

**PUBLIC DISCLOSURE SOQ**  
**ORIGINAL | Volume 1**



**I-70 EAST  
PROJECT SOQ:**



June 2015



**CONNECTING COMMUNITIES ALONG I-70 EAST**



c/o HOCHTIEF PPP Solutions North America Inc.  
375 Hudson Street, 6th floor  
New York, NY 10014

June 22, 2015

High Performance Transportation Enterprise and Colorado Bridge Enterprise  
c/o High Performance Transportation Enterprise  
Colorado Department of Transportation  
4201 E. Arkansas Avenue, Room 230  
Denver, Colorado 80222  
Attn: Michael Cheroutes, HPTD Director and  
Shailen Bhatt, CDOT Executive Director acting as BE Executive Director

**Re. Submission of FRMG's Public Disclosure SOQ in connection with the I-70 East Project**

In connection with the Request for Qualifications dated March 25, 2015 (as amended by the addendum dated May 29, 2015) (the "RFQ") issued by the High Performance Transportation Enterprise and the Bridge Enterprise, divisions of the Colorado Department of Transportation, in relation to the I-70 East Project (as defined therein), under penalty of perjury I hereby certify on behalf of Front Range Mobility Group ("FRMG" or the "Proposer") that the enclosed digital and physical copies of Proposer's Public Disclosure SOQ (as defined in the RFQ) have been prepared in compliance with Section 5.7.3 of Part B of the RFQ, and I further acknowledge that the Procuring Authorities are relying on my certification to this effect.

Respectfully,

---

Roberto Friedrich  
Official Representative  
Front Range Mobility Group



Nicholas Farber  
Enterprise Specialist  
High Performance Transportation Enterprise  
4201 E. Arkansas Ave., Room 230  
Denver, CO 80222

June 22, 2015

**RESPONSE TO REQUEST FOR QUALIFICATIONS TO DESIGN, BUILD, FINANCE, OPERATE AND MAINTAIN THE I-70 EAST PROJECT**

Dear Mr. Farber,

The Front Range Mobility Group ("FRMG") is pleased to submit this Statement of Qualifications ("SOQ") in response to the Request for Qualifications for the I-70 East Project (the "Project") issued by the Bridge Enterprise and High-Performance Transportation Enterprise (the "Procuring Authorities") on March 25, 2015. We have assembled a team of highly experienced local and international companies to meet the specific challenges of the Project and ensure the successful delivery of this critical project to the Denver community.

FRMG is led by a team of P3 developers with an unparalleled track-record of delivering large and complex transportation P3 projects in North America and globally. Equity Members ACS Infrastructure Development, Inc., HOCHTIEF PPP Solutions North America, Inc., AECOM Capital Inc. and John Laing Investments Limited have delivered more than 220 P3 Projects around the world, including the Eagle P3 Project in Denver. In their capacity as Lead Operator for FRMG, members of our Equity Team bring their extensive experience of providing operations and maintenance services for more than 40 P3 Projects around the world.

FRMG's Lead Contractor is a joint venture of Flatiron Constructors, Inc. and URS Energy & Construction, Inc. (AECOM Construction) - each locally headquartered in Colorado, and Dragados USA, Inc. In partnership with premier local subcontractors Kraemer North America, LLC, BT Construction, Inc. and Interstate Highway Construction Inc., our team has constructed more than 1,500 projects in Colorado and over 50 P3/DB projects in North America.

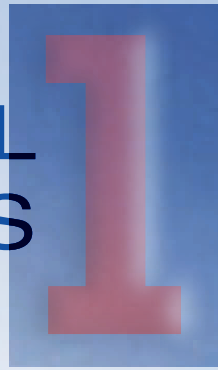
FRMG's Lead Engineer is a joint venture of the locally headquartered CH2M HILL Engineers, Inc. and AECOM Technical Services, Inc., who together have delivered more than 15,000 projects in Colorado. Local engineering firm Tsiouvaras Simmons Holderness Inc. will join our team rounding out our extensive Colorado experience and thorough understanding of the complexities of the Project.

Employing more than 3,500 employees in Colorado, FRMG's team is ready to develop the Project in partnership with the Procuring Authorities and CDOT. We are committed to achieving the Project goals, and delivering an innovative and sustainable solution while advancing the development of the local workforce. We thank you for your consideration of our team and look forward to participating in a transparent and collaborative procurement process with the Procuring Authorities and CDOT on this landmark project.

Sincerely,

Roberto Friedrich  
Official Representative  
Front Range Mobility Group  
*"Connecting Communities along I-70 East"*

# GENERAL REQUIREMENTS

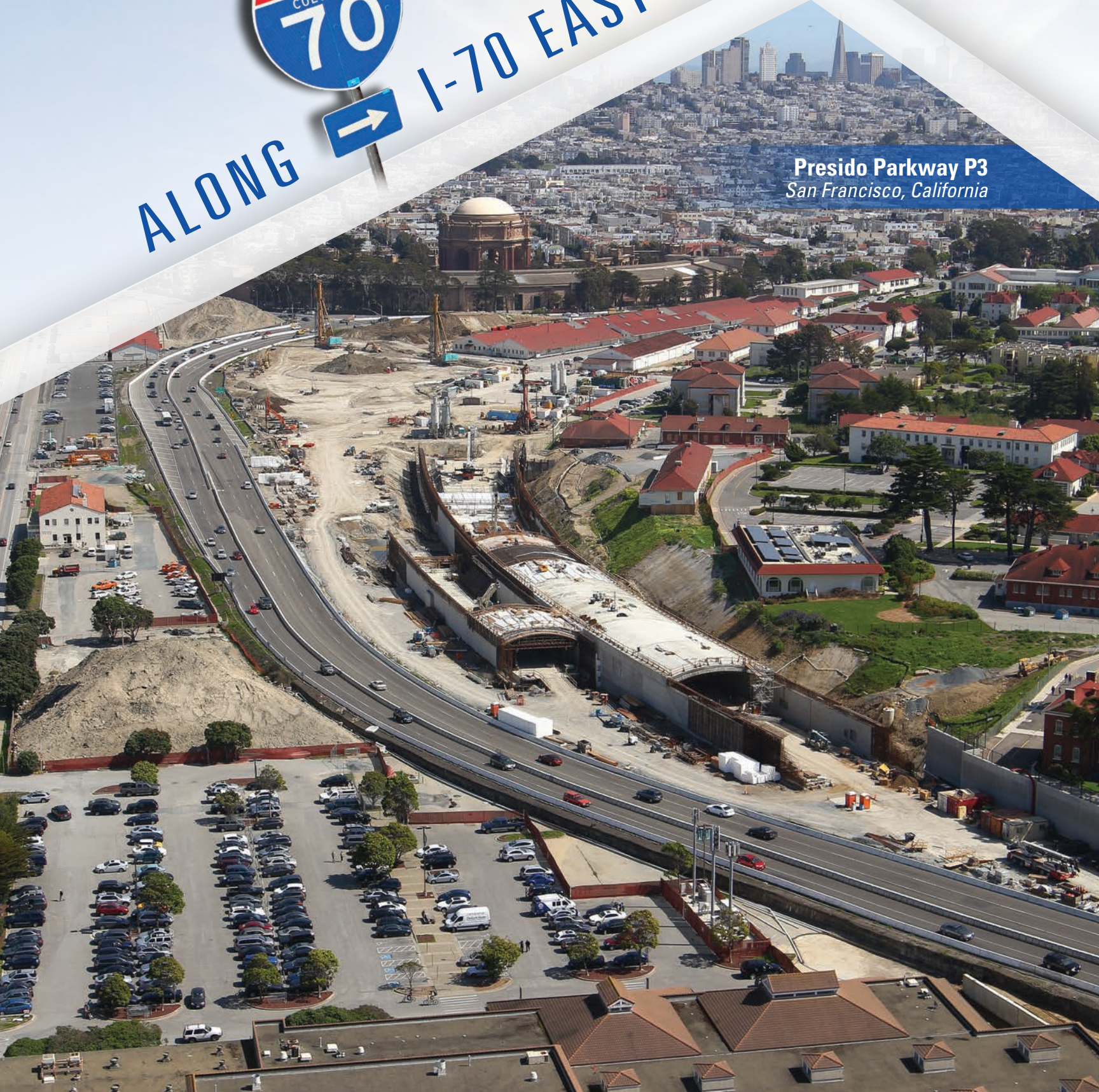


# CONNECTING COMMUNITIES



ALONG I-70 EAST

**Presido Parkway P3**  
*San Francisco, California*







Colorado I-70 East Project

**FORM A: SUBMITTAL LETTER**

**Proposer Name:** Front Range Mobility Group  
**Proposer's business address:** Front Range Mobility Group  
c/o HOCHTIEF PPP Solutions North America Inc.  
375 Hudson Street, 6th floor  
New York, NY 10014

**SOQ Submission Date:** June 22, 2015

High Performance Transportation Enterprise and Colorado Bridge Enterprise  
c/o High Performance Transportation Enterprise  
Colorado Department of Transportation  
4201 E. Arkansas Avenue, Room 230  
Denver, Colorado 80222  
Attn: Michael Cheroutes, HPTE Director and Shailen Bhatt, CDOT Executive Director acting as BE Executive Director

**Re. Submission of SOQ in connection with the I-70 East Project**

1. Introduction.

- (a) Front Range Mobility Group (the "Proposer") submits this statement of qualifications (this "SOQ") in response to the Request for Qualifications dated March 25, 2015 (as amended by Addendum No. 1 thereto dated May 29, 2015, the "RFQ") issued by the High Performance Transportation Enterprise ("HPTE") and the Bridge Enterprise ("BE"), each of which is a division of the Colorado Department of Transportation, in relation to the I-70 East Project.
- (b) Capitalized terms not otherwise defined in this letter have the meanings given to them in the RFQ.
- (c) References to Sections and Parts herein are references to Sections and Parts of the RFQ.

2. Enclosures.

- (a) Enclosed, and by this reference incorporated herein and made a part of this SOQ, are each of Volume 1 Volume 2 of the SOQ as required to be submitted in accordance with the RFQ. This letter itself constitutes the Submittal Letter.
- (b) For the Procuring Authorities' ease of reference:
  - (i) attached as Annex A to this letter is a reference chart indicating the conclusions of Proposer's evaluation of each element of the SOQ for compliance with the Pass/Fail Evaluation Criteria; and
  - (ii) attached as Annex B to this letter is a reference chart indicating each element of the SOQ that Proposer believes is relevant to each of the Substantive Evaluation Criteria.

3. Representations and Warranties; Acknowledgments and Agreements.

- (a) Proposer represents and warrants to HPTE, BE and CDOT that it (i) has read the RFQ (including Addendum No. 1 thereto) and (ii) agrees to abide by the contents and terms of the RFQ and the statements and commitments in Proposer's SOQ.



**Colorado I-70 East Project**

- (b) Proposer acknowledges (i) receipt of, or access to, and understanding and consideration of (A) all information and materials posted on the Project Website and (B) all written information and materials provided directly to it through the Official Representative and (ii) the terms of Section 1.4.3 of Part B, including the limitation on Proposer's ability to rely on such information and materials.
  - (c) Proposer acknowledges and understands that, under the terms of the RFQ, the Procuring Authorities have reserved to themselves a number of rights related to the selection of Short-listed Proposers and the procurement of the Project, including as set out in Section 9 of Part B.
  - (d) Proposer further understands that all costs and expenses incurred by it in preparing this SOQ and participating in the Project procurement process will be borne solely by Proposer, other than as may be expressly provided for in the RFP.
  - (e) Proposer agrees that, in accordance with Section 6.2.3 of Part B, it, and not the Procuring Authorities, will be responsible for any errors, omissions, assumptions, inaccuracies or incomplete statements in its SOQ.
  - (f) Proposer acknowledges and agrees to the protest provisions set out in Section 8.1 of Part B and understands that such provisions limit Proposer's rights and remedies to protest or challenge any aspect of the RFQ process or any determination or short-listing thereunder.
4. Official Representative. For the purpose of any future communications, the "Official Representative" for Proposer is:

<b>Name:</b>	Roberto Friedrich
<b>Title:</b>	Senior Director, U.S. Development
<b>Employer:</b>	HOCHTIEF PPP Solutions North America, Inc.
<b>Address:</b>	375 Hudson Street, 6th floor, New York, NY 10014
<b>Phone (office):</b>	1 212 229 6037
<b>Phone (mobile):</b>	1 646 265 1072
<b>Email:</b>	rfriedrich@hochtief-p3.com
<b>Fax (if any):</b>	1 212 229 6416

5. Governing law. This letter shall be governed by and construed in all respects according to the law of the State of Colorado.

Under penalty of perjury, I hereby swear and affirm that I am authorized to act on behalf of Proposer in signing and delivering this letter, and acknowledge that the Procuring Authorities are each relying on my representation to this effect.

**Proposer:** Front Range Mobility Group

**By:**

**Printed Name:** Roberto Friedrich

**Title:** Official Representative





**Colorado I-70 East Project**

Under penalty of perjury, each of the undersigned:

- (a) certifies on behalf of the entity for which he or she signs that:
  - (i) the Official Representative named above is authorized by the relevant entity to sign this Submittal Letter on behalf of Proposer; and
  - (ii) the representations, certifications, statements, disclosures, authorizations and commitments made, and information contained, in the SOQ (including, for the avoidance of doubt, in Form D (Legal Disclosures)) in respect of such entity have been authorized by such entity, is or are correct, complete and not materially misleading; and
- (b) swears and affirms that he or she is authorized to act on behalf of the entity for which he or she signs and acknowledges that the Procuring Authorities are each relying on his or her representation to this effect:


**Equity Member and  
Lead Operator:**

HOCHTIEF PPP Solutions North America, Inc.

**By:**  
**Printed Name:**  
**Title:**

  
\_\_\_\_\_  
Mike McGuinty  
President

**By:**  
**Printed Name:**  
**Title:**

  
\_\_\_\_\_  
Cecil Kramer  
Secretary

**Colorado I-70 East Project**

Under penalty of perjury, each of the undersigned:

- (a) certifies on behalf of the entity for which he or she signs that:
  - (i) the Official Representative named above is authorized by the relevant entity to sign this Submittal Letter on behalf of Proposer; and
  - (ii) the representations, certifications, statements, disclosures, authorizations and commitments made, and information contained, in the SOQ (including, for the avoidance of doubt, in Form D (Legal Disclosures)) in respect of such entity have been authorized by such entity, is or are correct, complete and not materially misleading; and
- (b) swears and affirms that he or she is authorized to act on behalf of the entity for which he or she signs and acknowledges that the Procuring Authorities are each relying on his or her representation to this effect:

**Equity Member and Lead Operator:** ACS Infrastructure Development Inc.

**By:**



**Printed Name:**

Nuria Haltiwanger

**Title:**

Chief Executive Officer



**Colorado I-70 East Project**

Under penalty of perjury, each of the undersigned:

- (a) certifies on behalf of the entity for which he or she signs that:
  - (i) the Official Representative named above is authorized by the relevant entity to sign this Submittal Letter on behalf of Proposer; and
  - (ii) the representations, certifications, statements, disclosures, authorizations and commitments made, and information contained, in the SOQ (including, for the avoidance of doubt, in Form D (Legal Disclosures)) in respect of such entity have been authorized by such entity, is or are correct, complete and not materially misleading; and
- (b) swears and affirms that he or she is authorized to act on behalf of the entity for which he or she signs and acknowledges that the Procuring Authorities are each relying on his or her representation to this effect:

**Equity Member and Lead Operator:** AECOM Capital Inc.

**By:**

A handwritten signature in blue ink, appearing to read "John T. Livingston", is written over a horizontal line.

**Printed Name:** John T. Livingston

**Title:** Chief Executive



**Colorado I-70 East Project**

Under penalty of perjury, each of the undersigned:

- (a) certifies on behalf of the entity for which he or she signs that:
  - (i) the Official Representative named above is authorized by the relevant entity to sign this Submittal Letter on behalf of Proposer; and
  - (ii) the representations, certifications, statements, disclosures, authorizations and commitments made, and information contained, in the SOQ (including, for the avoidance of doubt, in Form D (Legal Disclosures)) in respect of such entity have been authorized by such entity, is or are correct, complete and not materially misleading; and
- (b) swears and affirms that he or she is authorized to act on behalf of the entity for which he or she signs and acknowledges that the Procuring Authorities are each relying on his or her representation to this effect:

**Equity Member:** John Laing Investments Limited

**By:**

A handwritten signature in blue ink, appearing to read "A Phillips", is written over a horizontal line.

**Printed Name:** Anthony Phillips

**Title:** Head of North America

**Colorado I-70 East Project**

Under penalty of perjury, each of the undersigned:

- (a) certifies on behalf of the entity for which he or she signs that:
  - (i) the Official Representative named above is authorized by the relevant entity to sign this Submittal Letter on behalf of Proposer; and
  - (ii) the representations, certifications, statements, disclosures, authorizations and commitments made, and information contained, in the SOQ (including, for the avoidance of doubt, in Form D (*Legal Disclosures*)) in respect of such entity have been authorized by such entity, is or are correct, complete and not materially misleading; and
- (b) swears and affirms that he or she is authorized to act on behalf of the entity for which he or she signs and acknowledges that the Procuring Authorities are each relying on his or her representation to this effect:

**Lead Contractor** Flatiron Constructors, Inc.  
**Member:**

**By:**



**Printed Name:** John Couture

**Title:** Vice President



**Colorado I-70 East Project**

Under penalty of perjury, each of the undersigned:

- (a) certifies on behalf of the entity for which he or she signs that:
  - (i) the Official Representative named above is authorized by the relevant entity to sign this Submittal Letter on behalf of Proposer; and
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- (b) swears and affirms that he or she is authorized to act on behalf of the entity for which he or she signs and acknowledges that the Procuring Authorities are each relying on his or her representation to this effect:

**Lead Contractor** Dragados, USA Inc.  
**Member:**

**By:**

A handwritten signature in blue ink, appearing to read "Lawrence G. Hurley", written over a horizontal line.

**Printed Name:** Lawrence G. Hurley

**Title:** Executive Vice President



**Colorado I-70 East Project**

Under penalty of perjury, each of the undersigned:

- (a) certifies on behalf of the entity for which he or she signs that:
  - (i) the Official Representative named above is authorized by the relevant entity to sign this Submittal Letter on behalf of Proposer; and
  - (ii) the representations, certifications, statements, disclosures, authorizations and commitments made, and information contained, in the SOQ (including, for the avoidance of doubt, in Form D (Legal Disclosures)) in respect of such entity have been authorized by such entity, is or are correct, complete and not materially misleading; and
- (b) swears and affirms that he or she is authorized to act on behalf of the entity for which he or she signs and acknowledges that the Procuring Authorities are each relying on his or her representation to this effect:

**Lead Contractor** URS Energy & Construction, Inc.  
**Member:**

**By:**

**Printed Name:**

Bruce Trott

**Title:**

General Manager, Civil Construction, Mining  
Energy, Infrastructure, & Industrial Construction



**Colorado I-70 East Project**

Under penalty of perjury, each of the undersigned:

- (a) certifies on behalf of the entity for which he or she signs that:
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- (b) swears and affirms that he or she is authorized to act on behalf of the entity for which he or she signs and acknowledges that the Procuring Authorities are each relying on his or her representation to this effect:

**Lead Engineer** CH2M HILL Engineers, Inc.

**Member:**

**By:**

**Printed Name:** Steven Mathews

**Title:** Treasurer



**Colorado I-70 East Project**



Under penalty of perjury, each of the undersigned:

- (a) certifies on behalf of the entity for which he or she signs that:
  - (i) the Official Representative named above is authorized by the relevant entity to sign this Submittal Letter on behalf of Proposer; and
  - (ii) the representations, certifications, statements, disclosures, authorizations and commitments made, and information contained, in the SOQ (including, for the avoidance of doubt, in Form D (*Legal Disclosures*)) in respect of such entity have been authorized by such entity, is or are correct, complete and not materially misleading; and
- (b) swears and affirms that he or she is authorized to act on behalf of the entity for which he or she signs and acknowledges that the Procuring Authorities are each relying on his or her representation to this effect:

**Lead Engineer** AECOM Technical Services, Inc.  
**Member:**

**By:** Travis Boone

**Printed Name:** Travis Boone

**Title:** Vice President



**Colorado I-70 East Project**

Under penalty of perjury, each of the undersigned:

- (a) certifies on behalf of the entity for which he or she signs that:
  - (i) the Official Representative named above is authorized by the relevant entity to sign this Submittal Letter on behalf of Proposer; and
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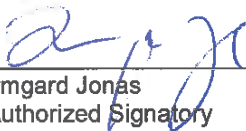
**Financially Responsible Party:**

HOCHTIEF Aktiengesellschaft  
for HOCHTIEF PPP Solutions North America, Inc. and Flatiron  
Constructors, Inc.

**By:**  
**Printed Name:**  
**Title:**

  
 \_\_\_\_\_  
 Dr Lutz Schmidt  
 Authorized Signatory

**By:**  
**Printed Name:**  
**Title:**

  
 \_\_\_\_\_  
 Irmgard Jonas  
 Authorized Signatory



**Colorado I-70 East Project**

Under penalty of perjury, each of the undersigned:

- (a) certifies on behalf of the entity for which he or she signs that:
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- (b) swears and affirms that he or she is authorized to act on behalf of the entity for which he or she signs and acknowledges that the Procuring Authorities are each relying on his or her representation to this effect:

**Financially Responsible Party:** ACS Servicios y Concesiones S.L. for ACS Infrastructure Development Inc.

**By:**

  
\_\_\_\_\_

**Printed Name:**

Francisco Reinoso Torres

**Title:**

Attorney-In-Fact



**Colorado I-70 East Project**

Under penalty of perjury, each of the undersigned:

- (a) certifies on behalf of the entity for which he or she signs that:
  - (i) the Official Representative named above is authorized by the relevant entity to sign this Submittal Letter on behalf of Proposer; and
  - (ii) the representations, certifications, statements, disclosures, authorizations and commitments made, and information contained, in the SOQ (including, for the avoidance of doubt, in Form D (Legal Disclosures)) in respect of such entity have been authorized by such entity, is or are correct, complete and not materially misleading; and
- (b) swears and affirms that he or she is authorized to act on behalf of the entity for which he or she signs and acknowledges that the Procuring Authorities are each relying on his or her representation to this effect:

**Financially Responsible Party:** AECOM for AECOM Capital Inc., AECOM Technical Services Inc. and URS Energy & Construction, Inc.

**By:**

A handwritten signature in blue ink, appearing to read "Troy Rudd", is written over a horizontal line.

**Printed Name:**

Troy Rudd

**Title:**

Senior Vice President, Finance and Treasurer



**Colorado I-70 East Project**

Under penalty of perjury, each of the undersigned:

- (a) certifies on behalf of the entity for which he or she signs that:
  - (i) the Official Representative named above is authorized by the relevant entity to sign this Submittal Letter on behalf of Proposer; and
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- (b) swears and affirms that he or she is authorized to act on behalf of the entity for which he or she signs and acknowledges that the Procuring Authorities are each relying on his or her representation to this effect:

**Financially Responsible Party:** John Laing Group plc for John Laing Investments Limited

**By:**

  
\_\_\_\_\_

**Printed Name:**

Carolyn Cattermole

**Title:**

Group General Counsel and Company Secretary



**Colorado I-70 East Project**

Under penalty of perjury, each of the undersigned:

- (c) certifies on behalf of the entity for which he or she signs that:
  - (i) the Official Representative named above is authorized by the relevant entity to sign this Submittal Letter on behalf of Proposer; and
  - (ii) the representations, certifications, statements, disclosures, authorizations and commitments made, and information contained, in the SOQ (including, for the avoidance of doubt, in Form D (Legal Disclosures)) in respect of such entity have been authorized by such entity, is or are correct, complete and not materially misleading; and
- (d) swears and affirms that he or she is authorized to act on behalf of the entity for which he or she signs and acknowledges that the Procuring Authorities are each relying on his or her representation to this effect:

**Financially  
Responsible  
Party:**

Dragados S.A. for Dragados USA, Inc.

**By:**

A handwritten signature in blue ink, appearing to read "Ignacio Segura Suriñach", is written over a solid black horizontal line.

