf} \le 1.4$$

$$\frac{223 * 1000}{N1 \times 1017.4 + N2 \times 201} \Big/ 80 \times 1 + \frac{772.8*1000}{0.8 \times (N1/2 \times 1017.4)} \Big/ 120 \times 1 \le 1.4$$

0.16 + 0.986 ≤ 1.4 **[HENCE SAFE]**

Calculation for anchor bolt length **IS456-2000-CL: 26.2.1**

Permissible bond stress of Plain bars in tension , ζ_{bd} = 1.0 N/mm2

Overall Anchorage length required = T x d_b /(4* A x ζbd)

Thus $D_{overall}$ = 820.1 mm **[ANCHORAGE LENGTH PROVIDED IS SUFFICIENT]**

CALCULATION FOR MAXIMUM BENDING MOMENT IN BASE PLATE DUE TO TENSION

ON TENSION SIDE :

M = (Max Tensile force in Bolt*0.75/2)*(Max(a1,a2))

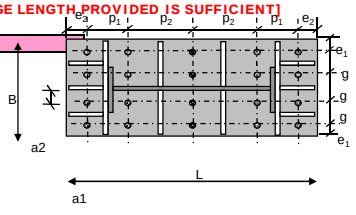
M = 8864567.6 N-mm

Thickness of base plate required for tension

SQRT(6 x M/(b x fy x 0.75)) = **35.2** mm

b= Cantilever along Length from centre of P1/2

Since the load is due to wind, the allowable stress may be increased by 33%, which is equivalent to reducing the uplift force



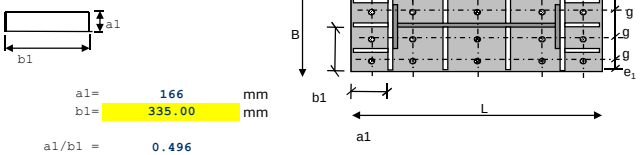
PROJECT:-			DESIGN	BP3
BLDG. NAME:-	HOSPITAL BLDG		DETAIL A.B	F1
CLIENT:-			NODE NO.	
LOCATION:-			FRAME NO.	

CALCULATION FOR MAXIMUM BENDING MOMENT IN BASE PLATE DUE TO COMPRESSION

CHECKING OF PLATE THICKNESS BY W.T MOODY

Base Plate Thickness :-

Exterior Panel : Two Continuous Edge is Fixed & T



a1= 166 mm

b1= 335.00 mm

a1/b1 = 0.496

Assuming Y/b	1
Assuming X/a	0

Moment Coefficient a3 = 0.106 after interpolation

For Coefficient See Page 33 of Moment & Reaction for rectangular plate by W.T Moody

Moment On Compression Side :

M = a3 x s con-max x d1^2 = 52217.4 N-mm/mm

Thickness of base plate required for Compression
SQRT(6 x M/(0.75 x Fy x 1.25)) = **31.1** mm

***The Base Plate thickness should not be less than this thickness.**

25% stress increse has been considered.

Maximum Thickness Of Base Plate = Max (Compression, Tension)

Maximum Thickness Of Base Plate (t) = **35.2** mm

=

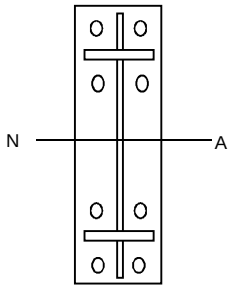
t = 36.0 mm **[HENCE SAFE]**

SECTION 2.3
CONNECTION PLATE DESIGN

JOB NO.		Rev. No.	
OWNER		Date	
CONSULTANT		Designed By	
MAIN CONTRACTOR		Checked By	
PROJECT		Recommded By	
BUILDING		Approved By	

FOUR/EIGHT BOLT MOMENT CONNECTION IS PROVISION AS PER WSD FOR 8.8 GRADE BOLT UTS 800MPa

Frame No.	
Location.	R14
Node No.	
Load Case	
Connection No.	CP-1



	SI units		
Nominal Dia. Of Bolt 'db' =	20	mm	
Fillet weld size in flange 'w1' =	4	mm	
Throat Size t1 =	3		
Fillet weld size in web 'w2' =	4	mm	
Throat Size t2=	3		
Number of bolt near one flange 'N' =	4		
Depth of connected beam 'd' =	400	mm	
Width of beam flange 'bf' =	165	mm	
thickness of beam flange 'tf' =	6	mm	
thickness of beam web 'tw' =	5	mm	
Shear Force 'V' =	62	kN	
Bending Moment 'M' =	92	kN-m	
Tension Force 'T' =	1	kN	
Stiffner Condition =	4	PLEASE REFER STIFFNER CONDITION TABLE	
Yield stress of material 'Fy'=	345		
β=	1	(2-for Non pre tensioned bolt & 1-for pre tensioned bolt)	

y_{mf}	1.25			
y_{m1}	1.25			
y_m	1.1			
y_{mw}	1.25			

Proof Stress f0=0.7X fu 'f0'=0.7x800=	560	REFER TABLE 1 SNO (iv) ULTIMATE STRENGTH (fu) & clause 10.4.3 for proof stress		
Clause 10.2.4.2 End distance 'Ed'=	40	mm	> 1.5x D 30	For Machine Flame cut, sawn & Planed edge
$le=1.1xt_{(provided)} \times \sqrt{(\beta f_0/fy)}$ =	20.58	mm	**IS 800:2007 Cl 10.4.7**	
lv=	40.00	mm	**Distance b/w centre of bolt to fillet weld of flange.**	

Check For Tension:

Flange Force 'Ff' = M / (d+tf) +T/2	227.10	kN		
Tension per bolt 'Tb' =Flange Force/N =	56.77	kN		
Prying Force=Q				
Q= (lv/(2le))x(Te-βγf0bet^4/(27le^2xlv^2)	28.73	kN	**IS 800:2007 Cl 10.4.7**	
Total Tension in the bolt = Tb+Q=	85.50	kN		
ominal Tension Capacity of the Bolt (T_{nf})=	163.4	kN	**$0.9xF_{ub}$ x A_n**	**IS 800:2007 Cl 10.4.5**
ominal Tension Capacity of the Bolt (T_{nf})=	228.5	kN	**fyb x A_{sb} x y_{m1}/y_m**	**IS 800:2007 Cl 10.4.5**
Hence T_{nf} = Min of above two	163.4			
Capacity of Bolt (T_{df})= T_{nf}	98.1	kN	**=0.6 x T_{nf}**	**IS 800:2007 Cl 11.6.2.3**
			Hence OK	
			0.871932938	

Check For Shear:

Shear per Bolt 'Tsb'=Shear Force/2N =	7.8	kN		
ar Plane with thread intercepting = n_n=	0.0			
ear Plane without thred intercepting= n_s=	1.0			
Distance b/w extreme rows of bolt(l_j)=	496.0	>	**15db Reduction for Long Joint requi**	**IS 800:2007 Cl 10.3.3.1**
Reduction Factor for shear (β_{ij}) =	0.95		**where $0.75 \leq \beta_{ij} \leq 1.0$**	

JOB NO.		Rev. No.	
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PROJECT		Recommded By	
BUILDING		Approved By	

Design Shear Strength of the Bolt = V_{dsb}= 137.99 kN — $(fu/\sqrt{3})x(n_n x\ A_{nb}+n_s x\ A_{sb})x\beta_{ij}$ IS 800:2007 Cl 10.3.3 (Cl 11.6.2)

Reduction Factor for Bearing 'K_b'= 0.61 — kb=min of $e/3d_0, p/3d_0-0.25, f_{ub}/f_u, 1$ As Per IS 800:2007 Cl 10.3.4 (Cl 11.6.2)

Design Bearing Strength of the Bolt =V_{dpb}= 163.64 kN — $(2.5\ k_b\ d\ t\ f_u)$ As Per IS 800:2007 Cl 10.3.4

Design Shear Strength of Bolt=V_{db}= 138.00 kN — Min of V_{dpb} & V_{dsb} Hence OK

perm. Shear strength of bolt = 82.80 kN — =0.6 x V_{db} as per IS800 2007 Cl(11.6.2.1)

Check For Combined Shear & Tension:

Tension stress per Bolt = 85.50 kN

Design Tensile stress of the Bolt = 98.06 kN

Actual Shear stress per Bolt = 7.75 kN

Design shear stress of the bolt = 82.80 kN

Combined Stress Ratio (Shear+ Tension) = $(V_{sf}/V_{df})^2 + (T_f/T_{df})^2 < 1$ IS 800:2007 Cl 11.6.2.5

(7.75/82.8)^2+(85.5/98.05)^2 =

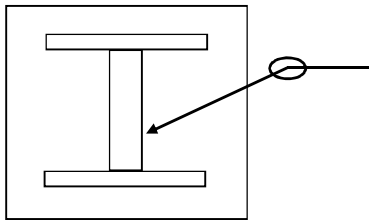
= 0.77 OK

B. Top flange with stiffner to end plate weld :

FD= SHEAR STRESSES

FM= BENDING STRESSES

$$FD = \frac{\text{SHEAR FORCE 'V'}}{\sum \text{LENGTH OF WELD(L)} \times 2.828}$$



PROVIDE FILLET WELD AROUND WEB AND FLANGE

FD= 10.61 N/mm2

$$FM = \frac{M\ X\ Ymax}{Ix}$$

Y max= (580-20)/2

Y max= 280 mm

Ix= (((165x2.828^3/12)+((165x2.828)(206^2)))X4)+((2.8212)x2)+2x(155x2.828^3/12)

Ix= 156773475 mm^4

FM= 164.31 N/mm2

RESULTANT= $(FM^2+3 \times FD^2)^{0.5}$ IS 800: 2007 Cl: 11.5.4

RESULTANT= 165.34 N/mm2.

JOB NO.		**Rev. No.**	
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MAIN CONTRACTOR		**Checked By**	
PROJECT		**Recommded By**	
BUILDING		**Approved By**	

Design Shear Strength of weld ' 211.31 N/mm2 **As per Cl 10.5.7.1.1 . We are using 70xx electrode but using the property of 56xx as per Table 1 800-2007 designing on conservative side**

maximum perm. Weld stress = 0.4 x fy = 193.2 N/mm2 **As per IS 800: 2007 Cl (11.6.3)**

165.34 N/mm2 < 193.2 N/mm2 SAFE

PROVIDE FILLET WELD AROUND WEB AND FLANGE

C. End Plate Design :

Tension in extreme bolt 'Tb' = 56.77 KN

Moment due to tension at Flange top = (56.77x22x2)/1000 = 2.50 KN-m

Design Moment Md = 2.50 KN-m

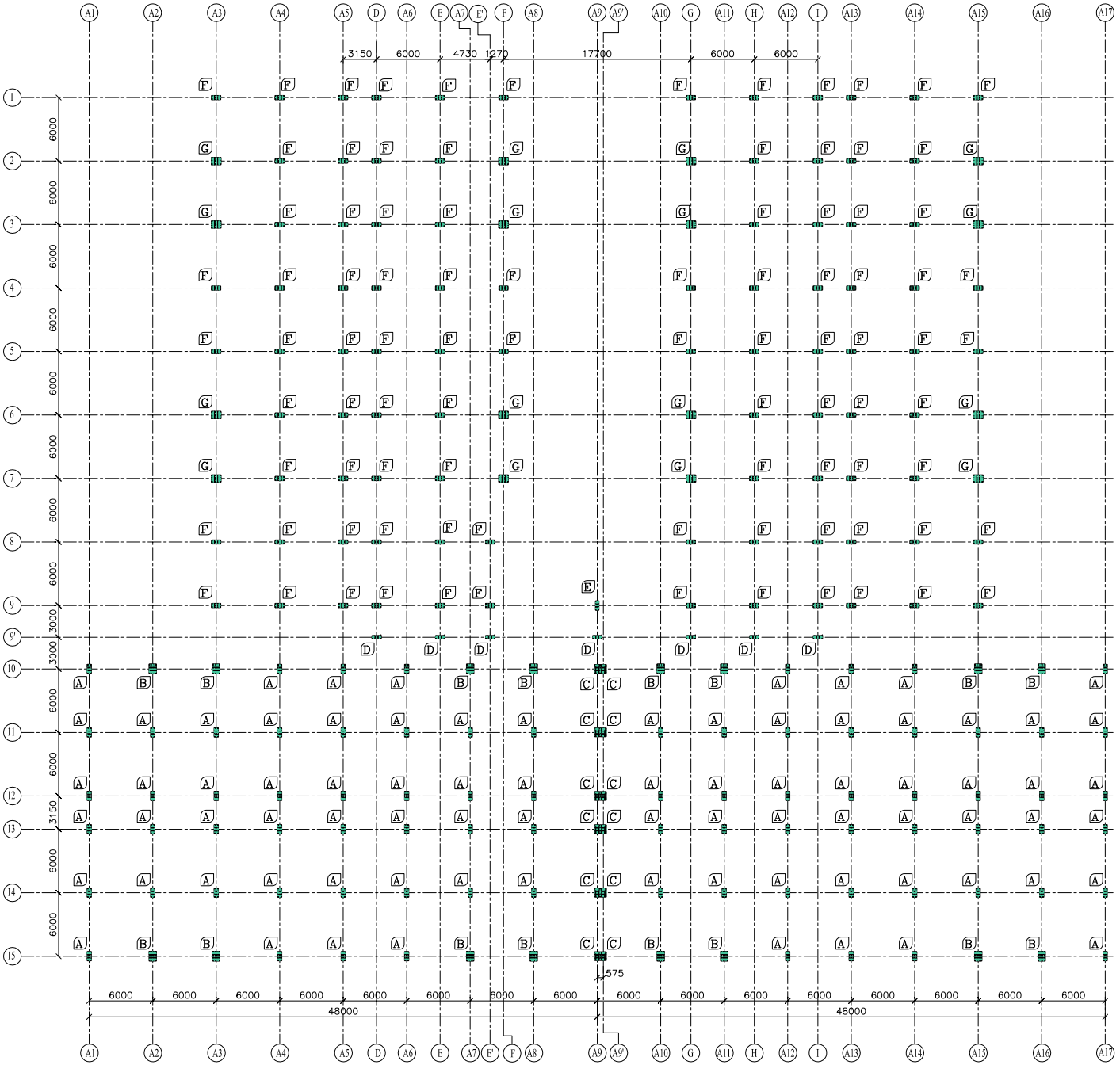
$$t = \left[\frac{Mdx\ 6}{0.75 \times fy \times b}\right]^{1/2}$$

t = **17.94** mm

Provide Connection Plate		**580**	**x**	**180**	**x**	**20**	**mm**

Provide Bolts	**8 nos -**	**20**	**mm Dia Bolts**

SECTION 2.4
ANCHOR BOLT PLAN AND ITS DETAILS



ANCHOR BOLT LAYOUT PLAN

DESIGN CODE : IS:800-1984

DEFLECTION CODE : IS:800-1984

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NAME

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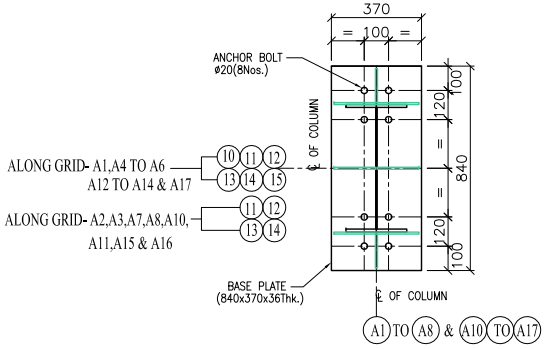
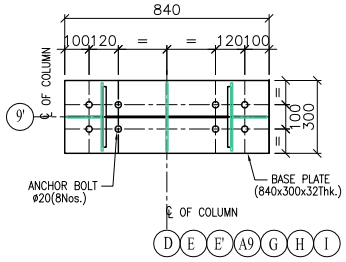
SIGNATURE DATE

REV.	DESCRIPTION	DSN.	DRN.	CKD.	APPR.	DATE

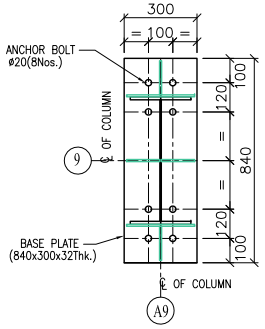
D.Q No.	:
JOB No.	:
PROJECT NAME	: HOSPITAL BUILDING
CUSTOMER NAME	:
JOB SITE LOCATION:	REV. R0
TITLE: ANCHOR BOLT SETTING PLAN	DWG. No. AB-101



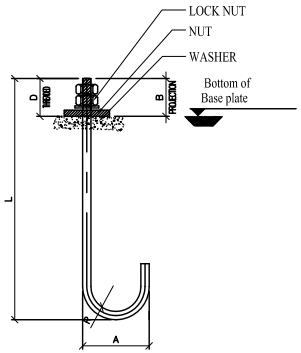
DETAIL- A



DETAIL-D



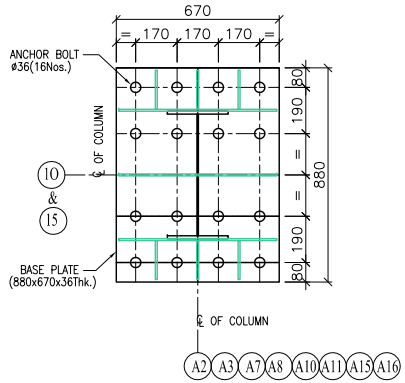
DETAIL-E



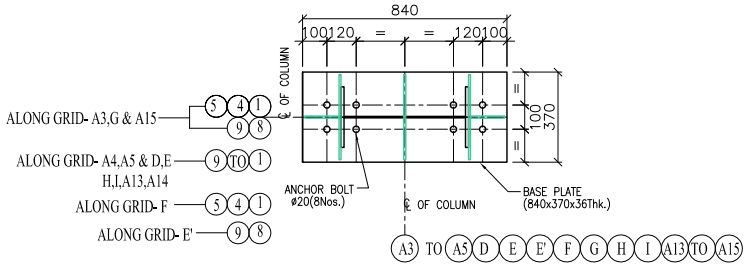
FOR 20 & 32 ø BOLTS
ANCHOR BOLT DETAIL

ANCHOR BOLT SCHEDULE								
QTY	DIA	L	A	B	C	D	R	PIECE MARK
1632	20	545	150	100	445	100	60	--
512	36							--

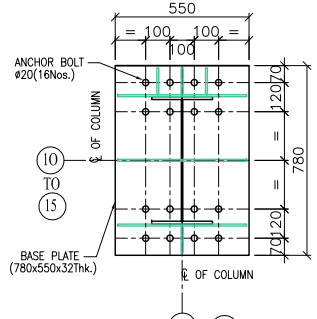
ANCHOR BOLT LENGTH DETAIL



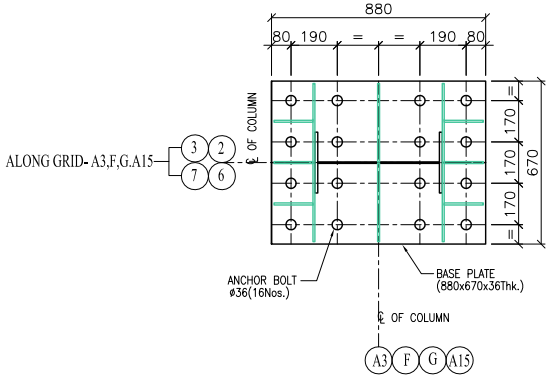
DETAIL- B



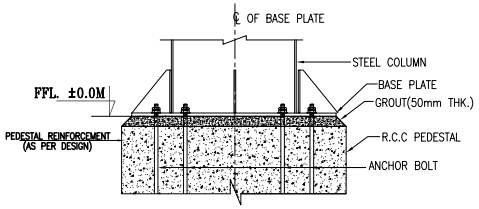
DETAIL -F



DETAIL -C



DETAIL-G



SAMPLE DETAIL OF
MINIMUM PEDESTAL REQUIREMENT

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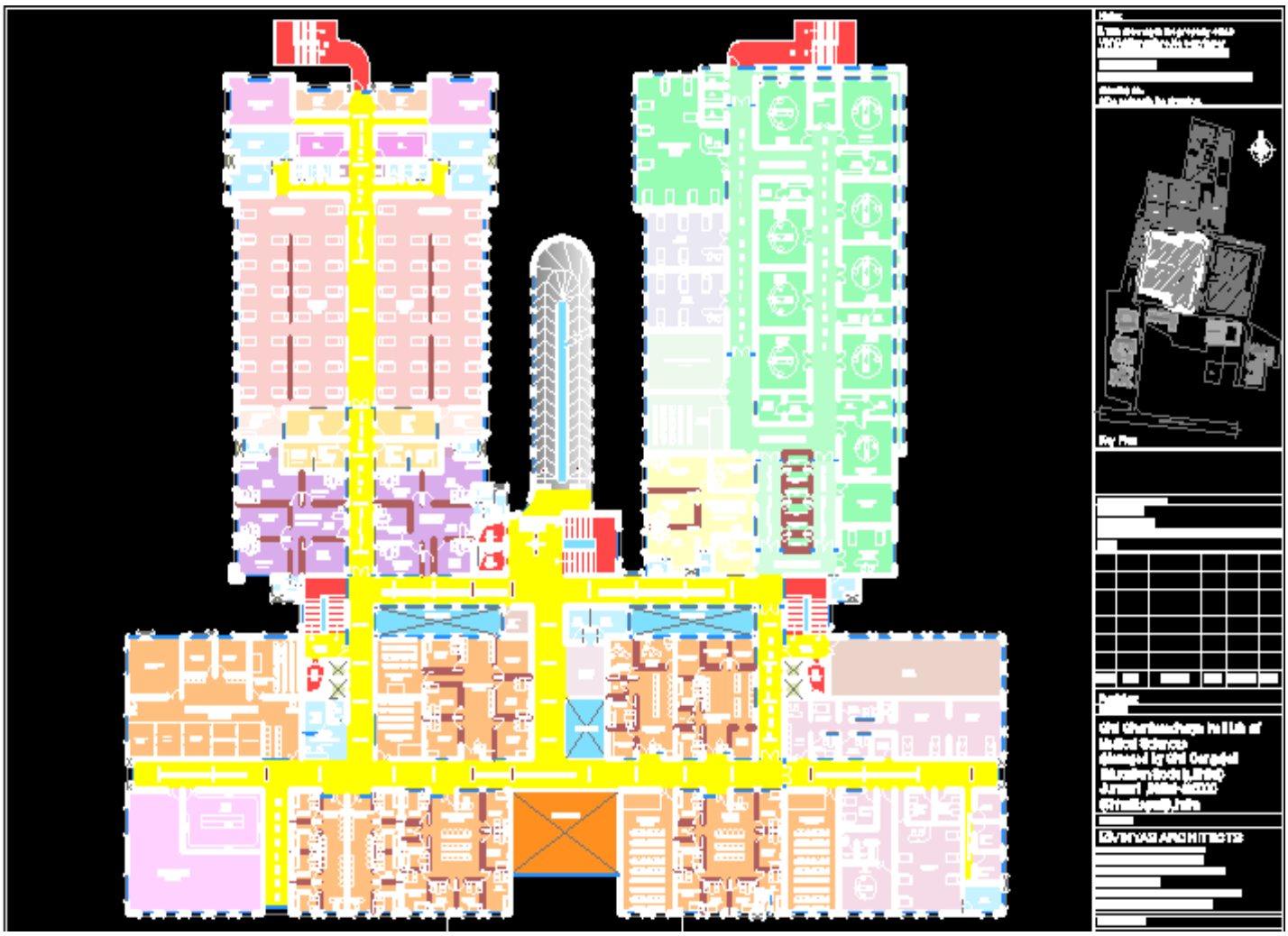
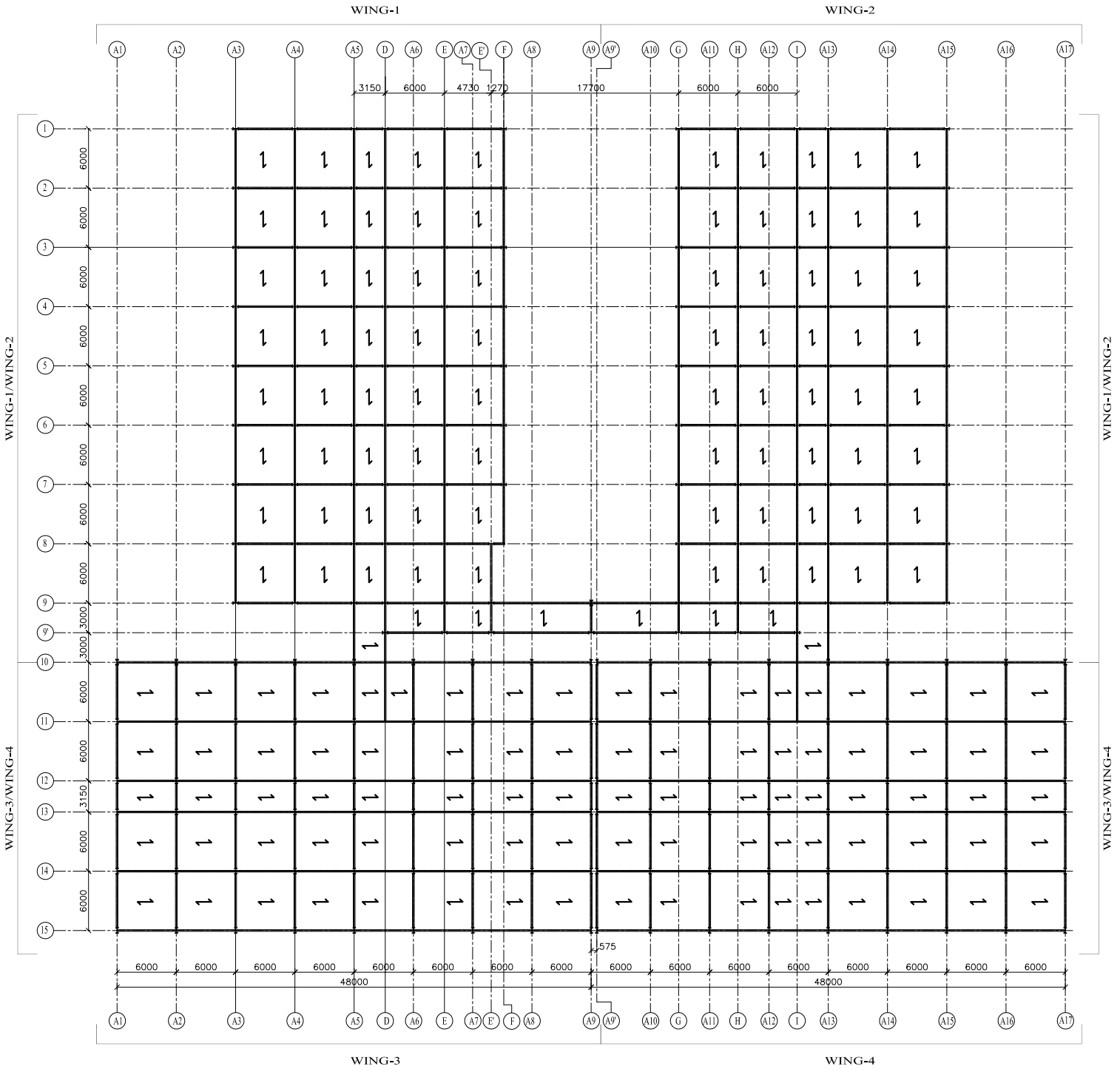
REVIEWED BY _____
NAME
_____ _____
SIGNATURE DATE

REV.	DESCRIPTION	DSN.	DRN.	CKD.	APPR.	DATE

D.Q No.	:
JOB No.	:
PROJECT NAME	: HOSPITAL BUILDING
CUSTOMER NAME	:
JOB SITE LOCATION:	REV. R0
TITLE: ANCHOR BOLT DETAILS	DWG. No. AB-104

SECTION 2.5
GA DRAWING





HOLLOW CORE SLAB ORIENTATION PLAN

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FABRICATION MAY PROCEED ON THE BASIS OF CORRECTIONS INDICATED.

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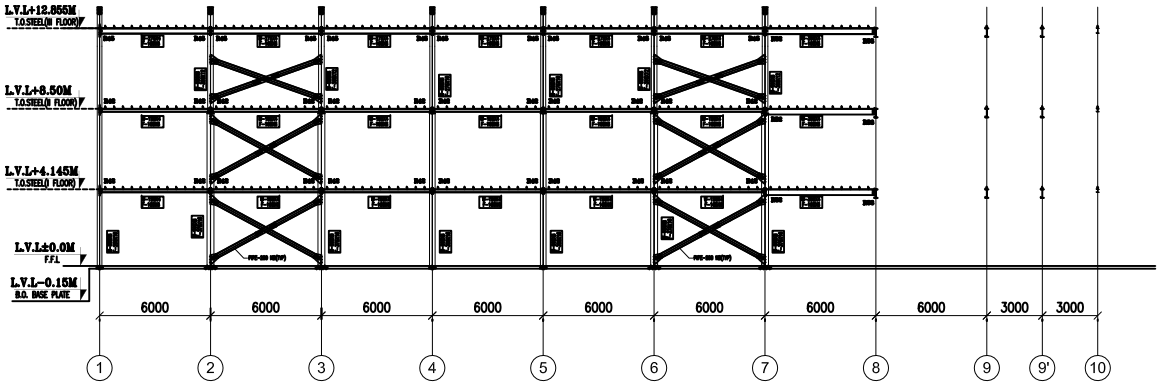
NAME

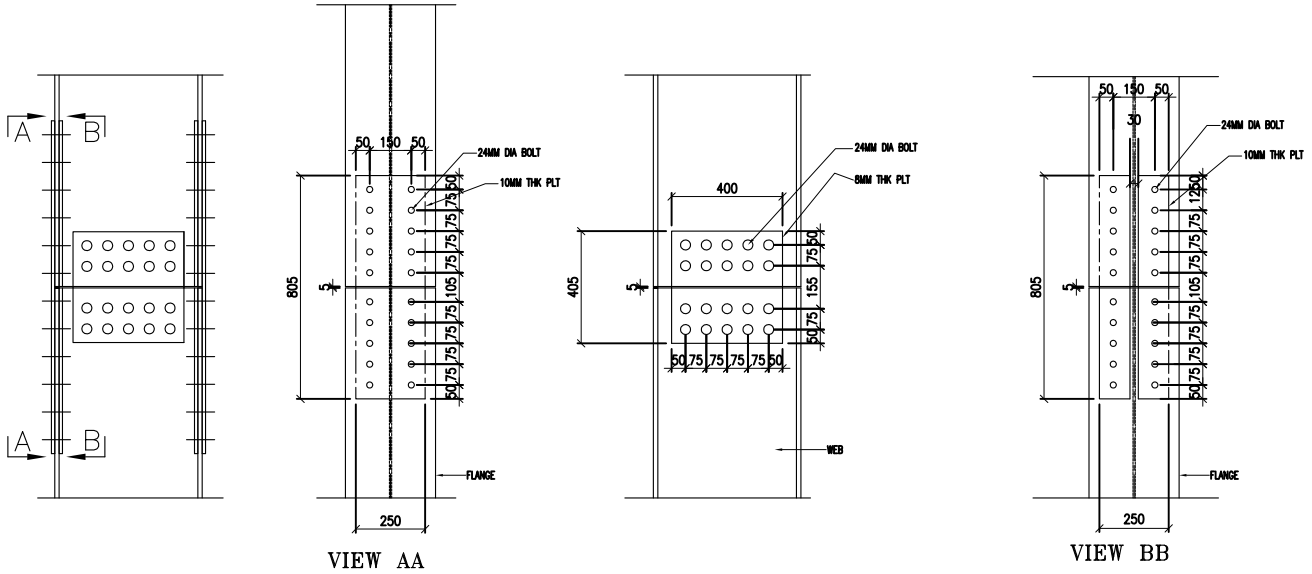
_____ _____
SIGNATURE DATE

REV	DESCRIPTION	DSN.	DRN.	CKD.	APPR.	DATE

D.Q No.	:
JOB No.	:
PROJECT NAME	: HOSPITAL BUILDING
CUSTOMER NAME	:
JOB SITE LOCATION:	REV.
TITLE:	G.A-101(SH-3)



ELEVATION ALONG GRID-F



COLUMN SPLICE AT 12.0M HEIGHT

ELEVATION OF WING-1

ISSUED FOR APPROVAL

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FABRICATION MAY PROCEED ON THE BASIS OF CORRECTIONS INDICATED.

REVIEWED BY _____
NAME

_____ _____
SIGNATURE DATE

REV.	DESCRIPTION	DSN.	DRN.	CKD.	APPR.	DATE

HOSPITAL BUILDING

D.Q No.	:
JOB No.	:
PROJECT NAME	: HOSPITAL BUILDING
CUSTOMER NAME	:
JOB SITE LOCATION:	
TITLE:	REV. G.A-101(SH-07)

SECTION 3
DESIGN OF SUBSTRUCTURE

SECTION 3.1
Design of Isolated Footing

Isolated Footing Design

FOOTING DESIGN : F6

Allowable gross pressure=		290	kN/m^2
Grade of concrete =	**M**	**30**	
Depth Of Footing below Ground Level =		2.5	m
Cover Taken		50	mm
Steel Grade	**Fe**	**500**	
Column Width = Cz =		0.47	m
Column Length = Cx =		0.94	m
Pedestal Projection		50	mm
Axial Load on column = P =		1492	kN
Moment @ X Direction =		0	kN-m
Moment @ Z Direction =		47	kN-m
Area Required = 1.1x P / S.B.C.		5.66	m^2
Footing Size			
Lz =		2.75	m
Lx =		3	m
Area Provided =		8.25	m^2
Earth load + selfweight of footing	W =	429.50	kN

Bearing Pressure Check

Pmax	244.3 kN/m^2	**Safe**	(checked against gross
Pmin	221.5 kN/m^2	**Safe**	

Bearing Pressure For Design

Pmax	244.3 kN/m^2
Pmin	221.5 kN/m^2

Design

Moment calculated for max. Pressure considering **cantilever** acti

Cantilever in Z direction =	1140 mm
Moment in Z Direc @ face of the Colm =	217.69
Cantilever in X direction =	1030 mm
Moment in X Direc @ face of the Colm =	175.97

Assume

D1 =	700	mm		
D2 =	700	mm		
d eff. =	642	mm		
ku(z)	0.528	Ast =	10.59	
ku(x)	0.427	Ast =	8.35	
Ast(in Z Direction) =	7.70	cm^2/m	(min 0.12%)	
Ast(in X Direction) =	7.70	cm^2/m	(min 0.12%)	
provide	16	@	175	
Ast =	11.5	0	**SAFE**	
provide	12	@	130	
Ast =	8.7	cm2		
			SAFE	

Check For Punching Shear

τ_v = V/bod
bo = 5388 mm
d eff. = 642 mm
τ_v = 0.43 N/mm2

τc permissible = $ks\,\tau_c$
τc permissible = (0.5+ βc)*0.25 fck
= 1.37 N/mm2
SAFE

CHECK AGAINST OVERTURNING

MOMENT = 70.5 kN-m

RESTORING MOMENT = P + W x Lx/2
2882 kN-m
F.O.S. = 40.88 > 1.4
SAFE

CHECK AGAINST SLIDING

Fx = 28.2 kN

RESIISTING FORCE

Pa = Passive earth pressure = $\frac{1+\sin\phi}{1-\sin\phi}$
Resistance due to passive Earth Pressure

F1a =(Pa 1+ Pa 2) x Lz x D / 2 130.4

Resistance due to friction

F1b =(W + P) x μ 864.6728

Force resisting Sliding Fx1 = Fx1a + Fx1b 995.083

F.O.S. = 35.29 > 1.4
SAFE

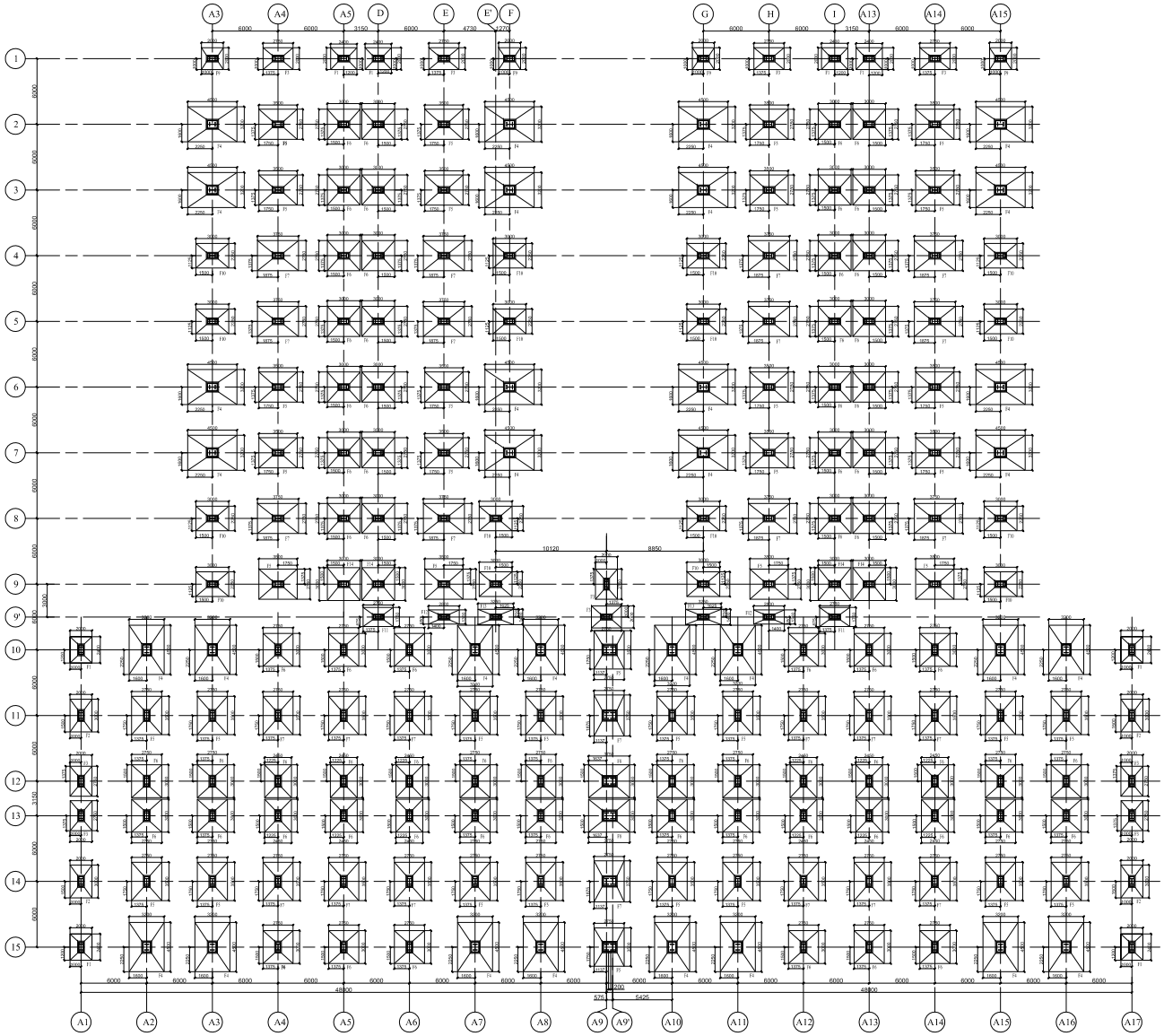
Check for One way shear

Distance of slope from face of column	0
sloping reach availaible on one side	2750
End depth	350
Truncated Cone area	3.94E+08
Tv	0.004916
Status	O.K.

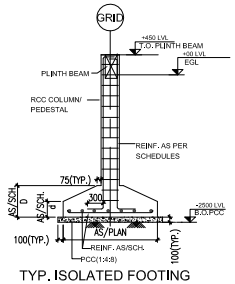
Design of pedestal

Effective length of pedestal	4	Percentage Steel
selenderness ratio	8	
Pu	26425	KN
Status	O.K	
Ast	662.7	
Dia of bar	16	
No.	3.29557	

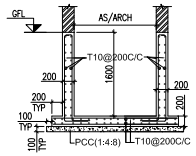
SECTION 3.2
Foundation Plan and Its Details



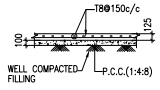
FOUNDATION LAYOUT PLAN



TYP. ISOLATED FOOTING



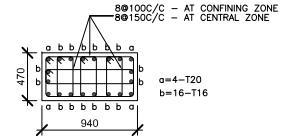
TYP. LIFT PIT



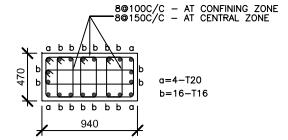
TYP. GRADE SLAB

SCHEDULE OF FOOTING

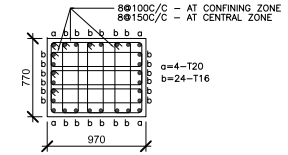
SL. NO.	FTG. MKD.	GRADE OF CONCRETE	FOOTING SIZE L	FOOTING SIZE B	DEPTH d	DEPTH D	REIN. BOTTOM LAYER ALONG-L	REIN. BOTTOM LAYER ALONG-B	REIN. TOP LAYER ALONG-L	REIN. TOP LAYER ALONG-B
1	F1	M30	2400	2000	250	500	T12@175c/c	T12@175c/c	——	——
2	F2	M30	3000	2000	250	500	T16@175c/c	T12@175c/c	——	——
3	F3	M30	2750	2000	250	500	T12@120c/c	T12@160c/c	——	——
4	F4	M30	4500	3200	400	800	T20@120c/c	T16@175c/c	——	——
5	F5	M30	3500	2750	350	700	T16@150c/c	T16@200c/c	——	——
6	F6	M30	3000	2750	350	700	T12@130c/c	T16@175c/c	——	——
7	F7	M30	3750	2750	350	700	T16@120c/c	T16@200c/c	——	——
8	F8	M30	3750	3000	350	700	T16@140c/c	T12@120c/c	——	——
9	F9	M30	2000	2000	250	500	T12@200c/c	T12@175c/c	——	——
10	F10	M30	3000	2250	250	500	T16@160c/c	T12@125c/c	——	——
11	F11	M30	2750	1750	250	500	T12@120c/c	T12@200c/c	——	——
12	F12	M30	2800	1300	250	500	T16@200c/c	T12@200c/c	——	——
13	F13	M30	3250	1400	250	500	T16@130c/c	T12@200c/c	——	——
14	F14	M30	3000	3000	350	700	T12@130c/c	T16@150c/c	——	——



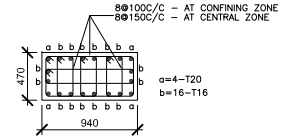
TYP. PEDESTAL DETAIL (BP1)
UPTO GROUND FLOOR



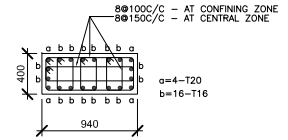
TYP. PEDESTAL DETAIL (BP2)
UPTO GROUND FLOOR



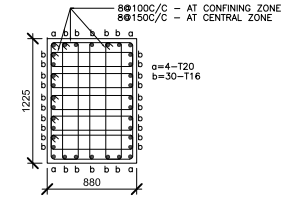
TYP. PEDESTAL DETAIL (BP3)
UPTO GROUND FLOOR



TYP. PEDESTAL DETAIL (BP4)
UPTO GROUND FLOOR



TYP. PEDESTAL DETAIL (BP5)
UPTO GROUND FLOOR



TYP. PEDESTAL DETAIL (BP6)
UPTO GROUND FLOOR

GENERAL NOTES:–

1. CONCRETE MIX
   a) FOOTING : M30
   b) COLUMN : M30
2. COVER
   a) FOOTING : 50MM
   b) COLUMN : 40MM
3. REINFORCEMENT : REINF. STEEL SHALL BE TMT BARS OF GRADE Fe500 CONFIRMING TO IS 1786–2008
4. GROSS BEARING CAPACITY = 30.0 T/M^2 AT 2.50M BELOW EXISTING GROUND LVL.

