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# PUBLIC WORKS FINANCING™

## THE PORT OF MIAMI TUNNEL BREAKS NEW GROUND FOR GREENFIELD P3 PROJECTS IN THE U.S.

*by Jeffrey A. Parker, President, Jeffrey A. Parker & Associates, Inc.*

The Port of Miami Tunnel (POMT) is a first in the U.S.—a technically challenging transport construction project implemented through a public-private partnership where no tolls are charged.

Almost 32 months after bid submission, the cost of POMT to the Florida Department of Transportation (FDOT) is a \$32.48-million maximum annual availability payment in 2009 dollars, a \$2.2-million annual savings in real (inflated) dollars over the original bid price. The original \$450 million in milestone payments (\$100 million during construction and \$350 million at final acceptance) has remained constant—representing a decline in real dollars.

It is worth noting that the original bid price was half of FDOT's own internal estimates, mainly attributable to a \$610-million construction cost, compared to an independent estimate north of \$1.2 billion. These are important indicators of value-for-money from the public-private partnership (P3) structure, in addition to enormous risk transfer to the concessionaire for project completion, the construction budget, adherence to schedule, future quality of service, and over 30 years of operations and maintenance costs.

POMT will introduce new tunnel boring technology to the U.S.—potentially offering significant cost savings in future endeavors, particularly in mass transit construction. Rather than 21-ft standard tunnels, POMT's large large-diameter machine will permit multiple highway lanes, or double-track railroad in a single, bored tunnel. These benefits have long been realized in European and Asian transport construction, and now the U.S. is poised to start catching up.

While the market may perceive that FDOT's I-595 Corridor Improvement and Managed Lane P3 transaction, which closed in March 2009, paved the way for POMT's close in October 2009, in fact, many of the innovations incorporated into the I-595 financing protocols and its TIFIA loan structure emerged from the final RFP for POMT, as well as the agonizing period of post-award negotiations with the concessionaire, Miami Access Tunnel, in response to financial market and commodity price disruption. In that sense, POMT was indeed the precedent-setting transaction it set out to be before funding and intergovernmental challenges delayed its close.

### THE PUBLIC-PUBLIC PARTNERSHIP

POMT is the product of not only a public-private partnership, but also a public-public partnership involving multiple jurisdictions: the State of Florida, Miami-Dade County, the City of Miami, as well as the U.S. Department of Transportation. Indeed, it was the final gelling of this public-public partnership that ultimately yielded the successful closing on October 15, 2009—almost 44 months after the RFQ was issued. The path to financial close was certainly complicated by these intergovernmental agreements, as headlines during this period will attest, resulting in important “lessons learned” on all sides. However, any large, multi-jurisdictional public works project in the U.S. faces similar political risks, which cannot be managed neatly and which affect conventional as well as P3 project implementation.

The state's leadership and the commitment to seeing the project through are evident. FDOT sustained \$9.48 billion in project commitment reductions between November, 2006, when the draft RFP for POMT was issued, to June, 2009, at commercial

close. Despite that hit, FDOT retained its funding for POMT, dedicated scarce resources for advisors, and kept its most senior managers focused on reaching the finish line. As a critical sign of its intent to follow through on its commitments, and to maintain the project's economics, FDOT also agreed to insulate the concessionaire from a wide range of financial risks prior to financial close and was flexible in adapting the financial structure to uncertain and volatile market conditions.

Miami-Dade County's financial, political and institutional support revived the project after disruption in the financial markets caused an extended delay. The county also held the line on \$350 million of cash commitments to POMT despite some of the most challenging budget conditions in 75 years.