**Printed Name:**

Ignacio Segura Suriñach

**Title:**

CEO (Chief Executive Officer)



**Colorado I-70 East Project**

Under penalty of perjury, each of the undersigned:

- (a) certifies on behalf of the entity for which he or she signs that:
  - (i) the Official Representative named above is authorized by the relevant entity to sign this Submittal Letter on behalf of Proposer; and
  - (ii) the representations, certifications, statements, disclosures, authorizations and commitments made, and information contained, in the SOQ (including, for the avoidance of doubt, in Form D (Legal Disclosures)) in respect of such entity have been authorized by such entity, is or are correct, complete and not materially misleading; and
- (b) swears and affirms that he or she is authorized to act on behalf of the entity for which he or she signs and acknowledges that the Procuring Authorities are each relying on his or her representation to this effect:

**Financially Responsible Party:** CH2M HILL Companies, Ltd for CH2M HILL Engineers, Inc.

**By:**

  
\_\_\_\_\_

**Printed Name:**

Steven Mathews

**Title:**

Treasurer

**Annex A to the Submittal Letter**  
**Pass/Fail Evaluation Criteria Verification**

No.	Pass/Fail Evaluation Criteria	RFQ Reference	Satisfied
(1)	SOQ conforms to all RFQ instructions regarding organization, format and content, including page limitations.	<u>General Requirements</u> , <u>Financial Requirements</u> and <u>SOQ Submission Requirements</u>	<input checked="" type="checkbox"/>
(2)	Volume 1 of SOQ includes each of the following:		<input checked="" type="checkbox"/>
	(a) Submittal Letter ( <u>Form A</u> );	<u>Section 1.1</u> of the <u>Volume 1 Requirements</u>	<input checked="" type="checkbox"/>
	(b) narrative executive summary;	<u>Section 1.2</u> of the <u>Volume 1 Requirements</u>	<input checked="" type="checkbox"/>
	(c) SOQ Submission Public Statement;	<u>Section 1.3.1</u> of the <u>Volume 1 Requirements</u>	<input checked="" type="checkbox"/>
	(d) Confidential Contents Index ( <u>Form B</u> );	<u>Section 1.3.2</u> of the <u>Volume 1 Requirements</u>	<input checked="" type="checkbox"/>
	(e) completed <u>Form C (Information Regarding Proposer)</u> for each of:	<u>Section 2.1.1</u> of the <u>Volume 1 Requirements</u>	<input checked="" type="checkbox"/>
	(i) each Equity Member;	<u>Section 2.1.1.a</u> of the <u>Volume 1 Requirements</u>	<input checked="" type="checkbox"/>
	(ii) Lead Contractor;	<u>Section 2.1.1.b</u> of the <u>Volume 1 Requirements</u>	<input checked="" type="checkbox"/>
	(iii) Lead Engineer;	<u>Section 2.1.1.c</u> of the <u>Volume 1 Requirements</u>	<input checked="" type="checkbox"/>
	(iv) Lead Operator; and	<u>Section 2.1.1.d</u> of the <u>Volume 1 Requirements</u>	<input checked="" type="checkbox"/>
	(v) each Financially Responsible Party (if any);	<u>Section 2.1.1.e</u> of the <u>Volume 1 Requirements</u>	<input checked="" type="checkbox"/>
	(f) organizational chart (entity level);	<u>Section 2.1.2</u> of the <u>Volume 1 Requirements</u>	<input checked="" type="checkbox"/>
	(g) organizational chart (or charts, if different by time period) identifying Key Personnel and management structures;	<u>Section 2.1.3</u> of the <u>Volume 1 Requirements</u>	<input checked="" type="checkbox"/>
	(h) narrative description of Proposer's organizational and management structure;	<u>Section 2.1.4</u> of the <u>Volume 1 Requirements</u>	<input checked="" type="checkbox"/>
	(i) list of names and titles of senior involved personnel;	<u>Section 2.1.5</u> of the <u>Volume 1 Requirements</u>	<input checked="" type="checkbox"/>
	(j) narrative description of workloads and (other than for (vi) below) availability of non-financial resources for each of:	<u>Section 2.2</u> of the <u>Volume 1 Requirements</u>	<input checked="" type="checkbox"/>
	(i) each Equity Member;	<u>Section 2.2.a</u> of the <u>Volume 1 Requirements</u>	<input checked="" type="checkbox"/>
	(ii) Lead Contractor;	<u>Section 2.2.b</u> of the <u>Volume 1 Requirements</u>	<input checked="" type="checkbox"/>
	(iii) Lead Engineer;	<u>Section 2.2.c</u> of the <u>Volume 1 Requirements</u>	<input checked="" type="checkbox"/>



Colorado I-70 East Project

	(iv) Lead Operator;	<u>Section 2.2.d of the Volume 1 Requirements</u>	<input checked="" type="checkbox"/>
	(v) Financially Responsible Party (if any); and	<u>Section 2.2.e of the Volume 1 Requirements</u>	<input checked="" type="checkbox"/>
	(vi) each proposed Key Personnel;	<u>Section 2.2.f of the Volume 1 Requirements</u>	<input checked="" type="checkbox"/>
	(k) either: (i) confirmation of absence of any organizational conflicts of interest; or (ii) narrative description of any such organizational conflicts of interest;	<u>Section 3.1 of the Volume 1 Requirements</u>	<input checked="" type="checkbox"/>
	(l) completed <u>Form D (Legal Disclosures)</u> ;	<u>Section 3.2.1 of the Volume 1 Requirements</u>	<input checked="" type="checkbox"/>
	(m) completed <u>Part A (Summary of Certifications) of Form E (Certifications)</u> ;	<u>Section 3.2.2 of the Volume 1 Requirements</u>	<input checked="" type="checkbox"/>
	(n) completed <u>Part B (Certifications) of Form E (Certifications)</u> for each of:	<u>Section 3.2.3 of the Volume 1 Requirements</u>	<input checked="" type="checkbox"/>
	(i) each Equity Member;	<u>Section 3.2.3.a of the Volume 1 Requirements</u>	<input checked="" type="checkbox"/>
	(ii) Lead Contractor;	<u>Section 3.2.3.b of the Volume 1 Requirements</u>	<input checked="" type="checkbox"/>
	(iii) Lead Engineer;	<u>Section 3.2.3.c of the Volume 1 Requirements</u>	<input checked="" type="checkbox"/>
	(iv) Lead Operator; and	<u>Section 3.2.3.d of the Volume 1 Requirements</u>	<input checked="" type="checkbox"/>
	(v) each Financially Responsible Party (if any);	<u>Section 3.2.3.e of the Volume 1 Requirements</u>	<input checked="" type="checkbox"/>
	(o) statement regarding the presence (or absence) of anticipated legal issues;	<u>Section 3.3 of the Volume 1 Requirements</u>	<input checked="" type="checkbox"/>
	(p) completed <u>Form F (Project Experience)</u> for each of:	<u>Section 4.1 of the Volume 1 Requirements</u>	<input checked="" type="checkbox"/>
	(i) the Equity Members (collectively), with respect to at least 3 but no more than 5 General Reference Projects (of which the Procuring Authorities permit 1 General Reference Project to not satisfy paragraph (a) of the definition of General Reference Project);	<u>Section 4.1.a of the Volume 1 Requirements</u>	<input checked="" type="checkbox"/>
	(ii) the Lead Contractor (collectively), with respect to at least 4 but no more than 6 General Reference Projects (of which the Procuring Authorities permit 1 General Reference Project to not satisfy paragraph (a) of the definition of General Reference Project);	<u>Section 4.1.b of the Volume 1 Requirements</u>	<input checked="" type="checkbox"/>

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	(iii) the Lead Engineer (collectively), with respect to at least 4 but no more than 6 General Reference Projects (of which the Procuring Authorities permit 1 General Reference Project to not satisfy paragraph (a) of the definition of General Reference Project); and	<u>Section 4.1.c of the Volume 1 Requirements</u>	<input checked="" type="checkbox"/>
	(iv) the Lead Operator (collectively), with respect to at least 2 but no more than 4 O&M Reference Projects.	<u>Section 4.1.d of the Volume 1 Requirements</u>	<input checked="" type="checkbox"/>
	(q) completed <u>Form G (Safety Questionnaire)</u> for each of:	<u>Section 4.2 of the Volume 1 Requirements</u>	<input checked="" type="checkbox"/>
	(i) Lead Contractor;	<u>Section 4.2.a of the Volume 1 Requirements</u>	<input checked="" type="checkbox"/>
	(ii) Lead Engineer; and	<u>Section 4.2.b of the Volume 1 Requirements</u>	<input checked="" type="checkbox"/>
	(iii) Lead Operator;	<u>Section 4.2.c of the Volume 1 Requirements</u>	<input checked="" type="checkbox"/>
	(r) completed <u>Form H (Stakeholder and Economic Engagement Questionnaire)</u> ;	<u>Section 4.3 of the Volume 1 Requirements</u>	<input checked="" type="checkbox"/>
	(s) completed <u>Form I (Key Personnel)</u> attaching resumes (including a list of references in the form of <u>Annex A to Form I</u> ) for each of:	<u>Section 4.4 of the Volume 1 Requirements</u>	<input checked="" type="checkbox"/>
	(i) Design-Build Manager;	<u>Section 4.4.a of the Volume 1 Requirements</u>	<input checked="" type="checkbox"/>
	(ii) Design Manager;	<u>Section 4.4.b of the Volume 1 Requirements</u>	<input checked="" type="checkbox"/>
	(iii) O&M Manager;	<u>Section 4.4.c of the Volume 1 Requirements</u>	<input checked="" type="checkbox"/>
	(iv) Quality Manager;	<u>Section 4.4.d of the Volume 1 Requirements</u>	<input checked="" type="checkbox"/>
	(v) Environmental Manager;	<u>Section 4.4.e of the Volume 1 Requirements</u>	<input checked="" type="checkbox"/>
	(vi) Utilities Manager; and	<u>Section 4.4.f of the Volume 1 Requirements</u>	<input checked="" type="checkbox"/>
	(vii) Community and Public Relations Manager; and	<u>Section 4.4.g of the Volume 1 Requirements</u>	<input checked="" type="checkbox"/>
	(t) statement of technical approach.	<u>Section 5 of the Volume 2 Requirements</u>	<input checked="" type="checkbox"/>
(3)	Volume 2 of SOQ includes each of the following:		<input checked="" type="checkbox"/>

Colorado I-70 East Project

	(a) narrative description of Proposer's organizational and management structure as it relates to financial matters;	<u>Section 1.1 of the Volume 2 Requirements</u>	<input checked="" type="checkbox"/>
	(b) narrative description of the financial capacity available to Proposer for this Project for each of:	<u>Section 1.2 of the Volume 2 Requirements</u>	<input checked="" type="checkbox"/>
	(i) each Equity Member;	<u>Section 1.2.a of the Volume 2 Requirements</u>	<input checked="" type="checkbox"/>
	(ii) Lead Contractor;	<u>Section 1.2.b of the Volume 2 Requirements</u>	<input checked="" type="checkbox"/>
	(iii) Lead Engineer;	<u>Section 1.2.c of the Volume 2 Requirements</u>	<input checked="" type="checkbox"/>
	(iv) Lead Operator; and	<u>Section 1.2.d of the Volume 2 Requirements</u>	<input checked="" type="checkbox"/>
	(v) each Financially Responsible Party (if any);	<u>Section 1.2.e of the Volume 2 Requirements</u>	<input checked="" type="checkbox"/>
	(c) narrative description of the relevant experience of the Core Proposer Team Members on General Reference Projects;	<u>Section 1.3 of the Volume 2 Requirements</u>	<input checked="" type="checkbox"/>
	(d) statement of financial approach;	<u>Section 2 of the Volume 2 Requirements</u>	<input checked="" type="checkbox"/>
	(e) letter of support from each Financially Responsible Party (if any);	<u>Section 3.1 of the Volume 2 Requirements</u>	<input checked="" type="checkbox"/>
	(f) letter or letters from an Eligible Surety, together (at Proposer's option) with a letter or letters from an Eligible Financial Institution, as evidence of bonding/letter of credit capacity and ability to secure performance security;	<u>Section 3.2 of the Volume 2 Requirements</u>	<input checked="" type="checkbox"/>
	(g) equity funding letter from each Equity Member;	<u>Section 3.3 of the Volume 2 Requirements</u>	<input checked="" type="checkbox"/>
	(h) financial statements for:	<u>Section 4.1 of the Volume 2 Requirements</u>	<input checked="" type="checkbox"/>
	(i) each Equity Member;	<u>Section 4.1.a of the Volume 2 Requirements</u>	<input checked="" type="checkbox"/>
	(ii) Lead Contractor;	<u>Section 4.1.b of the Volume 2 Requirements</u>	<input checked="" type="checkbox"/>
	(iii) Lead Engineer;	<u>Section 4.1.c of the Volume 2 Requirements</u>	<input checked="" type="checkbox"/>
	(iv) Lead Operator; and	<u>Section 4.1.d of the Volume 2 Requirements</u>	<input checked="" type="checkbox"/>
	(v) each Financially Responsible Party (if any);	<u>Section 4.1.e of the Volume 2 Requirements</u>	<input checked="" type="checkbox"/>
	(i) information regarding material changes in financial capacity, or confirmation of the absence of any such changes, for:	<u>Section 4.2 of the Volume 2 Requirements</u>	<input checked="" type="checkbox"/>

Colorado I-70 East Project

	(i) each Equity Member;	<u>Section 4.2.b.i of the Volume 2 Requirements</u>	<input checked="" type="checkbox"/>
	(ii) Lead Contractor;	<u>Section 4.2.b.ii of the Volume 2 Requirements</u>	<input checked="" type="checkbox"/>
	(iii) Lead Engineer;	<u>Section 4.2.b.iii of the Volume 2 Requirements</u>	<input checked="" type="checkbox"/>
	(iv) Lead Operator; and	<u>Section 4.2.b.iv of the Volume 2 Requirements</u>	<input checked="" type="checkbox"/>
	(v) each Financially Responsible Party (if any);	<u>Section 4.2.b.v of the Volume 2 Requirements</u>	<input checked="" type="checkbox"/>
	(j) identification of off balance sheet liabilities, or confirmation of the absence of such liabilities, for each of:	<u>Section 4.3 of the Volume 2 Requirements</u>	<input checked="" type="checkbox"/>
	(i) each Equity Member;	<u>Section 4.3.a of the Volume 2 Requirements</u>	<input checked="" type="checkbox"/>
	(ii) Lead Contractor;	<u>Section 4.3.b of the Volume 2 Requirements</u>	<input checked="" type="checkbox"/>
	(iii) Lead Engineer;	<u>Section 4.3.c of the Volume 2 Requirements</u>	<input checked="" type="checkbox"/>
	(iv) Lead Operator; and	<u>Section 4.3.d of the Volume 2 Requirements</u>	<input checked="" type="checkbox"/>
	(v) each Financially Responsible Party (if any);	<u>Section 4.3.e of the Volume 2 Requirements</u>	<input checked="" type="checkbox"/>
	(k) completed <u>Form J (Credit Ratings)</u> ; and	<u>Section 4.4.1 of the Volume 2 Requirements</u>	<input checked="" type="checkbox"/>
	(l) all rating information and materials for each entity that has a credit rating as indicated on the completed <u>Form J (Credit Ratings)</u> .	<u>Section 4.4.2 of the Volume 2 Requirements</u>	<input checked="" type="checkbox"/>

Annex B to the Submittal Letter

Scoring Reference Chart

Relevant RFQ Section (of Part C)	Substantive Evaluation Criteria	SOQ Vol. & Sec. Ref.
	<b>Technical Criteria</b>	
<u>Section 1.1</u>	Organization, Structure and Experience	
<u>Section 1.1.a</u>	<ul style="list-style-type: none"> <li>Likelihood of success based on:</li> </ul>	
<u>Section 1.1.a.i</u>	<ul style="list-style-type: none"> <li>management, organization and structure</li> </ul>	<p><b>Volume 1</b></p> <p>1.2 Executive Summary</p> <p>2.1.2 Organization Chart identifying each Core Proposer Team Member (including notes)</p> <p>2.1.3.a Organization Chart: Key Personnel during RFQ/RFP</p> <p>2.1.3.b Organization Chart: Key Personnel after commercial close</p> <p>2.1.4 Organizational and Management Structure</p> <p>2.1.5 List of Advisors</p> <p>2.2 Capacity and Resources</p> <p>4.1 Project Experience (Form F)</p> <p>4.2 Safety Record (Form G)</p> <p>4.3 Stakeholder Engagement (Form H)</p> <p>4.4. Key Personnel (Form I)</p> <p><b>Volume 2</b></p> <p>1.1 Description of Organizational and Management Structure and Expertise</p>
<u>Section 1.1.a.ii</u>	<ul style="list-style-type: none"> <li>prior experience and Demonstrated Performance</li> </ul>	<p><b>Volume 1</b></p> <p>1.2 Executive Summary</p> <p>2.1.4 Organizational and Management Structure</p> <p>2.2 Capacity and Resources</p> <p>4.1 Project Experience (Form F)</p> <p>4.2 Safety Record (Form G)</p> <p>4.3 Stakeholder Engagement (Form H)</p> <p>4.4. Key Personnel (Form I)</p> <p>5. Statement of Technical Approach</p> <p><b>Volume 2:</b></p> <p>1.1 Description of Organizational and Management Structure and Expertise</p> <p>1.2 Available Financial Capacity</p> <p>1.3 Project Financing Experience</p>

Colorado I-70 East Project

Relevant RFQ Section (of Part C)	Substantive Evaluation Criteria	SOQ Vol. & Sec. Ref.
<u>Section 1.1.b</u>	<ul style="list-style-type: none"> <li>Experience and Demonstrated Performance on Reference Projects based on:</li> </ul>	
<u>Section 1.1.b.i.A</u>	- design and construction	<b>Volume 1</b> 1.2 Executive Summary 4.1 Project Experience (Form F) 4.3 Stakeholder Engagement (Form H) 4.4. Key Personnel (Form I) 5.b Technical Challenges
<u>Section 1.1.b.i.B</u>	- operations and maintenance	<b>Volume 1</b> 1.2 Executive Summary 4.1 Project Experience (Form F) 4.3 Stakeholder Engagement (Form H) 4.4. Key Personnel (Form I) 5.b Technical Challenges
<u>Section 1.1.b.ii.A</u>	- workforce, subcontractor and stakeholder engagement	<b>Volume 1</b> 1.2 Executive Summary 4.1 Project Experience (Form F) 4.3 Stakeholder Engagement (Form H) 5.d Public Interest and Engagement Plan
<u>Section 1.1.b.ii.B</u>	- environmental monitoring and mitigation	<b>Volume 1</b> 1.2 Executive Summary 4.1 Project Experience (Form F) 4.3 Stakeholder Engagement (Form H) 5.d Public Interest and Engagement Plan
<u>Section 0</u>	Technical Approach to Project	<b>Volume 1</b> 1.2 Executive Summary 5. Statement of Technical Approach
<u>Section 1.2.a</u>	<ul style="list-style-type: none"> <li>Understanding of key challenges and risks</li> </ul>	1.2 Executive Summary 2.1.3.a Organization Chart: Key Personnel during RFQ/RFP 2.1.3.b Organization Chart: Key Personnel after commercial close 2.1.4 Organizational and Management Structure 4.1 Project Experience (Form F) 5.a Summary of Technical Approach 5.b Technical Challenges

Colorado I-70 East Project

Relevant RFQ Section (of Part C)	Substantive Evaluation Criteria	SOQ Vol. & Sec. Ref.
<u>Section 1.2.b</u>	<ul style="list-style-type: none"> <li>Project plan</li> </ul>	1.2 Executive Summary 2.1.3.a Organization Chart: Key Personnel during RFQ/RFP 2.1.3.b Organization Chart: Key Personnel after commercial close 2.1.4 Organizational and Management Structure 5.c Project Plan
<u>Section 1.2.c</u>	<ul style="list-style-type: none"> <li>Public interest and engagement plan</li> </ul>	1.2 Executive Summary 4.3 Stakeholder Engagement (Form H) 5.d Public Interest and Engagement Plan
<b>Financial Criteria</b>		
<u>Section 2.1</u>	Financial Qualifications and Capacity	
<u>Section 2.1.a</u>	<ul style="list-style-type: none"> <li>Experience and Demonstrated Performance on closing financing of Reference Projects</li> </ul>	<b>Volume 1</b> 1.2 Executive Summary 2.1.4 Organizational and Management Structure 4.1 Project Experience (Form F) <b>Volume 2</b> 1.1 Description of Organizational and Management Structure and Expertise 1.3 Project Financing Experience 2. Statement of Financial Approach
<u>Section 2.1.b</u>	<ul style="list-style-type: none"> <li>Financial capacity</li> </ul>	<b>Volume 1</b> 2.1.4 Organizational and Management Structure 2.2 Capacity and Resources <b>Volume 2</b> 1.1 Description of Organizational and Management Structure and Expertise 1.2 Available Financial Capacity 1.3 Project Financing Experience 2. Statement of Financial Approach 3.1 Financially Responsible Party Letter of Support 3.2 Surety or Bank/Financial Institution Letter 3.3 Equity Funding Support Letter 4.1 a through e Financial Statements 4.2.a Material Changes in Financial Condition 4.3 Off Balance Sheet Liabilities 4.4.1 Credit Ratings (Form J) 4.4.2 Rating Information Appendix 1 Bank Letters of Support

Colorado I-70 East Project

Relevant RFQ Section (of Part C)	Substantive Evaluation Criteria	SOQ Vol. & Sec. Ref.
<u>Section 2.2</u>	Financial Approach to Project	<p><b>Volume 1</b>            1.2 Executive Summary            2.1.4 Organizational and Management Structure            2.1.5 Financial Advisors            2.2 Capacity and Resources            4.1 Project Experience (Form F)</p> <p><b>Volume 2</b>            1.1 Description of Organizational and Management Structure and Expertise            1.2 Available Financial Capacity            1.3 Project Financing Experience            2 Statement of Financial Approach            3.1 Financially Responsible Party Letter of Support            3.2 Surety or Bank/Financial Institution Letter            3.3 Equity Funding Support Letter            Appendix 1 Bank Letters of Support</p>





# 1.2 EXECUTIVE SUMMARY



## I-70 EAST

### *“Connecting Communities”*

Colorado Department of Transportation and the Procuring Authorities are embarking on one of the largest and most significant transportation projects in Colorado’s history — the replacement of the aging I-70 East viaduct and adding capacity to I-70 between downtown Denver and the Denver International Airport.

The original construction of the I-70 corridor and particularly the viaduct in 1964 had unintended consequences on the surrounding Denver communities by bisecting and isolating once cohesive neighborhoods. The need for a solution to both re-vitalize the community and address traffic, safety, and capacity concerns has grown more critical with Colorado’s expected growth over the next 20 years and its recent economic and population boom.

This project has been more than a decade in the making and is evidence of the planning and foresight by CDOT, the City and County of Denver, along with many others to address these concerns today.

This project is not just about delivering more capacity and safer infrastructure – it is also about the livelihood of the local community, its role in the larger North Denver Cornerstone Collaborative, and its place as the gateway for one of the nation’s top tourist destinations.

Neighborhoods will once again be reconnected. Community members will socialize and children will play on the new greenspace created. Drivers will experience shorter and more reliable journey times and improved road safety.

**THE ENVISIONED  
PARTIAL COVER LOWERED  
(PCL) ALTERNATIVE IS A SAFE  
AND MODERN SOLUTION TO  
IMPROVING MOBILITY ALONG  
THE I-70 CORRIDOR AND  
RECONNECTING THE ELYRIA AND  
SWANSEA NEIGHBORHOODS.**

**CONNECTING COMMUNITIES ALONG I-70 EAST**

# WHO IS FRONT RANGE MOBILITY GROUP?



Front Range Mobility Group (FRMG) is a tailor-made team that came together to meet the specific challenges of the I-70 East Project. Our team members will provide CDOT and the Procuring Authorities with proven local experience and world-class expertise in the delivery of highway infrastructure projects in partnership with public agencies.

## FRMG'S EQUITY MEMBERS



FRMG's Equity Members, HOCHTIEF PPP Solutions North America, Inc. (**HOCHTIEF**), ACS Infrastructure Development, Inc. (**ACS**), AECOM Capital (**AECOM Capital**), and John Laing Investments Limited (**John Laing**) are active investors in the North American and global P3 markets with a proven track record. Collectively, the Equity Members have unmatched development experience, having closed approximately \$10 billion in financing to support transportation availability payment P3 projects in North America.

**17 P3's**  
developed in North America since 2008.

## FRMG'S LEAD CONTRACTOR



FRMG's Lead Contractor is an integrated team that will implement their proven expertise and capabilities to ensure the successful completion of the Project. The Lead Contractor includes Flatiron Constructors, Inc. (**Flatiron**), Dragados USA, Inc. (**Dragados**), and URS Energy & Construction, Inc. (**AECOM Construction**). Flatiron and AECOM Construction are headquartered in the Denver metro area bringing unmatched local expertise to our Lead Contractor.

**50+ P3/DB**  
projects constructed in North America.

## FRMG'S LEAD ENGINEER



FRMG's Lead Engineer is a joint venture between CH2M HILL Engineers, Inc. (**CH2M**) and AECOM Technical Services, Inc. (**AECOM Design**). The Lead Engineer team members have designed or provided management services on over 50 P3 projects worth an estimated \$65 billion, including high profile Colorado projects such as COSMIX, TREX, and Denver Union Station.

