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REF. NO.: EIS/QTN/2014-15/30 DATE : December 9th, 2014

To: Dr Hardeep Singh Rai – DEAN (Consultancy) Civil and Structural Engg Consultancy Guru Nanak Dev University, Ludhiana

Dear Sir,

This has ref to our telephonic discussions regarding requirement of CSI softwares namely ETABS , CSI BRIDGE, SAFE and SAP 2000

We would also like to take this opportunity to inform you that we are the sole National Authorized Reseller representing Computers & Structures Inc (CSI) through their India Distributor CSI Engineering Softwares Pvt Ltd for their range of CAE Software's in the domain of Structural & Earthquake Engineering namely, ETABS, CSI Bridge, SAFE, SAP 2000, Preform 3D & CSICOL.

EUROSOFT is a CAD/CAM/CAE consultancy organization, having an installed base of more than 2000 CAD / CAM/CAE software's for various applications.

About Computers and Structures, Inc. (CSI) :

Founded in 1975, Computers and Structures, Inc. (CSI) is recognized globally as the pioneering leader in software tools for structural and earthquake engineering. Software from CSI is used by thousands of engineering firms in over 160 countries for the design of major projects, including the Taipei 101 Tower in Taiwan, One World Trade Center in New York, the 2008 Olympics Birds Nest Stadium in Beijing and the cable-stayed Centenario Bridge over the Panama Canal. CSI's software is backed by more than three decades of research and development, making it the trusted choice of sophisticated design professionals everywhere.

CSI produces five primary software packages: SAP2000, CSiBridge, ETABS, SAFE, and PERFORM-3D.

Each of these programs offers unique capabilities and tools that are tailored to different types of structures and problems, allowing users to find just the right solution for their work. SAP2000 is intended for use on civil structures such as dams, communication towers, stadiums, industrial plants and buildings. CSiBridge offers powerful parametric design of concrete and steel bridges. ETABS has been developed specifically for multi-story commercial and residential building structures, such as office towers, apartments and hospitals. The SAFE System provides an efficient and powerful program for the analysis and design of concrete slabs and foundations, with or without post-tensioning. PERFORM-3D is a highly focused nonlinear tool offering powerful performance based design capabilities.

With its uniquely qualified staff of professional structural engineers, researchers, academicians, and its worldwide involvement in the structural engineering community, CSI has been at the forefront of structural software development for nearly four decades. With CSI products you can be confident that you have the finest structural engineering software available, backed by a company with an unmatched record of innovation, and an unrivaled commitment to meet the ever-evolving needs of the profession.

WORLD'S FINEST STRUCTURAL & EARTHQUAKE ENGINEERING SO'FTWARE

ETABS CJIBRIDGE JAFE PERFORM JOC CJI COL JAP 2000

ETABS :

The innovative and revolutionary new ETABS is the ultimate integrated software package for the structural analysis and design of buildings. Incorporating 40 years of continuous research and development, this latest ETABS offers unmatched 3D object based modeling and visualization tools, blazingly fast linear and nonlinear analytical power, sophisticated and comprehensive design capabilities for a wide-range of materials, and insightful graphic displays, reports, and schematic drawings that allow users to quickly and easily decipher and understand analysis and design results.

From the start of design conception through the production of schematic drawings, ETABS integrates every aspect of the engineering design process. Creation of models has never been easier - intuitive drawing commands allow for the rapid generation of floor and elevation framing. CAD drawings can be converted directly into ETABS models or used as templates onto which ETABS objects may be overlaid. The state-of-the-art SAPFire 64-bit solver allows extremely large and complex models to be rapidly analyzed, and supports nonlinear modeling techniques such as construction sequencing and time effects (e.g., creep and shrinkage).

Design of steel and concrete frames (with automated optimization), composite beams, composite columns, steel joists, and concrete and masonry shear walls is included, as is the capacity check for steel connections and base plates. Models may be realistically rendered, and all results can be shown directly on the structure. Comprehensive and customizable reports are available for all analysis and design output, and schematic construction drawings of framing plans, schedules, details, and cross-sections may be generated for concrete and steel structures.

ETABS provides an unequaled suite of tools for structural engineers designing buildings, whether they are working on one-story industrial structures or the tallest commercial high-rises. Immensely capable, yet easy-touse, has been the hallmark of ETABS since its introduction decades ago, and this latest release continues that tradition by providing engineers with the technologically-advanced, yet intuitive, software they require to be their most productive. For additional information please visit: https://www.csiamerica.com/products/etabs/features CSI Bridge :

Modeling, analysis and design of bridge structures have been integrated into CSiBridge to create the accomplished makes CSiBridge the most versatile and productive software program available on the ultimate in computerized engineering tools. The ease with which all of these tasks can be market today.

