



**The Construction Law Committee of
The New York City Bar Association**

21st Century Construction 20th Century Construction Law

Update

February 2014

EXECUTIVE SUMMARY

Construction of all elements of the built environment—from infrastructure for transportation of people and commodities, including energy and telecommunications, and parks to buildings for purposes as varied as residential, educational, health care, commercial, manufacturing and cultural—is both a reflection of a jurisdiction’s economic condition and a generator of its future economic conditions. All of the built environment, its participants and their products are regulated by all three levels of government, but in New York State, the most significant built environment laws are at the state level. It is to the Governor and Legislature we address these recommendations.

The Construction Law Committee continues to urge the State to completely overhaul its archaic and counterproductive statutory scheme for publicly and privately constructed and financed elements of the built environment across the State to match the needs of 21st Century construction projects. Since change in this area is likely to be of an incremental nature, however, the Committee makes the following recommendations to the Governor and Legislature for consideration in the near-term:

- Expand the authorization of the design-build methodology to include its use for all types of structures, and additionally authorize the construction-management-at-risk methodology, for all New York Public owners
- Remove the regulatory chilling effect on the design-build methodology in current legislation and resolve regulatory inconsistencies
- Expand the New York City Educational Construction Fund model to all public school districts and for other building typologies such as public health care clinics and ambulatory care facilities to further leverage the benefits of private multi-use development projects when and where they occur

The ultimate goal of our recommendations on public construction procurement is for the State to provide all New York public owners with all procurement and delivery modes, as necessary and appropriate, to materially reduce costs, speed delivery and improve quality and safety.

Past as Prologue

The New York City Bar Association’s Construction Law Committee (the “Committee”) has, for the last ten years, urged the Governor and the State Legislature to embark on wholesale modernization of outdated State laws affecting every aspect of our built environment, both publicly and privately financed and constructed.¹ In 2008, the Committee said:

The Construction Law Committee, like other Committees before it, believes that mandatory multiple prime contracting² has no place in modern public construction and that the entire statutory scheme for public procurement must be overhauled to promote flexibility and innovation and reflect contemporary trends in service delivery methodology.³ This Committee, however, further believes the State must engage in a rigorous review of the entire statutory scheme for construction and its products, both publicly and privately financed, to bring New York’s construction industry into the 21st century, unleashing its economic potential.⁴

Similar to the way that built objects and systems have a tendency to remain in place after the conditions and theories that supported their creation have been eliminated or discredited, so too written products, such as laws. The State’s disparate collection of built environment laws contain imprints of earlier ways of viewing social conditions, relationships and needs that require review and revision to assure they are not at odds with changed conditions, relationships and needs decades later. Words—and the concepts and viewpoints embedded in them—matter. Having emerged from an earlier time, these laws may shackle contemporary actors engaged in activities that are the functional equivalents of those covered by the older laws but that have evolved over time with education and technology. A preliminary survey conducted by the Committee to “age” the State’s built environment statutes reveals that 14 percent of our current laws had been originally enacted by the time of the Great Depression in 1929, 37 percent by the end of World War 2 and close to half by 1960, a period of time that largely coincided with the construction of the region’s major public works systems and the career of Robert Moses.⁵ In the second half of the last century, 30 percent of current laws were enacted during the three decades that spanned 1960 to 1990. The adoption rate in the first full decade of the 21st century was a pale shadow of the rates of adoption of those preceding three decades. Inspired by the first stirrings of construction law reform in the spring and summer of 2007, in the form of proposals providing public owners with some relief from the mandatory multiple prime contracting requirements, the Committee noted that the State,

”in its economic policy role, should strive to permit the State and its local governments, in their role as owner and client, to have flexibility in deciding, like private owners, what service delivery method is appropriate for their various capital projects” and recommended that the Governor and Legislature consider, as a basis of reform, the model code that became the American Bar Association’s Model Code for Public Infrastructure Procurement (the MCPIP).⁶

Not long after the Committee’s 2008 Report was released, the civic conversation across the State centered on public-private partnerships as a way to solve the recognized failure of public owners across the State to maintain their existing infrastructure in a “state of good repair” as well as the generalized concerns that public owners would be unable to build new infrastructure to support improving the State’s economic performance. This Committee recommended, in its 2011 Update, that the State adopt the MCPIP, and took the added step of providing the form of draft legislation, based on the MCPIP, in an appendix to the 2011 Update, because:

[t]he MCPIP, based upon the experiences of state and local governments across the country that enacted provisions from the earlier 1979 Model Code as well as upon academic research, provides model statutory language to authorize all modern service delivery methods as options for public owners to match service delivery with project needs and owner capacity. It expresses these options in general functional terms that can accommodate changes in practice over time and it specifically authorizes public owners to use competitive sealed proposals awarded based on best value criteria. All MCPIP methods depend upon the public owner first establishing the functional requirements of a project, which are to be part of any solicitation document. The MCPIP authorizes the traditional design-bid-build methodology, which will continue to remain an appropriate option for a significant proportion of any public capital program, but it also permits authorization of construction manager at risk, as a variation of design-bid-build. It authorizes design-build, which permits an earlier collaboration among the designer, contractor and owner, permitting changes to the project during the early design phase when change is effectively cost-free. It also authorizes design-build-finance-operate-and-maintain and design-build-operate-and-maintain, which are types of public private partnerships that highlight the finance aspect. The design-build-finance-operate-and-maintain methodology specifically prohibits any public funding, while the design-build-operate-maintain methodology can be financed exclusively on a public funds basis

or on a mixed public and private funds basis. All methodologies except design-bid-build require a competitive sealed proposal solicitation process with an award based on best value criteria, permitting an integrated focus on a project's initial construction cost and its life cycle costs.⁷