**15,000+ Projects**  
in Colorado by the design team

## FRMG'S LEAD OPERATOR



FRMG's Lead Operator includes **ACS**, **HOCHTIEF**, and **AECOM Capital** who bring a long-term owner's perspective to delivering high quality and safe operations for the Project. Our team members are seasoned and experienced operators of key transportation corridors and will apply their unique knowledge of operating and maintaining highways to the Project.

**15,000+ Lane Miles**  
of O&M services in North America.

## WHO IS FRONT RANGE MOBILITY GROUP?

# 220+ P3 Projects

successfully delivered worldwide.



# \$1.9 Billion

of TIFIA financing closed.

# 13,000 Miles

of roadway constructed by Lead Contractor team members.

# Local Community

commitment with established regional presence.



# 3,500+

Colorado local design and construction staff

# 40+ P3

transportation projects currently in operations worldwide.



# 1,500+ Projects

constructed in Colorado in the last 20 years.



# \$10 Billion

raised in committed debt to support P3 projects in North America.



# A LONG TERM PARTNER TO CDOT



FRMG will be supported by specialized local firms who bring added expertise from the local market. Excited about the prospect of participating on a large project at home, the Lead Contractor enlisted the services of Kraemer North America LLC (**Kraemer**), Interstate Highway Construction (**IHC**), and BT Construction (**BTC**) to partner with fellow Coloradans and ensure that we are delivering a project that we can be proud of and showcase to our friends and families.

The Lead Engineer will be supported by Colorado's Tsiouvaras Simmons Holderness (**TSH**), who has earned a reputation as a leader in structures and design-build, and brings direct experience with the existing viaduct and the I-70 corridor.

### A Vertically Integrated Team

CDOT and the Procuring Authorities will benefit from the vertical corporate integration of our team and the inherent alignment of interests and facilitated decision making process that stems from related team member participation in multiple levels of the Project.

HOCHTIEF, ACS and AECOM are all present at both the Equity and Lead Operator levels and all three have affiliated companies participating at the Lead Contractor level through Dragados, Flatiron and AECOM respectively. In addition, AECOM has another level of integration through their participation at the design level through AECOM Design.

The vertically integrated nature of our team allows us to start with the "end in mind," where O&M and life-cycle maintenance are taken into account early in the development phase in order to engineer an asset that is built to last, optimizes **operating and life cycle costs**, provides flexibility to accommodate future growth and facilitates innovative advances and sustainable solutions.

This vertical integration among team members also leads to complete goal alignment for the duration of the P3 and fosters shared objectives **for the Project as a whole, avoiding conflicts** between disciplines.

Our integrated team is further balanced by the participation of both John Laing and CH2M. John Laing brings the independent long-term investor perspective and local P3 experience. CH2M offers local design expertise and a mission to stretch the boundaries of innovation and optimize project scope.

# DEEPLY ROOTED LOCAL PRESENCE

FRMG TEAM MEMBERS HAVE A DEEPLY ROOTED COLORADO PRESENCE THAT INCLUDES LOCAL DESIGNERS, CONTRACTORS AND PERSONNEL WHO LIVE AND WORK IN THIS COMMUNITY. WE ARE EXCITED TO BE PART OF A PROJECT THAT TAKES PLACE IN OUR OWN "BACKYARD" AND ARE COMMITTED TO ENSURING ITS SUCCESS.



"Like no other in my career, this project conveys the importance of transportation to our State, City, neighborhoods and businesses. We are excited at the opportunity to help with this transformative endeavor."

—Alan Eckman, AECOM



"I have participated in the major transportation projects in the Metro Denver area such as T-Rex, I-25/270/76/36 interconnection, and Denver Union Station (DUS) in growing roles from a drainage engineer to design manager. I'm prepared work with my colleagues to navigate the complexities of the I-70 East project."

—Dave Center, AECOM



"We understand the importance this project has as the state's critical central east-west transportation corridor and are committed to providing significant local resources to help deliver this high profile project."

—Jim Randall, IHC



"As a fourth generation Colorado Native, I understand the importance of this project as the transportation gateway to our city and state. I am personally committed to the project's success, and will ensure Kraemer North America's full cadre of proven local and national resources are available to support CDOT in delivering this transformative project."

—Dave Zanetell, Kraemer NA

Seven of our Team Members have offices in Colorado and five of them are headquartered in the Denver metro area. This gives us relevant knowledge of the social, economic, and political needs of the I-70 East project area and an in-depth understanding of the sensitivities involved within the local neighborhoods.



**HEADQUARTERED IN  
THE DENVER METRO AREA**



**"I have spent the better part of the last two decades working hand-in-hand on numerous successful infrastructure improvements with CDOT, and I look forward to bringing that level of trust and mutual commitment we share to help deliver this world class project."**

**—Tim Maloney, Kraemer NA**

**"The I-70 East Redevelopment project will mark a new pinnacle of Colorado infrastructure improvements and as a local contractor, we embrace the challenges, and the lasting rewards, of participating in such an endeavor."**

**—Mari Bergstrom, BTC Construction Owner**



**"I remember my first job with CDOT, working on the I-70 El Rancho project back in the early 1990s, and then later on the Johnson and Eisenhower tunnels. I look forward to the opportunity to work with CDOT to devise solutions for this next phase of I-70!"**

**—Scott Stetson, Flatiron Project Manager**

**"As a long-time resident of Denver and Colorado native, it will be extremely gratifying to work with CDOT to improve the I-70 East corridor as the gateway to our great City and beautiful State. Together let's help protect and enhance the quality of life for metro Denver!"**

**—Chris Bisio, CH2M**



**"I spent more than 10 years on the ground working on I-70 including as the consultant project manager for the last major viaduct reconstruction effort from Washington to Brighton and at the I-70 East project office as the engineering manager for the EIS. I have a detailed understanding of the viaduct and I-70 and a strong desire to improve I-70 for the community and the motoring public."**

**—George Tsiouvaras, TSH**

**"As the Resident Engineer on the last phase of reconstructing the I-70 Viaduct from Washington to Brighton, I have had the opportunity to gain extensive knowledge of the existing site conditions and constraints that will be encountered as the reconstruction effort continues to the east. I have also had the opportunity to become familiar with expectations of the local stakeholders including the neighborhoods, National Western Stock Show (NWSS) and the City and County of Denver"**

**—Fred Holderness, TSH**

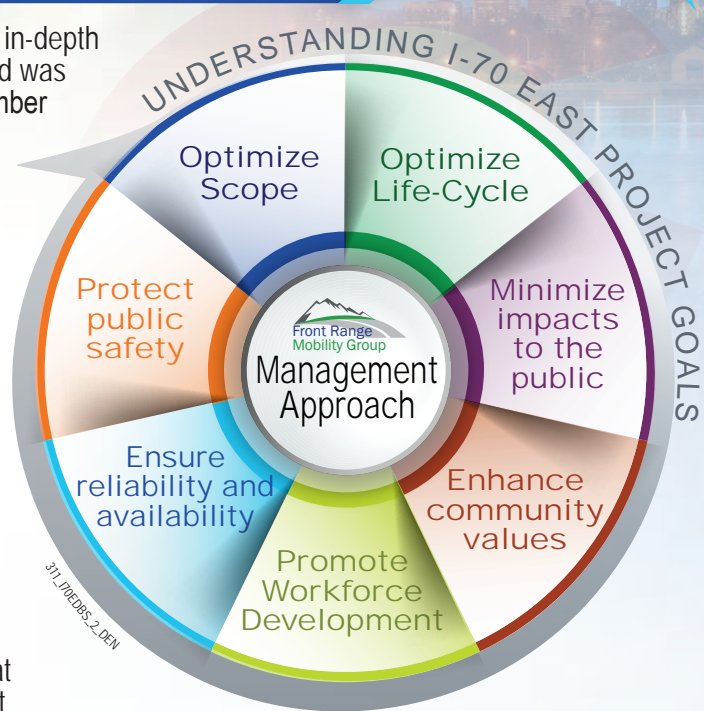


Collectively, FRMG Team Members employ over 3,500 employees in Colorado and we have delivered 16,500 projects in the State. Locally, our design and construction team has been delivering CDOT projects for more than 30 years. This vast local experience has allowed us to cultivate a history of working together with CDOT and other Project stakeholders like the City and County of Denver, and makes us uniquely qualified to successfully deliver this Project.

# FRMG's MANAGEMENT APPROACH

FRMG's management approach stems from an in-depth understanding of the I-70 East Project goals and was further refined by leveraging our vast team member experience delivering similarly complex P3's and the management of more than 220 P3 projects around the globe. FRMG's experienced firms and talented individuals are well equipped to lead a project management organization which is based on best-practices and proven principles, which include:

- » Seamless team integration
- » Proactive partnership with our client
- » Continuity of leadership
- » Transparent and clear lines of communication
- » Effective quick decision making
- » Strong emphasis on safety and quality management
- » Exceptional design and construction team that applies its collective capabilities to the Project
- » Early integration of O&M, ensuring long-term life cycle considerations are taken into account in the design and construction of the Project



## An integrated team

Our organizational structure is founded upon corporate vertical alignment which inherently facilitates decision making due to our shared long-term objectives and provides complete alignment of goals for the duration of the Project.

We integrate multidisciplinary task force groups early in the design process in order to achieve a design that reflects the broader issues of constructability, maintainability, operability, and long-term reliability. This approach ensures that the Project can be maintained effectively over the long-term and will result in O&M efficiencies and significant cost savings over the life of the Project.

## Consistent Leadership

FRMG has selected individuals for key positions (including but not solely limited to Key Personnel) who bring crucial experience and first-hand knowledge of the key success factors and lessons learned on our Reference Projects.

All technical Key Personnel will be involved in both the procurement and delivery of the Project, providing critical continuity of leadership and streamlining the transition between phases. This continuity also ensures a comprehensive transfer of knowledge and helps ensure the vision of those involved during the RFP process is realized including CDOT and the Procuring Authorities.

## Proactive partnership with CDOT and the Procuring Authorities

A primary goal of FRMG's management approach is to create a long-term partnership with CDOT and the Procuring Authorities based on mutual respect, open and transparent interaction and shared objectives that will drive the Project to success. FRMG recognizes the importance of constructive dialogue and collaborative efforts between private and public partners. This is particularly critical in a P3 context where a contractual relationship extends for decades.

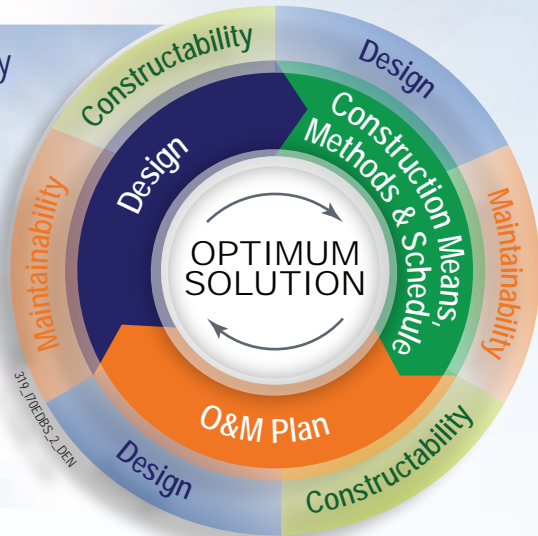
**We understand the complexity of the I-70 East Project and know that the characteristics of the Project will evolve. By identifying key activities that will take place during each phase we ensure the appropriate management structure is in place to successfully deliver the Project as we progress from one phase to the next.**

# FRMG's LIFE CYCLE APPROACH

FRMG team members have extensive experience in working together to develop an overall approach to design, construction, operations, maintenance and financing that ensures a sustainable “whole-life” asset management approach from the very beginning of the procurement.

FRMG's early integration of life cycle considerations into the Project will ensure long-term operability and maintainability of the Project both during the operating period and well after the Project is handed back to CDOT. With more than 40 P3 transportation projects under operations, members of our Lead Operator have extensive experience in developing and managing operations and maintenance approaches and bring specific experience on projects that include a mix of new and existing assets.

Our fully integrated team will utilize multidisciplinary task force working groups early into the Project design to provide a high-quality, aesthetically-pleasing, reliable, durable and maintainable facility. Whether it is a life cycle analysis or a construction methodology, each decision is evaluated and weighed against its effect on the overall product, ensuring we develop the optimum solution for the Project. This early integration of operations and maintenance requirements allows FRMG to optimize life cycle costs based on proven approaches and new innovations.



FRMG's life cycle approach will include the definition and implementation of a Project-Specific Operations & Maintenance Plan, which will include a Routine Maintenance Plan, a Roadway Operations Plan and a Major Rehabilitation Plan. FRMG team members have developed similar O&M Plans for projects comparable to the I-70 East, accounting for the mix of new and existing infrastructure in a high traffic volume, urban corridor.

## Montreal's Autoroute 30 (A-30)

The A-30 project integrated new and existing assets throughout the 46 mile corridor, which included two new major bridges over water, 69 structures, 10 major intersections and a tunnel. ACS has been self-performing the operations and maintenance of the existing 19.9 mile section since 2008 and the remainder of the project since December 2012. The climate conditions in Montreal are similar to the Denver Metro Area with over 80" of snowfall a year. The O&M team was actively involved in the early stages of the project and undertook a life cycle-based approach to minimize the net present value of costs for the public.

**FRMG will leverage the experience of operating new and existing assets under similar climatic conditions when considering the life cycle approach for the I-70 East Project.**





# WORKFORCE DEVELOPMENT

WITH A STRONG COLORADO CONNECTION ALREADY IN PLACE, FRMG IS READY AND EAGER TO ENGAGE LOCAL COMMUNITIES THROUGH PARTNERSHIPS WITH LOCAL COMPANIES AND PERSONNEL FOR THE SUCCESSFUL DELIVERY OF THE I-70 EAST PROJECT. OUR GOAL IS TO DESIGN, BUILD, AND MAINTAIN THIS PROJECT WITH LOCAL LABOR AND MATERIALS. WE KNOW HOW IMPORTANT WORKFORCE DEVELOPMENT IS TO CDOT, THE PROCURING AUTHORITIES AND TO THE COMMUNITIES BENEFITING FROM THE PROJECT AND FRMG HAS STRUCTURED OUR MANAGEMENT APPROACH AROUND THIS KEY VALUE.

Our team members have a strong history of partnering with small and disadvantaged business (SBs/DBEs) and meeting or exceeding related goals on major P3 projects. On the I-595 Corridor Roadway Improvements project, Dragados USA exceeded the 8.1% DBE goal for a final DBE participation of 13.6% and surpassed the On the Job Training goal of 118 trainees with a final graduation of 164 trainees

FRMG has already begun capitalizing on our workforce development experience by hosting our first SB/DBE outreach meeting for the I-70 East in Denver on June 18th.

We will further enhance our workforce development initiatives by hosting job fairs and partnering with the Denver Workforce Development Investment Board after project award. We will develop apprenticeship programs to build on the local trade skills relevant to the complexities required to deliver this Project, and provide general education on the project elements to local schools to inspire young minds to consider the infrastructure industry as a potential career path.

To participate in this project means that I get to work with a highly qualified team of professionals and help develop a fully inclusive small, disadvantage and emerging business program that promotes maximum participation of all affected businesses - both construction and non-construction. Additionally, there is also a unique workforce development element that we plan to use to create jobs now as well as the workforce of the future for maintenance and sustainment of the completed Project.

—Terry Gerrit  
DBE/ESB  
Manager



**FRMG team members are well versed in community commitment. On the US 6 project, Lead Contractor team members held a local job fair to connect job seekers with contractors and project stakeholders. The fair followed the guidelines established by CDOT.**

**OVER THE LAST TWENTY YEARS, CH2M HAS MENTORED 43 FIRMS, EIGHT OF WHICH ARE BASED IN COLORADO.**

# PUBLIC INTEREST AND ENGAGEMENT

FRMG understands the important role public engagement plays in the overall success of the Project. Our approach places a great deal of emphasis on developing clear lines of communication between FRMG, the communities and involved agencies, early in the process. FRMG's goal is to involve the public through non-technical task forces, in an effort to enhance public interest while helping residents and locals understand the long-term benefits their community will reap from the Project. This approach will include developing communication solutions tailored to the local situation, monitoring progress, and making adjustments as needed. All engagement plans and activities will be agreed upon with CDOT and Procuring Authorities.

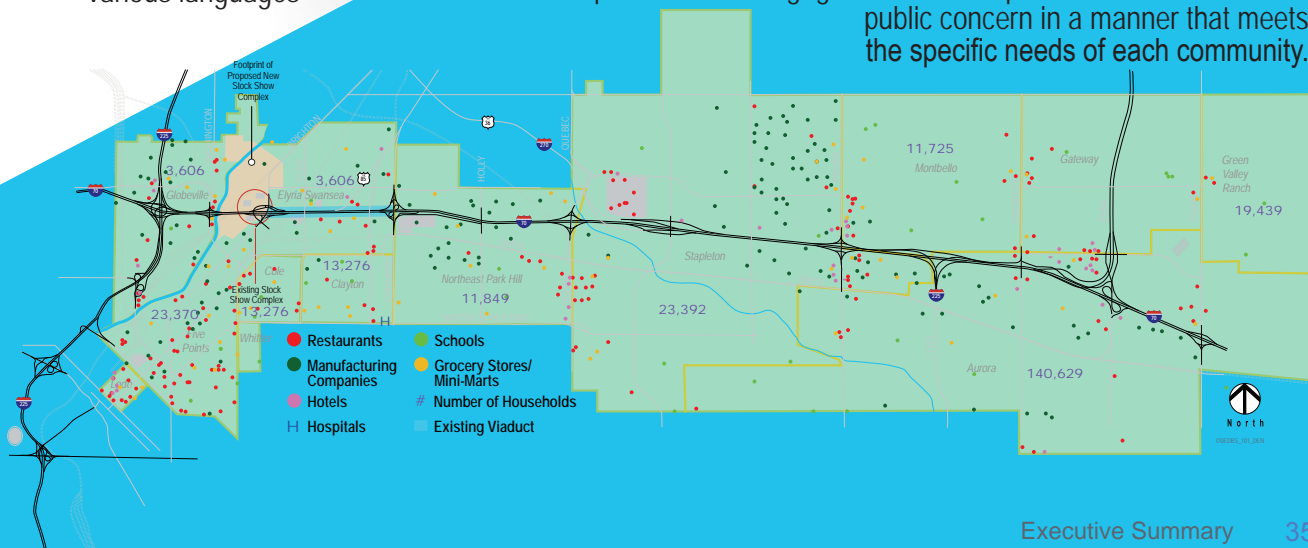
FRMG will create public interest and involvement by:

- » Partnering with local companies and personnel who have been living and working in the area for decades
- » Introducing our team, strategy, and opportunities on our public website
- » Including community representatives on select task forces so they are part of the Project's creative process
- » Engaging with local Colorado elementary schools by developing classroom exercises in designing and building models
- » Providing a detailed Business and School Outreach Plan to provide advanced notice of construction activities
- » Providing documents and services for public notices and community meetings in various languages

Our team's employees have volunteered to teach engineering and project modeling to local Colorado elementary students. This approach could be used to create excitement and engage students at local elementary schools, like Swansea Elementary School.



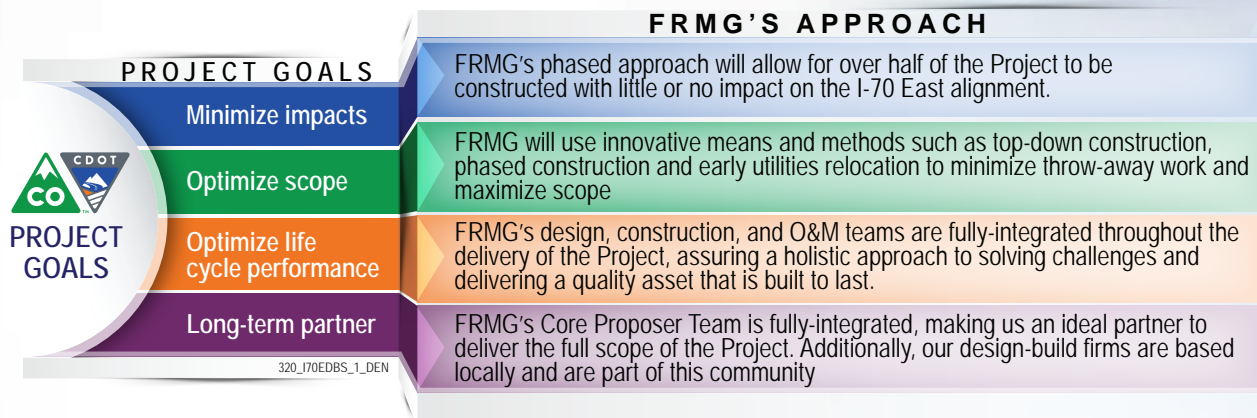
FRMG has thoroughly analyzed the areas surrounding the Project and has identified the neighborhoods which will be most affected by the development of the Project, such as Globeville, Elyria, Swansea, Park Hill, and Stapleton; along with more than 1,200 local businesses and associations in the area. FRMG will take special care to engage with these impacted areas and address public concern in a manner that meets the specific needs of each community.



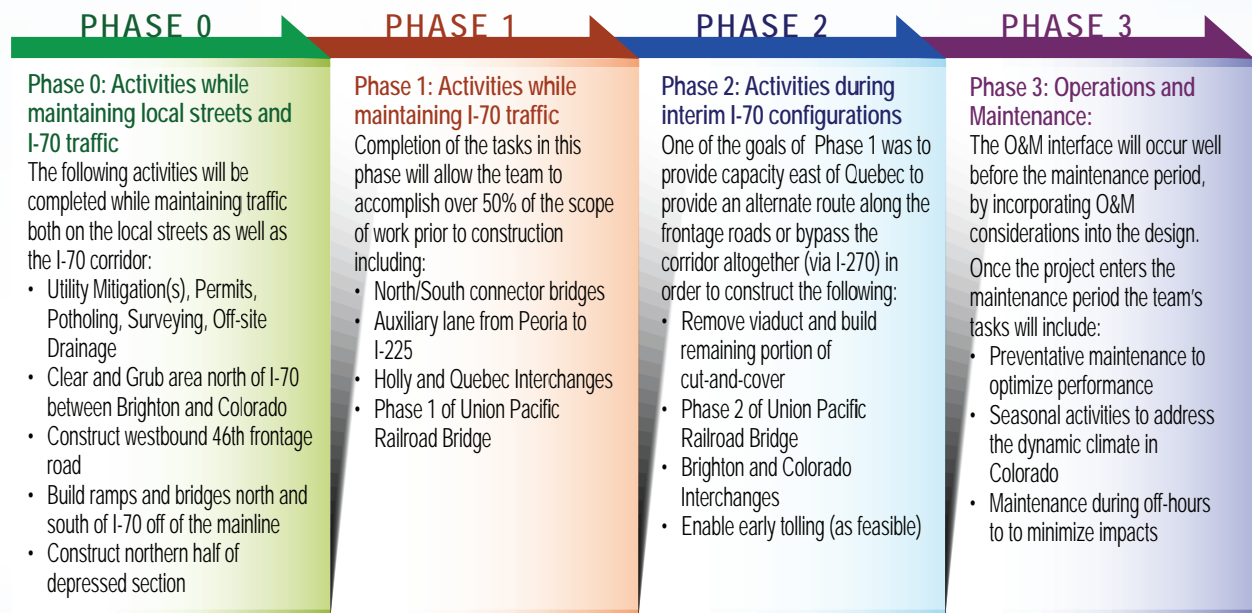
# FRMG'S TECHNICAL APPROACH

FRMG has followed the development of the I-70 East Project for more than a decade. As a locally-based design-build team, we understand the significance of this corridor to CDOT, the Procuring Authorities, and the Region. Leveraging our experience with similarly complex projects, we will work together with CDOT and the community to mitigate construction impacts and address health and safety concerns.

FRMG's technical approach for the I-70 East has been expertly designed to meet all Project goals.



FRMG has developed a preliminary phased approach which would deliver the key benefit of minimizing impacts to the residents, businesses, and other stakeholders by allowing for over half of the Project to be constructed with little or no impact to the I-70 East Alignment. Our preliminary proposed solution would schedule major work activities in a manner that reflects our goal of maintaining multi-modal connectivity and traffic flow on both local streets and along I-70.