The USDOT played a central role in financing

POMT. When rapidly escalating commodity prices, gyrating currency markets, financial market disruptions, and loss of monoline insurance options threatened POMT's affordability, the Transportation Infrastructure Finance and Innovation Act (TIFIA) credit program provided access to long-term debt with a relatively low cost, stable interest rates, and favorable debt structuring. TIFIA played a key counter-cyclical role. As credit spreads ballooned, loan tenors shortened, and capital fled to the Treasury market, driving down federal borrowing costs, TIFIA was able to transfer those benefits to POMT (as well as to Florida DOT's I-595 project), maintaining both access to debt and affordability. As the credit markets recover, TIFIA may well revert back to its former, less competitive position relative to tax-exempt debt and other forms of conventional financing; however, the POMT and I-595 experi-

## Florida Steps Up For POMT Financing

The Port of Miami Tunnel (POMT) reached financial close Oct. 15 on the strength of Florida's appropriation risk commitment, and with a \$341-million, 35-year loan at 4.31% from the U.S. DOT's TIFIA program. A grace period on interest runs to 2016 and to 2033 on principal payments to the U.S. Treasury. The borrowing will be repaid from indexed availability payments of up to \$32.5 million (in 2009 \$) per year made by Florida DOT to the private developer, starting when the tunnel opens in September 2014.

In addition to TIFIA, five-year commercial loans of \$322 million were arranged by the developer with 10 banks and swapped to a fixed rate of 6.63%. Spain's BBVA led the mostly French bank group.

The bank loans will be repaid from milestone payments made by the state during construction (\$100 million) and at final acceptance (\$350 million). An addition-

al loan of \$22 million will be repaid from the first-year's availability payment.

Equity of \$80 million was provided in a 90-10 split by Luxembourg-based Meridiam Infrastructure Finance, an investment fund, and French contractor Bouygues Travaux Publics SA, which reported \$14.2 billion in sales in 2008.

Total cost of the project is \$900 million. The fixed-price, date-certain design-build contract with Bouygues is for \$607 million. VMS, now a subsidiary of Australia's Transfield, will operate and maintain the twin-bore, car and truck tunnel and access roads under the development group's 35-year concession contract with FDOT. The facilities will not be tolled.

FDOT is the only counterparty to the concession agreement. The state intends to pay for 50% of the capital costs and all of the opera-

tions and maintenance, while the remaining 50% of the capital costs will be provided to FDOT by the local governments. FDOT has independent funding agreements with Miami-Dade County and the City of Miami which also together put in land valued at \$55 million. The city secured its promised capital contribution using a \$50-million letter of credit, with Miami-Dade providing the balance.

In addition, the contract provides for FDOT to fund up to \$150 million for reserves in the event geotechnical contingencies are triggered, with the private developer facing up to \$30 million of exposure. Miami-Dade provided FDOT with a \$75-million letter-of-credit, to fund half of FDOT's geotechnical contingency exposure pro-rata, in keeping with the agreed local/state split on capital costs. ■

*by William G. Reinhardt, Editor*

ences are important examples for crafting future federal lending programs and anticipating their potential role in project finance during periods of market disruption.

Accessing TIFIA required a determination of eligibility for Federal Highway assistance. However, POMT had been procured without federal funding. Recognizing the national significance of POMT, its impact on jobs and economic development in Miami-Dade County, the innovative aspects of its design, construction methods and financing, as well as its attractive pricing, FDOT and FHWA were able to collaborate at the Headquarters and Division Office levels in an unprecedented effort that allowed POMT to qualify as a federal-aid project after its award. That was a first in the history of the federal highway program for a project of this magnitude. The patience and perseverance of FHWA and TIFIA in support of the project, despite its numerous delays, was critical to its ultimate success. POMT is now part of the National Highway System.

TIFIA recently capped its subsidy for projects at \$20 million and the POMT experience makes clear the need for a transparent mechanism for calculating subsidy amounts borrowers are expected to pay, as well as the importance of a predictable process for the handling and timing of fund transfers. Confidence and support for TIFIA and federal lending programs in general, including a potential national infrastructure bank, will depend upon the establishment by USDOT and the Office of Management and Budget (OMB) of internal procedures capable of interfacing smoothly with commercial transactions. POMT was an important first step in beginning to develop and test these processes.

### **THE FINANCIAL PARTNERSHIP**

The financial institutions that played key roles in the project (ABN-Amro, Babcock & Brown, Lehman Brothers, MBIA and Excel) ultimately crumbled. Not so Bouygues Travaux Publiques, the lead constructor and equity investor, which remained committed to POMT and helped to attract Meridian Infrastructure as the replacement majority equity partner. Lehman's team also remained committed to the project, seeing it through as financial advisor to the concessionaire under Barclays.

