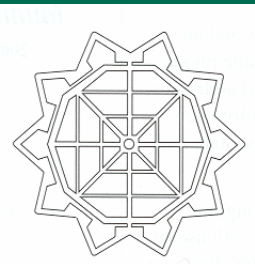


THE DESIGN / BUILD / OPERATE PROJECT DELIVERY METHOD

A How to Seminar
For Industries and Municipalities

MMA ANNUAL MEETING 2003

January 10, 2003

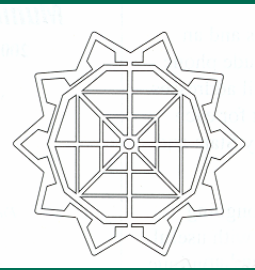


Presentation Participants

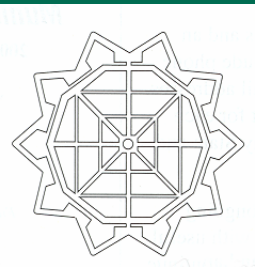
Paul B. Doran, P.E., Director of Engineering,
Alternative Resources, Inc.

Cassandra A. Koutalidis, P.E., Lead Engineer,
Alternative Resources, Inc.

Peter J. Lau, Director of Outsourcing Services,
Roy F. Weston, Inc.

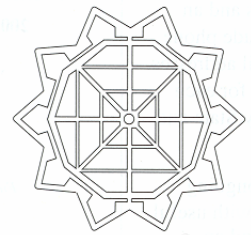


Defining the Approaches



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

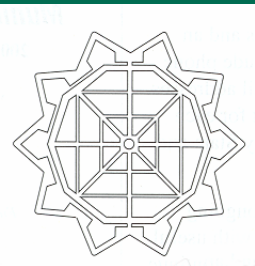
- *Operation of Facilities by Municipality / Industry / Vendor*



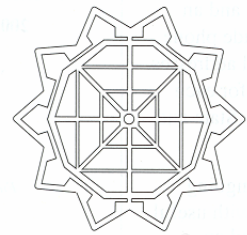
Design / Build / Operate Approach

● 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

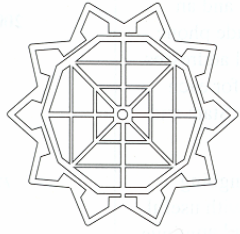


*Why Consider
D/B or D/B/O ?*



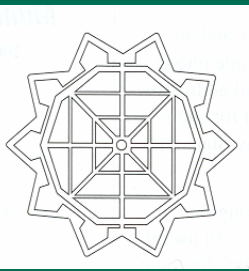
Why Consider D/B or D/B/O ?

- 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



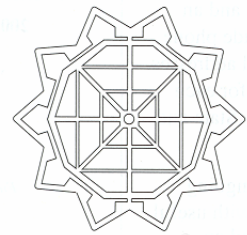
Why Consider D/B or D/B/O ? (cont)

- 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



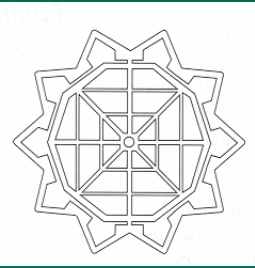
Where Are the Savings ?

- 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



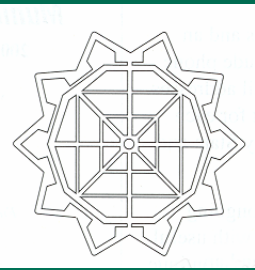
Risk Allocation

- 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



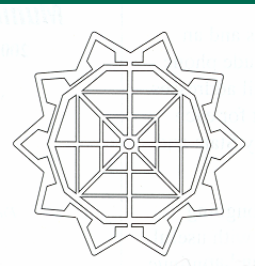
Project Risk Allocation

<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



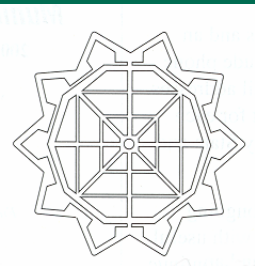
Project Risk Allocation

<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



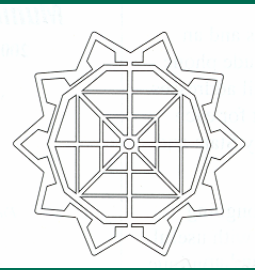
Why D/B or D/B/O Are Not Considered?

