

Issue Overview

ORGANIZATIONAL CONFLICTS OF INTEREST

- Organizational Conflicts of Interest (OCI) rules were created to preserve fair and open competition and enable contracting agencies to obtain impartial advice from consultants. Concern has been raised that application of OCI rules when separate design and construction contracts are planned may limit the extent that companies can be both designers and providers of ITS. This may deter the best qualified contractors from participating in a project's early stages including system development and design.
- Characterization of a project can impact application of OCI. Different OCI rules may apply to systems engineering contracts, development contracts, evaluation contracts or planning contracts. OCI issues can be avoided through bundling of activities into a single contract such as a design-build contract.
- Lack of certainty as to which rules apply and how they will be applied to ITS is a problem, not the rules themselves. It is the public agency Contracting Officer's responsibility to articulate clear guidelines. Making the rules known at the outset of a project creates a level playing field where contractors, consultants, and vendors can compete for and be awarded work based on merit.
- The following barriers related to Organizational Conflicts of Interest have been identified as having the potential to constrain or hamper the implementation of ITS:
 - (1) OCI rules may deter the best qualified firms from participating in a project's early stages, including development and design. *(Page E-10)*
 - (2) Traditional Federal highway construction contracting rules require separation of the design contract from the construction contract. *(Page E-14)*
 - (3) Failure to clearly state guidelines regarding OCI and the division of responsibilities at the outset of a project may threaten the project. *(Page E- 16)*

Section E

ORGANIZATIONAL CONFLICTS OF INTEREST

E-1. STATEMENT OF ISSUE

Address the extent to which organizational conflict of interest rules may prevent ITS designers from eligibility for award of contracts to supply, construct, install, maintain or operate those systems.

E-2. ANALYSIS

ITS America has identified Organizational Conflict of Interest (“OCI”) rules as one of the nine problem areas that the ITS community associates with traditional procurement practices.^{286/} The concern is that inflexible application of OCI rules will: (i) limit the extent to which companies can be both designers and providers of ITS systems; and (ii) the Federal rules pertaining to OCI will limit the ability of manufacturers and designers providing design services to the Federal Government to both participate in the national ITS architecture program and provide ITS products to State and local governments.

Traditional rules against OCI were designed to preserve fair and open competition and to enable contracting agencies to obtain impartial advice from consultants. Theoretically, if an organization that designs a project is able to bid on the construction or operation of the project, that organization has an incentive to recommend a design that favors its products, and either shuts out competition entirely, or limits the pool of potential bidders, interfering with that organization’s ability to provide objective advice to the contracting agency. The OCI problem became highly visible when the rapid growth of military technology in the 1960’s required the government to turn to private contractors not only for things, but for systems engineering and technical direction in addition to products, “which amounted to giving the contractor a large say in what the ultimate customer -- the government -- was going to buy.”^{287/}

The most comprehensive and detailed OCI rules identified in an electronic search of the codes of all 50 States in the United States are set forth in the Federal Acquisition Regulation (the “FAR”). The FAR uses the term OCI to refer to situations where, because of other activities or relationships with other persons: (i) “a person is unable or potentially unable to render impartial assistance or advice to the Government, or the person’s objectivity in performing the contract work is or might be otherwise impaired,”

^{286/} Letter from James Costantino to Frederico Pena, Secretary of Transportation (October 22, 1993), (submitting *Procurement Issues in IVHS Development and Deployment*).

^{287/} Yarmolinsky, Adams, *Organizational Conflicts of Interest*, 24 Fed.B.J. 309 (1964).

or (ii) “a person has an unfair competitive advantage.”^{288/} While the types of acquisitions that are subject to OCI limitations are not specified in the FAR, the FAR does identify management support services, consultant or other professional services, contract or performance of or assistance in technical evaluations, systems engineering and technical direction work as the situations in which OCI are most likely to occur.^{289/} The FAR’s provisions generally will not be applicable to ITS deployment, which is expected to be procured primarily by State and local governments.

In the context of a traditional highway construction project, the OCI problem is dealt with easily by separating the design function from the construction function. However, ITS projects are often a hybrid both of elements that are typically thought of as “construction,” and elements of sophisticated research, development and systems integration. Application of traditional highway construction OCI rules in the context of ITS may discourage the most qualified firms from participating in early design and development. They fear that the ITS project will be characterized as “highway construction,” and that by participating in the design, they will be precluded from “construction,” or from sale of ITS end-products to State and local governments.

Complicating the OCI issue is the fact that often entities in the forefront of ITS research and development are under the corporate umbrella of other companies that manufacture and supply ITS services and products. The FHWA’s conflict of interest provisions, and State and local rules, often simply provide that no engineer or other person performing services in connection with a project shall have, “directly or indirectly,” a financial or other personal interest in any contract or any subcontract in connection with such project.^{290/} No further guidance is provided regarding the degree of common ownership affiliated entities must share in order to fall under the OCI restriction. Could the fact that a multi-national conglomerate owns 5% of a laboratory that participates, in some small respect, in a research and development project concerning an ITS system, preclude a distantly-related entity, under the same corporate umbrella, from contracting to provide the ultimate ITS system or product?

