

**THE UNIVERSITY OF TEXAS SYSTEM
OFFICE OF GENERAL COUNSEL**

CONSTRUCTION CONTRACTING GUIDELINES

Revised January 2016

The *Rules and Regulations* of the Board of Regents of The University of Texas System for the Government of The University of Texas System require that all agreements related to the construction, repair and/or rehabilitation of improvements to real property throughout the UT System, including contracts with architects and engineers, be written on standard forms approved by the Office of General Counsel and comply with guidelines issued by the Office of General Counsel. Following are the Office of General Counsel's Construction Contracting Guidelines.

In these Guidelines, the term "University" is used to designate The University of Texas System or the particular UT System Institution that is managing a construction project.

I. GENERAL REQUIREMENTS AND PROCEDURES

A. Statutory and Regulatory Limitations.

NOTE: As of September 1, 2005, all state employees who make decisions on behalf of a state agency or recommendations regarding:

- the contract terms or conditions of, preparation of a solicitation for, or who is to be awarded a contract valued at \$1 million or more; or
- evaluation of a bid or proposal;

must fill out a State Agency Uniform Nepotism Disclosure Form regarding personal and financial interests that they may have in the project and submit it to the administrative head of the state agency for every solicitation in which they participate.¹

ADDITIONAL NOTE: As of January 1, 2016, before a state agency can enter into any contract or contract renewal with a value of \$1 million or more, the *Vendor* must submit electronically a "Certificate of Interested Parties (Form 1296)" to the Texas Ethics Commission and receive a certification of filing from the Commission. A copy of Form 1295 including the certification must be printed, signed by the Vendor under penalty of perjury that it is true, notarized and then provided to the state agency before the agency executes the contract with the Vendor.²

There are many state and federal laws and regulations that impact construction projects. However, the principles adopted in these Guidelines are primarily derived from the statutes and rules listed below and case law and Attorney General opinions interpreting them.

¹ Gov't Code § 2262.004

² Gov't Code § 2258.908

1. State Statutes

As state agencies, our authority to act comes directly from the Texas Legislature and our actions are limited to the powers delegated to us by the Texas Legislature. Following is a partial list of the principal state laws that govern construction contracting for higher education:

- Government Code §2254—The Professional Services Procurement Act
- Education Code §§51.776-51.784—Construction and Repair of Permanent Improvements
 - In particular:
 - §51.778—Competitive Sealed Bidding
 - §51.780—Design-Build
 - §51.782—Construction Manager-At-Risk
 - §51.783—Competitive Sealed Proposals
 - §51.784—Job Order Contracts
- Education Code §51.9335—Best Value Procurement of Goods and Services
- Government Code Ch. 2253—Payment and Performance Bonds
- Government Code §§2161.251-.253—HUB Subcontracting Plans
- ~~Government Code §2166.302—State Uniform General Conditions~~ Exempted by SB 5, 82nd Regular Session
- Government Code Ch. 2260—Resolution of Contract Claims against the State

2. Board of Regents Rules and Regulations

In addition, the Board of Regents of The University of Texas System has issued its own *Rules and Regulations* governing delegated authority in general and specific processes and procedures for construction, rehabilitation and repair of permanent improvements. The *Rules and Regulations* most relevant to construction contracting are as follows:

- Series 10501—Delegation to Act on Behalf of the Board
- Series 80302—Building Committees (A/E and Contractor Selection)
- Series 80402—Major Construction and Repair and Rehabilitation Projects
- Series 80403—Minor Construction and Repair and Rehabilitation Projects (**See Note**)
- Series 80404—Institutional Management of Major Construction and Repair and Rehabilitation Projects

Note: Minor Construction and Repair and Rehabilitation Projects are defined in Series 80403 of the *Rules and Regulations* as “**New building construction and road, paving, and repair and rehabilitation projects of less than \$10 million.**” The *Rules and Regulations* do not contemplate and do not authorize any Minor Project to exceed these limitations for any reason at any time during the progress of the Project (e.g. because of change orders, added scope or additional costs). Projects that reasonably could exceed these limitations should be considered Major Projects, be included on the U.T. System Capital Improvement Program and institutional management of the Project must be approved by the Board of Regents or the Chancellor.

B. Construction Contract Forms and OGC Review.

1. Form Agreements.

By Board of Regents *Rules and Regulations*, all construction related agreements must be written on forms approved by OGC. Pre-approved forms for various professional agreements and for the most commonly used construction delivery methods are available from the OGC Construction Law website, <http://www.utsystem.edu/ogc/constlaw.htm>. The forms are updated regularly and revised every few years. You must use the most current version of the approved form agreement to comply with the *Rules and Regulations*.

Specific guidelines for using the various types of form agreements are discussed in the relevant sections, below.

2. Uniform General and Supplementary Conditions

As of September 1, 2013, the University has been exempted from using the uniform general conditions promulgated by the Texas Facilities Commission. Tex. Gov't Code § 2166.302.

The Office of General Counsel has issued the "2013 Uniform General Conditions for University of Texas System Building Construction Contracts." (UGC's) The UGC's provide many of the critical legal terms and procedural requirements that govern the relationship between the University and general contractors. The UGC's must be incorporated into all construction projects.

Component institutions may adopt special general conditions that address conditions and practices unique to the institution and/or a particular project. Such special conditions may not alter basic legal responsibilities and obligations, liabilities and risk, standard of care, insurance and bonding, or other items with legal implications without prior OGC approval.

3. OGC Review

The Office of General Counsel is available to discuss contract issues and/or review proposed agreements for legal form at any time. The primary contact for construction related issues is Edwin Smith. His direct phone line is 512.499.4491 and his email is esmith@utsystem.edu.

a. Construction Contract Checklists

There are two checklists on the Construction Law website: the OGC Checklist for Professional Services Agreements and the OGC Checklist for Construction Agreements. The appropriate checklist must be completed by the contracting representative before execution of any construction related agreement. The completed checklist must be included with to the agreement submitted to OGC for review and approval.

b. Unaltered Form Agreements

Agreements executed on pre-approved OGC forms without substantive legal changes do not necessarily require additional OGC approval unless the agreement must be approved by Board of

Regents. Modifications to business terms do not require OGC approval. However, any exceptions noted on the appropriate checklist must be reviewed by OGC.

c. Modification of Legal Terms on Form Agreements

All proposed changes to the legal terms of a form agreement must be approved in advance by OGC. The proposed changes should be submitted to OGC in writing for review and comment before being incorporated into the form agreement.