While “[p]ublic construction is, by definition, a form of public private partnership”, this Committee believed what needed to occur for New York public owners to be able to use the integrated public-private partnership financing model then widely advocated during the latter half of the last decade, was not reform of the State’s public finance laws, but rather reform of its public construction procurement laws—specifically, general authorization of the design-build methodology, which is a necessary condition for use of the integrated public private partnership financing model.⁸ This Committee was hopeful that “[s]ince New York’s public finance laws already permit the financing of public-private partnership types of projects, subject to federal tax limitations, the conversation about public-private partnerships [would] help focus attention on the need to modernize public construction procurement laws by highlighting the one essential feature that has been missing for the majority of New York public owners—those service delivery methodologies that developed since the heyday of design-bid-build.”⁹ While this Committee was then, as now, committed to the proposition that all public owners in the State should have access to all service delivery methodologies along the lines of the MCPPI, the rage for public-private partnerships required this Committee to focus on elements of the design-build methodology:

A critical feature of the private public partnership model is the embedded design-build methodology that permits the designer and the contractor to work together on the design and its constructability, maximizing the utility of building information modeling technology as well as integrated project delivery tools, greatly enhancing the project team’s control over schedule and, thus, costs to stay within the parameters of the owner's stated functional scope and price. * * * Optimum efficiency and cost effectiveness in construction requires the integration of owners, designers and constructors on collaborative teams from project conception until commissioning at project completion, focusing on the owner's needs as the yardstick against which to measure performance. Additionally, the benefits of building information modeling technology and integrated project management techniques (if not the contract form) are maximized by the earliest possible collaboration of project team stakeholders. This working environment is simply not possible for public

projects under the currently mandated public design-bid-build methodology. In addition, the selection methodology requiring award to the bidder with the lowest initial cost exacerbates the public sector's lack of focus on operation and maintenance costs after initial construction, which contributes to inadequate investment in state of good repair activities for existing capital assets. Among the factors that conspire against the explicit and early assumption and planning for project life cycle costs as part of the initial public investment decision processes, such as the politics of capital programs, the public design-bid-build methodology's single-minded focus on initial costs is a significant abettor. Yet, while the design-build methodology embedded in public private partnership methodology is a useful arrangement, there is no single optimal project delivery methodology for all types of construction projects. It is the owner's ability to select a service delivery method from among all available methods and match it with specific project circumstances, such as the extent of scope definition, the need for schedule speed as well as certainty, the need for flexibility to make changes to the project during construction, the capacity of the owner to participate in the process and general market conditions, that enables a project team to increase its chances of meeting project performance goals of budget, schedule, quality and safety. A mismatch of service delivery methodology and the specific project circumstances will generate costs that could have been avoided with a better match. When the law constrains an owner's ability to use modern project management techniques, the owner will be less likely to be to deliver a project within its estimated budget, schedule and quality parameters.¹⁰

Three years later as 2014 begins, failure to keep all the State's built environment law consistent with 21st century needs and capabilities not only impedes meeting those needs by keeping participants from exploiting modern techniques, technologies and tools to effectively manage cost, schedule, quality and safety, but also increases the chances of unintended negative consequences, some at odds with the original intent of the archaic laws. At the core of the Committee's work is an acknowledgement of the complex role of government that operates simultaneously in different roles and at multiple levels in the built environment. This Committee will take advantage of events and trends that have occurred since the 2011 Update to provide this addendum to our earlier Reports.

Intervening Events and Trends on the Road to Complete Modernization of the State's Built Environment Laws

There have been several changes in the built environment since our last report in March 2011. On December 7, 2011, the State adopted the Infrastructure Investment Act (the Act),¹¹ authorizing the use of the design-build methodology for physical infrastructure projects costing at least \$1.2 million to a handful of state-level public owners of horizontal infrastructure.¹² The legislative findings and declarations covered the spectrum of rhetoric from the role of infrastructure investment in the economy to efficiencies obtainable via the design-build methodology to encouraging private sector capital investment (public private partnerships). The timing of the Act, however, suggests that its immediate impetus was the need to repair infrastructure destroyed by Tropical Storm Lee, as well as the critical need to replace the Tappan Zee Bridge and become eligible for federal transportation grant programs that require the grantee utilize the design-build methodology to manage cost during construction. Proposed legislation accompanying the Governor's recent executive budget submission would expand the Act's authorization of the design-build methodology to most local governments across the state for physical infrastructure not subject to the State's multiple prime contracting requirement.¹³

In addition, since early 2011, there has been increasing use of building information modeling (BIM) on private and public projects numbers of public and private owners. The use of BIM, as a tool, during all phases of a project, in what has been described as an industry that time had forgotten,¹⁴ will permit project participants to avoid and better manage costs for a number of reasons, the most critical of which is the reduction of gaps in information transfer and coordination errors among project participants, thus reducing the chances of often massive rework during the construction phase, which is far more disruptive and expensive compared to early identification of error or the need to change during the design phase. Until parametric solid modeling, which had been used in aerospace and automobile industries, arrived in construction industry in the form of BIM, the ability of technology to reduce schedule and cost volatility was a dream. With BIM, it is now possible to avoid conditions leading to delays in schedule and cost overruns. Moreover, a logical consequence of BIM use in design has been the accelerated and accurate translation of design drawings to shop drawings via BIM programs and the increase in off-site industrial production of modular building elements assembled in place at the site. While project participants can use BIM in conjunction with all service delivery methodologies, the ability to maximize its potential for managing cost, schedule, quality and safety variables on a project requires the earliest intensive participation of the actual constructor in the design process, which is simply not possible in the conventional design-bid-build process which, on public works projects, requires the separation of designer and

constructor until the lowest competitive price is selected and the prime constructor entities (due to Wicks Law) are able to be identified.¹⁵ Finally, a wealth of data that can be generated at multiple levels from a BIM model that is used throughout the life cycle of a project, from design to operation and maintenance, has the potential to be available at the enterprise level for management purposes and, if the enterprise is also a public entity acting in the roles of owner, regulator and economic development catalyst, for public policy analysis purposes.¹⁶

Renew the Infrastructure Investment Act and Expand Its Authorization of Design-Build Methodology, as well as Authorize Construction Management at Risk, for All New York Public Owners