It appears that a lack of certainty in the contracting community regarding the application of OCI rules in the context of ITS, rather than OCI rules themselves, is a major source of the problem. The FAR’s OCI provisions are very specific, but they do not apply to State and local government procurements. The OCI provisions set forth in 23 C.F.R. 1.33, which do apply to State and local recipients of Federal-aid highway grant monies, are not sufficiently detailed to provide much guidance in the context of ITS. Similarly, in those cases where State and local governments actually have statutory or regulatory

^{288/} FAR 48 C.F.R. § 9.501.

^{289/} FAR 48 C.F.R. § 9.502.

^{290/} 23 C.F.R. § 1.33.

provisions pertaining to OCI, the provisions are not specific enough to deal with the complex issues raised by ITS. This uncertainty may also contribute to bid protests that delay projects.

E-2.1 Federal Law Regarding OCI

E-2.1 (a) Federal-aid Highways

Section 1.33 of Title 23 of the Code of Federal Regulations (C.F.R.) sets forth the conflict of interest provisions relating to administration of the Federal-aid highway program. That section provides in pertinent part as follows:

. . . No engineer, attorney, appraiser, inspector or other person performing services for a State or a governmental instrumentality in connection with a project shall have, directly or indirectly, a financial or other personal interest, other than his employment or retention by a State or other governmental instrumentality, in any contract or subcontract in connection with such project.

A 'project' is defined as an undertaking by a State highway department of highway construction, including preliminary engineering, acquisition of rights-of-way and actual construction, or for highway planning and research, or for any other work of activity to carry out the provisions of the Federal laws for the administration of Federal-aid for highways.^{291/}

The regulations set forth in Title 23 of the C.F.R. do not provide any additional guidance on the application of this rule in the context of OCI or with respect to ITS.

(1) Procurement Rules. Although they are not technically OCI rules, the FHWA's procurement rules also impact the OCI issue. Section 112(a) of 23 U.S.C. requires that in all cases where construction is to be performed by the State Highway Department or under its supervision, the contract for construction of the project may be awarded only on the basis of the lowest responsible bid submitted by a bidder meeting established criteria of responsibility. "Construction" means "the supervising, inspecting, actual building and all expenses incidental to the construction or reconstruction of a highway, including . . . improvements which directly facilitate and control traffic flow, such as traffic control systems . . ." "Highway" is defined to include ". . . roads, streets, and parkways, and also includes rights-of-way,

^{291/} 23 C.F.R. §§ 1.33, 1.2.

bridges, railroad-highway crossings, tunnels, drainage structures, signs, guardrails, and protective structures, in connection with highways."^{292/}

Further, 23 U.S.C. § 112(b) requires that contracts for engineering and design services be awarded on the basis of qualifications. Because the definitions of “construction” and “highway” appear to include certain elements of ITS, these provisions may effectively require that the design contract be separated from the “construction” contract in the context of an ITS project, in which case 23 C.F.R. § 1.33 arguably prohibits the same contractor from performing both functions.

The Common Rule has an organizational conflicts of interest rule of sorts that applies to all grantees and subgrantees other than States. 49 C.F.R. § 18.36(c) requires that all procurement transactions be conducted by grantees and subgrantees in a manner providing for full and open competition. Subsection (c)(v) provides simply that an organizational conflict of interest is a situation that is considered to be restrictive of competition.^{293/}

E-2.1(b) Federal Acquisition Regulations Regarding OCI

The ‘OCI rules set forth in the FAR^{294/} provide much greater detail than does either 23 C.F.R. 1.33, or the Common Rule. Pursuant to the Common Rule, the FAR’s OCI limitations do not apply to State and local transportation agencies procuring ITS goods and services under grants or cooperative agreements from the Federal Government. However, the principles and policies evidenced in the FAR may be useful in interpreting 23 C.F.R. 1.33. The relevant provisions of FAR’s OCI rules are briefly summarized below.

The FAR’s OCI rules are found at 48 C.F.R. Subpart 9.5. Section 9.502(c) provides that an OCI may result when factors create an actual or potential conflict of interest in the instant contract, or when the nature of the work to be performed on the instant contract creates an actual or potential conflict of interest on a future acquisition.

(1) FAR Regulations Regarding OCI Waivers. Pursuant to FAR § 9.503, agency heads or designees are given the power to waive any general rules or practices set

^{292/} 23 U.S.C. § 101(a).

^{293/} 49 C.F.R. § 18.36(c)(v).

^{294/} 48 C.F.R. Subpart 9.5

forth in Subpart 9.5 by determining that their application in a particular situation is not in the government’s interest. Requests for waivers are to be made in writing, and require the approval of the agency head or a designee.