**FRMG will partner with CDOT to deliver innovative and sustainable solutions to the I-70 East Project that will minimize impacts of construction to surrounding communities and ensure safe and reliable travel along this critical corridor**

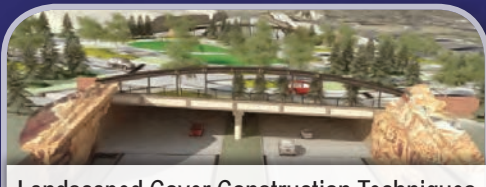
# TECHNICAL CHALLENGES

**FRMG is a team fully equipped to address the unique technical challenges of this Project.**

We will leverage our experience from previous projects that had similarly complex challenges to expertly deliver the I-70 East.



**Viaduct Removal (demolition)**  
*Broadway Demo*



**Landscaped Cover Construction Techniques**  
*Golden Lid*



**Phased Deep Excavation**  
*I-71/670 Columbus Crossroads*



**Maintaining Traffic During Construction in an Urban Corridor**  
*I-595*



# FRMG's FINANCING APPROACH

FRMG's Equity Members are experienced developers and financiers in the North American and global P3 markets and have proven experience in developing innovative and competitive financing solutions for P3 transactions in North America.

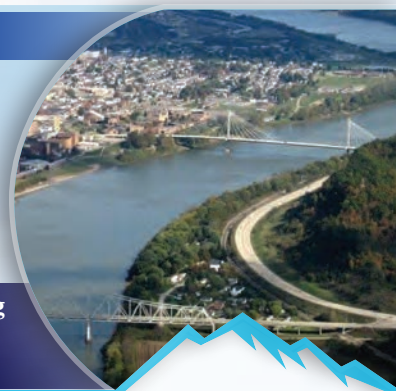
Our diligent and collaborative approach, provides lenders and rating agencies with a detailed and thorough understanding of the solutions developed by our technical teams, facilitating an efficient and decisive evaluation process.

We have the financial expertise required to structure and secure cost-effective and highly competitive debt financing and our team brings significant and recent experience in structuring financing for P3 projects that include Private Activity Bonds (PABs), commercial bank debt, and TIFIA Loans. FRMG Equity Members have closed over \$1.9 billion in TIFIA financing.

## Southern Ohio Veterans Memorial Highway (Portsmouth Bypass)

The Portsmouth Bypass project represents the most recent PABs and TIFIA financed P3 project to reach financial close in the United States. ACS' experience leading the development and financing of this project will be key to our team's success on the I-70 East, as the recent market knowledge will be instrumental to successfully evaluating and negotiating efficient terms with senior lenders and the TIFIA Joint Program Office for a PABs and TIFIA solution as currently under consideration by CDOT and the Procuring Authorities for the Project.

**This project provides recent and highly relevant experience in negotiating and closing a TIFIA and PABs financed project, similar to what may be structured for the I-70 East.**



FRMG's Equity Members are among the most active P3 developers in North America with respect to structuring, closing and managing availability payment transactions for transportation P3s. In the time since I-595 closed in 2009, which was the first transportation availability payment P3 project to reach financial close in the US, the Equity Members have been awarded and reached financial close on 11 transportation availability payment P3s in North America.

Our demonstrated success on availability payment P3 projects in North America is based on our ability to tailor specific financial solutions around the unique characteristics, challenges and goals of each Project we pursue. We will apply this experience to the I-70 East Project as we develop a competitive financing structure that also delivers execution certainty.

Each of the Equity Member Reference Projects included in our submission highlight our ability to evaluate and deliver tailored, competitive and certain financing structures for our projects.

## FRMG TEAM MEMBER AWARDS FOR P3 PROJECT FINANCING



**2014 "TRANSPORT DEAL OF THE YEAR"** at the Infrastructure Journal Global Americas Awards for the **I-4 Ultimate project.**

**2013 "SILVER AWARD FOR PROJECT FINANCING"** from the Canadian Council for Public Private Partnerships for **Northeast Anthony Henday Drive.**

**2010 "AWARD OF MERIT FOR PROJECT FINANCING"** from the Canadian Council for Public Private Partnerships for the **South Fraser Perimeter Road.**

**2010 "NORTH AMERICAN TRANSPORT DEAL OF THE YEAR"** from Project Finance Magazine for the **Denver Eagle P3 project.**

**2008 "GOLD AWARD FOR PROJECT FINANCING"** from the Canadian Council for Public Private Partnerships for the **Autoroute-30.**

# AN EXPERIENCED TEAM

Successful P3's that are delivered on time and on budget, are characterized by a high level of integration between design, construction, finance, operation and maintenance.

**P3 Project success requires relevant project experience, highly skilled personnel, and experience working together as an integrated team.**

As illustrated in our Reference Projects and highlighted briefly below, FRMG has the demonstrated experience and team credentials to successfully deliver the I-70 East Project.

## Experience working together through all stages of P3 project development

FRMG team members have a long history of effective partnering that has resulted in the successful delivery of large scale transportation P3 projects. The Northeast Anthony Henday Project currently being constructed is an excellent example of successful partnering between five FRMG team members.

### Alberta's Northeast Anthony Henday Project

Five of FRMG's team members are successfully building the \$1.1 billion Northeast Anthony Henday Drive, demonstrating the value of an integrated approach in optimizing the scope during RFP and transitioning to full execution of the project. This project is currently on track to be finished three years earlier than it would have been via conventional delivery.

**Our shared experience working together on NEAH will benefit the I-70 East project through our established familiarity as a team and our mutual goals.**



## Experience developing tailored financing solutions

FRMG team members have been awarded 13 P3 transportation projects in North America with a combined investment volume of more than \$21 billion and have demonstrated experience in arranging financing for availability payment P3 projects, including the use of Transportation Infrastructure Finance Innovation Act Program (TIFIA) Loan and Private Activity Bond (PABs). FRMG team members have closed the most recent PAB issuance as well as the two most recent TIFIA loans for availability projects, the I-4 Ultimate (TIFIA) and the Portsmouth Bypass (TIFIA and PABs).

### Florida's I-4 Ultimate Project

The I-4 Ultimate was the largest TIFIA loan for an availability project and was successfully closed within FDOT's procurement timeline. FRMG has the most recent experience with TIFIA. The FRMG team's experience on this project will allow the Procuring Authorities to obtain a more optimized financing structure and a more certain path to a timely financial close, because we have an understanding of TIFIA's likely positions and approach when finalizing the loan documents.

**The I-4 Ultimate illustrates just one example of our team's collective expertise in reaching financial close on complex availability payment P3 projects.**



# AN EXPERIENCED TEAM

## Experience designing and constructing world class projects with highly skilled personnel

To successfully deliver the Project, FRMG's Lead Contractor and Lead Engineer will draw on the wealth of experience gained on the over 16,500 projects they have completed in Colorado. Our experienced local team and it's partners employ over 3,500 Colorado State residents and is eager to mobilize. In addition to the benefits realized from our strong local presence and firsthand knowledge of the Project area, FRMG brings highly skilled individuals to the I-70 East project who will be performing similar roles to those which they have already successfully performed on other comparable projects.

Chris Bisio, FRMG's Design Manager, provided design oversight of a landscaped vehicular and pedestrian "cap" over the I-71/670 which reconnected the Lincoln-King neighborhood to downtown Columbus on the Columbus Crossroads project. This project was successfully delivered \$41 million under Ohio Department of Transportation's estimate. The local community was engaged from the beginning on design and aesthetics for the newly constructed cap, and over 2,000 citizens attended the celebration of its opening.

### I-71/670 Columbus Crossroads

A critical part of the project was a cut-and-cover tunnel which required fire and life safety provisions developed in collaboration with the local fire department.

**2014 Roads & Bridges Top Ten Roads Award (No. 7)**

**2014 ODOT/OCA Don Conaway Partnering Award**

**2014 DBIA National Award of Merit Winner**

**2014 DBIA Excellence in Process Finalist**

**2014 NE and Central Ohio Outstanding Short Span Bridge – Long St. Bridge/Cap**

**2014-2015 ASHE Central Ohio Project of the Year (over \$5M construction)**

**2014-2015 ASHE Central Ohio Peers Choice Project of the Year (all categories)**



## Experience demonstrating the value of a fully integrated team

FRMG's Lead Operator team members have the unique experience of providing operating and maintenance services to more than 40 transportation P3 projects and 20 non-P3 projects around the world. More than 3.5 million cars a day use roads serviced by our team members and we understand the importance of maintaining maximum availability of important transportation systems. FRMG team members bring decades of experience in O&M services on similar road/highway projects. This allows our team the ability to take full advantage of the understanding that the careful consideration of life cycle issues early in the design process will allow us to deliver a more cost-effective long-term solution for taxpayers.

### South Fraser Perimeter Road

One of the most significant challenges overcome by FRMG team members on the South Fraser Perimeter Road was related to compressible organic soils along the corridor. ACS, in collaboration with Dragados, developed a comprehensive pavement rehabilitation plan for areas of high settlement by reducing the initial pavement thickness during construction, with a plan to significantly increase thickness in year five of the operating period to correct for post-construction settlements. This solution resulted in lower upfront construction costs and higher rehabilitation costs, however it was optimal from net present value perspective and cost to our client, while protecting the overall ride quality for users.

**FRMG will leverage its technical task force working groups to similarly identify areas on the I-70 East Project where an innovative life cycle solution will bring savings to CDOT.**





# Front Range Mobility Group

**WE ARE** established members of the local community with a long history of partnership with CDOT

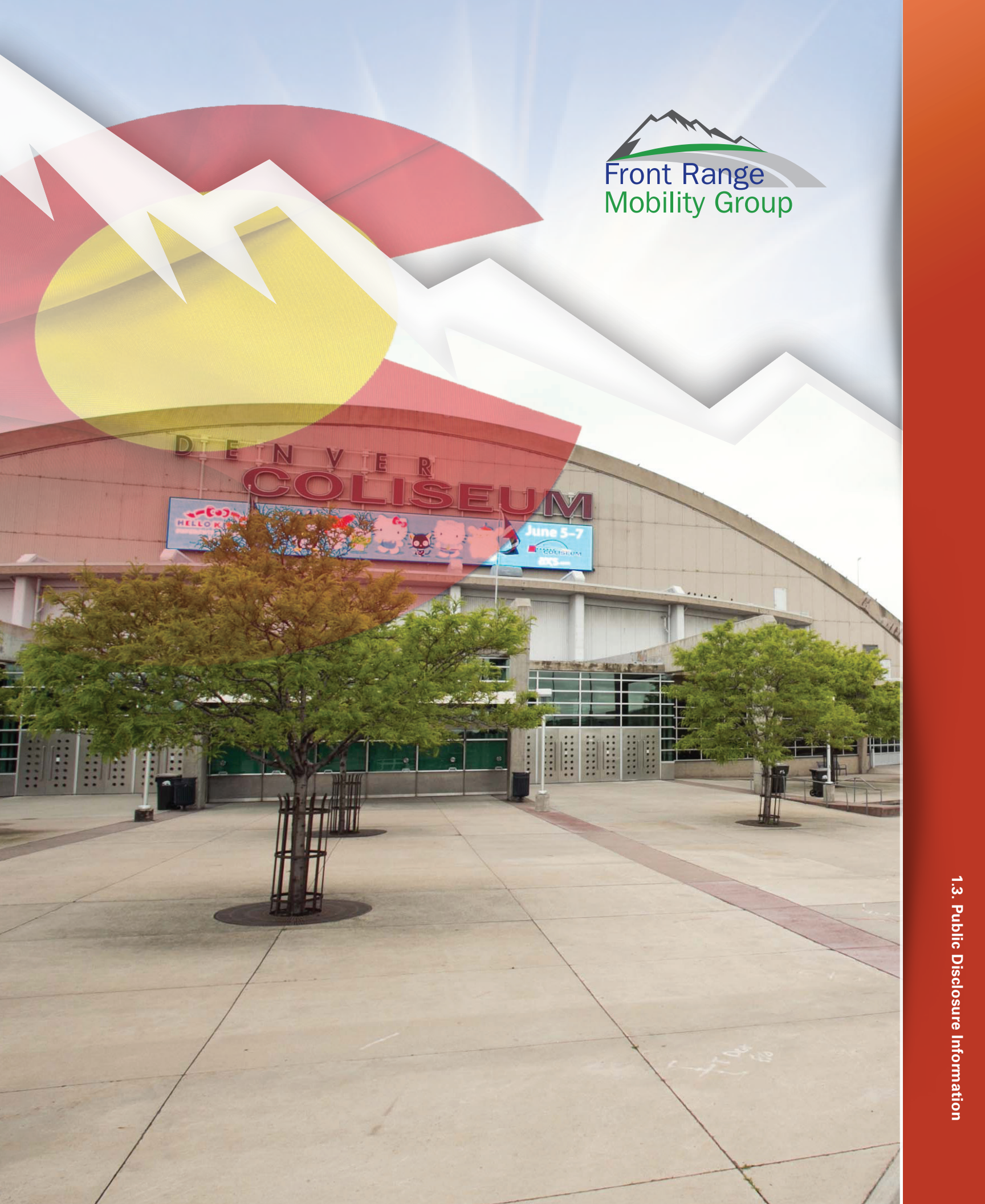
**WE ARE** invested in the long-term success of I-70 East and committed to meeting the Project goals with integrity and transparency

**WE ARE** P3 experts with proven experience working together delivering the most complex transportation projects with a focus on value and sustainability

**WE ARE THE RIGHT TEAM  
FOR YOUR PROJECT**







# 1.3.1.



AREA ELEMENTARY SCHOOL



### 1.3.1. SOQ SUBMISSION PUBLIC STATEMENT

Colorado Department of Transportation and the Procuring Authorities are embarking on one of the largest and most significant transportation projects in Colorado's history — the replacement of the aging I-70 East viaduct and adding capacity to I-70 between downtown Denver and the Denver International Airport. To deliver the Project, CDOT has elected to use a P3 model which brings a very high level of certainty for an on-time and on-budget delivery, with an optimized long-term value for the benefit of the State of Colorado. As such, CDOT and the Procuring Authorities, HTPe and CBE, issued a Request for Qualifications on March 25, 2015 to design, build, finance, operate and maintain the I-70 East Project.

Front Range Mobility Group (FRMG) is a tailor-made team that came together to meet the specific challenges of the I-70 East Project. Our team members will provide CDOT and the Procuring Authorities with an ideal blend of local involvement, world-class transportation infrastructure expertise and proven experience in delivering highway infrastructure projects in partnership with public agencies.

FRMG team members combine some of the most capable and successful developers, contractors, designers and operators in the national and global P3 market. Our demonstrated success is based on technical expertise and proven capability to innovate and deliver sound solutions to the construction and long-term management of highway projects, as well as decades of experience in successfully raising project financing, for projects similar to the I-70 East Project.

 <b>Team Structure</b>	
<b>Equity Members</b>	
HOCHTIEF PPP Solutions North America, Inc.	
ACS Infrastructure Development, Inc.	
AECOM Capital, Inc.	
John Laing Investments Limited	
<b>Lead Contractor Members</b>	
Flatiron Constructors Inc.	
Dragados USA Inc.	
URS Energy & Construction, Inc. (AECOM Construction)	
<b>Lead Engineer Members</b>	
CH2M HILL Engineers, Inc.	
AECOM Technical Services, Inc.	
<b>Lead Operator Members</b>	
HOCHTIEF PPP Solutions North America, Inc.	
ACS Infrastructure Development, Inc.	
AECOM Capital, Inc.	
<b>Financially Responsible Parties</b>	
HOCHTIEF Aktiengesellschaft	
ACS Servicios y Concesiones, S.L.	
Dragados S.A.	
AECOM	
CH2M HILL Companies, LTD	
<b>Major Subcontractors and Consultants</b>	
Kraemer North America, LLC	
BT Construction, Inc.	
Interstate Highway Construction Inc.	
Tsiouvaras Simmons Holderness Inc.	

## Our Relevant Experience

### Equity Team

- » Unmatched experience having reached financial close on 11 transportation availability payment P3s in North America
- » Successful track record of delivering more than 220 P3 projects around the world, including the Eagle P3 project, right here in Denver

### Construction Team

- » Qualified and skilled in Design-Build projects, with more than 50 P3 / Design - Build projects constructed across North America
- » Experienced in the construction of more than 13,000 miles of highways
- » Comprehensive local know-how having constructed more than 1,500 projects in Colorado, over the last 20 years

### Design Team

- » Provided Design and Management expertise for more than 50 P3 projects in North America
- » Delivered more than 15,000 projects in Colorado

### Operations Team

- » Industry leaders with more than 40 P3 and 20 non-P3 transportation projects under operation worldwide
- » Provides Operations and Maintenance Services for more than 15,000 lane miles of roads and highways across North America

## Why have we submitted this SOQ?

FRMG team members have a deep rooted Colorado presence that includes designers, contractors and personnel who live and work in this community. We are excited to be part of a project that takes place in our own “backyard” and are committed to ensuring its success.

We understand that this project is not just about delivering more capacity and safer infrastructure – it is also about the livelihood of the local community, its role in the larger North Denver Cornerstone Collaborative, and its place as the gateway for one of the nation’s top tourist destinations.

Collectively, FRMG Team Members employ over 3,500 employees in Colorado and we have delivered more than 16,500 projects in the State. Locally, our design and construction team has been delivering CDOT projects for more than 30 years and we are enthusiastic about the prospect of participating on a large project at home.

The collective local experience of our team members has allowed us to cultivate a strong working relationship with CDOT and other Project stakeholders, making us highly qualified to successfully deliver this Project. We look forward to having the opportunity to work together with CDOT to develop a comprehensive community outreach and workforce development program to ensure the full benefits of this Project are realized in the local community.

Through a transparent and committed partnership with CDOT, FRMG looks forward to developing a corridor where neighborhoods are once again reconnected, and drivers experience shorter and more reliable journey times and improved road safety.

# 1.3.2. FORM B



AREA ELEMENTARY SCHOOL

## FORM B: CONFIDENTIAL CONTENTS INDEX

Proposer Name: Front Range Mobility Group

### Form B: Confidential Contents Index

Volume 1:

No.	SOQ Heading(s)	SOQ Section(s)	SOQ Page(s)	Other Identifying Information (if any)	Relevant CORA Exemption(s)	Duration of Exemption
(1)	3.2 Legal Disclosures and Certifications	Form D, Legal Disclosures Attachment 2	116-117	<b>HOCHTIEF PPP Solutions North America Inc.</b>	Form D requires the provision of information relating to certain legal liabilities and proceedings in which HOCHTIEF PPP Solutions North America Inc. (as an Equity Member and Member of the Lead Operator) and its Affiliates have been involved, which includes information regarding settlements, ongoing proceedings and the monetary value of claims. We consider all of this information to be privileged and/or commercially confidential and therefore exempt from disclosure as CORA Exempt Materials under C.R.S. §§24-72-204(3)(a)(IV).	Permanent This information will remain commercially sensitive indefinitely. As such, we consider that it should be exempt from disclosure permanently
(2)	3.2 Legal Disclosures and Certifications	Form E, Certifications	131-137	<b>HOCHTIEF PPP Solutions North America Inc.</b>	The information provided in response to the questionnaire in Form E includes information regarding settlements, citations, allegations and ongoing matters. We consider all of this information to be privileged and/or commercially confidential and therefore exempt from disclosure as CORA Exempt Materials under C.R.S. §§24-72-204(3)(a)(IV).	Permanent This information will remain commercially sensitive indefinitely. As such, we consider that it should be exempt from disclosure permanently

Colorado I-70 East Project

No.	SOQ Heading(s)	SOQ Section(s)	SOQ Page(s)	Other Identifying Information (if any)	Relevant CORA Exemption(s)	Duration of Exemption
(3)	3.2 Legal Disclosures and Certifications	Form D, Legal Disclosures Attachment 2	116-117	<b>HOCHTIEF Aktiengesellschaft</b>	Form D requires the provision of information relating to certain legal liabilities and proceedings in which HOCHTIEF Aktiengesellschaft (as Financially Responsible Party for Equity Member and Member of the Lead Operator HOCHTIEF PPP Solutions North America Inc. and Member of the Lead Contractor Flatiron Constructors Inc.) and its Affiliates have been involved, which includes information regarding settlements, ongoing proceedings and the monetary value of claims. We consider all of this information to be privileged and/or commercially confidential and therefore exempt from disclosure as CORA Exempt Materials under C.R.S. §§24-72-204(3)(a)(IV).	Permanent This information will remain commercially sensitive indefinitely. As such, we consider that it should be exempt from disclosure permanently
(4)	3.2 Legal Disclosures and Certifications	Form E, Certifications	183-186	<b>HOCHTIEF Aktiengesellschaft</b>	The information provided in response to the questionnaire in Form E includes information regarding settlements, citations, allegations and ongoing matters. We consider all of this information to be privileged and/or commercially confidential and therefore exempt from disclosure as CORA Exempt Materials under C.R.S. §§24-72-204(3)(a)(IV).	Permanent This information will remain commercially sensitive indefinitely. As such, we consider that it should be exempt from disclosure permanently

Colorado I-70 East Project

No.	SOQ Heading(s)	SOQ Section(s)	SOQ Page(s)	Other Identifying Information (if any)	Relevant CORA Exemption(s)	Duration of Exemption
(5)	3.2 Legal Disclosures and Certifications	Form D, Legal Disclosures Attachment 2	118-119	<b>Flatiron Constructors, Inc.</b>	Form D requires the provision of information relating to certain legal liabilities and proceedings in which Flatiron Constructors, Inc. (as a Joint Venturer in the Lead Contractor) and its Affiliates have been involved, which includes information regarding settlements, ongoing proceedings and the monetary value of claims. We consider all of this information to be privileged and/or commercially confidential and therefore exempt from disclosure as CORA Exempt Materials under C.R.S. §§24-72-204(3)(a)(IV).	Permanent This information will remain commercially sensitive indefinitely. As such, we consider that it should be exempt from disclosure permanently
(6)	3.2 Legal Disclosures and Certifications	Form E, Certifications	150-152	<b>Flatiron Constructors, Inc.</b>	The information provided in response to the questionnaire in Form E includes information regarding settlements, citations, allegations and ongoing matters. We consider all of this information to be privileged and/or commercially confidential and therefore exempt from disclosure as CORA Exempt Materials under C.R.S. §§24-72-204(3)(a)(IV).	Permanent This information will remain commercially sensitive indefinitely. As such, we consider that it should be exempt from disclosure permanently
(7)	3.2 Legal Disclosures and Certifications	Form D, Legal Disclosures Attachment 3	120 122-126	<b>Dragados USA Inc.</b>	Form D requires the provision of information relating to certain legal liabilities and proceedings in which Dragados USA, Inc. (as a Joint Venturer in the Lead Contractor) and its Affiliates have been involved, which includes	Permanent This information will remain commercially sensitive indefinitely. As such, we consider that it should be



Colorado I-70 East Project

No.	SOQ Heading(s)	SOQ Section(s)	SOQ Page(s)	Other Identifying Information (if any)	Relevant CORA Exemption(s)	Duration of Exemption
					information regarding settlements, ongoing proceedings and the monetary value of claims. We consider all of this information to be privileged and/or commercially confidential and therefore exempt from disclosure as CORA Exempt Materials under C.R.S. §§24-72-204(3)(a)(IV).	exempt from disclosure permanently
(8)	3.2 Legal Disclosures and Certifications	Form E, Certifications	153-168	<b>Dragados USA Inc.</b>	The information provided in response to the questionnaire in Form E includes information regarding settlements, citations, allegations and ongoing matters. We consider all of this information to be privileged and/or commercially confidential and therefore exempt from disclosure as CORA Exempt Materials under C.R.S. §§24-72-204(3)(a)(IV).	Permanent This information will remain commercially sensitive indefinitely. As such, we consider that it should be exempt from disclosure permanently
(9)	3.2 Legal Disclosures and Certifications	Form D, Legal Disclosures Attachment 4	121,127-128	<b>Dragados S.A.</b>	Form D requires the provision of information relating to certain legal liabilities and proceedings in which Dragados S.A. (as Financially Responsible Party) and its Affiliates have been involved, which includes information regarding settlements, ongoing proceedings and the monetary value of claims. We consider all of this information to be privileged and/or commercially confidential and therefore exempt from disclosure as CORA Exempt	Permanent This information will remain commercially sensitive indefinitely. As such, we consider that it should be exempt from disclosure permanently

**Colorado I-70 East Project**

No.	SOQ Heading(s)	SOQ Section(s)	SOQ Page(s)	Other Identifying Information (if any)	Relevant CORA Exemption(s)	Duration of Exemption
					Materials under C.R.S. §§24-72-204(3)(a)(IV).	
(10)	3.2 Legal Disclosures and Certifications	Form E, Certifications	198-200	<b>Dragados S.A.</b>	The information provided in response to the questionnaire in Form E includes information regarding settlements, citations, allegations and ongoing matters. We consider all of this information to be privileged and/or commercially confidential and therefore exempt from disclosure as CORA Exempt Materials under C.R.S. §§24-72-204(3)(a)(IV).	Permanent This information will remain commercially sensitive indefinitely. As such, we consider that it should be exempt from disclosure permanently

**VOLUME 2, SUB-VOLUME: HOCHTIEF PPP SOLUTIONS NORTH AMERICA, INC.**

No.	SOQ Heading(s)	SOQ Section(s)	SOQ Page(s)	Other Identifying Information (if any)	Relevant CORA Exemption(s)	Duration of Exemption
(1)	4. Financial Information	4.1.a	N/A	<b>HOCHTIEF PPP Solutions North America, Inc.</b>	HOCHTIEF PPP Solutions North America Inc. does not prepare audited financial statements and is fully consolidated within the audited financials of its publicly listed ultimate parent company HOCHTIEF Aktiengesellschaft. As such the financial statements of HOCHTIEF PPP Solutions North America Inc. contain proprietary information. We consider all of this information to be privileged and/or	Permanent. This information will remain commercially sensitive indefinitely. As such, we consider that it should be exempt from disclosure permanently

Colorado I-70 East Project

No.	SOQ Heading(s)	SOQ Section(s)	SOQ Page(s)	Other Identifying Information (if any)	Relevant CORA Exemption(s)	Duration of Exemption
					commercially confidential and therefore exempt from disclosure as CORA Exempt Materials under C.R.S. §§24-72-204(3)(a)(IV).	

