

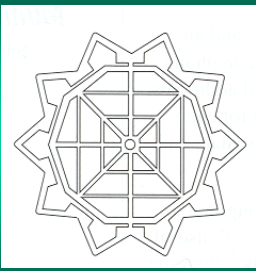


THE DESIGN / BUILD / OPERATE PROJECT DELIVERY METHOD

A How to Seminar
For Industries and Municipalities

MMA ANNUAL MEETING 2003

January 10, 2003

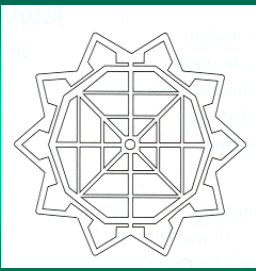


Presentation Participants

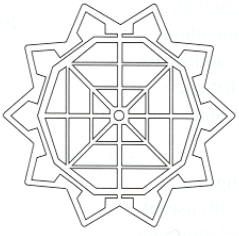
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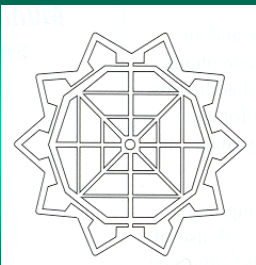


Defining the Approaches



Traditional D/B/B/O Approach

- *Design/Bid/Build/Operate [D/B/B/O]*
 - Selection of engineer to permit, plan & design project
 - 100% contract documents issued for bid
 - Selection of general contractor to construct project
 - Selection of Engineer to provide construction management services
 - Finance project through SRF / GO / Revenue bonds if Municipality
- *Operation of Facilities by Municipality / Industry*



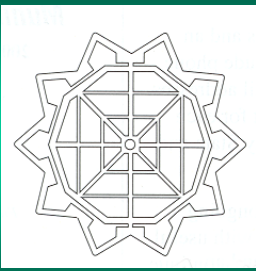
Design/Build Approach

- *Design/Build [D/B]*
 - Entity issues RFEI / RFP for design/build services
 - Entity evaluates proposals & selects vendor
 - Entity negotiates contract with vendor
 - Vendor designs & constructs project
 - Entity provides construction management services
 - Entity finances project through SRF/GO/Revenue bonds
- *Operation of Facilities by Municipality / Industry / Vendor*

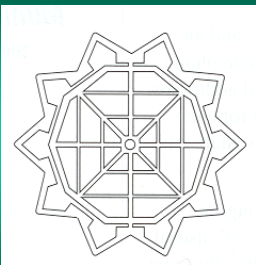


Design / Build / Operate Approach

- Design/Build/Operate [D/B/O]
 - Entity issues RFEI / RFP for design/build/operate services
 - Entity evaluates proposals & selects vendor
 - Entity negotiates service contract with vendor
 - Vendor designs, constructs & operates project
 - Entity provides construction management services
 - Entity provides contract monitoring
 - Entity finances project through SRF/GO/Revenue bonds

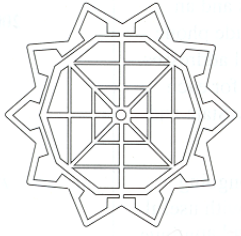


*Why Consider
D/B or D/B/O ?*



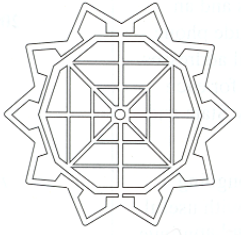
Why Consider D/B or D/B/O ?

- Lower Project Costs - Construction & Operation
- Stabilize Payments / User Fees Over the Long Term
- Reduce and/or Transfer:
 - Technical, Environmental and Business Risks
- Eliminate Corporate / Municipal Responsibility for Wastewater / Water Treatment
- Transfer the Wastewater / Water Asset Management to Streamline Internal Operation



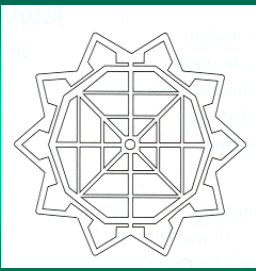
Why Consider D/B or D/B/O ? (cont)

