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Owner Controlled Insurance Programs

A Synthesis of Highway Practice

TRANSPORTATION RESEARCH BOARD

of the National Academies

OWNER CONTROLLED INSURANCE PROGRAMS

SUMMARY

Highway construction project complexity is increasing, and the roles assumed by designers, project managers, contractors, and subcontractors are changing. Complex projects combined with management role changes have created ambiguity in responsibilities, especially those concerning safety. Consequently, the project owner, as the party ultimately responsible for the construction work, is seeking to enhance control over project safety and risk management. Controlled insurance programs (CIPs) are highly efficient risk control mechanisms. With a CIP, the interest of the owner, designer, construction manager, contractors, and consultants are covered by one insurance arrangement. The intent of this synthesis is to inform state transportation agencies and contractors about CIPs. Although other types of CIPs are discussed in this synthesis (Contractor Controlled Insurance Programs and Partner Controlled Insurance Programs), this document is specific to Owner Controlled Insurance Programs (OCIPs).

Meeting CIP objectives depends primarily on how owners manage the program, especially regarding safety. To achieve savings with a CIP requires that the owner and all project contractors work closely together to implement and enforce an aggressive safety program.

In a conventional program where contractors provide their own insurance, those contractors with a good loss experience history receive better insurance rates and therefore have a bidding advantage. That advantage does not come free; it is a result of their investment in safety. With an OCIP, the rate break, achieved through the contractor's diligence goes to the owner; this has been a matter of controversy.

In the case of an OCIP, owners need to consider three risk/insurance questions.

1. How much of the risk should simply be assumed? When financially prudent, it is usually best to retain predictable risk. Even when insurance is used an owner retains some risk based on selected deductible levels. This is an important component of the risk acceptance decision.
2. What coverages should be included in the OCIP? Most of the insurance premiums that an owner compensates a contractor for in a traditional project bid situation are those related to workers' compensation and liability insurance, which are almost always included in the OCIP.
3. What limits should be purchased? Is excess coverage desired? Catastrophic risks should be insured when coverage is available at a reasonable price.

The issues in choosing to use a CIP are not about the type of project in terms of the physical work location or the type of construction operations required. The important parameters that owners should consider are

- Risk exposure,
- Potential for catastrophic loss,
- Construction costs—a high payroll component of project costs,
- Extended schedule, and
- Safety/loss control.

For the owner, an expected cost savings is the principle appeal of an OCIP. Cost savings are usually found in the workers' compensation component of insurance expenses. Workers' compensation premiums are based on the number of labor-hours required to complete a project. Therefore, this is a critical decision variable. A safe project will reduce workers' compensation expenses.

Together with direct insurance cost savings there are indirect cost savings associated with having a single point for processing claims and having less litigation. However, the OCIP should be viewed principally as a risk management tool and not as a risk financing tool; what is the best way to protect the project owner from construction project risks?

The contractors who participate in the project OCIP have both real and perceived concerns that must be addressed during design of the insurance program. Attention to contractor concerns will lead to superior OCIP performance, which benefits both the owner and the contractor.

It is difficult to write a definition of the project site that incorporates all the possibilities of where contractor activities might occur to include dedicated casting yards, source pits, and plant locations. To avoid the problems inherent in very specific-site definitions that limit OCIP coverage, the insurance can simply be tied to losses arising out of the *project work*. By limiting coverage to defined sites contractors avoid charging losses associated with other work to the OCIP.

Insurance for a typical CIP includes the following coverages:

- General liability insurance;
- Workers' compensation and employer's liability insurance;
- Builder's risk insurance, including coverage for property in transit and property stored off-site; and
- Umbrella or excess liability insurance.

Depending on project-specific risk and the sponsor's preferences, other coverages may be included in the CIP. For example, for the Central Artery/Tunnel Project in Boston, the owner purchased the following additional coverages:

- Airport contractor's liability insurance, because of the work on and around Logan Airport; and
- Railroad protective liability insurance, because the work abutted and passed under multiple operating railroad lines.

If the project is design-build, professional liability insurance could be included in the CIP.