Rev.	Date	Description

PROJECT TITLE

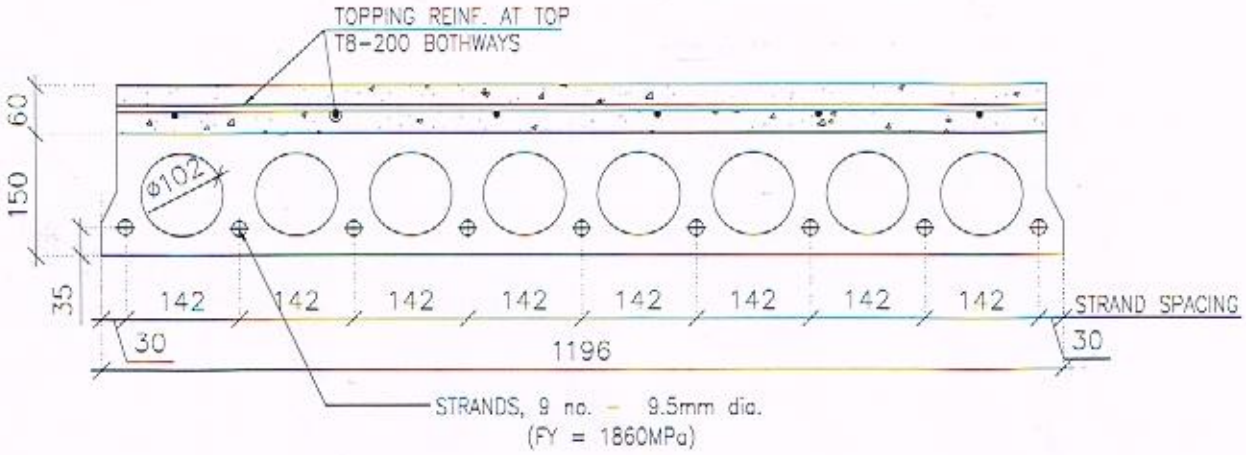
HOSPITAL BLOCK

DRAWING TITLE

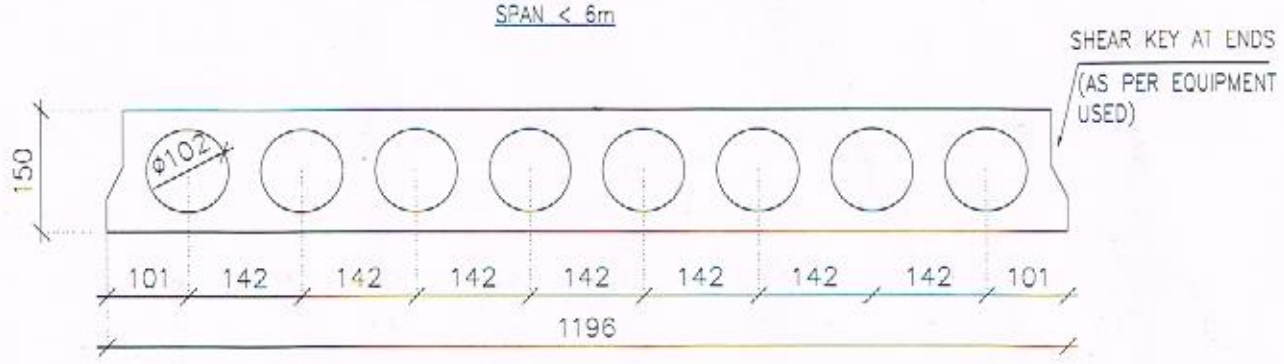
FOUNDATION LAYOUT PLAN & DETAILS

Checked by	Approved by	First Issue Date	Drawn by
Dwg. No. HB–1		Sheet 1 of 1	Rev. R0

SECTION 4
ANALYSIS & DESIGN OF HOLLOW CORE SLAB

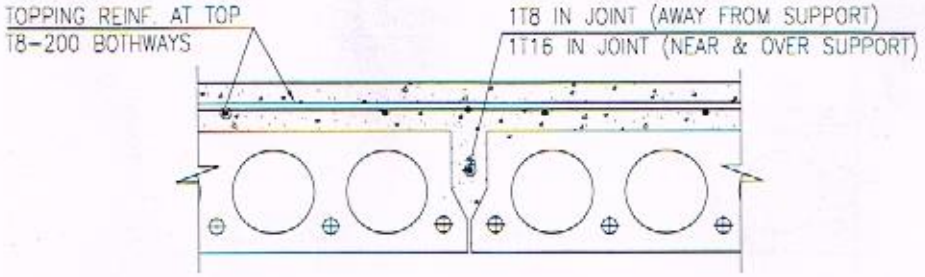


HOLLOW CORE SLAB DETAILS (TYPE - 1 & TYPE - 2)
SPAN < 6m

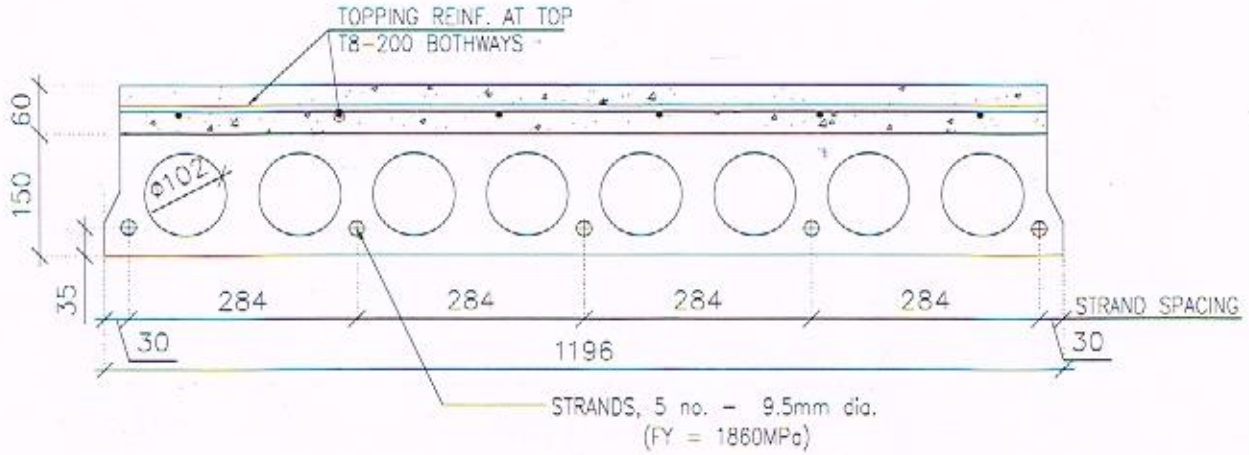


HOLLOW CORE SLAB PROFILE (TYPE - 1 & TYPE - 2)
SPAN < 6m

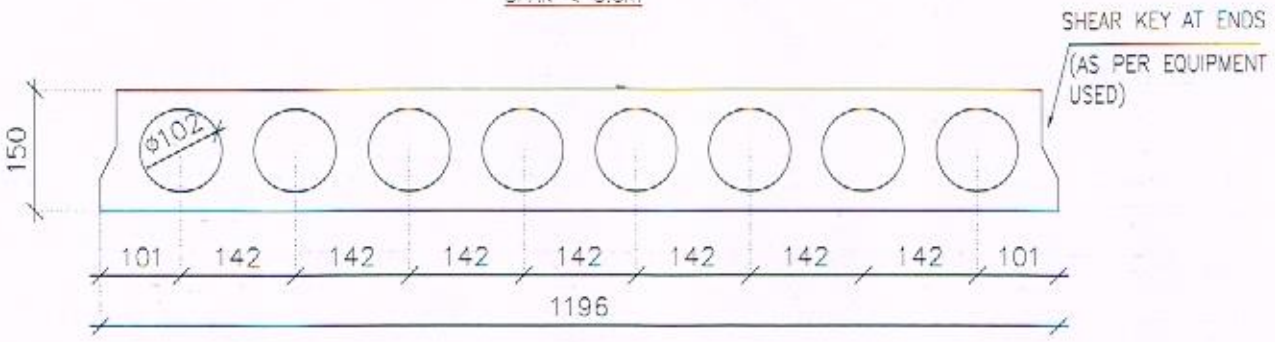
PRESTRESSING FORCE PER STRAND	= 66.70 kN
STRAND (LOW RELAXATION , 7WIRE) FY=	1860 N/mm2
GRADE OF CONCRETE	= M50 CUBE
CUBE STRENGTH AT 28 DAYS	= 50 N/mm2
CUBE STRENGTH AT TRANSFER	= 35 N/mm2



HOLLOW CORE SLAB - TYP. JOINT DETAIL

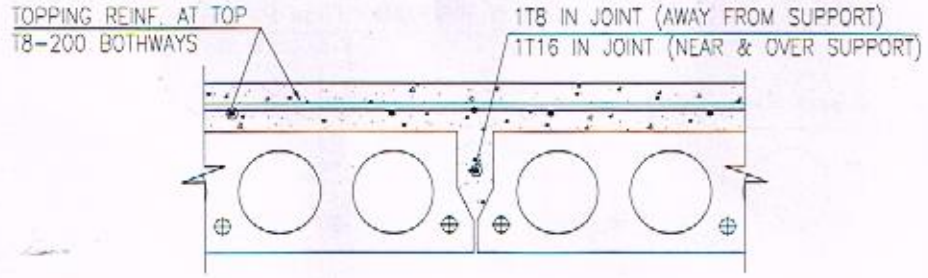


HOLLOW CORE SLAB DETAILS (TYPE - 3)
SPAN < 3.6m



HOLLOW CORE SLAB PROFILE (TYPE - 3)
SPAN < 3.6m

PRESTRESSING FORCE PER STRAND	= 61.40 kN
STRAND (LOW RELAXATION , 7WIRE) FY	= 1860 N/mm2
GRADE OF CONCRETE	= M50 CUBE
CUBE STRENGTH AT 28 DAYS	= 50 N/mm2
CUBE STRENGTH AT TRANSFER	= 35 N/mm2



HOLLOW CORE SLAB - TYP. JOINT DETAIL

(6)

Design of Hollow Core Slab (Type 1)

Material Properties

Concrete

28 days comp. strength	f_c'	:	50	MPa	
strength at release	f_{ci}'	:	35	MPa	
Topping concrete (screed)	f_{cT}	:	40	MPa	
concrete cover		:	30	mm	

E_c : $5000\sqrt{f_c'}$ E_c : 35355 MPa *(IS456-Sec.6.2.3.1)*

E_T : 31623 MPa E_{ci} : 29580 MPa

E_T/E_c : 0.89

Unit wt. of concrete : 24 kN/m^3

Strand

E_s : 195000 MPa : 28282 ksi *(IS1343-Sec.4.5.3.1)*

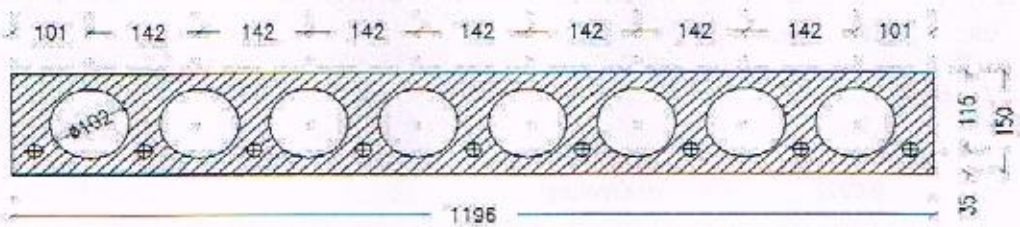
		Bottom	Top	Remark
Type of strand		Low relax	Low relax	
Grade, f_p	***ksi***	270	270	
	MPa	1860	1860	
Dia,d_{pb}	***mm***	9.5	9.5	
Area	***mm^2***	54.80	54.80	
No of strands, n		9	0	
P_i	***kips***	**15.0**	**0**	
	kN	66.72	0.00	
Initial stress, f_{pi}	***MPa***	1217.6	0	
yield stress, f_{pi}		0.90 f_{pu}	0.90 f_{pu}	(IS-14268-1995)
	MPa	1674	1674	
Jacking stress		0.65 f_{pu}	0.00 f_{pu}	< 0.74 fpu, hence o.k.

Eccentricity

from bottom	e_{Eb}	:	1.38	in	e_{Mb}	:	1.38	in	:	35.0 mm
from centroid	e_E	:	41.0	mm	e_M	:	41.0	mm		
	$e_{0.4L}$	:	41.0	mm	e_T	:	115.0	mm		

Section Properties

Type of section	:	Hollow Core						
Standard Name	:	**150**			H	:	**150**	mm
					b_w	:	410	mm (web width)
composite conc.	:	60 mm	(thick)		b_f	:	1200	mm (flange)
dia of core	:	102 mm			d	:	115	mm



(7)

Type of section	Perimeter	Area	y_b	y_t	S_b	S_t	I_c
	mm	mm^2	mm	mm	mm^3	mm^3	mm^4
precast	5646.5	115544	76.0	74.0	3890918	3996078	295709760
composite	5766.5	179727	113.1	96.9	6730831	7856109	761257000

Loading Condition

Length : 6.00 m — span L : 6.00 m
bearing width : 0.0 mm : 19.69 ft
Tributary width of loading : 1.20 m

Additional point load on composite
DL_L : 0.00 kN @ 1.80 m from left support
LL_L : 0.00 kN @ 1.80 m from left support
Additional point load on precast
DL_{LP} : 0.00 kN @ 0.00 m from left support

M_d : $w_d z/2(L-z)$

dead load (wpc +	:	1.50	kPa	: 1.80	kN/m	: 31.3	psf	M_{sd}
live load w_L	:	5.00	kPa	: 6.00	kN/m	: 104.4	psf	M_{LL}
self wt. of HCS - 150			w_d	: 2.77	kN/m	: 190.0	plf	M_d
				:	kN/m	: 0.0	plf	
wt. of composite				: 1.73	kN/m	: 118.4	plf	M_c
Service loads								
imposed dead loads			w_{DL}	: 3.53	kN/m			M_{DL}
sustained loads			w_s	: 6.30	kN/m			M_s
total loads			w_{to}	: 12.30	kN/m			M_{to}
Ultimate loads				: 1.5DL+1.5LL				
			w_u	: 18.45	kN/m			M_u

BM *(kN-m)*		
Max	0.4L	0.5L
0.0	0.0	0.0
0.0	0.0	0.0
0.0	0.0	0.0
	0.4L	0.5L
M_{sd}	7.8	8.1
M_{LL}	25.9	27.0
M_d	12.0	12.5
	0.0	0.0
M_c	7.5	7.8
M_{DL}	15.2	15.9
M_s	27.2	28.4
M_{to}	53.1	55.4
M_u	79.7	83.0

Loss of Prestress

The loss of prestress in the strands can be estimated as given in (IS:1343-Sec.18.5.2)

Elastic Shortening of Concrete

ES : mf_c *(IS:1343-Sec.18.5.2.4)*

Where,

m - Modular ratio
f_c - stress in concrete at level of steel

m : E_s/E_c : 195000 / 35355
: 5.52

f_c : $P_{pi}/A+P_{pi}e_M/S_b$ P_{pi} : nP_i : 600.5 kN
f_c : 11.52 N/mm^2
ES : **64** N/mm^2 » 5.22%

Creep of Concrete

CR : $\Phi_c f_c m$ *(IS:1343-Sec.18.5.2.1)*

Where,

Φ_c : 1.60 (Creep coefficient at 28 days loading) *(IS:1343-Sec.5.2.5.1)*

CR : **101.7** N/mm^2 » 8.35%

Shrinkage of Concrete

SH : $\varepsilon_{cs} E_{cs}$ *(IS:1343-Sec.18.5.2.2)*

Where,

ε_{cs} : 0.0003 (for pretensioning) *(IS:1343-Sec.5.2.4.1)*

SH : **58.5** N/mm^2 » 4.80%

Relaxation of Tendon

RE : As per Table -4 *(IS:1343-Sec.18.5.2.3)*

Loss due to relaxation of steel with respect to initial prestress

0.65 f_{pu} : 52.5

RE : **52.5** N/mm^2 » 4.31%

Total Losses

TL : ES+CR+SH+RE

: **276.3** N/mm^2 » 22.7%

Immediately after Transfer

During transfer of prestress, only elastic shortening and some amout of loss due to relaxation also occurs. Assume a 25% relaxation loss occurs at this stage.

Immediately after Transfer

f_p : f_{pi}-(ES+1/4RE)

: 1141 N/mm^2

P_p : $f_p nA_{ps}$

: 562.7 kN

Efective Prestress after all losses

f_{se} : f_{pi}-TL

: 941 N/mm^2

P_e : $f_{se} nA_{ps}$

: 464.3 kN

Top strand

f_{pt} : 0.0 N/mm^2 Assuming loss : 0%

P_{pt} : 0.0 kN

Check for Stresses

Permissible Stresses

At Transfer *(IS:1343-Fig.8)*

compression : $0.51f_{ci}'$ to $0.44f_{ci}'$ for concrete grade of M40 to M60

: $0.475\ f_{ci}'$: 16.6 N/mm^2

tension : $0.24\sqrt{f_{ci}'}$: 1.70 N/mm^2 (at ends of simply supported member)

At Service Loads

compression : $0.41f_{ci}'$ to $0.35f_{ci}'$ for concrete grade of M40 to M60 *(IS:1343-Fig.7)*

: $0.37\ f_{ci}'$: 18.5 N/mm^2 (Zone-1)

compression : $0.34f_{ci}'$ to $0.27f_{ci}'$ for concrete grade of M40 to M60

$0.2933\ f_{ci}'$: 14.67 N/mm^2 (Zone-2)

tension : : **3.00** N/mm^2 *(IS:1343-Sec.22.7.1)*

Service Load Stresses

transfer point : 30 d_{pb} : 285.0 mm *(IS:1343-Sec.18.6.1.1)*

distance to bearing center from end : $w_h/2$: 0.00 mm

z : 285-0 : 285.00 mm

M_d : $w_d z/2(L-z)$: 2.26 kN-m

$M_{d0.4L}$: 12.0 kN-m $M_{s0.4L}$: 27.2 kN-m

$M_{T0.4L}$: 239 kN-m e_{gb} : 41.0 mm

Stress at

Top : $P_p/A-P_pey_t/I+My_t/I$ Bottom : $P_p/A+P_pey_t/I-My_t/I$

Stresses in Concrete Immediately after Prestress Transfer						
Stress	**Transfer Point**		**At 0.4 L**		**At Mid Span**	
+ *compression*	Top	Bottom	Top	Bottom	Top	Bottom
- *tension*	N/mm^2		N/mm^2		N/mm^2	
P_p/A	4.87	4.87	4.87	4.87	4.87	4.87
P_pe/S	-5.77	5.93	-5.77	5.93	-5.77	5.93
$P_{pt}/A+ P_{pt}e/S$	0.00	0.00	0.00	0.00	0.00	0.00
M_dy/I	0.57	-0.58	3.00	-3.08	3.12	-3.21
Total	-0.34	10.22	2.09	7.72	2.22	7.59
Allowable stresses	-1.70	16.63	16.63	16.63	16.63	16.63
Status	ok	ok	ok	ok	ok	ok
req. strength at	1.98	21.51	4.41	16.25	4.67	15.98

Stresses in Concrete at Service Loads								
Stress due to	Sustained Loads				Total Loads			
	At 0.4 L		At Mid Span		At 0.4 L		At Mid Span	
+ compression	Top	Bottom	Top	Bottom	Top	Bottom	Top	Bottom
- tension	N/mm^2				N/mm^2			
P_e/A	4.02	4.02	4.02	4.02	4.02	4.02	4.02	4.02
$P_e e/S$	-4.76	4.89	-4.76	4.89	-4.76	4.89	-4.76	4.89
self wt.	3.00	-3.08	3.12	-3.21	3.00	-3.08	-3.12	-3.21
wt. of composite	1.87	-1.92	1.95	-2.00	1.87	-1.92	1.95	-2.00
DL on precast	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL on composite	0.99	-1.16	1.03	-1.20	0.99	-1.16	1.03	-1.20
LL on composite					3.30	-3.85	3.44	-4.01
Total	5.11	2.76	5.35	2.50	8.41	-1.09	8.79	-1.51
Allowable stresses	18.50	18.50	18.50	18.50	18.50	-3.00	18.50	-3.00
Status	ok	ok	ok	ok	ok	ok	ok	ok

Section Capacity

M_n : $[A_{ps} f_{pu} (d_p - 0.42 X_u)$

$M_{cr} : \left(f_r + \frac{P_{se}}{A_c} \right) S_b + (P_{se} \times e)$

f_r : $0.7\sqrt{f_c'}$: 4.95 MPa *(IS:1343-Sec.5.2.2)*

$\frac{A_p f_p}{b d_p f_c'}$: 0.0977

h : 210.0 mm

d_p : 175.0 mm

From Table 11 of IS-1343-1980

$\frac{f_{pu}}{0.87 f_p}$: 1.00

$\frac{X_u}{d_p}$: 0.212

f_{pu} : 1618.2 MPa

X_u : 37.1 mm

	At 0.4L	At 0.5L
	kNm	*kNm*
M_u	79.7	83.0
ΦM_n	127.2	127.2
Status	< Mu, ok.	< Mu, ok.
M_{cr}	36.468	36.5
$1.2M_{cr}$	43.762	43.762
Status	< Mn, ok.	< Mn, ok.

Shear Capacity

Reaction at ends : 55.355 kN

The critical section for shear is : 0.175 m (d from face of support)

Design shear is

V_u : 52.126 kN

Bending moment at critical location

M : 9.4045 kNm

Ultimate shear resistance of concrete in a section due to web shear crack

$$V_{cw} = 0.67 b_w h \sqrt{(f_t^2 + 0.8 f_{cp} f_t)}$$ *(IS:1343-Sec.22.4.1)*

b_w : 410 mm

V_{cw} : 145.79 kN

f_t : $0.24\sqrt{f_c'}$
: 1.70 MPa

f_{cp} : P_e/A
: 2.58 MPa

Ultimate shear resistance of a section cracked in flexure

$$V_{cr} = \left(1 - 0.55 \frac{f_{pe}}{f_p}\right) \xi_0 bd + M_0 \frac{V}{M}$$ *(IS:1343-Sec.22.4.2)*

V_{cr} : 106.99 kN

M_0 : $0.8\, f_{pe}\, I/Y$
: 13.9 kNm

f_{pe} : 0.51 f_p , not grater than 0.6 f_p

ξ_0 : 0.5775 *(IS:1343-Table-6)*

But,

V_{cr} not less than
$0.1\, b\, d\, \sqrt{f_c'}$
V_{cr} : 50.735 kN

The shear capacity of concrete at section considered is

V_c : 106.99 kN

$0.5V_c$: 53.497 kN
>Vu, Hence shear reinforcement is not required.

n : 0 (no. of cores filled solid)

Check for Deflection

Camber : $\frac{P\, e\, l^2}{8EI} - \frac{5\, w\, l^4}{384\, EI}$
: $a_p - a_s$
: 8.1925 - 4.4759
: 3.7166 mm (during erection)

Deflection due to superimposed dead load

a_{dl} : $\frac{5\, w_{DL}\, l^4}{384\, EI}$: -5.6944 mm

Deflection due to live dead load

a_{LL} : $\frac{5\, w_l\, l^4}{384\, EI_c}$: -3.7619 mm

50% live load is taken for the final deflection

Allowable deflection
: L/ 250 (All loads) : 24.0 mm
: L/ 350 (Sustained loads) : 17.1 mm

Final position
: 3.7166 + -5.6944 + -1.881
: -3.859 mm (All loads)

: **-1.978** mm (Sustained loads)

Long Term Deflection

Deflection due to shrinkage

a_{cs} : $k_3 \psi_{cs} l^2$ *(IS:456-C-3.1)*

where,

ψ_{cs} : $k_4 \varepsilon_{cs}/D$

where,

k_4 : $0.72*p_t-p_c/\sqrt{p_t}<1.0 for 0.25<pt-pc<1.0$ k_3 : 0.125

: $0.65*pt-pc/\sqrt{pt}<1.0 for pt-pc>1.0$

p_t : $100A_{st}/bd$ p_c : $100A_{sc}/bd$

: 0.2349 : 0

p_t-p_c : 0.2349 k_4 : 0.3489

ψ_{cs} : 5E-07

a_{cs} : 2.2431 mm

Deflection due to creep

Immediate deflection due to permanent loads

a_i : -10.17 mm (without the effect of prestress)

Long term deflection due to permanent loads

$a_{i,cc}$: 2.6 θ : 1.6 *(IS:456-6.2.5.1)*

: 26.443 mm

Deflection due to the effect of creep alone,

a_i : 16.273

Long term Camber due to prestress

a_f : $a_{i,cc} - \theta_{i,cc}\ a_p$

$\theta_{i,cc}$: $\left\{1-\frac{L_p}{P_i} + \left[1-\frac{L_p}{2P_i}\right]\theta\right\}$

where,

Lp : loss of prestress due to relaxatio shrinkage and creep

: 104.9 kN

$\theta_{i,cc}$: 2.3

$a_{p,LT}$: 18.724 mm

a_f : $a_{p,LT} - a_{i,cc} - a_{cs}/2 \quad a_{LL}/2$

: 18.724 - 16.273 - 1.12 - 1.881

: **-0.55** mm (All loads)

Allowable deflection

: L/ 250 (All loads) : 24.0 mm

: L/ 350 (Sustained loads) : 17.1 mm

UNIT VIII

ANALYSIS AND DESIGN OF CONVENTIONAL RCC STRCUTURE

INTRODUCTION

This Design Calculation is for superstructure and sub structure of multi storey hospital rcc fra

The scope of work includes the design of the following

1) Hospital building superstructure viz beams, columns and slabs
2) Isolated foundation alongwith pedestal

This Design Calculation includes Design Information, Design Basis & Load data

This Design Calculation has been prepared using the IS 456:2000 code standards as per the limit state of design and the latest developments in engineering practices.

Design Information: This section contains the description of the building superstructure and
1 foundation design, design codes and material specifications used, design assumptions, loads and design sketches showing foundation reinforcement layouts.

TABLE OF CONTENTS

SECTION 1
DESIGN INFORMATION

SECTION 1.1
APPLICABLE DESIGN CODES

APPLICABLE DESIGN CODES

Loads are applied in accordance with:

* IS-875 (Part I) : code of practice for design Dead loads for building and structure.
* IS-875 (Part II) : code of practice for design Imposed loads for building and structure.
* IS-875 (Part III) : code of practice for design Wind loads for building and structure.
* IS-1893 (2002) : criteria for Earthquake resistante design of structures.

Design of foundation in accordance with:

* IS 456:2000 : Plain and Reinforced concrete - code of practice

* SP 16: 1980 : Design Aids for Reinforced Concrete to IS 456:1978 [CED 2: Cement and Concre]

* IS 1786: 1985: Specification for high strength deformed steel bars and wires for concrete Reinforcement

* ALL CODE OF LATEST REVISION

SECTION 1.2

MATERIAL SPECIFICATIONS

MATERIAL SPECIFICATIONS

The following is the list of the material standards and specifications for which the building components have been designed

S.N	Materials	Specifications	Yield Strength
1	Concrete for superstructure	M-25 Grade design mix.	Minimum characteristic compressive strength shall not
2	Concrete for foundation	M-30 Grade design mix.	Minimum characteristic compressive strength shall not
3	Main tensile reinforcement	IS : 1786-1985	Fy = 500 MPa
4	Shear Reinforcement	IS : 1786-1985	Fy =415 MPa

SECTION 1.3

DESIGN ASSUMPTIONS & LOAD COMBINATIONS

DESIGN ASSUMPTIONS AND LOAD COMBINATIONS

a) DESIGN ASSUMPTIONS

The Superstructure is a RCC framed structure comprising of beams and columns and designed in Staad Pro and the output column reactions have been utilised from the same file in deciding loading on the isolated footing below. The slab has been designed in an excel sheet as a two way slab.

Following loadings have been considered in design

A) DEAD LOAD

A	**1st to 5th Floor**	
i)	150 mm HCS	2.5 kN/m2
ii)	60mm screed concrete	1.2 kN/m2
iii)	False Ceiling/services load	0.5 kN/m2
iv)	Internal Partition load	0.5 kN/m2
	TOTAL	**4.7 kN/m2**
v)	AAC Wall Load (150mm thk)	8 kN/m
vi)	Structural steel members	Self weight
B	**Terrace Floor**	
i)	150 mm HCS	2.5 kN/m2
ii)	60mm screed concrete	1.2 kN/m2
iii)	False Ceiling/services load	0.5 kN/m2
iv)	Water proofing (150 mm)	3 kN/m2
	TOTAL	**7.2 kN/m2**
v)	Structural steel members	Self weight

B) LIVE LOAD

A	**1st Floor-OPD**	
i)	Blood Bank, LAB, Physiotherapy dept, OPD, Teaching room, Demo, Post Partum, washing room, laundry room, toilet, Eclampsia room, Neonatal, nurses, labour room, CSSD, Wards, Office, Nurses duty, student duty, Resident Doctor duty room, treatment room, Dept, Store room, Post & Pre operative, SICU, MICU, Dept. of Anaesthesia	3.0 kN/m2
ii)	Corridor, Waiting room, OT	4.0 kN/m2
B	**Typical Floor-Wards(2nd to 5th floor)**	
i)	Ward Area, toilet, LAB ,Office, Nurces duty, student duty, Resident Doctor duty room, treatment room, toilet, Dept, Demo, Store room	3.0 kN/m2
ii)	Corridor, Waiting room	4.0 kN/m2
C	**Terrace floor**	2.0 kN/m2

C) WIND LOAD

i)	Basic Wind Speed	39 m/s
ii)	Category	2
iii)	Class of structure	C

D) SEISMIC LOAD

i)	Seismic Zone	2
ii)	Zone factor	0.1
iii)	Importance factor	**1.5**
iv)	Response Reduction factor	5
v)	Soil type	II (Medium)
vi)	Damping ratio	0.02
vii)	Seismic Weight for Dead load	100%
viii)	Seismic Weight for Live load (<=3 kN/m2)	25%
ix)	Seismic Weight for Live load (> 3 kN/m2)	50%

2 Footing Comprises :- 1) rectangular isolated footing

b) LOAD COMBINATIONS FOR SUPERSTRUCTURE AND FOUNDATION

DL- DEAD LOAD / COLLATERAL LOAD
LL - LIVE LOAD
EARTHQUAKE LOAD

LIMIT STATE OF STENGTH LOAD COMBINATION

1 LOAD COMB - 1.5 DL1+1.5 LL1
2 LOAD COMB 1.2 SL1+1.2 DL1+1.2 LL1
3 LOAD COMB- 0.6 SL1+1.2 DL1+1.2 LL1
4 LOAD COMB- 1.5 SL1+1.5 DL1

LIMIT STATE OF SERVICIABILITY LOAD COMBINATION

1 LOAD COMB- 1 DL1+1 LL1
2 LOAD COMB- 1 DL1+0.8 LL1
3 LOAD COMB- 0.8 SL1+1 DL1+0.8 LL1
4 LOAD COMB- 1 DL1+1 WL1
5 LOAD COMB- 1 SL1+1 DL1

SECTION 2.0
ANALYSIS AND DESIGN

DESIGN OF FLOOR SLAB FOR HOSPITAL BUILDING TYPICAL PANEL INCLUDING CORRIDOR AND WAITING ROOM

Design Data

Dimensions of the slab (c/c distance b/w supports),

Length of short span, L_x = **6** m

Length of long span, L_y = **6** m

Width of the supporting beam, = **350** mm

Clear cover to main reinforcement = **20** mm

Assume dia. of reinforcement steel = **12** mm

f_{ck} = **25** N/mm^2

f_y = **500** N/mm^2

Calculations

Assume the thickness of slab as **150** mm ; Effective depth, d = 124 mm

Effective span, l_x = 6 m (or) 5.774 m whichever is less; d = 5.774 m

l_y = 6 m (or) 5.774 m whichever is less; d = 5.774 m

(l_y / l_x) = 1.00 < 2 ; Here, (l_y / l_x) is less than 2, Hence design the slab as two way slab

Load Calculations

Dead Load of slab = 0.15 x 25 = 3.75 KN/m^2

Finishes load on slab = **1.00** KN/m^2

Live Load on slab = **4.0** KN/m^2

Total Dead load acting on the Structure = 4.75 KN/m^2

Total live load acting on the Structure = 4.0 KN/m^2

Factored Design Load w = 13.13 KN/m^2

Support Condition (Type of panel according to support condition)

Four Edges Discontinuous

Short span coefficient for (l_y / l_x) = 1,

For negative moment, a_x = 0.0000

For positive moment, a_x = 0.0560

For this support condition,

Long span coefficient,

For negative moment, a_y = 0

For positive moment, a_y = 0.056

Moment Calculation

Max. BM per unit width, $M_x = a_x w l_x^2$ & $M_y = a_y w l_x^2$

	M_u KNm	M_u / bd^2 N/mm^2	p_t %	$A_{st,req}$ mm^2
For Short Span,				
At mid span,	24.51	1.59	0.4788	594
At supports,	0.00	0.00	0	0
For Long span,				
At mid span,	24.51	1.95	0.6004	744
At supports,	0.00	0.00	0	0

$A_{st,min}$ = (0.12/100) bD = 180 mm^2

Reinforcement details

Provide Y **12** @ **200** mm c/c at midspan & supports for short span (A_{st} pro. = 565 mm^2)

Provide Y **12** @ **200** mm c/c at midspan & supports for long span (A_{st} pro. = 565 mm^2)

Check for Deflection

Percentage of tension reinforcement = 0.46 %

$f_s = 0.58 f_y (A_{st\ req} / A_{st\ pro})$ = 305

Refer Fig. 4 of IS 456,

Modification factor = **2**

Allowable (Span / d_{eff}) ratio = **52**

Effective depth required = 111 mm

< d prov.

Hence OK

TERACE SLAB

Design Data

Dimensions of the slab (c/c distance b/w supports),

Length of short span, L_x = **6** m

Length of long span, L_y = **6** m

f_{ck} = **25** N/mm^2

f_y = **500** N/mm^2

Width of the supporting beam, = **350** mm

Clear cover to main reinforcement = **20** mm

Assume dia. of reinforcement steel = **12** mm

Calculations

Assume the thickness of slab as **150** mm ; Effective depth, d = 124 mm

Effective span, l_x = 6 m (or) 5.774 m whichever is less; d = 5.774 m

l_y = 6 m (or) 5.774 m whichever is less; d = 5.774 m

(l_y / l_x) = 1.00 < 2 ; Here, (l_y / l_x) is less than 2, Hence design the slab as two way slab

Load Calculations

Dead Load of slab = 0.15 x 25	= 3.75	KN/m^2
Finishes load on slab	= **3.50**	KN/m^2
Live Load on slab	= **2.0**	KN/m^2
Total Dead load acting on the Structure	= 7.25	KN/m^2
Total live load acting on the Structure	= 2.0	KN/m^2
Factored Design Load	w = 13.88	KN/m^2

Support Condition (Type of panel according to support condition)

Four Edges Discontinuous

Short span coefficient for (l_y / l_x) = 1,

For negative moment, a_x = 0.0000

For positive moment, a_x = 0.0560

For this support condition,

Long span coefficient,

For negative moment, a_y = 0

For positive moment, a_y = 0.056

Moment Calculation

Max. BM per unit width, $M_x = a_x w l_x^2$ & $M_y = a_y w l_x^2$

	M_u KNm	M_u / bd^2 N/mm^2	p_t %	$A_{st, req}$ mm^2
For Short Span,				
At mid span,	25.91	1.69	0.512	635
At supports,	0.00	0.00	0	0
For Long span,				
At mid span,	25.91	2.07	0.6424	797
At supports,	0.00	0.00	0	0

$A_{st\ ,\ min}$ = (0.12/100) bD = 180 mm^2

Reinforcement details

Provide Y **12** @ **175** mm c/c at midspan & supports for short span (A_{st} pro. = 646 mm^2)

Provide Y **12** @ **140** mm c/c at midspan & supports for long span (A_{st} pro. = 808 mm^2)

Check for Deflection

Percentage of tension reinforcement = 0.52 %

$f_s = 0.58\ f_y\ (A_{st\ req} / A_{st\ pro})$ = 285

Refer Fig. 4 of IS 456,

Modification factor = **2**

Allowable (Span / d_{eff}) ratio = **52**

Effective depth required = 111 mm

< d prov.

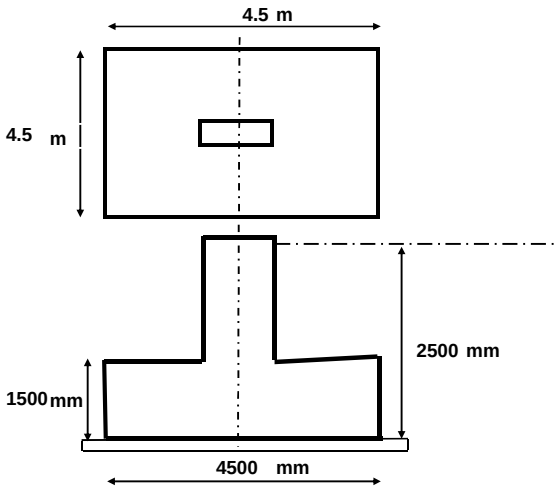
Hence OK

Isolated Footing Design

FOOTING DESIGN : F1

Footing design for node 1484

Allowable gross pressure=		290	kN/m^2
Grade of concrete =	M	30	
Depth Of Footing below Ground Level =		2.5	m
Cover Taken		50	mm
Steel Grade	Fe	500	
Column Width = Cz =		0.55	m
Column Length = Cx =		0.55	m
Pedestal Projection		0	mm
Axial Load on column = P =		4132	kN
Moment @ X Direction =		0	kN-m
Moment @ Z Direction =		-6.4	kN-m
Area Required = 1.1x P / S.B.C.		15.67	m^2



Footing Size

Lz =	4.5	m
Lx =	4.5	m
Area Provided =	20.25	m^2

O.K.

Earth load + selfweight of footing W = 1148.18 kN

Bearing Pressure Check

Pmax	260.3 kN/m^2	Safe	(checked against gross Pressure)
Pmin	261.2 kN/m^2	Safe	

Bearing Pressure For Design

Pmax	260.3 kN/m^2
Pmin	261.2 kN/m^2

Design

Moment calculated for max. Pressure considering **cantilever** action

Cantilever in Z direction =	1975	mm	
Moment in Z Direc @ face of the Colm =	761.58	kN-m	
Cantilever in X direction =	1975	mm	
Moment in X Direc @ face of the Colm =	761.58	kN-m	

Assume

D1 =	1500	mm			
D2 =	1500	mm			
d eff. =	1440	mm			
ku(z)	0.367	Ast =	17.28	cm^2/m	
ku(x)	0.367	Ast =	17.28	cm^2/m	

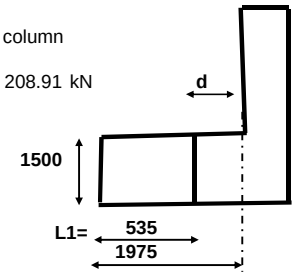
Ast(in Z Direction) =	17.28	cm^2/m	(min 0.12%)	
Ast(in X Direction) =	17.28	cm^2/m	(min 0.12%)	

provide	20	@	175	mm c/c	in Z Direction
Ast =	18.0		0	SAFE	
provide	20	@	175	mm c/c	in X Direction
Ast =	18.0	cm2			
			SAFE		

Check For One Way Shear

Critical Section is at the distance of 'd' from the face of the column

Shear at the Critical Section Vu = 1.5xPmax.xL1 = 208.91 kN



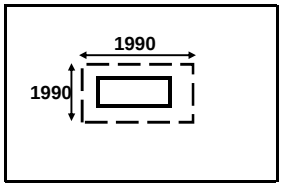
τc = Vu /bdeff. = 0.14

pt (prov)= 0.12

τc permissible = 0.20 N/mm2 **SAFE**
(value taken from IS 456)

Check For Punching Shear

τv = V/bod
bo = 7960 mm
d eff. = 1440 mm
τv = 0.36 N/mm2



τc permissible = *ks* τc
τc permissible = (0.5+ βc)*0.25 $\sqrt{fck}$
= 1.37 N/mm2
SAFE

CHECK AGAINST OVERTURNING

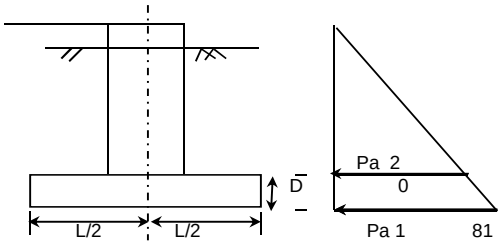
MOMENT = -9.6 kN-m

RESTORING MOMENT = P + W x Lx/2
11880 kN-m
F.O.S. = ##### > 1.4
SAFE

CHECK AGAINST SLIDING

Fx = -3.2 kN c

RESIISTING FORCE



Pa = Passive earth pressure = $\frac{1+\sin\phi}{1-\sin\phi}$

Resistance due to passive Earth Pressure

F1a =(Pa 1+ Pa 2) x Lz x D / 2 273.4

Resistance due to friction

F1b =(W + P) x μ 2376.079

Force resisting Sliding Fx1 = Fx1a + Fx1b 2649.45

F.O.S. = -828 > 1.4
SAFE

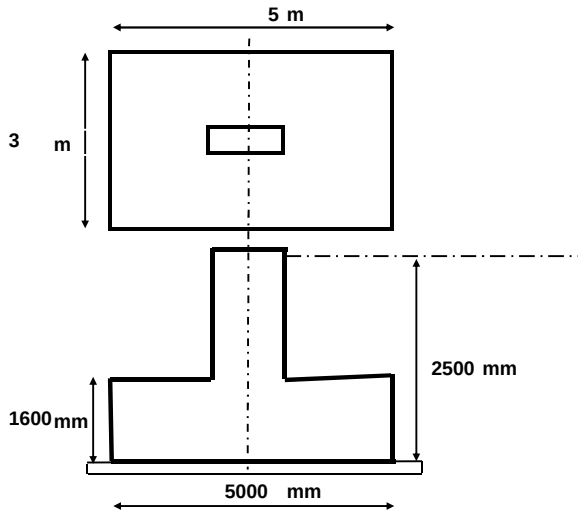
Design of pedestal

Effective length of pedestal	2	Percentage Steel	0.15
selenderness ratio	4		
Pu	18093 KN		
Status	O.K		
Ast	453.75		
Dia of bar	16		
No.	2.25647		

FOOTING DESIGN : F2

Footing design for node 1222

Allowable gross pressure=		290	kN/m^2
Grade of concrete =	M	30	
Depth Of Footing below Ground Level =		2.5	m
Cover Taken		50	mm
Steel Grade	Fe	500	
Column Width = Cz =		0.55	m
Column Length = Cx =		0.55	m
Pedestal Projection		0	mm
Axial Load on column = P =		3320	kN
Moment @ X Direction =		0	kN-m
Moment @ Z Direction =		55	kN-m
Area Required = 1.1x P / S.B.C.		12.59	m^2



Footing Size

Lz =		3	m
Lx =		5	m
Area Provided =		15.00	m^2

O.K.

Earth load + selfweight of footing W = 859.20 kN

Bearing Pressure Check

Pmax	283.0 kN/m^2	Safe	(checked against gross Pressure)
Pmin	274.2 kN/m^2	Safe	

Bearing Pressure For Design

Pmax	283.0 kN/m^2
Pmin	274.2 kN/m^2

Design

Moment calculated for max. Pressure considering **cantilever** action

Cantilever in Z direction = 1225 mm
Moment in Z Direc @ face of the Colm = 318.52 kN-m

Cantilever in X direction = 2225 mm
Moment in X Direc @ face of the Colm = 1050.82 kN-m

Assume

D1 =	1600	mm			
D2 =	1600	mm			
d eff. =	1540	mm			
ku(z)	0.134	Ast =	18.48	cm^2/m	
ku(x)	0.443	Ast =	18.48	cm^2/m	

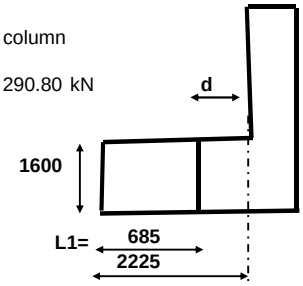
Ast(in Z Direction) =	18.48	cm^2/m	(min 0.12%)
Ast(in X Direction) =	18.48	cm^2/m	(min 0.12%)

provide	20	@	160	mm c/c	in Z Direction
Ast =	19.6		0	SAFE	
provide	20	@	160	mm c/c	in X Direction
Ast =	19.6	cm2			
			SAFE		

Check For One Way Shear

Critical Section is at the distance of 'd' from the face of the column

Shear at the Critical Section Vu = 1.5xPmax.xL1 = 290.80 kN

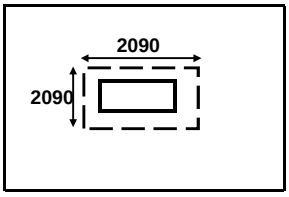


τc = Vu /bdeff. = 0.18

pt (prov)= 0.13

τc permissible = 0.20 N/mm2 **SAFE**
(value taken from IS 456)

Check For Punching Shear



τv = V/bod
bo = 8360 mm
d eff. = 1540 mm
τv = 0.26 N/mm2

τc permissible = *ks* τc
τc permissible = (0.5+ βc)*0.25 $\sqrt{fck}$
= 1.37 N/mm2
SAFE

CHECK AGAINST OVERTURNING

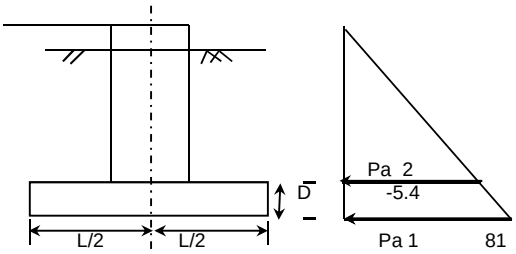
MOMENT = 82.5 kN-m

RESTORING MOMENT = P + W x Lx/2
10448 kN-m
F.O.S. = ##### > 1.4
SAFE

CHECK AGAINST SLIDING

Fx = 27.5 kN c

RESIISTING FORCE



Pa = Passive earth pressure = $\frac{1+\sin\phi}{1-\sin\phi}$

Resistance due to passive Earth Pressure

F1a =(Pa 1+ Pa 2) x Lz x D / 2 302.4

Resistance due to friction

F1b =(W + P) x μ 1880.64

Force resisting Sliding Fx1 = Fx1a + Fx1b 2183.04

F.O.S. = 79.38 > 1.4
SAFE

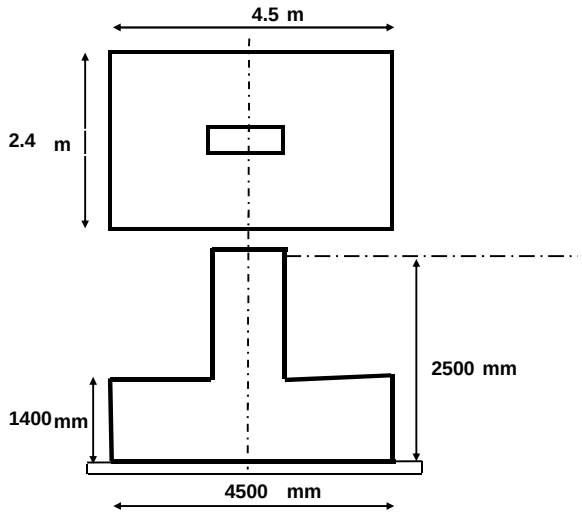
Design of pedestal

Effective length of pedestal	2	Percentage Steel	0.15
selenderness ratio	3		
Pu	18093 KN		
Status	O.K		
Ast	453.75		
Dia of bar	16		
No.	2.25647		

FOOTING DESIGN : F3

Footing design for node 1394

Allowable gross pressure=		290	kN/m^2
Grade of concrete =	M	30	
Depth Of Footing below Ground Level =		2.5	m
Cover Taken		50	mm
Steel Grade	Fe	500	
Column Width = Cz =		0.55	m
Column Length = Cx =		0.55	m
Pedestal Projection		0	mm
Axial Load on column = P =		2441	kN
Moment @ X Direction =		0	kN-m
Moment @ Z Direction =		0.35	kN-m
Area Required = 1.1x P / S.B.C.		9.26	m^2



Footing Size

Lz =		2.4	m
Lx =		4.5	m
Area Provided =		10.80	m^2

O.K.