All changes to the legal terms of a form agreement must be shown in the final agreement—deletions indicated by ~~striketroughs~~ and insertions indicated by underlining. Modified final agreements showing all legal changes along with the appropriate checklist must be submitted to OGC for final review and approval before execution by the University.

d. Non-Standard Agreements

Pre-approved form agreements should be used whenever feasible, but some projects will require the use of customized non-standard agreements. All such agreements must be reviewed and approved by OGC before execution by the University.

If a non-standard agreement will be used on a project, the draft of the agreement should be submitted to OGC for review at the earliest stages of contract negotiations. State agencies have both legal limitations and legal requirements that must be incorporated into all contracts. Early incorporation of these changes to non-standard agreements will help avoid last minute delays in execution.

C. Contract Dispute Resolution.

1. Sovereign Immunity

For all contracts executed before September 1, 2015, the University and all state agencies are immune from lawsuits based on breach of construction contract claims. Claims brought against the University based on those agreements are litigated before the State Office of Administrative Hearings (SOAH).³

As of September 1, 2015, the Legislature waived sovereign immunity for claims “for breach of a written contract for engineering, architectural, or construction services or for materials related to engineering, architectural or construction services brought by a party to the written contract, in which the amount in controversy is not less than \$250,000, excluding penalties, costs, expenses, prejudgment interest, and attorney’s fees.”⁴ Going forward contractors, architects, engineers and suppliers can now file lawsuits in state district court for breach of contract claims against the University. Claims for less than \$250,000 are still subject to review by SOAH.

2. Negotiated Settlement of Minor Disputes

It is in the best interest of all parties to a construction project to attempt to resolve minor disputes as they arise. Board of Regents *Rules and Regulations* Series 10501, Sections 2.3.2 authorizes the

³ Gov’t Code Ch. 2260

⁴ Civ. Prac. & Rem. Code § 114.003

University official designated in the contract to enter into construction settlements to the extent that there is funding available in the project. Minor disputes are often settled through an agreed change order. The University official should be reasonable in evaluating and ruling on claims

3. Claims against the University

Construction related contract claims against the University that cannot be resolved during the course of a project should be referred to the Office of General Counsel. Claims based on contracts entered into before September 1, 2015 are subject to the procedures found in Chapter 2260 of the Texas Government Code, Resolution of Certain Contract Claims against the State. Claims for damages of \$250,000 or more that are based on contracts entered into on or after September 1, 2015 will be subject to trial in state district court.

Whether governed by Chapter 2260 or the rules of district court, the parties will almost always agree to a good faith attempt to investigate and negotiate a settlement of the claims without going to trial. Typically this takes the form of a non-binding mediation of the dispute. OGC will represent the University in these procedures. If the funds left in the project are insufficient to pay the claims, the Vice Chancellor and General Counsel, in consultation with the institution president, are authorized to settle claims up to \$1,000,000 that will be paid out of institutional funds. Settlements over \$1,000,000 must be approved by the Board of Regents.

A party whose claim against the University is not resolved through negotiation can refer the claim to SOAH or state district court, as appropriate.

4. Claims by the University.

Construction related contract claims asserted by the University that cannot be resolved during the course of a project should be referred to the Office of General Counsel. These claims are generally resolved through negotiation and settlement, often involving insurance and bonding companies. These claims may also be asserted to offset claims asserted against the University in SOAH proceedings.

Claims by the University that are not resolved through negotiation may be referred to the Office of Attorney General for litigation.

D. HUB Subcontracting Requirements

For every project with an expected value of \$100,000 or more, the University must determine whether there will be subcontracting opportunities under the contract before soliciting bids or proposals for the work. If the University determines that subcontracting opportunities are probable, the bids or proposals must include an historically underutilized business (HUB) subcontracting plan that complies with State Building and Purchasing Commission HUB rules and with UT System HUB requirements.

No bid or proposal can be considered if it does not include a required HUB subcontracting plan.

II. REQUIREMENTS AND PROCEDURES FOR SPECIFIC AGREEMENTS

A. Professional Service Agreements.

1. Qualifications Based Selection

Agreements for architectural, engineering, landscape architectural and land surveying services must be awarded on the basis of demonstrated competence and qualifications. In procuring those services, the University must identify the most highly qualified provider who is willing to provide the services and then attempt to negotiate a contract at a fair and reasonable price. If a satisfactory agreement cannot be reached with the most highly qualified provider, the University can formally end negotiations with that provider and start negotiations with the next most highly qualified provider.

2. Requests for Qualifications

An RFQ for professional services is issued by the University as a means of identifying professionals who are interested in providing services for a particular project. Public notice of an RFQ should be made or the RFQ itself may be published. The RFQ should contain a description of the project, the qualifications that are necessary for the project, and the criteria for evaluation. Because of restrictions imposed on Architects and Engineers by their respective licensing boards, the RFQ cannot request information regarding the professional's proposed fees for the project. A model RFQ for professional services is available from the Construction Law website.

Except for projects designated as being of Special Interest to the Board of Regents, Architects are evaluated and ranked based on their response to the RFQ and, occasionally, interviews by an Architect Selection Advisory Committee appointed by the institution president. In order to avoid the appearance of bias in the selection process, it is important that the weighting assigned to the various selection criteria be established before submitting the RFQ responses to the Selection Committee for evaluation. Utilizing the recommendations of the Committee, the Executive Vice Chancellor for Business Affairs appoints the Architect to the project. Architects for institutionally managed projects are selected in the same manner but are appointed by the institution president.

3. Professional Fee Limitations

In an agenda item dated December 3, 1987, the Board of Regents adopted a fee structure that sets the maximum allowable fee for basic architectural and engineering services on projects of different types and sizes based on a percentage of the construction cost of the project. A/E agreements may contain provisions that adjust the basic services fee based on changes in the project construction cost, but the fee, expressed as a percentage of the construction cost, may not exceed the limits imposed by the Board of Regents.

Basic services are not defined in the agenda item, but should, at a minimum, include the architectural, landscape architectural, structural engineering, mechanical-electrical-plumbing engineering, and civil engineering services that would be provided on a typical project of each type and size.⁵ Fees for additional services, specialty consultants or other services not typically provided on a project are in addition to the fee for basic services and can be included in the scope of work as additional

⁵ The three building classifications identified in the agenda item are: Dormitories, Garages and Warehouses; Classroom, Office and Other Buildings; and Health, Research & Special Education Facilities.

services. The sum of the fee for basic services and the fee for additional services can exceed the Board of Regents fee limitations.