- Avoid the Disadvantages of the Conventional Procurement
- Solicit the “Better Idea”
- Implement the Option for Quality Over Price
- Achieve Cost Competition
- Select Vendor Offering “Best Value” Based on:
 - ✉ Quality of Competitive Design
 - ✉ Quality of Technical Proposal Submittals
 - ✉ Financial Strength of Parent Company (Guarantor)
 - ✉ Business Merit of Contract Proposal



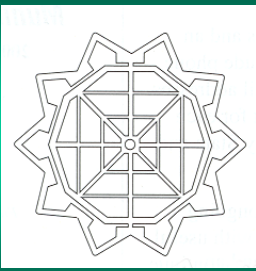
Where Are the Savings ?

- Savings in Time and Money Due to Single Point of Responsibility -- Quicker Response
- Inefficiencies of the Conventional Design / Bid / Build Process Reduced -- Filed Sub-bids, Negotiation
- Capital Construction Cost Savings
- Operation and Maintenance Cost Savings
 - ✉ Labor Through Natural Attrition
 - ✉ Power and Chemicals
 - ✉ Repair and Replacement -- Proactive Approach



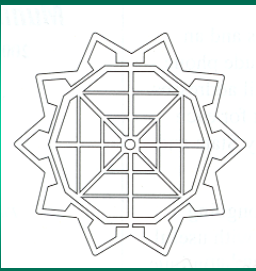
Risk Allocation

- Single Point of Performance Guarantee
- Single Point of Asset Management Responsibility
- Engineering Permitting and Design Guarantee
- Fixed Price for Construction
- Fixed O&M Service Fee
- Guaranteed Schedule for Design, Construction, Acceptance
- Guaranteed Performance Over Flow and Loading Criteria



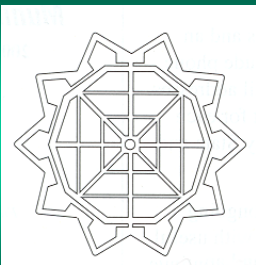
Project Risk Allocation

<u>Risk</u>	<u>D/B/B/O</u>	<u>D/B</u>	<u>D/B/O</u>
Schedule	Municipality Industry	Vendor	Vendor
Construction Cost	Municipality Industry	Vendor	Vendor
O&M Cost	Municipality Industry	Municipality Industry	Vendor
Project Permitting	Municipality Industry	Municipality Industry/Vendor	Vendor



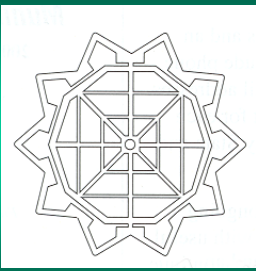
Project Risk Allocation

<u>Risk</u>	<u>D/B/B/O</u>	<u>D/B</u>	<u>D/B/O</u>
Environmental Compliance	Municipality Industry	Municipality Industry	Vendor
Force Majeure	Municipality Industry	Municipality Industry	Municipality Industry
Change of Law	Municipality Industry	Municipality Industry	Municipality Industry



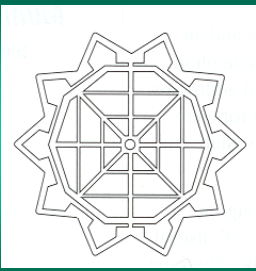
Why D/B or D/B/O Are Not Considered?

- Perceived Loss of Control Over Management of Assets
- Concern for Provider Cutting Corners to “Make a Profit”
- Concern for Reduced Maintenance / Upkeep by Vendor
- Perceived Inferior Design and Construction Criteria
- Concern for a Reduction in Service Level
- Potential Loss of Jobs, Wages and Benefits

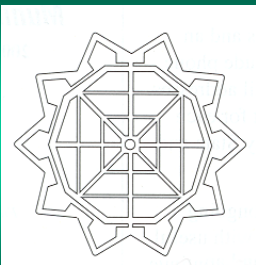


Concept of Asset Management?