Volume 2, Sub-Volume: AECOM Capital, Inc.

No.	SOQ Heading(s)	SOQ Section(s)	SOQ Page(s)	Other Identifying Information (if any)	Relevant CORA Exemption(s)	Duration of Exemption
(1)	4. Financial Information	4.1 – Financial Statements	N/A	<b>AECOM Capital, Inc.</b>	Exempt from disclosure as CORA Exempt Materials under C.R.S. 24-72-204(3)(a)(IV) as it pertains to confidential financial information.	Permanent exemption. These statements are not released as public documents.
(2)	3. Letters of Support	3.3 – Equity Funding Support Letter	N/A	Portions of the Equity Funding Support Letter for <b>AECOM Capital, Inc.</b> are financial confidential.	Exempt from disclosure as CORA Exempt Materials under C.R.S. 24-72-204(3)(a)(IV) as it pertains to confidential financial information.	Permanent exemption. These statements are not released as public documents.
(3)	4. Financial Information	4.1 – Financial Statement, 4.2 – Material Changes in Financial Condition and 4.3 – Off Balance Sheet Liabilities	N/A	Portions of the letter and Exhibit A of the Statement Regarding Financial Information letter for <b>AECOM Capital, Inc.</b> are financial confidential.	Exempt from disclosure as CORA Exempt Materials under C.R.S. 24-72-204(3)(a)(IV) as it pertains to confidential financial information.	Permanent exemption. These statements are not released as public documents.

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Volume 2, Sub-Volume: John Laing Investments Limited

No.	SOQ Heading(s)	SOQ Section(s)	SOQ Page(s)	Other Identifying Information (if any)	Relevant CORA Exemption(s)	Duration of Exemption
(1)	4. Financial Information	4.1 – Financial Statements	N/A	<b>John Laing Investments Limited</b> for the years 2012, 2013, and 2014	We consider the financial statements provided for John Laing Investments Limited to contain confidential commercial and financial data, which is exempt from disclosure as CORA Exempt Materials under C.R.S. §§24-72-204(3)(a)(IV).	Permanent exemption. These statements are not released as public documents.

Volume 2, Sub-Volume: Flatiron Constructors, Inc.

No.	SOQ Heading(s)	SOQ Section(s)	SOQ Page(s)	Other Identifying Information (if any)	Relevant CORA Exemption(s)	Duration of Exemption
(1)	4. Financial Information	4.1, Financial Statements 4.2 Material Changes 4.3, Off Balance Sheets	N/A	<b>Flatiron Constructors, Inc.</b> for the years 2012, 2013, and 2014 and CFO Letter	We consider the financial statements and the Statements from our CFO regarding the Financial Statements provided for Flatiron Constructors, Inc. to contain confidential commercial and financial data, which is exempt from disclosure as CORA Exempt Materials under C.R.S. §§24-72-204(3)(a)(IV).	Permanent exemption. These statements are not released as public documents.

Volume 2, Sub-Volume: Dragados USA, Inc

No.	SOQ Heading(s)	SOQ Section(s)	SOQ Page(s)	Other Identifying Information (if any)	Relevant CORA Exemption(s)	Duration of Exemption
(1)	4. Financial Information	4.1, Financial Statements 4.2	N/A	<b>Dragados USA, Inc.</b> Financial Statements for	We consider the financial statements and statement regarding financial	Permanent. This information will remain

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No.	SOQ Heading(s)	SOQ Section(s)	SOQ Page(s)	Other Identifying Information (if any)	Relevant CORA Exemption(s)	Duration of Exemption
		Material Changes 4.3, Off Balance Sheets		the years 2012, 2013, and 2014 and Statement Regarding Financial Information Signed by the CEO	information provided for Dragados USA, Inc. and Dragados, S.A. to contain confidential commercial and financial data, which is exempt from disclosure as CORA Exempt Materials under C.R.S. §§24-72-204(3)(a)(IV).	commercially sensitive indefinitely. As such, we consider that it should be exempt from disclosure permanently.

**VOLUME 2, SUB-VOLUME: URS ENERGY & CONSTRUCTION, INC.**

No.	SOQ Heading(s)	SOQ Section(s)	SOQ Page(s)	Other Identifying Information (if any)	Relevant CORA Exemption(s)	Duration of Exemption
(1)	4. Financial Information	4.1 – Financial Statements	N/A	<b>URS Energy &amp; Construction, Inc</b> an AECOM Company for the years 2011, 2012, and 2013	C.R.S. 24-72-204(3)(a)(IV) as it pertains to confidential financial information.	Permanent exemption. These statements are not released as public documents.

**Volume 2, Sub-Volume: CH2M HILL Engineers, Inc.**

No.	SOQ Heading(s)	SOQ Section(s)	SOQ Page(s)	Other Identifying Information (if any)	Relevant CORA Exemption(s)	Duration of Exemption
(1)	4. Financial Information	4.1 – Financial Statements	N/A	<b>CH2M HILL Engineers, Inc.</b> Consolidated Financial Statements for 2014 through 2011	C.R.S. 24-72-204(3)(a)(IV) as it pertains to confidential financial information.	Permanent exemption. These audit reports are not released as public documents.

**VOLUME 2, SUB-VOLUME: AECOM TECHNICAL SERVICES, INC.**

No.	SOQ Heading(s)	SOQ Section(s)	SOQ Page(s)	Other Identifying Information (if any)	Relevant CORA Exemption(s)	Duration of Exemption
(1)	4. Financial Information	4.1 – Financial Statements	N/A	<b>AECOM Technical Services, Inc.</b> for the years 2012, 2013 and 2014.	C.R.S. 24-72-204(3)(a)(IV) as it pertains to confidential financial information.	Permanent exemption. These statements are not released as public documents.

**Volume 2, Sub-Volume: HOCHTIEF Aktiengesellschaft**

No.	SOQ Heading(s)	SOQ Section(s)	SOQ Page(s)	Other Identifying Information (if any)	Relevant CORA Exemption(s)	Duration of Exemption
(1)	4. Financial Information	4.1 Extracts of Financial Statements in U.S .Dollar	N/A	<b>HOCHTIEF Aktiengesellschaft</b>	HOCHTIEF Aktiengesellschaft's Financial Statements are prepared in EUR. As such the US Dollar conversions provided by Deloitte of the financial statements from HOCHTIEF Aktiengesellschaft are not created for the purpose of public release, but solely for the purpose of this SOQ.  We consider all of this information to be privileged and/or commercially confidential and therefore exempt from disclosure as CORA Exempt Materials under C.R.S. §§24-72-204(3)(a)(IV).	Permanent This information will remain commercially sensitive indefinitely. As such, we consider that it should be exempt from disclosure permanently.

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VOLUME 2, SUB-VOLUME: DRAGADOS S.A

No.	SOQ Heading(s)	SOQ Section(s)	SOQ Page(s)	Other Identifying Information (if any)	Relevant CORA Exemption(s)	Duration of Exemption
(1)	4. Financial Information	4.1, Financial Statements 4.2 Material Changes 4.3, Off Balance Sheets	N/A	<b>Dragados S.A.</b> Financial Statements for the years 2012, 2013, and 2014 and Statement Regarding Financial Information Signed by the CEO	We consider the financial statements and statement regarding financial information provided for Dragados USA, Inc. and Dragados, S.A. to contain confidential commercial and financial data, which is exempt from disclosure as CORA Exempt Materials under C.R.S. §§24-72-204(3)(a)(IV).	Permanent This information will remain commercially sensitive indefinitely. As such, we consider that it should be exempt from disclosure permanently.

VOLUME 2, SUB-VOLUME: CH2M HILL COMPANIES, LTD

No.	SOQ Heading(s)	SOQ Section(s)	SOQ Page(s)	Other Identifying Information (if any)	Relevant CORA Exemption(s)	Duration of Exemption
(1)	4. Financial Information	4.1 – Financial Statements	N/A	<b>CH2M HILL COMPANIES, LTD. AND SUBSIDIARIES</b> Consolidated Financial Statements for 2014 through 2011.	C.R.S. 24-72-204(3)(a)(IV) as it pertains to confidential financial information.	Permanent exemption. These audit reports are not released as public documents.

VOLUME 2:

No.	SOQ Heading(s)	SOQ Section(s)	SOQ Page(s)	Other Identifying Information (if any)	Relevant CORA Exemption(s)	Duration of Exemption
(1)	3. Letters of Support	3.3 Equity Funding Support Letter	62-64	AECOM Equity Funding Letter	C.R.S. 24-72-204(3)(a)(IV) as it pertains to confidential financial information.	Permanent exemption. This letter is not released as public document.

# TEAM BACKGROUND INFORMATION

# 2



# CONNECTING COMMUNITIES



**EAST**  
**INTERSTATE COLORADO 70**  
**→ I-70 EAST**

**ALONG**

**RTD Eagle P3**  
*Denver, Colorado*



# 2.1.1. FORM C





## FORM C: INFORMATION REGARDING PROPOSER

Proposer Name: Front Range Mobility Group

### Form C: Core Proposer Team Member Information

#### A. Team Member and Role

- (1) Name of Team Member: HOCHTIEF PPP Solutions North America, Inc.
- (2) Role:
- Equity Member
  - Lead Contractor
  - Lead Engineer
  - Lead Operator
  - Joint venturer in Lead Operator
  - Financially Responsible Party for  
[Proposer to provide entity name]

#### B. Legal Information

- (1) Type of Legal Entity:
- Corporation
  - Limited Liability Company
  - Joint Venture
  - Partnership
  - Other: [Proposer to provide]
- (2) Year Established: 2008
- (3) Country of Organization or Formation (and, if US or Canada, state or Province of Organization or Formation): USA, Delaware
- (4) Federal Tax ID: 26-2473588
- (5) Authorized to do Business in Colorado:
- Yes (ID No.: [Proposer to provide])
  - No
- (6) North American Industry Classification Code: 23
- (7) Prior Name(s) (past five years): n/a
- (8) Successor in Interest to Entity/Entities (if any, past five years): n/a



## FORM C: INFORMATION REGARDING PROPOSER

Proposer Name: Front Range Mobility Group

### Form C: Core Proposer Team Member Information

#### A. Team Member and Role

- (1) Name of Team Member: ACS Infrastructure Development, Inc.
- (2) Role:
- Equity Member
  - Lead Contractor
  - Lead Engineer
  - Lead Operator
  - Joint venturer in Lead Operator
  - Financially Responsible Party for Front Range Mobility Group.

#### B. Legal Information

- (1) Type of Legal Entity:
- Corporation
  - Limited Liability Company
  - Joint Venture
  - Partnership
  - Other:
- (2) Year Established: 2006
- (3) Country of Organization or Formation (and, if US or Canada, state or Province of Organization or Formation): USA, Delaware
- (4) Federal Tax ID: 20-4677593
- (5) Authorized to do Business in Colorado:
- Yes (ID No.: [*Proposer to provide*])
  - No
- (6) North American Industry Classification Code: 237310
- (7) Prior Name(s) (past five years): Not applicable
- (8) Successor in Interest to Entity/Entities (if any, past five years): Not applicable



## FORM C: INFORMATION REGARDING PROPOSER

Proposer Name: Front Range Mobility Partner

### Form C: Core Proposer Team Member Information

#### A. Team Member and Role

- (1) Name of Team Member: AECOM Capital Inc.
- (2) Role:
- Equity Member
  - Lead Contractor
  - Lead Engineer
  - Lead Operator
  - Joint venturer in Lead Operator
  - Financially Responsible Party for  
[Proposer to provide entity name]

#### B. Legal Information

- (1) Type of Legal Entity:
- Corporation
  - Limited Liability Company
  - Joint Venture
  - Partnership
  - Other: [Proposer to provide]
- (2) Year Established: 2013
- (3) Country of Organization or Formation (and, if US or Canada, state or Province of Organization or Formation): USA, Delaware
- (4) Federal Tax ID: 46-1903320
- (5) Authorized to do Business in Colorado:
- Yes (ID No.: [Proposer to provide])
  - No – Not applicable (N/A)
- (6) North American Industry Classification Code: N/A
- (7) Prior Name(s) (past five years): N/A
- (8) Successor in Interest to Entity/Entities (if any, past five years): N/A

# FORM C: INFORMATION REGARDING PROPOSER

Proposer Name: Front Range Mobility Group

## Form C: Core Proposer Team Member Information

### A. Team Member and Role

(1) Name of Team Member:

John Laing Investments Limited

• Role:

- Equity Member
- Lead Contractor
- Lead Engineer Lead Operator
- Joint venturer in Lead  
[Contractor][Engineer][Operator]
- Financially Responsible Party for  
[Proposer to provide entity name]

### B. Legal Information

(1) Type of Legal Entity:

- Corporation
- Limited Liability Company
- Joint Venture
- Partnership
- Other: [Proposer to provide]

(2) Year Established:

1963

(3) Country of Organization or Formation (and, if US or Canada, state or Province of Organization or Formation):

Incorporated in England and Wales  
*Not applicable.*

(4) Federal Tax ID:

(5) Authorized to do Business in Colorado:

- Yes (ID No.: [Proposer to provide])
- No

(6) North American Industry Classification Code:

*Not applicable.*

(7) Prior Name(s) (past five years):

None

(8) Successor in Interest to Entity/Entities (if any, past five years):

None

# FORM C: INFORMATION REGARDING PROPOSER

Proposer Name: Front Range Mobility Group

## Form C: Core Proposer Team Member Information

### A. Team Member and Role

- (1) Name of Team Member: Flatiron Constructors, Inc.
- (2) Role:
- Equity Member
  - Lead Contractor
  - Lead Engineer
  - Lead Operator
  - Joint venturer in Lead Contractor
  - Financially Responsible Party for  
[Proposer to provide entity name]

### B. Legal Information

- (1) Type of Legal Entity:
- Corporation
  - Limited Liability Company
  - Joint Venture
  - Partnership
  - Other: [Proposer to provide]
- (2) Year Established: 1970
- (3) Country of Organization or Formation (and, if US or Canada, state or Province of Organization or Formation): USA, Delaware
- (4) Federal Tax ID: 84-1245004
- (5) Authorized to do Business in Colorado:
- Yes (ID No.: 20011242074)
  - No
- (6) North American Industry Classification Code: 237310
- (7) Prior Name(s) (past five years): N/A
- (8) Successor in Interest to Entity/Entities (if any, past five years): N/A

# FORM C: INFORMATION REGARDING PROPOSER

Proposer Name: Front Range Mobility Group

## **Form C: Core Proposer Team Member Information**

### **A. Team Member and Role**

- (1) Name of Team Member: Dragados USA, Inc.
- (2) Role:
- Equity Member
  - Lead Contractor
  - Lead Engineer
  - Lead Operator
  - Joint venturer in Lead Contractor
  - Financially Responsible Party for  
[Proposer to provide entity name]

### **B. Legal Information**

- (1) Type of Legal Entity:
- Corporation
  - Limited Liability Company
  - Joint Venture
  - Partnership
  - Other: [Proposer to provide]
- (2) Year Established: 2006
- (3) Country of Organization or Formation (and, if US or Canada, state or Province of Organization or Formation):  
USA, Delaware
- (4) Federal Tax ID: 20-3902316
- (5) Authorized to do Business in Colorado:
- Yes (ID No.: 20121202390)
  - No
- (6) North American Industry Classification Code: 237310; 237990; 488490
- (7) Prior Name(s) (past five years): N/A
- (8) Successor in Interest to Entity/Entities (if any, past five years): N/A



# FORM C: INFORMATION REGARDING PROPOSER

Proposer Name: Front Range Mobility Group

## Form C: Core Proposer Team Member Information

### A. Team Member and Role

- (1) Name of Team Member: URS Energy & Construction, Inc.
- (2) Role:
- Equity Member
  - Lead Contractor
  - Lead Engineer
  - Lead Operator
  - Joint venturer in Lead Contractor
  - Financially Responsible Party for [Proposer to provide entity name]

### B. Legal Information

- (1) Type of Legal Entity:
- Corporation
  - Limited Liability Company
  - Joint Venture
  - Partnership
  - Other: [Proposer to provide]
- (2) Year Established: 1937
- (3) Country of Organization or Formation (and, if US or Canada, state or Province of Organization or Formation): USA, Ohio
- (4) Federal Tax ID: 34-0217470
- (5) Authorized to do Business in Colorado:
- Yes (ID No.: #19871005366)
  - No
- (6) North American Industry Classification Code: 541330
- (7) Prior Name(s) (past five years): NA
- (8) Successor in Interest to Entity/Entities (if any, past five years): NA

# FORM C: INFORMATION REGARDING PROPOSER

Proposer Name: Front Range Mobility Group

## Form C: Core Proposer Team Member Information

### A. Team Member and Role

(1) Name of Team Member:

CH2M HILL Engineers, Inc.

Role:

- Equity Member
- Lead Contractor
- Lead Engineer
- Lead Operator
- Joint venturer in Lead Engineer
- Financially Responsible Party for  
[Proposer to provide entity name]

### B. Legal Information

(1) Type of Legal Entity:

- Corporation
- Limited Liability Company
- Joint Venture
- Partnership
- Other: [Proposer to provide]

(2) Year Established:

Established in 1946, Incorporated in Delaware in 2003

(3) Country of Organization or Formation (and, if US or Canada, state or Province of Organization or Formation):

USA, Delaware

(4) Federal Tax ID:

32-0100027

(5) Authorized to do Business in Colorado:

- Yes (ID No.: 20041411015)
- No

(6) North American Industry Classification Code:

541330- Engineering Services

(7) Prior Name(s) (past five years):

Not Applicable

(8) Successor in Interest to Entity/Entities (if any, past five years):

Not Applicable

# FORM C: INFORMATION REGARDING PROPOSER

Proposer Name: Front Range Mobility Group

## Form C: Core Proposer Team Member Information

### A. Team Member and Role

- (1) Name of Team Member: AECOM Technical Services, Inc.
- (2) Role:
- Equity Member
  - Lead Contractor
  - Lead Engineer
  - Lead Operator
  - Joint venturer in Lead Engineer
  - Financially Responsible Party for  
[Proposer to provide entity name]

### B. Legal Information

- (1) Type of Legal Entity:
- Corporation
  - Limited Liability Company
  - Joint Venture
  - Partnership
  - Other: [Proposer to provide]
- (2) Year Established: 1970
- (3) Country of Organization or Formation (and, if US or Canada, state or Province of Organization or Formation): USA, California
- (4) Federal Tax ID: 95-2661922
- (5) Authorized to do Business in Colorado:
- Yes (ID No.: 19961159924)
  - No
- (6) North American Industry Classification Code: 541330 – Engineering Services
- (7) Prior Name(s) (past five years): N/A
- (8) Successor in Interest to Entity/Entities (if any, past five years): N/A

# FORM C: INFORMATION REGARDING PROPOSER

Proposer Name: Front Range Mobility Group

## Form C: Core Proposer Team Member Information

### A. Team Member and Role

- (1) Name of Team Member: HOCHTIEF Aktiengesellschaft
- (2) Role:
- Equity Member
  - Lead Contractor
  - Lead Engineer
  - Lead Operator
  - Joint venturer in Lead [Contractor][Engineer][Operator]
  - Financially Responsible Party for HOCHTIEF PPP Solutions North America, Inc. and Flatiron Constructors, Inc.

### B. Legal Information

- (1) Type of Legal Entity:
- Corporation
  - Limited Liability Company
  - Joint Venture
  - Partnership
  - Other: [*Proposer to provide*]
- (2) Year Established: Established in 1873  
Incorporated in 1986
- (3) Country of Organization or Formation (and, if US or Canada, state or Province of Organization or Formation): Germany
- (4) Federal Tax ID: n/a
- (5) Authorized to do Business in Colorado:
- Yes (ID No.: [*Proposer to provide*])
  - No
- (6) North American Industry Classification Code: n/a
- (7) Prior Name(s) (past five years): n/a
- (8) Successor in Interest to Entity/Entities (if any, past five years): n/a

## FORM C: INFORMATION REGARDING PROPOSER

Proposer Name: Front Range Mobility Group

### Form C: Core Proposer Team Member Information

#### A. Team Member and Role

- (1) Name of Team Member: ACS Servicios y Concesiones, S.L.
- (2) Role:
- Equity Member
  - Lead Contractor
  - Lead Engineer
  - Lead Operator
  - Joint venturer in Lead [Contractor][Engineer][Operator]
  - Financially Responsible Party for ACS Infrastructure Development, Inc.

#### B. Legal Information

- (1) Type of Legal Entity:
- Corporation
  - Limited Liability Company
  - Joint Venture
  - Partnership
  - Other: Spanish Entity (Sociedad Limited)
- (2) Year Established: 2002
- (3) Country of Organization or Formation (and, if US or Canada, state or Province of Organization or Formation): Madrid, Spain
- (4) Federal Tax ID: N/A (Spanish Entity)
- (5) Authorized to do Business in Colorado:
- Yes (ID No.: [*Proposer to provide*])
  - No
- (6) North American Industry Classification Code: Not Applicable
- (7) Prior Name(s) (past five years): None
- (8) Successor in Interest to Entity/Entities (if any, past five years): None

# FORM C: INFORMATION REGARDING PROPOSER

Proposer Name: Front Range Mobility Partner

## Form C: Core Proposer Team Member Information

### A. Team Member and Role

- (1) Name of Team Member: AECOM
- (2) Role:
- Equity Member
  - Lead Contractor
  - Lead Engineer
  - Lead Operator
  - Joint venturer in Lead [Contractor][Engineer][Operator]
  - Financially Responsible Party for AECOM Capital Inc., AECOM Technical Services, Inc., and URS Energy & Construction, Inc.

### B. Legal Information

- (1) Type of Legal Entity:
- Corporation
  - Limited Liability Company
  - Joint Venture
  - Partnership
  - Other: [Proposer to provide]
- (2) Year Established: 1980
- (3) Country of Organization or Formation (and, if US or Canada, state or Province of Organization or Formation): USA, Delaware
- (4) Federal Tax ID: 61-1088522
- (5) Authorized to do Business in Colorado:
- Yes (ID No.: 20021068664)
  - No – Not applicable (N/A)
- (6) North American Industry Classification Code: 541330
- (7) Prior Name(s) (past five years): AECOM Technology Corporation
- (8) Successor in Interest to Entity/Entities (if any, past five years): N/A

# FORM C: INFORMATION REGARDING PROPOSER

Proposer Name: Front Range Mobility Group

## Form C: Core Proposer Team Member Information

### A. Team Member and Role

(1) Name of Team Member:

John Laing Group Public Limited Company

• Role:

- Equity Member
- Lead Contractor
- Lead Engineer Lead Operator
- Joint venturer in Lead [Contractor][Engineer][Operator]
- Financially Responsible Party for John Laing Investments Limited

### B. Legal Information

(1) Type of Legal Entity:

- Corporation
- Limited Liability Company
- Joint Venture
- Partnership
- Other: [Proposer to provide]

(2) Year Established:

2006

(3) Country of Organization or Formation (and, if US or Canada, state or Province of Organization or Formation):

Incorporated in England and Wales

(4) Federal Tax ID:

*Not applicable.*

(5) Authorized to do Business in Colorado:

- Yes (ID No.: [Proposer to provide])
- No

(6) North American Industry Classification Code:

*Not applicable.*

(7) Prior Name(s) (past five years):

Henderson Infrastructure Holdco (UK) Ltd

(8) Successor in Interest to Entity/Entities (if any, past five years):

None

# FORM C: INFORMATION REGARDING PROPOSER

Proposer Name: Front Range Mobility Group

## Form C: Core Proposer Team Member Information

### A. Team Member and Role

- (1) Name of Team Member: Dragados S.A.
- (2) Role:
- Equity Member
  - Lead Contractor
  - Lead Engineer
  - Lead Operator
  - Joint venturer in Lead [Contractor][Engineer][Operator]
  - Financially Responsible Party for Dragados USA, Inc.