4. Miscellaneous Professional Service Agreements

It is sometimes useful to have A/Es “on call” to provide professional services on projects of limited size and scope. A form agreement for such services is available on the Construction Law website.

However, in order to comply with the legal requirement that A/Es be selected on the basis of demonstrated competence and qualifications, an RFQ for miscellaneous professional services must be narrowly tailored to a particular type of project. For example, an RFQ for “general architectural services” does not provide a meaningful basis for differentiating between the qualifications of the various responders and is not permissible. On the other hand, an RFQ for “architectural design services for the remodeling and repair of laboratory and research facilities” may be acceptable. A separate RFQ might be issued for “architectural design services for the remodeling and repair of classroom and office facilities.”

Just as with job order contracting, use of miscellaneous professional service agreements should be limited to relatively small projects where selection of a project specific Architect or Engineer is impractical or unfeasible.

Because land surveying services are not project specific, land surveyors may be hired for a fixed duration of time to provide services on multiple projects.

5. Direct Appointment of Architects and Engineers

In very rare circumstances it may be obvious that a particular A/E is clearly the most highly qualified provider for the services required on a project without going through the RFQ process. Those circumstances will generally involve the need for highly specialized and unique skills and/or critical knowledge of existing facilities and systems. Under such rare circumstances, it is permissible for an A/E to be awarded a project directly without issuing an RFQ provided that the justification for the direct appointment is documented.

Direct appointment of A/Es is also permissible in emergency situations where it is not feasible to go through and RFQ process but only in circumstances where delay in the project will cause an imminent threat of personal injury or death, or the destruction of property. Other economic considerations or poor planning do not constitute adequate reasons for justifying a direct appointment.

6. Form A/E Agreements

There are three different basic form agreements for A/E services listed on the Construction Law website: Standard Agreement between Owner and A/E; Agreement between Owner and A/E for Projects of Limited Scope; and Agreement between Owner and A/E for Miscellaneous Services. The distinctions between them are discussed below. In addition there is a standard amendment to the Standard Agreement between Owner and A/E for use on projects that will be built using the Construction Manager at Risk delivery method. There is also a standard exhibit for documenting the A/Es HUB subcontracting plan, if required.

The form agreements can be modified by adding project names and other business terms and adjusting scope of services requirements (generally Article 14 issues in the Standard Agreement.) without additional OGC approval. Legal terms may not be modified without OGC approval.

a. Standard Agreement between Owner and A/E

This form agreement is the basic Standard Agreement that should be used on most projects. It requires the delivery of full A/E services, including schematic design, design development and construction document drawings as well as full construction contract administration services.

b. Agreement between Owner and A/E for Projects of Limited Scope

This form agreement can be used on smaller projects where full A/E services are not required. This form requires the University and A/E to specify the scope of services to be provided for the project and all deliverables. Typically this form would be used on relatively less complicated projects where multiple design stages are not necessary and where construction contract administration services are limited. Note, this form agreement is for projects where the A/E has been selected specifically for the project and not for use with miscellaneous services agreements.

c. Agreement between Owner and A/E for Miscellaneous Services

As discussed above, this form agreement is for small projects of a particular type for which it is impractical or unfeasible to go through a standard A/E selection process. The scope of work article should be modified to identify the particular type(s) of projects that the A/E has been selected to provide services for. This agreement requires the University and the A/E to develop a scope of services document for each separate project.

B. Construction Delivery Methods and Agreements

There are six distinct project delivery methods that are authorized by state statute for construction and repair of permanent improvements at higher education facilities. The enabling statutes describe the processes and procedures that must be followed for each particular delivery method and, therefore, the statutes will be reprinted here under their respective headings.

NOTE: Before advertising a project, the University must determine which of the following delivery methods would provide the best value. This determination should be documented on every construction project.

NOTE: In all cases, the University must base its selection of a contractor on the criteria that it publishes in the request for bids, proposals or qualifications. The University must document the basis for its selection and make the evaluations public not later than seven days after the contract is awarded.

1. Competitive Sealed Bidding

Competitive sealed bidding is the traditional method for procuring construction services where the University hires an A/E to prepare the construction documents and then issues a Request for Bids soliciting confidential bids from contractors to perform the work. The University is required to award

the construction contract to the responsible bidder who submits the best price or else not award the contract at all. Under competitive sealed bidding the University cannot consider any factors other than price and cannot negotiate the scope of the project before entering into an agreement.

Prior to September 1, 1977, competitive sealed bidding was the only method available to state agencies for procuring construction services. With the adoption of alternative delivery methods in 1977 and best value procurement in 1999, competitive bidding is now rarely used. The Construction Law website no longer maintains a form Request for Bids for competitive sealed bidding procurement.

The following statute governs competitive bidding procurement of construction services:

Education Code § 51.778. Competitive Bidding on Contracts

(a) Except as otherwise provided by this subchapter, all contracts for the construction or erection of permanent improvements at an institution are void unless made after advertising for bids for the contracts in a manner prescribed by the institution's board, receiving sealed competitive bids, and awarding of the contract to the lowest responsible bidder by the board.

(b) If a contract awarded under sealed competitive bidding is to be recommended for award to other than the lowest bidder, any bidder making a lower bid than the recommended bid shall be notified of the recommendation for award and shall be allowed an opportunity before the award to present evidence to the board or its designated representative as to the responsibility of that bidder.

2. Competitive Sealed Proposals

The Competitive Sealed Proposal (CSP) procurement method is a slight variation on the traditional competitive bidding method. The University still hires the A/E directly and then issues a Request for Proposals soliciting confidential proposals from contractors to perform the work. However, the Request for Proposals will require the contractors to respond to various selection criteria that is important to the University or the project in addition to price. The University then ranks the proposals based on the responses to all of the criteria and identifies the best value proposal. Furthermore, once the University has identified the best value proposal, the University can enter into negotiations with that offeror and make adjustments in the project scope, time and price before entering into a construction agreement.