- Full Service Operation and Maintenance of the Designated Facilities
- Full Responsibility for all “Inside the Fence” Activities
- Full Responsibility to Permit, Design, and Construct New Facilities or Make Needed Capital Improvements
- Detailed Capital Repair and Replacement Program
- Full Provisions “In-force” Until Last Day of Contract

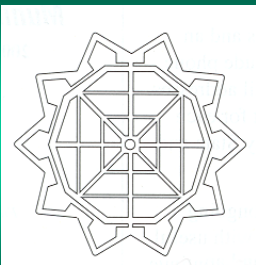


Procurement of D/B -- D/B/O Services



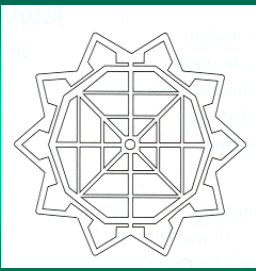
How Do I Get Started?

- Need a “Champion” With Vision to Initiate the Process
- Preparation of “Baseline Analysis” or “Benchmark”
 - ✉ Forms Basis of Comparison
 - ✉ Details the Impacts of Continuing with “Status Quo”
- RFEI Document Prepared and Issued
- Issue Request For Qualifications
- Issue Request For Proposals



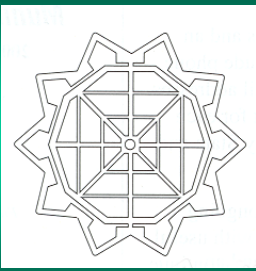
Investigating the Approach - Testing the Waters

- Identify Objectives
- Review Facility Condition, Compliance History, Required Capital Improvements
- Conduct Preliminary Analysis -- Are There Savings to be Realized?
- Assess Your Own Ability to Effect the Required Change
- Conduct Economic Analysis -- Benchmarks From Others
- Decision to Proceed



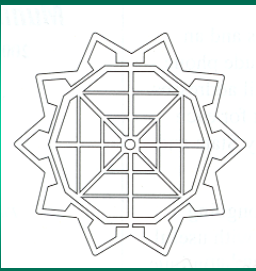
Objectives of D/B - D/B/O Services Procurement

- Elicit Competition Among Service Provider Firms
- Attract Proposals From Qualified / Responsive Providers
- Obtain Terms of Agreement that Meet Established Objectives
- Develop a Win - Win Contract That Serves Both Parties
- Provide an Environment for the Development of Attractive Business Relationships
- Demonstrate a Fair and Even Playing Field



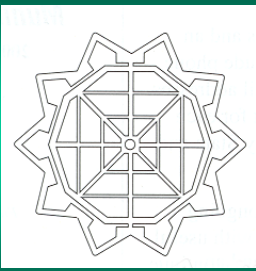
Recommended Procurement Steps

- Redefine Objectives
- Issue RFI -- Generate Vendor Interest (Test the Market)
- Define Key Business Terms & Conditions
- Develop and Issue RFP -- Main Procurement Instrument
- Evaluate Proposals & Conduct Interviews
- Select Service Provider
- Negotiate Contract
- Monitor Contract



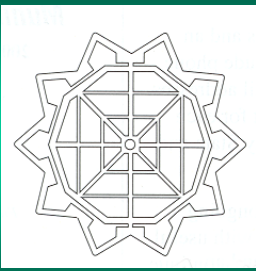
Content of Typical RFP

- Background and Objectives of Procurement
- Description of Facilities
- Scope of Services --- Construction & Operation
- Performance Specifications
- Schedule Requirements



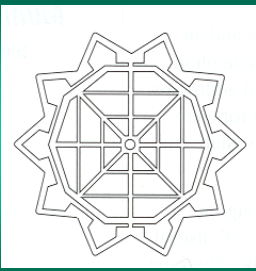
Content of Typical RFP (cont)

- Draft Contract, Key Contract Terms
- Structure of the Deal
- Procurement Process Description
- Proposal Submission Guidelines and Criteria
- Evaluation Process and Comparison Criteria
- Cost Submission Guidelines and Procedures



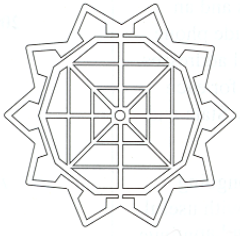
Evaluation of Proposals

- Establish a Selection Committee
- Conduct Technical Proposal Review
- Conduct Cost Proposal Review
- Contact References / Visit Referenced Facilities
- Perform Value Analysis
- Develop Short-List / Conduct Interviews
- Select Vendor