The process of organizing and starting an OCIP involves strategic decisions concerning how the program will be designed. There are three basic approaches to OCIP administration.

1. The agency establishes its own insurance (or risk management) department,
2. Existing in-house staff is expanded, or
3. An insurance consultant is engaged.

A 1977 Department of Transportation (DOT) study reported that since the early 1960s all agencies undertaking major construction works projects and using an OCIP have, after some study, engaged a consultant. Similarly, a 1999 U.S. General Accounting Office study reported that only one agency administered the OCIP with its own staff.

The OCIP insurance manager has four principal responsibilities.

1. Provide technical advice on insurance complexities,
2. Engage the best available insurance carriers for the planned coverages,
3. Arrange the most favorable insurance costcosts and terms, and
4. Handle the OCIP administration burden.

In most cases the selection of outside administrative support was based on a response to a request for proposals. However, insurance administration is a long-duration partnership and some agencies have contracted their OCIP support with the providers of their current coverage. The risk manager for one large public agency stressed, however, that it is very important to find a broker that understands construction and construction claims.

DOTs that have used OCIPs for their major projects reported very favorable results.

Central Artery/Tunnel Project, Boston, Massachusetts (\$14.5 billion)—Although results are not documented, administrators believe that there are savings through reduced litigation, efficient purchasing of insurance, enhanced safety and loss control, and reduced premiums for general liability and workers' compensation insurance.

I-15 Reconstruction, Salt Lake City, Utah (\$1.6 billion)—Preconstruction survey consultant certifies that more than \$30 million was saved. The safety records, both for the project (loss history declined) and the public (speed through the work zone was 75 mph in a 50 mph zone, with few accidents) were excellent. Good public relations resulted in few complaints over small claims. Overall, the claims process was much better controlled.

Fort Washington Way, Cincinnati, Ohio (\$330 million)—This was a very safe project—after 2.5 million person-hours of work the incident record was 0.17 (this is far below the 4.7 national average). Insurance claims were handled expeditiously. The full-time safety managers (contract requirement and pay item) were important contributors to these results. No savings were realized because of the absence of workers' compensation insurance in the OCIP; \$300,000 in additional costs was reported. The owner wanted a safe project, and believed that the cost was reasonable to obtain that goal.

Based on the surveys of DOTs and contractors engaged in projects using OCIPs, it is clear that owners are pleased with the cost savings and job safety. The favorable safety records were achieved with the OCIPs because there were also very specific contractual requirements pertaining to safety. Coordination of insurance to the satisfaction of the contracting community requires advance planning for the OCIPs structure and the availability of insurance policies with the bid documents.

INTRODUCTION

BACKGROUND

Across the country, owners of transportation facilities are pursuing strategies to improve transportation project delivery (e.g., reduce costs, control risk, and streamline processes). At the same time, the lines of responsibility for construction site safety have become blurred as the number of project participants working in the same physical space increases. On many urban projects there can be multiple prime contractors, municipal utility crews, private utility crews, and even transit authority contractors involved. Project complexity is increasing and the roles assumed by designers, project managers, contractors, and subcontractors are changing (1). Complex projects combined with management role changes have created ambiguity in responsibilities, especially those concerning safety. Consequently, the project owner, as the party ultimately responsible for the construction work, is looking to enhance control over project safety and risk management. Controlled insurance programs (CIPs) are highly efficient risk control mechanisms. With a CIP, the interests of the owner, designer, construction manager, contractors, and consultants are all covered by one insurance arrangement. The intent of this synthesis is to inform state transportation agencies and contractors about CIPs. There are several different names for a CIP: Consolidated Insurance Program; Owner Controlled Insurance Program (OCIP), where the sponsor is the project owner; or a Contractor Controlled Insurance Program (CCIP), where the contractor acts as the program sponsor. The name originally used for such insurance programs was “wrap up” and many in the industry use the term wrap-up insurance and OCIP interchangeably.

Risk management is a vital component for any successful construction project. In the Associated General Contractor’s (AGC) *Guide to Construction Insurance* (2), the risk-management process is explained as having the following five steps:

1. Risk identification,
2. Risk analysis,
3. Selection of the appropriate treatment technique,
4. Implementation of the selected technique, and
5. Measurement of the results.