- 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

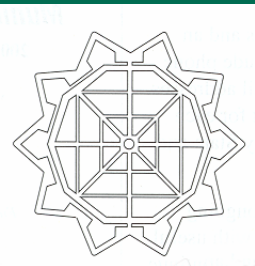


Concept of Asset Management?

- 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



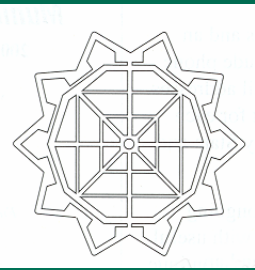
How Do I Get Started?

- 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



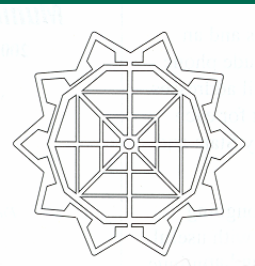
Investigating the Approach - Testing the Waters

- 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



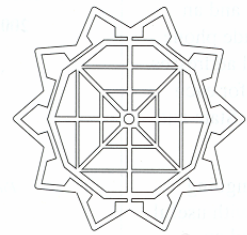
Objectives of D/B - D/B/O Services Procurement

- 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



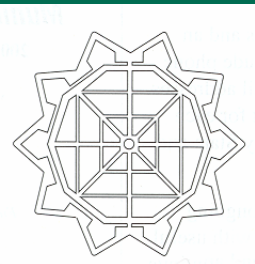
Recommended Procurement Steps

- 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



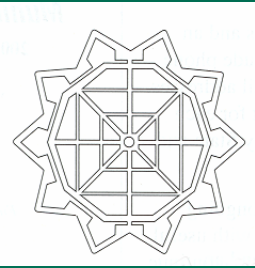
Content of Typical RFP

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



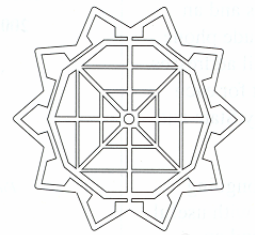
Content of Typical RFP (cont)