Earth load + selfweight of footing W = 606.10 kN

Bearing Pressure Check

Pmax	282.2 kN/m^2	Safe	(checked against gross Pressure)
Pmin	282.1 kN/m^2	Safe	

Bearing Pressure For Design

Pmax	282.2 kN/m^2
Pmin	282.1 kN/m^2

Design

Moment calculated for max. Pressure considering **cantilever** action

Cantilever in Z direction =	925	mm	
Moment in Z Direc @ face of the Colm =	181.08	kN-m	
Cantilever in X direction =	1975	mm	
Moment in X Direc @ face of the Colm =	825.51	kN-m	

Assume

D1 =	1400	mm			
D2 =	1400	mm			
d eff. =	1340	mm			
ku(z)	0.101	Ast =	16.08	cm^2/m	
ku(x)	0.46	Ast =	16.08	cm^2/m	
Ast(in Z Direction) =	16.08	cm^2/m	(min 0.12%)		
Ast(in X Direction) =	16.08	cm^2/m	(min 0.12%)		

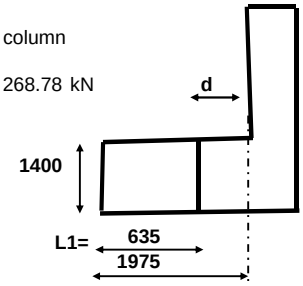
provide	20	@	185	mm c/c	in Z Direction
Ast =	17.0		0 SAFE		
provide	20	@	185	mm c/c	in X Direction
Ast =	17.0	cm2			

SAFE

Check For One Way Shear

Critical Section is at the distance of 'd' from the face of the column

Shear at the Critical Section Vu = 1.5xPmax.xL1 = 268.78 kN

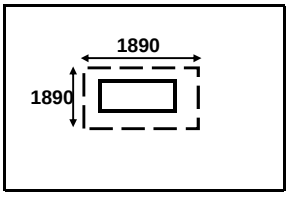


τc = Vu /bdeff. = 0.19

pt (prov)= 0.13

τc permissible = 0.20 N/mm2 **SAFE**
(value taken from IS 456)

Check For Punching Shear



τv = V/bod
bo = 7560 mm
d eff. = 1340 mm
τv = 0.24 N/mm2

τc permissible = *ks* τc
τc permissible = (0.5+ βc)*0.25 $\sqrt{fck}$
= 1.37 N/mm2
SAFE

CHECK AGAINST OVERTURNING

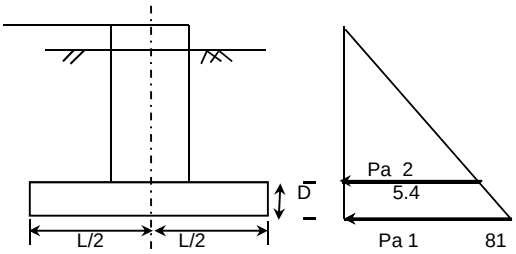
MOMENT = 0.525 kN-m

RESTORING MOMENT = P + W x Lx/2
6856 kN-m
F.O.S. = ##### > 1.4
SAFE

CHECK AGAINST SLIDING

Fx = 0.175 kN c

RESIISTING FORCE



Pa = Passive earth pressure = $\frac{1+\sin\phi}{1-\sin\phi}$

Resistance due to passive Earth Pressure

F1a =(Pa 1+ Pa 2) x Lz x D / 2 272.2

Resistance due to friction

F1b =(W + P) x μ 1371.193

Force resisting Sliding Fx1 = Fx1a + Fx1b 1643.35

F.O.S. = 9391 > 1.4
SAFE

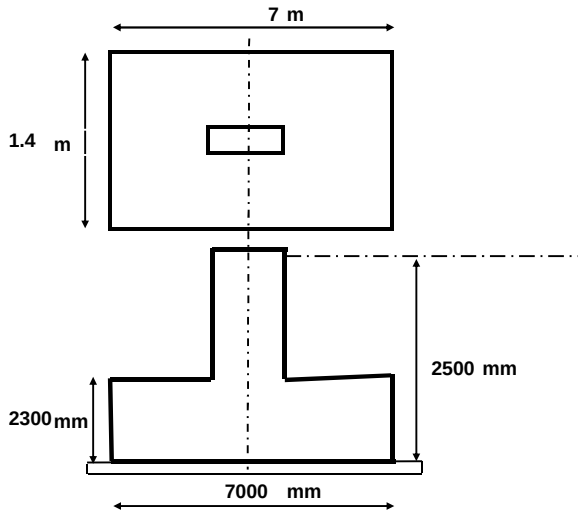
Design of pedestal

Effective length of pedestal	2	Percentage Steel	0.15
selenderness ratio	4		
Pu	18093 KN		
Status	O.K		
Ast	453.75		
Dia of bar	16		
No.	2.25647		

FOOTING DESIGN : F4

Footing design for node 1393

Allowable gross pressure=		290	kN/m^2
Grade of concrete =	M	30	
Depth Of Footing below Ground Level =		2.5	m
Cover Taken		50	mm
Steel Grade	Fe	500	
Column Width = Cz =		0.55	m
Column Length = Cx =		0.55	m
Pedestal Projection		0	mm
Axial Load on column = P =		2111	kN
Moment @ X Direction =		230	kN-m
Moment @ Z Direction =		113.5	kN-m
Area Required = 1.1x P / S.B.C.		8.01	m^2



Footing Size

Lz =		1.4	m
Lx =		7	m
Area Provided =		9.80	m^2

O.K.

Earth load + selfweight of footing W = 601.13 kN

Bearing Pressure Check

Pmax	286.7	kN/m^2	Safe (checked against gross Pressure)
Pmin	266.8	kN/m^2	Safe

Bearing Pressure For Design

Pmax	286.7	kN/m^2
Pmin	266.8	kN/m^2

Design

Moment calculated for max. Pressure considering **cantilever** action

Cantilever in Z direction =	425	mm
Moment in Z Direc @ face of the Colm =	38.84	kN-m
Cantilever in X direction =	3225	mm
Moment in X Direc @ face of the Colm =	2236.20	kN-m

Assume

D1 =	2300	mm			
D2 =	2300	mm			
d eff. =	2238	mm			
ku(z)	0.008	Ast =	26.85	cm^2/m	
ku(x)	0.447	Ast =	26.85	cm^2/m	

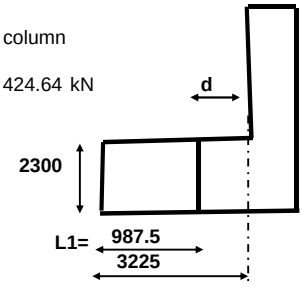
Ast(in Z Direction) =	26.85	cm^2/m	(min 0.12%)
Ast(in X Direction) =	26.85	cm^2/m	(min 0.12%)

provide	25	@	175	mm c/c	in Z Direction
Ast =	28.0		0	SAFE	
provide	25	@	175	mm c/c	in X Direction
Ast =	28.0	cm2			
			SAFE		

Check For One Way Shear

Critical Section is at the distance of 'd' from the face of the column

Shear at the Critical Section Vu = 1.5xPmax.xL1 = 424.64 kN



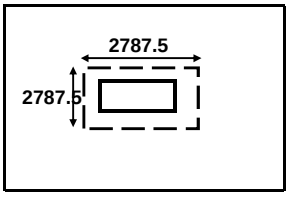
τc = Vu /bdeff. = 0.18

pt (prov)= 0.13

τc permissible = 0.20 N/mm2 **SAFE**
(value taken from IS 456)

Check For Punching Shear

τv = V/bod
bo = 11150 mm
d eff. = 2237.5 mm
τv = 0.08 N/mm2



τc permissible = *ks* τc
τc permissible = (0.5+ βc)*0.25 √fck
= 1.37 N/mm2
SAFE

CHECK AGAINST OVERTURNING

MOMENT = 170.25 kN-m

RESTORING MOMENT = P + W x Lx/2
9492 kN-m
F.O.S. = 55.76 > 1.4
SAFE

CHECK AGAINST SLIDING

Fx = 56.75 kN c

RESIISTING FORCE

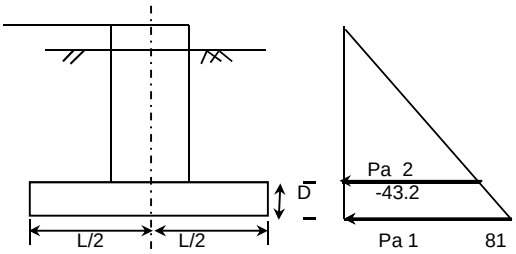
Pa = Passive earth pressure = $\frac{1+\sin\phi}{1-\sin\phi}$

Resistance due to passive Earth Pressure

F1a =(Pa 1+ Pa 2) x Lz x D / 2 304.3

Resistance due to friction

F1b =(W + P) x μ 1220.459



Force resisting Sliding Fx1 = Fx1a + Fx1b 1524.75

F.O.S. = 26.87 > 1.4
SAFE

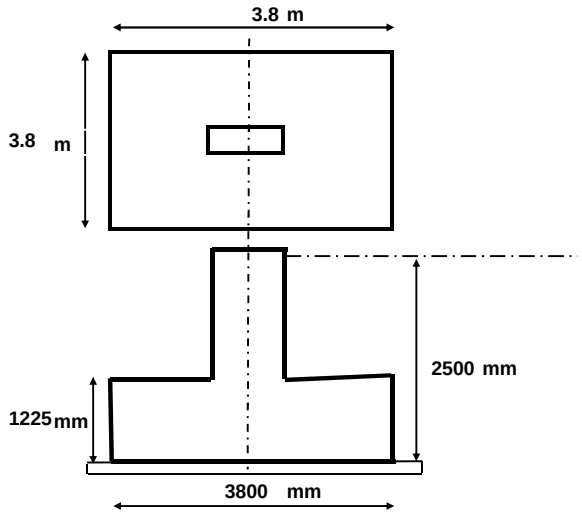
Design of pedestal

Effective length of pedestal	0	Percentage Steel	0.15
selenderness ratio	1		
Pu	18093 KN		
Status	O.K		
Ast	453.75		
Dia of bar	16		
No.	2.25647		

FOOTING DESIGN : F5

Footing design for node 557

Allowable gross pressure=		290	kN/m^2
Grade of concrete =	M	30	
Depth Of Footing below Ground Level =		2.5	m
Cover Taken		50	mm
Steel Grade	Fe	500	
Column Width = Cz =		0.55	m
Column Length = Cx =		0.55	m
Pedestal Projection		0	mm
Axial Load on column = P =		3208	kN
Moment @ X Direction =		3	kN-m
Moment @ Z Direction =		64	kN-m
Area Required = 1.1x P / S.B.C.		12.17	m^2



Footing Size

Lz =		3.8	m
Lx =		3.8	m
Area Provided =		14.44	m^2

O.K.

Earth load + selfweight of footing W = 795.72 kN

Bearing Pressure Check

Pmax	284.3	kN/m^2	Safe (checked against gross Pressure)
Pmin	270.3	kN/m^2	Safe

Bearing Pressure For Design

Pmax	284.3	kN/m^2
Pmin	270.3	kN/m^2

Design

Moment calculated for max. Pressure considering **cantilever** action

Cantilever in Z direction =	1625	mm
Moment in Z Direc @ face of the Colm =	562.98	kN-m
Cantilever in X direction =	1625	mm
Moment in X Direc @ face of the Colm =	562.98	kN-m

Assume

D1 =	1225	mm			
D2 =	1225	mm			
d eff. =	1167	mm			
ku(z)	0.413	Ast =	14.00	cm^2/m	
ku(x)	0.413	Ast =	14.00	cm^2/m	

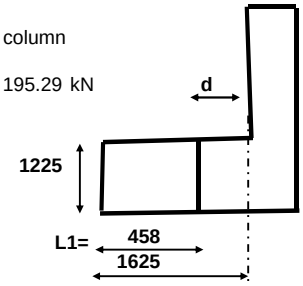
Ast(in Z Direction) =	14.00	cm^2/m	(min 0.12%)
Ast(in X Direction) =	14.00	cm^2/m	(min 0.12%)

provide	16	@	140	mm c/c	in Z Direction
Ast =	14.4		0	SAFE	
provide	16	@	140	mm c/c	in X Direction
Ast =	14.4	cm2			
			SAFE		

Check For One Way Shear

Critical Section is at the distance of 'd' from the face of the column

Shear at the Critical Section Vu = 1.5xPmax.xL1 = 195.29 kN

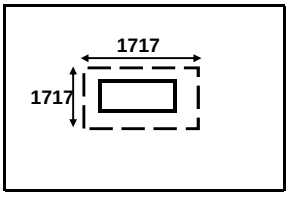


τc = Vu /bdeff. = 0.16

pt (prov)= 0.12

τc permissible = 0.20 N/mm2 **SAFE**
(value taken from IS 456)

Check For Punching Shear



τv = V/bod
bo = 6868 mm
d eff. = 1167 mm
τv = 0.40 N/mm2

τc permissible = *ks* τc
τc permissible = (0.5+ βc)*0.25 $\sqrt{fck}$
= 1.37 N/mm2
SAFE

CHECK AGAINST OVERTURNING

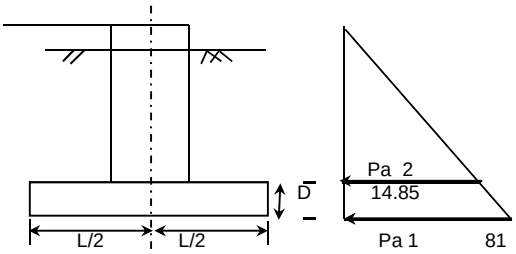
MOMENT = 96 kN-m

RESTORING MOMENT = P + W x Lx/2
7607 kN-m
F.O.S. = 79.24 > 1.4
SAFE

CHECK AGAINST SLIDING

Fx = 32 kN c

RESIISTING FORCE



Pa = Passive earth pressure = $\frac{1+\sin\phi}{1-\sin\phi}$

Resistance due to passive Earth Pressure

F1a =(Pa 1+ Pa 2) x Lz x D / 2 223.1

Resistance due to friction

F1b =(W + P) x μ 1801.672

Force resisting Sliding Fx1 = Fx1a + Fx1b 2024.76

F.O.S. = 63.27 > 1.4
SAFE

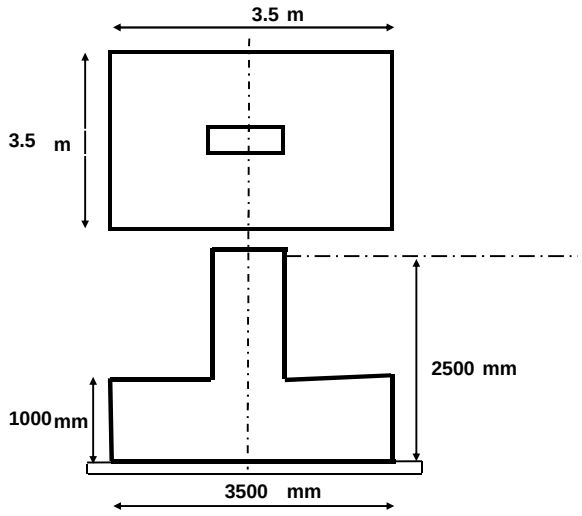
Design of pedestal

Effective length of pedestal	3	Percentage Steel	0.15
selenderness ratio	5		
Pu	18093 KN		
Status	O.K		
Ast	453.75		
Dia of bar	16		
No.	2.25647		

FOOTING DESIGN : F6

Footing design for node 553

Allowable gross pressure=		290	kN/m^2
Grade of concrete =	M	30	
Depth Of Footing below Ground Level =		2.5	m
Cover Taken		50	mm
Steel Grade	Fe	500	
Column Width = Cz =		0.55	m
Column Length = Cx =		0.55	m
Pedestal Projection		0	mm
Axial Load on column = P =		2388	kN
Moment @ X Direction =		174	kN-m
Moment @ Z Direction =		-98.5	kN-m
Area Required = 1.1x P / S.B.C.		9.06	m^2



Footing Size

Lz =		3.5	m
Lx =		3.5	m
Area Provided =		12.25	m^2

O.K.

Earth load + selfweight of footing: W = 659.05 kN

Bearing Pressure Check

Pmax	235.0 kN/m^2	Safe	(checked against gross Pressure)
Pmin	262.5 kN/m^2	Safe	

Bearing Pressure For Design

Pmax	235.0 kN/m^2
Pmin	262.5 kN/m^2

Design

Moment calculated for max. Pressure considering **cantilever** action

Cantilever in Z direction = 1475 mm
Moment in Z Direc @ face of the Colm = 383.38 kN-m

Cantilever in X direction = 1475 mm
Moment in X Direc @ face of the Colm = 383.38 kN-m

Assume

D1 =	1000	mm			
D2 =	1000	mm			
d eff. =	940	mm			
ku(z)	0.434	Ast =	11.28	cm^2/m	
ku(x)	0.434	Ast =	11.28	cm^2/m	

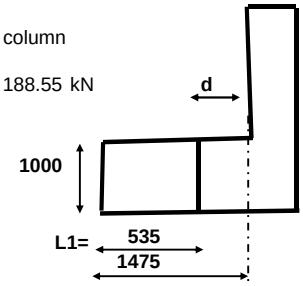
Ast(in Z Direction) =	11.28	cm^2/m	(min 0.12%)
Ast(in X Direction) =	11.28	cm^2/m	(min 0.12%)

provide	20	@	200	mm c/c	in Z Direction
Ast =	15.7		0	SAFE	
provide	20	@	200	mm c/c	in X Direction
Ast =	15.7	cm2			
			SAFE		

Check For One Way Shear

Critical Section is at the distance of 'd' from the face of the column

Shear at the Critical Section Vu = 1.5xPmax.xL1 = 188.55 kN

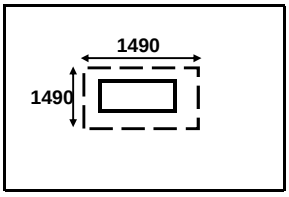


τc = Vu /bdeff. = 0.19

pt (prov)= 0.17

τc permissible = 0.20 N/mm2 **SAFE**
(value taken from IS 456)

Check For Punching Shear



τv = V/bod
bo = 5960 mm
d eff. = 940 mm
τv = 0.43 N/mm2

τc permissible = *ks* τc
τc permissible = (0.5+ βc)*0.25 $\sqrt{fck}$
= 1.37 N/mm2
SAFE

CHECK AGAINST OVERTURNING

MOMENT = -147.75 kN-m

RESTORING MOMENT = P + W x Lx/2
5332 kN-m
F.O.S. = -36.09 > 1.4
SAFE

CHECK AGAINST SLIDING

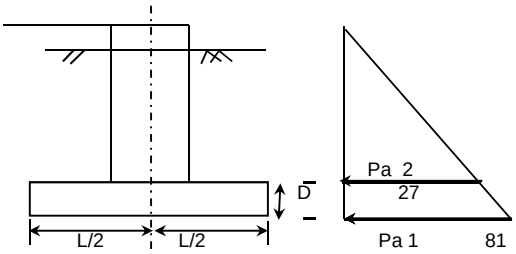
Fx = -49.25 kN c

RESIISTING FORCE

Pa = Passive earth pressure = $\frac{1+\sin\phi}{1-\sin\phi}$

Resistance due to passive Earth Pressure

F1a =(Pa 1+ Pa 2) x Lz x D / 2 189



Resistance due to friction

F1b =(W + P) x μ 1371.173

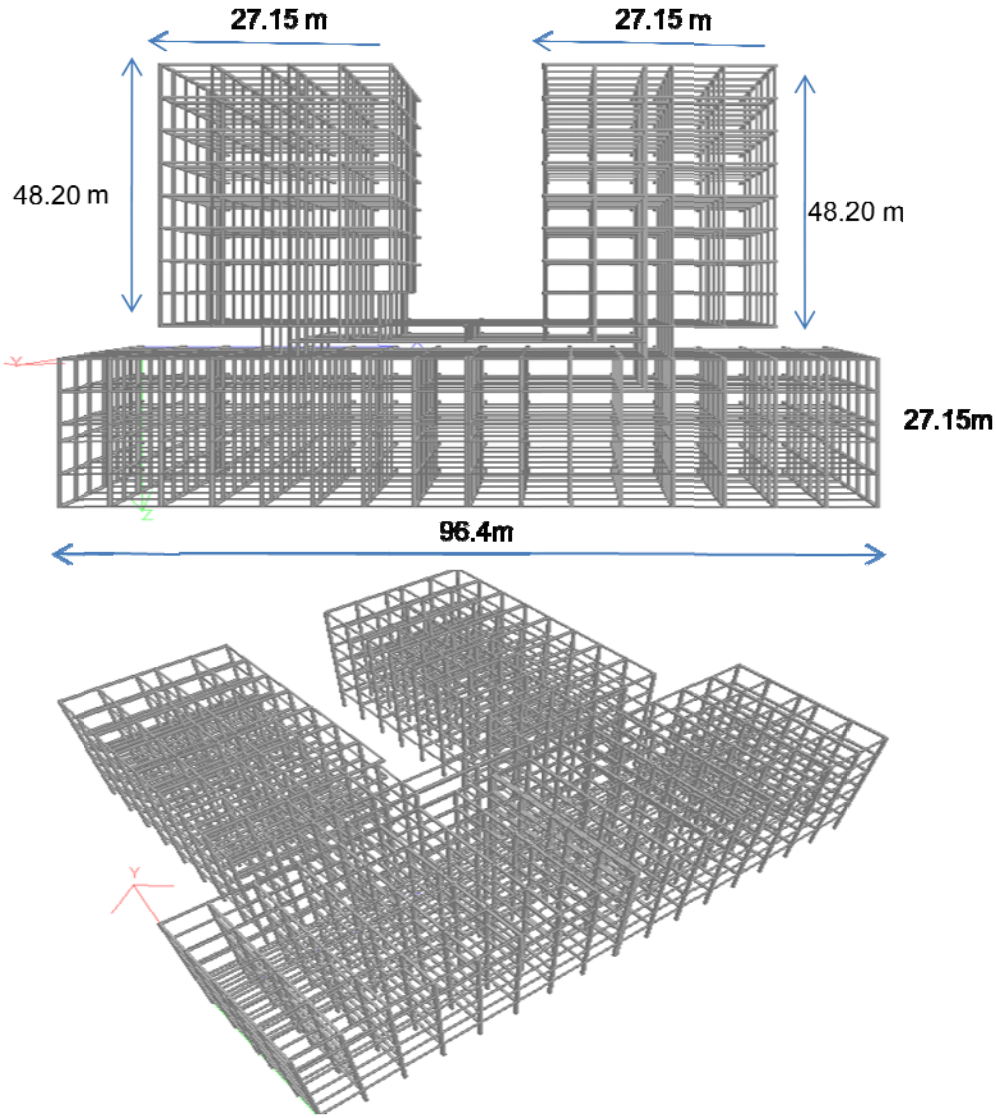
Force resisting Sliding Fx1 = Fx1a + Fx1b 1560.17

F.O.S. = -31.7 > 1.4
SAFE

Design of pedestal

Effective length of pedestal	3	Percentage Steel	0.15
selenderness ratio	5		
Pu	18093 KN		
Status	O.K		
Ast	453.75		
Dia of bar	16		
No.	2.25647		

STAAD OUTPUT



3D RENDER VIEW OF RCC CONVENTIONAL STRCUTURE

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     4. JOB REV R0
     5. ENGINEER NAME PRAFULL
     6. JOB PART MAJOR PROJECT PART-2
     7. END JOB INFORMATION
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727 TO 729 733 TO 735 851 852 855 856 935 936 939 940 1019 1023 1105 TO 1107 -
1111 TO 1113 1229 1230 1233 1234 1313 1314 1317 1318 1397 1398 1401 1402 -
1483 TO 1485 1489 TO 1491 1607 1608 1611 1612 1691 1692 1695 1696 1775 1776 -
1779 1780
_BP3 2 3 362 363 550 570 633 653 716 717 746 747 928 948 1011 1031 1094 1095 -
1124 1125 1305 1306 1325 1326 1472 1473 1502 1503 1683 1684 1703 1704
_BP4 1 361 465 466 485 486 549 569 715 745 843 844 863 864 927 947 1093 1123 -
1221 1222 1241 1242 1409 1410 1471 1501 1599 1600 1619 1620 1767 1768 1787 -
1788 1923 1936
_BP5 1851 1853 1891 1898 1905 1907 1909 1940
_BP6 634 638 642 646 650 654 1012 1016 1020 1024 1028 1032
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*E 2.05E+008
*POISSON 0.3
*DENSITY 76.9822
*ALPHA 1.2E-005
*DAMP 0.03
DEFINE MATERIAL START
ISOTROPIC CONCRETE
E 2.17185E+007
POISSON 0.17
DENSITY 23.5616
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ALPHA 1E-005
DAMP 0.05
TYPE CONCRETE
STRENGTH FCU 27579
END DEFINE MATERIAL
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1032 1037 1042 TO 1044 1062 1067 1072 1077 1082 1087 TO 1089 1107 1112 1117 -
1122 1127 1132 TO 1134 1152 1157 1162 1167 1172 1177 TO 1179 1217 1218 1251 -
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1523 1524 1557 1558 1591 1592 1625 1626 1659 1660 1693 1694 1727 1728 1761 -
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1998 2003 TO 2005 2023 2028 2033 2038 2043 2048 TO 2050 2068 2073 2078 2083 -
2088 2093 TO 2095 2113 2118 2123 2128 2133 2138 TO 2140 2158 2163 2168 2173 -
2178 2183 TO 2185 2223 2224 2257 2258 2291 2292 2325 2326 2359 2360 2393 -
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2665 2666 2699 2700 2733 2734 2767 2768 2801 2802 2903 TO 2905 2908 2913 -
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1944 1945 1949 1950 1954 1955 1979 1980 1984 1985 1989 1990 1994 1995 1999 -
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2079 2080 2084 2085 2089 2090 PRIS YD 0.55 ZD 0.55
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1991 1992 1996 1997 2026 2027 2031 2032 2036 2037 2041 2042 2071 2072 2076 -
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5139 TO 5142 5146 TO 5150 5160 5164 TO 5167 5171 TO 5174 -
5175 PRIS YD 0.45 ZD 0.3
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1685. 4611 4613 4615 4641 4643 4645 4647 4649 4675 4677 4679 4681 4683 4709 4711 -
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1688. MEMBER PROPERTY INDIAN
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1694. 5178 PRIS YD 0.5 ZD 0.35
1695. CONSTANTS
1696. BETA 90 MEMB 57 TO 59 176 TO 178 295 TO 297 414 TO 416 533 TO 535 652 TO 654 -
1697. 972 TO 974 977 TO 979 982 TO 984 987 TO 989 992 TO 994 997 TO 999 -
1698. 1017 TO 1019 1022 TO 1024 1027 TO 1029 1032 TO 1034 1037 TO 1039 -
1699. 1042 TO 1044 1062 TO 1064 1067 TO 1069 1072 TO 1074 1077 TO 1079 -
1700. 1082 TO 1084 1087 TO 1089 1107 TO 1109 1112 TO 1114 1117 TO 1119 -
1701. 1122 TO 1124 1127 TO 1129 1132 TO 1134 1152 TO 1154 1157 TO 1159 -
1702. 1162 TO 1164 1167 TO 1169 1172 TO 1174 1177 TO 1179 1197 1198 1201 1202 1205 -
1703. 1206 1209 1210 1213 1214 1217 1218 1231 1232 1235 1236 1239 1240 1243 1244 -
1704. 1247 1248 1251 1252 1265 1266 1269 1270 1273 1274 1277 1278 1281 1282 1285 -
1705. 1286 1299 1300 1303 1304 1307 1308 1311 1312 1315 1316 1319 1320 1333 1334 -
1706. 1337 1338 1341 1342 1345 1346 1349 1350 1353 1354 1367 1368 1371 1372 1375 -
1707. 1376 1379 1380 1383 1384 1387 1388 1401 1402 1405 1406 1409 1410 1413 1414 -
1708. 1417 1418 1421 1422 1435 1436 1439 1440 1443 1444 1447 1448 1451 1452 1455 -
1709. 1456 1469 1470 1473 1474 1477 1478 1481 1482 1485 1486 1489 1490 1503 1504 -
1710. 1507 1508 1511 1512 1515 1516 1519 1520 1523 1524 1537 1538 1541 1542 1545 -
1711. 1546 1549 1550 1553 1554 1557 1558 1571 1572 1575 1576 1579 1580 1583 1584 -
1712. 1587 1588 1591 1592 1605 1606 1609 1610 1613 1614 1617 1618 1621 1622 1625 -
1713. 1626 1639 1640 1643 1644 1647 1648 1651 1652 1655 1656 1659 1660 1673 1674 -
1714. 1677 1678
1715. BETA 90 MEMB 1681 1682 1685 1686 1689 1690 1693 1694 1707 1708 1711 1712 1715 -
1716. 1716 1719 1720 1723 1724 1727 1728 1741 1742 1745 1746 1749 1750 1753 1754 -
1717. 1757 1758 1761 1762 1775 1776 1779 1780 1783 1784 1787 1788 1791 1792 1795 -
1718. 1796 1933 TO 1935 1938 TO 1940 1943 TO 1945 1948 TO 1950 1953 TO 1955 1958 -
1719. 1959 TO 1960 1978 TO 1980 1983 TO 1985 1988 TO 1990 1993 TO 1995 1998 TO 2000 -
1720. 2003 TO 2005 2023 TO 2025 2028 TO 2030 2033 TO 2035 2038 TO 2040 -
1721. 2043 TO 2045 2048 TO 2050 2068 TO 2070 2073 TO 2075 2078 TO 2080 -
1722. 2083 TO 2085 2088 TO 2090 2093 TO 2095 2113 TO 2115 2118 TO 2120 -
1723. 2123 TO 2125 2128 TO 2130 2133 TO 2135 2138 TO 2140 2158 TO 2160 -
1724. 2163 TO 2165 2168 TO 2170 2173 TO 2175 2178 TO 2180 2183 TO 2185 2203 2204 -
1725. 2207 2208 2211 2212 2215 2216 2219 2220 2223 2224 2237 2238 2241 2242 2245 -
1726. 2246 2249 2250 2253 2254 2257 2258 2271 2272 2275 2276 2279 2280 2283 2284 -
1727. 2287 2288 2291 2292 2305 2306 2309 2310 2313 2314 2317 2318 2321 2322 2325 -
1728. 2326 2339 2340 2343 2344 2347 2348 2351 2352 2355 2356 2359 2360 2373 2374 -
1729. 2377 2378 2381 2382 2385 2386 2389 2390 2393 2394 2407 2408 2411 2412 2415 -
1730. 2416 2419 2420 2423 2424 2427 2428 2441 2442 2445 2446 2449 2450 2453 2454 -
1731. 2457 2458 2461 2462 2475 2476 2479 2480 2483 2484 2487 2488 2491 2492 2495 -
1732. 2496 2509 2510 2513 2514 2517 2518 2521 2522 2525 2526 2529 2530 2543 2544 -
1733. 2547 2548 2551 2552 2555 2556
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1734. BETA 90 MEMB 2559 2560 2563 2564 2577 2578 2581 2582 2585 2586 2589 2590 2593 -
1735. 2594 2597 2598 2611 2612 2615 2616 2619 2620 2623 2624 2627 2628 2631 2632 -
1736. 2645 2646 2649 2650 2653 2654 2657 2658 2661 2662 2665 2666 2679 2680 2683 -
1737. 2684 2687 2688 2691 2692 2695 2696 2699 2700 2713 2714 2717 2718 2721 2722 -
1738. 2725 2726 2729 2730 2733 2734 2747 2748 2751 2752 2755 2756 2759 2760 2763 -
1739. 2764 2767 2768 2781 2782 2785 2786 2789 2790 2793 2794 2797 2798 2801 2802 -
1740. 4888 TO 4893
1741. MATERIAL CONCRETE ALL
1742. SUPPORTS
1743. 1 TO 3 73 TO 75 145 TO 147 217 TO 219 289 TO 291 361 TO 363 465 466 469 470 -
1744. 473 474 477 478 481 482 485 486 549 550 553 554 557 558 561 562 565 566 569 -
1745. 570 633 634 637 638 641 642 645 646 649 650 653 654 715 TO 717 721 TO 723 -
1746. 727 TO 729 733 TO 735 739 TO 741 745 TO 747 843 844 847 848 851 852 855 856 -
1747. 859 860 863 864 927 928 931 932 935 936 939 940 943 944 947 948 1011 1012 -
1748. 1015 1016 1019 1020 1023 1024 1027 1028 1031 1032 1093 TO 1095 1099 TO 1101 -
1749. 1105 TO 1107 1111 TO 1113 1117 TO 1119 1123 TO 1125 1221 1222 1225 1226 1229 -
1750. 1230 1233 1234 1237 1238 1241 1242 1305 1306 1309 1310 1313 1314 1317 1318 -
1751. 1321 1322 1325 1326 1393 1394 1397 1398 1401 1402 1405 1406 1409 1410 1471 -
1752. 1472 TO 1473 1477 TO 1479 1483 TO 1485 1489 TO 1491 1495 TO 1497 1501 TO 1503 -
1753. 1599 1600 1603 1604 1607 1608 1611 1612 1615 1616 1619 1620 1683 1684 1687 -
1754. 1688 1691 1692 1695 1696 1699 1700 1703 1704 1767 1768 1771 1772 1775 1776 -
1755. 1779 1780 1783 1784 1787 1788 1851 1853 1891 1898 1905 1907 1909 1923 1936 -
1756. 1940 FIXED
1757. DEFINE 1893 LOAD
1758. ZONE 0.1 RF 5 I 1.5 SS 2 ST 2 DM 0.02
1759. ******************************************************************************
1760. SELFWEIGHT 1
1761. MEMBER WEIGHT
1762. 715 778 841 904 967 1000 1003 1006 1009 1012 1045 1048 1051 1054 1057 1090 -
1763. 1093 1096 1099 1102 1135 1138 1141 1144 1147 1961 1964 1967 1970 1973 2006 -
1764. 2009 2012 2015 2018 2051 2054 2057 2060 2063 2096 2099 2102 2105 2108 2141 -
1765. 2144 2147 2150 2153 2931 2934 2937 2940 2943 2976 2979 2982 2985 2988 3021 -
1766. 3024 3027 3030 3033 3066 3069 3072 3075 3078 3111 3114 3117 3120 3123 3901 -
1767. 3904 3907 3910 3913 3946 3949 3952 3955 3958 3991 3994 3997 4000 4003 4036 -
1768. 4039 4042 4045 4048 4081 4084 4087 4090 4093 UNI 14.1
1769. ***
1770. 716 717 779 780 842 843 905 906 968 969 1001 1002 1004 1005 1007 1008 1010 -
1771. 1011 1013 1014 1046 1047 1049 1050 1052 1053 1055 1056 1058 1059 1091 1092 -
1772. 1094 1095 1097 1098 1100 1101 1103 1104 1136 1137 1139 1140 1142 1143 1145 -
1773. 1146 1148 1149 1219 TO 1228 1253 TO 1262 1287 TO 1296 1321 TO 1330 -
1774. 1355 TO 1364 1423 TO 1432 1457 TO 1466 1491 TO 1500 1525 TO 1534 -
1775. 1559 TO 1568 1627 TO 1636 1661 TO 1670 1695 TO 1704 1729 TO 1738 -
1776. 1763 TO 1772 1962 1963 1965 1966 1968 1969 1971 1972 1974 1975 2007 2008 -
1777. 2010 2011 2013 2014 2016 2017 2019 2020 2052 2053 2055 2056 2058 2059 2061 -
1778. 2062 2064 2065 2097 2098 2100 2101 2103 2104 2106 2107 2109 2110 2142 2143 -
1779. 2145 2146 2148 2149 2151 2152 2154 2155 2225 TO 2234 2259 TO 2268 -
1780. 2293 TO 2302 2327 TO 2336 2361 TO 2370 2429 TO 2438 2463 TO 2472 -
1781. 2497 TO 2506 2531 TO 2540 2565 TO 2574 2633 TO 2642 2667 TO 2676 -
1782. 2701 TO 2710 2735 TO 2744 2769 TO 2778 2932 2933 2935 2936 2938 2939 2941 -
1783. 2942 2944 2945 2977 2978 2980 2981 2983 2984 2986 2987 2989 2990 3022 3023 -
1784. 3025 3026 3028 3029 3031 3032 3034 3035 3067 3068 3070 3071 3073 3074 3076 -
1785. 3077 3079 3080 3112 3113 3115 3116 3118 3119 3121 3122 3124 3125 -
1786. 3195 TO 3204 3229 TO 3238 3263 TO 3272 3297 TO 3306 3331 TO 3340 -
1787. 3399 TO 3408 3433 TO 3442 3467 TO 3476 3501 TO 3510 3535 TO 3544 3603 3605 -
1788. 3606 TO 3612 3637 3639 TO 3646 3671 3673 UNI 28.2
1789. 3674 TO 3680 3705 3707 TO 3714 3739 3741 TO 3748 3902 3903 3905 3906 3908 -
1790. 3909 3911 3912 3914 3915 3947 3948 3950 3951 3953 3954 3956 3957 3959 3960 -
1791. 3992 3993 3995 3996 3998 3999 4001 4002 4004 4005 4037 4038 4040 4041 4043 -
1792. 4044 4046 4047 4049 4050 4082 4083 4085 4086 4088 4089 4091 4092 4094 4095 -
1793. 4165 TO 4174 4199 TO 4208 4233 TO 4242 4267 TO 4276 4301 TO 4310 -
1794. 4369 TO 4378 4403 TO 4412 4437 TO 4446 4471 TO 4480 4505 TO 4514 -
1795. 4573 TO 4582 4607 TO 4616 4641 TO 4650 4675 TO 4684 4709 TO 4718 5008 5010 -
1796. 5012 5014 5016 5020 5022 5024 5026 5028 UNI 28.2
1797. ***
1798. 1 2 120 121 239 240 358 359 477 478 596 597 715 TO 717 778 TO 780 841 TO 843 -
1799. 904 TO 906 967 TO 971 975 976 980 981 985 986 990 991 995 996 1000 TO 1016 -
1800. 1020 1021 1025 1026 1030 1031 1035 1036 1040 1041 1045 TO 1061 1065 1066 -
1801. 1070 1071 1075 1076 1080 1081 1085 1086 1090 TO 1106 1110 1111 1115 1116 -
1802. 1120 1121 1125 1126 1130 1131 1135 TO 1149 1195 1196 1199 1200 1203 1204 -
1803. 1207 1208 1211 1212 1215 1216 1219 TO 1230 1233 1234 1237 1238 1241 1242 -
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1804. 1245 1246 1249 1250 1253 TO 1264 1267 1268 1271 1272 1275 1276 1279 1280 -
1805. 1283 1284 1287 TO 1298 1301 1302 1305 1306 1309 1310 1313 1314 1317 1318 -
1806. 1321 TO 1332 1335 1336 1339 1340 1343 1344 1347 1348 1351 1352 1355 TO 1364 -
1807. 1399 1400 1403 1404 1407 1408 1411 1412 1415 1416 1419 1420 1423 TO 1434 -
1808. 1437 1438 1441 1442 1445 1446 1449 1450 1453 1454 1457 TO 1468 1471 1472 -
1809. 1475 1476 1479 1480 1483 1484 1487 1488 1491 TO 1502 1505 1506 1509 1510 -
1810. 1513 1514 1517 1518 1521 1522 1525 TO 1536 1539 1540 1543 1544 1547 1548 -
1811. 1551 1552 1555 1556 1559 TO 1568 1603 1604 1607 1608 1611 1612 1615 1616 -
1812. 1619 1620 1623 1624 1627 TO 1638 1641 1642 1645 1646 1649 1650 1653 1654 -
1813. 1657 1658 1661 TO 1672 1675 1676 1679 1680 1683 1684 1687 1688 1691 1692 -
1814. 1695 TO 1706 1709 1710 1713 1714 1717 1718 1721 1722 1725 1726 1729 TO 1740 -
1815. 1743 1744 1747 1748 1751 1752 1755 1756 1759 1760 1763 TO 1772 UNI 8
1816. 1931 1932 1936 1937 1941 1942 1946 1947 1951 1952 1956 1957 1961 TO 1977 1981 -
1817. 1982 1986 1987 1991 1992 1996 1997 2001 2002 2006 TO 2022 2026 2027 2031 -
1818. 2032 2036 2037 2041 2042 2046 2047 2051 TO 2067 2071 2072 2076 2077 2081 -
1819. 2082 2086 2087 2091 2092 2096 TO 2112 2116 2117 2121 2122 2126 2127 2131 -
1820. 2132 2136 2137 2141 TO 2155 2201 2202 2205 2206 2209 2210 2213 2214 2217 -
1821. 2218 2221 2222 2225 TO 2236 2239 2240 2243 2244 2247 2248 2251 2252 2255 -
1822. 2256 2259 TO 2270 2273 2274 2277 2278 2281 2282 2285 2286 2289 2290 2293 -
1823. 2294 TO 2304 2307 2308 2311 2312 2315 2316 2319 2320 2323 2324 2327 TO 2338 -
1824. 2341 2342 2345 2346 2349 2350 2353 2354 2357 2358 2361 TO 2370 2405 2406 -
1825. 2409 2410 2413 2414 2417 2418 2421 2422 2425 2426 2429 TO 2440 2443 2444 -
1826. 2447 2448 2451 2452 2455 2456 2459 2460 2463 TO 2474 2477 2478 2481 2482 -
1827. 2485 2486 2489 2490 2493 2494 2497 TO 2508 2511 2512 2515 2516 2519 2520 -
1828. 2523 2524 2527 2528 2531 TO 2542 2545 2546 2549 2550 2553 2554 2557 2558 -
1829. 2561 2562 2565 TO 2574 2609 2610 2613 2614 2617 2618 2621 2622 2625 2626 -
1830. 2629 2630 2633 TO 2644 2647 2648 2651 2652 2655 2656 2659 2660 2663 2664 -
1831. 2667 TO 2678 2681 2682 2685 2686 2689 2690 2693 2694 2697 2698 2701 TO 2712 -
1832. 2715 2716 2719 2720 2723 2724 2727 2728 2731 2732 2735 TO 2746 2749 2750 -
1833. 2753 2754 2757 2758 2761 2762 2765 2766 2769 TO 2778 2901 2902 2906 2907 -
1834. 2911 2912 2916 2917 2921 2922 2926 2927 UNI 8
1835. 2931 TO 2947 2951 2952 2956 2957 2961 2962 2966 2967 2971 2972 2976 TO 2992 -
1836. 2996 2997 3001 3002 3006 3007 3011 3012 3016 3017 3021 TO 3037 3041 3042 -
1837. 3046 3047 3051 3052 3056 3057 3061 3062 3066 TO 3082 3086 3087 3091 3092 -
1838. 3096 3097 3101 3102 3106 3107 3111 TO 3125 3171 3172 3175 3176 3179 3180 -
1839. 3183 3184 3187 3188 3191 3192 3195 TO 3206 3209 3210 3213 3214 3217 3218 -
1840. 3221 3222 3225 3226 3229 TO 3240 3243 3244 3247 3248 3251 3252 3255 3256 -
1841. 3259 3260 3263 TO 3274 3277 3278 3281 3282 3285 3286 3289 3290 3293 3294 -
1842. 3297 TO 3308 3311 3312 3315 3316 3319 3320 3323 3324 3327 3328 3331 TO 3340 -
1843. 3375 3376 3379 3380 3383 3384 3387 3388 3391 3392 3395 3396 3399 TO 3410 -
1844. 3413 3414 3417 3418 3421 3422 3425 3426 3429 3430 3433 TO 3444 3447 3448 -
1845. 3451 3452 3455 3456 3459 3460 3463 3464 3467 TO 3478 3481 3482 3485 3486 -
1846. 3489 3490 3493 3494 3497 3498 3501 TO 3512 3515 3516 3519 3520 3523 3524 -
1847. 3527 3528 3531 3532 3535 TO 3544 3579 3583 3584 3587 3588 3591 3592 3595 -
1848. 3596 3599 3600 3603 3605 TO 3613 3617 3618 3621 3622 3625 3626 3629 3630 -
1849. 3633 3634 3637 3639 TO 3647 3651 3652 3655 3656 3659 3660 3663 3664 3667 -
1850. 3668 3671 3673 TO 3681 3685 3686 3689 3690 3693 3694 3697 3698 3701 3702 -
1851. 3705 3707 TO 3715 3719 3720 3723 3724 3727 3728 3731 3732 3735 3736 3739 -
1852. 3741 TO 3748 3871 3872 3876 3877 3881 3882 3886 3887 3891 3892 3896 3897 -
1853. 3901 TO 3917 3921 3922 3926 3927 3931 UNI 8
1854. 3932 3936 3937 3941 3942 3946 TO 3962 3966 3967 3971 3972 3976 3977 3981 3982 -
1855. 3986 3987 3991 TO 4007 4011 4012 4016 4017 4021 4022 4026 4027 4031 4032 -
1856. 4036 TO 4052 4056 4057 4061 4062 4066 4067 4071 4072 4076 4077 4081 TO 4095 -
1857. 4141 4142 4145 4146 4149 4150 4153 4154 4157 4158 4161 4162 4165 TO 4176 -
1858. 4179 4180 4183 4184 4187 4188 4191 4192 4195 4196 4199 TO 4210 4213 4214 -
1859. 4217 4218 4221 4222 4225 4226 4229 4230 4233 TO 4244 4247 4248 4251 4252 -
1860. 4255 4256 4259 4260 4263 4264 4267 TO 4278 4281 4282 4285 4286 4289 4290 -
1861. 4293 4294 4297 4298 4301 TO 4310 4345 4346 4349 4350 4353 4354 4357 4358 -
1862. 4361 4362 4365 4366 4369 TO 4380 4383 4384 4387 4388 4391 4392 4395 4396 -
1863. 4399 4400 4403 TO 4414 4417 4418 4421 4422 4425 4426 4429 4430 4433 4434 -
1864. 4437 TO 4448 4451 4452 4455 4456 4459 4460 4463 4464 4467 4468 4471 TO 4482 -
1865. 4485 4486 4489 4490 4493 4494 4497 4498 4501 4502 4505 TO 4514 4549 4550 -
1866. 4553 4554 4557 4558 4561 4562 4565 4566 4569 4570 4573 TO 4584 4587 4588 -
1867. 4591 4592 4595 4596 4599 4600 4603 4604 4607 TO 4618 4621 4622 4625 4626 -
1868. 4629 4630 4633 4634 4637 4638 4641 TO 4652 4655 4656 4659 4660 4663 4664 -
1869. 4667 4668 4671 4672 4675 TO 4686 4689 4690 4693 4694 4697 4698 4701 4702 -
1870. 4705 4706 4709 TO 4718 5008 5010 5012 5014 5016 5020 TO 5029 5061 TO 5066 -
1871. 5068 TO 5076 5078 5086 TO 5091 5093 TO 5101 5103 5111 TO 5116 5118 TO 5126 -
1872. 5128 5136 TO 5141 UNI 8
1873. 5143 TO 5151 5153 5161 TO 5166 5168 TO 5176 5178 UNI 8