Meridian provided essential leadership to the team and efficiently assembled and managed a club of ten banks that ultimately delivered the senior

debt. Both of the equity investors hung in for the rollercoaster ride of intergovernmental politics at its best, unprecedented financial market disruption, wide swings in currencies and commodities, and rapidly morphing federal lending policies and practices. Originally financed with \$37 million of equity and \$685 million in Private Activity Bonds (PABs) insured by two monolines (and a spread lock from Lehman), POMT travelled through a time warp to emerge with \$80 million in equity commitments, \$342 million in bank debt and a \$340-million TIFIA loan at closing. Despite all this, POMT was delivered at lower overall cost than the original bid.

### **WHAT ARE THE LESSONS OF POMT?**

***Ideology hurts.*** Many P3 market pundits and advocacy groups define efforts to introduce P3 frameworks in this country in terms of ideological warfare, with winners, losers, and no prisoners taken. POMT demonstrates that success requires consensus. We should check the ideological six-shooters at the door if we really want to see a market develop in the U.S. Similarly, commercial practice on other continents will have to be adapted to the financial and institutional frameworks of each state, home rule municipality, and public authority—there is no “one size fits all” in the U.S.

***Hard-bid availability-pay benefits.*** The financial close of I-595 and POMT are significant events, but only the very first step in proving that emerging, domestic, availability-payment P3 frameworks are an attractive solution compared to design-build or DBOM implementation methods that are supported by traditional, U.S. financing tools. Will implementation be faster, better, cheaper? Will lifecycle renewal and replacement investment requirements be met more faithfully without deferred maintenance? Will the public receive a higher quality of service? Will public owners fulfill their responsibilities to private partners? Will private partners act as partners or predators? Until now, the rationale for roadway P3s in the U.S. has been taking traffic risk, with most early P3s developed on a negotiated basis; will hard-bid availability-payment-based projects demonstrate that in the U.S. there can be tangible efficiency gains from joining design-build responsibilities with private infrastructure management and finance? These initial transactions only open the door to answering such questions.

***Financing advantages.*** Both the POMT and I-595 transactions are based upon availability payments. These groundbreaking precedents demon-

strate that there is an appetite for both debt and equity in well-structured transactions that do not involve revenue-risk transfer. The potential for solid, predictable returns based upon performance have allowed these two projects to receive \$2.5 billion of financing during the unsettled year of 2009, while many undertakings involving revenue risk have experienced delays, restructuring or cancellation. As financial market conditions stabilize, the potential for P3 structures incorporating revenue risk will come back. However, it is unlikely that the bubble of heavily leveraged, “go go” deals that many predicted would lead to wholesale monetization of transport assets in the U.S. will be seen again. Pension funds and other long-term investors are similarly finding that overleveraged transactions and “winners curse” outcomes do not match the promise of the emerging infrastructure asset class. Realistically structured revenue-risk deals and, in many cases, availability-payment transactions (particularly for greenfield transit and sensitive highway facilities that are unrealistic to toll) are the more likely future of P3 in this country.

**Risk transfer.** POMT demonstrates that P3s are an excellent vehicle for risk transfer and encouraging innovation. Confronted with a preference from U.S. constructors for, essentially, a “cost-plus” contract structure, Florida was unwilling to take the risks of new technology for tunneling, building its first major tunnel ever, and operating and maintaining a critical, but novel facility for 30-plus years. The P3 framework attracted compliant proposals from three international teams, two of which were priced well under in-house estimates, and all of which accepted the desired risk transfer. FDOT will make a \$350-million payment upon final acceptance and will begin making availability payments upon substantial completion — the burden of completion clearly rests on the concessionaire. Over the following 30-plus years, availability payments will be subject to deduction if there are unplanned lane closures or deficiencies in providing a safe, well-maintained facility, with higher deductions during peak periods.