Role of Contracting Officer. Section 9.504 charges Federal agency contracting officers with the responsibility of identifying and evaluating potential OCI as soon as possible in the acquisition process, and avoiding, neutralizing or mitigating significant potential conflicts before contract award.^{295/} Contracting officers are also directed to obtain the advice of counsel and technical specialists in evaluating potential conflicts and developing necessary solicitation provisions and contract clauses. The contracting officer is directed to award the contract to the apparent successful bidder unless an OCI is determined to exist that cannot be avoided or mitigated. In such case, the contracting officer is required to give the contractor notice and an opportunity to respond. Additionally, if the contracting officer feels that it is in the best interest of the government to award the contract notwithstanding the conflict, he or she may request a waiver.^{296/}

Special Contracting Situations. Section 9.505 of 48 C.F.R. explains that each individual contracting situation should be examined on the basis of its particular facts and the nature of the proposed contract in light of two underlying principles: “(a) Preventing the existence of conflicting roles that might bias a contractor’s judgment; and (b) Preventing unfair competitive advantage.,, An unfair competitive advantage is said to exist where a contractor competing for award of any Federal contract possesses: (1) proprietary information that was obtained from a government official without proper authorization; or (2) source selection information that is relevant to the contract but not available to all contractors.^{297/}

Sections 9.505-1 through 9.505-4 of 48 C.F.R. prescribe certain limitations on contracting as a means of avoiding, neutralizing or mitigating OCI. These strategies may be summarized as follows:

(1) Systems Engineering. Section 9.505-1 provides that when a contractor provides systems engineering and technical direction for a system but does not have overall contractual responsibility for its development, integration, assembly and checkout or production, that contractor may not be awarded a contract to supply the system or any of its major components, or be a subcontractor or consultant to a supplier of the system or any of its major components. “Systems

^{295/} 48 C.F.R. § 9.504(a).

^{296/} 48 C.F.R. §9.504(e).

^{297/} 48 C.F.R. § 9.505(b)(1)-(2).

Engineering” is defined to include a combination of substantially all of the following activities: Determining specifications, identifying and resolving interface problems, developing test requirements, evaluating test data, and supervising the design. “Technical Direction” is defined to include a combination of substantially all of the following activities: Developing work statements, determining parameters, directing other contractors’ operations, and resolving technical controversies.

(2) Specifications for Non-Developmental Items. Pursuant to §9.5052, if a contractor prepares and furnishes complete specifications covering non-developmental items to be used in a competitive acquisition, that contractor shall not be allowed to furnish these items for a reasonable period of time including at least the duration of the initial production contract. This rule does not apply to a contractor furnishing specifications that the government requests regarding products the contractor manufactures, or situations in which the contractor is acting as an industry representative to help the government agency prepare, refine or coordinate specifications, provided that the assistance is supervised and controlled by government representatives. The purpose of these rules is to avoid situations in which a contractor could draw specifications favoring its own products or capabilities.

(3) Development Contracts. Significantly, the FAR’s OCI rule does not apply to “development,, contractors. 48 C.F.R. 9.505-2(a)(3) explains that in development work it is normal to select firms that have engaged in the most advanced work in a field, and which can be expected to design and develop around their own prior knowledge. Selection of a development contractor promotes speed and quality of production. “Thus, while the development contractor has a competitive advantage, it is an unavoidable one that is not considered unfair; hence no prohibition should be imposed.”^{298/}

When a contractor prepares, or assists in preparing, a work statement to be used in competitively acquiring a system or services, that contractor may not supply the system or major components or services related thereto, unless: (i) it is the sole source; (ii) it has participated in the development and design work; or (iii) more than one contractor has been involved in preparing the work statement.^{299/} For the same reasons set forth in § 9.505-2(a)(3), no prohibitions are imposed on development and design contractors for systems or services.^{300/}

^{298/} 48 C.F.R. § 9.505-2(a)(3).

^{299/} 48 C.F.R. § 9.505-2(b)(1).

^{300/} 48 C.F.R. § 9.505-2(b)(3).

While the FAR’s OCI rules provide an exception for “development work,” the term “development work” is not defined in Subpart 9.5. A definition of “development” is set forth in part 35 of the FAR regarding research and development contracting, but the applicability of the definition is limited to part 35. Nonetheless, the definition of “development” in part 35 may be useful for guidance regarding the meaning of “development” in the context of Subpart 9.5 regarding OCI. 48 C.F.R. 35.001 defines “development” as “the systematic use of scientific and technical knowledge in the design, development, testing or evaluation of a potential new product or service (or of an improvement in an existing product or service) to meet specific performance requirements or objectives. It includes the functions of design engineering, prototyping, and engineering testing; it excludes subcontracted technical efforts that have been used for the sole purpose of developing an additional source for an existing product.

(4) Evaluation Contracts. Contracts involving technical evaluation of other contractors’ offers or products are generally not to be awarded to a contractor that would evaluate or advise the government concerning its own products or activities, or those of a competitor, without proper safeguards to ensure objectivity.^{301/} Additionally, contractors are required to agree to protect other companies’ information from unauthorized use or disclosure for so long as it remains proprietary, and to refrain from using the information for any purpose other than that for which it was furnished.^{302/}

Where significant potential of organizational conflicts of interest are determined to exist, affected solicitations are required to contain provisions calling attention to the OCI rules, stating the nature of the proposed restraint on future contractor activities, and whether the terms are subject to negotiation. Furthermore, the contractor’s contract must contain a clause regarding the nature and duration of the proposed restraints.^{303/}

E-2.2 State Laws, Regulations and Practices Governing OCI

OCI rules applicable to procurements at the State and local levels appear in a variety of forms, and application of OCI rules at the State and local levels is as often a matter of policy or an agency’s general sensitivity to the OCI issue, as it is a response to express State or local statutes or regulations.