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1874. ****
1875. 1150 1151 1175 1176 1180 1183 1186 1189 1192 1365 1366 1385 1386 1569 1570 -
1876. 1589 1590 1773 1774 1793 1794 1798 1800 1802 1804 1806 2156 2157 2181 2182 -
1877. 2186 2189 2192 2195 2198 2371 2372 2391 2392 2575 2576 2595 2596 2779 2780 -
1878. 2799 2800 2804 2806 2808 2810 2812 3126 3127 3151 3152 3156 3159 3162 3165 -
1879. 3168 3341 3342 3361 3362 3545 3546 3565 3566 3749 3769 3770 3776 3778 3780 -
1880. 3782 4096 4097 4121 4122 4126 4129 4132 4135 4138 4311 4312 4331 4332 4515 -
1881. 4516 4535 4536 4719 4720 4739 4740 4744 4746 4748 4750 4752 4861 4868 5030 -
1882. 5031 5040 UNI 1.8
1883. ****
1884. 1181 1182 1184 1185 1187 1188 1190 1191 1193 1194 1389 TO 1398 1593 TO 1602 -
1885. 1797 TO 1806 2187 2188 2190 2191 2193 2194 2196 2197 2199 2200 2395 TO 2404 -
1886. 2599 TO 2608 2803 TO 2812 3157 3158 3160 3161 3163 3164 3166 3167 3169 3170 -
1887. 3365 TO 3374 3569 TO 3578 3773 3775 TO 3782 4127 4128 4130 4131 4133 4134 -
1888. 4136 4137 4139 4140 4335 TO 4344 4539 TO 4548 4743 TO 4752 5018 -
1889. 5030 UNI 43.2
1890. ****
1891. 1180 1183 1186 1189 1192 2186 2189 2192 2195 2198 3156 3159 3162 3165 3168 -
1892. 4126 4129 4132 4135 4138 UNI 21.6
1893. ****
1894. 5059 5060 5064 TO 5067 5071 TO 5078 5084 5085 5089 TO 5092 5096 TO 5103 5109 -
1895. 5110 5114 TO 5117 5121 TO 5128 5134 5135 5139 TO 5142 5146 TO 5153 5159 5160 -
1896. 5164 TO 5167 5171 TO 5178 UNI 7.05
1897. ****
1898. 3774 4862 4865 TO 4867 4870 4872 TO 4874 4918 4919 5038 5039 5053 UNI 10.8
1899. ******************
1900. ****LL***
1901. *****25%*******
1902. 715 778 904 967 1000 1003 1009 1012 1045 1048 1054 1057 1090 1093 1099 1102 -
1903. 1135 1138 1144 1147 1961 1964 1970 1973 2006 2009 2015 2018 2051 2054 2060 -
1904. 2063 2096 2099 2105 2108 2141 2144 2150 2153 2931 2934 2940 2943 2976 2979 -
1905. 2985 2988 3021 3024 3030 3033 3066 3069 3075 3078 3111 3114 3120 3123 3946 -
1906. 3949 3955 3958 3991 3994 4000 4003 4036 4039 4045 4048 4081 4084 4090 -
1907. 4093 UNI 2.25
1908. 716 717 779 780 905 906 968 969 1001 1002 1004 1005 1010 1011 1013 1014 1046 -
1909. 1047 1049 1050 1055 1056 1058 1059 1091 1092 1094 1095 1100 1101 1103 1104 -
1910. 1136 1137 1139 1140 1145 1146 1148 1149 1219 TO 1222 1225 TO 1228 -
1911. 1253 TO 1256 1259 TO 1262 1287 TO 1290 1293 TO 1296 1321 TO 1324 -
1912. 1327 TO 1330 1355 TO 1358 1361 TO 1364 1423 TO 1426 1429 TO 1432 -
1913. 1457 TO 1460 1463 TO 1466 1491 TO 1494 1497 TO 1500 1525 TO 1528 -
1914. 1531 TO 1534 1559 TO 1562 1565 TO 1568 1627 TO 1630 1633 TO 1636 -
1915. 1661 TO 1664 1667 TO 1670 1695 TO 1698 1701 TO 1704 1729 TO 1732 -
1916. 1735 TO 1738 1763 TO 1766 1769 TO 1772 1962 1963 1965 1966 1971 1972 1974 -
1917. 1975 2007 2008 2010 2011 2016 2017 2019 2020 2052 2053 2055 2056 2061 2062 -
1918. 2064 2065 2097 2098 2100 2101 2106 2107 2109 2110 2142 2143 2145 2146 2151 -
1919. 2152 2154 2155 2225 TO 2228 2231 TO 2234 2259 TO 2262 2265 TO 2268 -
1920. 2293 TO 2296 2299 TO 2302 2327 TO 2330 2333 TO 2336 2361 TO 2364 -
1921. 2367 TO 2370 2429 TO 2432 2435 TO 2438 2463 TO 2466 2469 TO 2472 -
1922. 2497 TO 2500 2503 TO 2506 2531 TO 2534 2537 TO 2540 2565 TO 2568 -
1923. 2571 TO 2574 2633 TO 2636 2639 TO 2642 2667 TO 2670 2673 TO 2676 -
1924. 2701 TO 2704 2707 TO 2710 2735 TO 2738 2741 TO 2744 2769 TO 2772 -
1925. 2775 TO 2778 2932 2933 2935 2936 2941 2942 2944 2945 2977 2978 2980 2981 -
1926. 2986 2987 2989 2990 3022 3023 3025 3026 UNI 4.5
1927. 3031 3032 3034 3035 3067 3068 3070 3071 3076 3077 3079 3080 3112 3113 3115 -
1928. 3116 3121 3122 3124 3125 3195 TO 3198 3201 TO 3204 3229 TO 3232 3235 TO 3238 -
1929. 3263 TO 3266 3269 TO 3272 3297 TO 3300 3303 TO 3306 3331 TO 3334 -
1930. 3337 TO 3340 3399 TO 3402 3405 TO 3408 3433 TO 3436 3439 TO 3442 -
1931. 3467 TO 3470 3473 TO 3476 3501 TO 3504 3507 TO 3510 3535 TO 3538 -
1932. 3541 TO 3544 3603 3605 3606 3609 TO 3612 3637 3639 3640 3643 TO 3646 3671 -
1933. 3673 3674 3677 TO 3680 3705 3707 3708 3711 TO 3714 3739 3741 3742 -
1934. 3745 TO 3748 3947 3948 3950 3951 3956 3957 3959 3960 3992 3993 3995 3996 -
1935. 4001 4002 4004 4005 4037 4038 4040 4041 4046 4047 4049 4050 4082 4083 4085 -
1936. 4086 4091 4092 4094 4095 4199 TO 4202 4205 TO 4208 4233 TO 4236 4239 TO 4242 -
1937. 4267 TO 4270 4273 TO 4276 4301 TO 4304 4307 TO 4310 4403 TO 4406 -
1938. 4409 TO 4412 4437 TO 4440 4443 TO 4446 4471 TO 4474 4477 TO 4480 -
1939. 4505 TO 4508 4511 TO 4514 4607 TO 4610 4613 TO 4616 4641 TO 4644 -
1940. 4647 TO 4650 4675 TO 4678 4681 TO 4684 4709 TO 4712 4715 TO 4718 5008 5010 -
1941. 5012 5014 5016 5020 5022 5024 5026 5028 UNI 4.5
1942. ****50%***
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1944. 1325 1326 1359 1360 1427 1428 1461 1462 1495 1496 1529 1530 1563 1564 1631 -
1945. 1632 1665 1666 1699 1700 1733 1734 1767 1768 1968 1969 2013 2014 2058 2059 -
1946. 2103 2104 2148 2149 2229 2230 2263 2264 2297 2298 2331 2332 2365 2366 2433 -
1947. 2434 2467 2468 2501 2502 2535 2536 2569 2570 2637 2638 2671 2672 2705 2706 -
1948. 2739 2740 2773 2774 2938 2939 2983 2984 3028 3029 3073 3074 3118 3119 3199 -
1949. 3200 3233 3234 3267 3268 3301 3302 3335 3336 3403 3404 3437 3438 3471 3472 -
1950. 3505 3506 3539 3540 3607 3608 3641 3642 3675 3676 3709 3710 3743 3744 3902 -
1951. 3903 3905 3906 3908 3909 3911 3912 3914 3915 3953 3954 3998 3999 4043 4044 -
1952. 4088 4089 4165 TO 4174 4203 4204 4237 4238 4271 4272 4305 4306 4369 TO 4378 -
1953. 4407 4408 4441 4442 4475 4476 4509 4510 4573 TO 4582 4611 4612 4645 4646 -
1954. 4679 4680 4713 4714 UNI 12
1955. 841 1006 1051 1096 1141 1967 2012 2057 2102 2147 2937 2982 3027 3072 3117 -
1956. 3901 3904 3907 3910 3913 3952 3997 4042 4087 UNI 6
1957. ****25%*****
1958. 1180 1183 1186 1189 1192 2186 2189 2192 2195 2198 3156 3159 3162 3165 3168 -
1959. 4126 4129 4132 4135 4138 UNI 1.5
1960. 1181 1182 1184 1185 1187 1188 1190 1191 1193 1194 1389 TO 1398 1593 TO 1602 -
1961. 1797 TO 1806 2187 2188 2190 2191 2193 2194 2196 2197 2199 2200 2395 TO 2404 -
1962. 2599 TO 2608 2803 TO 2812 3157 3158 3160 3161 3163 3164 3166 3167 3169 3170 -
1963. 3365 TO 3374 3569 TO 3578 3773 3775 TO 3782 4127 4128 4130 4131 4133 4134 -
1964. 4136 4137 4139 4140 4335 TO 4344 4539 TO 4548 4743 TO 4752 5018 5030 UNI 3
1965. 5059 5060 5064 TO 5067 5071 TO 5078 5084 5085 5089 TO 5092 5096 TO 5103 5109 -
1966. 5110 5114 TO 5117 5121 TO 5128 5134 5135 5139 TO 5142 5146 TO 5153 5159 5160 -
1967. 5164 TO 5167 5171 TO 5178 UNI 1.5
1968. 3774 4862 4865 TO 4867 4870 4872 TO 4874 4918 4919 5038 5039 5053 UNI 0.75
1969. ********************************************************************************
1970. ********************************************************************
1971. LOAD 1 LOADTYPE NONE  TITLE EQ1
1972. 1893 LOAD X 1
1973. PERFORM ANALYSIS
```

P R O B L E M S T A T I S T I C S

NUMBER OF JOINTS	**1603**	**NUMBER OF MEMBERS**	**3739**
NUMBER OF PLATES	**0**	**NUMBER OF SOLIDS**	**0**
NUMBER OF SURFACES	**0**	**NUMBER OF SUPPORTS**	**224**

SOLVER USED IS THE IN-CORE ADVANCED SOLVER

TOTAL PRIMARY LOAD CASES = 1, TOTAL DEGREES OF FREEDOM = 8274

```
 ******************************************************
 *                                                    *
 * TIME PERIOD FOR X 1893 LOADING =    0.98237 SEC    *
 * SA/G PER 1893=    1.938, LOAD FACTOR= 1.000        *
 *      FACTOR V  PER 1893=    0.0291 X 382654.25     *
 *                                                    *
 ******************************************************
```

```
1974. CHANGE
1975. LOAD 2 LOADTYPE NONE  TITLE EQ2
1976. 1893 LOAD X -1.
1977. PERFORM ANALYSIS
```

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 ******************************************************
 *                                                    *
 * TIME PERIOD FOR X 1893 LOADING =    0.98237 SEC    *
 * SA/G PER 1893=    1.938, LOAD FACTOR=-1.000        *
 *      FACTOR V  PER 1893=    0.0291 X 382654.25     *
 *                                                    *
 ******************************************************
```

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1978. CHANGE
1979. LOAD 3 LOADTYPE NONE  TITLE EQ3
1980. 1893 LOAD Z 1
1981. PERFORM ANALYSIS


 ******************************************************
 *                                                    *
 * TIME PERIOD FOR Z 1893 LOADING =    0.98237 SEC    *
 * SA/G PER 1893=    1.938, LOAD FACTOR= 1.000        *
 *      FACTOR V  PER 1893=    0.0291 X 382654.25     *
 *                                                    *
 ******************************************************



1982. CHANGE
1983. LOAD 4 LOADTYPE NONE  TITLE EQ4
1984. 1893 LOAD Z -1.
1985. PERFORM ANALYSIS


 ******************************************************
 *                                                    *
 * TIME PERIOD FOR Z 1893 LOADING =    0.98237 SEC    *
 * SA/G PER 1893=    1.938, LOAD FACTOR=-1.000        *
 *      FACTOR V  PER 1893=    0.0291 X 382654.25     *
 *                                                    *
 ******************************************************



1986. CHANGE
1987. LOAD 5 LOADTYPE NONE  TITLE DL
1988. SELFWEIGHT Y -1
1989. MEMBER LOAD
1990. ****SLAB DEAD LOAD************************************************
1991. ****150MM AAC WALL-2.5KN/SQM********
1992. ****60MM SCREED CONCRETE-1.2KN/SQM****
1993. ****FALSE CEILING  SERVICE-0.5KN/SQM
1994. **** INTERNAL PARTITION LOAD - 0.5 KN/SQM
1995. ***TOTAL DEAD LOAD=4.7KN/SQM = 4.7*6=28.2KN/M****
1996. 715 778 841 904 967 1000 1003 1006 1009 1012 1045 1048 1051 1054 1057 1090 -
1997. 1093 1096 1099 1102 1135 1138 1141 1144 1147 1628 1630 1632 1634 1636 1662 -
1998. 1664 1666 1668 1670 1696 1698 1700 1702 1704 1730 1732 1734 1736 1738 1764 -
1999. 1766 1768 1770 1772 1961 1964 1967 1970 1973 2006 2009 2012 2015 2018 2051 -
2000. 2054 2057 2060 2063 2096 2099 2102 2105 2108 2141 2144 2147 2150 2153 2634 -
2001. 2636 2638 2640 2642 2668 2670 2672 2674 2676 2702 2704 2706 2708 2710 2736 -
2002. 2738 2740 2742 2744 2770 2772 2774 2776 2778 2931 2934 2937 2940 2943 2976 -
2003. 2979 2982 2985 2988 3021 3024 3027 3030 3033 3066 3069 3072 3075 3078 3111 -
2004. 3114 3117 3120 3123 3901 3904 3907 3910 3913 3946 3949 3952 3955 3958 3991 -
2005. 3994 3997 4000 4003 4036 4039 4042 4045 4048 4081 4084 4087 4090 -
2006. 4093 UNI GY -14.1
2007. 716 717 779 780 842 843 905 906 968 969 1001 1002 1004 1005 1007 1008 1010 -
2008. 1011 1013 1014 1046 1047 1049 1050 1052 1053 1055 1056 1058 1059 1091 1092 -
2009. 1094 1095 1097 1098 1100 1101 1103 1104 1136 1137 1139 1140 1142 1143 1145 -
2010. 1146 1148 1149 1219 TO 1228 1253 TO 1262 1287 TO 1296 1321 TO 1330 -
2011. 1355 TO 1364 1423 TO 1432 1457 TO 1466 1491 TO 1500 1525 TO 1534 -
2012. 1559 TO 1568 1627 1629 1631 1633 1635 1661 1663 1665 1667 1669 1695 1697 -
2013. 1699 1701 1703 1729 1731 1733 1735 1737 1763 1765 1767 1769 1771 1962 1963 -
2014. 1965 1966 1968 1969 1971 1972 1974 1975 2007 2008 2010 2011 2013 2014 2016 -
2015. 2017 2019 2020 2052 2053 2055 2056 2058 2059 2061 2062 2064 2065 2097 2098 -
2016. 2100 2101 2103 2104 2106 2107 2109 2110 2142 2143 2145 2146 2148 2149 2151 -
2017. 2152 2154 2155 2225 TO 2234 2259 TO 2268 2293 TO 2302 2327 TO 2336 -
2018. 2361 TO 2370 2429 TO 2438 2463 TO 2472 2497 TO 2506 2531 TO 2540 -
2019. 2565 TO 2574 2633 2635 2637 2639 2641 2667 2669 2671 2673 2675 2701 2703 -
2020. 2705 2707 2709 2735 2737 2739 2741 2743 2769 2771 2773 2775 2777 2932 2933 -
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2021. 2935 2936 2938 2939 2941 2942 2944 2945 2977 2978 2980 2981 2983 2984 2986 -
2022. 2987 2989 2990 3022 3023 3025 3026 3028 3029 3031 3032 3034 3035 3067 3068 -
2023. 3070 3071 3073 3074 3076 3077 3079 3080 3112 3113 3115 3116 3118 3119 3121 -
2024. 3122 3124 3125 3195 TO 3204 3229 TO 3238 3263 TO 3272 3297 TO 3306 -
2025. 3331 TO 3340 3399 TO 3408 3433 UNI GY -28.2
2026. 3434 TO 3442 3467 TO 3476 3501 TO 3510 3535 TO 3544 3603 3605 TO 3612 3637 -
2027. 3639 TO 3646 3671 3673 UNI GY -28.2
2028. 3674 TO 3680 3705 3707 TO 3714 3739 3741 TO 3748 3902 3903 3905 3906 3908 -
2029. 3909 3911 3912 3914 3915 3947 3948 3950 3951 3953 3954 3956 3957 3959 3960 -
2030. 3992 3993 3995 3996 3998 3999 4001 4002 4004 4005 4037 4038 4040 4041 4043 -
2031. 4044 4046 4047 4049 4050 4082 4083 4085 4086 4088 4089 4091 4092 4094 4095 -
2032. 4165 TO 4174 4199 TO 4208 4233 TO 4242 4267 TO 4276 4301 TO 4310 -
2033. 4369 TO 4378 4403 TO 4412 4437 TO 4446 4471 TO 4480 4505 TO 4514 -
2034. 4573 TO 4582 4607 TO 4616 4641 TO 4650 4675 TO 4684 4709 TO 4718 5008 5010 -
2035. 5012 5014 5016 5020 5022 5024 5026 5028 UNI GY -28.2
2036. ***************************
2037. ****EXTERNAL WALL LOAD************************************************************
2038. ****DENSITY=12KN/SQM********
2039. ****FLOOR HT.= 4.4 M *****WALL THK=150MM************
2040. ******LOAD=12*0.15*4.4=8 KN/M*******************************
2041. 1 2 120 121 239 240 358 359 477 478 596 597 715 TO 717 778 TO 780 841 TO 843 -
2042. 904 TO 906 967 TO 971 975 976 980 981 985 986 990 991 995 996 1000 TO 1016 -
2043. 1020 1021 1025 1026 1030 1031 1035 1036 1040 1041 1045 TO 1061 1065 1066 -
2044. 1070 1071 1075 1076 1080 1081 1085 1086 1090 TO 1106 1110 1111 1115 1116 -
2045. 1120 1121 1125 1126 1130 1131 1135 TO 1149 1195 1196 1199 1200 1203 1204 -
2046. 1207 1208 1211 1212 1215 1216 1219 TO 1230 1233 1234 1237 1238 1241 1242 -
2047. 1245 1246 1249 1250 1253 TO 1264 1267 1268 1271 1272 1275 1276 1279 1280 -
2048. 1283 1284 1287 TO 1298 1301 1302 1305 1306 1309 1310 1313 1314 1317 1318 -
2049. 1321 TO 1332 1335 1336 1339 1340 1343 1344 1347 1348 1351 1352 1355 TO 1364 -
2050. 1399 1400 1403 1404 1407 1408 1411 1412 1415 1416 1419 1420 1423 TO 1434 -
2051. 1437 1438 1441 1442 1445 1446 1449 1450 1453 1454 1457 TO 1468 1471 1472 -
2052. 1475 1476 1479 1480 1483 1484 1487 1488 1491 TO 1502 1505 1506 1509 1510 -
2053. 1513 1514 1517 1518 1521 1522 1525 TO 1536 1539 1540 1543 1544 1547 1548 -
2054. 1551 1552 1555 1556 1559 TO 1568 1603 1604 1607 1608 1611 1612 1615 1616 -
2055. 1619 1620 1623 1624 1627 TO 1638 1641 1642 1645 1646 1649 1650 1653 1654 -
2056. 1657 1658 1661 TO 1672 1675 1676 1679 1680 1683 1684 1687 1688 1691 1692 -
2057. 1695 TO 1706 1709 1710 1713 1714 1717 1718 1721 1722 1725 1726 1729 TO 1740 -
2058. 1743 1744 1747 1748 1751 1752 1755 1756 1759 1760 1763 TO 1772 UNI GY -8
2059. 1931 1932 1936 1937 1941 1942 1946 1947 1951 1952 1956 1957 1961 TO 1977 1981 -
2060. 1982 1986 1987 1991 1992 1996 1997 2001 2002 2006 TO 2022 2026 2027 2031 -
2061. 2032 2036 2037 2041 2042 2046 2047 2051 TO 2067 2071 2072 2076 2077 2081 -
2062. 2082 2086 2087 2091 2092 2096 TO 2112 2116 2117 2121 2122 2126 2127 2131 -
2063. 2132 2136 2137 2141 TO 2155 2201 2202 2205 2206 2209 2210 2213 2214 2217 -
2064. 2218 2221 2222 2225 TO 2236 2239 2240 2243 2244 2247 2248 2251 2252 2255 -
2065. 2256 2259 TO 2270 2273 2274 2277 2278 2281 2282 2285 2286 2289 2290 2293 -
2066. 2294 TO 2304 2307 2308 2311 2312 2315 2316 2319 2320 2323 2324 2327 TO 2338 -
2067. 2341 2342 2345 2346 2349 2350 2353 2354 2357 2358 2361 TO 2370 2405 2406 -
2068. 2409 2410 2413 2414 2417 2418 2421 2422 2425 2426 2429 TO 2440 2443 2444 -
2069. 2447 2448 2451 2452 2455 2456 2459 2460 2463 TO 2474 2477 2478 2481 2482 -
2070. 2485 2486 2489 2490 2493 2494 2497 TO 2508 2511 2512 2515 2516 2519 2520 -
2071. 2523 2524 2527 2528 2531 TO 2542 2545 2546 2549 2550 2553 2554 2557 2558 -
2072. 2561 2562 2565 TO 2574 2609 2610 2613 2614 2617 2618 2621 2622 2625 2626 -
2073. 2629 2630 2633 TO 2644 2647 2648 2651 2652 2655 2656 2659 2660 2663 2664 -
2074. 2667 TO 2678 2681 2682 2685 2686 2689 2690 2693 2694 2697 2698 2701 TO 2712 -
2075. 2715 2716 2719 2720 2723 2724 2727 2728 2731 2732 2735 TO 2746 2749 2750 -
2076. 2753 2754 2757 2758 2761 2762 2765 2766 2769 TO 2778 2901 2902 2906 2907 -
2077. 2911 2912 2916 2917 2921 2922 2926 2927 UNI GY -8
2078. 2931 TO 2947 2951 2952 2956 2957 2961 2962 2966 2967 2971 2972 2976 TO 2992 -
2079. 2996 2997 3001 3002 3006 3007 3011 3012 3016 3017 3021 TO 3037 3041 3042 -
2080. 3046 3047 3051 3052 3056 3057 3061 3062 3066 TO 3082 3086 3087 3091 3092 -
2081. 3096 3097 3101 3102 3106 3107 3111 TO 3125 3171 3172 3175 3176 3179 3180 -
2082. 3183 3184 3187 3188 3191 3192 3195 TO 3206 3209 3210 3213 3214 3217 3218 -
2083. 3221 3222 3225 3226 3229 TO 3240 3243 3244 3247 3248 3251 3252 3255 3256 -
2084. 3259 3260 3263 TO 3274 3277 3278 3281 3282 3285 3286 3289 3290 3293 3294 -
2085. 3297 TO 3308 3311 3312 3315 3316 3319 3320 3323 3324 3327 3328 3331 TO 3340 -
2086. 3375 3376 3379 3380 3383 3384 3387 3388 3391 3392 3395 3396 3399 TO 3410 -
2087. 3413 3414 3417 3418 3421 3422 3425 3426 3429 3430 3433 TO 3444 3447 3448 -
2088. 3451 3452 3455 3456 3459 3460 3463 3464 3467 TO 3478 3481 3482 3485 3486 -
2089. 3489 3490 3493 3494 3497 3498 3501 TO 3512 3515 3516 3519 3520 3523 3524 -
2090. 3527 3528 3531 3532 3535 TO 3544 3579 3583 3584 3587 3588 3591 3592 3595 -
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2091. 3596 3599 3600 3603 3605 TO 3613 3617 3618 3621 3622 3625 3626 3629 3630 -
2092. 3633 3634 3637 3639 TO 3647 3651 3652 3655 3656 3659 3660 3663 3664 3667 -
2093. 3668 3671 3673 TO 3681 3685 3686 3689 3690 3693 3694 3697 3698 3701 3702 -
2094. 3705 3707 TO 3715 3719 3720 3723 3724 3727 3728 3731 3732 3735 3736 3739 -
2095. 3741 TO 3748 3871 3872 3876 3877 3881 3882 3886 3887 3891 3892 3896 3897 -
2096. 3901 TO 3917 3921 3922 3926 3927 3931 UNI GY -8
2097. 3932 3936 3937 3941 3942 3946 TO 3962 3966 3967 3971 3972 3976 3977 3981 3982 -
2098. 3986 3987 3991 TO 4007 4011 4012 4016 4017 4021 4022 4026 4027 4031 4032 -
2099. 4036 TO 4052 4056 4057 4061 4062 4066 4067 4071 4072 4076 4077 4081 TO 4095 -
2100. 4141 4142 4145 4146 4149 4150 4153 4154 4157 4158 4161 4162 4165 TO 4176 -
2101. 4179 4180 4183 4184 4187 4188 4191 4192 4195 4196 4199 TO 4210 4213 4214 -
2102. 4217 4218 4221 4222 4225 4226 4229 4230 4233 TO 4244 4247 4248 4251 4252 -
2103. 4255 4256 4259 4260 4263 4264 4267 TO 4278 4281 4282 4285 4286 4289 4290 -
2104. 4293 4294 4297 4298 4301 TO 4310 4345 4346 4349 4350 4353 4354 4357 4358 -
2105. 4361 4362 4365 4366 4369 TO 4380 4383 4384 4387 4388 4391 4392 4395 4396 -
2106. 4399 4400 4403 TO 4414 4417 4418 4421 4422 4425 4426 4429 4430 4433 4434 -
2107. 4437 TO 4448 4451 4452 4455 4456 4459 4460 4463 4464 4467 4468 4471 TO 4482 -
2108. 4485 4486 4489 4490 4493 4494 4497 4498 4501 4502 4505 TO 4514 4549 4550 -
2109. 4553 4554 4557 4558 4561 4562 4565 4566 4569 4570 4573 TO 4584 4587 4588 -
2110. 4591 4592 4595 4596 4599 4600 4603 4604 4607 TO 4618 4621 4622 4625 4626 -
2111. 4629 4630 4633 4634 4637 4638 4641 TO 4652 4655 4656 4659 4660 4663 4664 -
2112. 4667 4668 4671 4672 4675 TO 4686 4689 4690 4693 4694 4697 4698 4701 4702 -
2113. 4705 4706 4709 TO 4718 5008 5010 5012 5014 5016 5020 TO 5029 5061 TO 5066 -
2114. 5068 TO 5076 5078 5086 TO 5091 5093 TO 5101 5103 5111 TO 5116 5118 TO 5126 -
2115. 5128 5136 TO 5141 UNI GY -8
2116. 5143 TO 5151 5153 5161 TO 5166 5168 TO 5176 5178 UNI GY -8
2117. ******TERRACE LOAD********************
2118. *********PARAPET LOAD=12*0.15*1=1.8 KN/M*******************************
2119. 1150 1151 1175 1176 1180 1183 1186 1189 1192 1365 1366 1385 1386 1569 1570 -
2120. 1589 1590 1773 1774 1793 1794 1798 1800 1802 1804 1806 2156 2157 2181 2182 -
2121. 2186 2189 2192 2195 2198 2371 2372 2391 2392 2575 2576 2595 2596 2779 2780 -
2122. 2799 2800 2804 2806 2808 2810 2812 3126 3127 3151 3152 3156 3159 3162 3165 -
2123. 3168 3341 3342 3361 3362 3545 3546 3565 3566 3749 3769 3770 3776 3778 3780 -
2124. 3782 4096 4097 4121 4122 4126 4129 4132 4135 4138 4311 4312 4331 4332 4515 -
2125. 4516 4535 4536 4719 4720 4739 4740 4744 4746 4748 4750 4752 4861 4868 5030 -
2126. 5031 5040 UNI GY -1.8
2127. ****150MM AAC WALL-2.5KN/SQM********
2128. ****60MM SCREED CONCRETE-1.2KN/SQM****
2129. ****FALSE CEILING  SERVICE-0.5KN/SQM
2130. **** WATER PROOFING 150MM THK - 0.15*20 = 3 KN/SQM
2131. ***TOTAL DEAD LOAD=7.2KN/SQM = 7.2X6 = 43.2 KN/M****
2132. 1181 1182 1184 1185 1187 1188 1190 1191 1193 1194 1389 TO 1398 1593 TO 1602 -
2133. 1797 1799 1801 1803 1805 2187 2188 2190 2191 2193 2194 2196 2197 2199 2200 -
2134. 2395 TO 2404 2599 TO 2608 2803 2805 2807 2809 2811 3157 3158 3160 3161 3163 -
2135. 3164 3166 3167 3169 3170 3365 TO 3374 3569 TO 3578 3773 3775 TO 3782 4127 -
2136. 4128 4130 4131 4133 4134 4136 4137 4139 4140 4335 TO 4344 4539 TO 4548 4743 -
2137. 4744 TO 4752 5018 5030 UNI GY -43.2
2138. 1180 1183 1186 1189 1192 1798 1800 1802 1804 1806 2186 2189 2192 2195 2198 -
2139. 2804 2806 2808 2810 2812 3156 3159 3162 3165 3168 4126 4129 4132 4135 -
2140. 4138 UNI GY -21.6
2141. 5059 5060 5064 TO 5067 5071 TO 5078 5084 5085 5089 TO 5092 5096 TO 5103 5109 -
2142. 5110 5114 TO 5117 5121 TO 5128 5134 5135 5139 TO 5142 5146 TO 5153 5159 5160 -
2143. 5164 TO 5167 5171 TO 5178 UNI GY -7.05
2144. 3774 4862 4865 TO 4867 4870 4872 TO 4874 4918 4919 5038 5039 5053 UNI GY -10.8
2145. *****LIVE LOAD***************
2146. LOAD 6 LOADTYPE NONE  TITLE LL
2147. MEMBER LOAD
2148. ***3 KN/SQM*****************************************
2149. 715 778 904 967 1000 1003 1009 1012 1045 1048 1054 1057 1090 1093 1099 1102 -
2150. 1135 1138 1144 1147 1628 1630 1634 1636 1662 1664 1668 1670 1696 1698 1702 -
2151. 1704 1730 1732 1736 1738 1764 1766 1770 1772 1961 1964 1970 1973 2006 2009 -
2152. 2015 2018 2051 2054 2060 2063 2096 2099 2105 2108 2141 2144 2150 2153 2634 -
2153. 2636 2640 2642 2668 2670 2674 2676 2702 2704 2708 2710 2736 2738 2742 2744 -
2154. 2770 2772 2776 2778 2931 2934 2940 2943 2976 2979 2985 2988 3021 3024 3030 -
2155. 3033 3066 3069 3075 3078 3111 3114 3120 3123 3946 3949 3955 3958 3991 3994 -
2156. 4000 4003 4036 4039 4045 4048 4081 4084 4090 4093 UNI GY -9
2157. 716 717 779 780 905 906 968 969 1001 1002 1004 1005 1010 1011 1013 1014 1046 -
2158. 1047 1049 1050 1055 1056 1058 1059 1091 1092 1094 1095 1100 1101 1103 1104 -
2159. 1136 1137 1139 1140 1145 1146 1148 1149 1219 TO 1222 1225 TO 1228 -
2160. 1253 TO 1256 1259 TO 1262 1287 TO 1290 1293 TO 1296 1321 TO 1324 -
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2161. 1327 TO 1330 1355 TO 1358 1361 TO 1364 1423 TO 1426 1429 TO 1432 -
2162. 1457 TO 1460 1463 TO 1466 1491 TO 1494 1497 TO 1500 1525 TO 1528 -
2163. 1531 TO 1534 1559 TO 1562 1565 TO 1568 1627 1629 1633 1635 1661 1663 1667 -
2164. 1669 1695 1697 1701 1703 1729 1731 1735 1737 1763 1765 1769 1771 1962 1963 -
2165. 1965 1966 1971 1972 1974 1975 2007 2008 2010 2011 2016 2017 2019 2020 2052 -
2166. 2053 2055 2056 2061 2062 2064 2065 2097 2098 2100 2101 2106 2107 2109 2110 -
2167. 2142 2143 2145 2146 2151 2152 2154 2155 2225 TO 2228 2231 TO 2234 -
2168. 2259 TO 2262 2265 TO 2268 2293 TO 2296 2299 TO 2302 2327 TO 2330 -
2169. 2333 TO 2336 2361 TO 2364 2367 TO 2370 2429 TO 2432 2435 TO 2438 -
2170. 2463 TO 2466 2469 TO 2472 2497 TO 2500 2503 TO 2506 2531 TO 2534 -
2171. 2537 TO 2540 2565 TO 2568 2571 TO 2574 2633 2635 2639 2641 2667 2669 2673 -
2172. 2675 2701 2703 2707 2709 2735 2737 2741 2743 2769 2771 2775 2777 2932 2933 -
2173. 2935 2936 2941 2942 2944 2945 2977 2978 2980 2981 2986 2987 2989 2990 3022 -
2174. 3023 3025 3026 UNI GY -18
2175. 3031 3032 3034 3035 3067 3068 3070 3071 3076 3077 3079 3080 3112 3113 3115 -
2176. 3116 3121 3122 3124 3125 3195 TO 3198 3201 TO 3204 3229 TO 3232 3235 TO 3238 -
2177. 3263 TO 3266 3269 TO 3272 3297 TO 3300 3303 TO 3306 3331 TO 3334 -
2178. 3337 TO 3340 3399 TO 3402 3405 TO 3408 3433 TO 3436 3439 TO 3442 -
2179. 3467 TO 3470 3473 TO 3476 3501 TO 3504 3507 TO 3510 3535 TO 3538 -
2180. 3541 TO 3544 3603 3605 3606 3609 TO 3612 3637 3639 3640 3643 TO 3646 3671 -
2181. 3673 3674 3677 TO 3680 3705 3707 3708 3711 TO 3714 3739 3741 3742 -
2182. 3745 TO 3748 3947 3948 3950 3951 3956 3957 3959 3960 3992 3993 3995 3996 -
2183. 4001 4002 4004 4005 4037 4038 4040 4041 4046 4047 4049 4050 4082 4083 4085 -
2184. 4086 4091 4092 4094 4095 4199 TO 4202 4205 TO 4208 4233 TO 4236 4239 TO 4242 -
2185. 4267 TO 4270 4273 TO 4276 4301 TO 4304 4307 TO 4310 4403 TO 4406 -
2186. 4409 TO 4412 4437 TO 4440 4443 TO 4446 4471 TO 4474 4477 TO 4480 -
2187. 4505 TO 4508 4511 TO 4514 4607 TO 4610 4613 TO 4616 4641 TO 4644 -
2188. 4647 TO 4650 4675 TO 4678 4681 TO 4684 4709 TO 4712 4715 TO 4718 5008 5010 -
2189. 5012 5014 5016 5020 5022 5024 5026 5028 UNI GY -18
2190. ***4 KN/SQM*****************************************
2191. 842 843 1007 1008 1052 1053 1097 1098 1142 1143 1223 1224 1257 1258 1291 1292 -
2192. 1325 1326 1359 1360 1427 1428 1461 1462 1495 1496 1529 1530 1563 1564 1631 -
2193. 1665 1699 1733 1767 1968 1969 2013 2014 2058 2059 2103 2104 2148 2149 2229 -
2194. 2230 2263 2264 2297 2298 2331 2332 2365 2366 2433 2434 2467 2468 2501 2502 -
2195. 2535 2536 2569 2570 2637 2671 2705 2739 2773 2938 2939 2983 2984 3028 3029 -
2196. 3073 3074 3118 3119 3199 3200 3233 3234 3267 3268 3301 3302 3335 3336 3403 -
2197. 3404 3437 3438 3471 3472 3505 3506 3539 3540 3607 3608 3641 3642 3675 3676 -
2198. 3709 3710 3743 3744 3902 3903 3905 3906 3908 3909 3911 3912 3914 3915 3953 -
2199. 3954 3998 3999 4043 4044 4088 4089 4165 TO 4174 4203 4204 4237 4238 4271 -
2200. 4272 4305 4306 4369 TO 4378 4407 4408 4441 4442 4475 4476 4509 4510 4573 -
2201. 4574 TO 4582 4611 4612 4645 4646 4679 4680 4713 4714 UNI GY -24
2202. 841 1006 1051 1096 1141 1632 1666 1700 1734 1768 1967 2012 2057 2102 2147 -
2203. 2638 2672 2706 2740 2774 2937 2982 3027 3072 3117 3901 3904 3907 3910 3913 -
2204. 3952 3997 4042 4087 UNI GY -12
2205. ***2 KN/SQM*****************************************
2206. 1180 1183 1186 1189 1192 2186 2189 2192 2195 2198 3156 3159 3162 3165 3168 -
2207. 4126 4129 4132 4135 4138 UNI GY -6
2208. 1181 1182 1184 1185 1187 1188 1190 1191 1193 1194 1389 TO 1398 1593 TO 1602 -
2209. 1797 1799 1801 1803 1805 2187 2188 2190 2191 2193 2194 2196 2197 2199 2200 -
2210. 2395 TO 2404 2599 TO 2608 2803 2805 2807 2809 2811 3157 3158 3160 3161 3163 -
2211. 3164 3166 3167 3169 3170 3365 TO 3374 3569 TO 3578 3773 3775 TO 3782 4127 -
2212. 4128 4130 4131 4133 4134 4136 4137 4139 4140 4335 TO 4344 4539 TO 4548 4743 -
2213. 4744 TO 4752 5018 5030 UNI GY -12
2214. 1798 1800 1802 1804 1806 2804 2806 2808 2810 2812 5059 5060 5064 TO 5067 5071 -
2215. 5072 TO 5078 5084 5085 5089 TO 5092 5096 TO 5103 5109 5110 5114 TO 5117 5121 -
2216. 5122 TO 5128 5134 5135 5139 TO 5142 5146 TO 5153 5159 5160 5164 TO 5167 5171 -
2217. 5172 TO 5178 UNI GY -6
2218. 3774 4862 4865 TO 4867 4870 4872 TO 4874 4918 4919 5038 5039 5053 UNI GY -3
2219. *****WIND LOAD*********
2220. LOAD 7 LOADTYPE NONE  TITLE WL1
2221. MEMBER LOAD
2222. 57 652 972 997 2928 2973 3873 3918 UNI GX 2.85
2223. 1017 1042 3018 3963 UNI GX 3.125
2224. 1062 1087 3063 4008 UNI GX 3.3
2225. 1107 1132 1152 1177 3108 3153 4053 4098 UNI GX 3.6
2226. 176 533 977 992 2929 2930 2974 2975 3193 3194 3227 3228 3397 3398 3431 3432 -
2227. 3601 3602 3635 3636 3874 3875 3919 3920 4143 4144 4177 4178 4347 4348 4381 -
2228. 4382 4551 4552 4585 4586 UNI GX 5.7
2229. 1022 1037 3019 3020 3261 3262 3465 3466 3669 3670 3964 3965 4211 4212 4415 -
2230. 4416 4619 4620 UNI GX 6.25
```

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1067 1082 3064 3065 3295 3296 3499 3500 3703 3704 4009 4010 4245 4246 4449 -
4450 4653 4654 UNI GX 6.6
1112 1127 1157 1172 3109 3110 3154 3155 3329 3330 3363 3364 3533 3534 3567 -
3568 3737 3738 3771 3772 4054 4055 4099 4100 4279 4280 4313 4314 4483 4484 -
4517 4518 4687 4688 4721 4722 UNI GX 7.2
295 414 982 987 UNI GX 4.35
1027 1032 UNI GX 4.8
1072 1077 UNI GX 5
1117 1122 1162 1167 UNI GX 5.45
LOAD 8 LOADTYPE NONE  TITLE WL2
MEMBER LOAD
1933 1958 1978 2003 2903 2948 3898 3943 UNI GX -2.85
2023 2048 2993 3988 UNI GX -3.125
2068 2093 3038 4033 UNI GX -3.3
2113 2138 2158 2183 3083 3128 4078 4123 UNI GX -3.6
1938 1953 1983 1998 2904 2905 2949 2950 3173 3174 3207 3208 3377 3378 3411 -
3412 3899 3900 3944 3945 4163 4164 4197 4198 4367 4368 4401 4402 4571 4572 -
4605 4606 5009 5011 UNI GX -5.7
2028 2043 2994 2995 3241 3242 3445 3446 3989 3990 4231 4232 4435 4436 4639 -
4640 5013 UNI GX -6.25
2073 2088 3039 3040 3275 3276 3479 3480 4034 4035 4265 4266 4469 4470 4673 -
4674 5015 UNI GX -6.6
2118 2133 2163 2178 3084 3085 3129 3130 3309 3310 3343 3344 3513 3514 3547 -
3548 4079 4080 4124 4125 4299 4300 4333 4334 4503 4504 4537 4538 4707 4708 -
4741 4742 5017 5019 UNI GX -7.2
1943 1948 1988 1993 UNI GX -4.35
2033 2038 UNI GX -4.8
2078 2083 UNI GX -5
2123 2128 2168 2173 UNI GX -5.45
LOAD 9 LOADTYPE NONE  TITLE WL3
MEMBER LOAD
652 997 1626 1660 1958 2003 2632 2666 UNI GZ -2.85
1042 1694 2048 2700 UNI GZ -3.125
1087 1728 2093 2734 UNI GZ -3.3
1132 1177 1762 1796 2138 2183 2768 2802 UNI GZ -3.6
653 654 998 999 1217 1218 1251 1252 1421 1422 1455 1456 1625 1659 1959 1960 -
2004 2005 2223 2224 2257 2258 2427 2428 2461 2462 2631 2665 UNI GZ -5.7
1043 1044 1285 1286 1489 1490 1693 2049 2050 2291 2292 2495 2496 -
2699 UNI GZ -6.25
1088 1089 1319 1320 1523 1524 1727 2094 2095 2325 2326 2529 2530 -
2733 UNI GZ -6.6
1133 1134 1178 1179 1353 1354 1387 1388 1557 1558 1591 1592 1761 1795 2139 -
2140 2184 2185 2359 2360 2393 2394 2563 2564 2597 2598 2767 -
2801 UNI GZ -7.2
LOAD 10 LOADTYPE NONE  TITLE WL4
MEMBER LOAD
57 972 1933 1978 2903 2928 2948 2973 3873 3898 3918 3943 UNI GZ 2.85
1017 2023 2993 3018 3963 3988 UNI GZ 3.125
1062 2068 3038 3063 4008 4033 UNI GZ 3.3
1107 1152 2113 2158 3083 3108 3128 3153 4053 4078 4098 4123 UNI GZ 3.6
58 59 973 974 1934 1935 1979 1980 2908 2923 2953 2968 3878 3893 3923 -
3938 UNI GZ 5.7
1018 1019 2024 2025 2998 3013 3968 3983 UNI GZ 6.25
1063 1064 2069 2070 3043 3058 4013 4028 UNI GZ 6.6
1108 1109 1153 1154 2114 2115 2159 2160 3088 3103 3133 3148 4058 4073 4103 -
4118 UNI GZ 7.2
2913 2918 2958 2963 3883 3888 3928 3933 UNI GZ 4.35
3003 3008 3973 3978 UNI GZ 4.8
3048 3053 4018 4023 UNI GZ 5
3093 3098 3138 3143 4063 4068 4108 4113 UNI GZ 5.45
********STRENGTH LOAD COMBINATION AS PER IS456***************
LOAD COMB 11 1.5DL+1.5LL
5 1.5 6 1.5
LOAD COMB 12 1.2DL+1.2LL+1.2WL1
5 1.2 6 1.2 7 1.2
LOAD COMB 13 1.2DL+1.2LL+1.2WL2
5 1.2 6 1.2 8 1.2
LOAD COMB 14 1.2DL+1.2LL+1.2WL3
5 1.2 6 1.2 9 1.2
LOAD COMB 15 1.2DL+1.2LL+1.2WL4
```