- 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



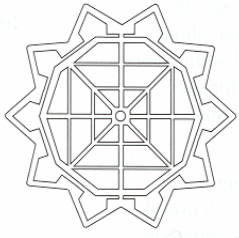
Evaluation of Proposals

- 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



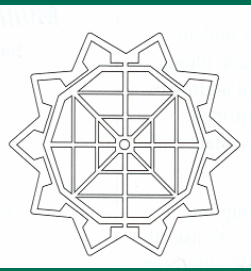
Technical Evaluation of Proposals

- 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



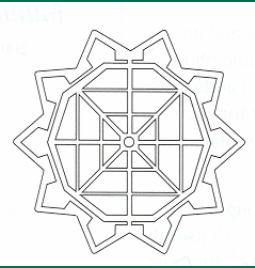
Economic Evaluation of Proposals

- 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



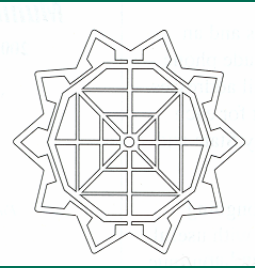
Evaluation of Proposers' Financials

- 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

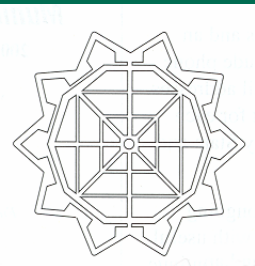


Project Financial Analysis

- 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

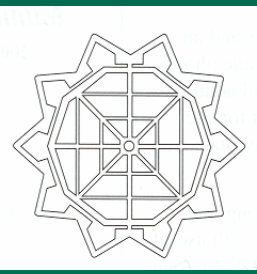


D/B/O Contracts



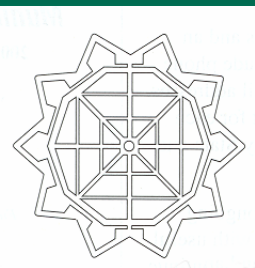
Elements of Solid Contracts

- 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



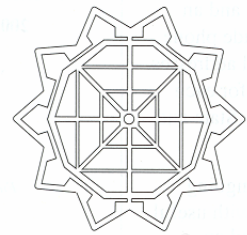
Elements of Solid Contracts - II

- 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



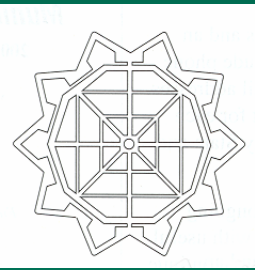
Elements of Solid Contracts - III

- 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

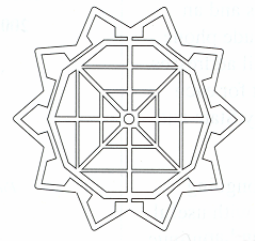


Elements of Solid Contracts - IV

- “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

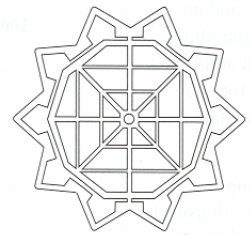


Frequently Asked Questions



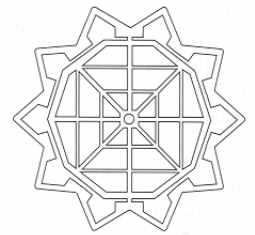
Municipal Procurement of D/B and D/B/O

- 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



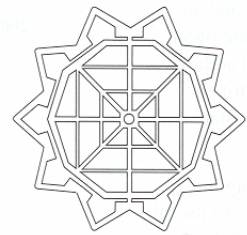
Typical Results

- 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



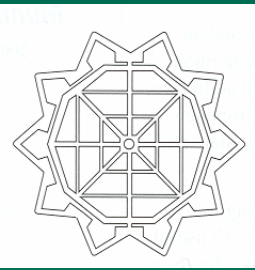
Typical Results

- 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



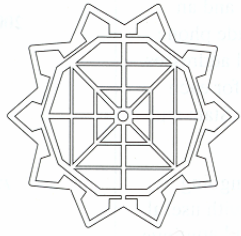
Ensure Quality Facility

- 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



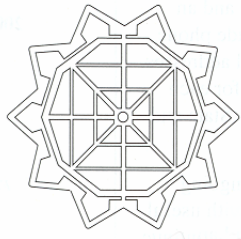
Ensure Quality Facility

- 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



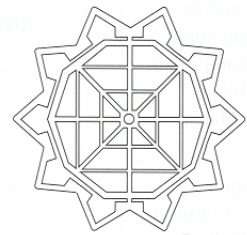
Security in Transaction

- 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



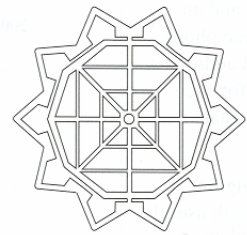
Security in Transaction

- 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



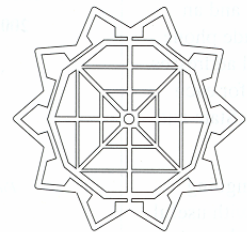
Due Diligence

- 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



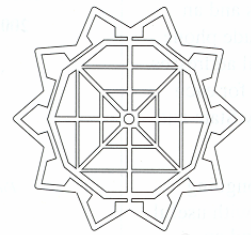
Due Diligence

- 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

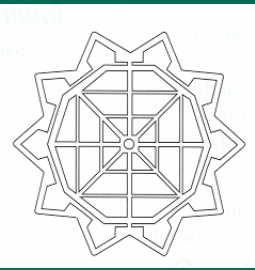
- How can municipality / industry ensure that its assets will be in decent condition at the end of the 20-year contract?
 - Initial contract system inventory via written and video media
 - Asset condition assessment and criticality analysis
 - Provision for computer maintenance management system
 - Provision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