^{301/} 48 C.F.R. § 9.505-3.

^{302/} 48 C.F.R. § 9.505-4.

^{303/} 48 C.F.R. § 9.507-1-9.507-2.

(1) **Impact of Federal Funds.** If a State agency procures ITS goods or services with Federal-aid, the Common Rule requires the transportation agency to use its own contracting practices, except that it must include any clauses required by Federal statutes and executive orders in their implementing regulations. Thus, the provisions of 23 C.F.R. § 1.33 apply to ITS procurements by State and local agencies. As discussed above, these provisions are not particularly detailed. And, while the FAR provisions are not applicable to State and local agency procurements with Federal aid funds, the FAR provisions may be referred to for guidance in interpreting 23 C.F.R. § 1.33. Additionally, it should be noted that while State and local agencies are required to enforce the requirements of 23 C.F.R. §1.33, it does not appear that these provisions preempt any State or local requirements with regard to OCI.

(2) **Overview of Statutory and Case Law,** Research of the statutory and case law of all 50 States uncovered relatively few references to OCI, and no provisions were discovered that even closely approximated the detail afforded by the FAR's OCI provisions:

- Section 11.41 .1 of Title 11 of the **Code of Virginia** provides a good example of a State OCI provision. That section provides that “[a] person or firm who has been engaged as an architect or engineer for the same project under a separate contract shall not be able to bid on or submit a proposal for any such contract or to have the contract awarded to him.” Additionally, applicable regulations provide that “[a]n independent contractor employed by a State agency to design a project, develop a scope of work, write specifications or otherwise define contract requirements is not eligible to compete for or receive the resulting contracts. In addition, the contractor may not be a subcontractor or supplier for the entity which is awarded the contract or any of that entity’s subcontracts, however far removed.”^{304/}
- In an interesting twist on the Virginia statute, the **State of Nevada** authorizes the award of construction contracts to a contractor that has assisted the architect in the design of a project of capital improvements, provided that such contractor’s work under the contract

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Dept. of General Services, Commonwealth of Virginia, Agency Procurement and Surplus Property Manual (1993) [hereinafter “VDOT Agency Manual”].

for services assisting the architect was satisfactory, and the contractor guaranteed the final costs for the project.”^{305/}

- **The Illinois Vehicle Code** provides an example of the relative dearth of guidance available regarding OCI at the State and local levels. That code provides that, in preparing its proposals for bidding by potential contractors, the procuring agency shall endeavor to include provisions relating to “(7) Avoidance of personal and organizational conflicts of interest prohibited under Federal, State, or local law.”^{306/}

(3) **Review of Operational Tests**, From our review of the Operational Tests, our discussions with the expert panelists assembled for this contract, and interviews with other professionals involved in the procurement of ITS goods and services, it is apparent that State and local agencies’ conduct with respect to OCI “rules” is as much a result of their general awareness of the Federal rules and a sensitivity to OCI issues, as it is a result of specific statutory requirements applying to such State and local agencies. In a telephone interview, **John Milano, Esq.**, an Assistant Attorney General for the State of Illinois, suggested that States tend to look to the language of the FAR and adopt the FAR’s provisions into State contracts. This approach is viewed by State and local agencies as the safest alternative, since most major projects ultimately will include Federal funding of some sort, and if Federal funding is not currently available for the project, the State may wish to obtain a Federal grant in the future. **Melanie Morgan, Esq.**, Assistant General Counsel to the Bay Area Metropolitan Transportation Commission in Oakland, California, concurred with Mr. Milano. She advised that although her agency has no express OCI provisions like those set forth in the FAR, the Metropolitan Transportation Commission is extremely sensitive to the issues raised by OCI, and approaches all OCI in a fashion similar to that suggested by Mr. Milano.

(4) **Open Issues in OCI**, An interesting OCI issue will arise in the context of a purely State or local procurement of an ITS for which the design or specifications were created in a Federally-funded research and development project or operational test. If the Federal Government were directly procuring the system, arguably the contractor that developed the design or specifications under the Federally-funded project would be precluded from contracting to provide the product to the Federal Government for a period of time, unless the contractor had performed a “development” function.

^{305/} Nev. Rev. Stat. Ann. § 341.161 (1993).

^{306/} 625 ILCS 5/13 B-45.

However, a local transportation agency that is procuring the product exclusively with its own funds is not governed by the Federal OCI rules. Should OCI come into play in these situations at all? What about procurements at the State and local level based on systems developed as part of the national architecture?

E-3. BARRIERS AND SOLUTIONS

Relatively few innovative approaches to OCI were identified in the review of operational tests and case studies conducted for this report. In addition to the operational tests and case studies, the available literature concerning OCI and the FAR suggest some innovative contracting practices. These are discussed below.