Although it can be a slightly more complicated process to prepare a RFP with meaningful selection criteria and then to evaluate and rank the proposals based on the criteria, the flexibility that the CSP process provides should make it a better value than the competitive bidding process on almost all construction projects. CSP is appropriate for use on projects of any size and is a much less complicated process to manage during construction as compared to the construction manager-at-risk and the design-build delivery methods.

a. Read the Statute

The following statute governs the use of CSP procurement for construction services. Please read it carefully because it details the procedures that must be followed to select a contractor using the CSP delivery method.

Education Code § 51.783. SELECTING CONTRACTOR FOR CONSTRUCTION SERVICES THROUGH COMPETITIVE SEALED PROPOSALS.

(a) In selecting a contractor for construction, rehabilitation, alteration, or repair services for a facility through competitive sealed proposals, a board shall follow the procedures prescribed by this section.

(b) The board shall select or designate an engineer or architect to prepare construction documents for the project. The selected or designated engineer or architect has full responsibility for complying with Chapter 1001 or 1051, Occupations Code, as applicable. If the engineer or architect is not a full-time employee of the institution, the board shall select the engineer or architect on the basis of demonstrated competence and qualifications as provided by Section 2254.004, Government Code.

(c) The board shall provide or contract for, independently of the contractor, the inspection services, the testing of construction materials engineering, and the verification testing services necessary for acceptance of the facility by the institution. The board shall select those services for which it contracts in accordance with Section 2254.004, Government Code, and shall identify them in the request for proposals.

(d) The board shall prepare a request for competitive sealed proposals that includes construction documents, selection criteria, estimated budget, project scope, schedule, and other information that contractors may require to respond to the request. The board shall state in the request for proposals the selection criteria that will be used in selecting the successful offeror.

(e) The board shall publish notice of the request for proposals in a manner prescribed by the board.

(f) The board shall receive, publicly open, and read aloud the names of the offerors and, if any are required to be stated, all prices stated in each proposal. Within 45 days after the date of opening the proposals the board shall evaluate and rank each proposal submitted in relation to the published selection criteria.

(g) The board shall select the offeror that offers the best value for the institution based on the published selection criteria and on its ranking evaluation. The board shall first attempt to negotiate with the selected offeror a contract. The board and its engineer or architect may discuss with the selected offeror options for a scope or time modification and any price change associated with the modification. If the board is unable to reach a contract with the selected offeror, the board shall, formally and in writing, end negotiations with that offeror and proceed to the next offeror in the order of the selection ranking until a contract is reached or all proposals are rejected.

(h) In determining best value for the institution, the board is not restricted to considering price alone but may consider any other factor stated in the selection criteria.

b. Establishing the Selection Criteria

It is critically important that the selection criteria that will be used in each CSP process be carefully considered before issuing the RFP and that they be identified in the RFP. Selection criteria should include obvious factors such as pricing and scheduling, but may also include factors such as offeror's experience, past performance, safety record, proposed personnel, proposed methodology, and other appropriate factors related to needs of the project and the capability of the offeror. The form CSP Request for Proposal on the Construction Law website includes many common criteria, but it is important to consider and include other criteria that may be particularly important to the specific project.

The relative weighting of the various selection criteria should not be included in the RFP. However, in order to avoid the appearance of possible bias, the criteria weighting should be established by the project management team before the responses are submitted to the selection committee for evaluation.

c. Publication of the RFP

The RFP must be published. Although higher education institutions are no longer required to use the State Business Daily (otherwise known as the Texas Marketplace),⁶ that remains an effective forum for publishing contracting opportunities. Web postings, newspaper ads and notices in trade publications can also be used.

d. Prequalification

It may be desirable in some cases to identify the contractors who are qualified to perform the work before requiring the development of financial proposals. To use this process, the University must state in the published RFP that a two-step process will be used. In the first step, all interested offerors will submit information responsive to an RFQ that addresses factors other than financial proposals. The qualification proposals should be evaluated and scored by the selection committee based on the stated criteria. The University may then request that five or fewer offerors, selected solely on the basis of qualifications, submit full financial proposals for evaluation based on published criteria in the RFP.

e. Opening and Reading

Proposals must be publicly opened and the names of the offerors and the financial terms, if any, read aloud. Other information in the proposals, or information acquired during the evaluation and interview process, must be kept confidential during the evaluation and negotiation phase.

f. Evaluation and Selection

Contractor selection committees for Major Projects are appointed by the Associate Vice Chancellor for Facilities Planning and Construction. Contractor selection committees for institutionally managed projects are appointed by the institution president. Committee members should be UT employees and should not be related to or share financial interests with any of the offerors.

⁶ Tex. Gov't Code § 2155.083(n)

The University has 45 days from the date of proposal opening to rank the proposals in accordance with the published selection criteria. The selection committee should evaluate the proposals using the published criteria and the criteria weighting established by the project management team only. No other factors or criteria may be considered or used. Committee members should be fair and objective in their evaluations. Each individual evaluation should be documented by entering the criteria scoring results in a matrix. All committee member evaluations should then be compiled to identify the proposal that offers the best value.

After determining the best value proposal, the University must attempt to negotiate a contract with that offeror. If a contract cannot be successfully concluded, the University must proceed down the list in descending order of ranking. At any point, the University may decide to reject all of the proposals.

The status of the evaluations and negotiations should not be discussed except between participants in the selection process. There should be a single person designated to respond to any outside inquiries.

g. Form CSP Agreements

There are two form agreements for CSP construction contracts on the Construction Law webpage. The primary one, Agreement between Owner and General Contractor—CSP, incorporates the Uniform General and Supplementary Conditions by reference and can be used for any CSP project. The other form, CSP Agreement for Projects under \$100,000, includes its own general conditions and can be used for projects that will have construction costs under \$100,000.

The form agreements can be modified by adding project names and other business terms and adjusting scope of work requirements without requiring additional OGC approval. Legal terms may not be modified without OGC approval.

3. Construction Manager-at-Risk

The Construction Manager-at-Risk (CM-R) project delivery method introduces significant changes from traditional competitive sealed bid/proposal methods. CM-R is particularly effective on large projects where initial site and structural work can be started before the interior spaces and finishes are fully detailed. CM-R is not recommended for new projects under \$1 million or repair and renovation projects under \$2 million.

While it is generally believed that CM-R delivery can shorten the amount of time necessary to take a project from preliminary design to completion, it is not certain that CM-R will be more cost effective than CSP. Not only does the CM-R process add uncertainty about the final cost of a project, in order for the CM-R process to be effective the University must be prepared to provide more, and more sophisticated, project management expertise and to track and audit a much more complicated pricing arrangement.