Set to expire on December 7, 2014, the Act authorized the design-build service methodology for infrastructure projects to a handful of State owners of horizontal infrastructure, while, as noted above, legislation proposed by the Governor, would expand the such authorization to some local governments for a subset of such infrastructure projects.. While this Committee cannot stress enough its continuing position, from the 2008 Report, that the State should modernize all of the State’s built environment laws, including authorizing full service delivery flexibility for all public project types to all its agencies and authorities and to its subordinate entities such as school districts, authorities and local governments, using the MCPIP as a model, we are also realistic. Anyone who has studied New York legislative history in the area of the built environment cannot escape the reality of the State’s historic practice of incremental legislative change. Thus, this Committee focuses on the proposed legislation and the Act’s sunset date to urge the Governor and Legislature to evaluate the nature and magnitude of avoided costs on design-build projects completed under the Act¹⁷ and investigate implementation issues experienced by the effected agencies, with the ultimate goal of renewing design-build authorization to all public owners in the State, eliminating project type restrictions on the use of design-build¹⁸ and add, as an alternative service delivery methodology available to all public owners, the construction-management-at-risk (CM@Risk) methodology. Though CM@Risk is a variety of the traditional design-bid-build methodology, it shares, with the design-build methodology, the ability of designer and constructor to collaborate during the design phase, which permits the avoidance of certain costs attributable to the separation of the two participants during the process. Finally, since multiple prime contracting, which, among other things, requires “the owner [to hold] separate contracts with specialized contractors and [have] the responsibility of managing, or hiring someone to manage the project schedule and budget,” is technically inconsistent with design-build and CM@Risk methodologies, the State will need to revise its mandatory prime contracting requirement either to make it an optional tool for public owners as a general matter or to eliminate it as a requirement for design-build or CM@Risk methodologies, relying on other safeguards, provided in the MCPIP, to balance the

public policies underlying the State's mandatory prime requirement.¹⁹ We urge the Governor and Legislature look to the form and content of the MCPIP to inform the State's efforts to modernize elements of its public construction procurement laws as discussed above.

Some view "construction [as] essentially a design process", more like product development and less like factory production, at a specific site that requires on site assembly.²⁰ Compared to design-bid-build, which is a segmented, sequential method susceptible to gaps and errors in information transfer with associated costs, the design-build methodology, which brings together the designer and constructor during the design phase, is more integrated, permitting the design-build team to structure and manage elements of uncertainty, complexity and scheduling during the design phase in ways that resonate positively to the end of project completion.²¹ As a result of the early marketing efforts of design-build that focused on design-build as a cost-containment tool, there appears to be ingrained misunderstanding and resistance within segments of the built environment community about design-build—it is not uncommon to hear about the evils of design-build as cheapening the design of a project or increasing safety risks. Such advocacy misses the point and does a grave disservice to public owners, with public works programs spanning the spectrum from simple to complex projects. Simply put, all public owners should have every service delivery methodology, including design-build, available for them to use as they deem appropriate for all project types, both vertical and horizontal.

The ability of the constructor entity to participate with the designer team at the earliest possible time during the design phase—something that is simply not possible with the traditional design-bid-build methodology—is the significant characteristic of both the design-build methodology and the CM@Risk methodology that informs this Committee's recommendation. Both design-build and CM@Risk, as conceived by the MCPIP,²² permit designer and constructor collaboration during design to reduce the likelihood of rework and related delay costs due to the fragmentation of knowledge and gaps and errors in information transfer throughout the process by integrating the "strong complementaries" that the "master builder" possessed before the dynamics of modern industrial specialization forced the previously integrated project definition and design function and the building function apart from each other.²³ In a design-build environment, the constructor can contribute its "skill and judgment [to] inform the project design, reducing information asymmetries at the earliest possible time and reducing the chances of post-design changes."²⁴ The BIM tool can then leverage these "strong complementaries", permitting a project team to approximate some of the original master builder unity wrought asunder by modern industrial imperatives.

The early experience of the Commonwealth of Massachusetts, with its 2004 construction law reform authorizing CM@Risk for all public owners, supports the criticality of public owners' ability to bring constructors into the design process to manage and control cost and schedule. In Massachusetts, public owners electing to use CM@Risk have the ability to hire a construction manager before the design is completed to assist the owner and designer during the design process.²⁵ The reform also gives owners the ability to require the construction manager commit to a guaranteed maximum price (GMP) contract as early as 60 percent of design document completion.²⁶ In the review by the Office of the Inspector General (OIG) of public owners' experience with the CM@Risk, as required by the law authorizing CM@Risk, the OIG found "clear and consistent" evidence of public owner satisfaction with the CM@Risk method.²⁷ Of the reasons stated for such satisfaction, "the benefits most often cited by owners included the owner's ability to factor experience and capacity in the CM at risk selection decision, the preconstruction services provided by the CM@Risk firm, the collaborative and productive working relationship among the participants on at CM at risk project and the schedule savings from early construction work."²⁸ At the conclusion of five years of the reform's implementation, the striking fact that all public owners "negotiated the GMP contracts when design documents were complete or nearly complete and, in most cases, after construction work on the projects had begun,"²⁹ analogous to the timing of price in the design-bid-build methodology, suggests that the primary benefit of the CM@Risk methodology to public owners has been the ability to bring the constructor into the design process.