Asset Protection

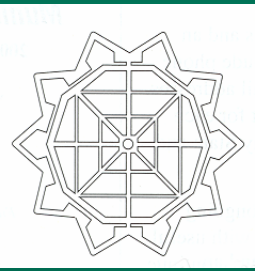
● How can municipality / industry ensure that its assets will be in decent condition at the end of the 20-year contract (cont)?

- 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

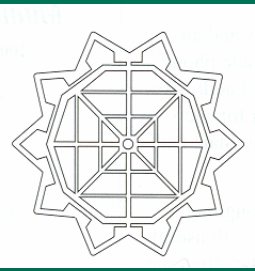
- How can municipality protect its existing wastewater employees in the special legislation?
 - All employees maintain employment
 - Equal or better pay and comparable benefits
 - Opportunity for advancement
 - Employee leasing agreement possible
 - Staff reductions due to natural attrition



DISCUSSION QUESTIONS



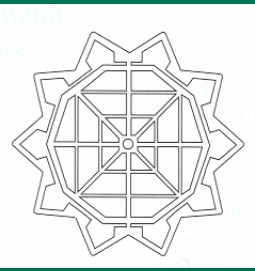
**JOE FRIDAY:
“THE FACTS AND
ONLY THE FACTS”**



*PROFITS, PROFITS,
PROFITS*



**D/B/O VENDORS
RAISE THE RATES TO
BOOST THEIR
PROFITS**

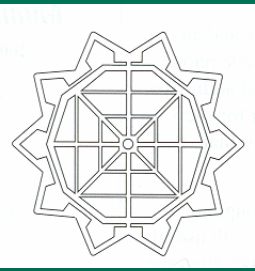


PRIVATE PROFITS



FACTS:

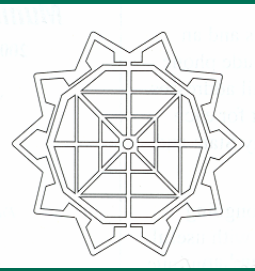
- ***MUNICIPALITY HAS CONTROL OVER RATES***
- ***PRIVATE FIRM NOT SELECTED FOR HIGHER COSTS***
- ***FEES SET BY SERVICE CONTRACT***
- ***CORPORATE GREED vs CORPORATE BLEED***



OPERATIONS PERFORMANCE



***PRIVATE COMPANIES DO
NOT HAVE A GOOD
RECORD OF OPERATIONS
PERFORMANCE***

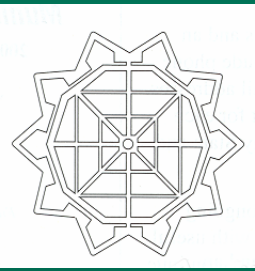


OPERATION PERFORMANCE



FACTS:

- ***MUNICIPALITIES HAVE A SIMILAR COMPLIANCE ISSUES***
- ***PRIVATE D/B/O FIRMS ARE VIEWED DIFFERENTLY BY REGULATORY AGENCIES***
- ***REGULATORY AGENCIES ARE MORE LIKELY NOT TO FINE A MUNICIPALITY FOR NON-COMPLIANCE OR BE VERY TOLERANT***
- ***PRIVATE SERVICE CONTRACTS HAVE SEVERE PENALTIES FOR NON-PERFORMANCE***