Barrier No. 1	OCI rules may deter the best qualified firms from participating in a project's early stages, including development and design
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As explained by the FAR, OCI rules are designed to provide fair and open competition. OCI rules protect the government's interest by restricting an entity that designs a system from obtaining a contract to construct or operate that system, as a disincentive to designing a system that only that entity, or a limited pool of competitors, would be qualified to build.^{307/} Because inflexible application of OCI rules would limit the extent to which companies can be both the designer and builder of an ITS, firms that have already invested heavily in development of ITS, and which have the most expertise in systems engineering and design for ITS systems, may be discouraged from participating in the design phase of an ITS project because they fear that such participation will preclude them from future ITS hardware and software sales. As discussed above, the lack of specificity in the FHWA's conflict of interest rule at 23 C.F.R. 1.33, and in State and local OCI rules, may contribute to this problem being somewhat blown out of proportion.

Reference to the FAR's OCI rules helps to put the issue in context. As explained above, at §§ 9.505(a)(2) and (3), the FAR provides that the OCI prohibition should not

^{307/} Russell, Beverly, *Organizational Conflict of Interest Rules and Design/Build: The Federal Perspective*, *ITS Legal Issues*, vol. 3, no. 1, p. 2 (Fall 1994).

be imposed in a context of “development” work. Arguably, the design elements of the national architecture program could be appropriately characterized as “developmental” and would thereby be exempted from OCI prohibitions. In fact, until the ITS industry matures, it is likely that much of the work on early phases of ITS deployments also may be characterized appropriately as “developmental.” Thus, it appears that much of the concern over OCI could be mitigated by a clear policy statement from the FHWA indicating that it will refer to policies set forth in the FAR in applying 23 C.F.R. § 1.33. State and local agencies could be expected to follow the FHWA's lead.

Solution No. 1(a)	Prepare specifications in-house with ample opportunity for private industry to comment (for free) on these specifications
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A transportation agency may attempt to avoid this barrier by taking on the design obligation itself, notwithstanding the high technology nature of an ITS procurement. When the **Texas Department of Transportation (T DOT)** wanted to procure an Advanced Traffic Management System for the San Antonio area, the agency’s in-house engineers learned all that they could about ITS in order to develop the design, and then distributed the design to the aerospace defense industry, with a request for comments. Based upon the comments received from industry, the in-house engineers modified the original design and repeated the process until a final design was determined. Although the in-house engineers received advice from industry, because they had avoided conducting a procurement for the design portion of the project, they avoided creating an OCI barrier with regard to the ultimate procurement of the ATMS.^{308/}

While the Texas solution avoided OCI problems, in most circumstances this solution probably would not meet the goals of streamlining the ITS procurement process and encouraging deployment. The educational learning curve for in-house engineers necessarily lengthened the design phase. While the solution would seem to protect the public’s interest in the integrity of the public contracting process, and it appears that quality goods and services were obtained at a fair and reasonable price, it is unclear as to whether or not the process was more advantageous than having design work performed by outside consultants. Furthermore, this solution is probably not practicable or expedient for the more sophisticated ITS applications. Texas has been lauded for

^{308/} Williams & Schott, *ITS Procurement: Analysis and Recommendations*, Virginia Transportation Research Council, pp. 30-31 (Nov. 1993).

having obtained industry advice at no direct cost, but query, what was the true in-house cost of taking engineers inexperienced in the technology and bringing them up to a level at which they were able to design the specification?

<p>Solution No. 1 (b)</p>	<p>Involve the ITS design contractor in an oversight role during system implementation</p>
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Solicitations for research, development and design may be structured to make the early phases more attractive to certain types of firms by providing that the firm selected as design contractor will be retained as consultants and evaluators or inspectors throughout the life of the project, or at least through all phases of the procurement. Making the initial contract more desirable operates to keep those contractors off of the deployment teams. This solution was successfully used by the **Bay Area Metropolitan Transportation Commission** in connection with its procurement of a regional telephone information system. In that project, the consultant that was hired to develop the design specifications was kept on board to provide advice and consultation during the implementation phase. In the Letter of Invitation for the design contract, the **Bay Area Metropolitan Transportation Commission** expressly stated that firms or individuals having a financial interest in companies that manufacture and provide telecommunications hardware, software or information services were excluded from participating in the project. This imposed a de facto “hardware ban” on the design contract.^{309/} According to the **Bay Area Metropolitan Transportation Commission’s** Associate General Counsel, this solution both encouraged qualified firms to participate in the design function and prevented OCI from becoming a problem. No dissatisfaction with the situation was visible from industry, and it was apparent that the members of the contracting community generally felt they were more suited to one contract or the other. It was the Associate Counsel’s feeling, however, that had the design consultant’s role terminated at completion of the design, without the consultant/evaluator role continuing through later phases of the project, the design contract would have been much less attractive, and industry response would have diminished.

The **Bay Area Metropolitan Transportation Commission’s** solution streamlined the ITS procurement process by providing continuity of input from start to finish. It also met the goals of the ISTEA by enhancing competitiveness and productivity, and protecting

^{309/} Bay Area Metropolitan Transportation Commission, Request for Proposal to Design a Regional Telephone System, dated June 8, 1994.

the public's interest in the integrity of the contracting process. By providing the design contractor with an on-going role in the project, but precluding designers from participating in the implementation contract, the disincentive to participate in the design was mitigated, and designers were not incentivized to create a design favoring their own services or products.