### B. Legal Information

- (1) Type of Legal Entity:
- Corporation
  - Limited Liability Company
  - Joint Venture
  - Partnership
  - Other:
- (2) Year Established: 1988
- (3) Country of Organization or Formation (and, if US or Canada, state or Province of Organization or Formation): Spain
- (4) Federal Tax ID: N/A
- (5) Authorized to do Business in Colorado:
- Yes
  - No
- (6) North American Industry Classification Code: N/A
- (7) Prior Name(s) (past five years): N/A
- (8) Successor in Interest to Entity/Entities (if any, past five years): N/A



# FORM C: INFORMATION REGARDING PROPOSER

Proposer Name: Front Range Mobility Group

## Form C: Core Proposer Team Member Information

### A. Team Member and Role

(1) Name of Team Member:

CH2M HILL Companies, Ltd

Role:

- Equity Member
- Lead Contractor
- Lead Engineer
- Lead Operator
- Joint venturer in Lead Engineer
- Financially Responsible Party for CH2M HILL Engineers, Inc.

### B. Legal Information

(1) Type of Legal Entity:

- Corporation
- Limited Liability Company
- Joint Venture
- Partnership
- Other: [*Proposer to provide*]

(2) Year Established:

Established in 1946, Incorporated in Oregon in 1965 and changed to Delaware in 2011

(3) Country of Organization or Formation (and, if US or Canada, state or Province of Organization or Formation):

USA, Delaware

(4) Federal Tax ID:

93-0549963

(5) Authorized to do Business in Colorado:

- Yes (ID No.:19871550800)
- No

(6) North American Industry Classification Code:

541330- Engineering Services

(7) Prior Name(s) (past five years):

Not Applicable

(8) Successor in Interest to Entity/Entities (if any, past five years):

Not Applicable

# 2.1.2. & 2.1.3.

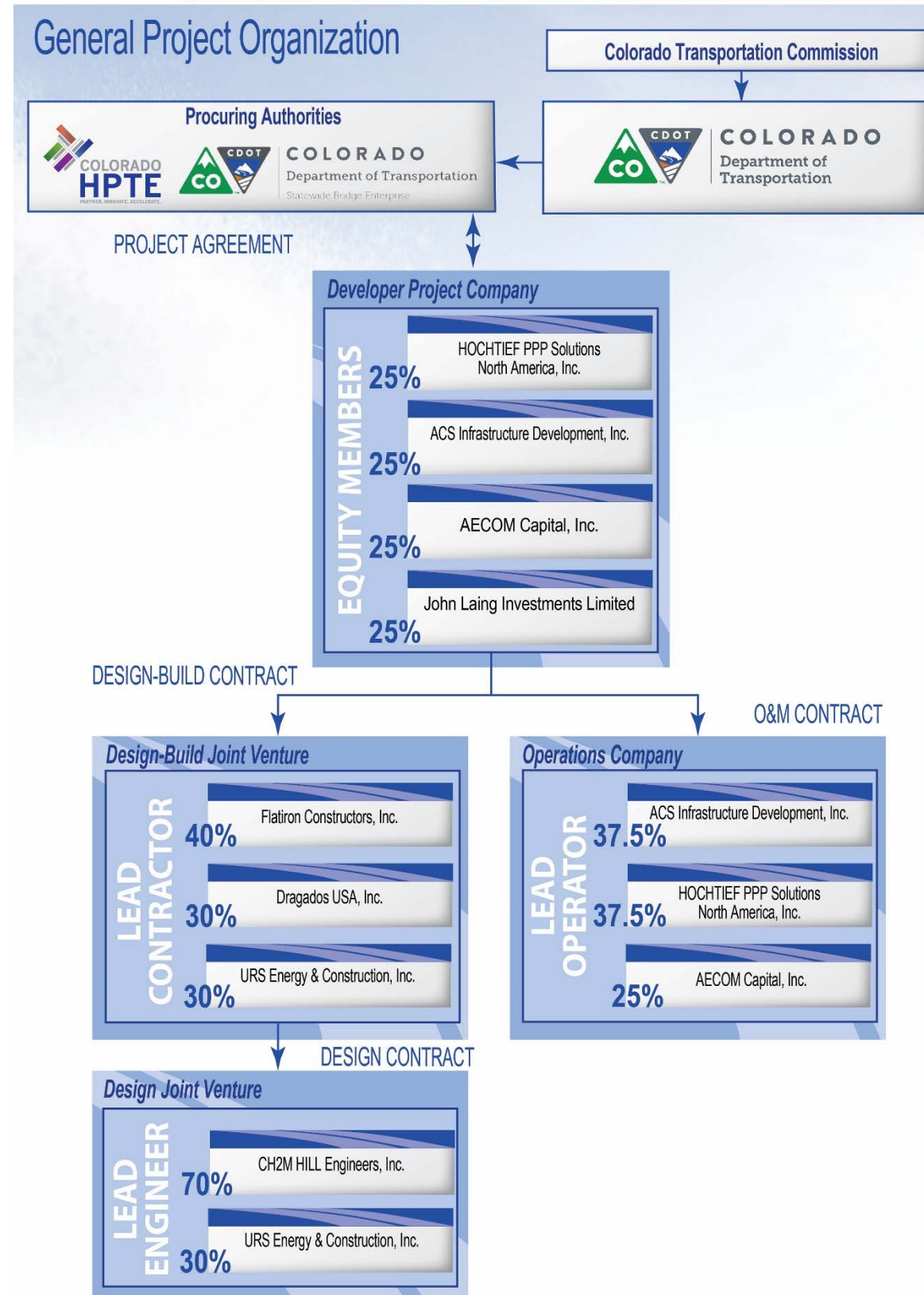
## ORGANIZATIONAL CHARTS



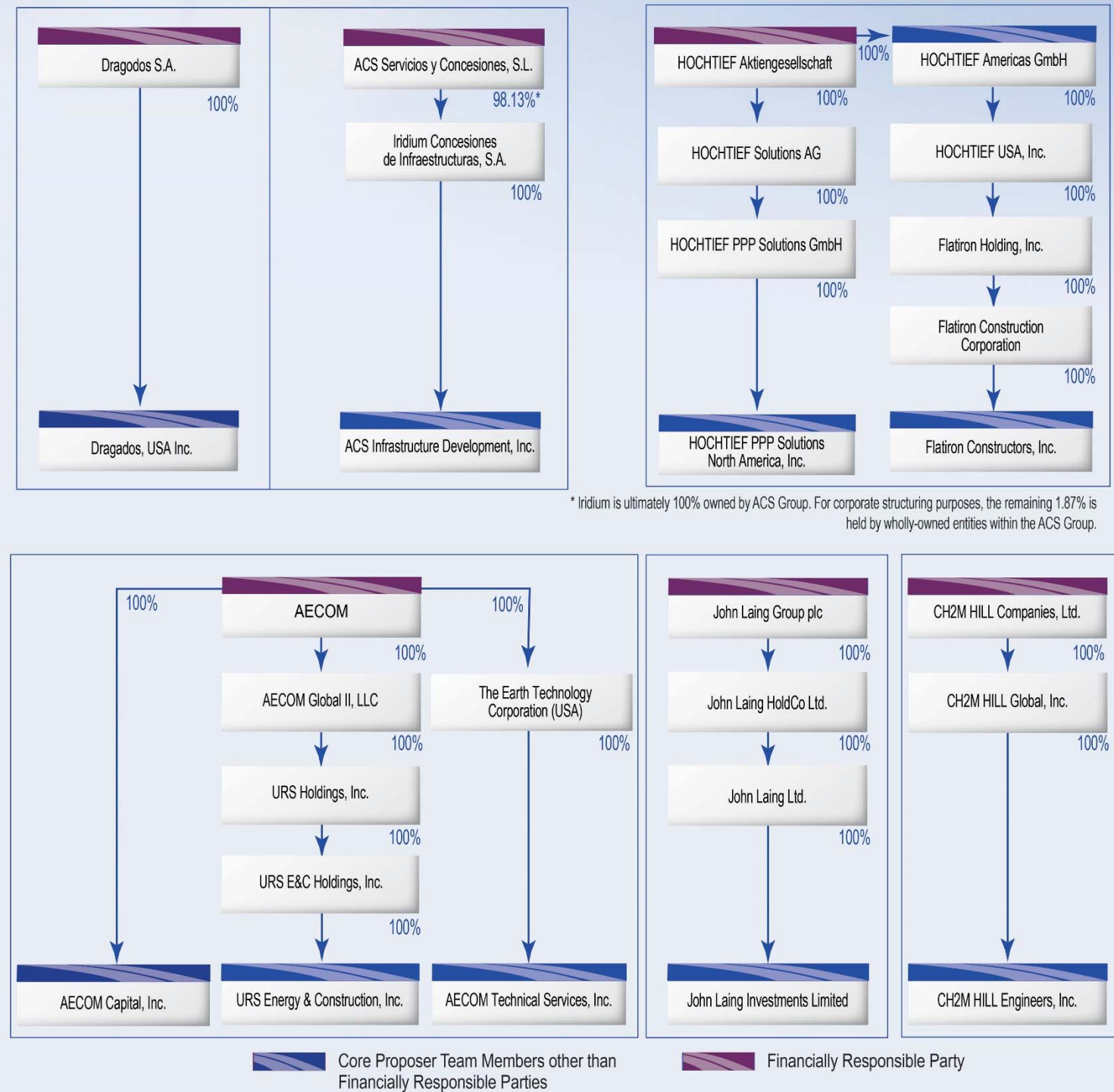
AREA ELEMENTARY SCHOOL



2.1.2 ORGANIZATIONAL CHART IDENTIFYING CORE PROPOSER TEAM



### Corporate Relationships of Financially Responsible Parties with Other Core Proposer Team Members



170EDBS\_107\_DEN



### 2.1.2. Notes to Organizational Chart Identifying each Core Proposer Team Member

#### EQUITY MEMBERS

Front Range Mobility Group (“FRMG”) is led by four Equity Members with support of their respective Financially Responsible Parties:

The Equity Members will set-up a project capacity as defined in Organization Chart B (or “Developer”) which will serve as single-point of contact for CDOT. During the procurement/development process, the Equity Members will lead FRMG to develop a holistic proposal which will provide best value over the term of the Project Agreement. An Interface Agreement between the Developer, the Lead Operator, and the Lead Contractor will be established to ensure interfaces between the three major FRMG contracting parties are appropriately addressed.

PROPOSER EQUITY MEMBERS	SHARE IN PROPOSER	FINANCIALLY RESPONSIBLE PARTY
HOCHTIEF PPP Solutions North America, Inc.	25%	HOCHTIEF Aktiengesellschaft
ACS Infrastructure Development, Inc.	25%	ACS Servicios y Concesiones, S.L.
AECOM Capital, Inc.	25%	AECOM
John Laing Investments Limited	25%	John Laing Group plc

#### LEAD CONTRACTOR

The Lead Contractor will be a Joint Venture of construction companies with support of their respective Financially Responsible Parties:

The Lead Contractor, with its strong local ties, will be responsible for delivering the full design and construction scope passed down through the Design-Build Contract. The Lead Contractor intends to self-perform major portions of the work, but will also subcontract significant parts to major local subcontractors including Kraemer, IHC, BTC and other qualified contractors, including DBE/MBE/ESB/SBE firms. The design portion of the Design-Build contract will be contracted to the Lead Engineer by executing a Design Agreement.

LEAD CONTRACTOR MEMBERS	SHARE IN LEAD CONTRACTOR	FINANCIALLY RESPONSIBLE PARTY
Flatiron Constructors, Inc.	40%	HOCHTIEF Aktiengesellschaft
Dragados USA Inc.	30%	Dragados S.A.
URS Energy & Construction, Inc	30%	AECOM

#### LEAD ENGINEER

The Lead Engineer will be a Joint Venture of design firms with support of their respective Financially Responsible Parties:

The Lead Engineer, with its strong presence in the Denver Area, will self-perform the majority of the design work, but also sub-contract strategic portions to other highly-skilled local firms like TSH and other DBE/MBE/ESB/SBE firms.

LEAD ENGINEER MEMBERS	SHARE IN LEAD ENGINEER	FINANCIALLY RESPONSIBLE PARTY
CH2M HILL Engineers, Inc.	70%	CH2M HILL Companies, LTD
AECOM Technical Services, Inc.	30%	AECOM

#### LEAD OPERATOR

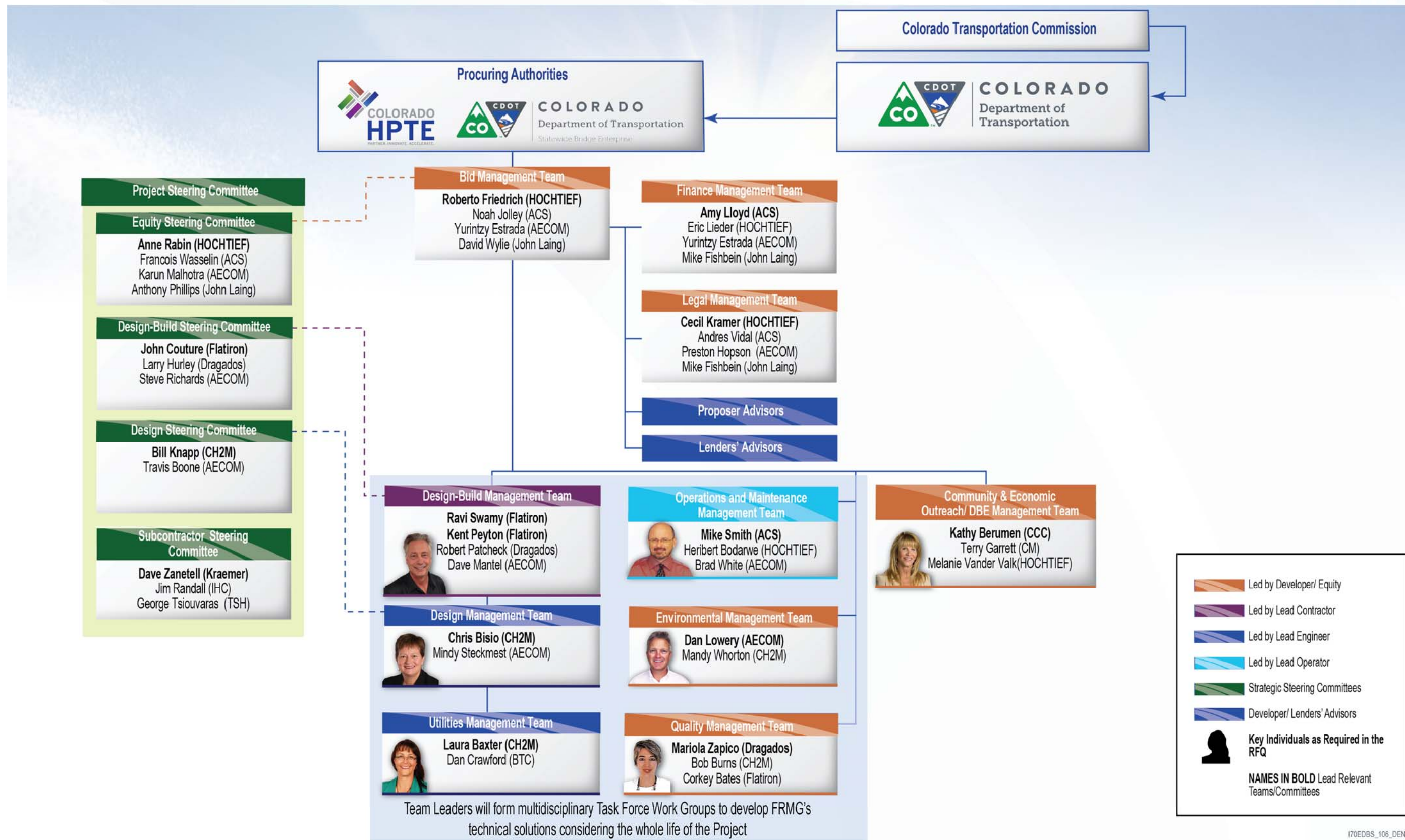
The Lead Operator will be established by experienced companies with support from their respective Financially Responsible Parties:

Significant O&M tasks will be contracted from the Developer to the Lead Operator. During the development phase, the Lead Operator will carefully define the portions of services to be self-performed and will be subcontracted to ensure the most efficient operational model for CDOT.

The Lead Operator’s ability to provide different O&M models, including self-performance, provides utmost flexibility and capacity to CDOT.

LEAD OPERATOR MEMBERS	SHARE IN LEAD OPERATOR	FINANCIALLY RESPONSIBLE PARTY
ACS Infrastructure Development, Inc.	37.5%	N/A
HOCHTIEF PPP Solutions North America, Inc.	37.5%	HOCHTIEF Aktiengesellschaft
AECOM Capital, Inc.	25%	AECOM

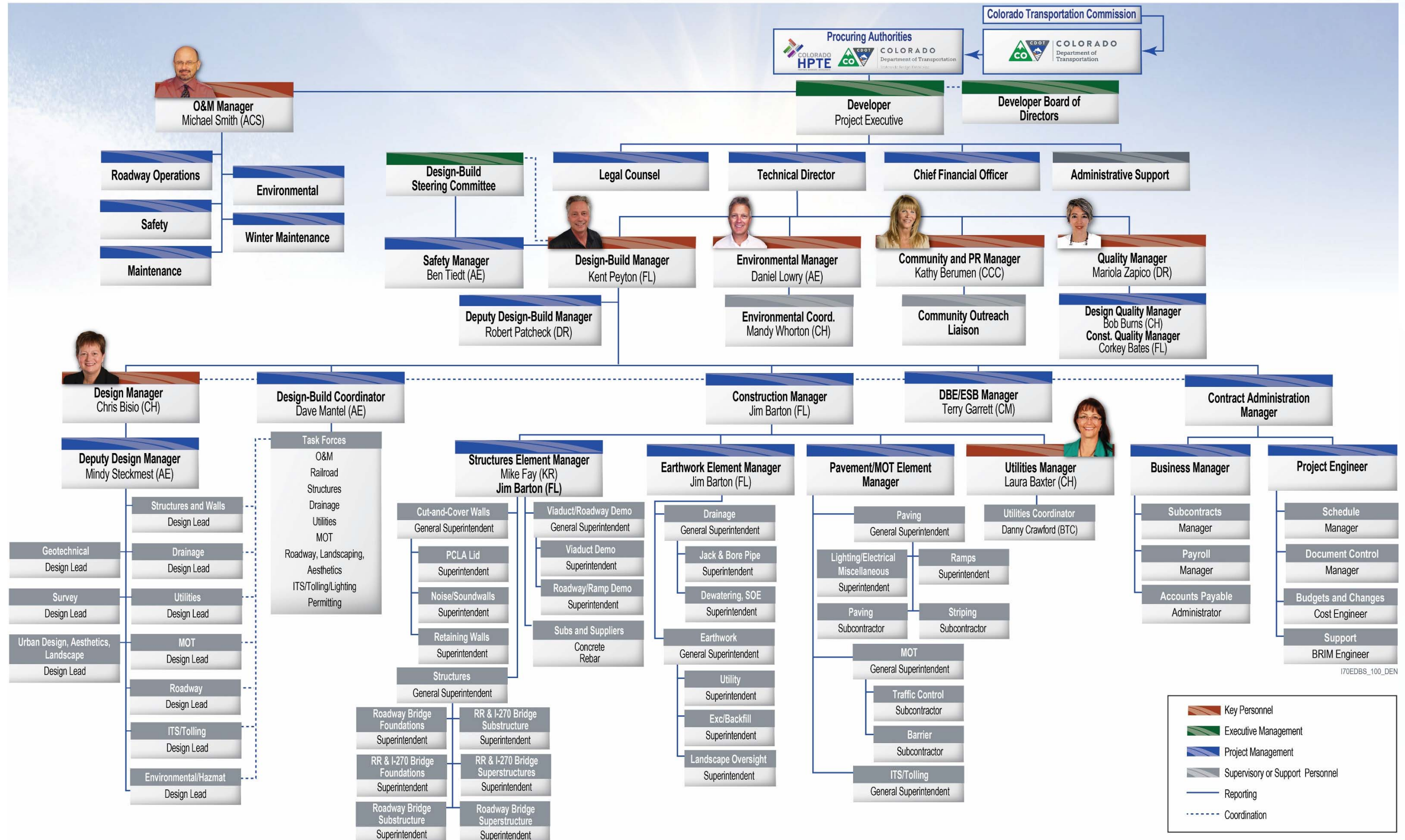
2.1.3.A. ORGANIZATIONAL CHART FOR KEY PERSONNEL DURING THE RFQ AND RFP PROCESS



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2.1.3.B. ORGANIZATIONAL CHART FOR KEY PERSONNEL AFTER COMMERCIAL CLOSE



# 2.1.4.



AREA ELEMENTARY SCHOOL



### 2.1.4 Organizational and Management Structure

Front Range Mobility Group (“FRMG”) team members have a proven history of success in developing and managing large and complex transportation P3 projects. Our team brings key advantages to the Project which provide the framework for our organizational and management structure:

- » Proven expertise in developing and managing P3 projects in North America;
- » Previous successful experience working together;
- » A vertically integrated team with complete alignment of goals and shared objectives
- » Demonstrated ability to design and build P3 projects on time and on budget
- » Comprehensive understanding of the local community’s priorities.

FRMG’s management approach will fully leverage these advantages to successfully deliver the Project.

#### ADVANTAGE – P3 Development Experience

FRMG’s Equity Members are among the most experienced P3 developers having invested in more than 220 P3 projects worldwide. Collectively, FRMG’s Equity Members and their affiliates have closed 13 P3 transportation Projects in North America since 2008 with an investment volume of more than \$21 billion, including the Eagle P3 Project in Denver. FRMG has drawn upon our depth of experience developing and managing P3 projects to ensure that the management structure in place for the I-70 East Project facilitates the achievement of all Project goals.

#### ADVANTAGE – Previous Experience Successfully Working Together

Our strong integrated FRMG team is built upon prior successful experience working together on complex infrastructure projects including P3’s. We understand the expectations and processes within each organization (including our dedicated subcontractors) and we know how to best leverage the collective strengths and experience of our team as shown by the highly integrated management structure illustrated in Section 2.1.3.

The table below highlights some of the Reference Projects we have presented in Section 4.1 (Form F) that demonstrate our team’s successful experience working together on projects that are similarly complex to the I-70 East Project. In addition, our team members have delivered and are currently teamed together on multiple projects across North America.

Project Name	Companies Involved											
	Equity	Member	Eng.	Contractor	Operator							
	HOCHTIEF	ACS	AECOM Capital	John Laing	CH2M	AECOM Design	Flarion	Dragados	AECOM Construction	HOCHTIEF	ACS	AECOM
I-595		●				●		●			●	
Portsmouth Bypass		●				●		●			●	
Northeast Anthony Henday	●	●				●		●		●	●	
A-30		●						●				
I-405						●		●				
Northwest Anthony Henday						●		●				
Eastside										●		
South Fraser		●				●		●			●	

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FRMG brings best-practices and lessons learned from our collective experience on similarly complex projects to the I-70 East Project.

#### ADVANTAGE – A vertically integrated team

CDOT and the Procuring Authorities will benefit from the vertical corporate integration of our team and the inherent alignment of interests and facilitated decision making process that stems from team member participation in multiple levels of the Project.

The vertically integrated nature of our team ensures focus on optimizing the project from a whole life perspective. FRMG will account for O&M and life-cycle maintenance early on in order to design a project that is built to last, optimizes operating and life cycle costs, provides flexibility to accommodate future growth and facilitates technological advances and sustainable solutions.

This vertical integration among team members also leads to complete goal alignment for the duration of the project and fosters shared objectives for the Project as a whole, breaking down traditional conflicts between disciplines.





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North America. Our team members employ more than 70,000 design and construction professionals in North America providing FRMG an extensive resource pool from which we can select the most highly qualified staff to lead the design and construction of the Project.

*ADVANTAGE – Comprehensive Understanding of Local Goals*

This Project represents something greater than just another construction project to our team. I-70 East is a critical link that will re-connect communities and enhance the overall quality of life

for the local communities, as well as improve the experience and enhance the safety for all travelers on I-70.

While our team is able to access North American and global resources, FRMG team members have strong local ties to the Denver Metro Area, employing more than 3,500 employees in Colorado. FRMG’s team members are integrated into the local community and understand the restraints that the current facility poses for the users, residents and businesses.

In addition, FRMG’s team members have worked on many successful projects with CDOT and understand the Project goals for local business participation and workforce development.