On a CM-R project, the University selects a construction manager to act as a general contractor early in the design process on the basis of qualifications, proposed management fee and estimated general conditions costs. The CM-R is paid a design stage fee to work with the A/E, who is still employed by the University, and provide constructability and cost estimating services. In order to take advantage of an

accelerated construction schedule, at some point before the construction documents are complete, typically at the design development stage, the construction manager provides the University with a Guaranteed Maximum Price Proposal (GMP) for completing the work. The GMP should provide a detailed breakdown of the construction manager's fee and not-to-exceed prices for all major elements of the work and the general conditions. The GMP may also include various contingency amounts for unexpected conditions, further development of the construction documents and for University changes.

If the University accepts the GMP, the CM-R may begin work while the design of the project is being finalized. The CM-R must obtain competitive bids from all subcontractors who perform the major elements of the work. All actual cost for the work must be verified to the University who is responsible for tracking and auditing them for compliance with the GMP.

a. Read the Statute

The following statute governs the use of CM-R procurement for construction services. Please read it carefully because it details the procedures that must be followed to select a construction manager and for delivery of a project using the CM-R method.

Education Code § 51.782. CONTRACTS FOR FACILITIES: CONSTRUCTION MANAGER-AT-RISK.

(a) An institution may use the construction manager-at-risk method for the construction, rehabilitation, alteration, or repair of a facility. In using that method and in entering into a contract for the services of a construction manager-at-risk, a board shall follow the procedures prescribed by this section.

(b) A construction manager-at-risk is a sole proprietorship, partnership, corporation, or other legal entity that assumes the risk for construction, rehabilitation, alteration, or repair of a facility at the contracted price as a general contractor and provides consultation to the institution regarding construction during and after the design of the facility.

(c) Before or concurrently with selecting a construction manager-at-risk, the board shall select or designate an engineer or architect who shall prepare the construction documents for the project and who has full responsibility for complying with Chapter 1001 or 1051, Occupations Code, as applicable. If the engineer or architect is not a full-time employee of the institution, the board shall select the engineer or architect on the basis of demonstrated competence and qualifications as provided by Section 2254.004, Government Code. The institution's engineer, architect, or construction manager-agent for a project may not serve, alone or in combination with another, as the construction manager-at-risk unless the engineer or architect is hired to serve as the construction manager-at-risk under a separate or concurrent procurement conducted in accordance with this subchapter. This subsection does not prohibit the institution's engineer or architect from providing customary construction phase services under the engineer's or architect's original professional service agreement in accordance with applicable licensing laws.

(d) The board shall provide or contract for, independently of the construction manager-at-risk, the inspection services, the testing of construction materials

engineering, and the verification testing services necessary for acceptance of the facility by the institution. The board shall select those services for which it contracts in accordance with Section 2254.004, Government Code.

(e) The board shall select the construction manager-at-risk in either a one-step or two-step process. The board shall prepare a request for proposals, in the case of a one-step process, or a request for qualifications, in the case of a two-step process, that includes general information on the project site, project scope, schedule, selection criteria, estimated budget, and the time and place for receipt of proposals or qualifications, as applicable, a statement as to whether the selection process is a one-step or two-step process, and other information that may assist the board in its selection of a construction manager-at-risk. The board shall state the selection criteria in the request for proposals or qualifications, as applicable. The selection criteria may include the offeror's experience, past performance, safety record, proposed personnel and methodology, and other appropriate factors that demonstrate the capability of the construction manager-at-risk. If a one-step process is used, the board may request, as part of the offeror's proposal, proposed fees and prices for fulfilling the general conditions. If a two-step process is used, the board may not request fees or prices in step one. In step two, the board may request that five or fewer offerors, selected solely on the basis of qualifications, provide additional information, including the construction manager-at-risk's proposed fee and its price for fulfilling the general conditions.

(f) The board shall publish the request for qualifications in a manner prescribed by the board.

(g) At each step, the board shall receive, publicly open, and read aloud the names of the offerors. At the appropriate step, the board shall also read aloud the fees and prices, if any, stated in each proposal as the proposal is opened. Within 45 days after the date of opening the proposals, the board or its representative shall evaluate and rank each proposal submitted in relation to the criteria set forth in the request for proposals.

(h) The board or its representative shall select the offeror that submits the proposal that offers the best value for the institution based on the published selection criteria and on its ranking evaluation. The board or its representative shall first attempt to negotiate with the selected offeror a contract. If the board or its representative is unable to negotiate a satisfactory contract with the selected offeror, the board or its representative shall, formally and in writing, end negotiations with that offeror and proceed to negotiate with the next offeror in the order of the selection ranking until a contract is reached or negotiations with all ranked offerors end.

(i) A construction manager-at-risk shall publicly advertise, in the manner prescribed by the institution, and receive bids or proposals from trade contractors or subcontractors for the performance of all major elements of the work other than general conditions work. A construction manager-at-risk may seek to perform major elements of the work itself if the construction manager-at-

risk submits its bid or proposal for that work in the same manner as all other trade contractors or subcontractors and if the board determines that the construction manager-at-risk's bid or proposal provides the best value for the institution. If no satisfactory bid or proposal for a major element of the work is received in the time allowed, the board may negotiate directly with the construction manager-at-risk for performance of that work. The board may negotiate directly with the manager-at-risk for the performance of minor elements of the work that are not included in major work packages.

(j) The construction manager-at-risk and the board or its representative shall review all trade contractor or subcontractor bids or proposals in a manner that does not disclose the contents of the bid or proposal during the selection process to a person not employed by the construction manager-at-risk, engineer, architect, or institution. All bids or proposals shall be made public after the award of the contract or within seven days after the date of final selection of bids and proposals, whichever is later.

(k) If the construction manager-at-risk reviews, evaluates, and recommends to the board a bid or proposal from a trade contractor or subcontractor but the board requires another bid or proposal to be accepted, the institution shall compensate the construction manager-at-risk by a change in price, time, or guaranteed maximum cost for any additional cost and risk that the construction manager-at-risk may incur because of the board's requirement that another bid or proposal be accepted.

(l) If a selected trade contractor or subcontractor defaults in the performance of its work or fails to execute a subcontract after being selected in accordance with this section, the construction manager-at-risk may, without advertising, itself fulfill the contract requirements or select a replacement trade contractor or subcontractor to fulfill the contract requirements.