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5 1.2 6 1.2 10 1.2
LOAD COMB 16 1.2DL+1.2LL+1.2EQ1
5 1.2 6 1.2 1 1.2
LOAD COMB 17 1.2DL+1.2LL+1.2EQ2
5 1.2 6 1.2 2 1.2
LOAD COMB 18 1.2DL+1.2LL+1.2EQ3
5 1.2 6 1.2 3 1.2
LOAD COMB 19 1.2DL+1.2LL+1.2EQ4
5 1.2 6 1.2 4 1.2
LOAD COMB 20 1.5EQ1+0.9DL
1 1.5 5 0.9
LOAD COMB 21 1.5EQ2+0.9DL
2 1.5 5 0.9
LOAD COMB 22 1.5EQ3+0.9DL
3 1.5 5 0.9
LOAD COMB 23 1.5EQ4+0.9DL
4 1.5 5 0.9
LOAD COMB 24 0.9DL+1.5LL
5 0.9 6 1.5
****SERVICIABILTY LOAD COMBINATION**********
*LOAD COMB 11 1DL+1LL
*5 1.0 6 1.0
*LOAD COMB 12 1DL+1LL+1WL1
*5 1.0 6 1.0 7 1.0
*LOAD COMB 13 1DL+1LL+1WL2
*5 1.0 6 1.0 8 1.0
*LOAD COMB 14 1DL+1LL+1WL3
*5 1.0 6 1.0 9 1.0
*LOAD COMB 15 1DL+1LL+1WL4
*5 1.0 6 1.0 10 1.0
*LOAD COMB 16 1DL+1LL+1EQ1
*5 1.0 6 1.0 1 1.0
*LOAD COMB 17 1DL+1LL+1EQ2
*5 1.0 6 1.0 2 1.0
*LOAD COMB 18 1DL+1LL+1EQ3
*5 1.0 6 1.0 3 1.0
*LOAD COMB 19 1DL+1LL+1EQ4
*5 1.0 6 1.0 4 1.0
*LOAD COMB 20 1EQ1+1DL
*1 1.0 5 1.0
*LOAD COMB 21 1EQ2+1DL
*2 1.0 5 1.0
*LOAD COMB 22 1EQ3+01DL
*3 1.0 5 1.0
*LOAD COMB 23 1EQ4+1DL
*4 1.0 5 1.0
*LOAD COMB 24 1DL+11LL
*5 1.0 6 1.0
****************************
PERFORM ANALYSIS


LOAD LIST 11 TO 24
START CONCRETE DESIGN
CODE INDIAN
BRACE 3 MEMB 57 TO 59 176 TO 178 295 TO 297 414 TO 416 533 TO 535 652 TO 654 -
972 TO 974 977 TO 979 982 TO 984 987 TO 989 992 TO 994 997 TO 999 -
1017 TO 1019 1022 TO 1024 1027 TO 1029 1032 TO 1034 1037 TO 1039 -
1042 TO 1044 1062 TO 1064 1067 TO 1069 1072 TO 1074 1077 TO 1079 -
1082 TO 1084 1087 TO 1089 1107 TO 1109 1112 TO 1114 1117 TO 1119 -
1122 TO 1124 1127 TO 1129 1132 TO 1134 1152 TO 1154 1157 TO 1159 -
1162 TO 1164 1167 TO 1169 1172 TO 1174 1177 TO 1179 1197 1198 1201 1202 1205 -
1206 1209 1210 1213 1214 1217 1218 1231 1232 1235 1236 1239 1240 1243 1244 -
1247 1248 1251 1252 1265 1266 1269 1270 1273 1274 1277 1278 1281 1282 1285 -
1286 1299 1300 1303 1304 1307 1308 1311 1312 1315 1316 1319 1320 1333 1334 -
1337 1338 1341 1342 1345 1346 1349 1350 1353 1354 1367 1368 1371 1372 1375 -
1376 1379 1380 1383 1384 1387 1388 1401 1402 1405 1406 1409 1410 1413 1414 -
1417 1418 1421 1422 1435 1436 1439 1440 1443 1444 1447 1448 1451 1452 1455 -
1456 1469 1470 1473 1474 1477 1478 1481 1482 1485 1486 1489 1490 1503 1504 -
1507 1508 1511 1512 1515 1516 1519 1520 1523 1524 1537 1538 1541 1542 1545 -
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2369. 1546 1549 1550 1553 1554 1557 1558 1571 1572 1575 1576 1579 1580 1583 1584 -
2370. 1587 1588 1591 1592 1605 1606 1609 1610 1613 1614 1617 1618 1621 1622 1625 -
2371. 1626 1639 1640 1643 1644 1647 1648 1651 1652 1655 1656 1659 1660 1673 1674 -
2372. 1677 1678
2373. BRACE 3 MEMB 1681 1682 1685 1686 1689 1690 1693 1694 1707 1708 1711 1712 1715 -
2374. 1716 1719 1720 1723 1724 1727 1728 1741 1742 1745 1746 1749 1750 1753 1754 -
2375. 1757 1758 1761 1762 1775 1776 1779 1780 1783 1784 1787 1788 1791 1792 1795 -
2376. 1796 1933 TO 1935 1938 TO 1940 1943 TO 1945 1948 TO 1950 1953 TO 1955 1958 -
2377. 1959 TO 1960 1978 TO 1980 1983 TO 1985 1988 TO 1990 1993 TO 1995 1998 TO 2000 -
2378. 2003 TO 2005 2023 TO 2025 2028 TO 2030 2033 TO 2035 2038 TO 2040 -
2379. 2043 TO 2045 2048 TO 2050 2068 TO 2070 2073 TO 2075 2078 TO 2080 -
2380. 2083 TO 2085 2088 TO 2090 2093 TO 2095 2113 TO 2115 2118 TO 2120 -
2381. 2123 TO 2125 2128 TO 2130 2133 TO 2135 2138 TO 2140 2158 TO 2160 -
2382. 2163 TO 2165 2168 TO 2170 2173 TO 2175 2178 TO 2180 2183 TO 2185 2203 2204 -
2383. 2207 2208 2211 2212 2215 2216 2219 2220 2223 2224 2237 2238 2241 2242 2245 -
2384. 2246 2249 2250 2253 2254 2257 2258 2271 2272 2275 2276 2279 2280 2283 2284 -
2385. 2287 2288 2291 2292 2305 2306 2309 2310 2313 2314 2317 2318 2321 2322 2325 -
2386. 2326 2339 2340 2343 2344 2347 2348 2351 2352 2355 2356 2359 2360 2373 2374 -
2387. 2377 2378 2381 2382 2385 2386 2389 2390 2393 2394 2407 2408 2411 2412 2415 -
2388. 2416 2419 2420 2423 2424 2427 2428 2441 2442 2445 2446 2449 2450 2453 2454 -
2389. 2457 2458 2461 2462 2475 2476 2479 2480 2483 2484 2487 2488 2491 2492 2495 -
2390. 2496 2509 2510 2513 2514 2517 2518 2521 2522 2525 2526 2529 2530 2543 2544 -
2391. 2547 2548 2551 2552 2555 2556
2392. BRACE 3 MEMB 2559 2560 2563 2564 2577 2578 2581 2582 2585 2586 2589 2590 2593 -
2393. 2594 2597 2598 2611 2612 2615 2616 2619 2620 2623 2624 2627 2628 2631 2632 -
2394. 2645 2646 2649 2650 2653 2654 2657 2658 2661 2662 2665 2666 2679 2680 2683 -
2395. 2684 2687 2688 2691 2692 2695 2696 2699 2700 2713 2714 2717 2718 2721 2722 -
2396. 2725 2726 2729 2730 2733 2734 2747 2748 2751 2752 2755 2756 2759 2760 2763 -
2397. 2764 2767 2768 2781 2782 2785 2786 2789 2790 2793 2794 2797 2798 2801 2802 -
2398. 2903 TO 2905 2908 TO 2910 2913 TO 2915 2918 TO 2920 2923 TO 2925 -
2399. 2928 TO 2930 2948 TO 2950 2953 TO 2955 2958 TO 2960 2963 TO 2965 -
2400. 2968 TO 2970 2973 TO 2975 2993 TO 2995 2998 TO 3000 3003 TO 3005 -
2401. 3008 TO 3010 3013 TO 3015 3018 TO 3020 3038 TO 3040 3043 TO 3045 -
2402. 3048 TO 3050 3053 TO 3055 3058 TO 3060 3063 TO 3065 3083 TO 3085 -
2403. 3088 TO 3090 3093 TO 3095 3098 TO 3100 3103 TO 3105 3108 TO 3110 -
2404. 3128 TO 3130 3133 TO 3135 3138 TO 3140 3143 TO 3145 3148 TO 3150 -
2405. 3153 TO 3155 3173 3174 3177 3178 3181 3182 3185 3186 3189 3190 3193 3194 -
2406. 3207 3208 3211 3212 3215 3216 3219 3220 3223 3224 3227 3228 3241 3242 3245 -
2407. 3246 3249 3250 3253 3254 3257 3258 3261 3262 3275 3276 3279 3280 3283 3284 -
2408. 3287 3288 3291 3292 3295 3296 3309 3310 3313 3314 3317 3318 3321 3322 3325 -
2409. 3326 3329 3330 3343 3344 3347 3348 3351 3352 3355 3356 3359 3360 3363 3364 -
2410. 3377 3378 3381 3382 3385 3386 3389 3390 3393 3394 3397 3398
2411. BRACE 3 MEMB 3411 3412 3415 3416 3419 3420 3423 3424 3427 3428 3431 3432 3445 -
2412. 3446 3449 3450 3453 3454 3457 3458 3461 3462 3465 3466 3479 3480 3483 3484 -
2413. 3487 3488 3491 3492 3495 3496 3499 3500 3513 3514 3517 3518 3521 3522 3525 -
2414. 3526 3529 3530 3533 3534 3547 3548 3551 3552 3555 3556 3559 3560 3563 3564 -
2415. 3567 3568 3585 3586 3589 3590 3593 3594 3597 3598 3601 3602 3619 3620 3623 -
2416. 3624 3627 3628 3631 3632 3635 3636 3653 3654 3657 3658 3661 3662 3665 3666 -
2417. 3669 3670 3687 3688 3691 3692 3695 3696 3699 3700 3703 3704 3721 3722 3725 -
2418. 3726 3729 3730 3733 3734 3737 3738 3755 3756 3759 3760 3763 3764 3767 3768 -
2419. 3771 3772 3873 TO 3875 3878 TO 3880 3883 TO 3885 3888 TO 3890 3893 TO 3895 -
2420. 3898 TO 3900 3918 TO 3920 3923 TO 3925 3928 TO 3930 3933 TO 3935 -
2421. 3938 TO 3940 3943 TO 3945 3963 TO 3965 3968 TO 3970 3973 TO 3975 -
2422. 3978 TO 3980 3983 TO 3985 3988 TO 3990 4008 TO 4010 4013 TO 4015 -
2423. 4018 TO 4020 4023 TO 4025 4028 TO 4030 4033 TO 4035 4053 TO 4055 -
2424. 4058 TO 4060 4063 TO 4065 4068 TO 4070 4073 TO 4075 4078 TO 4080 -
2425. 4098 TO 4100 4103 TO 4105 4108 TO 4110 4113 TO 4115 4118 TO 4120 -
2426. 4123 TO 4125 4143 4144 4147 4148 4151 4152 4155 4156 4159 4160 4163 4164 -
2427. 4177 4178 4181 4182 4185 4186 4189 4190 4193 4194 4197 4198 4211 4212 4215 -
2428. 4216 4219 4220 4223 4224 4227 4228 4231 4232 4245 4246 4249 4250 4253 4254 -
2429. 4257 4258 4261 4262 4265 4266 4279 4280 4283 4284
2430. BRACE 3 MEMB 4287 4288 4291 4292 4295 4296 4299 4300 4313 4314 4317 4318 4321 -
2431. 4322 4325 4326 4329 4330 4333 4334 4347 4348 4351 4352 4355 4356 4359 4360 -
2432. 4363 4364 4367 4368 4381 4382 4385 4386 4389 4390 4393 4394 4397 4398 4401 -
2433. 4402 4415 4416 4419 4420 4423 4424 4427 4428 4431 4432 4435 4436 4449 4450 -
2434. 4453 4454 4457 4458 4461 4462 4465 4466 4469 4470 4483 4484 4487 4488 4491 -
2435. 4492 4495 4496 4499 4500 4503 4504 4517 4518 4521 4522 4525 4526 4529 4530 -
2436. 4533 4534 4537 4538 4551 4552 4555 4556 4559 4560 4563 4564 4567 4568 4571 -
2437. 4572 4585 4586 4589 4590 4593 4594 4597 4598 4601 4602 4605 4606 4619 4620 -
2438. 4623 4624 4627 4628 4631 4632 4635 4636 4639 4640 4653 4654 4657 4658 4661 -
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2439. 4662 4665 4666 4669 4670 4673 4674 4687 4688 4691 4692 4695 4696 4699 4700 -
2440. 4703 4704 4707 4708 4721 4722 4725 4726 4729 4730 4733 4734 4737 4738 4741 -
2441. 4742 4844 4845 4847 4848 4850 4851 4853 4854 4856 4857 4859 4860 -
2442. 4888 TO 4917 5009 5011 5013 5015 5017 5019 5032 TO 5037 5046 TO 5050 5052
2443. CLEAR 0.025 ALL
2444. ELY 0.8 MEMB 57 TO 59 176 TO 178 295 TO 297 414 TO 416 533 TO 535 652 TO 654 -
2445. 972 TO 974 977 TO 979 982 TO 984 987 TO 989 992 TO 994 997 TO 999 -
2446. 1017 TO 1019 1022 TO 1024 1027 TO 1029 1032 TO 1034 1037 TO 1039 -
2447. 1042 TO 1044 1062 TO 1064 1067 TO 1069 1072 TO 1074 1077 TO 1079 -
2448. 1082 TO 1084 1087 TO 1089 1107 TO 1109 1112 TO 1114 1117 TO 1119 -
2449. 1122 TO 1124 1127 TO 1129 1132 TO 1134 1152 TO 1154 1157 TO 1159 -
2450. 1162 TO 1164 1167 TO 1169 1172 TO 1174 1177 TO 1179 1197 1198 1201 1202 1205 -
2451. 1206 1209 1210 1213 1214 1217 1218 1231 1232 1235 1236 1239 1240 1243 1244 -
2452. 1247 1248 1251 1252 1265 1266 1269 1270 1273 1274 1277 1278 1281 1282 1285 -
2453. 1286 1299 1300 1303 1304 1307 1308 1311 1312 1315 1316 1319 1320 1333 1334 -
2454. 1337 1338 1341 1342 1345 1346 1349 1350 1353 1354 1367 1368 1371 1372 1375 -
2455. 1376 1379 1380 1383 1384 1387 1388 1401 1402 1405 1406 1409 1410 1413 1414 -
2456. 1417 1418 1421 1422 1435 1436 1439 1440 1443 1444 1447 1448 1451 1452 1455 -
2457. 1456 1469 1470 1473 1474 1477 1478 1481 1482 1485 1486 1489 1490 1503 1504 -
2458. 1507 1508 1511 1512 1515 1516 1519 1520 1523 1524 1537 1538 1541 1542 1545 -
2459. 1546 1549 1550 1553 1554 1557 1558 1571 1572 1575 1576 1579 1580 1583 1584 -
2460. 1587 1588 1591 1592 1605 1606 1609 1610 1613 1614 1617 1618 1621 1622 1625 -
2461. 1626 1639 1640 1643 1644 1647 1648 1651 1652 1655 1656 1659 1660 1673 1674 -
2462. 1677 1678
2463. ELY 0.8 MEMB 1681 1682 1685 1686 1689 1690 1693 1694 1707 1708 1711 1712 1715 -
2464. 1716 1719 1720 1723 1724 1727 1728 1741 1742 1745 1746 1749 1750 1753 1754 -
2465. 1757 1758 1761 1762 1775 1776 1779 1780 1783 1784 1787 1788 1791 1792 1795 -
2466. 1796 1933 TO 1935 1938 TO 1940 1943 TO 1945 1948 TO 1950 1953 TO 1955 1958 -
2467. 1959 TO 1960 1978 TO 1980 1983 TO 1985 1988 TO 1990 1993 TO 1995 1998 TO 2000 -
2468. 2003 TO 2005 2023 TO 2025 2028 TO 2030 2033 TO 2035 2038 TO 2040 -
2469. 2043 TO 2045 2048 TO 2050 2068 TO 2070 2073 TO 2075 2078 TO 2080 -
2470. 2083 TO 2085 2088 TO 2090 2093 TO 2095 2113 TO 2115 2118 TO 2120 -
2471. 2123 TO 2125 2128 TO 2130 2133 TO 2135 2138 TO 2140 2158 TO 2160 -
2472. 2163 TO 2165 2168 TO 2170 2173 TO 2175 2178 TO 2180 2183 TO 2185 2203 2204 -
2473. 2207 2208 2211 2212 2215 2216 2219 2220 2223 2224 2237 2238 2241 2242 2245 -
2474. 2246 2249 2250 2253 2254 2257 2258 2271 2272 2275 2276 2279 2280 2283 2284 -
2475. 2287 2288 2291 2292 2305 2306 2309 2310 2313 2314 2317 2318 2321 2322 2325 -
2476. 2326 2339 2340 2343 2344 2347 2348 2351 2352 2355 2356 2359 2360 2373 2374 -
2477. 2377 2378 2381 2382 2385 2386 2389 2390 2393 2394 2407 2408 2411 2412 2415 -
2478. 2416 2419 2420 2423 2424 2427 2428 2441 2442 2445 2446 2449 2450 2453 2454 -
2479. 2457 2458 2461 2462 2475 2476 2479 2480 2483 2484 2487 2488 2491 2492 2495 -
2480. 2496 2509 2510 2513 2514 2517 2518 2521 2522 2525 2526 2529 2530 2543 2544 -
2481. 2547 2548 2551 2552 2555 2556
2482. ELY 0.8 MEMB 2559 2560 2563 2564 2577 2578 2581 2582 2585 2586 2589 2590 2593 -
2483. 2594 2597 2598 2611 2612 2615 2616 2619 2620 2623 2624 2627 2628 2631 2632 -
2484. 2645 2646 2649 2650 2653 2654 2657 2658 2661 2662 2665 2666 2679 2680 2683 -
2485. 2684 2687 2688 2691 2692 2695 2696 2699 2700 2713 2714 2717 2718 2721 2722 -
2486. 2725 2726 2729 2730 2733 2734 2747 2748 2751 2752 2755 2756 2759 2760 2763 -
2487. 2764 2767 2768 2781 2782 2785 2786 2789 2790 2793 2794 2797 2798 2801 2802 -
2488. 2903 TO 2905 2908 TO 2910 2913 TO 2915 2918 TO 2920 2923 TO 2925 -
2489. 2928 TO 2930 2948 TO 2950 2953 TO 2955 2958 TO 2960 2963 TO 2965 -
2490. 2968 TO 2970 2973 TO 2975 2993 TO 2995 2998 TO 3000 3003 TO 3005 -
2491. 3008 TO 3010 3013 TO 3015 3018 TO 3020 3038 TO 3040 3043 TO 3045 -
2492. 3048 TO 3050 3053 TO 3055 3058 TO 3060 3063 TO 3065 3083 TO 3085 -
2493. 3088 TO 3090 3093 TO 3095 3098 TO 3100 3103 TO 3105 3108 TO 3110 -
2494. 3128 TO 3130 3133 TO 3135 3138 TO 3140 3143 TO 3145 3148 TO 3150 -
2495. 3153 TO 3155 3173 3174 3177 3178 3181 3182 3185 3186 3189 3190 3193 3194 -
2496. 3207 3208 3211 3212 3215 3216 3219 3220 3223 3224 3227 3228 3241 3242 3245 -
2497. 3246 3249 3250 3253 3254 3257 3258 3261 3262 3275 3276 3279 3280 3283 3284 -
2498. 3287 3288 3291 3292 3295 3296 3309 3310 3313 3314 3317 3318 3321 3322 3325 -
2499. 3326 3329 3330 3343 3344 3347 3348 3351 3352 3355 3356 3359 3360 3363 3364 -
2500. 3377 3378 3381 3382 3385 3386 3389 3390 3393 3394 3397 3398
2501. ELY 0.8 MEMB 3411 3412 3415 3416 3419 3420 3423 3424 3427 3428 3431 3432 3445 -
2502. 3446 3449 3450 3453 3454 3457 3458 3461 3462 3465 3466 3479 3480 3483 3484 -
2503. 3487 3488 3491 3492 3495 3496 3499 3500 3513 3514 3517 3518 3521 3522 3525 -
2504. 3526 3529 3530 3533 3534 3547 3548 3551 3552 3555 3556 3559 3560 3563 3564 -
2505. 3567 3568 3585 3586 3589 3590 3593 3594 3597 3598 3601 3602 3619 3620 3623 -
2506. 3624 3627 3628 3631 3632 3635 3636 3653 3654 3657 3658 3661 3662 3665 3666 -
2507. 3669 3670 3687 3688 3691 3692 3695 3696 3699 3700 3703 3704 3721 3722 3725 -
2508. 3726 3729 3730 3733 3734 3737 3738 3755 3756 3759 3760 3763 3764 3767 3768 -
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2509. 3771 3772 3873 TO 3875 3878 TO 3880 3883 TO 3885 3888 TO 3890 3893 TO 3895 -
2510. 3898 TO 3900 3918 TO 3920 3923 TO 3925 3928 TO 3930 3933 TO 3935 -
2511. 3938 TO 3940 3943 TO 3945 3963 TO 3965 3968 TO 3970 3973 TO 3975 -
2512. 3978 TO 3980 3983 TO 3985 3988 TO 3990 4008 TO 4010 4013 TO 4015 -
2513. 4018 TO 4020 4023 TO 4025 4028 TO 4030 4033 TO 4035 4053 TO 4055 -
2514. 4058 TO 4060 4063 TO 4065 4068 TO 4070 4073 TO 4075 4078 TO 4080 -
2515. 4098 TO 4100 4103 TO 4105 4108 TO 4110 4113 TO 4115 4118 TO 4120 -
2516. 4123 TO 4125 4143 4144 4147 4148 4151 4152 4155 4156 4159 4160 4163 4164 -
2517. 4177 4178 4181 4182 4185 4186 4189 4190 4193 4194 4197 4198 4211 4212 4215 -
2518. 4216 4219 4220 4223 4224 4227 4228 4231 4232 4245 4246 4249 4250 4253 4254 -
2519. 4257 4258 4261 4262 4265 4266 4279 4280 4283 4284
2520. ELY 0.8 MEMB 4287 4288 4291 4292 4295 4296 4299 4300 4313 4314 4317 4318 4321 -
2521. 4322 4325 4326 4329 4330 4333 4334 4347 4348 4351 4352 4355 4356 4359 4360 -
2522. 4363 4364 4367 4368 4381 4382 4385 4386 4389 4390 4393 4394 4397 4398 4401 -
2523. 4402 4415 4416 4419 4420 4423 4424 4427 4428 4431 4432 4435 4436 4449 4450 -
2524. 4453 4454 4457 4458 4461 4462 4465 4466 4469 4470 4483 4484 4487 4488 4491 -
2525. 4492 4495 4496 4499 4500 4503 4504 4517 4518 4521 4522 4525 4526 4529 4530 -
2526. 4533 4534 4537 4538 4551 4552 4555 4556 4559 4560 4563 4564 4567 4568 4571 -
2527. 4572 4585 4586 4589 4590 4593 4594 4597 4598 4601 4602 4605 4606 4619 4620 -
2528. 4623 4624 4627 4628 4631 4632 4635 4636 4639 4640 4653 4654 4657 4658 4661 -
2529. 4662 4665 4666 4669 4670 4673 4674 4687 4688 4691 4692 4695 4696 4699 4700 -
2530. 4703 4704 4707 4708 4721 4722 4725 4726 4729 4730 4733 4734 4737 4738 4741 -
2531. 4742 4844 4845 4847 4848 4850 4851 4853 4854 4856 4857 4859 4860 -
2532. 4888 TO 4917 5009 5011 5013 5015 5017 5019 5032 TO 5037 5046 TO 5050 5052
2533. ELZ 0.8 MEMB 57 TO 59 176 TO 178 295 TO 297 414 TO 416 533 TO 535 652 TO 654 -
2534. 972 TO 974 977 TO 979 982 TO 984 987 TO 989 992 TO 994 997 TO 999 -
2535. 1017 TO 1019 1022 TO 1024 1027 TO 1029 1032 TO 1034 1037 TO 1039 -
2536. 1042 TO 1044 1062 TO 1064 1067 TO 1069 1072 TO 1074 1077 TO 1079 -
2537. 1082 TO 1084 1087 TO 1089 1107 TO 1109 1112 TO 1114 1117 TO 1119 -
2538. 1122 TO 1124 1127 TO 1129 1132 TO 1134 1152 TO 1154 1157 TO 1159 -
2539. 1162 TO 1164 1167 TO 1169 1172 TO 1174 1177 TO 1179 1197 1198 1201 1202 1205 -
2540. 1206 1209 1210 1213 1214 1217 1218 1231 1232 1235 1236 1239 1240 1243 1244 -
2541. 1247 1248 1251 1252 1265 1266 1269 1270 1273 1274 1277 1278 1281 1282 1285 -
2542. 1286 1299 1300 1303 1304 1307 1308 1311 1312 1315 1316 1319 1320 1333 1334 -
2543. 1337 1338 1341 1342 1345 1346 1349 1350 1353 1354 1367 1368 1371 1372 1375 -
2544. 1376 1379 1380 1383 1384 1387 1388 1401 1402 1405 1406 1409 1410 1413 1414 -
2545. 1417 1418 1421 1422 1435 1436 1439 1440 1443 1444 1447 1448 1451 1452 1455 -
2546. 1456 1469 1470 1473 1474 1477 1478 1481 1482 1485 1486 1489 1490 1503 1504 -
2547. 1507 1508 1511 1512 1515 1516 1519 1520 1523 1524 1537 1538 1541 1542 1545 -
2548. 1546 1549 1550 1553 1554 1557 1558 1571 1572 1575 1576 1579 1580 1583 1584 -
2549. 1587 1588 1591 1592 1605 1606 1609 1610 1613 1614 1617 1618 1621 1622 1625 -
2550. 1626 1639 1640 1643 1644 1647 1648 1651 1652 1655 1656 1659 1660 1673 1674 -
2551. 1677 1678
2552. ELZ 0.8 MEMB 1681 1682 1685 1686 1689 1690 1693 1694 1707 1708 1711 1712 1715 -
2553. 1716 1719 1720 1723 1724 1727 1728 1741 1742 1745 1746 1749 1750 1753 1754 -
2554. 1757 1758 1761 1762 1775 1776 1779 1780 1783 1784 1787 1788 1791 1792 1795 -
2555. 1796 1933 TO 1935 1938 TO 1940 1943 TO 1945 1948 TO 1950 1953 TO 1955 1958 -
2556. 1959 TO 1960 1978 TO 1980 1983 TO 1985 1988 TO 1990 1993 TO 1995 1998 TO 2000 -
2557. 2003 TO 2005 2023 TO 2025 2028 TO 2030 2033 TO 2035 2038 TO 2040 -
2558. 2043 TO 2045 2048 TO 2050 2068 TO 2070 2073 TO 2075 2078 TO 2080 -
2559. 2083 TO 2085 2088 TO 2090 2093 TO 2095 2113 TO 2115 2118 TO 2120 -
2560. 2123 TO 2125 2128 TO 2130 2133 TO 2135 2138 TO 2140 2158 TO 2160 -
2561. 2163 TO 2165 2168 TO 2170 2173 TO 2175 2178 TO 2180 2183 TO 2185 2203 2204 -
2562. 2207 2208 2211 2212 2215 2216 2219 2220 2223 2224 2237 2238 2241 2242 2245 -
2563. 2246 2249 2250 2253 2254 2257 2258 2271 2272 2275 2276 2279 2280 2283 2284 -
2564. 2287 2288 2291 2292 2305 2306 2309 2310 2313 2314 2317 2318 2321 2322 2325 -
2565. 2326 2339 2340 2343 2344 2347 2348 2351 2352 2355 2356 2359 2360 2373 2374 -
2566. 2377 2378 2381 2382 2385 2386 2389 2390 2393 2394 2407 2408 2411 2412 2415 -
2567. 2416 2419 2420 2423 2424 2427 2428 2441 2442 2445 2446 2449 2450 2453 2454 -
2568. 2457 2458 2461 2462 2475 2476 2479 2480 2483 2484 2487 2488 2491 2492 2495 -
2569. 2496 2509 2510 2513 2514 2517 2518 2521 2522 2525 2526 2529 2530 2543 2544 -
2570. 2547 2548 2551 2552 2555 2556
2571. ELZ 0.8 MEMB 2559 2560 2563 2564 2577 2578 2581 2582 2585 2586 2589 2590 2593 -
2572. 2594 2597 2598 2611 2612 2615 2616 2619 2620 2623 2624 2627 2628 2631 2632 -
2573. 2645 2646 2649 2650 2653 2654 2657 2658 2661 2662 2665 2666 2679 2680 2683 -
2574. 2684 2687 2688 2691 2692 2695 2696 2699 2700 2713 2714 2717 2718 2721 2722 -
2575. 2725 2726 2729 2730 2733 2734 2747 2748 2751 2752 2755 2756 2759 2760 2763 -
2576. 2764 2767 2768 2781 2782 2785 2786 2789 2790 2793 2794 2797 2798 2801 2802 -
2577. 2903 TO 2905 2908 TO 2910 2913 TO 2915 2918 TO 2920 2923 TO 2925 -
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2579. 2968 TO 2970 2973 TO 2975 2993 TO 2995 2998 TO 3000 3003 TO 3005 -
2580. 3008 TO 3010 3013 TO 3015 3018 TO 3020 3038 TO 3040 3043 TO 3045 -
2581. 3048 TO 3050 3053 TO 3055 3058 TO 3060 3063 TO 3065 3083 TO 3085 -
2582. 3088 TO 3090 3093 TO 3095 3098 TO 3100 3103 TO 3105 3108 TO 3110 -
2583. 3128 TO 3130 3133 TO 3135 3138 TO 3140 3143 TO 3145 3148 TO 3150 -
2584. 3153 TO 3155 3173 3174 3177 3178 3181 3182 3185 3186 3189 3190 3193 3194 -
2585. 3207 3208 3211 3212 3215 3216 3219 3220 3223 3224 3227 3228 3241 3242 3245 -
2586. 3246 3249 3250 3253 3254 3257 3258 3261 3262 3275 3276 3279 3280 3283 3284 -
2587. 3287 3288 3291 3292 3295 3296 3309 3310 3313 3314 3317 3318 3321 3322 3325 -
2588. 3326 3329 3330 3343 3344 3347 3348 3351 3352 3355 3356 3359 3360 3363 3364 -
2589. 3377 3378 3381 3382 3385 3386 3389 3390 3393 3394 3397 3398
2590. ELZ 0.8 MEMB 3411 3412 3415 3416 3419 3420 3423 3424 3427 3428 3431 3432 3445 -
2591. 3446 3449 3450 3453 3454 3457 3458 3461 3462 3465 3466 3479 3480 3483 3484 -
2592. 3487 3488 3491 3492 3495 3496 3499 3500 3513 3514 3517 3518 3521 3522 3525 -
2593. 3526 3529 3530 3533 3534 3547 3548 3551 3552 3555 3556 3559 3560 3563 3564 -
2594. 3567 3568 3585 3586 3589 3590 3593 3594 3597 3598 3601 3602 3619 3620 3623 -
2595. 3624 3627 3628 3631 3632 3635 3636 3653 3654 3657 3658 3661 3662 3665 3666 -
2596. 3669 3670 3687 3688 3691 3692 3695 3696 3699 3700 3703 3704 3721 3722 3725 -
2597. 3726 3729 3730 3733 3734 3737 3738 3755 3756 3759 3760 3763 3764 3767 3768 -
2598. 3771 3772 3873 TO 3875 3878 TO 3880 3883 TO 3885 3888 TO 3890 3893 TO 3895 -
2599. 3898 TO 3900 3918 TO 3920 3923 TO 3925 3928 TO 3930 3933 TO 3935 -
2600. 3938 TO 3940 3943 TO 3945 3963 TO 3965 3968 TO 3970 3973 TO 3975 -
2601. 3978 TO 3980 3983 TO 3985 3988 TO 3990 4008 TO 4010 4013 TO 4015 -
2602. 4018 TO 4020 4023 TO 4025 4028 TO 4030 4033 TO 4035 4053 TO 4055 -
2603. 4058 TO 4060 4063 TO 4065 4068 TO 4070 4073 TO 4075 4078 TO 4080 -
2604. 4098 TO 4100 4103 TO 4105 4108 TO 4110 4113 TO 4115 4118 TO 4120 -
2605. 4123 TO 4125 4143 4144 4147 4148 4151 4152 4155 4156 4159 4160 4163 4164 -
2606. 4177 4178 4181 4182 4185 4186 4189 4190 4193 4194 4197 4198 4211 4212 4215 -
2607. 4216 4219 4220 4223 4224 4227 4228 4231 4232 4245 4246 4249 4250 4253 4254 -
2608. 4257 4258 4261 4262 4265 4266 4279 4280 4283 4284
2609. ELZ 0.8 MEMB 4287 4288 4291 4292 4295 4296 4299 4300 4313 4314 4317 4318 4321 -
2610. 4322 4325 4326 4329 4330 4333 4334 4347 4348 4351 4352 4355 4356 4359 4360 -
2611. 4363 4364 4367 4368 4381 4382 4385 4386 4389 4390 4393 4394 4397 4398 4401 -
2612. 4402 4415 4416 4419 4420 4423 4424 4427 4428 4431 4432 4435 4436 4449 4450 -
2613. 4453 4454 4457 4458 4461 4462 4465 4466 4469 4470 4483 4484 4487 4488 4491 -
2614. 4492 4495 4496 4499 4500 4503 4504 4517 4518 4521 4522 4525 4526 4529 4530 -
2615. 4533 4534 4537 4538 4551 4552 4555 4556 4559 4560 4563 4564 4567 4568 4571 -
2616. 4572 4585 4586 4589 4590 4593 4594 4597 4598 4601 4602 4605 4606 4619 4620 -
2617. 4623 4624 4627 4628 4631 4632 4635 4636 4639 4640 4653 4654 4657 4658 4661 -
2618. 4662 4665 4666 4669 4670 4673 4674 4687 4688 4691 4692 4695 4696 4699 4700 -
2619. 4703 4704 4707 4708 4721 4722 4725 4726 4729 4730 4733 4734 4737 4738 4741 -
2620. 4742 4844 4845 4847 4848 4850 4851 4853 4854 4856 4857 4859 4860 -
2621. 4888 TO 4917 5009 5011 5013 5015 5017 5019 5032 TO 5037 5046 TO 5050 5052
2622. ENSH 0 ALL
2623. FYMAIN 500000 ALL
2624. FC 30000 ALL
2625. FYSEC 415000 ALL
2626. METHOD 1 ALL
2627. RATIO 4 ALL
2628. REINF 0 MEMB 57 TO 59 176 TO 178 295 TO 297 414 TO 416 533 TO 535 652 TO 654 -
2629. 972 TO 974 977 TO 979 982 TO 984 987 TO 989 992 TO 994 997 TO 999 -
2630. 1017 TO 1019 1022 TO 1024 1027 TO 1029 1032 TO 1034 1037 TO 1039 -
2631. 1042 TO 1044 1062 TO 1064 1067 TO 1069 1072 TO 1074 1077 TO 1079 -
2632. 1082 TO 1084 1087 TO 1089 1107 TO 1109 1112 TO 1114 1117 TO 1119 -
2633. 1122 TO 1124 1127 TO 1129 1132 TO 1134 1152 TO 1154 1157 TO 1159 -
2634. 1162 TO 1164 1167 TO 1169 1172 TO 1174 1177 TO 1179 1197 1198 1201 1202 1205 -
2635. 1206 1209 1210 1213 1214 1217 1218 1231 1232 1235 1236 1239 1240 1243 1244 -
2636. 1247 1248 1251 1252 1265 1266 1269 1270 1273 1274 1277 1278 1281 1282 1285 -
2637. 1286 1299 1300 1303 1304 1307 1308 1311 1312 1315 1316 1319 1320 1333 1334 -
2638. 1337 1338 1341 1342 1345 1346 1349 1350 1353 1354 1367 1368 1371 1372 1375 -
2639. 1376 1379 1380 1383 1384 1387 1388 1401 1402 1405 1406 1409 1410 1413 1414 -
2640. 1417 1418 1421 1422 1435 1436 1439 1440 1443 1444 1447 1448 1451 1452 1455 -
2641. 1456 1469 1470 1473 1474 1477 1478 1481 1482 1485 1486 1489 1490 1503 1504 -
2642. 1507 1508 1511 1512 1515 1516 1519 1520 1523 1524 1537 1538 1541 1542 1545 -
2643. 1546 1549 1550 1553 1554 1557 1558 1571 1572 1575 1576 1579 1580 1583 1584 -
2644. 1587 1588 1591 1592 1605 1606 1609 1610 1613 1614 1617 1618 1621 1622 1625 -
2645. 1626 1639 1640 1643 1644 1647 1648 1651 1652 1655 1656 1659 1660 1673 1674 -
2646. 1677 1678
2647. REINF 0 MEMB 1681 1682 1685 1686 1689 1690 1693 1694 1707 1708 1711 1712 1715 -
2648. 1716 1719 1720 1723 1724 1727 1728 1741 1742 1745 1746 1749 1750 1753 1754 -
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2649. 1757 1758 1761 1762 1775 1776 1779 1780 1783 1784 1787 1788 1791 1792 1795 -
2650. 1796 1933 TO 1935 1938 TO 1940 1943 TO 1945 1948 TO 1950 1953 TO 1955 1958 -
2651. 1959 TO 1960 1978 TO 1980 1983 TO 1985 1988 TO 1990 1993 TO 1995 1998 TO 2000 -
2652. 2003 TO 2005 2023 TO 2025 2028 TO 2030 2033 TO 2035 2038 TO 2040 -
2653. 2043 TO 2045 2048 TO 2050 2068 TO 2070 2073 TO 2075 2078 TO 2080 -
2654. 2083 TO 2085 2088 TO 2090 2093 TO 2095 2113 TO 2115 2118 TO 2120 -
2655. 2123 TO 2125 2128 TO 2130 2133 TO 2135 2138 TO 2140 2158 TO 2160 -
2656. 2163 TO 2165 2168 TO 2170 2173 TO 2175 2178 TO 2180 2183 TO 2185 2203 2204 -
2657. 2207 2208 2211 2212 2215 2216 2219 2220 2223 2224 2237 2238 2241 2242 2245 -
2658. 2246 2249 2250 2253 2254 2257 2258 2271 2272 2275 2276 2279 2280 2283 2284 -
2659. 2287 2288 2291 2292 2305 2306 2309 2310 2313 2314 2317 2318 2321 2322 2325 -
2660. 2326 2339 2340 2343 2344 2347 2348 2351 2352 2355 2356 2359 2360 2373 2374 -
2661. 2377 2378 2381 2382 2385 2386 2389 2390 2393 2394 2407 2408 2411 2412 2415 -
2662. 2416 2419 2420 2423 2424 2427 2428 2441 2442 2445 2446 2449 2450 2453 2454 -
2663. 2457 2458 2461 2462 2475 2476 2479 2480 2483 2484 2487 2488 2491 2492 2495 -
2664. 2496 2509 2510 2513 2514 2517 2518 2521 2522 2525 2526 2529 2530 2543 2544 -
2665. 2547 2548 2551 2552 2555 2556
2666. REINF 0 MEMB 2559 2560 2563 2564 2577 2578 2581 2582 2585 2586 2589 2590 2593 -
2667. 2594 2597 2598 2611 2612 2615 2616 2619 2620 2623 2624 2627 2628 2631 2632 -
2668. 2645 2646 2649 2650 2653 2654 2657 2658 2661 2662 2665 2666 2679 2680 2683 -
2669. 2684 2687 2688 2691 2692 2695 2696 2699 2700 2713 2714 2717 2718 2721 2722 -
2670. 2725 2726 2729 2730 2733 2734 2747 2748 2751 2752 2755 2756 2759 2760 2763 -
2671. 2764 2767 2768 2781 2782 2785 2786 2789 2790 2793 2794 2797 2798 2801 2802 -
2672. 2903 TO 2905 2908 TO 2910 2913 TO 2915 2918 TO 2920 2923 TO 2925 -
2673. 2928 TO 2930 2948 TO 2950 2953 TO 2955 2958 TO 2960 2963 TO 2965 -
2674. 2968 TO 2970 2973 TO 2975 2993 TO 2995 2998 TO 3000 3003 TO 3005 -
2675. 3008 TO 3010 3013 TO 3015 3018 TO 3020 3038 TO 3040 3043 TO 3045 -
2676. 3048 TO 3050 3053 TO 3055 3058 TO 3060 3063 TO 3065 3083 TO 3085 -
2677. 3088 TO 3090 3093 TO 3095 3098 TO 3100 3103 TO 3105 3108 TO 3110 -
2678. 3128 TO 3130 3133 TO 3135 3138 TO 3140 3143 TO 3145 3148 TO 3150 -
2679. 3153 TO 3155 3173 3174 3177 3178 3181 3182 3185 3186 3189 3190 3193 3194 -
2680. 3207 3208 3211 3212 3215 3216 3219 3220 3223 3224 3227 3228 3241 3242 3245 -
2681. 3246 3249 3250 3253 3254 3257 3258 3261 3262 3275 3276 3279 3280 3283 3284 -
2682. 3287 3288 3291 3292 3295 3296 3309 3310 3313 3314 3317 3318 3321 3322 3325 -
2683. 3326 3329 3330 3343 3344 3347 3348 3351 3352 3355 3356 3359 3360 3363 3364 -
2684. 3377 3378 3381 3382 3385 3386 3389 3390 3393 3394 3397 3398
2685. REINF 0 MEMB 3411 3412 3415 3416 3419 3420 3423 3424 3427 3428 3431 3432 3445 -
2686. 3446 3449 3450 3453 3454 3457 3458 3461 3462 3465 3466 3479 3480 3483 3484 -
2687. 3487 3488 3491 3492 3495 3496 3499 3500 3513 3514 3517 3518 3521 3522 3525 -
2688. 3526 3529 3530 3533 3534 3547 3548 3551 3552 3555 3556 3559 3560 3563 3564 -
2689. 3567 3568 3585 3586 3589 3590 3593 3594 3597 3598 3601 3602 3619 3620 3623 -
2690. 3624 3627 3628 3631 3632 3635 3636 3653 3654 3657 3658 3661 3662 3665 3666 -
2691. 3669 3670 3687 3688 3691 3692 3695 3696 3699 3700 3703 3704 3721 3722 3725 -
2692. 3726 3729 3730 3733 3734 3737 3738 3755 3756 3759 3760 3763 3764 3767 3768 -
2693. 3771 3772 3873 TO 3875 3878 TO 3880 3883 TO 3885 3888 TO 3890 3893 TO 3895 -
2694. 3898 TO 3900 3918 TO 3920 3923 TO 3925 3928 TO 3930 3933 TO 3935 -
2695. 3938 TO 3940 3943 TO 3945 3963 TO 3965 3968 TO 3970 3973 TO 3975 -
2696. 3978 TO 3980 3983 TO 3985 3988 TO 3990 4008 TO 4010 4013 TO 4015 -
2697. 4018 TO 4020 4023 TO 4025 4028 TO 4030 4033 TO 4035 4053 TO 4055 -
2698. 4058 TO 4060 4063 TO 4065 4068 TO 4070 4073 TO 4075 4078 TO 4080 -
2699. 4098 TO 4100 4103 TO 4105 4108 TO 4110 4113 TO 4115 4118 TO 4120 -
2700. 4123 TO 4125 4143 4144 4147 4148 4151 4152 4155 4156 4159 4160 4163 4164 -
2701. 4177 4178 4181 4182 4185 4186 4189 4190 4193 4194 4197 4198 4211 4212 4215 -
2702. 4216 4219 4220 4223 4224 4227 4228 4231 4232 4245 4246 4249 4250 4253 4254 -
2703. 4257 4258 4261 4262 4265 4266 4279 4280 4283 4284
2704. REINF 0 MEMB 4287 4288 4291 4292 4295 4296 4299 4300 4313 4314 4317 4318 4321 -
2705. 4322 4325 4326 4329 4330 4333 4334 4347 4348 4351 4352 4355 4356 4359 4360 -
2706. 4363 4364 4367 4368 4381 4382 4385 4386 4389 4390 4393 4394 4397 4398 4401 -
2707. 4402 4415 4416 4419 4420 4423 4424 4427 4428 4431 4432 4435 4436 4449 4450 -
2708. 4453 4454 4457 4458 4461 4462 4465 4466 4469 4470 4483 4484 4487 4488 4491 -
2709. 4492 4495 4496 4499 4500 4503 4504 4517 4518 4521 4522 4525 4526 4529 4530 -
2710. 4533 4534 4537 4538 4551 4552 4555 4556 4559 4560 4563 4564 4567 4568 4571 -
2711. 4572 4585 4586 4589 4590 4593 4594 4597 4598 4601 4602 4605 4606 4619 4620 -
2712. 4623 4624 4627 4628 4631 4632 4635 4636 4639 4640 4653 4654 4657 4658 4661 -
2713. 4662 4665 4666 4669 4670 4673 4674 4687 4688 4691 4692 4695 4696 4699 4700 -
2714. 4703 4704 4707 4708 4721 4722 4725 4726 4729 4730 4733 4734 4737 4738 4741 -
2715. 4742 4844 4845 4847 4848 4850 4851 4853 4854 4856 4857 4859 4860 -
2716. 4888 TO 4917 5009 5011 5013 5015 5017 5019 5032 TO 5037 5046 TO 5050 5052
2717. TORSION 0 ALL
2718. DESIGN BEAM 1 2 120 121 239 240 358 359 477 478 596 597 715 TO 717 -
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2719. 778 TO 780 841 TO 843 904 TO 906 967 TO 971 975 976 980 981 985 986 990 991 -
2720. 995 996 1000 TO 1016 1020 1021 1025 1026 1030 1031 1035 1036 1040 1041 1045 -
2721. 1046 TO 1061 1065 1066 1070 1071 1075 1076 1080 1081 1085 1086 1090 TO 1106 -
2722. 1110 1111 1115 1116 1120 1121 1125 1126 1130 1131 1135 TO 1151 1155 1156 -
2723. 1160 1161 1165 1166 1170 1171 1175 1176 1180 TO 1196 1199 1200 1203 1204 -
2724. 1207 1208 1211 1212 1215 1216 1219 TO 1230 1233 1234 1237 1238 1241 1242 -
2725. 1245 1246 1249 1250 1253 TO 1264 1267 1268 1271 1272 1275 1276 1279 1280 -
2726. 1283 1284 1287 TO 1298 1301 1302 1305 1306 1309 1310 1313 1314 1317 1318 -
2727. 1321 TO 1332 1335 1336 1339 1340 1343 1344 1347 1348 1351 1352 1355 TO 1366 -
2728. 1369 1370 1373 1374 1377 1378 1381 1382 1385 1386 1389 TO 1400 1403 1404 -
2729. 1407 1408 1411 1412 1415 1416 1419 1420 1423 TO 1434 1437 1438 1441 1442 -
2730. 1445 1446 1449 1450 1453 1454 1457 TO 1468 1471 1472 1475 1476 1479 1480 -
2731. 1483 1484 1487 1488 1491 TO 1502 1505 1506 1509 1510 1513 1514 1517 1518 -
2732. 1521 1522 1525 TO 1536 1539 1540 1543 1544 1547 1548 1551 1552 1555 1556 -
2733. 1559 TO 1570 1573 1574 1577 1578 1581 1582 1585 1586 1589 1590 1593 TO 1604 -
2734. 1607 1608 1611 1612 1615 1616 1619 1620 1623 1624 1627 TO 1638 1641 1642 -
2735. 1645 1646 1649 1650 1653 1654 1657 1658 1661 TO 1672 1675 1676 1679 1680 -
2736. 1683 1684

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               B E A M  N O.      1   D E S I G N  R E S U L T S

      M30                    Fe500 (Main)               Fe415 (Sec.)