**Procurement innovations.** Procurement practices and risk allocation arrangements developed during the evolution of POMT were successfully applied to I-595 and are beginning to migrate into the terms and conditions of even conventionally financed projects. P3 practice in the U.S. and Canada is also building on international approaches that are being adapted in Florida:

1. Interaction with bidders prior to launching procurements through industry forums and one-on-one meetings;
2. Refining draft contract documents through written questions and one-on-one discussions;
3. Use of Final Acceptance Payments to manage the weighted average cost of capital and better fit future public budget requirements;
4. Recognizing more standardized approaches to commercial considerations such as: flexibility in financial risk sharing (credit spreads and even anticipating shifts from bond to bank financing), insurance benchmarking, surety requirements, escalation and indexation provisions, permitting, right of way, contamination, and compensation on termination.

### SPECIAL SAUCE

Finally, there is the uniqueness factor—POMT is a complex greenfield P3 with no tolls. As Congress considers P3s and national lending policies for infrastructure as part of the reauthorization of federal transport legislation, the ability of POMT to provide value for money to the public sector while offering attractive returns to the private sector opens a new basis for conversation that knocks down ideological stereotypes.

POMT was advanced under a highly competitive procurement process and delivers significantly improved transport capacity. It is the embodiment of port-highway intermodal connectivity for passenger and freight movement. And it introduces new tunneling technology to the U.S., all with no tolls and fair, predictable returns on investment that look more like a public utility than a leveraged buyout. Very little public money will be spent until the project is complete, and to the extent it is delayed or underperforms, the public payments will be reduced. No public sector jobs are being lost, and all federal aid requirements will be met. Hopefully, these lessons will help inform the discussions that are coming in Washington and in the other state capitals and city halls where programs and policies for P3s are being developed now. ■

*Jeffrey Parker served as financial advisor to Florida DOT on both the Port of Miami Tunnel Project and the recently financed I-595 Corridor Roadway Improvements Project.*

# Novel Risk Allocations For POMT

by Brandon Davis and Patrick Harder, Nossaman LLP

Florida's Dept. of Transportation (FDOT) considered many novel risk allocations over the course of the procurement for the Port of Miami Tunnel and Access Improvement Project. The following four stand out:

## Changed Geotechnical Conditions

The geology under Biscayne Bay is porous and unpredictable. Discovery of large voids or other unforeseen ground conditions during tunneling would undoubtedly lead to delays and increased costs. FDOT knew that it could not bear this risk all by itself. At the same time, if it shifted all of the risk of changed geotechnical conditions to the private sector, either no one would bid or the bids would skyrocket.

To address these countervailing concerns, FDOT came up with the following risk-sharing solution:

- a) The first \$10 million of extra costs due to changed geotechnical conditions is the concessionaire's responsibility;
- b) The next \$150 million is FDOT's responsibility (paid out of a contingency reserve containing FDOT and Miami-Dade County funds); and
- c) The next \$20 million is covered by the concessionaire.

Over this \$180-million contingency threshold, either party may choose to terminate the agreement.

## Named Windstorms (Hurricanes)

After considerable negotiations, FDOT decided to address hurricane risk by agreeing to cover property damage costs resulting from any storm severe enough for the government to name it, provided that the concessionaire:

- a) Complies with the procedures in the Hurricane Readiness Plan prepared by the concessionaire and approved by FDOT;
- b) Complies with storm-related directives

issued by the Port of Miami or other governmental entities; and

- c) Covers the first \$1 million of damage caused by each storm (with a maximum liability of \$3 million each year).

FDOT also agreed that if a named windstorm causes a project delay, it will extend the concessionaire's construction completion deadlines.

## Marine Transit of the Tunnel Boring Machine

Few companies in the world manufacture tunnel boring machines (TBM) big enough to bore the twin 42-ft tunnels for the project. Since all of these manufacturers are outside the United States, the concessionaire will need to transport the TBM over open water. The concessionaire was willing to assume the risk of losing or damaging the TBM in transit. The banks, however, were not. A few weeks prior to financial close, the banks demanded time relief in the event the TBM is lost or damaged.

FDOT agreed to extend construction deadlines if the loss or damage results in at least 60 days of project delay, provided that the ship transporting the TBM was seaworthy. This compromise enables the concessionaire to avoid default if forced to replace its TBM (which takes a year or longer), though it does not extend the term of the concession or otherwise provide for monetary relief.