(m) If a fixed contract amount or guaranteed maximum price has not been determined at the time the contract is awarded, the penal sums of the performance and payment bonds delivered to the institution must each be in an amount equal to the project budget, as set forth in the request for qualifications. The construction manager shall deliver the bonds not later than the 10th day after the date the construction manager executes the contract unless the construction manager furnishes a bid bond or other financial security acceptable to the institution to ensure that the construction manager will furnish the required performance and payment bonds when a guaranteed maximum price is established.

b. Selection of the CM-R

The process for selecting a CM-R is the same as selecting a contractor using the CSP method and paragraphs b.-f. in the CSP section, above, apply equally here.

c. Buy-out of the work

All major elements of the work (all work other than minor work that is included in the CM-R's general conditions) must be publicly advertised and procured using either competitive bids or competitive sealed proposals from trade contractors and subcontractors. Trade contractor and subcontractor bids and proposals are not opened publicly. The CM-R may seek to perform portions of the work itself as long as it submits a bid or proposal in the same manner as all others and the University determines that the CM-R's bid or proposal provides the best value.

The CM-R evaluates and recommends to the University which sub bid/proposal to accept. The University may require that the CM-R use a different sup bid/proposal, but it must also compensate the CM-R for any additional time, cost or risk it incurs. If a selected subcontractor defaults in performing its work or fails to enter into an agreement after it has been selected, the CM-R may select another subcontractor or perform the work itself without further advertising required.

d. Form CM-R Agreement

An approved form CM-R agreement is found on the Construction Law webpage. The form agreement can be modified by adding project names and other business terms and adjusting scope of work requirements without requiring additional OGC approval. Legal terms may not be modified without OGC approval.

4. Construction Manager-Agent

The Construction Manager-Agent (CM-A) form of project delivery is a variation of the CM-R process in which the CM-A is not a contractor, but provides administrative and on-site management services for the University. Under the typical CM-A arrangement, the University contracts directly with contractors or subcontractors who serve as the prime contractor for their specific portions of the work. The statute governing CM-A is found at Education Code § 51.781.

The University takes on a very much increased risk using the CM-A process. There is no single contractor responsible for coordinating work between trades and there is no single guaranteed maximum price that applies to the entire project.

The CM-A delivery process is not approved for use on any UT System or institution projects.

5. Design/Build Delivery Method

The Design/Build (D/B) delivery method entails a significant departure from more 'traditional' delivery methods because the A/E for the project is no longer employed directly by or an agent of the University. D/B can be effective on large scale projects that are repetitive and relatively uncomplicated (e.g. student housing, parking garages), smaller projects requiring specialized expertise where the construction part of the project is more demanding than the design services (e.g. mechanical/electrical system retrofits and upgrades), and, occasionally, for very complicated and/or specialized projects where the University wants one entity to be primarily responsible for the outcome (e.g. large scale utility

projects). D/B is generally not recommended for new projects under \$1 million or repair and renovation projects under \$2 million.

In order to use D/B effectively, the University must be able to clearly and completely describe the facility it wants (the "Design Criteria Package" required by the statute). In many cases the University will need to hire an A/E firm to help it develop the Design Criteria Package. In addition, the University must be willing to cede significant control over architectural and engineering decisions during design development and construction to the D/B team. D/B is not appropriate for projects requiring extensive architectural services in order to tailor the spaces to the needs of a variety of end users.

a. Read the Statute

Please read the following statute carefully. It provides detailed instructions on the procedures that must be followed to select a contractor using the D/B delivery method.

Education Code § 51.780. DESIGN-BUILD CONTRACTS FOR FACILITIES.

(a) In this section:

(1) "Design-build contract" means a single contract with a design-build firm for the design and construction of a facility.

(2) "Design-build firm" means a partnership, corporation, or other legal entity or team that includes an engineer or architect and builder qualified to engage in building construction in Texas.

(3) "Design criteria package" means a set of documents that provides sufficient information to permit a design-build firm to prepare a response to an institution's request for qualifications and any additional information requested, including criteria for selection. The design criteria package must specify criteria the institution considers necessary to describe the project and may include, as appropriate, the legal description of the site, survey information concerning the site, interior space requirements, special material requirements, material quality standards, conceptual criteria for the project, special equipment requirements, cost or budget estimates, time schedules, quality assurance and quality control requirements, site development requirements, applicable codes and ordinances, provisions for utilities, parking requirements, or any other requirement, as applicable.

(b) An institution may use the design-build method for the construction, rehabilitation, alteration, or repair of a facility. In using that method and in entering into a contract for the services of a design-build firm, the contracting institution and the design-build firm shall follow the procedures provided by Subsections (c)-(k).

(c) The board may designate an engineer or architect independent of the design-build firm to act as its representative for the duration of the work on the facility. If the board's engineer or architect is not a full-time employee of the institution, any engineer or architect designated shall be selected on the basis of

demonstrated competence and qualifications in accordance with Section 2254.004, Government Code.

(d) The institution shall prepare a request for qualifications that includes general information on the project site, project scope, budget, special systems, selection criteria, and other information that may assist potential design-build firms in submitting proposals for the project. The institution shall also prepare the design criteria package that includes more detailed information on the project. If the preparation of the design criteria package requires engineering or architectural services that constitute the practice of engineering within the meaning of Chapter 1001, Occupations Code, or the practice of architecture within the meaning of Chapter 1051, Occupations Code, those services shall be provided in accordance with the applicable law.

(e) The board or its representative shall publish the request for qualifications in a manner prescribed by the board.

(f) The board or its representative shall evaluate statements of qualifications and select a design-build firm in two phases:

(1) In phase one, the board or its representative shall prepare a request for qualifications and evaluate each offeror's experience, technical competence, and capability to perform, the past performance of the offeror's team and members of the team, and other appropriate factors submitted by the team or firm in response to the request for qualifications, except that cost-related or price-related evaluation factors are not permitted. Each offeror must certify to the board that each engineer or architect that is a member of its team was selected based on demonstrated competence and qualifications in the manner provided by Section 2254.004, Government Code. The board or its representative shall qualify a maximum of five offerors to submit additional information and, if the board or its representative chooses, to interview for final selection.