Using CSiBridge, engineers can easily define complex bridge geometries, boundary conditions and load cases. The bridge models are defined parametrically, using terms that are familiar to bridge engineers such as layout lines, spans, bearings, abutments, bents, hinges and post-tensioning. The software creates spine, shell or solid object models that update automatically as the bridge definition parameters are changed.

CSiBridge design allows for quick and easy design and retrofitting of steel and concrete bridges. The parametric modeler allows the user to build simple or complex bridge models and to make changes efficiently while maintaining total control over the design process. Lanes and vehicles can be defined quickly and include width effects. Simple and practical Gantt charts are available to simulate modeling of construction sequences and scheduling.

CSiBridge includes an easy to follow wizard that outlines the steps necessary to create a bridge model.

Completely integrated within the CSiBridge design package is the power of the SAPFire® analysis engine, including staged construction, creep and shrinkage analysis, cable tensioning to target forces, camber and shape finding, geometric nonlinearity (P-delta and large displacements), material nonlinearity (superstructure, bearings, substructure and soil supports), buckling and static and dynamic analysis. All of these apply to a single comprehensive model. In addition, AASHTO LRFD design is included with automated load combinations, superstructure design and the latest seismic design.

For additional information please visit : https://www.csiamerica.com/products/csibridge/features

<u>SAFE :</u>

SAFE is the ultimate tool for designing concrete floor and foundation systems. From framing layout all the way through to detail drawing production, SAFE integrates every aspect of the engineering design process in one easy and intuitive environment. SAFE provides unmatched benefits to the engineer with its truly unique combination of power, comprehensive capabilities, and ease-of-use.

Laying out models is quick and efficient with the sophisticated drawing tools, or use one of the import options to bring in data from CAD, spreadsheet, or database programs. Slabs or foundations can be of any shape, and can include edges shaped with circular and spline curves.

Post-tensioning may be included in both slabs and beams to balance a percentage of the self-weight. Suspended slabs can include flat, two-way, waffle, and ribbed framing systems. Models can have columns, braces, walls, and ramps connected from the floors above and below. Walls can be modeled as either straight or curved.

Mats and foundations can include nonlinear uplift from the soil springs, and a nonlinear cracked analysis is available for slabs. Generating pattern surface loads is easily done by SAFE with an automated option. Design strips can be generated by SAFE or drawn in a completely arbitrary manner by the user, with complete control provided for locating and sizing the calculated reinforcement. Finite element design without strips is also available and useful for slabs with complex geometries.

Comprehensive and customizable reports are available for all analysis and design results. Detailed plans, sections, elevations, schedules, and tables may be generated, viewed, and printed from within SAFE or exported to CAD packages.

SAFE provides an immensely capable yet easy-to-use program for structural designers, provideing the only tool necessary for the modeling, analysis, design, and detailing of concrete slab systems and foundations.

For additional information please visit: https://www.csiamerica.com/products/safe/features

PERFORM 3D :

Traditionally, earthquake-resistant design has been strength-based, using linear elastic analysis. Since inelastic behavior is usually allowed for strong earthquakes, this is not entirely rational. Strength-based design considers inelastic behavior only implicitly. Displacement-based (or deformation-based) design considers inelastic behavior explicitly, using nonlinear inelastic analysis. Displacement-based design recognizes that in a strong earthquake, inelastic deformation (or ductility) can be more important than strength. PERFORM-3D allows you to use displacement-based design.

Procedures for displacement-based design using inelastic analysis are specified in ASCE 41, "Seismic Rehabilitation of Existing Buildings". ASCE 41 applies to the retrofit of existing buildings, but the procedures can be applied to the design of new buildings. PERFORM-3D implements the procedures in ASCE 41. However, PERFORM-3D is a general tool for implementing displacement-based design. It is not limited to ASCE 41.

The response of a structure to earthquake ground motion, whether elastic or inelastic, is highly uncertain. Capacity design is a rational way to improve the response of a structure in a strong earthquake, by deliberately controlling its behavior. Capacity design controls the inelastic behavior of a structure, by allowing inelastic behavior only in locations chosen by the designer. In these locations the structural components are designed to be ductile. The rest of the structure remains essentially elastic, and can be less ductile. Controlling the behavior in this way improves reliability, reduces the amount of damage, and can reduce construction costs. PERFORM-3D allows you to apply capacity design principles.