Thus the benefits of design-build and CM@Risk that argue for wide authorization stem from the ability to bring the designer and constructor together during the design phase to permit them to manage project cost, schedule, quality and safety and avoid construction costs attributable to the forced separation required by design-bid-build, when the public owner decides it is appropriate for the project at hand. Public owner funds equivalent to the amount of costs thus avoided would then be available to bring forward other projects in the owner's project pipeline or, if such projects were not to be accelerated, to avoid related debt service costs in the future.³⁰ By permitting the designer and builder—which is, in reality, a constellation of constructor and design entities with the general contractor at the apex—to collaborate fully during the design phase, before a single shovel hits the dirt, benefits the owner—which, in the public sector, translates into the taxpayer/citizen/user. When BIM becomes the standard of practice, the State's failure to authorize the design build methodology and/or CM@Risk, both of which directly involve the constructor during the design phase of a project, across the board to all public owners will limit their ability to realize increases in value by reducing the avoidable costs that BIM facilitates.³¹ Failing thus to modernize public construction procurement law will not only keep the State from achieving its articulated goals with respect to infrastructure maintenance and expansion across the State at every level of

government, but will also render whatever infrastructure and public building are completed to be more expensive than was necessary at completion and delinked from any consideration of the relation of initial design cost decisions to life cycle operation and maintenance costs, all examples of wasted scarce capital and expense budget resources.

Remove the Regulatory Chilling Effect on Design-Build in the Act and Resolve Regulatory Inconsistencies

The existence of text in Section 12 of the Act poses issues that will need to be resolved in the event the State renews the Act as is or extends the design-build methodology in the Act to all public owners. Section 12 provides that participation in a design-build contract under the Act will not be construed to be a violation Section 6512 of the Education Law, which applies to all licensed professionals covered by the Education Law, including architects and engineers, and which makes the unauthorized practice of architecture and engineering a crime. The presence of this provision in the Act authorizing design-build on certain public work suggests that its absence renders architects and engineers unable to engage in private sector design-build projects without being in violation of the Education Law. In addition, the suggestion raised by this language in legislation affecting public projects now also implicates private projects despite the absence of a statutory prohibition of design-build for private projects and the existence of strong case law supporting private sector use of the design-build methodology, case law that we believe the State Department of Education (the Department) has, frankly, declined to follow to one degree or another.

New York not only limits design-build on public construction projects by mandating design-bid-build on the vast majority of public projects, but it also appears to permit positions taken by the Department, which licenses architects and engineers,³² to further limit design-build on both public and private construction projects.³³ The Department's regulatory practice strongly discourages the architects and engineers it licenses from participating on design-build projects through its interpretation and enforcement of various Education Law provisions.³⁴ New York courts have supported the design-build methodology, as conventionally understood and practiced, on private construction projects, by upholding contracts in which the design-build entity enters into a separate contract with the design professional for services.³⁵ Thus, for private construction projects, New York courts permit architects and engineers to provide their professional services in connection with design-build projects so long as they enter into a variation of the construction management contract, in which the contractor contracts with the owner for the design-build project and then separately contracts with a design professional for the architecture services for the project.³⁶ Requiring the insertion of an extra contractual device in order for New York owners to utilize design-build to manage schedule and cost risk

can add legal complexity and exacerbate the high level of adversarial posturing among participants on New York construction projects.

Policy interests advanced in support of this regulatory position consist of preserving an independence of the design professional, free from “unlicensed oversight,”³⁷ and maintaining a connection between the design professional and owner. In 1996, the Education Department promulgated a “delegation exception” rule, which expressly allows the engineers to be retained by unlicensed entities and thus provide engineering services on projects.³⁸ This exception, though, has limited scope and is used for supplemental, rather than substantial, engineering services.³⁹ The dichotomy between the statutes and case law and the gaps in the licensing statute create a chilling effect on the practice of design-build and, in connection with the renewal and extension of the Act as recommended above, it is necessary to revise the Act and the Education Law and its regulations to clearly allow alternate project delivery methods for private and public owners, while balancing the various policy interests and providing adequate safeguards, which the MCPIP does.

The foregoing reflects a state of a skirmish between designers and contractors about the control of the design-build process which has added to the considerable amount of flotsam and jetsam in the wake of the design-build methodology. The focus on control as between designer and contractor does not serve the interests of the project or of the owner,⁴⁰ and the debate between *designer-led* design-build and *contractor-led* design build diverts attention from the benefits to a project from closer collaboration between designer and contractor. Added to the chilling effect described above, this ongoing conflict has resulted in a standoff that denies New York owners—both public and private—increased schedule and cost control that can consistent with project quality or safety,⁴¹ and the ability to leverage BIM capabilities to assist all project participants in achieving the optimum project parameters for cost, schedule, quality and safety.

The MCPIP statutory framework for design-build puts the locus of control with the public owner, establishing baseline conditions that assure adequate professional input for the public owner engaging in a design-build procurement. The MCPIP begins by simply defining design-build as a project delivery method in which the public owner enters into a single contract for the design and construction of a project, but requires, as a pre-condition, that the public owner establish, in conjunction with a designer on the staff of the public owner or under contract, the project’s design criteria or requirements.⁴² The owner must use a competitive sealed proposal to solicit and evaluate proposals from designer constructor entities and negotiate and award the contract for the best proposal, instead of public bid methodology to identify and award to the contractor proposing the lowest initial cost.⁴³ The MCPIP not only leaves open how the owner can select the designer to assist it with development of design

criteria or requirements prior to the solicitation and the nature of the solicitation details, it also leaves the nature of the design-build single contract open, permitting all types of contracts with the exception of the cost-plus-a-percentage-of-cost contract, which it expressly prohibits,⁴⁴ and it conditions the use of a cost-reimbursement contract upon a determination by the governmental entity that such contract is likely to be less costly than other contract types or it is impracticable to use other contract types.⁴⁵ The MCPIP's structure and approach empowers the public owner to match tools with project needs and its own internal capacities, while still establishing a necessary framework for safeguards within the fabric of the code. This modern methodology is completely at odds with the archaic statutory paradigm that limits what public owners can do as a way to protect against potential abuses and lapses in judgment, such as limiting public owners to traditional design-bid-build, which is familiar to all and provides a segmented process that is thought to provide serial focus points for oversight. Some more modern laws authorizing alternative delivery methods still take this paternalistic approach and assume that public owners previously limited to traditional methodologies will not know how to manage more modern techniques and attempt to compensate for the familiar opportunities for abuse and lapses in judgment by inserting an operational apparatus aimed especially at preventing lapses in judgment.⁴⁶ Concerns about public owner capacity to change management practices and agency culture after years of constraint are real, and the MCPIP's format provides opportunities to add provisions to address them. While, as the saying goes, the "devil is in the details", it is better to focus on the details within the framework of a modern code than attempt to advance archaic laws into present time.