## Bonding Requirements

Florida law required contractors on public works projects to provide surety bonds covering 100% of the contract price. Although such requirements are common, they can by themselves undermine P3 programs because the surety market does not provide bonds big enough to cover the contract price of many P3 projects. Nevertheless, legislatures are slow to pull back these requirements due to concerns that the state and local subcontractors will be unprotected if there is a default by the prime contractor.

To resolve this problem, FDOT spearheaded an effort to enact legislation in 2007 that permits FDOT to reduce bonding requirements for larger projects, as long as the private sector provides alternate security for the balance of the uncovered contract amount. With this revision in hand, FDOT was able to require payment and performance security that are obtainable in the market. This security, coupled with other project-appropriate tools, provides FDOT and local subcontractors with the protection they need in case of concessionaire default.

### Conclusion

Although the Port of Miami Tunnel Project is novel in many ways, the construction industry gen-

erally, and the P3 market in particular, can learn from the deal. Specifically, the industry can learn the value of early and active engagements between the sponsoring agencies and proposers regarding their concerns and re-assessing standard risk allocations when appropriate. At the end of the day, this approach played a key role in enabling FDOT to reach financial close on a project unlike any other in the state's history, despite the worst recession in decades. ■

*Nossaman LLP attorneys Patrick Harder and Brandon Davis served as lead outside legal counsel to the Florida DOT on both the Port of Miami Tunnel Project and the recently financed I-595 Corridor Roadway Improvements Project.*

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# Bouygues Jumps Over Miami Hurdles

by Peter Reina, PWF London

It lost its financial backers twice but the French construction company Bouygues Travaux Public (BTP), Paris, went on to win the Miami tunnel contract anyway. A difficult, greenfield project such as Miami Port's twin tunnels, backed by in-house technical and financial engineering, is just the kind of project that seems to suit the European way of doing things.

More than their Anglo-Saxon counterparts, French contractors are used to engineering projects as much as building them. For the French, the ability to shape a scheme from the start is the route to gaining a bidding advantage. The lack of such opportunities has been one reason cited by Bouygues Construction's Deputy Chief Executive Michel Cote for eschewing the U.S. market so far.

Miami has changed all that. "To put together such a project, there is not so much competition," says BTP's Commercial Director Jean-Pierre Margolin. Wet soft ground along the 1.2-km-long tunnel tends to rule out methods used traditionally in the U.S. in favour of sophisticated technology familiar to Europeans. What technical competition there was, came also from abroad, with Spain's FCC and Dragados and Brazil's Odebrecht in rival teams.

That the construction cost estimate made by officials was around 100% above BTP's US\$607-million bid price reflects the project's novelty in the U.S., suspects Margolin. Why such a high estimate "was a question we asked ourselves at the beginning of the process," he says. He thinks officials had built in large contingencies to cover the uncertainties in the absence of a "benchmark." Whatever the reason, there's no question of BTP buying the contract with an artificially low price, he says: "We don't sacrifice margins."

"In this kind of soil conditions we have an edge in terms of track record [and] risk management," says Margolin. BTP will procure a giant tunnel boring machine of the Earth Pressure Balance (EPB) type. The machine's 12.3-meter diameter closed face is designed to grind the soft soil creating a kind of slurry that is intended to support the ground in front, preventing its collapse.

During the 55-month construction phase, BTP will

be in familiar territory. The firm introduced EPB technology to Hong Kong early this decade. And it has built large, soft-ground tunnel in various countries. Last year it completed a Yangtze River crossing near Shanghai using two machines nearly 3 meters wider than Miami's will be.

"We identified the project at a very early stage and then we looked for potential partners and investors. That's how we started to work with ABN Amro as the investor and Transfield as the partner," says Margolin. In early 2007, after prequalifying to bid, ABN Amro quit the group and Bouygues recruited Babcock & Brown as a replacement. "At that stage it didn't impact the proposal, it was early enough," he recalls.

Then financial bad luck struck again, as Babcock & Brown fell victim to the global crisis late last year. Luxembourg-based Meridiam Infrastructure Finance stepped into the breach this spring. Bouygues and Meridiam had worked together previously, and the financier understood infrastructure. Its portfolio includes the Irish Republic's Limerick tunnel and highway concessions in Austria, Poland, Germany, and Slovakia.