    LENGTH:  6000.0 mm      SIZE:   300.0 mm X  450.0 mm   COVER: 25.0 mm


                       SUMMARY OF REINF. AREA (Sq.mm)
 ------------------------------------------------------------------------
 SECTION      0.0 mm     1500.0 mm     3000.0 mm     4500.0 mm     6000.0 mm
 ------------------------------------------------------------------------
  TOP        1055.28        358.38          0.00        327.98       1013.66
 REINF.      (Sq. mm)      (Sq. mm)       (Sq. mm)      (Sq. mm)      (Sq. mm)

 BOTTOM       611.41        419.25        211.65        386.20        575.11
 REINF.      (Sq. mm)      (Sq. mm)       (Sq. mm)      (Sq. mm)      (Sq. mm)
 ------------------------------------------------------------------------


                       SUMMARY OF PROVIDED REINF. AREA
 ------------------------------------------------------------------------
 SECTION      0.0 mm     1500.0 mm     3000.0 mm     4500.0 mm     6000.0 mm
 ------------------------------------------------------------------------
  TOP      14-10í         5-10í         2-10í         5-10í        13-10í
 REINF.   2 layer(s)    1 layer(s)    1 layer(s)    1 layer(s)    2 layer(s)

 BOTTOM     3-20í         3-20í         3-20í         3-20í         3-20í
 REINF.   1 layer(s)    1 layer(s)    1 layer(s)    1 layer(s)    1 layer(s)

 SHEAR   2 legged  8í  2 legged  8í  2 legged  8í  2 legged  8í  2 legged  8í
 REINF.  @ 150 mm c/c  @ 150 mm c/c  @ 150 mm c/c  @ 150 mm c/c  @ 150 mm c/c
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 SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

 SHEAR DESIGN RESULTS AT   690.0 mm AWAY FROM START SUPPORT
   VY =    65.17 MX =    -0.78 LD=   17
   Provide 2 Legged  8í  @ 150 mm c/c

 SHEAR DESIGN RESULTS AT   690.0 mm AWAY FROM END SUPPORT
   VY =   -64.80 MX =    -0.76 LD=   16
   Provide 2 Legged  8í  @ 150 mm c/c

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               B E A M  N O.      2   D E S I G N  R E S U L T S
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M30 Fe500 (Main) Fe415 (Sec.)

LENGTH: 6000.0 mm SIZE: 300.0 mm X 450.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	970.07 (Sq. mm)	330.70 (Sq. mm)	0.00 (Sq. mm)	333.81 (Sq. mm)	976.39 (Sq. mm)
BOTTOM REINF.	539.26 (Sq. mm)	371.78 (Sq. mm)	214.20 (Sq. mm)	370.95 (Sq. mm)	536.29 (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	3-25í 1 layer(s)	3-25í 1 layer(s)	2-25í 1 layer(s)	3-25í 1 layer(s)	3-25í 1 layer(s)
BOTTOM REINF.	7-10í 1 layer(s)	5-10í 1 layer(s)	3-10í 1 layer(s)	5-10í 1 layer(s)	7-10í 1 layer(s)
SHEAR REINF.	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c

SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM START SUPPORT
VY = 63.59 MX = -0.01 LD= 21
Provide 2 Legged 8í @ 150 mm c/c

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM END SUPPORT
VY = -63.81 MX = -0.01 LD= 20
Provide 2 Legged 8í @ 150 mm c/c

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B E A M N O. 120 D E S I G N R E S U L T S

M30 Fe500 (Main) Fe415 (Sec.)

LENGTH: 6000.0 mm SIZE: 350.0 mm X 450.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	1188.84 (Sq. mm)	433.37 (Sq. mm)	0.00 (Sq. mm)	382.88 (Sq. mm)	1117.23 (Sq. mm)
BOTTOM REINF.	734.06 (Sq. mm)	480.67 (Sq. mm)	249.90 (Sq. mm)	445.29 (Sq. mm)	704.18 (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm

REINF.	1 layer(s)	1 layer(s)	1 layer(s)	1 layer(s)	1 layer(s)
BOTTOM	10-10í	7-10í	4-10í	6-10í	9-10í
REINF.	2 layer(s)	1 layer(s)	1 layer(s)	1 layer(s)	1 layer(s)
SHEAR	2 legged 8í	2 legged 8í	2 legged 8í	2 legged 8í	2 legged 8í
REINF.	@ 170 mm c/c	@ 170 mm c/c	@ 170 mm c/c	@ 170 mm c/c	@ 170 mm c/c

SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM START SUPPORT
VY = 74.94 MX = -0.03 LD= 21
Provide 2 Legged 8í @ 170 mm c/c

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM END SUPPORT
VY = -74.11 MX = 0.02 LD= 20
Provide 2 Legged 8í @ 170 mm c/c

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B E A M N O. 121 D E S I G N R E S U L T S

M30 Fe500 (Main) Fe415 (Sec.)

LENGTH: 6000.0 mm SIZE: 350.0 mm X 450.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	1106.68 (Sq. mm)	384.20 (Sq. mm)	0.00 (Sq. mm)	387.04 (Sq. mm)	1111.87 (Sq. mm)
BOTTOM REINF.	657.55 (Sq. mm)	433.81 (Sq. mm)	249.31 (Sq. mm)	434.07 (Sq. mm)	656.38 (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP	10-12í	4-12í	2-12í	4-12í	10-12í
REINF.	2 layer(s)	1 layer(s)	1 layer(s)	1 layer(s)	2 layer(s)
BOTTOM	6-12í	4-12í	3-12í	4-12í	6-12í
REINF.	1 layer(s)	1 layer(s)	1 layer(s)	1 layer(s)	1 layer(s)
SHEAR	2 legged 8í	2 legged 8í	2 legged 8í	2 legged 8í	2 legged 8í
REINF.	@ 170 mm c/c	@ 170 mm c/c	@ 170 mm c/c	@ 170 mm c/c	@ 170 mm c/c

SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM START SUPPORT
VY = 71.70 MX = -0.01 LD= 21
Provide 2 Legged 8í @ 170 mm c/c

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM END SUPPORT
VY = -71.85 MX = 0.00 LD= 20
Provide 2 Legged 8í @ 170 mm c/c

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B E A M N O. 239 D E S I G N R E S U L T S

M30 Fe500 (Main) Fe415 (Sec.)

LENGTH: 6000.0 mm SIZE: 350.0 mm X 450.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	1222.19 (Sq. mm)	436.84 (Sq. mm)	0.00 (Sq. mm)	389.78 (Sq. mm)	1156.87 (Sq. mm)
BOTTOM REINF.	752.03 (Sq. mm)	490.34 (Sq. mm)	249.90 (Sq. mm)	450.44 (Sq. mm)	713.53 (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	11-12í 2 layer(s)	4-12í 1 layer(s)	2-12í 1 layer(s)	4-12í 1 layer(s)	11-12í 2 layer(s)
BOTTOM REINF.	10-10í 2 layer(s)	7-10í 1 layer(s)	4-10í 1 layer(s)	6-10í 1 layer(s)	10-10í 2 layer(s)
SHEAR REINF.	2 legged 8í @ 170 mm c/c	2 legged 8í @ 170 mm c/c	2 legged 8í @ 170 mm c/c	2 legged 8í @ 170 mm c/c	2 legged 8í @ 170 mm c/c

SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM START SUPPORT
VY = 73.91 MX = 0.58 LD= 17
Provide 2 Legged 8í @ 170 mm c/c

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM END SUPPORT
VY = -74.86 MX = 0.31 LD= 20
Provide 2 Legged 8í @ 170 mm c/c

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B E A M N O. 240 D E S I G N R E S U L T S

M30 Fe500 (Main) Fe415 (Sec.)

LENGTH: 6000.0 mm SIZE: 350.0 mm X 450.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	1119.39 (Sq. mm)	389.32 (Sq. mm)	0.00 (Sq. mm)	391.59 (Sq. mm)	1123.08 (Sq. mm)
BOTTOM REINF.	667.03 (Sq. mm)	438.24 (Sq. mm)	249.31 (Sq. mm)	439.13 (Sq. mm)	667.23 (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	10-12í 2 layer(s)	4-12í 1 layer(s)	2-12í 1 layer(s)	4-12í 1 layer(s)	10-12í 2 layer(s)
BOTTOM REINF.	6-12í 1 layer(s)	4-12í 1 layer(s)	3-12í 1 layer(s)	4-12í 1 layer(s)	6-12í 1 layer(s)
SHEAR REINF.	2 legged 8í @ 170 mm c/c	2 legged 8í @ 170 mm c/c	2 legged 8í @ 170 mm c/c	2 legged 8í @ 170 mm c/c	2 legged 8í @ 170 mm c/c

SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM START SUPPORT
VY = 72.26 MX = 0.00 LD= 21
Provide 2 Legged 8í @ 170 mm c/c

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM END SUPPORT
VY = -72.34 MX = 0.00 LD= 20
Provide 2 Legged 8í @ 170 mm c/c

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B E A M N O. 358 D E S I G N R E S U L T S

M30 Fe500 (Main) Fe415 (Sec.)

LENGTH: 6000.0 mm SIZE: 350.0 mm X 450.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	1224.46 (Sq. mm)	437.97 (Sq. mm)	0.00 (Sq. mm)	389.92 (Sq. mm)	1157.63 (Sq. mm)
BOTTOM REINF.	752.73 (Sq. mm)	490.53 (Sq. mm)	249.90 (Sq. mm)	451.50 (Sq. mm)	715.38 (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	11-12í 2 layer(s)	4-12í 1 layer(s)	2-12í 1 layer(s)	4-12í 1 layer(s)	11-12í 2 layer(s)
BOTTOM REINF.	10-10í 2 layer(s)	7-10í 1 layer(s)	4-10í 1 layer(s)	6-10í 1 layer(s)	10-10í 2 layer(s)
SHEAR REINF.	2 legged 8í @ 170 mm c/c	2 legged 8í @ 170 mm c/c	2 legged 8í @ 170 mm c/c	2 legged 8í @ 170 mm c/c	2 legged 8í @ 170 mm c/c

SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM START SUPPORT
VY = 75.40 MX = -0.32 LD= 21
Provide 2 Legged 8í @ 170 mm c/c

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM END SUPPORT
VY = -74.91 MX = -0.27 LD= 20

Provide 2 Legged 8í @ 170 mm c/c

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B E A M N O. 359 D E S I G N R E S U L T S

M30 Fe500 (Main) Fe415 (Sec.)

LENGTH: 6000.0 mm SIZE: 350.0 mm X 450.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	1120.96 (Sq. mm)	389.98 (Sq. mm)	0.00 (Sq. mm)	392.04 (Sq. mm)	1124.17 (Sq. mm)
BOTTOM REINF.	667.97 (Sq. mm)	438.69 (Sq. mm)	249.31 (Sq. mm)	439.80 (Sq. mm)	668.59 (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	10-12í 2 layer(s)	4-12í 1 layer(s)	2-12í 1 layer(s)	4-12í 1 layer(s)	10-12í 2 layer(s)
BOTTOM REINF.	6-12í 1 layer(s)	4-12í 1 layer(s)	3-12í 1 layer(s)	4-12í 1 layer(s)	6-12í 1 layer(s)
SHEAR REINF.	2 legged 8í @ 170 mm c/c	2 legged 8í @ 170 mm c/c	2 legged 8í @ 170 mm c/c	2 legged 8í @ 170 mm c/c	2 legged 8í @ 170 mm c/c

SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM START SUPPORT
VY = 72.33 MX = -0.01 LD= 21
Provide 2 Legged 8í @ 170 mm c/c

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM END SUPPORT
VY = -72.39 MX = 0.00 LD= 20
Provide 2 Legged 8í @ 170 mm c/c

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B E A M N O. 477 D E S I G N R E S U L T S

M30 Fe500 (Main) Fe415 (Sec.)

LENGTH: 6000.0 mm SIZE: 350.0 mm X 450.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	1197.47 (Sq. mm)	436.95 (Sq. mm)	0.00 (Sq. mm)	385.06 (Sq. mm)	1122.73 (Sq. mm)
BOTTOM REINF.	739.21 (Sq. mm)	483.11 (Sq. mm)	249.90 (Sq. mm)	448.53 (Sq. mm)	711.31 (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	6-16í 1 layer(s)	3-16í 1 layer(s)	2-16í 1 layer(s)	3-16í 1 layer(s)	6-16í 1 layer(s)
BOTTOM REINF.	10-10í 2 layer(s)	7-10í 1 layer(s)	4-10í 1 layer(s)	6-10í 1 layer(s)	10-10í 2 layer(s)
SHEAR REINF.	2 legged 8í @ 170 mm c/c	2 legged 8í @ 170 mm c/c	2 legged 8í @ 170 mm c/c	2 legged 8í @ 170 mm c/c	2 legged 8í @ 170 mm c/c

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SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM START SUPPORT
VY = 75.31 MX = -0.03 LD= 21
Provide 2 Legged 8í @ 170 mm c/c

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM END SUPPORT
VY = -74.36 MX = 0.02 LD= 20
Provide 2 Legged 8í @ 170 mm c/c

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B E A M N O. 478 D E S I G N R E S U L T S

M30 Fe500 (Main) Fe415 (Sec.)

LENGTH: 6000.0 mm SIZE: 350.0 mm X 450.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	1114.53 (Sq. mm)	387.35 (Sq. mm)	0.00 (Sq. mm)	389.19 (Sq. mm)	1117.23 (Sq. mm)
BOTTOM REINF.	662.18 (Sq. mm)	436.00 (Sq. mm)	249.31 (Sq. mm)	437.27 (Sq. mm)	663.18 (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	10-12í 2 layer(s)	4-12í 1 layer(s)	2-12í 1 layer(s)	4-12í 1 layer(s)	10-12í 2 layer(s)
BOTTOM REINF.	6-12í 1 layer(s)	4-12í 1 layer(s)	3-12í 1 layer(s)	4-12í 1 layer(s)	6-12í 1 layer(s)
SHEAR REINF.	2 legged 8í @ 170 mm c/c	2 legged 8í @ 170 mm c/c	2 legged 8í @ 170 mm c/c	2 legged 8í @ 170 mm c/c	2 legged 8í @ 170 mm c/c

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SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM START SUPPORT
VY = 72.05 MX = -0.01 LD= 21

Provide 2 Legged 8í @ 170 mm c/c

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM END SUPPORT
VY = -72.09 MX = 0.00 LD= 20
Provide 2 Legged 8í @ 170 mm c/c

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B E A M N O. 596 D E S I G N R E S U L T S

M30 Fe500 (Main) Fe415 (Sec.)

LENGTH: 6000.0 mm SIZE: 300.0 mm X 450.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	1064.89 (Sq. mm)	361.94 (Sq. mm)	0.00 (Sq. mm)	329.84 (Sq. mm)	1018.29 (Sq. mm)
BOTTOM REINF.	615.52 (Sq. mm)	421.34 (Sq. mm)	211.65 (Sq. mm)	389.52 (Sq. mm)	582.72 (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	14-10í 2 layer(s)	5-10í 1 layer(s)	2-10í 1 layer(s)	5-10í 1 layer(s)	13-10í 2 layer(s)
BOTTOM REINF.	3-20í 1 layer(s)	3-20í 1 layer(s)	3-20í 1 layer(s)	3-20í 1 layer(s)	3-20í 1 layer(s)
SHEAR REINF.	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c

SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM START SUPPORT
VY = 65.58 MX = 0.75 LD= 17
Provide 2 Legged 8í @ 150 mm c/c

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM END SUPPORT
VY = -64.87 MX = 0.77 LD= 16
Provide 2 Legged 8í @ 150 mm c/c

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B E A M N O. 597 D E S I G N R E S U L T S

M30 Fe500 (Main) Fe415 (Sec.)

LENGTH: 6000.0 mm SIZE: 300.0 mm X 450.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm

REINF.	(Sq. mm)	(Sq. mm)	(Sq. mm)	(Sq. mm)	(Sq. mm)
BOTTOM REINF.	544.17 (Sq. mm)	374.39 (Sq. mm)	213.69 (Sq. mm)	375.47 (Sq. mm)	545.32 (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	3-25í 1 layer(s)	3-25í 1 layer(s)	2-25í 1 layer(s)	3-25í 1 layer(s)	3-25í 1 layer(s)
BOTTOM REINF.	7-10í 1 layer(s)	5-10í 1 layer(s)	3-10í 1 layer(s)	5-10í 1 layer(s)	7-10í 1 layer(s)
SHEAR REINF.	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c

SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM START SUPPORT
VY = 63.98 MX = 0.00 LD= 21
Provide 2 Legged 8í @ 150 mm c/c

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM END SUPPORT
VY = -63.98 MX = 0.00 LD= 20
Provide 2 Legged 8í @ 150 mm c/c

B E A M N O. 715 D E S I G N R E S U L T S

M30 Fe500 (Main) Fe415 (Sec.)

LENGTH: 6000.0 mm SIZE: 300.0 mm X 450.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	1372.62 (Sq. mm)	240.50 (Sq. mm)	0.00 (Sq. mm)	228.38 (Sq. mm)	1408.00 (Sq. mm)
BOTTOM REINF.	224.98 (Sq. mm)	370.90 (Sq. mm)	470.86 (Sq. mm)	333.21 (Sq. mm)	214.20 (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	13-12í 2 layer(s)	3-12í 1 layer(s)	2-12í 1 layer(s)	3-12í 1 layer(s)	13-12í 2 layer(s)
BOTTOM REINF.	3-10í 1 layer(s)	5-10í 1 layer(s)	6-10í 1 layer(s)	5-10í 1 layer(s)	3-10í 1 layer(s)
SHEAR REINF.	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c

SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM START SUPPORT
VY = 121.03 MX = 0.03 LD= 19
Provide 2 Legged 8í @ 150 mm c/c

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM END SUPPORT
VY = -123.63 MX = 0.01 LD= 18
Provide 2 Legged 8í @ 150 mm c/c

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B E A M N O. 716 D E S I G N R E S U L T S

M30 Fe500 (Main) Fe415 (Sec.)

LENGTH: 6000.0 mm SIZE: 350.0 mm X 500.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	1958.72 (Sq. mm)	330.91 (Sq. mm)	0.00 (Sq. mm)	306.34 (Sq. mm)	2024.32 (Sq. mm)
BOTTOM REINF.	324.15 (Sq. mm)	549.75 (Sq. mm)	746.76 (Sq. mm)	459.49 (Sq. mm)	279.65 (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	7-20í 1 layer(s)	3-20í 1 layer(s)	2-20í 1 layer(s)	3-20í 1 layer(s)	7-20í 1 layer(s)
BOTTOM REINF.	5-10í 1 layer(s)	7-10í 1 layer(s)	10-10í 2 layer(s)	6-10í 1 layer(s)	4-10í 1 layer(s)
SHEAR REINF.	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c

SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 740.0 mm AWAY FROM START SUPPORT
VY = 197.25 MX = 0.03 LD= 19
Provide 2 Legged 8í @ 150 mm c/c

SHEAR DESIGN RESULTS AT 740.0 mm AWAY FROM END SUPPORT
VY = -204.00 MX = -0.01 LD= 18
Provide 2 Legged 8í @ 150 mm c/c

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B E A M N O. 717 D E S I G N R E S U L T S

M30 Fe500 (Main) Fe415 (Sec.)

LENGTH: 6000.0 mm SIZE: 350.0 mm X 500.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	1989.56 (Sq. mm)	350.93 (Sq. mm)	0.00 (Sq. mm)	324.18 (Sq. mm)	2053.88 (Sq. mm)
BOTTOM REINF.	363.57 (Sq. mm)	567.24 (Sq. mm)	747.24 (Sq. mm)	477.35 (Sq. mm)	279.65 (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	7-20í 1 layer(s)	3-20í 1 layer(s)	2-20í 1 layer(s)	3-20í 1 layer(s)	7-20í 1 layer(s)
BOTTOM REINF.	5-10í 1 layer(s)	8-10í 1 layer(s)	10-10í 2 layer(s)	7-10í 1 layer(s)	4-10í 1 layer(s)
SHEAR REINF.	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c

SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 740.0 mm AWAY FROM START SUPPORT
VY = 199.14 MX = -0.01 LD= 19
Provide 2 Legged 8í @ 150 mm c/c

SHEAR DESIGN RESULTS AT 740.0 mm AWAY FROM END SUPPORT
VY = -205.91 MX = -0.05 LD= 18
Provide 2 Legged 8í @ 150 mm c/c

B E A M N O. 778 D E S I G N R E S U L T S

M30 Fe500 (Main) Fe415 (Sec.)

LENGTH: 6000.0 mm SIZE: 300.0 mm X 450.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	1391.81 (Sq. mm)	229.65 (Sq. mm)	0.00 (Sq. mm)	214.20 (Sq. mm)	1312.67 (Sq. mm)
BOTTOM REINF.	214.20 (Sq. mm)	329.14 (Sq. mm)	463.07 (Sq. mm)	326.85 (Sq. mm)	214.20 (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	7-16í 2 layer(s)	3-16í 1 layer(s)	2-16í 1 layer(s)	3-16í 1 layer(s)	7-16í 2 layer(s)
BOTTOM REINF.	3-10í 1 layer(s)	5-10í 1 layer(s)	6-10í 1 layer(s)	5-10í 1 layer(s)	3-10í 1 layer(s)
SHEAR	2 legged 8í	2 legged 8í	2 legged 8í	2 legged 8í	2 legged 8í

REINF. @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c @ 150 mm c/c

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SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM START SUPPORT
VY = 121.67 MX = 0.00 LD= 19
Provide 2 Legged 8í @ 150 mm c/c

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM END SUPPORT
VY = -119.28 MX = -0.03 LD= 18
Provide 2 Legged 8í @ 150 mm c/c

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B E A M N O. 779 D E S I G N R E S U L T S

M30 Fe500 (Main) Fe415 (Sec.)

LENGTH: 6000.0 mm SIZE: 350.0 mm X 500.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	2020.37 (Sq. mm)	307.12 (Sq. mm)	0.00 (Sq. mm)	279.65 (Sq. mm)	1911.89 (Sq. mm)
BOTTOM REINF.	279.65 (Sq. mm)	451.71 (Sq. mm)	726.43 (Sq. mm)	464.71 (Sq. mm)	279.65 (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	7-20í 1 layer(s)	3-20í 1 layer(s)	2-20í 1 layer(s)	3-20í 1 layer(s)	7-20í 1 layer(s)
BOTTOM REINF.	4-10í 1 layer(s)	6-10í 1 layer(s)	10-10í 2 layer(s)	6-10í 1 layer(s)	4-10í 1 layer(s)
SHEAR REINF.	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c

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SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 740.0 mm AWAY FROM START SUPPORT
VY = 201.18 MX = -0.04 LD= 11
Provide 2 Legged 8í @ 150 mm c/c

SHEAR DESIGN RESULTS AT 740.0 mm AWAY FROM END SUPPORT
VY = -194.25 MX = -0.04 LD= 11
Provide 2 Legged 8í @ 160 mm c/c

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B E A M N O. 780 D E S I G N R E S U L T S

M30 Fe500 (Main) Fe415 (Sec.)

LENGTH: 6000.0 mm SIZE: 350.0 mm X 500.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	2022.03 (Sq. mm)	325.74 (Sq. mm)	0.00 (Sq. mm)	279.65 (Sq. mm)	1915.09 (Sq. mm)
BOTTOM REINF.	279.65 (Sq. mm)	469.61 (Sq. mm)	726.44 (Sq. mm)	478.00 (Sq. mm)	279.65 (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	7-20í 1 layer(s)	3-20í 1 layer(s)	2-20í 1 layer(s)	3-20í 1 layer(s)	7-20í 1 layer(s)
BOTTOM REINF.	4-10í 1 layer(s)	6-10í 1 layer(s)	10-10í 2 layer(s)	7-10í 1 layer(s)	4-10í 1 layer(s)
SHEAR REINF.	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c

SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 740.0 mm AWAY FROM START SUPPORT
VY = 201.16 MX = -0.02 LD= 11
Provide 2 Legged 8í @ 150 mm c/c

SHEAR DESIGN RESULTS AT 740.0 mm AWAY FROM END SUPPORT
VY = -195.48 MX = -0.04 LD= 18
Provide 2 Legged 8í @ 160 mm c/c

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B E A M N O. 841 D E S I G N R E S U L T S

M30 Fe500 (Main) Fe415 (Sec.)

LENGTH: 3150.0 mm SIZE: 300.0 mm X 450.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	0.0 mm	787.5 mm	1575.0 mm	2362.5 mm	3150.0 mm
TOP REINF.	1154.87 (Sq. mm)	462.76 (Sq. mm)	0.00 (Sq. mm)	462.10 (Sq. mm)	1153.11 (Sq. mm)
BOTTOM REINF.	829.47 (Sq. mm)	439.93 (Sq. mm)	214.20 (Sq. mm)	440.57 (Sq. mm)	831.06 (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	0.0 mm	787.5 mm	1575.0 mm	2362.5 mm	3150.0 mm
TOP REINF.	6-16í 1 layer(s)	3-16í 1 layer(s)	2-16í 1 layer(s)	3-16í 1 layer(s)	6-16í 1 layer(s)

BOTTOM REINF.	11-10í 2 layer(s)	6-10í 1 layer(s)	3-10í 1 layer(s)	6-10í 1 layer(s)	11-10í 2 layer(s)
SHEAR REINF.	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c

SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM START SUPPORT
VY = 118.08 MX = 0.06 LD= 23
Provide 2 Legged 8í @ 150 mm c/c

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM END SUPPORT
VY = -117.93 MX = -0.07 LD= 22
Provide 2 Legged 8í @ 150 mm c/c

B E A M N O. 842 D E S I G N R E S U L T S

M30 Fe500 (Main) Fe415 (Sec.)

LENGTH: 3150.0 mm SIZE: 350.0 mm X 500.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	0.0 mm	787.5 mm	1575.0 mm	2362.5 mm	3150.0 mm
TOP REINF.	1521.58 (Sq. mm)	609.47 (Sq. mm)	0.00 (Sq. mm)	609.21 (Sq. mm)	1520.80 (Sq. mm)
BOTTOM REINF.	995.10 (Sq. mm)	548.30 (Sq. mm)	277.86 (Sq. mm)	548.55 (Sq. mm)	995.77 (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	0.0 mm	787.5 mm	1575.0 mm	2362.5 mm	3150.0 mm
TOP REINF.	5-20í 1 layer(s)	3-20í 1 layer(s)	2-20í 1 layer(s)	3-20í 1 layer(s)	5-20í 1 layer(s)
BOTTOM REINF.	5-16í 1 layer(s)	3-16í 1 layer(s)	3-16í 1 layer(s)	3-16í 1 layer(s)	5-16í 1 layer(s)
SHEAR REINF.	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c

SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 740.0 mm AWAY FROM START SUPPORT
VY = 176.45 MX = 0.06 LD= 19
Provide 2 Legged 8í @ 180 mm c/c

SHEAR DESIGN RESULTS AT 740.0 mm AWAY FROM END SUPPORT
VY = -176.26 MX = -0.08 LD= 18
Provide 2 Legged 8í @ 180 mm c/c

B E A M N O. 843 D E S I G N R E S U L T S

M30 Fe500 (Main) Fe415 (Sec.)

LENGTH: 3150.0 mm SIZE: 350.0 mm X 500.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	0.0 mm	787.5 mm	1575.0 mm	2362.5 mm	3150.0 mm
TOP REINF.	1602.93 (Sq. mm)	634.16 (Sq. mm)	0.00 (Sq. mm)	634.47 (Sq. mm)	1603.61 (Sq. mm)
BOTTOM REINF.	1074.25 (Sq. mm)	571.61 (Sq. mm)	279.65 (Sq. mm)	571.31 (Sq. mm)	1073.66 (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	0.0 mm	787.5 mm	1575.0 mm	2362.5 mm	3150.0 mm
TOP REINF.	8-16í 2 layer(s)	4-16í 1 layer(s)	2-16í 1 layer(s)	4-16í 1 layer(s)	8-16í 2 layer(s)
BOTTOM REINF.	14-10í 2 layer(s)	8-10í 1 layer(s)	4-10í 1 layer(s)	8-10í 1 layer(s)	14-10í 2 layer(s)
SHEAR REINF.	2 legged 8í @ 180 mm c/c	2 legged 8í @ 170 mm c/c	2 legged 8í @ 180 mm c/c	2 legged 8í @ 170 mm c/c	2 legged 8í @ 180 mm c/c

SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 740.0 mm AWAY FROM START SUPPORT
VY = 181.36 MX = 0.07 LD= 19
Provide 2 Legged 8í @ 170 mm c/c

SHEAR DESIGN RESULTS AT 740.0 mm AWAY FROM END SUPPORT
VY = -181.32 MX = -0.08 LD= 18
Provide 2 Legged 8í @ 170 mm c/c

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B E A M N O. 904 D E S I G N R E S U L T S

M30 Fe500 (Main) Fe415 (Sec.)

LENGTH: 6000.0 mm SIZE: 300.0 mm X 450.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	1314.66 (Sq. mm)	214.20 (Sq. mm)	0.00 (Sq. mm)	229.32 (Sq. mm)	1389.68 (Sq. mm)
BOTTOM REINF.	214.20 (Sq. mm)	326.53 (Sq. mm)	462.92 (Sq. mm)	329.52 (Sq. mm)	214.20 (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm

TOP REINF.	7-16í 2 layer(s)	3-16í 1 layer(s)	2-16í 1 layer(s)	3-16í 1 layer(s)	7-16í 2 layer(s)
BOTTOM REINF.	3-10í 1 layer(s)	5-10í 1 layer(s)	6-10í 1 layer(s)	5-10í 1 layer(s)	3-10í 1 layer(s)
SHEAR REINF.	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c

SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM START SUPPORT
VY = 119.36 MX = 0.02 LD= 19
Provide 2 Legged 8í @ 150 mm c/c

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM END SUPPORT
VY = -121.59 MX = -0.01 LD= 18
Provide 2 Legged 8í @ 150 mm c/c

B E A M N O. 905 D E S I G N R E S U L T S

M30 Fe500 (Main) Fe415 (Sec.)

LENGTH: 6000.0 mm SIZE: 350.0 mm X 500.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	1912.77 (Sq. mm)	279.65 (Sq. mm)	0.00 (Sq. mm)	307.04 (Sq. mm)	2019.46 (Sq. mm)
BOTTOM REINF.	279.65 (Sq. mm)	464.35 (Sq. mm)	726.22 (Sq. mm)	451.86 (Sq. mm)	279.65 (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	7-20í 1 layer(s)	3-20í 1 layer(s)	2-20í 1 layer(s)	3-20í 1 layer(s)	7-20í 1 layer(s)
BOTTOM REINF.	4-10í 1 layer(s)	6-10í 1 layer(s)	10-10í 2 layer(s)	6-10í 1 layer(s)	4-10í 1 layer(s)
SHEAR REINF.	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c

SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 740.0 mm AWAY FROM START SUPPORT
VY = 194.33 MX = 0.01 LD= 11
Provide 2 Legged 8í @ 160 mm c/c

SHEAR DESIGN RESULTS AT 740.0 mm AWAY FROM END SUPPORT
VY = -201.10 MX = 0.01 LD= 11
Provide 2 Legged 8í @ 150 mm c/c

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B E A M N O. 906 D E S I G N R E S U L T S

M30 Fe500 (Main) Fe415 (Sec.)

LENGTH: 6000.0 mm SIZE: 350.0 mm X 500.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	1915.19 (Sq. mm)	279.65 (Sq. mm)	0.00 (Sq. mm)	326.00 (Sq. mm)	2021.98 (Sq. mm)
BOTTOM REINF.	279.65 (Sq. mm)	478.08 (Sq. mm)	726.37 (Sq. mm)	469.40 (Sq. mm)	279.65 (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	7-20í 1 layer(s)	3-20í 1 layer(s)	2-20í 1 layer(s)	3-20í 1 layer(s)	7-20í 1 layer(s)
BOTTOM REINF.	4-10í 1 layer(s)	7-10í 1 layer(s)	10-10í 2 layer(s)	6-10í 1 layer(s)	4-10í 1 layer(s)
SHEAR REINF.	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c

SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 740.0 mm AWAY FROM START SUPPORT
VY = 195.50 MX = 0.02 LD= 19
Provide 2 Legged 8í @ 160 mm c/c

SHEAR DESIGN RESULTS AT 740.0 mm AWAY FROM END SUPPORT
VY = -201.13 MX = -0.01 LD= 11
Provide 2 Legged 8í @ 150 mm c/c

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B E A M N O. 967 D E S I G N R E S U L T S

M30 Fe500 (Main) Fe415 (Sec.)

LENGTH: 6000.0 mm SIZE: 300.0 mm X 450.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	1409.58 (Sq. mm)	228.91 (Sq. mm)	0.00 (Sq. mm)	240.38 (Sq. mm)	1370.71 (Sq. mm)
BOTTOM REINF.	214.20 (Sq. mm)	333.12 (Sq. mm)	471.17 (Sq. mm)	371.48 (Sq. mm)	225.97 (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	13-12í 2 layer(s)	3-12í 1 layer(s)	2-12í 1 layer(s)	3-12í 1 layer(s)	13-12í 2 layer(s)
BOTTOM REINF.	3-10í 1 layer(s)	5-10í 1 layer(s)	6-10í 1 layer(s)	5-10í 1 layer(s)	3-10í 1 layer(s)
SHEAR REINF.	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c

SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM START SUPPORT
VY = 123.72 MX = -0.01 LD= 19
Provide 2 Legged 8í @ 150 mm c/c

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM END SUPPORT
VY = -120.94 MX = -0.08 LD= 18
Provide 2 Legged 8í @ 150 mm c/c

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B E A M N O. 968 D E S I G N R E S U L T S

M30 Fe500 (Main) Fe415 (Sec.)

LENGTH: 6000.0 mm SIZE: 350.0 mm X 500.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	2025.40 (Sq. mm)	306.69 (Sq. mm)	0.00 (Sq. mm)	331.13 (Sq. mm)	1958.04 (Sq. mm)
BOTTOM REINF.	279.65 (Sq. mm)	459.74 (Sq. mm)	747.16 (Sq. mm)	550.36 (Sq. mm)	324.76 (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	7-20í 1 layer(s)	3-20í 1 layer(s)	2-20í 1 layer(s)	3-20í 1 layer(s)	7-20í 1 layer(s)
BOTTOM REINF.	4-10í 1 layer(s)	6-10í 1 layer(s)	10-10í 2 layer(s)	8-10í 1 layer(s)	5-10í 1 layer(s)
SHEAR REINF.	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c

SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 740.0 mm AWAY FROM START SUPPORT
VY = 204.07 MX = 0.01 LD= 19
Provide 2 Legged 8í @ 150 mm c/c

SHEAR DESIGN RESULTS AT 740.0 mm AWAY FROM END SUPPORT
VY = -197.17 MX = -0.09 LD= 18
Provide 2 Legged 8í @ 150 mm c/c

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B E A M N O. 969 D E S I G N R E S U L T S

M30 Fe500 (Main) Fe415 (Sec.)

LENGTH: 6000.0 mm SIZE: 350.0 mm X 500.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	2054.12 (Sq. mm)	324.17 (Sq. mm)	0.00 (Sq. mm)	351.56 (Sq. mm)	1989.62 (Sq. mm)
BOTTOM REINF.	279.65 (Sq. mm)	477.98 (Sq. mm)	746.94 (Sq. mm)	567.36 (Sq. mm)	363.43 (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	7-20í 1 layer(s)	3-20í 1 layer(s)	2-20í 1 layer(s)	3-20í 1 layer(s)	7-20í 1 layer(s)
BOTTOM REINF.	4-10í 1 layer(s)	7-10í 1 layer(s)	10-10í 2 layer(s)	8-10í 1 layer(s)	5-10í 1 layer(s)
SHEAR REINF.	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c

SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 740.0 mm AWAY FROM START SUPPORT
VY = 205.93 MX = 0.05 LD= 19
Provide 2 Legged 8í @ 150 mm c/c

SHEAR DESIGN RESULTS AT 740.0 mm AWAY FROM END SUPPORT
VY = -199.13 MX = -0.06 LD= 18
Provide 2 Legged 8í @ 150 mm c/c

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B E A M N O. 970 D E S I G N R E S U L T S

M30 Fe500 (Main) Fe415 (Sec.)

LENGTH: 6000.0 mm SIZE: 300.0 mm X 450.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	1254.93 (Sq. mm)	437.01 (Sq. mm)	0.00 (Sq. mm)	392.74 (Sq. mm)	1180.12 (Sq. mm)

BOTTOM REINF.	759.64 (Sq. mm)	478.52 (Sq. mm)	214.20 (Sq. mm)	455.83 (Sq. mm)	746.22 (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	4-20í 1 layer(s)	3-20í 1 layer(s)	2-20í 1 layer(s)	3-20í 1 layer(s)	4-20í 1 layer(s)
BOTTOM REINF.	10-10í 2 layer(s)	7-10í 1 layer(s)	3-10í 1 layer(s)	6-10í 1 layer(s)	10-10í 2 layer(s)
SHEAR REINF.	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c

SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM START SUPPORT
VY = 72.37 MX = -0.70 LD= 17
Provide 2 Legged 8í @ 150 mm c/c

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM END SUPPORT
VY = -72.82 MX = -0.30 LD= 20
Provide 2 Legged 8í @ 150 mm c/c

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B E A M N O. 971 D E S I G N R E S U L T S

M30 Fe500 (Main) Fe415 (Sec.)

LENGTH: 6000.0 mm SIZE: 300.0 mm X 450.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	1134.65 (Sq. mm)	398.04 (Sq. mm)	0.00 (Sq. mm)	401.70 (Sq. mm)	1143.52 (Sq. mm)
BOTTOM REINF.	706.80 (Sq. mm)	445.26 (Sq. mm)	214.20 (Sq. mm)	442.56 (Sq. mm)	700.24 (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	6-16í 1 layer(s)	3-16í 1 layer(s)	2-16í 1 layer(s)	3-16í 1 layer(s)	6-16í 1 layer(s)
BOTTOM REINF.	9-10í 2 layer(s)	6-10í 1 layer(s)	3-10í 1 layer(s)	6-10í 1 layer(s)	9-10í 2 layer(s)
SHEAR REINF.	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c

SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM START SUPPORT
VY = 71.36 MX = -0.01 LD= 21
Provide 2 Legged 8í @ 150 mm c/c

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM END SUPPORT
VY = -71.71 MX = 0.00 LD= 20
Provide 2 Legged 8í @ 150 mm c/c

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B E A M N O. 975 D E S I G N R E S U L T S

M30 Fe500 (Main) Fe415 (Sec.)

LENGTH: 6000.0 mm SIZE: 350.0 mm X 450.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	1471.19 (Sq. mm)	525.15 (Sq. mm)	0.00 (Sq. mm)	451.99 (Sq. mm)	1327.75 (Sq. mm)
BOTTOM REINF.	898.67 (Sq. mm)	560.42 (Sq. mm)	246.93 (Sq. mm)	543.10 (Sq. mm)	911.00 (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	3-25í 1 layer(s)	3-25í 1 layer(s)	2-25í 1 layer(s)	3-25í 1 layer(s)	3-25í 1 layer(s)
BOTTOM REINF.	3-20í 1 layer(s)	3-20í 1 layer(s)	3-20í 1 layer(s)	3-20í 1 layer(s)	3-20í 1 layer(s)
SHEAR REINF.	2 legged 8í @ 170 mm c/c	2 legged 8í @ 170 mm c/c	2 legged 8í @ 170 mm c/c	2 legged 8í @ 170 mm c/c	2 legged 8í @ 170 mm c/c

SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM START SUPPORT
VY = 84.89 MX = -0.05 LD= 21
Provide 2 Legged 8í @ 170 mm c/c

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM END SUPPORT
VY = -81.90 MX = 0.00 LD= 20
Provide 2 Legged 8í @ 170 mm c/c

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B E A M N O. 976 D E S I G N R E S U L T S

M30 Fe500 (Main) Fe415 (Sec.)

LENGTH: 6000.0 mm SIZE: 350.0 mm X 450.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm

TOP REINF.	1341.35 (Sq. mm)	465.35 (Sq. mm)	0.00 (Sq. mm)	469.28 (Sq. mm)	1351.12 (Sq. mm)
BOTTOM REINF.	851.58 (Sq. mm)	518.98 (Sq. mm)	249.90 (Sq. mm)	516.32 (Sq. mm)	844.87 (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	12-12í 2 layer(s)	5-12í 1 layer(s)	2-12í 1 layer(s)	5-12í 1 layer(s)	12-12í 2 layer(s)
BOTTOM REINF.	11-10í 2 layer(s)	7-10í 1 layer(s)	4-10í 1 layer(s)	7-10í 1 layer(s)	11-10í 2 layer(s)
SHEAR REINF.	2 legged 8í @ 170 mm c/c	2 legged 8í @ 170 mm c/c	2 legged 8í @ 170 mm c/c	2 legged 8í @ 170 mm c/c	2 legged 8í @ 170 mm c/c

SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM START SUPPORT
VY = 80.74 MX = -0.01 LD= 21
Provide 2 Legged 8í @ 170 mm c/c

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM END SUPPORT
VY = -81.10 MX = 0.00 LD= 20
Provide 2 Legged 8í @ 170 mm c/c

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B E A M N O. 980 D E S I G N R E S U L T S

M30 Fe500 (Main) Fe415 (Sec.)

LENGTH: 6000.0 mm SIZE: 350.0 mm X 450.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

TOP REINF.	1477.66 (Sq. mm)	528.37 (Sq. mm)	0.00 (Sq. mm)	462.03 (Sq. mm)	1351.58 (Sq. mm)
BOTTOM REINF.	919.58 (Sq. mm)	571.26 (Sq. mm)	246.93 (Sq. mm)	545.87 (Sq. mm)	915.72 (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	5-20í 1 layer(s)	3-20í 1 layer(s)	2-20í 1 layer(s)	3-20í 1 layer(s)	5-20í 1 layer(s)
BOTTOM REINF.	3-20í 1 layer(s)	3-20í 1 layer(s)	3-20í 1 layer(s)	3-20í 1 layer(s)	3-20í 1 layer(s)
SHEAR REINF.	2 legged 8í @ 170 mm c/c	2 legged 8í @ 170 mm c/c	2 legged 8í @ 170 mm c/c	2 legged 8í @ 170 mm c/c	2 legged 8í @ 170 mm c/c

SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM START SUPPORT
VY = 85.05 MX = 0.23 LD= 21
Provide 2 Legged 8í @ 170 mm c/c

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM END SUPPORT
VY = -82.76 MX = 0.29 LD= 20
Provide 2 Legged 8í @ 170 mm c/c

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B E A M N O. 981 D E S I G N R E S U L T S

M30 Fe500 (Main) Fe415 (Sec.)