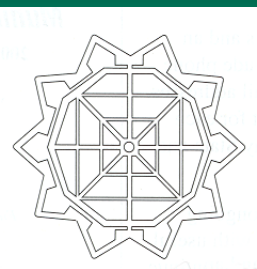
Technical Evaluation of Proposals

- Completeness Review
- Conformance to Technical and Schedule Requirements
- Review of Exceptions Taken
- Conformance with Minimum Technical Scope Items
- Qualifications and Experience of Firm / Project History
- Qualifications and Experience of Professionals Assigned
- Merits of Technical Approach
- Conformance with Technical Contract Principles



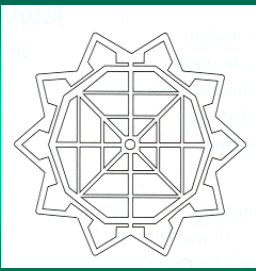
Economic Evaluation of Proposals

- Total Present Value Cost Analysis
 - ☐ Capital Costs & Operation and Maintenance Costs
- Fair Representation of Future Costs
- Life Cycle Financial Model Developed
- Projected Annual Debt Service - Representation Capital
- Comparison to the Conventional Approach Benchmark
- Sensitivity Analyses Conducted for Bracketing
- Make Valid Comparisons



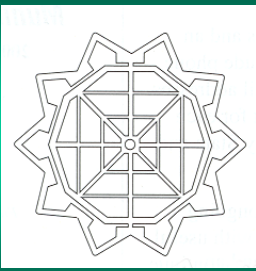
Evaluation of Proposers' Financials

- Short Term Perspective / Long Term Perspective
- Quality vs Quantity of Financials
- Strength of Firm
 - ✉ Strong Firm Made Weak -- Special Purpose Company
 - ✉ Weak Firm Made Strong -- Solid Parent Guarantee
- Talk with Credit Analyst / Talk with a Rating Agency
- Work with Source Materials

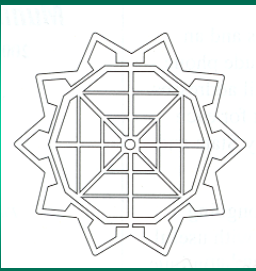


Project Financial Analysis

- Public Entity Financing
- Sources of Public Sector Capital
 - ✉ General Obligation Debt
 - ✉ Revenue Debt
 - ✉ Concession Payments
- Revenue Procedure 97 - 13
 - ✉ Maximum 20 Year Term, Renewals Allowed
 - ✉ Minimum 80% Fixed Fee
- Credit Strength of Proposers/Vendors

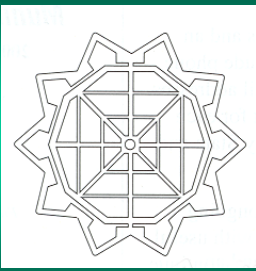


D/B/O Contracts



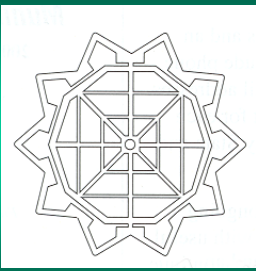
Elements of Solid Contracts

- Well-defined Scope of Service
- Highly Specific Performance Standards and Attainable Performance Guarantees
- Necessary Sureties -- Construction and Operation
 - ✉ Labor and Material Payment Bonds
 - ✉ Performance Bonds
 - ✉ Bid Bond
 - ✉ Letter of Credit
 - ✉ Vendor Parent Guarantee



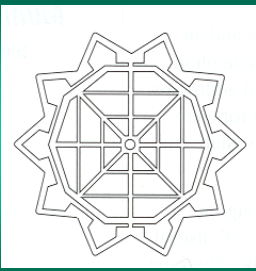
Elements of Solid Contracts - II

- Review / Oversight of Design and Construction
- Well-Defined Acceptance Testing Requirements
- Information and Reporting Requirements
- Periodic Testing Provision
- Annual Operations Review by Independent Engineer
- Well-Defined Arbitration / Dispute Resolution Provisions