"When Babcock & Brown ran into difficulties, for sure we had uncertainties that we could find a new investor or that Florida Department of Transportation would accept such a change," says Margolin. "But I think that the fundamentals of the project were still there."

Having to work with several governmental agencies meant local knowledge "was fundamental to the deal," says Margolin. "We relied a lot on Meridiam to lead." Having the American engineering consultant Jacobs on the team helped. And BTP's own pedigree contributed, he adds.

BTP is part of a construction group with sales last year of around Euro 9.5 billion (US\$14.2 billion), 45% outside France. Its project finance experience precedes that of many of today's big players. Bouygues's infrastructure concessions include a container port in South Korea, highways in Croatia, France and Jamaica, Africa's first high-speed railway, and a road tunnel now being built on the U.K. River Tyne. ■

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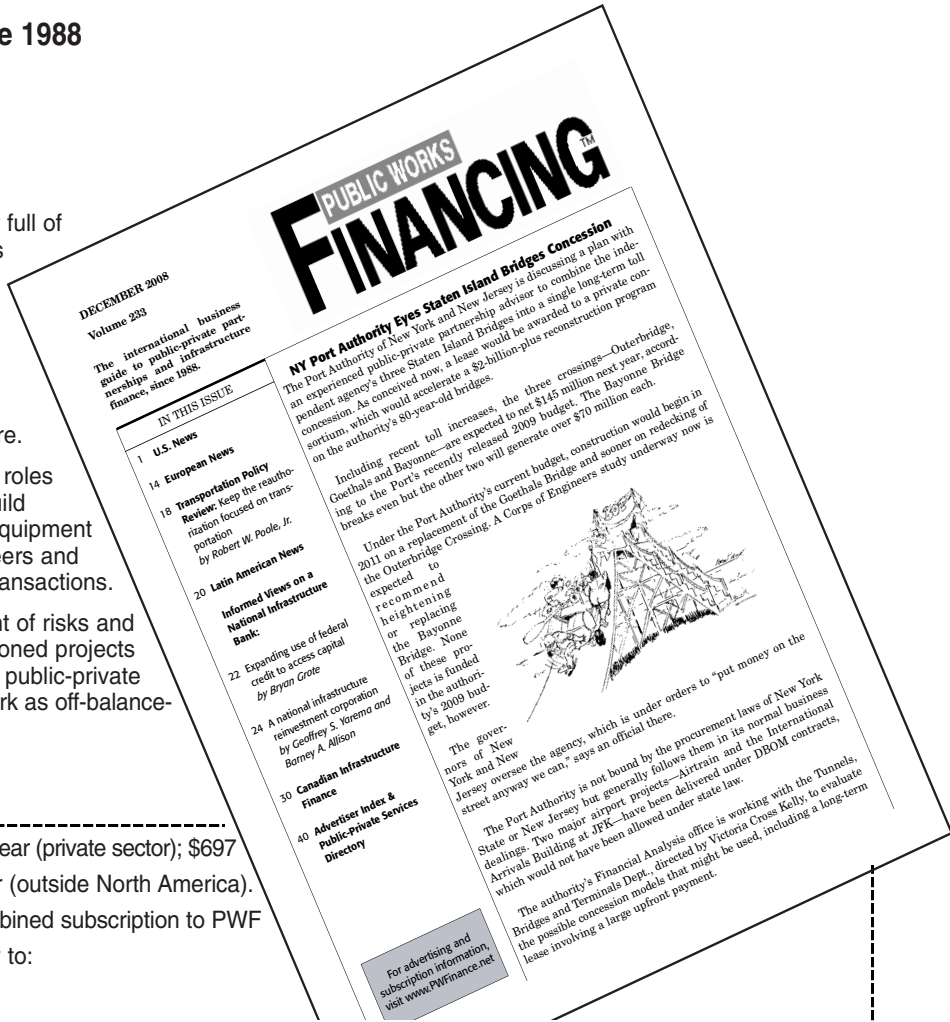
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