FAR Solutions to OCI. The FAR suggests some additional solutions to Barrier No. 1. As suggested above, for innovative projects, the procuring agency could carefully craft the scope of work so that it fits within the definition of "developmental" work. Then, by taking a flexible approach to application of its OCI rules (if, in fact, the agency actually has formal OCI rules), the agency may permit the development contractor to participate in later stages of the project based upon the analysis set forth in the FAR.

- **Separate Contracts.** To the extent that the entire early phase of the project may not appropriately be exempted from OCI on the basis that it is "developmental," a transportation agency may limit the impact of OCI by providing separate contracts for discrete portions of the development and design elements of an ITS project. The FAR provides the following example of how this might work: Assume that Company 1 agrees to provide technical direction and systems engineering for the Navy on the power plant for a group of submarines. The FAR states that Company 1 should not be allowed to supply any power plant components. However, Company 1 can supply components of the submarine unrelated to the power plant, such as fire control, navigation and the like. In the FAR's example, the contractor designed only the power plant system, not the entire submarine, and the ban on supplying components is limited to those for the system only.^{310/}
- **Utilizing Government Personnel.** Transportation agencies may engage representatives of the ITS industry to work under government supervision and control to refine specifications or clarify the requirements of a specific acquisition. In the FAR's example, employees of two companies representing the American Tool Institute work under government supervision and control to refine specifications and clarify the requirements of a specific acquisition. These companies are permitted to supply the item.^{311/}

^{310/} 48 C.F.R. § 9.508(a).

^{311/} 48 C.F.R. § 9.508(d).

If it is determined to be in the government’s best interest, the transportation agency may waive the OCI. Please see the discussion under Section E-4, Additional Findings and Recommendations, below.

Barrier No. 2	Traditional Federal highway construction contracting rules require separation of the design contract from the construction contract
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OCI “rules” generally suggest that where separate contracts are awarded for design and implementation or construction, a single contractor may not participate in both phases of a project. OCI rules protect the government’s interest by restricting a contractor that designs a system from having the opportunity to bid on the construction of that system. Further complicating this barrier is the fact that the definition of “highway construction” in the FHWA’s statutory contracting procedures for Federal-aid highways is broad enough to encompass many ITS projects, and those procedures dictate that construction contracts must be procured on a competitive low-bid basis.^{312/} Yet, ITS AMERICA has argued that the better method for ITS high technology procurements is the use of system performance criteria, rather than the separation of the design contract from the implementation contract.^{313/}

Solution No. 2(a)	Carefully define project roles. A contractor that participates in “planning” (as opposed to “design”) may still participate in construction
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By carefully framing the contractor’s role at each stage of the project, participation may be permitted in later phases of the project. For example, in response to a request by the **Virginia Department of Transportation**, the Director of the Department of General Services determined that a contract for systems integration services can provide for “planning” of the project without preventing the contractor from competing for further design or construction contracts. If the **COMPARE** project were classified as a

^{312/} 23 U.S.C. § 112(b).

^{313/} See also, Russell, Beverly, *supra* at note 17, at p. 3.

planning effort, then the contractor for the “planning stage” could bid on later phases of the project.^{314/} In the **COMPARE** project, it was determined that the contractor’s role in the initial stage of the project had not been sufficiently limited to “planning.” However, following this experience, the **Virginia DOT** was later able to structure a procurement such that it characterized the initial phase of the **North Virginia Early Deployment Study** to fit within a “planning” concept, thereby permitting the Attorney General to determine that the project was exempted from the Virginia OCI, quoted above in Section E-2.2.

Classifying ITS Projects. Where there are no Federal funds involved in a project, State and local transportation agencies may be able to classify ITS projects as something other than “highway construction” because they are not constrained by the definition in 23 U.S.C. 101. Often the procurement requirements for the use, purchase or installation of data processing equipment, software or services and telecommunications equipment may be less restrictive than for highway construction, and may not implicate OCI and competitive selection procedures.^{315/}

Solution No. 2(b)	Award a design/build contract if the public agency is authorized to use this type of contract
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Another solution, and the one that will perhaps become the most widely used in the context of ITS, is to contract for ITS systems on a design/build basis. Design/build contracting is based on the use of performance criteria. The procuring agency identifies the required end results, and minimum design criteria. Design/build contracting affords the contractor an opportunity to optimize its work force, equipment and scheduling, but also requires that the contractor assume greater responsibility. Often design/build contracts include extended liability insurance and warranty clauses. By combining design and build under a single contract, the OCI issue is avoided entirely.

Design/build has many desirable characteristics. It is generally accepted that high technology procurements are better suited to bidding based on performance criteria, rather than bidding based on a single design prepared by the buyer. Design/build should also reduce claims for design errors or construction delays due to re-design.

^{314/} Williams & Schott, *supra*, note 19, at p. 30.

^{315/} See, e.g., the Illinois Purchasing Act, 30 ILCS 505/6.

