Today’s Presenters

• Moderator
  Marc Butorac, Kittelson & Associate, Inc.

• IDIQ Contracting Practice Authors
  Douglas Gransberg, Iowa State University
  Jorge Rueda Benavides, Iowa State University
NCHRP is...

A state-driven national program

- The state DOTs, through AASHTO’s Standing Committee on Research...
  - Are core sponsors of NCHRP
  - Suggest research topics and select final projects
  - Help select investigators and guide their work through oversight panels
NCHRP delivers...

Practical, ready-to-use results

- Applied research aimed at state DOT practitioners
- Often become AASHTO standards, specifications, guides, manuals
- Can be directly applied across the spectrum of highway concerns: planning, design, construction, operation, maintenance, safety
A range of approaches and products

- Traditional NCHRP reports
- Syntheses of highway practice
- IDEA Program
- Domestic Scan Program
- Quick-Response Research for AASHTO
- Other products to foster implementation:
  - Research Results Digests
  - Legal Research Digests
  - Web-Only Documents and CD-ROMs
NCHRP Webinar Series

- Part of TRB’s larger webinar program
- Opportunity to interact with investigators and apply research findings.
Today’s First Presenter

- IDIQ Contracting Practice Authors
  Douglas Gransberg, Iowa State University
  Jorge Rueda Benavides, Iowa State University
INDEFINITE DELIVERY/INDEFINITE QUANTITY (IDIQ) CONTRACTING PRACTICES

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and
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Iowa State University
May 10th, 2016
Overview

• Introduction to IDIQ Contracting
• State-of-Practice of IDIQ among State DOTs
• Cost & Pricing Considerations in IDIQ Contracts
• Summary and Conclusions
• Question and Answer Session
Introduction to IDIQ Contracting
Definition and Terminology

“An IDIQ contract provides for an indefinite quantity of supplies and/or services whose performance and delivery scheduling is determined by placing work orders with one or multiple contractors during a fixed period of time”
IDIQ Generic Models

Single Work Order Contract
(e.g. Florida DOT)

Owner —> Work Order —> Contractor

Single Award Work Order Contract
(e.g. Minnesota DOT)

Owner —> Work Order —> Contractor

Multiple Award Work Order Contract
(e.g. Caltrans)

Owner —> Work Order —> Contractor #1
    Work Order —> Contractor #2
    Work Order —> Contractor #3
    Work Order —> Contractor #4
### IDIQ Advantages and Disadvantages

<table>
<thead>
<tr>
<th>Advantages</th>
<th>Disadvantages</th>
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<tbody>
<tr>
<td>• Shorter project delivery period</td>
<td>• Lack of IDIQ experience of agencies and contractors</td>
</tr>
<tr>
<td>• Flexibility in quantity and delivery scheduling</td>
<td>• Limited ability to conduct complete planning, programming, and budgeting procedures at the contract level</td>
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<tr>
<td>• Useful contracting option during emergencies</td>
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State-of-Practice of IDIQ among State DOTs
**Focus of NCHRP Synthesis 473**

<table>
<thead>
<tr>
<th>PROFESSIONAL ENGINEERING SERVICES</th>
<th>CONSTRUCTION SERVICES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design</td>
<td>Construction</td>
</tr>
<tr>
<td>Research</td>
<td>Maintenance</td>
</tr>
<tr>
<td>Other Consulting Services</td>
<td></td>
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*IDIQ may be used on virtually all types of work as their scope comprises recurring tasks*
43 DOTs participated in this study (84% response rate)

32 DOTs use IDIQ for construction & maintenance services.

Note: Those that use IDIQ for design services are not shown.
Some DOTs are using more than one advertising/award approach in IDIQ contracts.
Some DOTs are using more than one payment provision in IDIQ contracts.
### Multiple Award Construction/Maintenance IDIQ Contracts – State DOTs

**Examples:**

<table>
<thead>
<tr>
<th>AGENCY</th>
<th>PROJECT DESCRIPTION</th>
<th>NUMBER OF Awardees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caltrans</td>
<td>Identify and remove underground hazardous material/waste and tanks</td>
<td>Up to 6</td>
</tr>
<tr>
<td>Delaware DOT</td>
<td>Landscaping</td>
<td>All responsive and responsible bidders</td>
</tr>
<tr>
<td>Maine DOT</td>
<td>Paving construction and maintenance services</td>
<td>All responsive and responsible bidders</td>
</tr>
<tr>
<td>Vermont Agency of Transportation</td>
<td>Bridge and pavement preventive maintenance</td>
<td>All responsive and responsible bidders</td>
</tr>
</tbody>
</table>
Multiple Award Construction/Maintenance IDIQ Contracts – State DOTs (Cont.)