The construction market has been saturated over time with myriad standardized contracts, often prefaced with various acronyms, some of which have been written by the trade and professional groups representing the archetypal participants, that over time have contributed to the conventional sense that design-build must be a "fast tracked" method or must have a "guaranteed maximum price" element.⁴⁷ To the extent these standard contracts focus on one or two project variables, such as schedule or price, at the expense of the other important variables, such as quality, safety and lifecycle costs, they have contributed to a litany of misunderstandings associated with design-build. The design-build methodology, however, is a vessel with respect to which the parties can negotiate all aspects of their ad hoc relationship on a particular project.⁴⁸ In the renewal and extension of the Act, the drafters must make it as clear as it is in the MCPIP that the parties to a design-build contract, including the design professionals, are free to design the contract or contracts that serve the schedule, cost, quality and safety needs of the project designed and built, without the licensed professionals being in fear of losing their license so long as they perform their professional obligations in the context of a robustly regulated industry. With project needs and the owner's financial resources serving as both objectives and limits for contract drafters, parties to a design-build contract,

free from standard contract product provisions that represent some archetypal ideal of risk allocation, can incorporate such principles of integrated project delivery and support such data-driven management tools,⁴⁹ as the parties deem appropriate for their capacity mix and the project needs.⁵⁰

Expand the Educational Construction Fund Model to All School Districts and for Other Public Building Typologies

It remains the Committee's position that the largest impediment to "public private partnerships" at all levels of government is not a matter of public finance law but rather one of public procurement laws—specifically, the lack of general design-build authority, as authorized in the MCPPI, which is the *sine qua non* of design-build-operate-maintain (publicly funded public private partnerships) and design-build-operate-maintain-finance. Nonetheless, the Committee has been studying the New York City Educational Construction Fund (ECF), a unique public private partnership model, as a potential model for legislative expansion.⁵¹ New York amended the Education Law in 1966, to create the ECF, as a mechanism to increase the production of elementary and secondary school facilities on land located in New York City, within the envelope of a larger compatible mixed use (residential, multi-family and/or commercial) "combined occupancy structure", thus permitting optimal and appropriate use of available land, including previously underutilized City-owned property.⁵² Although not restricted to City-owned land, the typical ECF project has been developed on either vacant or school-occupied property owned by the City, in order to capture and utilize the value of previously underutilized land. The ECF is a carefully targeted public-private partnership model to "encourage the investment of private capital in such combined occupancy structures and enable the construction of additional school facilities within existing financial limitations through the utilization of incidental revenue produced thereby . . . " ⁵³ A public benefit corporation jointly controlled jointly by the City's Board of Education⁵⁴ and the New York City mayor, the ECF is authorized to issue its tax-exempt bonds to finance the construction of the school facility portion of a combined occupancy structure. The non-school portion is financed (usually privately) by the developer, to whom the ECF leases or otherwise transfers the development rights necessary to permit construction of the larger non-school structure. The ECF bonds are secured by the City's space lease obligations to the ECF and the developer's ground lease obligations, which can cover, in whole or in part, the City's rental obligations to the ECF. The City typically pays a nominal rental amount for the school facility, particularly if the rental from the non-school portion is sufficient to cover the debt service on the bonds issued for the project.

One benefit of the ECF model in the school capacity setting is that it can help to mitigate unavoidable limitations in educational facilities capacity forecasting. Even if the City were to maximize the accuracy of its forecasting techniques and the effectiveness of its long-term planning processes,⁵⁵ there will always be the potential of a mismatch between actual physical plant and program needs, especially in a jurisdiction as large and as dynamic as New York City, a mismatch that the ECF model can provide assistance in solving. In view of the close connection to school capacity needs and new residential development the ECF model is a good tool to reduce the mismatch due to residential development. The ECF model has other advantages for development of schools and non-school facilities as compared to the traditional segregated model. First, the use of otherwise unused City-owned development rights – particularly on a leasehold basis – allows the City to capture value that would otherwise remain dormant. Aside from the value of the development rights being leased, it also provides tax revenue on what would otherwise be exempt property, through tax equivalency payments by the developer. In addition, provided the income generated from the non-school portion is sufficient to cover the debt service on the ECF-issued bonds, the City is able to build new, state-of-the-art schools outside of its capital budget, simply allowing more schools to be built. On the developer side, the ability to avoid up-front acquisition costs provides greater access to and flexibility for financing. This, in turn, increases the viability of projects that would otherwise be unsustainable in a given location. This reduced financing burden also allows ECF and the developer greater flexibility to include affordable housing components without disrupting the financial viability of the project.

Thus, this Committee recommends the State consider authorizing the use of the ECF model for all its school districts. While few school districts have issues of density and scarcity of land at the magnitude that New York City does, the ability of the model to exact payments in lieu of taxes on tax exempt property would benefit certain jurisdictions. Allowing a private developer to avoid up-front land acquisition costs would also enable ancillary and supportive development that would otherwise not be financially supportable. Moreover, an ECF model based on government- or privately-owned property is consistent with current urban *and* suburban planning objectives of reducing sprawl and carbon footprints. In view of the qualities that education, healthcare and housing share—they are goods or services that require public subsidies to generate produce socially acceptable levels of their production,⁵⁶ the State should also consider the extent to which the ECF model could be modified to increase the production of healthcare and housing facilities. Since ambulatory health care clinics can occupy the same ratio to a mixed used building as school facilities do, the ECF model could be expanded to apply to the development and financing of public health care delivery sites in local communities away from tertiary care sites as the current regulatory framework demands. Since the standard “separation of uses” zoning model is no longer considered the best practice in land use

planning, especially in denser urban environments, combining housing with mixed use facilities that include light manufacturing as well as other commercial uses, with the employment potential might serve as an experimental use of the ECF model to increase the production of affordable housing within a community.