A 1977 U.S. Department of Transportation (DOT) report (3) outlined a four-step risk-management process:

1. Identify, measure, and analyze the potential risks (this is really a combination of the AGC’s first two steps);

2. Eliminate or reduce risk;
3. Insurance decision step; and
4. Loss prevention program planning.

Although the defined steps are slightly different, the final objective is the same—risk control.

One mechanism that an owner can use to manage construction risk is to engage in a CIP. Such programs have been in use since the 1940s. Based on project size, defense projects undertaken during World War II obtained insurance under what was then called the War Projects Rating Plan. These CIPs were an early form of insurance based on economies of scale. More recently in Houston, Texas, Brown & Root used a CCIP for the Enron Field project. OCIPs are used on almost all “mega” transit projects. Bay Area Rapid Transit (BART), Washington Metropolitan Area Transit Authority (WMATA), Metropolitan Atlanta Rapid Transit Authority (MARTA), and Baltimore Mass Transit Administration (MTA) all used OCIPs. More recently, both the San Joaquin and Eastern Transportation corridor projects in California used OCIPs. Each of these design-build projects had costs of approximately \$800 million.

Transportation construction projects typically involve many types of insurance coverage including workers’ compensation, general liability, builder’s risk, and professional liability. As shown by the U.S. Government Accounting Office (GAO) (4) and confirmed by this study, with so many participants working on large transportation projects—owner representatives, private design professionals, a prime contractor, subcontractors, and suppliers—there may be redundancy and/or gaps in insurance coverage. An OCIP risk-management program can help to eliminate both duplication of coverage and insurance gaps, and can provide all parties with higher coverage limits.

Because CIPs enhance risk management, 10 state DOTs have used some form of controlled insurance on one or more of their projects. DOTs are using OCIPs both for individual transportation projects and for groups of projects. The idea behind these programs is for the sponsor to purchase workers’ compensation and liability insurance for all parties working on a project. The CIP provides a single point of contact for all liability issues, prevents insurance coverage gaps or redundancies, and should reduce underwriting and claims administration expenses. The results of such a program are a safer jobsite and lower construction costs.

TABLE 1
TRANSPORTATION PROJECTS USING OCIP INSURANCE PROGRAMS

Project	Project Cost (\$ million)	Insurance Savings (\$ million)	Comments
Blue Water Bridge (Michigan)	97.2	\$2.9	Good safety record
Central Artery/Tunnel (Boston, Mass.)	12,000	\$265.0	Save 25% on insurance
I-15 (Salt Lake City, Utah)	1,600	\$29.9	Two risk management employees
CTA Green Line Rehabilitation (Chicago, Ill.)	409	\$11.5	Helped minority subcontractors. Safety incentive program
Tri-Met, Westside Light Rail (Portland, Ore.)	952	\$9.9	Provided \$1.3 million for enhanced safety incentives
I-75 & I-275 (Detroit, Mich.)	60 and 50	\$3.0	
Corridor 44 (New Mexico)	400	\$20.0	
E-470 Toll Road (Denver, Colo.)	320	\$1.0	One million person-hours; no lost-time incidents
Ft. Washington Way (Cincinnati, Ohio)	159		Currently under construction

[Source: Attachment E to Arizona DOT office memorandum to Arizona DOT Director Mary Peters (May 19, 2000) (5)].

As their popularity with project owners has grown, OCIPs have been the subject of much scrutiny. Critics have questioned the ability of such arrangements to achieve their stated objectives, and claim that these programs set up the owner and contractor as adversaries. Furthermore, contractors worry that OCIPs create potential coverage gaps in their own insurance programs and can hinder their competitiveness on other projects. Even supporters acknowledge that an owner's ability to meet CIP objectives depends primarily on how the program is managed, especially with regards to safety. To achieve savings with an OCIP requires that the owner and all project contractors work closely together to implement and enforce an aggressive safety program.