Elements of Solid Contracts - III

- Protection For Existing Employees
 - ✉ All Employees Offered jobs
 - ✉ Equal or Better Pay / Benefits
 - ✉ No Lay-offs for Life of Contract -- Except for Cause
 - ✉ Recognition of Existing Unions
 - ✉ No Loss of Seniority
 - ✉ No Involuntary Transfer to Off-site Position
 - ✉ Ability to Stay in the Public Pension System
 - ✉ Ability to Remain Public Employees

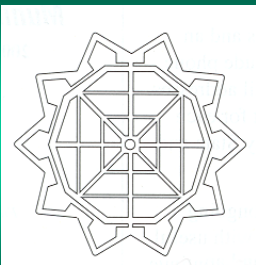


Elements of Solid Contracts - IV

- “Make Whole” Provision
- Termination Provisions
 - ✉ Cause
 - ✉ Convenience After the Fifth Anniversary
 - ✉ Excessive Increase in the Service Fee
 - ✉ Excessive Future Capital Modification Costs
 - ✉ Inability for Entity to Pay
 - ✉ Non-appropriation

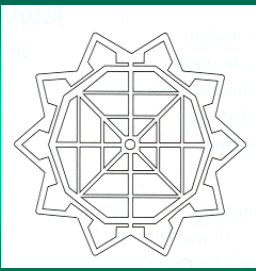


Frequently Asked Questions



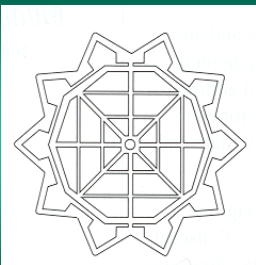
Municipal Procurement of D/B and D/B/O

- How do municipalities procure D/B or D/B/O services in Massachusetts (MA)?
 - Current MA procurement laws do not allow for the procurement of D/B or D/B/O services
 - Municipality would be required to prepare, submit and obtain special “Home Rule” legislation
 - Legislation forms the framework for D/B or D/B/O procurement & controls procurement methodology
 - Examples of municipalities that have obtained legislation include; GLSD, LWSC, Plymouth, Taunton and Holyoke



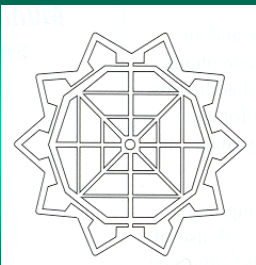
Typical Results

- What are the typical results of a D/B/O procurement?
 - A better design for a WWTP
 - Significant savings in construction costs and O&M costs
 - A reduction in the number of responsible parties: down to a single vendor
 - Design and construction proceeds more quickly
 - Multiple proposals & ideas from several engineering firms, not one
 - Competition from various vendors resulting in cost savings to the municipality



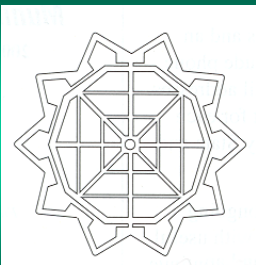
Typical Results

- What are the typical results of a D/B/O procurement (continued)?
 - Ability to negotiate, per special legislation, the proposed scope of services and cost with the selected vendor
 - Ability to select higher cost alternative to gain higher quality product which may provide lower long-term O&M costs
 - Transfer of certain risks from the municipality to vendor
 - Provision for the protection of current labor force as identified in special legislation



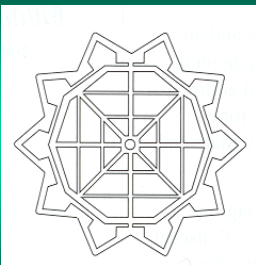
Ensure Quality Facility

- How would municipality / industry ensure that a quality facility is designed and constructed?
 - Describe proposed capital improvements in the RFP
 - Require the vendor to obtain/comply with all permits
 - Describe the design standards to be used for the capital improvements - detailed specifications
 - Describe the construction standards to be used for construction - detailed specifications
 - Provide for monitoring, testing and observation during the conduct of the work