¹ Report on Alternate Methods of Public Works Procurement (2003 Report) (<http://www.nycbar.org/pdf/report/Construction%20-%20AlternateMethodsOfPublicWorksProcurement.pdf>); 21st Century Construction, 20th Century Construction Law (2008 Report) (<http://www.nycbar.org/pdf/report/ConstructionLaw.pdf>); Modernizing Public Construction Procurement for New York's Public Owners—If Not Now, When? (2009 Comments) (http://www.nycbar.org/pdf/report/Response_SAM.pdf); and 21st Century Construction, 20th Century Construction Law; 2011 Update (2011 Report) (<http://www.nycbar.org/pdf/report/uploads/20072050-21stCentConstruction20thCentConstructionLawUpdated.pdf>). These documents are collectively referred to as the “our earlier Reports”.

² Multiple prime contracting is a technical/functional term for what people in New York refer to as the Wicks Law.

³ State and local governments and their associated authorities are creations of State law and, in their role of owner, they can use only those service delivery methodologies authorized by the State. This Committee explained that “[t]he public construction procurement statutes in New York, enacted in the last century, reflect the dominant mode of construction at that time, as did the statutes of most other states. This traditional service delivery methodology consists of a public solicitation using what are termed final drawings and specifications and selection methodology mandating the award to the bidder proposing the lowest initial cost to construct (the “public design-bid-build methodology”). Complicating prior attempts to move away from the public design-bid-build methodology is the fact that the methodology is embedded in a series of laws that were enacted, or were perceived to have been enacted, in response to earlier instances of corruption in public works. In particular, this scheme reflects a strong bias against negotiation as a way to obtain the best value for construction services and products, despite evidence that this mandated methodology no longer insures either the best work or the lowest combination of initial and life-cycle costs.” 2011 Update, p.6.

⁴ 2008 Report, p. 2.

⁵ At the time of this report, the statutes surveyed in the initial phase of this analysis include the State Finance, Insurance, General Municipal, Education, Highway, Public Buildings, Labor, Public Lands, General Business and Lien Laws.

⁶ 2011 Report, p. 6.

⁷ 2011 Report, p. 11.

⁸ This line of reasoning assumes that no public owner would relinquish the tax-exempt interest rate on bonds, which is typically lower than the private cost of capital, to finance projects, so that most public private partnerships would take the form of design-build-operate-maintain, with public finance on a mixed tax-exempt and taxable basis. 2011 Report, p. 8.

⁹ 2011 Report, p. 9.

¹⁰ 2011 Report, pp.9-10.

¹¹ S. 50002, 2011 General Assembly, Extraordinary Session (N.Y. 2011).

¹² The New York State Thruway Authority, State Department of Transportation, Office of Parks, Recreation and Historic Preservation, State Department of Environmental Conservation and New York State Bridge Authority.

¹³ Proposed amendment of the Infrastructure Investment Act in the 2014 Executive Budget at <http://publications.budget.ny.gov/eBudget1415/fy1415artVIIbills/TEDArticleVII.pdf>. [Part B, beginning on page 11

of the document] Cities, towns and villages with populations of 50,000 or less are excluded from this authorization. Public works projects can be excluded from the adverse impacts of the State's multiple prime contracting requirement because, as with some horizontal infrastructure projects, there are no applicable multiple prime elements. In addition, amendments to the State's multiple prime contracting law raised the dollar value to which the law applies and also permitted public owners to avoid it if they entered into a project labor agreement. See 2008 Report, p. 9.

¹⁴ See Barry B. LePatner, Esq., *Technology and the Industry That Time Forgot* at <http://www.barrylepatner.com/documents/TechandtheIndustrythatTimeForgot.pdf>.

¹⁵ Contrast the discussion of the construction-manager-at-risk methodology, which, although a variety of design-bid-build, does permit the identification and participation of the constructor during the design phase, thus permitting some of the same types of cost avoidance as design-build does.

¹⁶ John Lord and John Rapaport, "Harmonizing BIM: The Value of Multi-Disciplinary/Multi-Dimensional Participation in the Model," *Journal of the National Institute of Building Sciences*, October 2013, pp. 32-34, at <http://www.journalofthenationalinstituteofbuildingsciences.com/2013/October/files/32.html>. This data can include the various cost estimates made during the design phase, actual cost data from contractors and subcontractors, and the owner's operations and maintenance cost data during the project life. For this data to be available for enterprise management purposes (such as return on investment analyses) and public policy purposes (such as evaluation of the alignment of built environment regulatory intent and actual impact), it will be necessary for construction industry stakeholder participants to resolve technical issues such as interoperability and open standards among the various BIM programs or, perhaps, for large public owners to mandate the use of interoperable programs by their designers, general and prime contractors, and their subcontractors.

¹⁷ Terri Matthews, "Modernizing Built Environment Law", Albany Government Review, Vol. 6, Issue 1 (2013), pp. 171-178.

¹⁸ The reference to the multiple prime requirement in the proposed legislation has the effect of limiting the use of design-build for horizontal projects unless they are below the dollar value to which the multiple prime requirement applies or there is an applicable project labor agreement. There appear to be conventional preferences in practice for design-build on horizontal infrastructure projects and for CM@Risk on vertical projects. While Massachusetts' statutory scheme follows conventional preferences by limiting design-build to horizontal structures and CM@Risk to vertical structures, the MCPPI does not—its broad authorization of all service delivery methodologies leaves it up to the discretion of the public owner to decide what service delivery methodology makes sense for the particular project at hand.