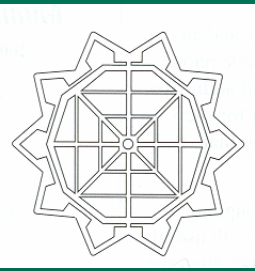


OPERATION PERFORMANCE



FACTS:

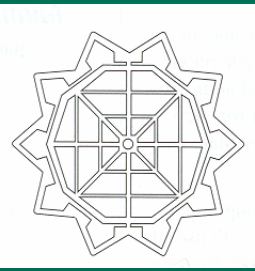
- ***MUNICIPAL ASSETS RECEIVE “CARE AND FEEDING”***
- ***PRIVATE COMPANY MUST INITIATE “ASSET MANAGEMENT” TECHNIQUES***
- ***MAINTENANCE OF EQUIPMENT NOT DEPENDENT ON MUNICIPAL AUTHORIZATIONS THAT ARE “EASILY DEFERRED TO OTHER NEEDS”***
- ***ASSET MANAGEMENT LEADS TO BETTER COMPLIANCE***



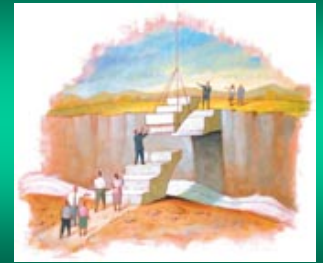
DISCUSSION QUESTIONS



***PRIVATE OPERATION
WILL RESULT IN A
LOSS OF LOCAL
CONTROL***

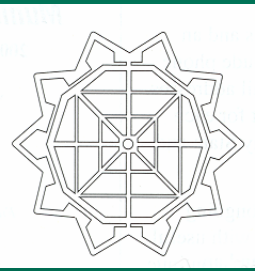


DISCUSSION QUESTIONS



FACTS:

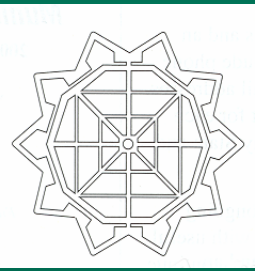
- ***“MORE CONTROL” IS GAINED THROUGH THE SERVICE CONTRACT PROVISIONS***
- ***MUNICIPALITY CAN “TERMINATE FOR CONVENIENCE”***
- ***SERVICE CONTRACT BACKED UP BY “FINANCIAL GUARANTEES”***
- ***SERVICE CONTRACTS HAVE “SEVERE PENALTIES” FOR NON-PERFORMANCE***



DISCUSSION QUESTIONS



***PRIVATE OPERATION
WILL RESULT IN A
LOSS OF WAGES
AND BENEFITS***

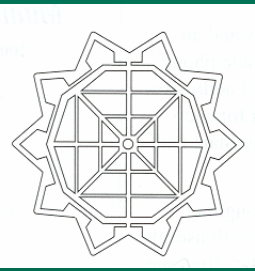


DISCUSSION QUESTIONS

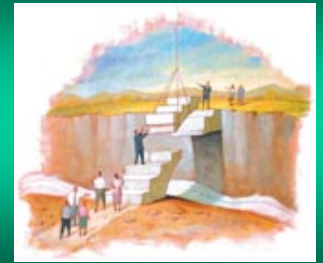


FACTS:

- ***ALL EMPLOYEES MAINTAIN EMPLOYMENT***
- ***EQUAL OR BETTER PAY AND BENEFITS***
- ***OPPORTUNITY FOR ADVANCEMENT***
- ***EMPLOYEE LEASING ARRANGEMENT***
- ***STAFF REDUCTIONS DUE TO NATURAL ATTRITION***



INACCURATE ASSERTIONS



- ***Private Contracting COSTS MORE than in-house services***
- ***Another attack on UNIONS***
- ***Private Firm MAXIMIZING PROFITS***
- ***Social Costs of LOWER WAGES***
- ***Loss of IN-HOUSE EXPERTISE***
- ***Reduction in ACCOUNTABILITY***
- ***Open Door to CORRUPTION***