(2) In phase two, the board or its representative shall evaluate the information submitted by the offerors on the basis of the selection criteria stated in the request for qualifications and the results of any interview. The board or its representative may request additional information regarding demonstrated competence and qualifications, considerations of the safety and long-term durability of the project, the feasibility of implementing the project as proposed, the ability of the offeror to meet schedules, costing methodology, or other factors as appropriate. The board or its representative may not require offerors to submit detailed engineering or architectural designs as part of the proposal. The board or its representative shall rank each proposal submitted on the basis of the criteria specified in the request for qualifications. The board or its representative shall select the design-build firm that submits the proposal offering the best value for the institution on the basis of the published selection criteria and on its ranking evaluations. The board or its representative shall first attempt to negotiate with the selected offeror a contract. If the board or its representative is unable to negotiate a satisfactory contract with the selected offeror, the institution shall, formally and in writing, end all negotiations with that offeror and

proceed to negotiate with the next offeror in the order of the selection ranking until a contract is reached or negotiations with all ranked offerors end.

(g) Following selection of a design-build firm under Subsection (f), that firm's engineers or architects shall complete the design, submitting all design elements for review and determination of scope compliance by the institution's engineer or architect before or concurrently with construction.

(h) An engineer shall have responsibility for compliance with the engineering design requirements and all other applicable requirements of Chapter 1001, Occupations Code. An architect shall have responsibility for compliance with the requirements of Chapter 1051, Occupations Code.

(i) The institution shall provide or contract for, independently of the design-build firm, the inspection services, the testing of construction materials engineering, and the verification testing services necessary for acceptance of the facility by the institution. The institution shall select those services for which it contracts in accordance with Section 2254.004, Government Code.

(j) The design-build firm shall supply a signed and sealed set of construction documents for the project to the institution at the conclusion of construction.

(k) A payment or performance bond is not required for, and may not provide coverage for, the portion of a design-build contract under this section that includes design services only. If a fixed contract amount or guaranteed maximum price has not been determined at the time a design-build contract is awarded, the penal sums of the performance and payment bonds delivered to the institution shall each be in an amount equal to the project budget, as specified in the design criteria package. The design-build firm shall deliver the bonds not later than the 10th day after the date the design-build firm executes the contract unless the design-build firm furnishes a bid bond or other financial security acceptable to the institution to ensure that the design-build firm will furnish the required performance and payment bonds when a guaranteed maximum price is established.

b. Use of D/B on Minor Projects

Before deciding to use the D/B delivery method for new projects under \$1 million or repair and renovation projects under \$2 million, the University should be certain it can meet all of the statutory requirements, particularly those relating to the preparation of a Design Criteria Package (complete facility program) as described in the statute, and management of a two-step, RFQ/RFP, selection process. In addition, the University must be prepared to monitor the D/B firm's work. These requirements will render D/B inappropriate for most minor construction.

The University should have a compelling reason to use Design/Build for a minor project, such as fast-tracked scheduling. However, the lengthier, mandatory two-step selection process may offset the hoped-for schedule gains on a minor project.

c. D/B Entities and A/E Certification

There is no standard type of D/B contracting firm. Typically a D/B proposer is a general contracting firm that contracts for A/E services, but some D/B firms have in-house A/E capabilities. Sometimes a general contractor and an A/E form a partnership or a joint venture to propose on D/B projects. Some D/B proposers are construction management firms that subcontract out both design and construction services. Regardless of the business model used, it is imperative that the D/B agreement be signed by a single business entity with a distinct tax identification number.

Each D/B entity proposing on a project must certify to the University that it's A/E members were selected on the basis of demonstrated competence and qualifications and in the manner provided by Government Code § 2254.004. See paragraph II.A.1, above.

d. Selection of the D/B

The process for selecting a D/B is similar to selecting a contractor using the CSP method (see paragraphs b.-f. in the CSP section, above) except that a two stage selection process is mandatory. Selection requirements are detailed in the statute.

e. Form D/B Agreement

An approved form D/B agreement is found on the Construction Law webpage. The form agreement can be modified by adding project names and other business terms and adjusting scope of work requirements without requiring additional OGC approval. Legal terms and other terms may not be modified without OGC approval.

6. Job Order Contracts

The Job Order Contracts (JOC) method of project delivery is a unique variation of the CSP delivery method and is appropriate for use on relatively small projects only. As discussed in greater detail below, the optimal value for any individual project using a JOC work order is \$75,000 or less. JOC work orders for projects valued over \$150,000 should be issued rarely and not without upper level management approval. JOC work orders for projects valued over \$300,000 should be issued only in very special circumstances where the University business officer responsible for construction procurement certifies that the project falls within the statutory limitations for JOC and that JOC is the best value method for procuring the construction services.

JOC agreements should be treated as a way for the University to enhance and expand its own maintenance and operations capabilities. As a general rule of thumb, JOC work orders should only be issued for projects that the University would consider performing with its own trade and shop personnel if it had adequate manpower. JOC should not be used for projects that reasonably could be procured using a stand alone process such as CSP.

Note: Time constraints or perceived delays associated with more traditional project delivery methods, such as CSP, are not a valid justification for using the JOC method for projects that do not fall within the statutory limitations. Nowhere in the JOC statute does it authorize use of the JOC delivery method because it is “faster” or “requires less paperwork” or even if it is “more economical or efficient.” It is not appropriate to use JOC delivery to construct any individual project does not fall within the limitations of the statute.

Further Note: If it is anticipated that the sum of the value of all projects that may be assigned to the JOC contractor during the term of the agreement and any likely extensions will exceed \$1 million, the JOC Agreement must be approved by the Board of Regents.⁷ Except for routine services in support of Health Operations.⁸

a. Read the Statute

Please read the following statute carefully. It describes the type of project for which JOC is authorized and it provides detailed instructions on the procedures that must be followed to select a contractor using the JOC delivery method. Specific terms of the statute are discussed in greater detail, below.

Education Code § 51.784. JOB ORDER CONTRACTS FOR FACILITIES CONSTRUCTION OR REPAIR.

(a) An institution may award job order contracts for the minor construction, repair, rehabilitation, or alteration of a facility if the work is of a recurring nature but the delivery times are indefinite and indefinite quantities and orders are awarded substantially on the basis of pre-described and pre-priced tasks.

(b) The institution may establish contractual unit prices for a job order contract by:

(1) specifying one or more published construction unit price books and the applicable divisions or line items; or

(2) providing a list of work items and requiring the offerors to bid or propose one or more coefficients or multipliers to be applied to the price book or work items as the price proposal.

(c) The board shall advertise for, receive, and publicly open sealed proposals for job order contracts.