FRMG has partnered with strong local firms like Kraemer, IHC, BTC and TSH to further expand its local business network and to ensure maximum local participation.

FRMG’s vertical alignment of corporately related entities benefits the Project, CDOT and the Procuring Authorities by ensuring:

- » A commitment to quality and best value solutions are embedded within the team. At all levels of the organization, the ultimate goal focuses on the long-term success of the Project.
- » An efficient allocation of Project risks within FRMG is driven by the common goal of holistic project success; and
- » An effective partner comprised of experienced firms who are accustomed to working together across multiple disciplines.

Vertical integration among FRMG’s team members means complete goal alignment for the duration of the Project and ensures that CDOT and the Procuring Authorities receive a best value technical solution that has considered the long-term needs of the Project.

*ADVANTAGE – Ability to Design and Build P3 Projects on time and budget*

FRMG’s Lead Contractor and Lead Engineer combine strong P3 and alternative delivery capabilities in

## Structure of our Team Organization during the RFP process and prior to commercial close

The Organizational Chart in Section 2.1.3 (a) illustrates FRMG's management approach during the procurement stage. The Bid Management Team is led by FRMG's Bid Director who has over fourteen years of P3 development experience in the US, Canada and Europe and has been involved in more than 30 P3 pursuits.

During the RFP process, the Bid Management Team, in coordination with the Finance Management Team and Legal Management Team, is responsible for producing and implementing the Bid Management Plan; liaising with the Procuring Authorities; coordinating all Task Force working groups; procuring and managing financial, legal and other advisors; developing the financing strategy; creating and maintaining the Project Risk Register; negotiating all legal and commercial agreements; and submitting the final bid.

FRMG's team includes the same individuals who have been responsible to lead and close some of the most significant and recent P3 availability-based projects in the U.S. to date, including Portsmouth Bypass, Presidio Parkway and I-4 Ultimate.

FRMG's management structure includes multidisciplinary working groups who are tasked with developing comprehensive long-term technical solutions. The Team Leaders shown on the Organization Chart in Section 2.1.3 (a) will both lead and participate in these working groups.

Efficiently managed interfaces and clear lines of communication are embedded in our management structure. Our Community & Economic Outreach/ DBE Management Team will develop concepts to maximize local integration of the community and local stakeholders and businesses.

The Project Steering Committee will be comprised of senior executives from each of the Core Proposer Team Members and will be supplemented on certain matters by local partners and subcontractors.

This committee is a key oversight and governance body. The Project Steering Committee will be responsible for the overall strategic direction of the Project and will function both during the RFP process and closing stages for the Project.

FRMG's fully integrated strong partners will help to ensure achievement of local project goals, such as community outreach and workforce development.

## Streamlining the transition from the RFP process to Design, Construction and Operations

The ability to quickly and efficiently transfer the organization from the RFP process to the implementation organization that is shown in section 2.1.3.b was a key criteria in our organizational structuring and staff selection.

FRMG has selected individuals for key positions (including but not solely limited to Key Personnel) who bring crucial experience and first-hand knowledge of the key success factors and lessons learned on our Reference Projects.

All technical Key Personnel will be involved in both the procurement and delivery of the Project, providing critical continuity of leadership and streamlining the transition between phases. This continuity also ensures a comprehensive transfer of knowledge and helps ensure the vision of those involved during the RFP process is realized including CDOT and the Procuring Authorities.

FRMG has selected skilled key individuals who will be involved during all relevant project phases to ensure a seamless transition.

## How FRMG will meet Project goals leveraging our successful prior experiences

**Challenge: Optimize the scope of the transportation, and supporting, infrastructure delivered through the Project in order to promote corridor-wide economic and community vitality.**

FRMG  
APPROACH

- Transfer key successes from other projects
- Develop Innovations during the RFP to optimize the scope / maximize value for Procuring Authorities and CDOT
- Ensure participation of local firms

SUCCESSFUL  
EXAMPLES



**Challenge: Optimize operating and life cycle maintenance costs by delivering a Project using quality design, materials and techniques.**

FRMG  
APPROACH

- Vertically integrate team organization to minimize interfaces and align interests
- Establish Lifecycle Task Force Groups during the RFP and Project Execution to ensure optimized O&M Costs
- Execute rigorous QA/QC protocols during construction and O&M

SUCCESSFUL  
EXAMPLES



**Challenge: Minimize impacts to the traveling public, businesses and nearby communities during and after construction.**

FRMG  
APPROACH

- Design to allow for efficient Construction Staging
- Optimize Construction Schedule
- Conduct detailed stakeholder and community outreach program

SUCCESSFUL  
EXAMPLES



**Challenge: Once operational, ensure reliable travel speeds in the tolled express/high occupancy vehicle (HOV) lanes and, for all lanes, a minimum appropriate standard of maintenance.**

FRMG  
APPROACH

- Develop Operations Manuals which minimize O&M Impacts
- Maintain high levels of Service Availability
- Implement Preventative Maintenance Program
- Develop interface plan with CDOT

SUCCESSFUL  
EXAMPLES



**Challenge: Utilize a collaborative process to enhance community values and Project benefits.**

FRMG  
APPROACH

- Leverage local experience at all levels to facilitate effective delivery
- Maximize local network of suppliers and resources to obtain cost-effective materials
- Implement proactive community outreach plan with CDOT and Procuring Authorities

SUCCESSFUL  
EXAMPLES



**Challenge: Protect the safety of the workforce and public.**

FRMG  
APPROACH

- Ensure state-of-the art safety standards and protocols during all project phases
- Inform public about travel impacts or detours, optimize design for safe travel during construction
- Execute proven safety review protocols as used on similar complex projects

SUCCESSFUL  
EXAMPLES



# 2.1.5.



AREA ELEMENTARY SCHOOL



### 2.1.5 List of full legal names, and names and titles of senior involved personnel of advisors and providers of financing

FRMG has extensive experience building highly competitive teams of market leading advisors and financiers. FRMG will leverage our deep rooted relationships to engage the best team of advisors and partners that will assist FRMG in developing a project in coordination with CDOT, HPTE and the Colorado Bridge Enterprise that:

- » Maximizes use of public funds for Colorado tax payers, CDOT, HPTE, and the Colorado Bridge Enterprise
- » Provides long-term mobility and a safe solution along the I-70 corridor for stakeholders, especially surrounding communities
- » Has the highest certainty of reaching financial close
- » Is sustainable over the term of the Project Agreement

FRMG has already engaged several critical advisors, while others will be engaged later in the procurement based on our experience that the optimal selection of our partners requires a more fulsome understanding of the project gained through information contained in RFP.

#### a. financial, technical, insurance, legal, public relations and other specialist advisors

Full Legal Name	Role of the Firm	Names and Titles of Senior Personal Involved	Exclusive or Non-Exclusive Engagement If non-exclusive, confirmation of requirement to institute information barriers as part of engagement
CIBC World Markets Corp.	Financial Advisor	Andrew Fleming, Managing Director, Infrastructure and Project Finance Laurie Mahon, Managing Director and Global Head of Infrastructure David Tweedy, Managing Director	(i) Exclusive Engagement (ii) n/a
Mayer Brown LLP	Legal Advisor	David Narefsky, Partner George Miller, Partner Joe Seliga, Partner Joanna K. Horsnail, Partner	(i) Exclusive Engagement (ii) n/a
Communication Connections Consulting, LLC	Community and public relations/economic outreach advisor	Kathy Berumen, President	(i) Exclusive Engagement (ii) n/a
Capitol Management & Information Engineering Services	Disadvantaged Business Enterprise (DBE) and Colorado Emerging Small Business (ESB) outreach and workforce development advisor	Terry Garrett, CEO	(i) Exclusive Engagement (ii) n/a
Tsiouvaras Simmons Holderness, Inc.	Technical Advisor to Lead Engineer	George Tsiouvaras, Principal	(i) Exclusive Engagement (ii) n/a
Pinyon Environmental, Inc.	Technical Advisor to Lead Engineer; DBE, and ESB	Lauren Evans, President Coordinating contact during the RFP-stage will be named as part of a non-disclosure agreement.	(i) Non-Exclusive Engagement (ii) Executed memorandum of understanding includes non-disclosure language.
Goodbee & Associates, Inc.	Technical Advisor to Lead Engineer and DBE	Lisa Goodbee, President Coordinating contact during the RFP-stage will be named as part of a non-disclosure agreement.	(i) Non-Exclusive Engagement (ii) Executed memorandum of understanding includes non-disclosure language.
Geocal, Inc.	Technical Advisor to Lead Engineer and DBE	Ron Vasquez, Principal Engineer	(i) Exclusive Engagement (ii) n/a

Full Legal Name	Role of the Firm	Names and Titles of Senior Personal Involved	Exclusive or Non-Exclusive Engagement If non-exclusive, confirmation of requirement to institute information barriers as part of engagement
Apex Design, PC	Technical Advisor to Lead Engineer; DBE, and ESB	Melissa Rosas, President Coordinating contact during the RFP-stage will be named as part of a non-disclosure agreement.	(i) Non-Exclusive Engagement (ii) Executed memorandum of understanding includes non-disclosure language.
studioINSITE	Technical Advisor to Lead Engineer and Small Business Enterprise	Dennis Rubba, Principal and Founding Partner	(i) Exclusive Engagement (ii) n/a
RNL	Technical Advisor to Lead Engineer	Andrew Irvine, Director	(i) Exclusive Engagement (ii) n/a

**b. banks, arrangers, underwriters, placement agents or other potential providers of financing,**

Full Legal Name	Role of the Firm	Names and Titles of Senior Personal Involved	Exclusive or Non-Exclusive Engagement If non-exclusive, confirmation of requirement to institute information barriers as part of engagement
Citigroup Global Markets Inc.	Underwriter	David Livingstone, Managing Director Shai Markowicz, Director	(i) Non-exclusive at current stage of procurement (ii) Confirmed information barriers are in place





## 2.2 CAPACITY AND RESOURCES

### (i) Current and Expected Workloads

The Front Range Mobility Group team members combine some of the most capable and successful developers, contractors, designers and operators in the P3 market. Our demonstrated success is based on technical expertise and proven ability to innovate and deliver sound approaches to the construction and long-term management of highway projects similar to I-70 East Project, as well as decades of experience in North America and across the world in raising and closing project financing. Our team has completed thousands of large scale infrastructure projects across North America through our ability to quickly and efficiently mobilize our vast resources to ensure that projects are delivered successfully.

FRMG team members have recently been awarded several major infrastructure projects across the U.S. and Canada, including the US 181 Harbor Bridge Replacement Project, the SH 288 Toll Road, the Southern Ohio Veterans Memorial Highway and the St. Lawrence in Montreal. Our team has the capacity and makeup to meet the demands of the Project, including ample local and global resources to develop and execute the Project and each team member supplements each other during and across different phases of the Project.

As outlined below, each of the Core Proposer Team Members, will have the necessary capacity to undertake their respective responsibilities on the Project based on current and expected workloads. Additionally, our financial capacity, further detailed in Volume 2, Section 1.2, is robust enough to undertake our equity commitments, backlogs and long-term operations and maintenance obligations for the Project. This immense experience, coupled with the necessary non-financial resources, including our Key Personnel and other individuals who will ultimately form our project-specific team, this means that the Project will have the highest commitment of resources and capacity.

### ✓ FRMG's Capacity Summary

Equity Members and their Financially Responsible Parties	
Combined Available Funds to invest \$15 – 30 million equity each:	Cash and cash equivalents: + \$4 billion Assets: + \$31 billion
Staff dedicated to P3 development in North America:	85+
P3 development experience:	220 + Projects (11 Transportation P3s in North America)
Lead Contractor Members and their Financially Responsible Parties	
Number of skilled staff in North America and locally:	12,000+ (almost 1,000 in Colorado)
Financial resources to support project obligations:	Cash and cash equivalents: \$3.9 billion + Assets: \$36 billion +
Excess capacity beyond already signed contracts in relevant key construction years (assumed 2017-2021):	\$3.4 billion Average per year
Equipment portfolio:	5,000 +
Lead Engineer Members and their Financially Responsible Parties	
Number of Staff in general:	115,000 +
Number of local staff:	3,000 +
Available staff capacity for expected project workload:	300+
Financial resources to support project obligations:	Combined Revenues in 2014: \$25.6 billion
FRMG Lead Operator members and their Financially Responsible Parties	
Number Projects O&M services are provided for:	40+ P3 Projects, 20 non-P3 Projects
Lane Miles O&M Services are provided for worldwide	20,000 +
Lane Miles O&M Services are provided for in North America:	15,000 +
Staff in operations ventures:	2,000 +

#### a. Each Equity Member and their Financially Responsible Parties



HOCHTIEF PPP Solutions  
North America, Inc.

("HOCHTIEF") has a dedicated development team of more than 25 skilled individuals solely responsible to develop and manage P3 projects in the U.S. and Canada. Seamless sharing of resources between our New York and Toronto offices provides for flexible and efficient use of development, technical and financial knowledge



across North America and ensures that HOCHTIEF is able to respond quickly to the needs of the P3 development process. HOCHTIEF’s team is currently managing five awarded P3 projects and is participating in seven P3 procurements either in the RFQ or RFP phase. This workload is comparable to last year’s and a similar workload is expected through 2016. The Project is a core element of HOCHTIEF’s U.S. strategy and its necessary resources have been allocated to lead the development. In addition to its North American offices, HOCHTIEF has access to further resources from its direct parent, HOCHTIEF PPP Solutions GmbH, which has an additional 100 dedicated P3 development and management personnel.

HOCHTIEF AG (“HOCHTIEF Group”) is the Financially Responsible Party to HOCHTIEF, one of the world’s largest providers of construction-related services with over 53,000 employees and annual revenues of \$26.9 billion in 2014. The HOCHTIEF Group has successfully developed more than 55 P3 projects worldwide, including more than 2,600 lane miles of highways, 55 miles of tunnels and 880 miles of railways. HOCHTIEF Group has the necessary capacity to meet the anticipated equity investment volume for the Project with more than \$18.5 billion in assets and \$3.1 billion in cash and cash equivalents. HOCHTIEF’s ability to meet the equity funding requirements for the Project are further detailed in its Equity Funding Letter in Volume 2, Section 3.3.

HOCHTIEF AG Summary (\$US million)			
	2012	2013	2014
Total Assets	22,318	20,214	18,560
Cash/Cash Equivalents	3,323	2,788	3,153



Equity Member ACS Infrastructure Development, Inc. (“ACS”) is the U.S. development and operations subsidiary of its Financially Responsible Party, ACS Servicios y Concesiones, S.L., (“ACS SyC”), the concession arm of the ACS Group, one of the largest P3 developers in the world and ACS, along with its sister company, ACS Infrastructure Canada Inc., has been awarded, and is currently managing, 10 transportation P3 projects in North America.

ACS’ current North American portfolio boasts the development of more than \$18 billion in transportation infrastructure including three newly awarded projects in 2015 (all of which have, or are anticipated to, reach financial close this year) four projects under construction and three projects which have successfully transitioned from construction into operations, representing over 900 lane miles of highway and serving approximately 250,000 travelers per day.

In regards to ACS’ P3 pursuit pipeline, ACS is currently in the RFP stage on a transportation project in Canada. ACS is equipped with a team of more than 40 skilled individuals solely responsible to develop and manage P3 projects in the U.S. and Canada.

The ACS Group has developed more than 80 P3 projects globally (72 of these in the transportation sector) and had annual revenues of more than \$42 billion in 2014. ACS, with the support of ACS SyC, possesses both the staff resources and financial strength to successfully develop the Project. The Project meets ACS’ investment policy requirements and approval has been obtained to submit this SOQ. The anticipated equity investment volume for the Project is available and ready to be put to work on this Project, as further detailed in the Equity Funding Letter provided in Volume 2, Section 3.3. ACS, together with more than \$5.5 billion in assets and \$290 million in cash and cash equivalents from ACS SyC, has more than sufficient resources to provide the required equity commitment.

ACS SyC Summary (\$US million)			
	2012	2013	2014
Total Assets	5,825	6,553	5,514
Cash/Cash Equivalents	241	277	290



Equity Member AECOM Capital, Inc. (“AECOM Capital”),

a wholly owned subsidiary of its Financially Responsible Party AECOM, provides equity investment and integrated project development by leveraging AECOM’s expansive technical and managerial global services platform.

Since the formation of AECOM Capital in 2013, it has invested \$150 million in equity on infrastructure and real assets projects. Five employees are responsible to develop P3 Projects in North America.

As of December 2014, AECOM had over \$574 million of cash and cash equivalents, with \$19.5 billion, in total global revenues that year. In North America, AECOM has access to approximately 53,000 professionals. The I-70 East Project is part of the Business Plan and AECOM Capitals participation is supported by AECOM as evidenced in the Support Letter in Volume 2 of this SOQ.

AECOM Summary (\$US million)			
	2012	2013	2014
Total Assets	5,665	5,666	6,123
Cash/Cash Equivalents	594	601	574

**John Laing** making infrastructure happen John Laing Investments Limited (John Laing) a wholly-owned subsidiary of its Financially Responsible Party John Laing Group plc (John Laing Group), is an international originator, active investor and manager of infrastructure projects.

John Laing fully commits its resources to the success of this Project. Its 18 P3 professionals in North America are part of its global network of more than 230 P3 professionals and fully intends to appropriate specialist technical input, as well as corporate support from its London, Amsterdam, Sydney and Melbourne offices.

In 2014, John Laing Group enjoyed a record year for new infrastructure investments with \$337 million equity committed. This included successful contract award on the largest transportation P3 projects in each of North America, Europe and Asia Pacific. As of December 2014, John Laing Group had a portfolio of 40 investments in infrastructure projects in ten countries with a book value of \$1.09 billion, as well as a shareholding in JLEN (a listed environmental asset investment fund) valued at \$102 million, making an overall investment portfolio of around \$1.2 billion. Furthermore, the company is managing 38 additional infrastructure projects on behalf of the John Laing Infrastructure Fund and other investors.

### EQUITY ADVANTAGE ✓

The FRMG Equity members have access to more than 85 skilled P3 development staff in North America and more than 400 worldwide. Our resource management and investment capacity is built upon our development of more than 220 P3 projects combined. Our cash and cash equivalents of more than \$4 billion and assets of more than \$31 billion are more than sufficient to meet the anticipated equity requirements for the Project.

John Laing's equity investments are funded from its own balance sheet and revenues. As of December 2014 John Laing Group had \$170 million in available capacity under its corporate lending facility. Following an initial public offering of shares which took place in February 2015 and raised net proceeds of \$187 million, John Laing has \$159 million in cash and cash equivalents. As a result, John Laing has approximately \$329 million in liquid assets available to fund its share of the equity investment. This is supplemented by regular revenues from existing assets, which provided a gross profit of \$321 million in 2014.

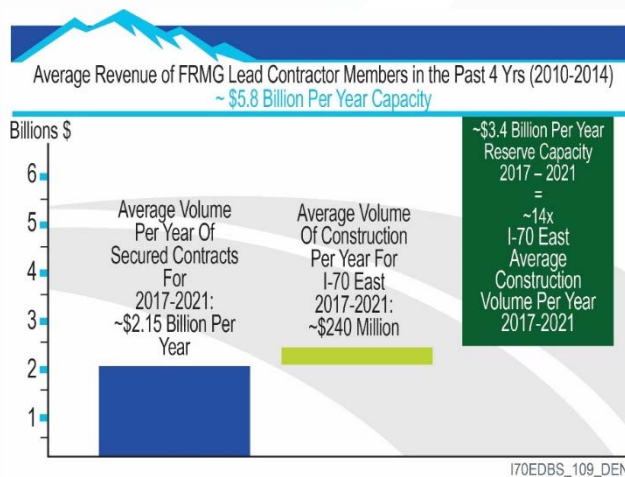
John Laing Group plc Summary (\$US million)			
	2012*	2013	2014
Total Assets	1,127.1	1,199.4	1,359.0
Cash and Cash Equivalents	95	77	18

\* Restated

### b. Lead Contractor and Relevant Financially Responsible Parties

FRMG's Lead Contractor, a combination of three large design-build contractors, has sufficient resources and capacity through the anticipated construction period to deliver the Project, leveraging and implementing its vast experience while also taking advance of each member's available capacity to provide redundancy and strength in the team. The chart below illustrates the Lead Contractor's capacity over the next several years along with backlog and forecasted needs. As part of their core project pursuits, the Lead Contractor will have ample resources to complete the Project as demonstrated by the available capacity from 2017 through 2021.

This number excludes projects in which members of our team are still in the procurement process as preferred proposers but that have not been technically awarded yet (i.e. Eglinton Crosstown LRT Project). The team's excess capacity is 14 times the anticipated average annual construction volume of I-70 East Project, providing significant reserve capacity for additional pursuits.



The following table highlights our significant staff resources for the Lead Contractor in North America, which FRMG can draw upon to ensure the Lead Contractor will have the necessary resources to appropriately staff the Project.

Construction Team Member	Staff Employees	Staff in Colorado
AECOM Construction	9,500	750+
Flatiron	2,500	200+
Dragados	600	-
Sub-contractors	650+	340+
<b>Total</b>	<b>13,250+</b>	<b>1,290+</b>
Projected for I-70	<300 (peak)	

The resources and capacity of each the Lead Contractor members are summarized below.



**Flatiron Constructors, Inc.** ("Flatiron"), a wholly-owned subsidiary of Financially

Responsible Party HOCHTIEF AG. Headquartered in Broomfield just 30 minutes from the I-70 East Project, Flatiron gained national prominence from its work building Interstate 70 through the Glenwood Canyon Corridor with CDOT during the 1980s and today is the fourth largest

contractor in Colorado, the eighth largest highway contractor and the sixth largest bridge builder in the U.S., with an annual construction revenue of more than \$800 million in 2014.

Nationally, Flatiron has delivered more than \$6.5 billion in transportation projects and is one of the largest design-build contractors in the U.S. With more than 2,500 employees across North America, the company has delivered 455 miles of roadway and constructed 445 bridges. Flatiron also offers experience delivering five P3 transportation projects worth more than \$3 billion, leveraging its local knowledge, workforce, and experience with international P3 best practices.

HOCHTIEF Group generated \$10.5 billion in revenues from its activities in North America in 2014 through its subsidiaries that include Flatiron, together employing more than 9,500 people.

HOCHTIEF AG Summary (\$US million)	2014
Revenue 2014	26,950
Total Assets	18,560
Cash/Cash Equivalents	3,153
Employees 2014 in North America	9,500 +



**Dragados USA Inc.**, ("Dragados") together with other affiliates being part of its Financially Responsible Party Dragados S.A. is the

primary construction arm of the ACS Group, ranked 1st overall on the 2014 ENR 250 Global Contractor List with annual revenues in excess of \$42 billion. Founded in 1941, Dragados has unmatched global experience in infrastructure construction, having built over 6,778 miles of roads and highways, 1,500 bridges, 840 miles of tunnels, 230 dams, 528 miles of rail transit, and airports. Dragados is one of the largest P3 contractors in the world and has participated on more than 65 P3 projects worldwide. In North America alone, Dragados has experience on eight major P3 transportation projects with combined construction values in excess of \$8.5 billion.

Dragados, S.A has over 11,800 employees worldwide and 600 in North America. Combined with its financial strength, Dragados, as a member of the Lead Contractor, has the resources and necessary capacity to successfully deliver the Project.



Dragados S.A. Summary (\$USD million)*	2014
Revenue 2014	1,656
Total Assets 2014	3,354
Cash/Cash Equivalents 2014	250
Employees 2014 in North America	600

\*non-consolidated



URS Energy & Construction, Inc. ("AECOM Construction") a wholly owned subsidiary of

AECOM, is headquartered in Denver, Colorado, and currently employs over 9,500 construction professionals worldwide with over 750 in Colorado. AECOM currently ranks # 7 in ENR's Top 400 Contractors for 2015. Beginning with their role as part of the consortium that built the Hoover Dam in the 1930s, AECOM Construction has a long history constructing some of the industry's most challenging projects, and will draw upon the talent of its seasoned highway construction professionals to help successfully deliver the I-70 East Project.

AECOM Construction and its legacy companies have designed and built infrastructure in Colorado for more than 50 years, including the first modern-day P3 in the U.S., and the first P3 in Colorado – E 470. Other Colorado alternative delivery project examples include I-70 Peak Period Shoulder Lanes, and Northwest Parkway DB.