In 2000, the Arizona DOT (ADOT) investigated transportation agency experiences with OCIPs and found several agencies reporting favorable results (Table 1). Tom Warne, former Director of the Utah DOT stated, "... overall we are happy with the OCIP Program on the I-15 project" (Tom Warne, UDOT, to Mary Peters, ADOT, personal communication, April 20, 2000.) This statement is in reference to Utah's OCIP for their \$1.6 billion, I-15 reconstruction project in Salt Lake City. Warne did go on to state that there are some issues with contractor acceptance of OCIPs.

CONTRACTOR ISSUES

It should be noted that many in the contracting community are reluctant to be part of an OCIP and contractor concerns must be carefully addressed when structuring such a risk-management program. Specific issues raised by the contracting community included

- Administration expense—What are the administrative functions of the contractor and how is reimbursement made for such activity?
- Claims management—In most jurisdictions, the workers' compensation experience under the OCIP follows the contractor, and affects the construction

company's experience modification rating and the cost of doing business.

- Exclusion clauses—Who is covered by the OCIP: vendors, haulers, truckers?
- Safety incentive programs—Is there an incentive plan and does the contractor receive benefits for a superior performance?
- Punchlist exposure—Does the OCIP cover warranty and callback exposure?
- Loss data, loss runs, and experience modifier rating (EMR) filings—The insurance broker is not a party to the construction contract, but the contractor and every participating subcontractor is the broker's client. Although insurance company is responsible for filing the unit statistical reports, the broker should ensure that the contractors are afforded the opportunity to review claims (for all years) prior to the filing. Contractors must be able to review information before it is filed and receive timely information from the broker.

Several contractors responding to the synthesis study did comment on the benefits of participating in an OCIP.

- "Educational exposure to good safety program and mandatory drug testing was helpful. Also increases mandatory safety supervision and helps all levels of management."
- "Reduced litigation potential. Workers' compensation and liability losses outside of our self-insurance and large deductible programs."
- "Reduced insurance costs."
- "More frequent safety inspections."

HISTORY

The insurance industry has been marketing wrap ups to contractors and owners for more than 50 years, but it is not known which project first used a true OCIP. In the case of public projects, the New York City Housing Authority used wrap ups in 1947 for several large housing projects (6).

The construction in New York of the United Nations building (1953) was also under a wrap up. It is claimed that the Chase Manhattan Bank headquarters building (1957–1960) was the first such project in the private sector. (The building is a steel-framed rectangle, 813 ft high, containing approximately 1.8 million square feet above ground level, with another 600,000 square feet below grade.) It is similarly reported, however, that the Prudential Center (1959–1965) in Boston was the first private project. (This is a steel frame building with 1,178,310 square feet of usable floor area.) One insurance broker reported 122 wrap-up projects placed from 1975 to 1998, or approximately 5 per year. These included eight airport and three light-rail projects, plus one subway project, so it is clear that the use of CIPs is fairly common.

Based on a mid-1970s study (3) of risk management for urban transportation construction, CIPs were recommended by the U.S. DOT for programs or projects greater than \$60 million. That study reviewed the risk-management practices of the BART system, MARTA (Atlanta), WMATA (Washington, D.C.), and the MTA in Baltimore. At the time of the study BART was 10 years and MARTA six and one-half years into construction. The reasons driving these authorities to use OCIPs were purchasing power cost savings and the elimination of the costs associated with multiple administrative tiers. Another significant issue was “assured coverage.” With an OCIP the owner has thorough coverage and protection even when there are “safe place to work statutes.” Some states hold that the duty to provide a safe workplace is a matter of a specific statute (e.g., Title 8 California Code of Regulations § 3203 [8 CCR 3203] and in New York State, Section 240 & 241 of the labor law). The New York State Labor Law imposes “strict liability” on owners and contractors. In other states the safe workplace issue has developed as a result of case law.

Conventional project contracting arrangements require that each project participant individually insure its interests. With an OCIP, the interest of the owner, designer, construction manager, contractors, and consultants are all covered by one insurance program. In Atlanta (MARTA) and Baltimore (MTA) (3), the OCIP even included some public utility companies in connection with the work they had to perform in relocating their facilities because of transit construction. The insurance coverages that are commonly required for transportation projects include commercial general liability, workers’ compensation, builder’s risk, excess/umbrella liability, and automobile liability.