At least two design/build projects have been authorized by the FHWA under Special Experimental Project No. 14, Innovative Contracting Practices: The **North Carolina Congestion Avoidance and Reduction for Automobiles and Trucks (CARAT)** project in Charlotte, North Carolina, and the **Michigan Advanced Traffic Management and Traveler Information System** project in Metropolitan Detroit.^{316/} At least 19 States also presently authorize contracting on a design/build basis.^{317/}

Section 4105 et seq. of the Federal Acquisition Reform Act of 1996^{318/} recently added design-build selection procedures to the FAR. The new provision permits the contracting officer to determine that a two-phase selection procedure for a negotiated design-build contract is appropriate in certain circumstances. However, this provision only applies to direct Federal procurements, not State and local Federal-aid contracts.

The design/build process is not a panacea. Concerns expressed with regard to the process include: (a) smaller firms do not have sufficient resources to make the initial commitment required to bid on a design/build/warranty project; (b) the process requires a large up-front investment of resources in order to submit a bid; (c) the process is a means of avoiding the Brooks Act requirement that engineering services be awarded based on qualifications; and (d) the warranty provisions of design/build contracts raise liability and insurability problems for the design community.^{319/}

Barrier No. 3	Failure to clearly state guidelines regarding OCI and the division of responsibilities at the outset of a project may threaten the project
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Barriers 1 and 2 concern disincentives to a contractor’s involvement in the early stages of an ITS project when it is unclear how OCI rules will be applied. Barrier 3 reflects not so much a disincentive to a contractor’s participating in the project, but the issues that may arise in implementing a project when OCI guidelines are not clearly stated from the

^{316/} Russell, Beverly, *supra*, at note 17, at p. 4.

^{317/} See, e.g., Ala. Code § 41-16-2; 41-16-27; 41-16-57; Alaska Stat. § 36.30.200; Ariz. Rev. Stat. § 28-3051; Cal. St. & H. Code § 143; Colorado H.D. 95-1267, enacted 1995; Conn. Gen. Stat. Ann. §§ 4b-24; 4b-51 et seq.; Fla. Stat. Ann. § 287.055; Haw. Rev. Stat. § 103D-304; Idaho Code §§ 67-5711A; Kan. Stat. Ann. § 68-2001 et seq.; Mass. Gen. Laws AM. Ch. 7, §§ 42B; Ch. 29, § 7E; Ch. 149, § 44A; Mont. Code Ann. § 60-2-112; Nev. Rev. Stat. § 341.171; N.H. Rev. Stat. Ann. § 228:4(1)(f); *Marina v. Town of Ramapo*, 326 N.R.S.2d 162; 1993 NC. Sess. Laws 1993, C.321, s.162; Ohio Stat. dated August 24, 1995; 1995 Or. Laws S.B. 626; S.C. Code Ann. § 57-3-200; Va. Code Ann. §§ 1-1-41 et seq.; Wash. Rev. Code Ann. § 47.46.010; Wis. Stat. Ann. §§ 13.48(19) and 16.855.

^{318/} Pub.L. 104-106, Division D (Feb. 10, 1996).

^{319/} Russell, Beverly, *supra*, at note 17, at p. 6.

project's inception. For example, in the **FAST-TRAC** Operational Test, the University of Michigan's evaluation contract was placed at risk because the limitations placed on the University due to OCI were not clearly identified at the inception of the project. The University was awarded the evaluation contract by the Road Commission of Oakland County in November 1992. At the time of that award, it was not affirmatively stated that by entering into the evaluation contract, the University would be precluded from performing any contracts for design work for the projects. By waiting to address the problem until after the project was underway, the project was slowed and the evaluation contract was threatened.^{320/}

Failure to deal explicitly with OCI issues at the outset of a project may also result in costly delay and expense due to bid protests based on OCI. The **Virginia Department of Transportation** experienced this problem in connection with its procurement of an electronic toll collection system.^{321/}

Solution No. 3(a)

Project participants should establish a clear understanding regarding the division of responsibilities and limitations imposed by OCI at the outset of the project

In the **FAST-TRAC** project, the participants learned that for future projects, a commitment should be obtained from all stakeholders regarding the division of responsibilities and the limitations imposed by OCI at the outset of the project. In that case, the issue was ultimately resolved when an internal decision was made stating that the **University of Michigan's** staff members would not perform design work. The principal investigator obtained agreements from other University staff members preventing them from engaging in design work for the project.^{322/}

^{320/} Intelligent Vehicle-Highway Systems Institutional and Legal Issues Program, *Review of the FAST-TRAC Operational Tests*, John A. Volpe National Transportation Systems Center, p. 52 (June 1994).

^{321/} Williams & Schott, *supra*, at note 19, at p. 32.

^{322/} *Review of the FAST-TRAC Operational Tests*, John A. Volpe National Transportation Systems Center, *supra* at note 30, at p. 52.