PERFORM-3D has powerful capabilities for inelastic analysis, but it is not intended for general purpose nonlinear analysis. If you have no idea how your structure will behave when it becomes inelastic in a strong earthquake, PERFORM-3D can probably help you to identify the weak points, and hence can guide you in improving the design. However, PERFORM-3D is not intended for "design by analysis", where the engineer expects the analysis to determine exactly how a structure will behave. PERFORM-3D is a powerful tool for implementing displacement-based design and capacity design. It will help you to produce better designs, but it will not do the engineering for vou. For additional information please visit: https://www.csiamerica.com/products/perform-3d/features

SAP 2000 :

The SAP name has been synonymous with state-of-the-art analytical methods since its introduction over 30 years ago. SAP2000 follows in the same tradition featuring a very sophisticated, intuitive and versatile user interface powered by an unmatched analysis engine and design tools for engineers working on transportation, industrial, public works, sports, and other facilities.

From its 3D object based graphical modeling environment to the wide variety of analysis and design options completely integrated across one powerful user interface, SAP2000 has proven to be the most integrated, productive and practical general purpose structural program on the market today. This intuitive interface allows you to create structural models rapidly and intuitively without long learning curve delays. Now you can harness the power of SAP2000 for all of your analysis and design tasks, including small day-to-day problems. Complex Models can be generated and meshed with powerful built in templates. Integrated design code features can automatically generate wind, wave, bridge, and seismic loads with comprehensive automatic steel and concrete design code checks per US, Canadian and international design standards.

Advanced analytical techniques allow for step-by-step large deformation analysis, Eigen and Ritz analyses based on stiffness of nonlinear cases, catenary cable analysis, material nonlinear analysis with fiber hinges, multi-layered nonlinear shell element, buckling analysis, progressive collapse analysis, energy methods for drift control, velocity-dependent dampers, base isolators, support plasticity and nonlinear segmental construction analysis. Nonlinear analyses can be static and/or time history, with options for FNA nonlinear time history dynamic analysis and direct integration.

From a simple small 2D static frame analysis to a large complex 3D nonlinear dynamic analysis, SAP2000 is the easiest, most productive solution for your structural analysis and design needs.

For additional information please visit: https://www.csiamerica.com/products/sap2000/features

CSi COL :

CSiCOL is a comprehensive software package used for the analysis and design of columns. The design of columns of any concrete, reinforced concrete, or composite cross-section can be carried out by the program. CSiCOL provides a 'Quick Design Wizard' tool that guides the users step-by-step, through the whole process of column design. This makes the design process simple, organized and efficient. The design can be carried out in accordance with ACI-318-11, ACI-318-08, ACI 318-05, ACI 318-02, ACI 318-99, BS8110, CSA A-23.3-04, CSA A23.3-94, Eurocode 2-2004 and IS 456-2000 codes.

CSiCOL is capable of handling an unlimited number of load combinations both for sway and non-sway conditions. The design actions may be specified directly or may be computed by the program using the moment magnification method. The design and analysis take into account the slenderness effects. Sway or non-sway condition checks may also be performed by the program as specified by the selected design code. Moreover, CSiCOL is capable of determining the Effective Length Factor based on the framing and end conditions of the column.

CSiCOL output includes the capacity interaction surface, load-moment curves, moment-moment curves, moment-curvature curves for various failure criteria, combined axial-flexural elastic stress contours, rebar stresses, cracked section stresses, load point location, capacity vector, neutral axis depth and orientation, etc. Reports may be created as part of the output for the analysis and design process. The reports may be customized by adding information and graphics of your choice.

CSiCOL provides several predefined parametric shapes, including a variety of solids, hollow, and flanged shapes, in addition to a large collection of Standard Steel Database Shapes, which can be used in composite columns. It is easy to merge, edit and draw Shapes to suit geometry requirements and create complex cross-sections. The program provides tools for the alignment, stacking, and placement of these Shapes. Rebars can be placed anywhere (corner, perimeter, sides, circle, irregular, etc.) in the cross-section using several addition and placement tools. Standard (ASTM, Metric, and Imperial) as well as user defined rebar sets may be used. For additional information please visit: https://www.csiamerica.com/products/csicol/features

	No of		Tax			
Product	Lic	Price	(12.36%)	Sub Total	5% VAT	Total
ETABS Ultimate - Network License10 user	10	500000	61800	561800	28090	589890
SUM Subscription for ETABS 1 year - for 10 users	10	175000	21630	196630	0	196630
Total		675000				786520