¹⁹ 2008 Report, p. 24 (endnote 5). Multiple prime contracting is a contractual variation of design-bid-build. While most states permit multiple prime contracting, New York State was, as of 2003, one of a handful of states that *mandate* it on public construction projects. When the Wicks Law was originally enacted in 1909, not only was design-bid-build the only methodology for construction and constructed infrastructure and buildings much less complex than they are today, but also multiple prime contracting, which is technically compatible with such delivery method, was also considered somewhat of an innovative practice, permitting the owner the flexibility to facilitate 'fast tracking' because the tool gives *the owner* the ability to award individual contracts "as soon as [a] respective aspect of design is complete, giving the owner more control over project schedule because owner can set bidding schedule and avoiding contractor mark up because the owner can directly procure major material items." For multiple prime contracting to work well for the benefit of the owner and its project, the owner must have the internal capacity to manage, as a general contractor does, the separate contractor entities with which it has contract privity or it must have the financial resources to hire a construction manager, as its agent, to manage those contractors. The problem with mandatory multiple prime contracting in New York is that it "forces public owners to use the multiple prime contracting tool, regardless of its internal competencies and capacities and financial resources, increasing the risk of delay and added costs, in a budget environment of limited resources and increasing needs." 2008 Report, pp. 4, 7 and 24 (endnotes 5 and 6).

²⁰ Glenn Ballard and Greg Howell, "What Kind of Production Is Construction?", Proceedings IGLC '98 Guaruja, Brazil, p. 5. Building design can be functionally conceived as "a flow of information and materials (flow process) and as the generation of value for customers" in the context of "converting inputs to outputs (conversion process)." (*Idem*) "Value is generated through a process of negotiation between customer ends and means. The first role of the designer is to make explicit to customers the consequences of their desires, subsequent to which customers may choose to modify their ends." (*Idem*) The design-build paradigm, aided by BIM technology which can greatly facilitate the flow process, is the context within which designers, constructors **and** the owner-customer can operate in a "social unity" on the design and production of a built artifact. (Ballard and Howell, *op. cit.*, p. 7.)

²¹ *Idem*; see also John B. Miller, "Life Cycle Delivery of Public Infrastructure: Precedents and Opportunities for the Commonwealth" (Boston: Pioneer Institute December 2008), No. 44. p. 6.

²² 2011 Report, p. 14 (footnote 36).

²³ Matthews, *op. cit.*, p. 164, citing Jean-Etienne de Bettignies and Thomas Ross, "The Economics of Public-Private Partnerships, 30 Canadian Public Policy (2004), p.135.

²⁴ *Idem*, citing de Bettignies and Ross, *op. cit.*, pp. 145-146. New York's public construction procurement laws not only reflect an archaic view of construction, but also reflect a judgment that the constructor does not exercise a sufficient level of skill and judgment, as other professionals do, necessary to move the selection criteria from that of pure price to that, like in the publicly-funded human services or the construction consultant services context, of a range of criteria of which price is but one. The State's home rule paradigm further enforces this judgment by permitting local governments to regulate for the competence of some constructor participants and to regulate some constructor entities as businesses, while increasing the regulatory complexity of the fragmented construction industry within the State. See Matter of AAA Carting & Rubbish Removal, Inc. v. Town of Southeast, 17 N.Y.3d 136 (2011), as an example of how New York courts do not extend the special skills and judgment exception to construction, which is viewed as the essential core of what is "public work" under General Municipal Law, Section 103 (GML 103). For the "special skills exception" to lowest competitive bid for professional services, the courts must be able to find that such contracts are neither public work nor a "purchase contract" within the meaning of GML 103.

²⁵ Mass. General Laws, Chapter 149A.

²⁶ Office of the Inspector General, *Experience of Massachusetts Public Agencies with Construction Management at Risk under M.G.L. c. 149A*, October 2009, p. 12.

²⁷ *Ibid.*, p. 57.

²⁸ *Ibid.*, pp. 50-51.

²⁹ *Ibid.*, p. 32.

³⁰ Matthews, *op. cit.*, pp. 171-178, citing to Miller, *op. cit.*, p. 27.

³¹ It is expected that the increasingly widespread adoption of building information modeling (BIM) technology across the industry will likely to follow the pattern, 30 years ago, of computer-assisted design's adoption and eventual acceptance as the standard of practice.

³² Education Law § 6504, Regulation of the Professions [establishing the supervision of the Board of Regents and the administration of the Education Department]. See also Education Law, Article 145, §§ 7200-7212, Engineering and Land Surveying, and Article 147, §§ 7300-7308, Architecture.

³³ See 2008 Report, page 31(endnote 59), summarizing findings from Michael K. Love and Douglas L. Patin, eds, State Public Construction Law Sourcebook (Chicago: CCH Inc. 2002).

³⁴ See, e.g., Education Law Section 6506(9) [authorizing the Board of Regents to establish rule on fee splitting], Section 6509(2) [defining professional misconduct as fraudulent practice or beyond authorized scope], Section 6509(7) [defining professional misconduct as aiding or abetting an unlicensed person to perform activities requiring a license], Section 6509(9) [committing unprofessional conduct as defined in rules or regulations] and

Section 7210(1) [authorizing professional corporations and certain grandfathered corporations to offer professional engineering services only upon receiving certificate of authorization from Department]. *See also*, 8 NYCRR § 29.3(6) [prohibiting sharing of fees between design professionals and most non-licensed persons]. Moreover, the Department’s website states that non-licensed entities may not subcontract professional engineering or land surveying services. *See* “Frequently Asked Practice Questions”, available at <http://www.op.nysed.gov/prof/pels/pefaq.htm> [the answer to question No. 12 states “An entity not authorized to provide professional engineering and/or land surveying services, such as a general contractor, cannot subcontract with a licensed professional engineer or land surveyor in order to provide professional services to a third party client”].

³⁵ Claude Charlebois et al. v. J.M. Weller Assocs., Inc., 136 A.D.2d 214, 218 (3d Dept, 1988), *aff’d* 72 N.Y.2d 587 (1988) [affirming lower courts]. Contractor did not violate the New York Education Law by obligating itself to perform both the design and construction services, but that was only because the contract specifically required the contractor to enter into a separate contract for design services. It did not matter that the owner of the contracting firm was also the owner of the engineering firm that the contractor hired, so that contractor was essentially hiring itself to perform the design work.