Commercial General Liability

Commercial general liability (CGL) insurance provides, within one policy, three basic coverages: (1) bodily injury and property damage liability, (2) personal and advertising

injury liability, and (3) medical payments. The policy will reimburse medical expenses incurred by members of the public who are injured on a contractor’s premises or because of the contractor’s operations. Bodily injury includes sickness, disease, and death. This coverage pays without regard to legal liability.

Workers’ Compensation

Workers’ compensation insurance provides coverage for statutory benefits payable under state law. Under workers’ compensation insurance there is *unlimited* medical coverage for conditions that result from a covered incident. These benefits are for impairment caused by accident or diseases stemming from employment. The benefits are paid without regard to employer or employee fault (no-fault). In general, the employee, in return for these benefits, loses the right to sue the employer for damages. A workers’ compensation payment does not, however, preclude litigation by the insured employee or the workers’ compensation insurance company in subrogation against a third party. In the industry such a suit is known as a third-party-over action.

All states require that contractors have workers’ compensation insurance. Most states allow the contractor to purchase this insurance from private insurers. In two states, however, Texas and New Jersey, self-insurance is allowed. Five other states require that workers’ compensation insurance be purchased from a monopolistic state fund (North Dakota, Ohio, Washington, West Virginia, and Wyoming).

Builder’s Risk Insurance

Builder’s risk insurance covers losses to the materials and equipment ready for installation, work-in-place, and existing structures damaged or destroyed during the construction process. It covers losses caused by acts of god or fire. It usually excludes damage caused by faulty materials or workmanship, or faulty design, but the terms of this coverage vary from state to state. Coverage also varies from insurance policy form to insurance policy form. On large projects the coverage forms are designed and negotiated to meet the needs of the participants.

Excess/Umbrella Liability Insurance

Excess/umbrella liability insurance is designed to pick up wherever standard coverages end. A standard coverage limit can be insufficient for a catastrophic loss. Without the excess/umbrella coverage the covered party would be responsible for the excess amounts over that paid by the underlying policies. Additionally, it should be noted that

excess/umbrella liability insurance does not provide protection for a builder's risk claim excess.

Automobile Insurance

Automobile insurance protects the company against losses arising from vehicle operations. The most important component of an automobile policy is the liability coverage, which will pay for bodily injury and property damage. This exposure may be the hardest to control because the vehicles are frequently operated away from the worksite and interact with members of the public that may not be as safety conscious as the well-trained employee. OCIPs exclude automobile insurance because vehicles move between other jobs or locations with ease and frequency.

How Insurance Is Priced

Comprehensive general liability insurance is calculated by assessing a rate per \$100 of payroll. With a conventional program, the contractor's cost is based on the book (standard) rate, modified by the experience and judgment of the underwriter, multiplied by the estimated payroll cost. There may be some adjustment upward or downward from the book if the contractor's general experience is bad or good.

Workers' compensation coverage is also calculated at a rate per \$100 of payroll. Each occupational classification has its own rate. The manual (base) premium is adjusted by the application of an experience modifier rating (sometimes referred to as the EMR or E-mod) (7). The EMR is calculated once each year, thus fixing a contractor's workers' compensation insurance rates for the full year. The historical EMR calculation takes into account 3 years of loss history, not including the most recent year, which is not used because there has not been time to clearly establish the amount of loss for recent claims (7). The loss experience of the company compared to the average experience for the industry establishes the rating. In a conventional program where contractors purchase their own insurance, those contractors with a good loss experience history receive better insurance rates and, therefore, have a bidding advantage. That advantage does not come without cost; it is a result of an investment in safety. With an OCIP program the rate break that was earned by the contractor goes to the owner, which has been a matter of considerable controversy.