Solution No. 3(b)	Expressly state in design contract solicitation that the successful ITS design firm and its affiliates will be excluded from bidding to supply the resulting system
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The **Bay Area Metropolitan Transportation Commission** avoided future OCI problems in connection with its telephone information system procurement by affirmatively prohibiting firms having a financial interest in companies that manufacture and provide telecommunications hardware, software, or information services from participating in the design phase of the project. Thus, the **Bay Area Metropolitan Transportation Commission** imposed a de facto “hardware ban” on the design contract. The **Bay Area Metropolitan Transportation Commission’s** Associate General Counsel reports that this approach was effective.^{323/}

E-4. ADDITIONAL FINDINGS AND RECOMMENDATIONS

In the context of Federally-funded projects, the FHWA should consider whether it would be appropriate to reconsider the definitions of “highway” and “construction.” It would be helpful if relevant statutes and regulations, particularly 23 U.S.C. 112(b) and applicable definitions, were revised to adapt to the concept of advanced technologies being developed on highways. Then the circumstances in which ITS projects will be subject to the requirement that design and construction be separated, and that construction be awarded on a low-bid basis, could be explored in more detail and appropriate exceptions could be provided.

Participants in the expert panel conducted for this project generally agreed that in the early stages of research, development, and operational testing, it is appropriate to have flexible OCI rules permitting the public agency to make a case-by-case determination as to whether or not OCI concerns are significant, and to retain flexibility in mitigating the impact of OCI rules. For example, a transportation agency may adopt an

^{323/} Bay Area Metropolitan Transportation Commission, Request for Proposal to Design a Regional Telephone System, dated June 8, 1994; interview with Bay Area Metropolitan Transportation Commission Assistant General Counsel, Melanie Morgan, Esq., conducted for purposes of this project in September, 1995.

administrative waiver process such as that contemplated by § 9.503 of the FAR. The waiver procedure should have the following characteristics:

- Require that potential OCI be identified as early in the contracting process as possible;
- Require that requests for waivers be in writing, set forth the extent of the conflict, and require approval by an agency head or designee with a high level of authority;
- Require that steps be taken to avoid, neutralize or mitigate the potential conflict to the extent reasonably possible. For example, where a desirable design firm is under a corporate umbrella with a desirable supply firm, the public agency may require the design firm to institute “Chinese wall” procedures, and to permit the public agency to audit compliance with such procedures;
- Require the rationale for the decision justifying waiver of OCI to be memorialized in writing.

To avoid delay from disgruntled bidders who are not awarded a contract, the public agency might consider implementing an administrative requirement that bid protests based on OCI be brought within a very short period of time from bid award. To the extent feasible, if it is anticipated that OCI will be an issue and the public agency desires to maintain great flexibility with regard to OCI, the public agency should publish its intention to waive OCI rules early in the solicitation process. Contractors would be put on notice of the transportation agency’s intent. The transportation agency’s regulations might provide that failure to bring a protest regarding the public agency’s statement of how it will treat OCI prior to the deadline for submission of bids would result in a waiver of claims based on OCI. Admittedly, OCI is fact-specific, and this solution contemplates making decisions regarding OCI in a somewhat general fashion. However, in the context of ITS the pool of potential bidders is likely fairly well known early in the process, and therefore it should not be prejudicial for the transportation agency to make generic determinations regarding its treatment of OCI. A suggested administrative rule might read as follows:

- **Agency Discretion.** The procuring agency has discretion to determine whether or not a firm or its related entities’ participation in development of specifications or advisory contracts with the agency regarding a project should preclude it from competing in the procurement itself.

- **Clarification** of Rules. The procuring agency shall make clear at the outset of a procurement the rules that shall pertain to organizational conflicts of interest in the development of the procurement.
- **Bid Protest Based on Organizational Conflicts of Interest.** Provided that the procuring agency has made it clear prior to submission of the bid that it will allow the participants in the development of the procurement to bid on the procurement, anyone desiring to make a bid protest based upon the perceived organizational conflict of interest shall be required to make such protest prior to the due date for submission of bids.
- **FAR Provisions.** Contract provisions contained in the FAR can be used as templates to address OCI, and to expressly define the restrictions placed on a contractor because of OCI.^{324/}

4.1 Suggested Approach

From the foregoing analysis, the following steps should be followed by a State or local transportation agency in focusing on organizational conflict of interest issues:

- Identify the basis of the transportation agency's policies regarding OCI. Is the transportation agency actually constrained by State law or agency-specific regulation with regard to OCI, or has the assumption that all pre-construction contractors must be precluded from actual implementation of a project been based on custom?
- Having inventoried applicable OCI rules, analyze how the procurement at hand might be structured so as to minimize the impacts of OCI. Can certain aspects of the project be separated out to constitute "planning" or "development," rather than specific system design? If the project is "developmental," does the public agency have the discretion to treat the procurement in the manner suggested by the FAR, and would such approach be desirable?
- Does the agency have the discretion to award a design/build contract, and would that be desirable?

^{324/}

See, e.g., 48 C.F.R. 52-209-T Organizational Conflicts of Interest Certificate -- Marketing Constraints; and 48 C.F.R. 52.20943 Organizational Conflicts of Interest Certificate -- Advertising and Assistance Services.

- Does the transportation agency possess the expertise to develop a system design in-house, thereby avoiding OCI?
- As soon as the preferred approach has been decided upon, issue an OCI policy statement clearly delineating the transportation agency's intended course of action with regard to OCI for the particular ITS project.
- Seek the advice of the FHWA as early as possible whenever Federal funds are involved.

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