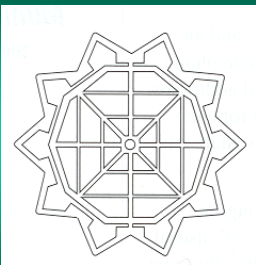
Ensure Quality Facility

- How would municipality / industry ensure a that quality facility is designed and constructed (continued)?
 - Define the shop and field testing required along with the standards of testing
 - Define the level of QA/QC during the conduct of the work
 - Define the start-up and acceptance testing guidelines to be implemented



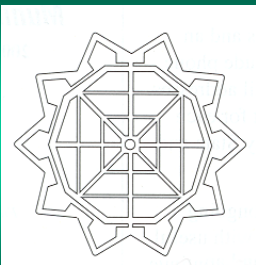
Security in Transaction

- How would municipality / industry protect itself in the contract?
 - Carefully defined scope of services
 - Requirements for a Letter of Credit, Performance Bond, Labor & Materials Payment Bond for both the construction of capital improvements and O&M services
 - Well-defined performance standards for every phase of project activities through the operating term
 - Requirements for parent company guarantee which provides for standing by the commitments made in the vendor proposal



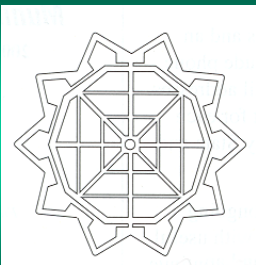
Security in Transaction

- How would municipality / industry protect itself in the contract (continued)?
 - Provisions for contract termination for convenience
 - Provisions to arbitrate disputes
 - Defined procedures to be implemented in the event that future capital improvements are required due to regulatory mandates, change of law, or force majeure
 - Provide for “make-whole” provisions
 - Provide for capital repair & replacement escrow
 - Provide for independent contractual oversight



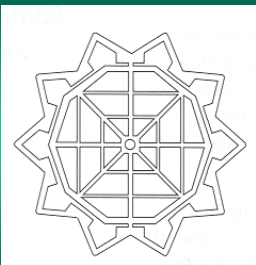
Due Diligence

- What level of municipal / industrial due diligence is required to ensure a successful D/B/O project?
 - Provide for detailed design & construction document review procedures
 - Require shop and field testing with appropriate standards
 - Active monitoring of design & construction functions
 - Establish a QA/QC program during design and construction
 - Conduct regularly scheduled meetings with the vendor



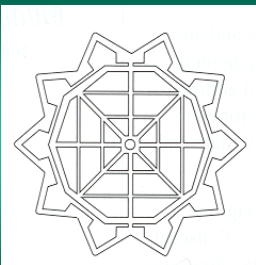
Due Diligence

- What level of municipal / industrial due diligence is required to ensure a successful D/B/O project (continued)?
 - Provide for detailed start-up testing and acceptance testing guidelines
 - Active monitoring of the service contract
 - Ensure the municipality has access to the WWTP on demand
 - Provide for the correction of service problems



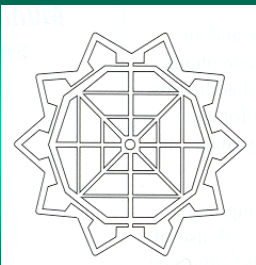
Asset Protection

- How can municipality / industry ensure that its assets will be in decent condition at the end of the 20-year contract?
 - Initial contract system inventory via written and video media
 - Asset condition assessment and criticality analysis
 - Provision for computer maintenance management system
 - Provision for full compliance of all permits and performance requirements
 - Provision for MADEP approved staffing plans
 - Requirements for training of WWTP personnel



Asset Protection

- How can municipality / industry ensure that its assets will be in decent condition at the end of the 20-year contract (cont)?
 - Provision for 24 hour, 7 day per week access of municipal representatives
 - Requirements to perform all preventative, corrective and predictive maintenance required for the facility
 - Provision for the control of odors and noise with the appropriate penalties for non-compliance
 - Provision to respond to emergencies within 2 hours or less



Protection of Municipal Employees

- How can municipality protect its existing wastewater employees in the special legislation?
 - All employees maintain employment
 - Equal or better pay and comparable benefits
 - Opportunity for advancement
 - Employee leasing agreement possible
 - Staff reductions due to natural attrition