(d) The board may require offerors to submit additional information besides rates, including experience, past performance, and proposed personnel and methodology.

(e) The board may award job order contracts to one or more job order contractors in connection with each solicitation of bids or proposals.

(f) An order for a job or project under the job order contract must be signed by the board's representative and the contractor. The order may be a fixed price, lump-sum contract based substantially on contractual unit pricing applied to estimated quantities or may be a unit price order based on the quantities and line items delivered.

⁷ Board of Regents *Rules and Regulations* Series 10501, Section 3.

⁸ Board of Regents *Rules and Regulations* Series 10501, Section 4.15.

(g) The contractor shall provide payment and performance bonds, if required by law, based on the amount or estimated amount of any order.

(h) The base term of a job order contract is for the period and with any renewal options that the institution sets forth in the request for proposals. If the institution fails to advertise that term, the base term may not exceed two years and is not renewable without further advertisement and solicitation of proposals.

(i) If a job order contract or an order issued under the contract requires engineering or architectural services that constitute the practice of engineering within the meaning of Chapter 1001, Occupations Code, or the practice of architecture within the meaning of Chapter 1051, Occupations Code, those services shall be provided in accordance with applicable law.

b. Type of Projects Approved for JOC

The state legislature did not approve the use of the JOC delivery method for all types of construction projects. Under section 51.784(a) of the JOC statute the work must be:

1. for the minor construction, repair, rehabilitation, or alteration of a facility;
2. of a recurring nature;
3. the delivery times are indefinite; and
4. indefinite quantities and orders are awarded substantially on the basis of prescribed and prepriced tasks.

The term “minor construction, repair, rehabilitation, or alteration of a facility” is not defined in the statute and, therefore, “minor” must be given its usual and customary meaning. “Minor” in this context does not have the same meaning as “Minor Project” under the Board of Regents *Rules and Regulations*⁹ delegating authority to manage Minor Projects.

Under these Guidelines, any single JOC Work Order for “minor construction, repair, rehabilitation, or alteration” shall not exceed \$150,000 except in very rare circumstances discussed below.

“Recurring nature” is a fairly broad term and probably encompasses most maintenance and general remodeling tasks. On University campuses, new construction is generally not of a recurring nature. Temporary/portable classroom buildings may qualify.

“Indefinite delivery times” and “indefinite quantities and orders” simply means that the amount of work to be provided under a JOC agreement is undefined and open ended.

“Awarded substantially on the basis of prescribed and prepriced tasks” is the heart of the JOC process. It is the basis on which JOC contractors are competitively selected. The particular prescribed tasks can be narrow (e.g. painting, installing carpet, built-up roofing) or broad (e.g. office/classroom

⁹ *Rules and Regulations* Series 80403 defines Minor Project as “New building construction and road, paving and repair and rehabilitation projects of less than \$4 million.”

renovation). The tasks can be prepriced in the agreement or by reference to a construction unit price guide such as R.S. Means.

c. Selection of a JOC Contractor

The procurement process for a JOC contractor is essentially a CSP process where the University identifies the types of work for which it is requesting services and the offerors submit either bids on the types of work or, more often, coefficients or multipliers to be applied to a reference price for the work found in a construction unit price guide such as R.S. Means. The RFP must identify the term of the proposed JOC agreement and any renewal options otherwise the JOC agreement is limited to a term of two years with no option for renewal.

The coefficient or multiplier proposed by each offeror should cover general administrative and other overhead costs, insurance costs, equipment rental, protective gear and clothing, contingencies such as changes in wage rates and inflation, contractor's profit, and indirect costs. Separate coefficients may be used for normal working hours and non-normal working hours.

Unlike the traditional CSP process that is project specific, the University can award more than one JOC agreement per solicitation.

d. Form JOC Agreement

An approved form JOC agreement is found on the Construction Law webpage. The form agreement can be modified by adding project names and other business terms and adjusting scope of work requirements without requiring additional OGC approval. Legal terms may not be modified without OGC approval.

e. Project Work Orders

Each project that will be assigned to the JOC contractor to perform must be described in sufficient detail in a Work Order that is signed by the University and the contractor.

Typically, the University will prepare a request for proposal describing the work (using licensed A/E's when required by law) and the JOC contractor will submit a cost proposal showing quantities for the predescribed and prepriced line items in its base JOC offer along with any non-prepriced items required. The value of non-prepriced work should not exceed ten percent of the value of the prepriced work.

The University and the contractor can negotiate the proposals and the final Work Order can be based on line item prices and quantities or on a lump sum price for the work.

f. JOC Work Orders Valued at Over \$150,000

Certainly, it is feasible that a project could qualify for JOC delivery and have a value exceeding \$150,000. Typically those projects will consist of a large number of relatively small, repetitive tasks that are performed over an extended period of time. For example, a Work Order to repaint and re-carpet the dorm rooms in a residence hall for a fixed unit price as they become available could have a value far in excess of \$150,000.

JOC Work Orders valued at over \$150,000 are not completely barred by these Guidelines, but because projects of that value often do not fit the limitations on JOC contracting, they require additional administrative review before being executed.

Proposed JOC Work Orders valued at over \$150,000 should be reviewed and approved by the University officer in charge of construction contracting before being executed. The review should include a written finding that the proposed Work Order project meets the requirements for JOC delivery and that JOC is the appropriate delivery method under the circumstance.

Proposed JOC Work Orders valued at over \$300,000 should be reviewed and approved by the chief business officer of the University before being executed. The review should include a written finding that the proposed Work Order project meets the requirements for JOC delivery and that JOC is the appropriate delivery method under the circumstance.

g. State Wide JOC Agreements

Under an alternative purchasing method known as the Texas multiple award schedule (TXMAS), the Texas Building and Procurement Commission has approved the use of a statewide JOC agreement procured by the federal government's General Accounting Office. The link to the TXMAS web page is <http://portal.tbpc.state.tx.us/txmas/>. UT System and its component institutions may use the TXMAS procedures to make a best value procurement. All JOC Work Orders made through TXMAS must comply with these Guidelines.

No other state wide JOC agreements or group purchasing arrangements are approved for use by UT System or its component institutions. In particular, The Cooperative Purchasing Network (TCPN) JOC agreement is not approved for UT System projects because it does not comply with our mandated HUB subcontracting requirements and it includes dispute resolution provisions that we cannot agree to.

End of OGC Construction Guidelines