	No of		Tax			
Product	Lic	Price	(12.36%)	Sub Total	5% VAT	Total
SAP 2000 Ultimate - Network License10 user	10	550000	67980	617980	30899	648879
SUM Subscription for SAP 2000 for 1 year - for 10 users	10	180000	22248	202248	0	202248
Total		730000				851127

	No of		Tax			
Product	Lic	Price	(12.36%)	Sub Total	5% VAT	Total
SAFE P/T - Network License10 user	10	450000	55620	505620	25281	530901
SUM Subscription for SAFE for 1 year - for 10 users	10	170000	21012	191012	0	191012
Total		620000				721913

	No of		Tax			
Product	Lic	Price	(12.36%)	Sub Total	5% VAT	Total
CSI Bridge Advanced with Rating - Network License -10						
user	10	600000	74160	674160	33708	707868
SUM Subscription for Bridge for 1 year - for 10 users	10	190000	23484	213484	0	213484
Total		790000				921352

Product	No of Lic	Price	Tax (12.36%)	Sub Total	5% VAT	Total
CSICol - Network License10 user	10	400000	49440	449440	22472	471912
SUM Subscription CSiCOL for 1 year - for 10 users	10	150000	18540	168540	0	168540
Total		550000				640452

Notes:

- 1. There will be 2 days training per software purchased for faculty and students. There would be no additional charge. The schedule of the training will be as per mutual consent. However software payments are not to be withheld because of training/ installation completion certificates.
- 2. Institutes are entitled email / web support/ access to Knowledgebase and online content along with free updates within the supplied version of the software as per the company guidelines.
- 3. SUM subscription is the additonal software maintenance which enables you to get upgrades to new versions within 1yr
- 4. All the softwares include the Indian standards also.

TERMS & CONDITIONS

1. Prices:

3.

- 1. Service tax on subscription & training component shall be @ 12.36%
- 2. Any other taxes applicable at the time of delivery because of change of govt policy shall be extra and payable at actuals.
- 3. There will be separate invoice for the product and the subscription component as the tax structures are different.
- 4. In case of Double taxation on Paper Lic no TDS deduction is applicable as per govt rules. The documentation and clause applicable shall be enclosed with the invoice.
- 2. Delivery : 1. Delivery shall be within 4 weeks from the date of receipt of confirmed order in all respects along with advance
 - Payment terms : 1. Payment : Payment 100% Advance. .
 - 2. Order once placed cannot be cancelled.
 - 3. Payments to be made by Cheque / DD, "PAYABLE AT PAR", in favour of Eurosoft Info Solutions, Payable at Ahmedabad.
 - 4. If the payment is made by DD then all DD commissions shall be to

purchaser account.

- 5. In case of non availability of hardware/infrastructure, payments shall not be withheld by purchaser.
- Validity:
 Prices mentioned herewith are valid till Dec 25th , 2014 for your acceptance and placement of order, thereafter subject to our written confirmation.
- 6. Others :
 - 1. We reserve the right to correct all typographical / clerical errors.
 - 2. The terms & conditions of the license agreement accompanying the software on CD are applicable in totality.
 - 3. All drivers for peripherals / hardware to be connected to the computer for the respective operating system shall have to be arranged by the user. We do not take responsibility of connecting peripherals like Digitizer, printers, plotters, network connectivity, operating system etc.
 - 4. The recommended operating system is Win 7 64 bit Professional . If there is any other operating system pl discuss.
 - 5. For all upgrades and new versions you have to enter into Subscrpiption / Maintenance Contract for a minimum period of 1 year
 - 6. The recommended hardware is the latest i7 or higher with at least 4GB RAM or higher with 1GB Graphics card for better performance.
 - 7. The Training Charges are extra based on requirement.

Thanking you and looking forward to your valued order. Yours sincerely, For **EUROSOFT INFO SOLUTIONS**,

NARINDER S. NARULA (M: 09376116363) ENGINEERING SOFTWARE PVT. LTD.

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TO WHOMSOEVER IT MAY CONCERN

We wish to inform you that CSI Engineering Software Pvt. Ltd. is the sole representative and distributor of CSI Products SAP2000, ETABS, CSIBridge, SAFE & CSICOL in India.

Eurosoft Info Solution having office at 29-A Teen Murti Bungalows, Near Amul Auda Garden, Surdhara Circle, Thaltej, Ahemdabad – 380054 is our authorized channel partner / reseller to sell CSI Products SAP2000, ETABS, CSIBridge, SAFE, & CSICOL in educational institutes in India.

For CSI Engineering Software Pvt. Ltd.

PERFORM D' CJi COL

we Director

Dt:02.12.2014

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