LENGTH: 6000.0 mm SIZE: 350.0 mm X 450.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	1354.49 (Sq. mm)	470.30 (Sq. mm)	0.00 (Sq. mm)	473.34 (Sq. mm)	1361.87 (Sq. mm)
BOTTOM REINF.	860.24 (Sq. mm)	522.82 (Sq. mm)	249.90 (Sq. mm)	521.03 (Sq. mm)	855.52 (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	7-16í 1 layer(s)	3-16í 1 layer(s)	2-16í 1 layer(s)	3-16í 1 layer(s)	7-16í 1 layer(s)
BOTTOM REINF.	11-10í 2 layer(s)	7-10í 1 layer(s)	4-10í 1 layer(s)	7-10í 1 layer(s)	11-10í 2 layer(s)
SHEAR REINF.	2 legged 8í @ 170 mm c/c	2 legged 8í @ 170 mm c/c	2 legged 8í @ 170 mm c/c	2 legged 8í @ 170 mm c/c	2 legged 8í @ 170 mm c/c

SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM START SUPPORT
VY = 81.27 MX = 0.00 LD= 21
Provide 2 Legged 8í @ 170 mm c/c

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM END SUPPORT
VY = -81.53 MX = 0.00 LD= 20
Provide 2 Legged 8í @ 170 mm c/c

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B E A M N O. 985 D E S I G N R E S U L T S

M30 Fe500 (Main) Fe415 (Sec.)

LENGTH: 6000.0 mm SIZE: 350.0 mm X 450.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	1480.70 (Sq. mm)	529.78 (Sq. mm)	0.00 (Sq. mm)	462.17 (Sq. mm)	1352.51 (Sq. mm)
BOTTOM REINF.	920.43 (Sq. mm)	571.46 (Sq. mm)	246.93 (Sq. mm)	547.23 (Sq. mm)	918.13 (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	5-20í 1 layer(s)	3-20í 1 layer(s)	2-20í 1 layer(s)	3-20í 1 layer(s)	5-20í 1 layer(s)
BOTTOM REINF.	3-20í 1 layer(s)	3-20í 1 layer(s)	3-20í 1 layer(s)	3-20í 1 layer(s)	3-20í 1 layer(s)
SHEAR REINF.	2 legged 8í @ 170 mm c/c	2 legged 8í @ 170 mm c/c	2 legged 8í @ 170 mm c/c	2 legged 8í @ 170 mm c/c	2 legged 8í @ 170 mm c/c

SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM START SUPPORT
VY = 85.14 MX = -0.30 LD= 21
Provide 2 Legged 8í @ 170 mm c/c

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM END SUPPORT
VY = -82.82 MX = -0.24 LD= 20
Provide 2 Legged 8í @ 170 mm c/c

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B E A M N O. 986 D E S I G N R E S U L T S

M30 Fe500 (Main) Fe415 (Sec.)

LENGTH: 6000.0 mm SIZE: 350.0 mm X 450.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	1356.55 (Sq. mm)	471.08 (Sq. mm)	0.00 (Sq. mm)	473.87 (Sq. mm)	1363.29 (Sq. mm)
BOTTOM REINF.	861.42 (Sq. mm)	523.35 (Sq. mm)	249.90 (Sq. mm)	521.83 (Sq. mm)	857.24 (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	7-16í 1 layer(s)	3-16í 1 layer(s)	2-16í 1 layer(s)	3-16í 1 layer(s)	7-16í 1 layer(s)
BOTTOM REINF.	11-10í 2 layer(s)	7-10í 1 layer(s)	4-10í 1 layer(s)	7-10í 1 layer(s)	11-10í 2 layer(s)

SHEAR REINF.	2 legged 8í @ 170 mm c/c	2 legged 8í @ 170 mm c/c	2 legged 8í @ 170 mm c/c	2 legged 8í @ 170 mm c/c	2 legged 8í @ 170 mm c/c

SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM START SUPPORT
VY = 81.35 MX = -0.01 LD= 21
Provide 2 Legged 8í @ 170 mm c/c

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM END SUPPORT
VY = -81.59 MX = 0.00 LD= 20
Provide 2 Legged 8í @ 170 mm c/c

B E A M N O. 990 D E S I G N R E S U L T S

M30 Fe500 (Main) Fe415 (Sec.)

LENGTH: 6000.0 mm SIZE: 350.0 mm X 450.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	1483.80 (Sq. mm)	529.67 (Sq. mm)	0.00 (Sq. mm)	455.45 (Sq. mm)	1336.65 (Sq. mm)
BOTTOM REINF.	906.62 (Sq. mm)	564.29 (Sq. mm)	246.93 (Sq. mm)	547.31 (Sq. mm)	920.87 (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	5-20í 1 layer(s)	3-20í 1 layer(s)	2-20í 1 layer(s)	3-20í 1 layer(s)	5-20í 1 layer(s)
BOTTOM REINF.	3-20í 1 layer(s)	3-20í 1 layer(s)	3-20í 1 layer(s)	3-20í 1 layer(s)	3-20í 1 layer(s)
SHEAR REINF.	2 legged 8í @ 170 mm c/c	2 legged 8í @ 170 mm c/c	2 legged 8í @ 170 mm c/c	2 legged 8í @ 170 mm c/c	2 legged 8í @ 170 mm c/c

SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM START SUPPORT
VY = 85.39 MX = -0.02 LD= 21
Provide 2 Legged 8í @ 170 mm c/c

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM END SUPPORT
VY = -82.25 MX = 0.05 LD= 20
Provide 2 Legged 8í @ 170 mm c/c

B E A M N O. 991 D E S I G N R E S U L T S

M30 Fe500 (Main) Fe415 (Sec.)

LENGTH: 6000.0 mm SIZE: 350.0 mm X 450.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	1353.05 (Sq. mm)	469.70 (Sq. mm)	0.00 (Sq. mm)	472.35 (Sq. mm)	1359.42 (Sq. mm)
BOTTOM REINF.	858.53 (Sq. mm)	522.12 (Sq. mm)	249.90 (Sq. mm)	520.71 (Sq. mm)	854.63 (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	7-16í 1 layer(s)	3-16í 1 layer(s)	2-16í 1 layer(s)	3-16í 1 layer(s)	7-16í 1 layer(s)
BOTTOM REINF.	11-10í 2 layer(s)	7-10í 1 layer(s)	4-10í 1 layer(s)	7-10í 1 layer(s)	11-10í 2 layer(s)
SHEAR REINF.	2 legged 8í @ 170 mm c/c	2 legged 8í @ 170 mm c/c	2 legged 8í @ 170 mm c/c	2 legged 8í @ 170 mm c/c	2 legged 8í @ 170 mm c/c

SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM START SUPPORT
VY = 81.21 MX = -0.01 LD= 21
Provide 2 Legged 8í @ 170 mm c/c

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM END SUPPORT
VY = -81.44 MX = 0.00 LD= 20
Provide 2 Legged 8í @ 170 mm c/c

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B E A M N O. 995 D E S I G N R E S U L T S

M30 Fe500 (Main) Fe415 (Sec.)

LENGTH: 6000.0 mm SIZE: 300.0 mm X 450.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	1247.89 (Sq. mm)	449.02 (Sq. mm)	0.00 (Sq. mm)	402.42 (Sq. mm)	1169.96 (Sq. mm)
BOTTOM REINF.	772.26 (Sq. mm)	484.41 (Sq. mm)	214.20 (Sq. mm)	462.46 (Sq. mm)	761.96 (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm

REINF.	1 layer(s)	1 layer(s)	1 layer(s)	1 layer(s)	1 layer(s)
BOTTOM	10-10í	7-10í	3-10í	6-10í	10-10í
REINF.	2 layer(s)	1 layer(s)	1 layer(s)	1 layer(s)	2 layer(s)
SHEAR	2 legged 8í	2 legged 8í	2 legged 8í	2 legged 8í	2 legged 8í
REINF.	@ 150 mm c/c	@ 150 mm c/c	@ 150 mm c/c	@ 150 mm c/c	@ 150 mm c/c

SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM START SUPPORT
VY = 73.08 MX = 0.65 LD= 17
Provide 2 Legged 8í @ 150 mm c/c

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM END SUPPORT
VY = -73.39 MX = 0.34 LD= 20
Provide 2 Legged 8í @ 150 mm c/c

B E A M N O. 996 D E S I G N R E S U L T S

M30 Fe500 (Main) Fe415 (Sec.)

LENGTH: 6000.0 mm SIZE: 300.0 mm X 450.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	1152.71 (Sq. mm)	405.05 (Sq. mm)	0.00 (Sq. mm)	406.63 (Sq. mm)	1156.32 (Sq. mm)
BOTTOM REINF.	722.20 (Sq. mm)	450.35 (Sq. mm)	214.20 (Sq. mm)	449.52 (Sq. mm)	719.90 (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP	6-16í	3-16í	2-16í	3-16í	6-16í
REINF.	1 layer(s)	1 layer(s)	1 layer(s)	1 layer(s)	1 layer(s)
BOTTOM	10-10í	6-10í	3-10í	6-10í	10-10í
REINF.	2 layer(s)	1 layer(s)	1 layer(s)	1 layer(s)	2 layer(s)
SHEAR	2 legged 8í	2 legged 8í	2 legged 8í	2 legged 8í	2 legged 8í
REINF.	@ 150 mm c/c	@ 150 mm c/c	@ 150 mm c/c	@ 150 mm c/c	@ 150 mm c/c

SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM START SUPPORT
VY = 72.12 MX = 0.00 LD= 21
Provide 2 Legged 8í @ 150 mm c/c

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM END SUPPORT
VY = -72.25 MX = 0.00 LD= 20
Provide 2 Legged 8í @ 150 mm c/c

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B E A M N O. 1000 D E S I G N R E S U L T S

M30 Fe500 (Main) Fe415 (Sec.)

LENGTH: 6000.0 mm SIZE: 300.0 mm X 450.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	1491.49 (Sq. mm)	305.33 (Sq. mm)	0.00 (Sq. mm)	276.31 (Sq. mm)	1462.62 (Sq. mm)
BOTTOM REINF.	314.00 (Sq. mm)	416.47 (Sq. mm)	466.75 (Sq. mm)	392.60 (Sq. mm)	293.49 (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	5-20í 1 layer(s)	3-20í 1 layer(s)	2-20í 1 layer(s)	3-20í 1 layer(s)	5-20í 1 layer(s)
BOTTOM REINF.	4-10í 1 layer(s)	6-10í 1 layer(s)	6-10í 1 layer(s)	5-10í 1 layer(s)	4-10í 1 layer(s)
SHEAR REINF.	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c

SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM START SUPPORT
VY = 127.31 MX = 0.05 LD= 19
Provide 2 Legged 8í @ 150 mm c/c

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM END SUPPORT
VY = -126.87 MX = 0.04 LD= 18
Provide 2 Legged 8í @ 150 mm c/c

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B E A M N O. 1001 D E S I G N R E S U L T S

M30 Fe500 (Main) Fe415 (Sec.)

LENGTH: 6000.0 mm SIZE: 350.0 mm X 500.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	2116.19 (Sq. mm)	408.08 (Sq. mm)	0.00 (Sq. mm)	349.93 (Sq. mm)	2061.32 (Sq. mm)
BOTTOM REINF.	401.14 (Sq. mm)	579.06 (Sq. mm)	737.51 (Sq. mm)	529.81 (Sq. mm)	358.72 (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	7-20í 1 layer(s)	3-20í 1 layer(s)	2-20í 1 layer(s)	3-20í 1 layer(s)	7-20í 1 layer(s)
BOTTOM REINF.	6-10í 1 layer(s)	8-10í 1 layer(s)	10-10í 2 layer(s)	7-10í 1 layer(s)	5-10í 1 layer(s)
SHEAR REINF.	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c

SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 740.0 mm AWAY FROM START SUPPORT
VY = 206.70 MX = 0.06 LD= 19
Provide 2 Legged 8í @ 150 mm c/c

SHEAR DESIGN RESULTS AT 740.0 mm AWAY FROM END SUPPORT
VY = -205.88 MX = 0.05 LD= 18
Provide 2 Legged 8í @ 150 mm c/c

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B E A M N O. 1002 D E S I G N R E S U L T S

M30 Fe500 (Main) Fe415 (Sec.)

LENGTH: 6000.0 mm SIZE: 350.0 mm X 500.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	2146.93 (Sq. mm)	428.05 (Sq. mm)	0.00 (Sq. mm)	367.67 (Sq. mm)	2089.54 (Sq. mm)
BOTTOM REINF.	440.10 (Sq. mm)	600.00 (Sq. mm)	737.35 (Sq. mm)	547.90 (Sq. mm)	394.90 (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	7-20í 1 layer(s)	3-20í 1 layer(s)	2-20í 1 layer(s)	3-20í 1 layer(s)	7-20í 1 layer(s)
BOTTOM REINF.	6-10í 1 layer(s)	8-10í 1 layer(s)	10-10í 2 layer(s)	7-10í 1 layer(s)	6-10í 1 layer(s)
SHEAR REINF.	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c

SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 740.0 mm AWAY FROM START SUPPORT
VY = 208.61 MX = -0.01 LD= 19
Provide 2 Legged 8í @ 150 mm c/c

SHEAR DESIGN RESULTS AT 740.0 mm AWAY FROM END SUPPORT
VY = -207.73 MX = -0.04 LD= 18

Provide 2 Legged 8í @ 150 mm c/c

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B E A M N O. 1003 D E S I G N R E S U L T S

M30 Fe500 (Main) Fe415 (Sec.)

LENGTH: 6000.0 mm SIZE: 300.0 mm X 450.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	1490.61 (Sq. mm)	282.53 (Sq. mm)	0.00 (Sq. mm)	266.61 (Sq. mm)	1468.15 (Sq. mm)
BOTTOM REINF.	275.40 (Sq. mm)	392.46 (Sq. mm)	461.24 (Sq. mm)	380.70 (Sq. mm)	266.61 (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	5-20í 1 layer(s)	3-20í 1 layer(s)	2-20í 1 layer(s)	3-20í 1 layer(s)	5-20í 1 layer(s)
BOTTOM REINF.	4-10í 1 layer(s)	5-10í 1 layer(s)	6-10í 1 layer(s)	5-10í 1 layer(s)	4-10í 1 layer(s)
SHEAR REINF.	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c

SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM START SUPPORT
VY = 126.03 MX = -0.01 LD= 19
Provide 2 Legged 8í @ 150 mm c/c

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM END SUPPORT
VY = -125.39 MX = -0.05 LD= 18
Provide 2 Legged 8í @ 150 mm c/c

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B E A M N O. 1004 D E S I G N R E S U L T S

M30 Fe500 (Main) Fe415 (Sec.)

LENGTH: 6000.0 mm SIZE: 350.0 mm X 500.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	2072.31 (Sq. mm)	368.25 (Sq. mm)	0.00 (Sq. mm)	342.93 (Sq. mm)	2035.40 (Sq. mm)
BOTTOM REINF.	326.69 (Sq. mm)	530.00 (Sq. mm)	723.49 (Sq. mm)	510.39 (Sq. mm)	311.40 (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	7-20í 1 layer(s)	3-20í 1 layer(s)	2-20í 1 layer(s)	3-20í 1 layer(s)	7-20í 1 layer(s)
BOTTOM REINF.	5-10í 1 layer(s)	7-10í 1 layer(s)	10-10í 2 layer(s)	7-10í 1 layer(s)	4-10í 1 layer(s)
SHEAR REINF.	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c

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SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 740.0 mm AWAY FROM START SUPPORT
VY = 204.08 MX = -0.01 LD= 19
Provide 2 Legged 8í @ 150 mm c/c

SHEAR DESIGN RESULTS AT 740.0 mm AWAY FROM END SUPPORT
VY = -202.82 MX = -0.09 LD= 18
Provide 2 Legged 8í @ 150 mm c/c

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B E A M N O. 1005 D E S I G N R E S U L T S

M30 Fe500 (Main) Fe415 (Sec.)

LENGTH: 6000.0 mm SIZE: 350.0 mm X 500.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	2099.81 (Sq. mm)	386.14 (Sq. mm)	0.00 (Sq. mm)	360.16 (Sq. mm)	2063.33 (Sq. mm)
BOTTOM REINF.	362.30 (Sq. mm)	548.76 (Sq. mm)	723.35 (Sq. mm)	527.88 (Sq. mm)	345.22 (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	7-20í 1 layer(s)	3-20í 1 layer(s)	2-20í 1 layer(s)	3-20í 1 layer(s)	7-20í 1 layer(s)
BOTTOM REINF.	5-10í 1 layer(s)	7-10í 1 layer(s)	10-10í 2 layer(s)	7-10í 1 layer(s)	5-10í 1 layer(s)
SHEAR REINF.	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c

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SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 740.0 mm AWAY FROM START SUPPORT
VY = 205.79 MX = 0.01 LD= 19

Provide 2 Legged 8í @ 150 mm c/c

SHEAR DESIGN RESULTS AT 740.0 mm AWAY FROM END SUPPORT
VY = -204.63 MX = -0.05 LD= 18
Provide 2 Legged 8í @ 150 mm c/c

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B E A M N O. 1006 D E S I G N R E S U L T S

M30 Fe500 (Main) Fe415 (Sec.)

LENGTH: 3150.0 mm SIZE: 300.0 mm X 450.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	0.0 mm	787.5 mm	1575.0 mm	2362.5 mm	3150.0 mm
TOP REINF.	1379.15 (Sq. mm)	537.18 (Sq. mm)	0.00 (Sq. mm)	536.41 (Sq. mm)	1376.90 (Sq. mm)
BOTTOM REINF.	1013.18 (Sq. mm)	523.66 (Sq. mm)	213.69 (Sq. mm)	524.42 (Sq. mm)	1015.12 (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	0.0 mm	787.5 mm	1575.0 mm	2362.5 mm	3150.0 mm
TOP REINF.	7-16í 2 layer(s)	3-16í 1 layer(s)	2-16í 1 layer(s)	3-16í 1 layer(s)	7-16í 2 layer(s)
BOTTOM REINF.	9-12í 2 layer(s)	5-12í 1 layer(s)	3-12í 1 layer(s)	5-12í 1 layer(s)	9-12í 2 layer(s)
SHEAR REINF.	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c

SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM START SUPPORT
VY = 133.87 MX = 0.04 LD= 23
Provide 2 Legged 8í @ 150 mm c/c

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM END SUPPORT
VY = -133.70 MX = -0.05 LD= 22
Provide 2 Legged 8í @ 150 mm c/c

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B E A M N O. 1007 D E S I G N R E S U L T S

M30 Fe500 (Main) Fe415 (Sec.)

LENGTH: 3150.0 mm SIZE: 350.0 mm X 500.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	0.0 mm	787.5 mm	1575.0 mm	2362.5 mm	3150.0 mm

REINF.	(Sq. mm)	(Sq. mm)	(Sq. mm)	(Sq. mm)	(Sq. mm)
BOTTOM REINF.	1192.39 (Sq. mm)	624.29 (Sq. mm)	279.65 (Sq. mm)	624.58 (Sq. mm)	1193.21 (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	0.0 mm	787.5 mm	1575.0 mm	2362.5 mm	3150.0 mm
TOP REINF.	16-12í 2 layer(s)	6-12í 1 layer(s)	2-12í 1 layer(s)	6-12í 1 layer(s)	16-12í 2 layer(s)
BOTTOM REINF.	6-16í 1 layer(s)	4-16í 1 layer(s)	3-16í 1 layer(s)	4-16í 1 layer(s)	6-16í 1 layer(s)
SHEAR REINF.	2 legged 8í @ 180 mm c/c	2 legged 8í @ 150 mm c/c	2 legged 8í @ 180 mm c/c	2 legged 8í @ 150 mm c/c	2 legged 8í @ 180 mm c/c

SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 740.0 mm AWAY FROM START SUPPORT
VY = 189.73 MX = 0.03 LD= 19
Provide 2 Legged 8í @ 150 mm c/c

SHEAR DESIGN RESULTS AT 740.0 mm AWAY FROM END SUPPORT
VY = -189.52 MX = -0.05 LD= 18
Provide 2 Legged 8í @ 150 mm c/c

B E A M N O. 1008 D E S I G N R E S U L T S

M30 Fe500 (Main) Fe415 (Sec.)

LENGTH: 3150.0 mm SIZE: 350.0 mm X 500.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	0.0 mm	787.5 mm	1575.0 mm	2362.5 mm	3150.0 mm
TOP REINF.	1826.35 (Sq. mm)	696.51 (Sq. mm)	0.00 (Sq. mm)	696.80 (Sq. mm)	1826.79 (Sq. mm)
BOTTOM REINF.	1251.24 (Sq. mm)	653.09 (Sq. mm)	279.05 (Sq. mm)	652.81 (Sq. mm)	1250.71 (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	0.0 mm	787.5 mm	1575.0 mm	2362.5 mm	3150.0 mm
TOP REINF.	6-20í 1 layer(s)	3-20í 1 layer(s)	2-20í 1 layer(s)	3-20í 1 layer(s)	6-20í 1 layer(s)
BOTTOM REINF.	4-20í 1 layer(s)	3-20í 1 layer(s)	3-20í 1 layer(s)	3-20í 1 layer(s)	4-20í 1 layer(s)
SHEAR REINF.	2 legged 8í @ 180 mm c/c	2 legged 8í @ 150 mm c/c	2 legged 8í @ 180 mm c/c	2 legged 8í @ 150 mm c/c	2 legged 8í @ 180 mm c/c

SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 740.0 mm AWAY FROM START SUPPORT
VY = 194.52 MX = 0.05 LD= 19
Provide 2 Legged 8í @ 150 mm c/c

SHEAR DESIGN RESULTS AT 740.0 mm AWAY FROM END SUPPORT
VY = -194.45 MX = -0.07 LD= 18
Provide 2 Legged 8í @ 150 mm c/c

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B E A M N O. 1009 D E S I G N R E S U L T S

M30 Fe500 (Main) Fe415 (Sec.)

LENGTH: 6000.0 mm SIZE: 300.0 mm X 450.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	1469.82 (Sq. mm)	267.02 (Sq. mm)	0.00 (Sq. mm)	282.14 (Sq. mm)	1488.81 (Sq. mm)
BOTTOM REINF.	265.72 (Sq. mm)	380.32 (Sq. mm)	461.04 (Sq. mm)	392.91 (Sq. mm)	276.35 (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	5-20í 1 layer(s)	3-20í 1 layer(s)	2-20í 1 layer(s)	3-20í 1 layer(s)	5-20í 1 layer(s)
BOTTOM REINF.	4-10í 1 layer(s)	5-10í 1 layer(s)	6-10í 1 layer(s)	6-10í 1 layer(s)	4-10í 1 layer(s)
SHEAR REINF.	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c

SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM START SUPPORT
VY = 125.49 MX = 0.04 LD= 19
Provide 2 Legged 8í @ 150 mm c/c

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM END SUPPORT
VY = -125.93 MX = -0.01 LD= 18
Provide 2 Legged 8í @ 150 mm c/c

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B E A M N O. 1010 D E S I G N R E S U L T S

M30 Fe500 (Main) Fe415 (Sec.)

LENGTH: 6000.0 mm SIZE: 350.0 mm X 500.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	2036.42 (Sq. mm)	343.08 (Sq. mm)	0.00 (Sq. mm)	368.15 (Sq. mm)	2071.17 (Sq. mm)
BOTTOM REINF.	311.06 (Sq. mm)	510.30 (Sq. mm)	723.21 (Sq. mm)	530.16 (Sq. mm)	327.10 (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	7-20í 1 layer(s)	3-20í 1 layer(s)	2-20í 1 layer(s)	3-20í 1 layer(s)	7-20í 1 layer(s)
BOTTOM REINF.	4-10í 1 layer(s)	7-10í 1 layer(s)	10-10í 2 layer(s)	7-10í 1 layer(s)	5-10í 1 layer(s)
SHEAR REINF.	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c

SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 740.0 mm AWAY FROM START SUPPORT
VY = 202.90 MX = 0.06 LD= 19
Provide 2 Legged 8í @ 150 mm c/c

SHEAR DESIGN RESULTS AT 740.0 mm AWAY FROM END SUPPORT
VY = -204.00 MX = -0.02 LD= 18
Provide 2 Legged 8í @ 150 mm c/c

B E A M N O. 1011 D E S I G N R E S U L T S

M30 Fe500 (Main) Fe415 (Sec.)

LENGTH: 6000.0 mm SIZE: 350.0 mm X 500.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	2063.60 (Sq. mm)	359.96 (Sq. mm)	0.00 (Sq. mm)	386.40 (Sq. mm)	2099.58 (Sq. mm)
BOTTOM REINF.	345.56 (Sq. mm)	528.14 (Sq. mm)	723.25 (Sq. mm)	548.55 (Sq. mm)	362.01 (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	7-20í 1 layer(s)	3-20í 1 layer(s)	2-20í 1 layer(s)	3-20í 1 layer(s)	7-20í 1 layer(s)
BOTTOM REINF.	5-10í 1 layer(s)	7-10í 1 layer(s)	10-10í 2 layer(s)	7-10í 1 layer(s)	5-10í 1 layer(s)
SHEAR	2 legged 8í	2 legged 8í	2 legged 8í	2 legged 8í	2 legged 8í

REINF. @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c @ 180 mm c/c

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SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 740.0 mm AWAY FROM START SUPPORT
VY = 204.66 MX = 0.03 LD= 19
Provide 2 Legged 8í @ 150 mm c/c

SHEAR DESIGN RESULTS AT 740.0 mm AWAY FROM END SUPPORT
VY = -205.76 MX = -0.05 LD= 18
Provide 2 Legged 8í @ 150 mm c/c

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B E A M N O. 1012 D E S I G N R E S U L T S

M30 Fe500 (Main) Fe415 (Sec.)

LENGTH: 6000.0 mm SIZE: 300.0 mm X 450.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	1464.36 (Sq. mm)	276.68 (Sq. mm)	0.00 (Sq. mm)	305.14 (Sq. mm)	1489.93 (Sq. mm)
BOTTOM REINF.	292.79 (Sq. mm)	392.45 (Sq. mm)	467.00 (Sq. mm)	416.90 (Sq. mm)	314.93 (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	5-20í 1 layer(s)	3-20í 1 layer(s)	2-20í 1 layer(s)	3-20í 1 layer(s)	5-20í 1 layer(s)
BOTTOM REINF.	4-10í 1 layer(s)	5-10í 1 layer(s)	6-10í 1 layer(s)	6-10í 1 layer(s)	5-10í 1 layer(s)
SHEAR REINF.	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c

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SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM START SUPPORT
VY = 126.97 MX = -0.03 LD= 19
Provide 2 Legged 8í @ 150 mm c/c

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM END SUPPORT
VY = -127.21 MX = -0.10 LD= 18
Provide 2 Legged 8í @ 150 mm c/c

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B E A M N O. 1013 D E S I G N R E S U L T S

M30 Fe500 (Main) Fe415 (Sec.)

LENGTH: 6000.0 mm SIZE: 350.0 mm X 500.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	2062.51 (Sq. mm)	350.22 (Sq. mm)	0.00 (Sq. mm)	408.30 (Sq. mm)	2115.37 (Sq. mm)
BOTTOM REINF.	358.69 (Sq. mm)	530.07 (Sq. mm)	737.85 (Sq. mm)	579.39 (Sq. mm)	401.74 (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	7-20í 1 layer(s)	3-20í 1 layer(s)	2-20í 1 layer(s)	3-20í 1 layer(s)	7-20í 1 layer(s)
BOTTOM REINF.	5-10í 1 layer(s)	7-10í 1 layer(s)	10-10í 2 layer(s)	8-10í 1 layer(s)	6-10í 1 layer(s)
SHEAR REINF.	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c

SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 740.0 mm AWAY FROM START SUPPORT
VY = 205.96 MX = -0.04 LD= 19
Provide 2 Legged 8í @ 150 mm c/c

SHEAR DESIGN RESULTS AT 740.0 mm AWAY FROM END SUPPORT
VY = -206.62 MX = -0.13 LD= 18
Provide 2 Legged 8í @ 150 mm c/c

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B E A M N O. 1014 D E S I G N R E S U L T S

M30 Fe500 (Main) Fe415 (Sec.)

LENGTH: 6000.0 mm SIZE: 350.0 mm X 500.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	2090.09 (Sq. mm)	367.81 (Sq. mm)	0.00 (Sq. mm)	428.69 (Sq. mm)	2146.81 (Sq. mm)
BOTTOM REINF.	395.62 (Sq. mm)	548.54 (Sq. mm)	737.16 (Sq. mm)	600.13 (Sq. mm)	440.14 (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	7-20í 1 layer(s)	3-20í 1 layer(s)	2-20í 1 layer(s)	3-20í 1 layer(s)	7-20í 1 layer(s)

BOTTOM REINF.	6-10í 1 layer(s)	7-10í 1 layer(s)	10-10í 2 layer(s)	8-10í 1 layer(s)	6-10í 1 layer(s)
SHEAR REINF.	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c

SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 740.0 mm AWAY FROM START SUPPORT
VY = 207.76 MX = 0.05 LD= 19
Provide 2 Legged 8í @ 150 mm c/c

SHEAR DESIGN RESULTS AT 740.0 mm AWAY FROM END SUPPORT
VY = -208.58 MX = -0.06 LD= 18
Provide 2 Legged 8í @ 150 mm c/c

B E A M N O. 1015 D E S I G N R E S U L T S

M30 Fe500 (Main) Fe415 (Sec.)

LENGTH: 6000.0 mm SIZE: 300.0 mm X 450.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	1152.14 (Sq. mm)	412.81 (Sq. mm)	0.00 (Sq. mm)	361.32 (Sq. mm)	1060.91 (Sq. mm)
BOTTOM REINF.	676.59 (Sq. mm)	442.49 (Sq. mm)	214.20 (Sq. mm)	431.87 (Sq. mm)	687.18 (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	6-16í 1 layer(s)	3-16í 1 layer(s)	2-16í 1 layer(s)	3-16í 1 layer(s)	6-16í 1 layer(s)
BOTTOM REINF.	9-10í 2 layer(s)	6-10í 1 layer(s)	3-10í 1 layer(s)	6-10í 1 layer(s)	9-10í 2 layer(s)
SHEAR REINF.	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c

SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM START SUPPORT
VY = 70.66 MX = -0.74 LD= 17
Provide 2 Legged 8í @ 150 mm c/c

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM END SUPPORT
VY = -69.06 MX = -0.32 LD= 20
Provide 2 Legged 8í @ 150 mm c/c

B E A M N O. 1016 D E S I G N R E S U L T S

M30 Fe500 (Main) Fe415 (Sec.)

LENGTH: 6000.0 mm SIZE: 300.0 mm X 450.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	1105.16 (Sq. mm)	369.56 (Sq. mm)	0.00 (Sq. mm)	371.26 (Sq. mm)	1109.59 (Sq. mm)
BOTTOM REINF.	638.71 (Sq. mm)	419.37 (Sq. mm)	213.69 (Sq. mm)	417.93 (Sq. mm)	635.40 (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	10-12í 2 layer(s)	4-12í 1 layer(s)	2-12í 1 layer(s)	4-12í 1 layer(s)	10-12í 2 layer(s)
BOTTOM REINF.	6-12í 1 layer(s)	4-12í 1 layer(s)	3-12í 1 layer(s)	4-12í 1 layer(s)	6-12í 1 layer(s)
SHEAR REINF.	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c

SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM START SUPPORT
VY = 68.59 MX = -0.01 LD= 21
Provide 2 Legged 8í @ 150 mm c/c

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM END SUPPORT
VY = -68.77 MX = 0.00 LD= 20
Provide 2 Legged 8í @ 150 mm c/c

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B E A M N O. 1020 D E S I G N R E S U L T S

M30 Fe500 (Main) Fe415 (Sec.)

LENGTH: 6000.0 mm SIZE: 350.0 mm X 450.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	1374.06 (Sq. mm)	507.08 (Sq. mm)	0.00 (Sq. mm)	420.86 (Sq. mm)	1210.08 (Sq. mm)
BOTTOM REINF.	810.71 (Sq. mm)	518.46 (Sq. mm)	249.31 (Sq. mm)	518.84 (Sq. mm)	858.21 (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm

TOP REINF.	7-16í 1 layer(s)	3-16í 1 layer(s)	2-16í 1 layer(s)	3-16í 1 layer(s)	7-16í 1 layer(s)
BOTTOM REINF.	11-10í 2 layer(s)	7-10í 1 layer(s)	4-10í 1 layer(s)	7-10í 1 layer(s)	11-10í 2 layer(s)
SHEAR REINF.	2 legged 8í @ 170 mm c/c	2 legged 8í @ 170 mm c/c	2 legged 8í @ 170 mm c/c	2 legged 8í @ 170 mm c/c	2 legged 8í @ 170 mm c/c

SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM START SUPPORT
VY = 82.79 MX = -0.06 LD= 21
Provide 2 Legged 8í @ 170 mm c/c

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM END SUPPORT
VY = -78.16 MX = -0.01 LD= 20
Provide 2 Legged 8í @ 170 mm c/c

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B E A M N O. 1021 D E S I G N R E S U L T S

M30 Fe500 (Main) Fe415 (Sec.)

LENGTH: 6000.0 mm SIZE: 350.0 mm X 450.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	1278.53 (Sq. mm)	443.07 (Sq. mm)	0.00 (Sq. mm)	446.67 (Sq. mm)	1291.11 (Sq. mm)
BOTTOM REINF.	798.23 (Sq. mm)	500.63 (Sq. mm)	248.12 (Sq. mm)	498.15 (Sq. mm)	792.10 (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	17-10í 2 layer(s)	6-10í 1 layer(s)	2-10í 1 layer(s)	6-10í 1 layer(s)	17-10í 2 layer(s)
BOTTOM REINF.	4-16í 1 layer(s)	3-16í 1 layer(s)	3-16í 1 layer(s)	3-16í 1 layer(s)	4-16í 1 layer(s)
SHEAR REINF.	2 legged 8í @ 170 mm c/c	2 legged 8í @ 170 mm c/c	2 legged 8í @ 170 mm c/c	2 legged 8í @ 170 mm c/c	2 legged 8í @ 170 mm c/c

SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM START SUPPORT
VY = 78.33 MX = -0.01 LD= 21
Provide 2 Legged 8í @ 170 mm c/c

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM END SUPPORT
VY = -78.67 MX = 0.00 LD= 20
Provide 2 Legged 8í @ 170 mm c/c

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B E A M N O. 1025 D E S I G N R E S U L T S

M30 Fe500 (Main) Fe415 (Sec.)

LENGTH: 6000.0 mm SIZE: 350.0 mm X 450.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	1372.83 (Sq. mm)	507.48 (Sq. mm)	0.00 (Sq. mm)	430.91 (Sq. mm)	1232.37 (Sq. mm)
BOTTOM REINF.	830.63 (Sq. mm)	528.97 (Sq. mm)	249.31 (Sq. mm)	518.87 (Sq. mm)	856.77 (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	7-16í 1 layer(s)	3-16í 1 layer(s)	2-16í 1 layer(s)	3-16í 1 layer(s)	7-16í 1 layer(s)
BOTTOM REINF.	11-10í 2 layer(s)	7-10í 1 layer(s)	4-10í 1 layer(s)	7-10í 1 layer(s)	11-10í 2 layer(s)
SHEAR REINF.	2 legged 8í @ 170 mm c/c	2 legged 8í @ 170 mm c/c	2 legged 8í @ 170 mm c/c	2 legged 8í @ 170 mm c/c	2 legged 8í @ 170 mm c/c

SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM START SUPPORT
VY = 81.39 MX = 0.54 LD= 17
Provide 2 Legged 8í @ 170 mm c/c

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM END SUPPORT
VY = -79.01 MX = 0.31 LD= 20
Provide 2 Legged 8í @ 170 mm c/c

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B E A M N O. 1026 D E S I G N R E S U L T S

M30 Fe500 (Main) Fe415 (Sec.)

LENGTH: 6000.0 mm SIZE: 350.0 mm X 450.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	1291.70 (Sq. mm)	446.71 (Sq. mm)	0.00 (Sq. mm)	449.52 (Sq. mm)	1298.35 (Sq. mm)
BOTTOM REINF.	807.48 (Sq. mm)	499.06 (Sq. mm)	249.90 (Sq. mm)	497.45 (Sq. mm)	803.26 (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	17-10í 2 layer(s)	6-10í 1 layer(s)	2-10í 1 layer(s)	6-10í 1 layer(s)	17-10í 2 layer(s)
BOTTOM REINF.	11-10í 2 layer(s)	7-10í 1 layer(s)	4-10í 1 layer(s)	7-10í 1 layer(s)	11-10í 2 layer(s)
SHEAR REINF.	2 legged 8í @ 170 mm c/c	2 legged 8í @ 170 mm c/c	2 legged 8í @ 170 mm c/c	2 legged 8í @ 170 mm c/c	2 legged 8í @ 170 mm c/c

SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM START SUPPORT
VY = 78.71 MX = 0.00 LD= 21
Provide 2 Legged 8í @ 170 mm c/c

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM END SUPPORT
VY = -78.95 MX = 0.00 LD= 20
Provide 2 Legged 8í @ 170 mm c/c

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B E A M N O. 1030 D E S I G N R E S U L T S

M30 Fe500 (Main) Fe415 (Sec.)

LENGTH: 6000.0 mm SIZE: 350.0 mm X 450.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	1375.81 (Sq. mm)	508.93 (Sq. mm)	0.00 (Sq. mm)	431.10 (Sq. mm)	1233.37 (Sq. mm)
BOTTOM REINF.	831.57 (Sq. mm)	529.21 (Sq. mm)	249.31 (Sq. mm)	520.26 (Sq. mm)	859.22 (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	7-16í 1 layer(s)	3-16í 1 layer(s)	2-16í 1 layer(s)	3-16í 1 layer(s)	7-16í 1 layer(s)
BOTTOM REINF.	11-10í 2 layer(s)	7-10í 1 layer(s)	4-10í 1 layer(s)	7-10í 1 layer(s)	11-10í 2 layer(s)
SHEAR REINF.	2 legged 8í @ 170 mm c/c	2 legged 8í @ 170 mm c/c	2 legged 8í @ 170 mm c/c	2 legged 8í @ 170 mm c/c	2 legged 8í @ 170 mm c/c

SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM START SUPPORT
VY = 81.47 MX = -0.60 LD= 17
Provide 2 Legged 8í @ 170 mm c/c

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM END SUPPORT
VY = -79.07 MX = -0.26 LD= 20
Provide 2 Legged 8í @ 170 mm c/c

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B E A M N O. 1031 D E S I G N R E S U L T S

M30 Fe500 (Main) Fe415 (Sec.)

LENGTH: 6000.0 mm SIZE: 350.0 mm X 450.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	1293.86 (Sq. mm)	447.55 (Sq. mm)	0.00 (Sq. mm)	450.08 (Sq. mm)	1299.84 (Sq. mm)
BOTTOM REINF.	808.73 (Sq. mm)	499.62 (Sq. mm)	249.90 (Sq. mm)	498.31 (Sq. mm)	805.08 (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	17-10í 2 layer(s)	6-10í 1 layer(s)	2-10í 1 layer(s)	6-10í 1 layer(s)	17-10í 2 layer(s)
BOTTOM REINF.	11-10í 2 layer(s)	7-10í 1 layer(s)	4-10í 1 layer(s)	7-10í 1 layer(s)	11-10í 2 layer(s)
SHEAR REINF.	2 legged 8í @ 170 mm c/c	2 legged 8í @ 170 mm c/c	2 legged 8í @ 170 mm c/c	2 legged 8í @ 170 mm c/c	2 legged 8í @ 170 mm c/c

SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM START SUPPORT
VY = 78.80 MX = -0.01 LD= 21
Provide 2 Legged 8í @ 170 mm c/c

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM END SUPPORT
VY = -79.02 MX = 0.00 LD= 20
Provide 2 Legged 8í @ 170 mm c/c

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B E A M N O. 1035 D E S I G N R E S U L T S

M30 Fe500 (Main) Fe415 (Sec.)

LENGTH: 6000.0 mm SIZE: 350.0 mm X 450.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	1388.26 (Sq. mm)	512.48 (Sq. mm)	0.00 (Sq. mm)	425.34 (Sq. mm)	1221.02 (Sq. mm)

BOTTOM REINF.	820.74 (Sq. mm)	523.39 (Sq. mm)	249.31 (Sq. mm)	523.77 (Sq. mm)	869.73 (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	7-16í 1 layer(s)	3-16í 1 layer(s)	2-16í 1 layer(s)	3-16í 1 layer(s)	7-16í 1 layer(s)
BOTTOM REINF.	8-12í 1 layer(s)	5-12í 1 layer(s)	3-12í 1 layer(s)	5-12í 1 layer(s)	8-12í 1 layer(s)
SHEAR REINF.	2 legged 8í @ 170 mm c/c	2 legged 8í @ 170 mm c/c	2 legged 8í @ 170 mm c/c	2 legged 8í @ 170 mm c/c	2 legged 8í @ 170 mm c/c

SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM START SUPPORT
VY = 83.39 MX = -0.01 LD= 21
Provide 2 Legged 8í @ 170 mm c/c

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM END SUPPORT
VY = -78.63 MX = 0.06 LD= 20
Provide 2 Legged 8í @ 170 mm c/c

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B E A M N O. 1036 D E S I G N R E S U L T S

M30 Fe500 (Main) Fe415 (Sec.)

LENGTH: 6000.0 mm SIZE: 350.0 mm X 450.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	1296.16 (Sq. mm)	448.30 (Sq. mm)	0.00 (Sq. mm)	450.80 (Sq. mm)	1302.03 (Sq. mm)
BOTTOM REINF.	811.00 (Sq. mm)	500.75 (Sq. mm)	249.90 (Sq. mm)	499.46 (Sq. mm)	807.44 (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	17-10í 2 layer(s)	6-10í 1 layer(s)	2-10í 1 layer(s)	6-10í 1 layer(s)	17-10í 2 layer(s)
BOTTOM REINF.	11-10í 2 layer(s)	7-10í 1 layer(s)	4-10í 1 layer(s)	7-10í 1 layer(s)	11-10í 2 layer(s)
SHEAR REINF.	2 legged 8í @ 170 mm c/c	2 legged 8í @ 170 mm c/c	2 legged 8í @ 170 mm c/c	2 legged 8í @ 170 mm c/c	2 legged 8í @ 170 mm c/c

SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM START SUPPORT
VY = 78.91 MX = -0.01 LD= 21
Provide 2 Legged 8í @ 170 mm c/c

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM END SUPPORT
VY = -79.12 MX = 0.00 LD= 20
Provide 2 Legged 8í @ 170 mm c/c

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B E A M N O. 1040 D E S I G N R E S U L T S

M30 Fe500 (Main) Fe415 (Sec.)

LENGTH: 6000.0 mm SIZE: 300.0 mm X 450.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	1183.51 (Sq. mm)	424.94 (Sq. mm)	0.00 (Sq. mm)	372.42 (Sq. mm)	1089.16 (Sq. mm)
BOTTOM REINF.	702.38 (Sq. mm)	454.62 (Sq. mm)	214.20 (Sq. mm)	443.07 (Sq. mm)	717.09 (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	6-16í 1 layer(s)	3-16í 1 layer(s)	2-16í 1 layer(s)	3-16í 1 layer(s)	6-16í 1 layer(s)
BOTTOM REINF.	9-10í 2 layer(s)	6-10í 1 layer(s)	3-10í 1 layer(s)	6-10í 1 layer(s)	10-10í 2 layer(s)
SHEAR REINF.	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c

SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM START SUPPORT
VY = 71.73 MX = 0.69 LD= 17
Provide 2 Legged 8í @ 150 mm c/c

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM END SUPPORT
VY = -70.28 MX = 0.36 LD= 20
Provide 2 Legged 8í @ 150 mm c/c

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B E A M N O. 1041 D E S I G N R E S U L T S

M30 Fe500 (Main) Fe415 (Sec.)

LENGTH: 6000.0 mm SIZE: 300.0 mm X 450.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm

TOP REINF.	1122.51 (Sq. mm)	382.03 (Sq. mm)	0.00 (Sq. mm)	383.36 (Sq. mm)	1125.47 (Sq. mm)
BOTTOM REINF.	662.37 (Sq. mm)	430.32 (Sq. mm)	213.69 (Sq. mm)	429.77 (Sq. mm)	660.77 (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	10-12í 2 layer(s)	4-12í 1 layer(s)	2-12í 1 layer(s)	4-12í 1 layer(s)	10-12í 2 layer(s)
BOTTOM REINF.	6-12í 1 layer(s)	4-12í 1 layer(s)	3-12í 1 layer(s)	4-12í 1 layer(s)	6-12í 1 layer(s)
SHEAR REINF.	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c

SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM START SUPPORT
VY = 69.86 MX = 0.00 LD= 21
Provide 2 Legged 8í @ 150 mm c/c

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM END SUPPORT
VY = -69.96 MX = 0.00 LD= 20
Provide 2 Legged 8í @ 150 mm c/c

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B E A M N O. 1045 D E S I G N R E S U L T S

M30 Fe500 (Main) Fe415 (Sec.)

LENGTH: 6000.0 mm SIZE: 300.0 mm X 450.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

TOP REINF.	1473.04 (Sq. mm)	288.52 (Sq. mm)	0.00 (Sq. mm)	253.20 (Sq. mm)	1417.24 (Sq. mm)
BOTTOM REINF.	266.77 (Sq. mm)	392.09 (Sq. mm)	468.01 (Sq. mm)	377.50 (Sq. mm)	263.20 (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	5-20í 1 layer(s)	3-20í 1 layer(s)	2-20í 1 layer(s)	3-20í 1 layer(s)	5-20í 1 layer(s)
BOTTOM REINF.	4-10í 1 layer(s)	5-10í 1 layer(s)	6-10í 1 layer(s)	5-10í 1 layer(s)	4-10í 1 layer(s)
SHEAR REINF.	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c

SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM START SUPPORT
VY = 126.33 MX = 0.08 LD= 19
Provide 2 Legged 8í @ 150 mm c/c

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM END SUPPORT
VY = -124.31 MX = 0.10 LD= 18
Provide 2 Legged 8í @ 150 mm c/c

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B E A M N O. 1046 D E S I G N R E S U L T S

M30 Fe500 (Main) Fe415 (Sec.)