CONTROLLING RISK

The process of identifying and analyzing risk should begin early in the project planning process (3). An owner's advantage in managing risk over the life of a project is highest early in the planning stage. Risk identification may involve

looking at historical data for the project area with respect to potential problems, unknown soil conditions, labor unrest or shortages, supplier/vendor problems, and crime rates. The project management team should take advantage of past experiences to identify potential problems that could befall the project.

The identified risks must be analyzed to determine the probability of occurrence and the potential impact on the project. There are several tools available for this analysis, but for the construction industry the most common is the Monte Carlo computer simulation. Monte Carlo simulation requires that the user first have an approximation of the underlying risk distribution. This is normally done by fitting data from many observations (usually 25 or more) to one of the 30 or more common distribution functions. Monte Carlo simulation then, using random numbers, makes multiple iterations (usually thousands) to calculate distribution statistics. Thus, the historical data on risk can be used to quantify the expected value of a certain risk, the frequency of its occurrence, or the probability of it exceeding some level.

The simulation results are not the final answer, but they do provide a range of probabilistic impacts. The agency must make a final assessment based on experience and comfort level for accepting risk.

Contractors

There are several techniques available to contractors for managing the risks (business risk). If the risk analysis is completed prior to bidding and the risks deemed too great, the contractor may avoid the risk by choosing not to bid the project. A joint venture is often used to share the risk between two or more companies that have come together for the completion of a particular project. A contractor can also transfer the risk by using subcontractors and pass-through clauses in subcontracts. (These are subcontracts, which state that the subcontractor or supplier will be bound by the provisions in the general contract. Such subcontracts sometimes state that the subcontractor or supplier shall be bound to the general contractor to the same extent as the general contractor is bound to the owner.) Another risk transfer tool is insurance, where the insurance company assumes much of the risk in exchange for premiums. Finally, a contractor can choose to accept the risk.

Owners

Owners must perform the same types of analyses and develop strategies to control risk that protect their interest, but the strategy must also allow for completion of a project for a reasonable cost. In the case of an OCIP, owners need to consider the following three risk/insurance questions:

- How much of the risk should be assumed? When financially prudent it is usually best to retain predictable affordable risk. Even when insurance is used an owner retains some risk based on selected policy deductible levels. This is an important component of the risk acceptance decision.
- What coverages should be included in the OCIP? Most of the insurance premiums that an owner compensates a contractor for in a traditional project bid situation are those related to workers' compensation insurance (4). Core coverages included in an OCIP are workers' compensation, employer's liability, general liability, excess/umbrella liability, and builder's risk.
- What limits should be purchased and is excess coverage desired? It is best to insure catastrophic risks when coverage is available at a reasonable price.

OCIP EXPERIENCE OF STATE DOTs

An objective assessment of the opportunities available by using OCIPs is of critical importance to DOTs. This synthesis is a compilation of the methods and techniques for OCIP insurance arrangements. It provides information on the actual state of practice and presents the details of the arrangements. A list of proven CIP programs with the details of specific risks and benefits realized is also provided. Specific projects are examined so that transportation departments can learn from both the successes and the difficulties experienced during actual execution of CIP programs.

SOURCES OF INFORMATION

A literature review revealed a large number of published papers and other documents addressing OCIPs. These sources of information are used extensively in this synthesis and provide documented references to actual practice.

At the outset of the exploratory work for this synthesis, letters were sent to the DOTs in all 50 states. The purpose of the letter was to identify those states having OCIP experience. Those transit departments with OCIP experience were asked to identify a knowledgeable point of contact, who in turn was asked to complete a questionnaire and participate in a telephone interview. The interviews (Appendix A) lasted approximately 90 min and were used to gather facts and opinions about the respective state's OCIP experiences. The results were transcribed and tabulated for reference and analysis. The responses to the surveys provided practical information concerning specific experiences and strategies.

Several contractor meetings were attended and contractors were engaged in discussions with contractors concerning their OCIP participation experiences. Based on those discussions a contractor survey (Appendix B) was transmitted to all heavy highway contractor members of the AGC. That survey sought information from construction companies having specific OCIP experience and attempted to identify positive and negative aspects of OCIP programs from the contractor's point of view. Many contractor comments are cited in this synthesis.