Work Order Placement Procedures:

<table>
<thead>
<tr>
<th>AGENCY</th>
<th>WORK ORDER PLACEMENT PROCEDURES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caltrans</td>
<td>• Each work order is assigned to the lowest total price for its specific bid line items.</td>
</tr>
<tr>
<td></td>
<td>• Total price is calculated using fixed unit prices submitted by contractors and applicable to all work orders.</td>
</tr>
<tr>
<td>Delaware DOT</td>
<td>• If the selected contractor is unable to perform the work, the work order is assigned to the awardee with the next lowest price.</td>
</tr>
<tr>
<td>Maine DOT</td>
<td>• Work orders are awarded at the discretion of the agency based on cost and contractor’s availability and/or ability to complete the work.</td>
</tr>
<tr>
<td>Vermont Agency of Transportation</td>
<td>• State DOTs assign work orders based on original bid packages submitted by successful awardees.</td>
</tr>
<tr>
<td></td>
<td>• Federal agencies assign work orders through competitive procedures at the work order level.</td>
</tr>
</tbody>
</table>
The use of IDIQ with DBB, DB or CMGC combines the flexibility of IDIQ, and its multiple project capacity, with the benefits accrued by these contracting methods.
Cost & Pricing Considerations in IDIQ Contracts
Key Cost-Impacting Factors in IDIQ

- Selection of project delivery method and contracting approach
- Contractor involvement in work order development
- Determination of pay items and bid quantities
- Compensation of mobilization expenses
- Selection of price escalation provision
Selection of Project Delivery Method and Contracting Approaches

- IDIQ contracting can be combined with almost all project delivery methods and contracting approaches used in transportation construction and maintenance projects.

- Owners may expect the same benefits and disadvantages commonly attributed to these methods, but at the work order level.
Contractor Involvement in Work Order Development

• Early contractor involvement reduces the risk of project delays and increases budget control.
• Single award IDIQ contracts allow for the earliest possible contractor involvement.
• Early contractor involvement can be achieved in multiple award IDIQ contracts by combining it with other alternative contracting methods.
Contractor Involvement in Work Order Development (Cont.)

- In New York State and Missouri contractors have at least 3 opportunities to submit input during the work order development process.
Determination of Pay Items and Bid Quantities

- IDIQ bid quantities of work should be in the same proportion as the quantities of anticipated actual work.

- Incomplete pay item lists result in post-award negotiations of prices in a non-competitive environment.
Determination of Pay Items and Bid Quantities (Cont.)

Scope development

1. Review previous similar projects
2. Build generic models for each anticipated type of work order to be issued
3. Determine Bid Quantities

High uncertainty related to pay items identification?

- Yes: Consider multiple award IDIQ or other non-IDIQ contracting approach
- No: Compile all pay items in generic models into a single list; Add contingency pay items

Items for services or supplies that the contractor may be requested to furnish under special circumstances
Compensation of Mobilization Expenses

• In single award IDIQ, contractors are only allowed to bid once when there is no precise information about the location and work to be performed under each project.

• Single award IDIQ contracts should include multiple mobilization pay items considering all possible types of projects and locations.

Source: Oregon DOT
Selection of Price Escalation Provisions

• Price Escalation provisions are used in multi-year single award IDIQ contracts to adjust unit prices over time.

• Unit price adjustment approaches:
  – Construction cost indexes
  – Fixed annual adjustment rate
  – AxE Bidding
Conclusions and Effective Practices
Conclusions

• IDIQ can be applied to virtually all types of work as their scopes comprises frequently required tasks.

• The major benefits of IDIQ contracting are:
  - Reduction of project delivery period;
  - Flexibility in quantity and delivery scheduling; and
  - The ability to quickly fund needed work (response to emergencies and use of year-end funds)

• IDIQ can be combined with almost all project delivery methods and contracting approaches.

• High levels of uncertainty may not prevent contractors from bidding, but may result in higher prices for owners.

• The use of multiple award IDIQ eliminates the need for mobilization and escalation clauses
Effective Practices

• State DOT’s historical data should be used to develop the list of pay items and bid quantities to be included in IDIQ solicitation documents.

• IDIQ bid quantities of work should be in the same proportion as the quantities of anticipated actual work.

• Single award IDIQ contracts facilitate the implementation of ECI practices.

• ECI practices can by implemented in multiple award IDIQ by combining it with alternative contracting methods.

• The use of multiple mobilization pay items and escalation clauses in single award IDIQ reduces the level of uncertainty and the need for large contingencies.
Other Effective Practices

• Streamlined IDIQ contracting procedures with minimum proposal submittal requirements.

• Training sessions with in-house staff and pre-bid meetings with bidders.

• DOTs should balance the number of contractors in multiple award IDIQ contracts with the number of expected work orders. It is a function of:
  − Project scope and complexity;
  − Expected number, frequency, and duration of work orders; and
  − Required resources for a contractor to perform all anticipated types of work.

• To facilitate bonding procedures and increase small business participation in IDIQ contracts, DOTs should:
  − Limit the contract period to one or two years or allow surety companies to furnish annual bonds;
  − Establish maximum quantities of work (in dollars) to be assigned to contractors each year; and
  − Establish a maximum value (in dollars) that the contractor may be performing at any one time.
Thank you for your attention.

Questions?

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