LENGTH: 6000.0 mm SIZE: 350.0 mm X 500.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	2102.63 (Sq. mm)	387.79 (Sq. mm)	0.00 (Sq. mm)	315.06 (Sq. mm)	1986.97 (Sq. mm)
BOTTOM REINF.	330.77 (Sq. mm)	542.47 (Sq. mm)	740.17 (Sq. mm)	518.43 (Sq. mm)	323.89 (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	7-20í 1 layer(s)	3-20í 1 layer(s)	2-20í 1 layer(s)	3-20í 1 layer(s)	7-20í 1 layer(s)
BOTTOM REINF.	5-10í 1 layer(s)	7-10í 1 layer(s)	10-10í 2 layer(s)	7-10í 1 layer(s)	5-10í 1 layer(s)
SHEAR REINF.	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c

SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 740.0 mm AWAY FROM START SUPPORT
VY = 205.96 MX = 0.10 LD= 19
Provide 2 Legged 8í @ 150 mm c/c

SHEAR DESIGN RESULTS AT 740.0 mm AWAY FROM END SUPPORT
VY = -201.20 MX = 0.13 LD= 18
Provide 2 Legged 8í @ 150 mm c/c

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B E A M N O. 1047 D E S I G N R E S U L T S

M30 Fe500 (Main) Fe415 (Sec.)

LENGTH: 6000.0 mm SIZE: 350.0 mm X 500.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	2129.30 (Sq. mm)	404.92 (Sq. mm)	0.00 (Sq. mm)	329.34 (Sq. mm)	2009.61 (Sq. mm)
BOTTOM REINF.	362.74 (Sq. mm)	559.54 (Sq. mm)	739.31 (Sq. mm)	530.83 (Sq. mm)	354.84 (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	7-20í 1 layer(s)	3-20í 1 layer(s)	2-20í 1 layer(s)	3-20í 1 layer(s)	7-20í 1 layer(s)
BOTTOM REINF.	5-10í 1 layer(s)	8-10í 1 layer(s)	10-10í 2 layer(s)	7-10í 1 layer(s)	5-10í 1 layer(s)
SHEAR REINF.	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c

SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 740.0 mm AWAY FROM START SUPPORT
VY = 207.64 MX = 0.01 LD= 19
Provide 2 Legged 8í @ 150 mm c/c

SHEAR DESIGN RESULTS AT 740.0 mm AWAY FROM END SUPPORT
VY = -202.74 MX = 0.02 LD= 18
Provide 2 Legged 8í @ 150 mm c/c

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B E A M N O. 1048 D E S I G N R E S U L T S

M30 Fe500 (Main) Fe415 (Sec.)

LENGTH: 6000.0 mm SIZE: 300.0 mm X 450.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	1462.17 (Sq. mm)	266.43 (Sq. mm)	0.00 (Sq. mm)	256.05 (Sq. mm)	1452.66 (Sq. mm)
BOTTOM REINF.	252.13 (Sq. mm)	380.02 (Sq. mm)	461.89 (Sq. mm)	366.77 (Sq. mm)	238.50 (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	13-12í 2 layer(s)	3-12í 1 layer(s)	2-12í 1 layer(s)	3-12í 1 layer(s)	13-12í 2 layer(s)
BOTTOM REINF.	4-10í 1 layer(s)	5-10í 1 layer(s)	6-10í 1 layer(s)	5-10í 1 layer(s)	4-10í 1 layer(s)

SHEAR REINF.	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c

SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM START SUPPORT
VY = 124.54 MX = -0.01 LD= 19
Provide 2 Legged 8í @ 150 mm c/c

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM END SUPPORT
VY = -124.53 MX = -0.06 LD= 18
Provide 2 Legged 8í @ 150 mm c/c

B E A M N O. 1049 D E S I G N R E S U L T S

M30 Fe500 (Main) Fe415 (Sec.)

LENGTH: 6000.0 mm SIZE: 350.0 mm X 500.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	2032.21 (Sq. mm)	346.32 (Sq. mm)	0.00 (Sq. mm)	333.42 (Sq. mm)	2025.60 (Sq. mm)
BOTTOM REINF.	304.01 (Sq. mm)	517.43 (Sq. mm)	725.24 (Sq. mm)	493.56 (Sq. mm)	279.65 (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	7-20í 1 layer(s)	3-20í 1 layer(s)	2-20í 1 layer(s)	3-20í 1 layer(s)	7-20í 1 layer(s)
BOTTOM REINF.	4-10í 1 layer(s)	7-10í 1 layer(s)	10-10í 2 layer(s)	7-10í 1 layer(s)	4-10í 1 layer(s)
SHEAR REINF.	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c

SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 740.0 mm AWAY FROM START SUPPORT
VY = 201.72 MX = -0.02 LD= 19
Provide 2 Legged 8í @ 150 mm c/c

SHEAR DESIGN RESULTS AT 740.0 mm AWAY FROM END SUPPORT
VY = -202.18 MX = -0.09 LD= 18
Provide 2 Legged 8í @ 150 mm c/c

B E A M N O. 1050 D E S I G N R E S U L T S

M30 Fe500 (Main) Fe415 (Sec.)

LENGTH: 6000.0 mm SIZE: 350.0 mm X 500.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	2056.20 (Sq. mm)	361.96 (Sq. mm)	0.00 (Sq. mm)	348.66 (Sq. mm)	2050.36 (Sq. mm)
BOTTOM REINF.	335.30 (Sq. mm)	533.88 (Sq. mm)	725.03 (Sq. mm)	509.07 (Sq. mm)	306.40 (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	7-20í 1 layer(s)	3-20í 1 layer(s)	2-20í 1 layer(s)	3-20í 1 layer(s)	7-20í 1 layer(s)
BOTTOM REINF.	5-10í 1 layer(s)	7-10í 1 layer(s)	10-10í 2 layer(s)	7-10í 1 layer(s)	4-10í 1 layer(s)
SHEAR REINF.	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c

SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 740.0 mm AWAY FROM START SUPPORT
VY = 203.23 MX = 0.01 LD= 19
Provide 2 Legged 8í @ 150 mm c/c

SHEAR DESIGN RESULTS AT 740.0 mm AWAY FROM END SUPPORT
VY = -203.78 MX = -0.05 LD= 18
Provide 2 Legged 8í @ 150 mm c/c

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B E A M N O. 1051 D E S I G N R E S U L T S

M30 Fe500 (Main) Fe415 (Sec.)

LENGTH: 3150.0 mm SIZE: 300.0 mm X 450.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	0.0 mm	787.5 mm	1575.0 mm	2362.5 mm	3150.0 mm
TOP REINF.	1267.94 (Sq. mm)	488.31 (Sq. mm)	0.00 (Sq. mm)	487.61 (Sq. mm)	1265.92 (Sq. mm)
BOTTOM REINF.	893.75 (Sq. mm)	475.90 (Sq. mm)	213.69 (Sq. mm)	476.60 (Sq. mm)	895.46 (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	0.0 mm	787.5 mm	1575.0 mm	2362.5 mm	3150.0 mm

```
REINF.   2 layer(s)    1 layer(s)    1 layer(s)    1 layer(s)    2 layer(s)

BOTTOM     8-12í         5-12í         3-12í         5-12í         8-12í
REINF.   2 layer(s)    1 layer(s)    1 layer(s)    1 layer(s)    2 layer(s)

SHEAR   2 legged  8í  2 legged  8í  2 legged  8í  2 legged  8í  2 legged  8í
REINF.  @ 150 mm c/c  @ 150 mm c/c  @ 150 mm c/c  @ 150 mm c/c  @ 150 mm c/c
--------------------------------------------------------------------------


SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT   690.0 mm AWAY FROM START SUPPORT
  VY =   124.52 MX =     0.02 LD=   23
  Provide 2 Legged  8í  @ 150 mm c/c

SHEAR DESIGN RESULTS AT   690.0 mm AWAY FROM END SUPPORT
  VY =  -124.36 MX =    -0.03 LD=   22
  Provide 2 Legged  8í  @ 150 mm c/c

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              B E A M  N O.    1052   D E S I G N  R E S U L T S

      M30                    Fe500 (Main)               Fe415 (Sec.)

    LENGTH:  3150.0 mm      SIZE:   350.0 mm X  500.0 mm   COVER: 25.0 mm


                     SUMMARY OF REINF. AREA (Sq.mm)
--------------------------------------------------------------------------
SECTION      0.0 mm      787.5 mm     1575.0 mm     2362.5 mm     3150.0 mm
--------------------------------------------------------------------------
 TOP        1540.21        613.78          0.00        613.51       1539.38
REINF.      (Sq. mm)      (Sq. mm)      (Sq. mm)      (Sq. mm)      (Sq. mm)

BOTTOM      1039.97        559.34        279.65        559.60       1040.70
REINF.      (Sq. mm)      (Sq. mm)      (Sq. mm)      (Sq. mm)      (Sq. mm)
--------------------------------------------------------------------------


                     SUMMARY OF PROVIDED REINF. AREA
--------------------------------------------------------------------------
SECTION      0.0 mm      787.5 mm     1575.0 mm     2362.5 mm     3150.0 mm
--------------------------------------------------------------------------
 TOP       5-20í         3-20í         2-20í         3-20í         5-20í
REINF.   1 layer(s)    1 layer(s)    1 layer(s)    1 layer(s)    1 layer(s)

BOTTOM    14-10í         8-10í         4-10í         8-10í        14-10í
REINF.   2 layer(s)    1 layer(s)    1 layer(s)    1 layer(s)    2 layer(s)

SHEAR   2 legged  8í  2 legged  8í  2 legged  8í  2 legged  8í  2 legged  8í
REINF.  @ 180 mm c/c  @ 180 mm c/c  @ 180 mm c/c  @ 180 mm c/c  @ 180 mm c/c
--------------------------------------------------------------------------


SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT   740.0 mm AWAY FROM START SUPPORT
  VY =   178.30 MX =     0.02 LD=   19
  Provide 2 Legged  8í  @ 180 mm c/c

SHEAR DESIGN RESULTS AT   740.0 mm AWAY FROM END SUPPORT
  VY =  -178.10 MX =    -0.04 LD=   18
  Provide 2 Legged  8í  @ 180 mm c/c

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B E A M N O. 1053 D E S I G N R E S U L T S

M30 Fe500 (Main) Fe415 (Sec.)

LENGTH: 3150.0 mm SIZE: 350.0 mm X 500.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	0.0 mm	787.5 mm	1575.0 mm	2362.5 mm	3150.0 mm
TOP REINF.	1607.38 (Sq. mm)	632.95 (Sq. mm)	0.00 (Sq. mm)	633.10 (Sq. mm)	1607.61 (Sq. mm)
BOTTOM REINF.	1090.33 (Sq. mm)	581.14 (Sq. mm)	279.65 (Sq. mm)	581.00 (Sq. mm)	1090.13 (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	0.0 mm	787.5 mm	1575.0 mm	2362.5 mm	3150.0 mm
TOP REINF.	8-16í 2 layer(s)	4-16í 1 layer(s)	2-16í 1 layer(s)	4-16í 1 layer(s)	8-16í 2 layer(s)
BOTTOM REINF.	14-10í 2 layer(s)	8-10í 1 layer(s)	4-10í 1 layer(s)	8-10í 1 layer(s)	14-10í 2 layer(s)
SHEAR REINF.	2 legged 8í @ 180 mm c/c	2 legged 8í @ 170 mm c/c	2 legged 8í @ 180 mm c/c	2 legged 8í @ 170 mm c/c	2 legged 8í @ 180 mm c/c

SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 740.0 mm AWAY FROM START SUPPORT
VY = 182.20 MX = 0.04 LD= 19
Provide 2 Legged 8í @ 160 mm c/c

SHEAR DESIGN RESULTS AT 740.0 mm AWAY FROM END SUPPORT
VY = -182.10 MX = -0.06 LD= 18
Provide 2 Legged 8í @ 160 mm c/c

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B E A M N O. 1054 D E S I G N R E S U L T S

M30 Fe500 (Main) Fe415 (Sec.)

LENGTH: 6000.0 mm SIZE: 300.0 mm X 450.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	1454.30 (Sq. mm)	256.47 (Sq. mm)	0.00 (Sq. mm)	266.06 (Sq. mm)	1460.30 (Sq. mm)
BOTTOM REINF.	237.64 (Sq. mm)	366.40 (Sq. mm)	461.71 (Sq. mm)	380.47 (Sq. mm)	253.06 (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	13-12í 2 layer(s)	3-12í 1 layer(s)	2-12í 1 layer(s)	3-12í 1 layer(s)	13-12í 2 layer(s)
BOTTOM REINF.	4-10í 1 layer(s)	5-10í 1 layer(s)	6-10í 1 layer(s)	5-10í 1 layer(s)	4-10í 1 layer(s)
SHEAR REINF.	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c

SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM START SUPPORT
VY = 124.62 MX = 0.04 LD= 19
Provide 2 Legged 8í @ 150 mm c/c

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM END SUPPORT
VY = -124.44 MX = -0.01 LD= 18
Provide 2 Legged 8í @ 150 mm c/c

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B E A M N O. 1055 D E S I G N R E S U L T S

M30 Fe500 (Main) Fe415 (Sec.)

LENGTH: 6000.0 mm SIZE: 350.0 mm X 500.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	2026.61 (Sq. mm)	333.59 (Sq. mm)	0.00 (Sq. mm)	346.24 (Sq. mm)	2030.94 (Sq. mm)
BOTTOM REINF.	279.65 (Sq. mm)	493.49 (Sq. mm)	724.98 (Sq. mm)	517.62 (Sq. mm)	304.45 (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	7-20í 1 layer(s)	3-20í 1 layer(s)	2-20í 1 layer(s)	3-20í 1 layer(s)	7-20í 1 layer(s)
BOTTOM REINF.	4-10í 1 layer(s)	7-10í 1 layer(s)	10-10í 2 layer(s)	7-10í 1 layer(s)	4-10í 1 layer(s)
SHEAR REINF.	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c

SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 740.0 mm AWAY FROM START SUPPORT
VY = 202.25 MX = 0.07 LD= 19
Provide 2 Legged 8í @ 150 mm c/c

SHEAR DESIGN RESULTS AT 740.0 mm AWAY FROM END SUPPORT
VY = -201.64 MX = -0.01 LD= 18

Provide 2 Legged 8í @ 150 mm c/c

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B E A M N O. 1056 D E S I G N R E S U L T S

M30 Fe500 (Main) Fe415 (Sec.)

LENGTH: 6000.0 mm SIZE: 350.0 mm X 500.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	2050.89 (Sq. mm)	348.57 (Sq. mm)	0.00 (Sq. mm)	362.15 (Sq. mm)	2055.74 (Sq. mm)
BOTTOM REINF.	306.59 (Sq. mm)	509.26 (Sq. mm)	724.95 (Sq. mm)	533.79 (Sq. mm)	335.20 (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	7-20í 1 layer(s)	3-20í 1 layer(s)	2-20í 1 layer(s)	3-20í 1 layer(s)	7-20í 1 layer(s)
BOTTOM REINF.	4-10í 1 layer(s)	7-10í 1 layer(s)	10-10í 2 layer(s)	7-10í 1 layer(s)	5-10í 1 layer(s)
SHEAR REINF.	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c

SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 740.0 mm AWAY FROM START SUPPORT
VY = 203.83 MX = 0.02 LD= 19
Provide 2 Legged 8í @ 150 mm c/c

SHEAR DESIGN RESULTS AT 740.0 mm AWAY FROM END SUPPORT
VY = -203.19 MX = -0.04 LD= 18
Provide 2 Legged 8í @ 150 mm c/c

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B E A M N O. 1057 D E S I G N R E S U L T S

M30 Fe500 (Main) Fe415 (Sec.)

LENGTH: 6000.0 mm SIZE: 300.0 mm X 450.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	1425.10 (Sq. mm)	254.95 (Sq. mm)	0.00 (Sq. mm)	290.17 (Sq. mm)	1478.22 (Sq. mm)
BOTTOM REINF.	262.47 (Sq. mm)	377.29 (Sq. mm)	468.01 (Sq. mm)	392.22 (Sq. mm)	267.38 (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	5-20í 1 layer(s)	3-20í 1 layer(s)	2-20í 1 layer(s)	3-20í 1 layer(s)	5-20í 1 layer(s)
BOTTOM REINF.	4-10í 1 layer(s)	5-10í 1 layer(s)	6-10í 1 layer(s)	5-10í 1 layer(s)	4-10í 1 layer(s)
SHEAR REINF.	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c

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SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM START SUPPORT
VY = 124.41 MX = -0.06 LD= 19
Provide 2 Legged 8í @ 150 mm c/c

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM END SUPPORT
VY = -126.23 MX = -0.11 LD= 18
Provide 2 Legged 8í @ 150 mm c/c

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B E A M N O. 1058 D E S I G N R E S U L T S

M30 Fe500 (Main) Fe415 (Sec.)

LENGTH: 6000.0 mm SIZE: 350.0 mm X 500.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	1987.77 (Sq. mm)	314.83 (Sq. mm)	0.00 (Sq. mm)	387.93 (Sq. mm)	2101.69 (Sq. mm)
BOTTOM REINF.	323.78 (Sq. mm)	518.16 (Sq. mm)	740.16 (Sq. mm)	542.25 (Sq. mm)	330.84 (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	7-20í 1 layer(s)	3-20í 1 layer(s)	2-20í 1 layer(s)	3-20í 1 layer(s)	7-20í 1 layer(s)
BOTTOM REINF.	5-10í 1 layer(s)	7-10í 1 layer(s)	10-10í 2 layer(s)	7-10í 1 layer(s)	5-10í 1 layer(s)
SHEAR REINF.	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c

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SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 740.0 mm AWAY FROM START SUPPORT
VY = 201.28 MX = -0.08 LD= 19

Provide 2 Legged 8í @ 150 mm c/c

SHEAR DESIGN RESULTS AT 740.0 mm AWAY FROM END SUPPORT
VY = -205.88 MX = -0.15 LD= 18
Provide 2 Legged 8í @ 150 mm c/c

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B E A M N O. 1059 D E S I G N R E S U L T S

M30 Fe500 (Main) Fe415 (Sec.)

LENGTH: 6000.0 mm SIZE: 350.0 mm X 500.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	2010.44 (Sq. mm)	329.57 (Sq. mm)	0.00 (Sq. mm)	405.36 (Sq. mm)	2128.86 (Sq. mm)
BOTTOM REINF.	355.27 (Sq. mm)	530.79 (Sq. mm)	739.22 (Sq. mm)	559.78 (Sq. mm)	362.98 (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	7-20í 1 layer(s)	3-20í 1 layer(s)	2-20í 1 layer(s)	3-20í 1 layer(s)	7-20í 1 layer(s)
BOTTOM REINF.	5-10í 1 layer(s)	7-10í 1 layer(s)	10-10í 2 layer(s)	8-10í 1 layer(s)	5-10í 1 layer(s)
SHEAR REINF.	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c	2 legged 8í @ 180 mm c/c

SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 740.0 mm AWAY FROM START SUPPORT
VY = 202.78 MX = 0.04 LD= 19
Provide 2 Legged 8í @ 150 mm c/c

SHEAR DESIGN RESULTS AT 740.0 mm AWAY FROM END SUPPORT
VY = -207.60 MX = -0.05 LD= 18
Provide 2 Legged 8í @ 150 mm c/c

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B E A M N O. 1060 D E S I G N R E S U L T S

M30 Fe500 (Main) Fe415 (Sec.)

LENGTH: 6000.0 mm SIZE: 300.0 mm X 450.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm

REINF.	(Sq. mm)	(Sq. mm)	(Sq. mm)	(Sq. mm)	(Sq. mm)
BOTTOM REINF.	505.14 (Sq. mm)	365.53 (Sq. mm)	214.20 (Sq. mm)	363.22 (Sq. mm)	527.28 (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	5-16í 1 layer(s)	3-16í 1 layer(s)	2-16í 1 layer(s)	3-16í 1 layer(s)	5-16í 1 layer(s)
BOTTOM REINF.	7-10í 1 layer(s)	5-10í 1 layer(s)	3-10í 1 layer(s)	5-10í 1 layer(s)	7-10í 1 layer(s)
SHEAR REINF.	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c

SHEAR DESIGN RESULTS AT DISTANCE d (EFFECTIVE DEPTH) FROM FACE OF THE SUPPORT

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM START SUPPORT
VY = 64.69 MX = -0.78 LD= 17
Provide 2 Legged 8í @ 150 mm c/c

SHEAR DESIGN RESULTS AT 690.0 mm AWAY FROM END SUPPORT
VY = -59.63 MX = -0.76 LD= 16
Provide 2 Legged 8í @ 150 mm c/c

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B E A M N O. 1061 D E S I G N R E S U L T S

M30 Fe500 (Main) Fe415 (Sec.)

LENGTH: 6000.0 mm SIZE: 300.0 mm X 450.0 mm COVER: 25.0 mm

SUMMARY OF REINF. AREA (Sq.mm)

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	905.37 (Sq. mm)	305.20 (Sq. mm)	0.00 (Sq. mm)	309.65 (Sq. mm)	915.91 (Sq. mm)
BOTTOM REINF.	496.39 (Sq. mm)	351.81 (Sq. mm)	214.20 (Sq. mm)	347.93 (Sq. mm)	487.94 (Sq. mm)

SUMMARY OF PROVIDED REINF. AREA

SECTION	0.0 mm	1500.0 mm	3000.0 mm	4500.0 mm	6000.0 mm
TOP REINF.	3-20í 1 layer(s)	3-20í 1 layer(s)	2-20í 1 layer(s)	3-20í 1 layer(s)	3-20í 1 layer(s)
BOTTOM REINF.	7-10í 1 layer(s)	5-10í 1 layer(s)	3-10í 1 layer(s)	5-10í 1 layer(s)	7-10í 1 layer(s)
SHEAR REINF.	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c	2 legged 8í @ 150 mm c/c

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WORST LOAD CASE: 22
END JOINT: 1930 Puz : 4574.37 Muz : 268.84 Muy : 268.84 IR: 0.91
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C O L U M N N O. 5034 D E S I G N R E S U L T S

M30 Fe500 (Main) Fe415 (Sec.)

LENGTH: 4355.0 mm CROSS SECTION: 550.0 mm X 550.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 11 END JOINT: 1931 SHORT COLUMN

REQD. STEEL AREA : 998.40 Sq.mm.
REQD. CONCRETE AREA: 124799.58 Sq.mm.
MAIN REINFORCEMENT : Provide 12 - 12 dia. (0.45%, 1357.17 Sq.mm.)
(Equally distributed)
TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 190 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

Puz : 4444.67 Muz1 : 330.04 Muy1 : 330.04

INTERACTION RATIO: 0.10 (as per Cl. 39.6, IS456:2000)

SECTION CAPACITY BASED ON REINFORCEMENT PROVIDED (KNS-MET)

WORST LOAD CASE: 22
END JOINT: 1932 Puz : 4574.37 Muz : 251.25 Muy : 251.25 IR: 0.86
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C O L U M N N O. 5035 D E S I G N R E S U L T S

M30 Fe500 (Main) Fe415 (Sec.)

LENGTH: 4355.0 mm CROSS SECTION: 550.0 mm X 550.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 22 END JOINT: 1933 SHORT COLUMN

REQD. STEEL AREA : 1037.63 Sq.mm.
REQD. CONCRETE AREA: 129703.84 Sq.mm.
MAIN REINFORCEMENT : Provide 12 - 12 dia. (0.45%, 1357.17 Sq.mm.)
(Equally distributed)
TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 190 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

Puz : 4458.85 Muz1 : 203.73 Muy1 : 203.73

INTERACTION RATIO: 0.99 (as per Cl. 39.6, IS456:2000)

SECTION CAPACITY BASED ON REINFORCEMENT PROVIDED (KNS-MET)

WORST LOAD CASE: 22
END JOINT: 1933 Puz : 4574.37 Muz : 234.58 Muy : 234.58 IR: 0.86
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C O L U M N N O. 5036 D E S I G N R E S U L T S

M30 Fe500 (Main) Fe415 (Sec.)

LENGTH: 4355.0 mm CROSS SECTION: 550.0 mm X 550.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 22 END JOINT: 1934 SHORT COLUMN

REQD. STEEL AREA : 898.04 Sq.mm.
REQD. CONCRETE AREA: 112255.41 Sq.mm.
MAIN REINFORCEMENT : Provide 8 - 12 dia. (0.30%, 904.78 Sq.mm.)
(Equally distributed)
TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 190 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

Puz : 4408.39 Muz1 : 167.76 Muy1 : 167.76

INTERACTION RATIO: 1.00 (as per Cl. 39.6, IS456:2000)

SECTION CAPACITY BASED ON REINFORCEMENT PROVIDED (KNS-MET)

WORST LOAD CASE: 22
END JOINT: 1934 Puz : 4410.83 Muz : 169.22 Muy : 169.22 IR: 0.99
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C O L U M N N O. 5037 D E S I G N R E S U L T S

M30 Fe500 (Main) Fe415 (Sec.)

LENGTH: 4355.0 mm CROSS SECTION: 550.0 mm X 550.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 22 END JOINT: 1935 SHORT COLUMN

REQD. STEEL AREA : 807.25 Sq.mm.
REQD. CONCRETE AREA: 100906.06 Sq.mm.
MAIN REINFORCEMENT : Provide 8 - 12 dia. (0.30%, 904.78 Sq.mm.)
(Equally distributed)
TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 190 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

Puz : 4375.57 Muz1 : 126.78 Muy1 : 126.78

INTERACTION RATIO: 0.96 (as per Cl. 39.6, IS456:2000)

SECTION CAPACITY BASED ON REINFORCEMENT PROVIDED (KNS-MET)

WORST LOAD CASE: 22
END JOINT: 1935 Puz : 4410.83 Muz : 136.17 Muy : 136.17 IR: 0.90
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C O L U M N N O. 5046 D E S I G N R E S U L T S

M30 Fe500 (Main) Fe415 (Sec.)

LENGTH: 4355.0 mm CROSS SECTION: 550.0 mm X 550.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 23 END JOINT: 1940 SHORT COLUMN

REQD. STEEL AREA : 1811.72 Sq.mm.
REQD. CONCRETE AREA: 226464.50 Sq.mm.
MAIN REINFORCEMENT : Provide 20 - 12 dia. (0.75%, 2261.95 Sq.mm.)

(Equally distributed)
TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 190 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

Puz : 4738.69 Muz1 : 253.54 Muy1 : 253.54

INTERACTION RATIO: 0.99 (as per Cl. 39.6, IS456:2000)

SECTION CAPACITY BASED ON REINFORCEMENT PROVIDED (KNS-MET)

WORST LOAD CASE: 23
END JOINT: 1940 Puz : 4901.44 Muz : 292.90 Muy : 292.90 IR: 0.86
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C O L U M N N O. 5047 D E S I G N R E S U L T S

M30 Fe500 (Main) Fe415 (Sec.)

LENGTH: 4355.0 mm CROSS SECTION: 550.0 mm X 550.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 23 END JOINT: 1941 SHORT COLUMN

REQD. STEEL AREA : 1330.72 Sq.mm.
REQD. CONCRETE AREA: 166340.52 Sq.mm.
MAIN REINFORCEMENT : Provide 12 - 12 dia. (0.45%, 1357.17 Sq.mm.)
(Equally distributed)
TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 190 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

Puz : 4564.81 Muz1 : 204.37 Muy1 : 204.37

INTERACTION RATIO: 0.99 (as per Cl. 39.6, IS456:2000)

SECTION CAPACITY BASED ON REINFORCEMENT PROVIDED (KNS-MET)

WORST LOAD CASE: 23
END JOINT: 1941 Puz : 4574.37 Muz : 208.67 Muy : 208.67 IR: 0.97
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C O L U M N N O. 5048 D E S I G N R E S U L T S

M30 Fe500 (Main) Fe415 (Sec.)

LENGTH: 4355.0 mm CROSS SECTION: 550.0 mm X 550.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 21 END JOINT: 1943 SHORT COLUMN

REQD. STEEL AREA : 1146.64 Sq.mm.
REQD. CONCRETE AREA: 143329.83 Sq.mm.
MAIN REINFORCEMENT : Provide 12 - 12 dia. (0.45%, 1357.17 Sq.mm.)
(Equally distributed)
TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 190 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

Puz : 4498.26 Muz1 : 223.23 Muy1 : 223.23

INTERACTION RATIO: 1.00 (as per Cl. 39.6, IS456:2000)

WORST LOAD CASE: 21
END JOINT: 1943 Puz : 4574.37 Muz : 243.97 Muy : 243.97 IR: 0.91
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C O L U M N N O. 5049 D E S I G N R E S U L T S

M30 Fe500 (Main) Fe415 (Sec.)

LENGTH: 4355.0 mm CROSS SECTION: 550.0 mm X 550.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 21 END JOINT: 1944 SHORT COLUMN

REQD. STEEL AREA : 1338.32 Sq.mm.
REQD. CONCRETE AREA: 167290.31 Sq.mm.
MAIN REINFORCEMENT : Provide 12 - 12 dia. (0.45%, 1357.17 Sq.mm.)
(Equally distributed)
TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 190 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

Puz : 4567.55 Muz1 : 217.51 Muy1 : 217.51

INTERACTION RATIO: 0.98 (as per Cl. 39.6, IS456:2000)

SECTION CAPACITY BASED ON REINFORCEMENT PROVIDED (KNS-MET)

WORST LOAD CASE: 21
END JOINT: 1944 Puz : 4574.37 Muz : 221.43 Muy : 221.43 IR: 0.96
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C O L U M N N O. 5050 D E S I G N R E S U L T S

M30 Fe500 (Main) Fe415 (Sec.)

LENGTH: 4355.0 mm CROSS SECTION: 550.0 mm X 550.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 21 END JOINT: 1945 SHORT COLUMN

REQD. STEEL AREA : 1294.92 Sq.mm.
REQD. CONCRETE AREA: 161865.59 Sq.mm.
MAIN REINFORCEMENT : Provide 12 - 12 dia. (0.45%, 1357.17 Sq.mm.)
(Equally distributed)
TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 190 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

Puz : 4551.87 Muz1 : 188.26 Muy1 : 188.26

INTERACTION RATIO: 0.98 (as per Cl. 39.6, IS456:2000)

SECTION CAPACITY BASED ON REINFORCEMENT PROVIDED (KNS-MET)

WORST LOAD CASE: 21
END JOINT: 1945 Puz : 4574.37 Muz : 195.01 Muy : 195.01 IR: 0.95
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C O L U M N N O. 5052 D E S I G N R E S U L T S

M30 Fe500 (Main) Fe415 (Sec.)

LENGTH: 4355.0 mm CROSS SECTION: 550.0 mm X 550.0 mm COVER: 40.0 mm

** GUIDING LOAD CASE: 17 END JOINT: 1946 SHORT COLUMN

REQD. STEEL AREA : 1568.12 Sq.mm.
REQD. CONCRETE AREA: 196015.11 Sq.mm.
MAIN REINFORCEMENT : Provide 8 - 16 dia. (0.53%, 1608.50 Sq.mm.)
(Equally distributed)
TIE REINFORCEMENT : Provide 8 mm dia. rectangular ties @ 255 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)

Puz : 4650.63 Muz1 : 198.90 Muy1 : 198.90

INTERACTION RATIO: 0.99 (as per Cl. 39.6, IS456:2000)

SECTION CAPACITY BASED ON REINFORCEMENT PROVIDED (KNS-MET)

WORST LOAD CASE: 17
END JOINT: 1946 Puz : 4665.22 Muz : 203.48 Muy : 203.48 IR: 0.97
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**********END OF COLUMN DESIGN RESULTS**********

2895. CONCRETE TAKE
2896. END CONCRETE DESIGN

********** CONCRETE TAKE OFF **********
(FOR BEAMS, COLUMNS AND PLATES DESIGNED ABOVE)

NOTE: CONCRETE QUANTITY REPRESENTS VOLUME OF CONCRETE IN BEAMS, COLUMNS, AND PLATES DESIGNED ABOVE.
REINFORCING STEEL QUANTITY REPRESENTS REINFORCING STEEL IN BEAMS AND COLUMNS DESIGNED ABOVE.
REINFORCING STEEL IN PLATES IS NOT INCLUDED IN THE REPORTED QUANTITY.

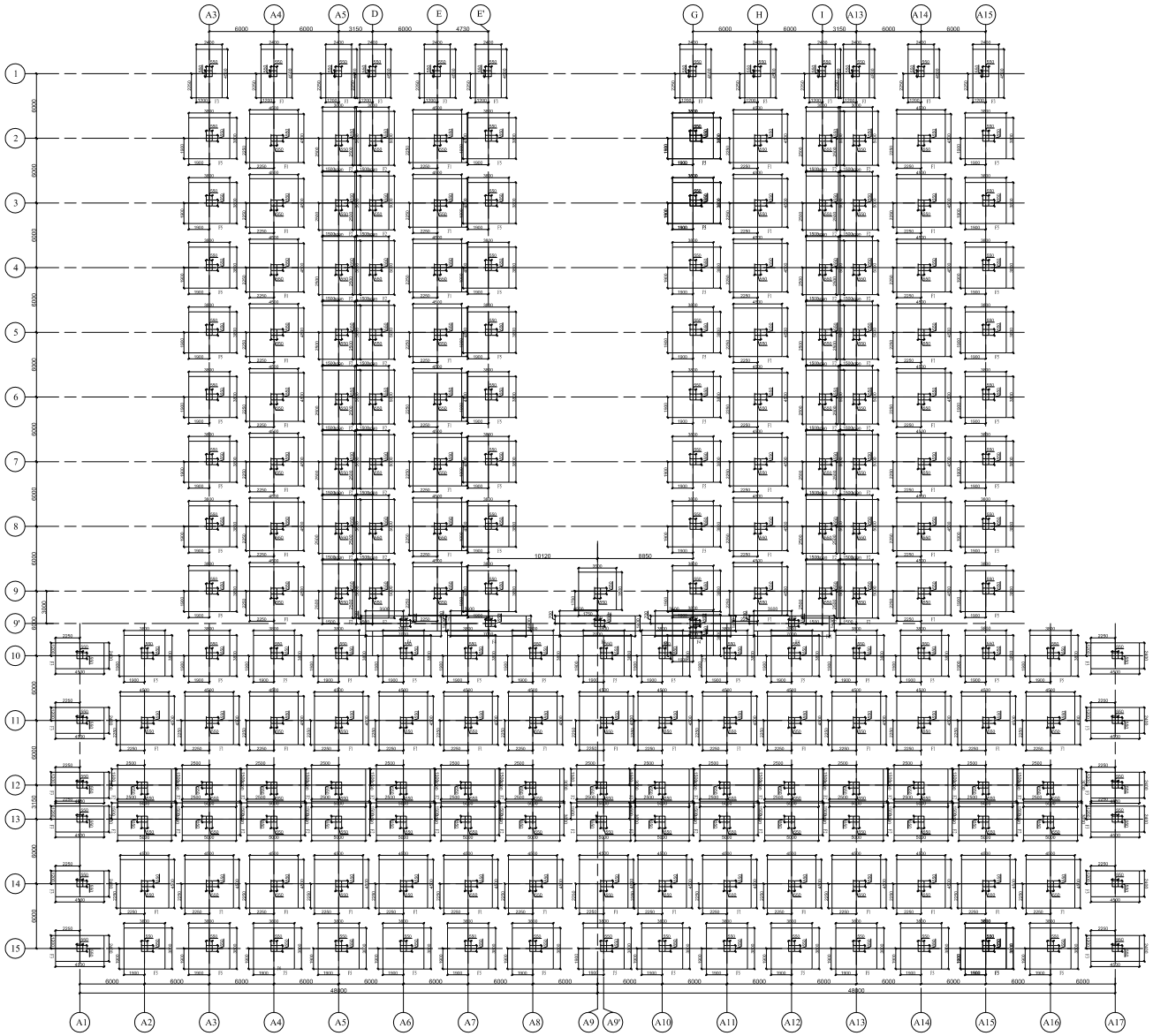
TOTAL VOLUME OF CONCRETE = 3822.8 CU.METER

BAR DIA (in mm)	WEIGHT (in New)
8	650088
10	440503
12	752832
16	291348
20	478801
25	107878
*** TOTAL=	2721450

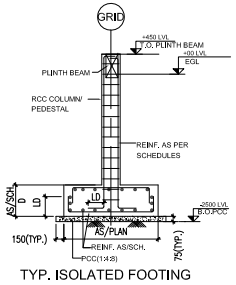
2897. FINISH

********** END OF THE STAAD.Pro RUN **********

DRAWINGS



FOUNDATION LAYOUT PLAN



TYP. ISOLATED FOOTING

SCHEDULE OF FOOTING

SL. NO.	FTG. MKD.	GRADE OF CONCRETE	FOOTING SIZE		DEPTH	REIN. BOTTOM LAYER	
			L	B	D	ALONG-L	ALONG-B
1	F1	M30	4500	4500	1500	T20@175c/c	T20@175c/c
2	F2	M30	5000	3000	1600	T20@160c/c	T20@160c/c
3	F3	M30	4500	2400	1400	T20@185c/c	T20@185c/c
4	F4	M30	7000	1400	2300	T25@175c/c	T25@175c/c
5	F5	M30	3800	3800	1225	T16@140c/c	T16@140c/c
6	F6	M30	3500	3500	1000	T20@200c/c	T20@200c/c

GENERAL NOTES:-

1. CONCRETE MIX
   a) FOOTING : M30
   b) COLUMN : M30
2. COVER
   a) FOOTING : 50MM
   b) COLUMN : 40MM
3. REINFORCEMENT : REINF. STEEL SHALL BE TMT BARS OF GRADE Fe500 CONFIRMING TO IS 1786-2008
4. GROSS BEARING CAPACITY = 30.0 T/M^2 AT 2.50M BELOW EXISTING GROUND LVL.

Rev.	Date	Description

PROJECT TITLE

HOSPITAL BLOCK

DRAWING TITLE

FOUNDATION LAYOUT PLAN & DETAILS

Checked by	Approved by	First Issue Date	Drawn by
Dwg. No. HB-1		Sheet 1 of 1	Rev. R0

UNIT IX

ESTIMATION AND COSTING OF GIRDER SLAB SYSTEM

UNIT-IX

ESTIMATION AND COSTING OF GIRDER SLAB SYSTEM

Steel Structure Tonnage for Hospital Building						
S. no	Floor	Total tonnage (MT)	Connection (MT)	Total Wt. (MT)	Area/floor (Sq.m)	Wt in kg/sqm
1	1st	181.99	32.76	214.75	5525	38.87
2	2nd	180.61	32.51	213.12	5525	38.57
3	3rd	176.02	31.68	207.70	5525	37.59
4	4th	165.03	29.71	194.74	5525	35.25
5	5th	146.04	26.29	172.33	5525	31.19
6	6th	147.64	26.58	174.22	5525	31.53
TOTAL		**997.33 MT**	**179.53 MT**	**1177 MT**	**33150 SQ.M**	**35.32 Kg per sq.m or 3.30 kg per sq.ft**

Sub Structure Qty for Hospital Building						
Sr.no	FTG. MKD.	Concrete Qty in M3	Reinforcement Qty in MT	Nos of FTG	Total qty. of Concrete In m3	Total qty. of Reinforcement In MT
1	F1	1.05	0.0504	8	8.40	0.4032
2	F2	1.35	0.0920	8	8.40	0.736
3	F3	1.23	0.0680	10	12.3	0.68
4	F4	6.5	0.182	32	208	5.824
5	F5	2.2	0.174	34	75.0	5.910
6	F6	1.95	0.154	56	110	8.624
7	F7	2.58	0.162	26	67.0	4.212
8	F8	2.65	0.179	2	5.30	0.358

9	F9	0.98	0.0622	8	8.00	0.500
10	F10	1.42	0.0960	16	23.0	1.536
11	F11	1.02	0.060	4	4.00	0.240
12	F12	0.95	0.056	4	3.80	0.224
13	F13	1.08	0.086	2	2.16	0.172
14	F14	2.45	0.158	8	20.0	1.264
TOTAL QTY. OF CONCRETE AND REINFORCEMENT					**556 m3**	**31 MT**

COSTING SHEET OF GIRDER SLAB SYSTEM

PRICE FOR SUPPLY OF GIRDER SLAB SYSTEM					
SN	**Item Description**	**Unit**	**Quantity**	**Basic Rate Per Unit Rs.**	**Amount in Rs.**
1	**Supply of PEB** components parts, with following considerations: 1. B/U, C/F 2. Transportation 3.Two coat Epoxy primer required in columns & beams 4.Two coat of Fire proof paint	MT	1177	65000	76505000
2	Accessories				
	Precast Hollow core slab	Sq.m	33150	2000	66300000
	Concrete	Cu.m	556	7000	3892000
	Reinforcement	MT	31	65000	2015000
		Sq.m	0	0	0
		Nos	0	0	0
		Sq.m	0	0	0
		Rmt	0	0	0
		Sq.m	0	0	0
	Basic Accessories Cost				**72207000**
		Basic Total Amount For Supply incuding Accessories			148712000
	GST @ 18% on Basic Cost				26768160
	TOTAL amount of Supply incuding GST @ 18%				**175480160**

PRICE FOR ERECTION					
SN	*Item Description*	*Unit*	*Quantity*	*Basic Rate Per Unit Rs.*	*Amount in Rs.Crore*
1	**ERECTION OF PEB BUILDING**	MT	1177	10000	11770000
	Service Tax @ 18% on Basic Cost of erection				2118600
TOTAL PRICE OF ERECTION INCLUDING SERVICE TAX					**13888600**
	TOTAL PRICE FOR SUPPLY + ERECTION INCUDING GST				**189368760**
	Per sq.ft price in Rs. (Total Area 33150 sq.m)				**531**

UNIT X

ESTIMATION AND COSTING OF RCC CONVENTIONAL STRUCTURE

Estimation and Costing for Conventional RCC Structure (Substructure + Superstructure)										
SL. No.	**Description**	**UOM**	**QTY**	**Unit rate**	**Total cost**	**Labour**	**T/P**	**Net cost**	**GST @ 12% on total Value as WCT**	**Gross cost**
1	RCC in column	CUM	1770.6	7000	1E+07	1475.4	105.95	INR 15,193,835.16	INR 1,823,260.22	INR 17,017,095.38
2	RCC in beams	CUM	2112.2	7000	1E+07	1950.1	117.45	INR 19,152,656.41	INR 2,298,318.77	INR 21,450,975.17
3	Shuttering in column	SQM	14027	453.34	6E+06	considered		INR 6,358,811.59	INR 763,057.39	INR 7,121,868.98
4	Shuttering in beam	SQM	7790.2	325	3E+06	considered		INR 2,531,803.95	INR 303,816.47	INR 2,835,620.42
5	RCC in slab	CUM	4807	7000	3E+07	1950.1	117.45	INR 43,587,683.77	INR 5,230,522.05	INR 48,818,205.83
6	Steel in slab	MT	569.73	65000	4E+07	3500	100	INR 39,083,368.34	INR 4,690,004.20	INR 43,773,372.55
7	Shuttering in slab	SQM	32047	325	1E+07	considered		INR 10,415,217.15	INR 1,249,826.06	INR 11,665,043.21
8	Steel in column and b	MT	277.42	65000	2E+07	3500	100	INR 18,032,033.64	INR 2,163,844.04	INR 20,195,877.68
9	RCC in foundation	CUM	3242.1	7000	2E+07	1475.4	105.95	INR 22,694,563.50	INR 2,723,347.62	INR 25,417,911.12
10	Steel in foundation	MT	141.23	65000	9E+06	3500	100	INR 9,179,902.01	INR 1,101,588.24	INR 10,281,490.25
11	Shuttering in Foundat	SQM	5796	200	1E+06	considered		INR 1,159,192.00	INR 139,103.04	INR 1,298,295.04
	Total cost of Material							**INR 187,389,068**	**INR 22,486,688**	**INR 209,875,756**
	PER SQ.FT COST IN RS.							**Total Area of Floor in sq.m**	**33150**	**INR 588.39**

UNIT XI

REFERENCES

REFERENCE:

Code used:

FOR PRE-FABRICATED STEEL STRUCTURE:

1) AMERICAL INSTITUTE OF STEEL CONSTRUCTION (AISC 1989-ASD)
2) IS800:1984 (WSM)
3) IS800:2007 (LSM)
4) IS875-PART-1 TO 5

FOR PRECAST CONCRETE STRUCTURE:

1) IS1343:1980 Code of Practice for Prestressed Concrete
2) IS 6006 (1983): uncoated stress relieved strand for prestressed concrete
3) IS 10297 (1982): Code of practice for design and construction of floors and roofs using precast reinforced/prestressed concrete ribbed or cored slab unit.
4) IS 14268 (1995): Uncoated stress relieved low relaxation seven-ply strand for prestressed concrete.

FOR FOUNDATION DESIGN AND SUPERSTRUCTURE:

1) * IS 456:2000 : Plain and Reinforced concrete - code of practice
2) * SP 16: 1980 : Design Aids for Reinforced Concrete to IS 456:1978 [CED 2: Cement and Concrete]
3) * IS 1786: 1985: Specification for high strength deformed steel bars and wires for concrete

BOOKS REFER-

DESIGN OF STEEL STRUCTURE:-

1) S.K Duggal
2) L.S Negi
3) S.S Bhavikatti
4) N Krishna Raju

FOR RATE ANALYSIS QUOTATION RECEIVED BY COMPANY:

1) LOYA PRE-ENGINEERED BUILDINGS PVT.LTD, AURANGABAD

2) Technocore Precast Plant & Machinery Services, Hyderabad

SOFTEWARE USED:- STAAD.PRO

UNIT XII

CONCLUSION

CONCLUSION

We have done the comparison of Girder slab system and RCC Conventional structure by doing its Analysis and design on major structural components. Also studied its merits, demerits, factors affecting its overall stability and done its cost analysis per m2.

We found that, Girder slab system can compete with the conventional RCC structure in terms of its structural stability, architectural appearance, and many more things. But as far as its costing and time factor compare to RCC Conventional structure is concerned, so have reached to the conclusion and observe that the Girder slab system is approximate 10% cheaper than conventional RCC structure. But if we see the time frame to complete the project so Girder slabs system required 50% less time and this is the most important factor for client to choose the Girder slab system to start their project in less time. However, Girder slab system is revolutionary structural system for High-rise residential and commercial construction.