³⁶ *See, e.g.*, Charlebois at note 25, SKR Design Group, Inc. v. Yonehama, Inc., 230 A.D.2d 533 (1st Dept. 1997), Cherokee Owners Corp. v. DNA Contracting, LLC, et al., 74 A.D.3d 411 (1st Dept. 2012), Mclver-Morgan, Inc. v. Dal Piaz, et al., 108 A.D.3d 47 (1st Dept. 2013).

³⁷ *See Charlebois* at note 25, General Building Contractors of New York State, Inc. v. New York State Education Dept., et al., 175 Misc.2d 922, 927-928 (1997) [NYSEd promulgation of delegation exception rule did not create unlicensed oversight, citing Charlebois]; Education Law § 7202 [only licensed persons shall practice engineering]. In view of the increasing presence of construction management programs and the professionalization within the constructor fields, the State should consider joining the several jurisdictions that license certain constructor participants as professionals. A number of states require significant state level licensure contractors such as Alabama, Alaska, Arkansas, Arizona, California, Connecticut, Delaware, Florida, Georgia, Hawaii, Massachusetts, Minnesota, Mississippi, North Carolina, North Dakota, New Mexico, Nevada, Oregon, Tennessee, Utah and Virginia.

³⁷ 8 NYCRR 29.3(b), § 7302 [only licensed persons shall practice architecture].

³⁸ 8 NYCRR 29.3(b), § 7302 [only licensed persons shall practice architecture].

³⁹ Anne-Mette E. Andersen, “The Illegal Practice of Engineering or Architecture by Companies in New York – A Compliance Guide [Part Two]”, *Bloomberg Law Reports* (2010), p. 8.

⁴⁰ As with any change, those who understand and work well under a set of relationships perceive a potential for reduction in the span of control. Even in a design-bid-build process, however, an architect’s control of the design space is illusory since the project owner’s financial resources have always provided, regardless of the delivery methodology, a finite envelope for the owner’s needs and desires for the project as well as the specific requirements of the project site. Yet it is necessary to confront the perception of design control lost via a change in service delivery methodology from design-bid-build to design-build. Instead of losing control of the design space in the move to design-build, the designer can experience an increase in controlled design space as more previously down-the-line construction/production information enters the design space, information that can inform the design as early as possible when change is relatively costless. The experience of aerospace designers after the introduction of parametric solid modeling (a forerunner to BIM) and multidisciplinary design optimization (MDO), an analog to design-build and principles of integrated project delivery) demonstrates a paradox of control when the “[e]arlier integration of MDO increases the time in conceptual and preliminary design to ‘capture more knowledge,’ and ‘retain[s] more design freedom later into the process in order to act on the new knowledge gained by analysis, experimentation and human reasoning.’” *See Matthews, op. cit.*, pp. 165-167.

⁴¹ In the public debate during moments of reform, issues of public safety arise when it is sometimes asserted that licensed designers in control of the design-build process are necessary to stand between project safety and disaster. We believe these assertions are baseless because they assume that an in-house licensed professional will protect the public less than an independently retained licensed professional. To use an analogy, we are unaware

of evidence that in-house counsel complies with professional responsibilities any less than outside counsel, especially in assuring that his or her client complies with the laws—the licensing laws seek to protect the public from dishonest or incompetent professionals and the contractual relationship between counsel and client is not an issue for lawyers as it appears to be for architects and engineers. Moreover, State governments license architects and engineers, among other professionals, in order to protect the public from incompetent professionals by mandating a level of professional competence, evidenced primarily by academic requirements and testing, as a condition of conducting business in the state. Protecting public safety is also a public purpose justifying licensing and the licensing of designers is but one of the many areas where government, as regulator, adopts laws and regulations to assure public safety in the built environment. The existence of building safety codes, with component sub-codes, worker safety laws and regulations, professional licensing requirements as well as non-professional licensing requirements, and government inspections of work certified by professionals and others, creates redundancy and means that there is no one guarantor of public safety. Government has put in place an entire system, with multiple redundancies due to different levels of government regulating the same built thing, process or participant, to increase the likelihood that both the construction process and the constructed thing do not pose danger to the public.

⁴² See 2011 Report, p. 21.

⁴³ See 2011 Report, pp. 31-33.

⁴⁴ MCPIP § 3-401.

⁴⁵ See 2011 Report, p. 35.

⁴⁶ See, e.g., Mass. General Laws, Chapter 149A requirement of an Owner's Project Manager, who is a professional designer with required levels of experience, hired before the project designer to serve as the public owner's agent and consultant throughout planning, design, procurement and construction, including providing advice on selection of designer, design, value engineering, scope, estimating, general and subcontractor pre-qualification and selection, scheduling and construction.

⁴⁷ The history of design-build is replete with an alphabet soup list of marketed contract products purporting to be the solution for what ails the construction industry.

⁴⁸ See Roberto Mangabeira Unger, *The Critical Legal Studies Movement* (Cambridge: Harvard University Press 1986), pp. 66-90.

⁴⁹ One example of a data-driven management tool that supports and is supported by BIM technology is earned value management, which utilizes data from the contractor and sub-contractor levels for both macro- and micro-level analyses.

⁵⁰ In this instance, the standard contracts produced by various archetypal participants—e.g., AIA and Consensus—can serve as examples for drafters who draft their own contracts to serve project and owner needs while allocating risks to those parties that can control for them while taking care to eliminate adversarial and counter-productive risk shifting.

⁵¹ See the City University Construction Fund and the State University Construction Fund, Education Law, Art. 125-B, and Art. 8-A. See also Education Law, Art. 10-B for City of Yonkers Educational Construction Fund.

⁵² Education Law, Art. 10.

⁵³ Education Law, Section 451.

⁵⁴ Currently called the Department of Education.

⁵⁵ See Office of New York City Comptroller, *Growing Pains: Reforming Department of Education Capital Planning to Keep Pace with New York City's Residential Construction*, pp. 6-8.

⁵⁶ See 2008 Report, p. 9 and p. 30 (end notes 54 and 54).