AECOM Summary* (\$US million)	2014
Revenue 2014	\$19,500 +
Total Assets	6,123
Cash/Cash Equivalents	574
Employees 2014 in North America	53,000+

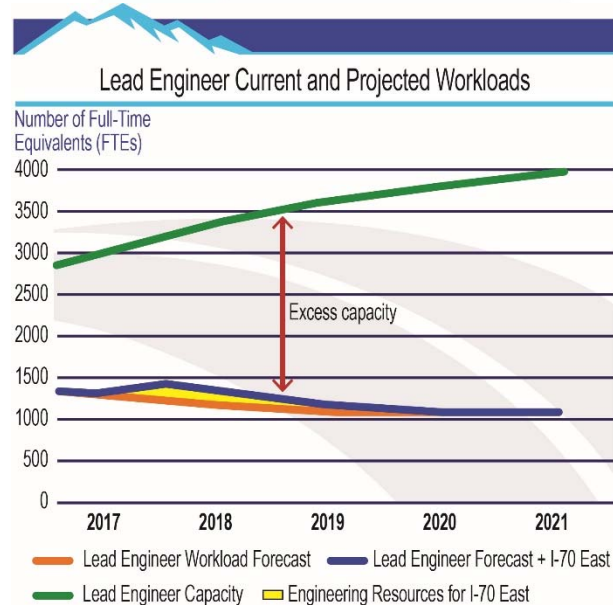
\* Including URS

**LEAD CONTRACTOR ADVANTAGE ✓**

The FRMG Lead Contractor members can access more than 12,000 skilled staff in North America, almost 1,000 locally. Having built some of the largest P3s in North America, FRMG's Lead Contractor team is experienced with the complexities of P3 contracts. The current excess capacity of 14 times the expected average annual construction volume for I-70 East provides the Procuring Authorities with ample back-up for additional contract wins of the Lead Contractor Members. The combined annual construction capacity of around \$5.8 billion indicates that a project of the complexity of I-70 E is well within FRMG's capacity.

**c. Lead Engineer and Relevant Financially Responsible Parties**

FRMG's Lead Engineer comprised of two of the largest engineering firms in Colorado and nationally, is a joint venture between CH2M and AECOM Design. With over 3,000 staff located in Colorado alone, FRMG's Lead Engineer is equipped to deliver the Project as a locally experienced and sophisticated team of designers that combine P3, design-build, and maintenance expertise to complement FRMG's focus on constructibility and a whole lifecycle approach. The following chart presents the current and expected workloads for the Lead Engineer's transportation staff in the western/central region of North America, showing the excess capacity (in FTEs).



I70EDBS\_115\_DEN

As demonstrated by this chart, the Lead Engineer will have an excess capacity of 1,600 available transportation FTEs in 2017 and up to 2,500 available FTEs by 2021, representing more than sufficient capacity to undertake the design work during the anticipated design and construction period for the Project, including the availability of transportation technical specialists and managers to take on the Project in addition to current and projected workloads.

**LEAD ENGINEER**

**TESTAMENT TO OUR LOCAL CAPACITY**

FRMG's Lead Engineer can access more than 3,000 employees in Colorado and belongs to corporations with more than 115,000 employees worldwide. Having worked on more than 15,000 transportation projects since 1994 in the State of Colorado is a sound testament for our local capacity and our deep rooted understanding of the local community.



**CH2M HILL Engineers, Inc.**, supported by its financially responsible Party **CH2M HILL Companies, LTD** ("CH2M"), is an industry leading engineering, construction, operations, and program management firm. Headquartered just outside of Denver in Englewood, Colorado, CH2M is an employee-owned company comprising of 696 offices in 91 countries worldwide with more than 25,000 employees worldwide, of which more than 1,500 are located in the Denver. CH2M has a strong financial base, with \$6.1 billion in annual revenue in FY 2014; where its highway and bridge consulting and transportation construction projects generated more than \$1.5 billion last year.

CH2M brings nearly 70 years of service helping clients develop safe, innovative, and sustainable solutions to their most challenging transportation projects. In the last 10 years CH2M has completed more than 13,500 transportation projects, in the State of Colorado since 1994 including CDOT's second design-build COSMIX™, I-225 Parker Road, and I-70/SH-58 in Denver. Since 2000, CH2M has provided design or management services on more than 30 P3 projects worth almost \$31 billion.

CH2M is consistently recognized by Engineering News Record (ENR) as a top firm among its peers. Examples of 2014 ENR rankings are: #1 (since 2006) Environmental Firms, #4 Transportation Design and #1 (since 2004) Program Management.

CH2M Highlights	
Employees worldwide 2014	25,000+
Employees in Colorado 2014	1,500+
Revenues worldwide 2014	\$6.1 billion



**AECOM Technical Services, Inc.** ("AECOM Design"), provides design and consulting

services for complex infrastructure projects across North America, from concept through operation. In the transportation alternative delivery market, AECOM Design offers innovative design solutions that drive value for money and support the goals of constructors, developers, lenders, concessionaires, and grantors. Notable ENR rankings include #1 Top Design firm, both nationally and globally; #1 Transportation; and #1 Highway and Bridges.

Locally, AECOM Design is able to draw upon the expertise of more than 1,500 employees. AECOM Design brings integrated, Colorado-based design personnel and discipline leads who have vast experience working on local and national design-build and P3 projects. The design team has been involved in some of Colorado's most iconic projects. Whether providing transportation engineering for Denver Union Station, design services for the E-470/I-70 Fly-By Interchange or engineering services to E-470 Public Highway Authority,

With its long and extensive history in Colorado, AECOM Design provides an excellent working knowledge of CDOT and a strong understanding of stakeholder values and goals.

AECOM Highlights	
Employees worldwide 2014	90,000+
Employees in Colorado 2014	1,500+
Revenues worldwide 2014*	\$19.5 billion

*\*post URS acquisition*

**d. Lead Operator and Relevant Financially Responsible Parties**

Operation and maintenance for the Project will be provided by FRMG team members HOCHTIEF, ACS and AECOM Capital, each supported by and drawing on the vast experience of their relevant Financially Responsible Parties and affiliates (see section 2.2.i.a. for further information). Members of the Lead Operator bring extensive experience managing similarly complex projects, especially under P3 contractual models, in North America and globally, with more than 40 P3 projects around the world and 20 non-P3 operations and maintenance contracts combined currently under operations.

Overall our team is involved in the provision of operation and maintenance services for more than 20,000 lane miles of roads, highways, bridges and tunnels, including 15,000 in North America, and has extensive experience in mobilizing resources and capacity to undertake operations and maintenance responsibilities in P3 projects. The Lead Operator is capable of operating and maintaining the Project with existing and newly hired and trained local resources and sub-contractors.

	FRMG Current O&M Projects	I-70 East Expected Scope
Lane Miles worldwide	20,000+	<150 lane miles
Lane Miles in North America	15,000+	<150 lane miles
Staffing in Operations Ventures to provide O&M	2,000+	< 15 Full Time Employees depending on Scope

We expect that operations and maintenance will require less than 15 FTEs for the I-70 East Project, depending on the final scope. The operators are currently employing more than 2,000 employees in an operations and maintenance role at concessions and operating companies. The Project is well within FRMG's capacity and FRMG is well versed in managing similar complex projects. FRMG's Lead Operator Members have established processes in setting up new project specific operation ventures that will ensure the Lead Operator is specifically tailored to meet the resources needs for the Project.

#### LEAD OPERATOR ADVANTAGE ✓

FRMG's Lead Operator has the experience and capacity to provide all the required services for the Project. More than 3.5 million cars per day use roads and highways where services are provided by Members of the Lead Operator and their affiliates.

#### e. Each Financially Responsible Party

All Core Proposer Team Members of FRMG are backed by strong companies with significant experience as described in each of the above sections, each sharing a same key quality: highly experienced with P3 projects and a deep understanding of the resources and commitment required to pursue the Project.

As demonstrated in the previous sections, all the Financially Responsible Parties have sufficient resources to justify their commitment.

#### f. Each of the proposed Key Personnel

FRMG has assigned highly experienced Key Personnel to the Project. Important criteria were used to strategically identify staff that have relevant skills to commit to the Project as part of FRMG:

##### a. Design-Build Manager - Kent Peyton (Flatiron)

Kent Peyton is currently working on the Northeast Anthony Henday project, which is scheduled to be completed in 2016 prior to the start of the I-70 project. Kent will be involved during the procurement and will be available 100% during the design and 100% during construction.

##### b. Design Manager - Chris Bisio (CH2M)

Chris Bisio, a life-long native of Colorado, will be 100% dedicated to the I-70 East project. She has been heavily engaged in the SOQ development, and will lead the design portion of the Front Range Mobility Group proposal. She will be supported by a team of professionals here in Denver. Succession plans are in place to transition Ms. Bisio's current workload upon the award of the I-70 East project.

##### c. O&M Manager - Mike Smith (ACS)

Mike Smith is currently involved in the development and management of O&M work for U.S. P3 projects, including the Portsmouth Bypass Project, SH 288 Toll Lanes and the I-595 Corridor Improvements as well as ACS' projects in Canada. He will be involved in similar capacity during the procurement process and will be responsible to manage the operations, maintenance and rehabilitation work upon close.

##### d. Quality Manager - Mariola Mata Zapico (Dragados)

Mariola Mata Zapico is currently working on the Ottawa Light Rail P3 Project in Canada. She will be involved in the development of the QM/QA/QC Program during the procurement and then be available for her role as required after award. Her assignment for Ottawa LRT will come to an end before her involvement in I-70 East and she will be 100% committed to the I-70 East Project. She will be seconded to work for the Developer.

##### e. Environmental Manager - Daniel Lowry (AECOM)

Dan Lowry is currently working as the District Environmental Manager for AECOM. He is local and readily available to work on the I-70 East Project. He will be seconded to work for the Developer.

##### f. Utilities Manager - Laura Baxter (CH2M)

Laura Baxter will be 100% dedicated to the I-70 East project and will play a major part in utilities coordination planning and construction phasing during the RFP submittal. She will be supported by a local Denver team. Succession plans are in place to transition Ms. Baxter's current workload upon the award of the I-70 East Project. Laura will be seconded to the Contractor.

##### g. Community and Public Relations Manager Kathy Berumen (CCC)

Community and Public Relations Manager, Kathy Berumen is local DBE company owner she has worked with several stakeholders throughout Colorado. Kathy will be 100% dedicated to the I-70 project and will work for the Developer.

**(ii) Availability of Non-Financial Resources**

FRMG Members have qualities beyond their financial strength to support a successful development and execution of the Project:

- » FRMG Members have worked together in the past, which allows us to draw on common experience.
- » Our Team has partnered with local firms to further strengthen our own capacity and capabilities.
- » The local nature of our Team Members will ensure full awareness of the Project’s local context.
- » Experienced staff allows FRMG to directly draw upon best practices from previous complex projects.

**a. Each Equity Member and their Financially Responsible Parties**

For successful development of a P3 project, transfer of experience from prior projects is critical. Our experienced individuals have some of the most recent and significant P3 experience in the U.S. and will be directly involved in the management of FRMG through the development and closing process. FRMG Equity Members draw on the collective group of more than 85 P3 professionals in North America and more than 400 worldwide, the vast resources of their respective Financially Responsible Parties and a group of advisors carefully selected for their experience in the U.S. P3 market and capacity to undertake their respective roles in our team on the Project.

**b. Lead Contractor and relevant Financially Responsible Parties**

To successfully design and construct this complex Project, a Lead Contractor must be able to not only proactively manage the procurement, but also mobilize forces quickly upon start of the project execution. A principle of FRMG is a high level of continuity between the development phase and the execution phase. Teams working on the procurement will be actively managing the execution.

**Self-performance:** FRMG’s Lead Contractor will self-perform key tasks on the project with their own resources, offering a high level of control over quality,

safety and schedule control. The FRMG Lead Contractor has access to more than 12,000 skilled staff in North America and almost 1,000 locally.

**ADVANTAGE – FRMG is already here!**

4 of our 7 nominated Key Individuals are already based in Denver and will draw on extensive experience working in the Denver region and with the Procuring Authorities

**Equipment:** We anticipate, at the project peak, to need approximately 150 pieces of equipment ranging from tandem trucks to rough terrain cranes. Our Lead Contractor team boasts over 5,000 pieces of equipment exclusive of our national accounts with major equipment suppliers to acquire any pieces that are not currently within our fleets.

Equipment Fleet	Equipment Fleet
Flatiron	1,200
Dragados	1,500
AECOM	2,387
Sub-contractors	1,800+
Total	6,800+
Projected for I-70	<150 (peak)

**Subcontractors:** FRMG’s Lead Contractor has partnered with three premier subcontractors to complement its own local experience and talent pool:



Kraemer North America, LLC (“Kraemer”), is a subcontractor with strong local and design-build experience, having worked on 650 projects totaling \$1.74 billion in the past 10 years in Colorado. Projects most recently completed within the Denver area include: US-6 DB and the Twin Tunnels CM/GC. Kraemer has been selected for two of the last three CDOT design-build contracts and has started work on the I-25 Cimarron Interchange and Lookout Mountain landscaped lid in Golden, CO.



BT Construction, Inc. (“BTC”) founded in 1980, is a local subcontractor who specializes in water, sanitary sewer and storm sewer pipelines, all types of buried utility infrastructure. BTC has successfully completed over 1,000 projects along the Colorado Front Range.



BTC has worked on large projects like the US 6 Bridges and Denver Eagle P3. BTC recently implemented a Mentor/Protégé Program to enhance DBE participation which will align well with the I-70 East Project’s goals set out by CDOT.

**IHC** Interstate Highway Construction (“IHC”) is a leading general contractor, specializing in highway, heavy civil, infrastructure and design-build construction. IHC is headquartered in Englewood, Colorado and has completed more than 200 heavy highway projects totaling over \$1.5 billion over the past ten years. IHC has worked on large local projects: I-25 Lincoln Avenue to County Line, I-225 Mississippi Avenue to 6th Street, and the I-25 Longmont, SH 119 to SH 66, among others.

All three local sub-contractors have worked extensively with CDOT and other local authorities and know the Project area exceptionally well. In addition, their involvement in FRMG further expands FRMG’s DBE/MBE network.

**ADVANTAGE – STRONG PARTNERS**

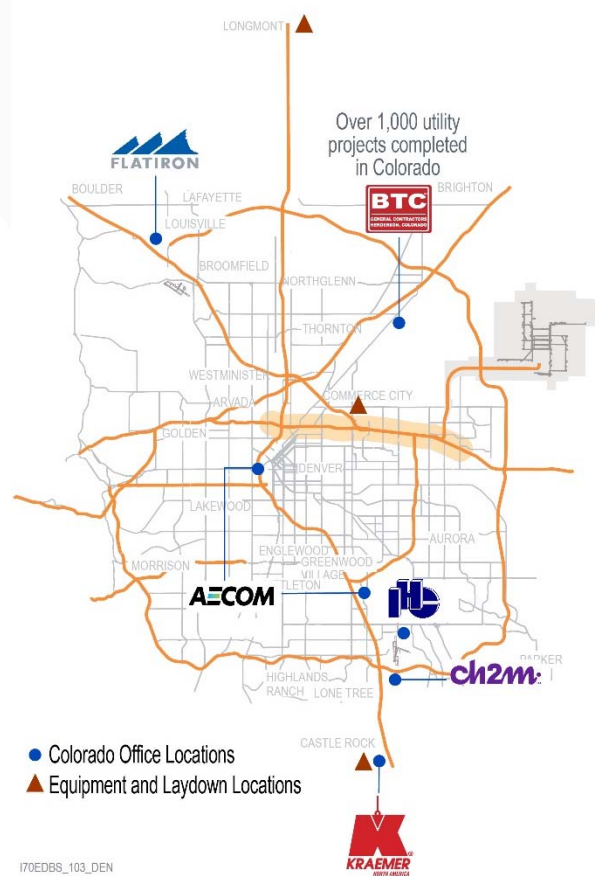
FRMG has teamed with three premier Colorado companies bringing additional resources and an expanded DBE / ESB network.

**DBE Community Integration:** Aside from providing the staff, craft, equipment, and material resources, the team is committed to meeting the DBE requirements of the Project. For projects exceeding \$150 million in value over the last ten years, FRMG members have exceeded their DBE goal by over ten percent. FRMG’s local ties will be paramount to achieving the DBE goals set forth from this Project. Team members have developed relationships over many years to ensure that the goal is not only met, but completed with a high degree of quality.

**Logistics and Local Material Supply:** FRMG’s Lead Contractor has the advantage of several local resources outside of the staff and equipment pool. Between the Lead Contractor and its sub-contractors, the team has over 20 acres of local laydown yards and storage with the closest yard in Commerce City. This land does not include the concrete production facilities contributed by IHC. In addition, FRMG can access significant local material resources, as shown in the next picture.

**c. Lead Engineer and relevant Financially Responsible Parties**

For a Lead Engineer on the I-70 East Project, talent and local know-how will be the two most important criterias for success.



**Strong in-house capacity:** With the combined resources of CH2M and AECOM Design, CDOT has access to one of the industry’s deepest benches and to some of the most innovative technical leaders of complex highway infrastructure projects. CH2M has 696 offices in 91 countries worldwide, with more than 17,000 staff in North America. AECOM Design has nearly 900 offices serving approximately 150 countries worldwide, with over 22,500 design staff in North America.

**Excellent Track Record in Colorado and Worldwide:** In the last 10 years FRMG’s Lead Engineering Team has completed more than 40,000 transportation projects, and since 2000, has provided design or management services on more than 50 P3 projects worth an estimated \$65 billion.



**Strong local support:** FRMG's Lead Engineering Team has partnered with local firms to complement their strong capacity.



**Tsiouvaras Simmons Holderness ("TSH")** is a

Colorado-based consulting firm founded in 2005 to serve the Colorado Transportation Industry. TSH currently has 70 employees who work exclusively in Colorado on transportation projects providing bridge, highway, traffic and hydraulic design along with construction management services. TSH will bring integral experience to the Project.

In addition to TSH, the Lead Engineer has teamed with additional partners to complement its own team, including DBE firms.

**ADVANTAGE – LOCAL AND GLOBAL DESIGN EXPERIENCE ✓**

FRMG's Lead Engineer has delivered more than 15,000 projects worth nearly \$4.5 B in Colorado. Since 2000, The Engineering Team has provided design or management services on more than 50 P3 projects worth an estimated \$65 billion.

**d. Lead Operator and relevant Financially Responsible Parties**

FRMG's Lead Operator members bring an extensive background in the operation and maintenance of highways and P3 projects. FRMG has dedicated and experienced professionals familiar with various challenges anticipated on the Project, and has implemented different approaches, specifically tailored to the unique aspects of each project; including self-performance, partial self-performance and sub-contracted services, and full management of sub-contracted services. Using this expertise and experience in North America, including on projects in similar climates as Denver. FRMG will develop an operations program and structure which best fits the Project and ensures a safe and efficient operation assigning experienced O&M experts to I-70 East, FRMG can ensure that previous project experience gets directly applied to the Project.

**ADVANTAGE – P3 AND LOCAL O&M EXPERIENCE ✓**

FRMG's Lead Operator Members can deliver a flexible portfolio of service models, which allows FRMG to develop the most efficient O&M solution for the I-70 East Project. In addition, CH2M offers local experience operating 573 lane miles of roads in the Denver Metro Area.

# LEGAL MATTERS

# 3



# CONNECTING COMMUNITIES



ALONG I-70 EAST

I-25 and Broadway  
Denver, Colorado







### 3.1 ORGANIZATIONAL CONFLICTS OF INTEREST

FRMG confirms the absence of any organizational conflicts of interest (as defined in Section 5.3.1.a of Part B) and has submitted a Preliminary Organizational Conflict of Interest Disclosure on April 24, 2015 as a prior step to confirm with the Procuring Authorities the absence of any such conflicts. In the interest of transparency the following pages disclose any relevant existing relationships, including details and other commentary on the relationships.

June 19, 2015

Nicholas Farber  
Enterprise Specialist  
High Performance Transportation Enterprise  
4201 E. Arkansas Ave., Room 230  
Denver, CO 80222 (720) 248-8544  
[DOT\\_I70EProject@state.co.us](mailto:DOT_I70EProject@state.co.us)

Re: **AECOM Capital, AECOM Technical Services, Inc, URS Corporation, URS Energy & Construction, Inc. (“AECOM Entities”)**  
**Preliminary Organizational Conflicts of Interest Disclosure**  
Request For Qualifications to Design, Build, Finance, Operate and Maintain the I-70 East Project

---

Reference is made to Section 5.3 (Organizational Conflicts of Interest and Limitations on Proposer Team Membership) of Part B of the Request for Qualifications (RFQ) issued on March 25, 2015 to Design, Build, Finance, Operate and Maintain the I-70 East Project (the “Project”).

AECOM Capital, Inc., AECOM Technical Services, Inc., URS Corporation, URS Energy & Construction, Inc. and AECOM (“AECOM Entities”) have conducted an internal review and acknowledge that transactions and/or services have taken place and/or provided between AECOM Entities and the following:

- Atkins
- Communications Infrastructure Group, LLC
- E-470
- Kaplan Kirsch & Rockwell LLP
- Yeh and Associates, Inc.

Based upon the internal review, and to the best of the AECOM Entities knowledge from the internal review, there are no I-70 East Project conflicts of interest regarding transactions and/or services that have taken place and/or provided between AECOM Entities and the above noted organizations.

As previously stated within the AECOM Entities Preliminary Organizational Conflicts of Interest Disclosure (attached), the AECOM Entities, through one of its subsidiaries, has provided certain services regarding the I-70 project. By letter dated October 4, 2013, (attached) CDOT approved AECOM’s Entities ability to propose on any solicitations/proposals for the I-70 East Design and/or Construction Program Management services under the conditions stated within the letter, which AECOM Entities has complied. AECOM has had no involvement in the development of engineering, the RFQ, or other elements of the I-70 East

Project. In addition, AECOM staff associated with the Colorado Bridge Enterprise have been firewalled from every part of this pursuit and have had no involvement in the development of the SOQ, the strategy, or teaming. The CDOT contract number for the Colorado Bridge Enterprise contract is OLA# 321000252 and CMS# 11 HA6 22174. The contract point of contact at CDOT is Scott McDaniel at 303.757.9799 or [scott.mcdaniel@state.co.us](mailto:scott.mcdaniel@state.co.us).

# STATE OF COLORADO

DEPARTMENT OF TRANSPORTATION  
Chief Engineer's Office  
4201 E. Arkansas Avenue  
Denver, Colorado 80222  
(303) 757-9204  
(303) 757-9656 - Fax



**AECOM**  
**Mr. Alan Eckman, P.E.**  
**Business Development Manager / Associate VP**  
**1717 17<sup>th</sup> Street, Suite 2600**  
**Denver, Colorado 80202**

October 4, 2013

Mr. Eckman,

In response to your letter dated September 24, 2013 requesting approval to propose on any solicitations / proposals for the I-70 East Design and/or Construction / Program Management services, CDOT approves of your request with the conditions stated in your letter. Those conditions are:

- No Bridge Enterprise staff from AECOM will be allowed to participate with the planning or development of the proposal.
- No current Bridge Enterprise staff will be included in the proposal.
- AECOM will prohibit cross-sharing of information between the Bridge Enterprise program management staff and AECOM staff responding to the solicitation.
- AECOM employees supporting the pursuit and AECOM staff assigned to the Bridge Enterprise will sign confidentiality agreements acknowledging that information sharing is prohibited and violation thereof will result in the disciplinary actions including possible termination of employment.

AECOM is free to pursue the proposed contract indicated above as a Prime consultant or a sub-consultant on the I-70 East project advertisements upon adherence to the above stipulations.

Thank you for your thoughtful request.

Sincerely,

A handwritten signature in blue ink, appearing to read "Timothy J. Harris".

TIMOTHY J. HARRIS, PE  
Chief Engineer





June 11, 2015

Nicholas Farber  
Enterprise Specialist  
High Performance Transportation Enterprise  
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Re: **CH2M HILL Companies, Ltd**  
**Organizational Conflicts of Interest Disclosure (final submittal)**  
Request For Qualifications to Design, Build, Finance, Operate and Maintain the I-70 East Project

---

Reference is made to Section 5.3 (Organizational Conflicts of Interest and Limitations on Proposer Team Membership) of Part B of the Request for Qualifications (RFQ) issued on March 25, 2015 to Design, Build, Finance, Operate and Maintain the I-70 East Project (the "Project").

CH2M HILL Companies, Ltd, as Financial Responsible Party for CH2M HILL Engineers, Inc., does not believe it has any Organizational Conflicts of Interest relating to the Project, as defined in Section 5.3 of Part B of the RFQ, however, in the interest of full disclosure, we want to advise the Procuring Authorities of certain projects and relationships that exist with our firm as further described in in Attachment A.



**Attachment A – Final Organizational Conflicts of Interest Disclosure for  
CH2M HILL Engineers, Inc.**

	<b>Disclosure</b>	<b>Relevant facts</b>	<b>Comments</b>
<b>1</b>	Brighton Boulevard Project	CH2M HILL performed a corridor study on Brighton Boulevard from 29 <sup>th</sup> north to the City limits for the City and County of Denver (CCD) from the Summer of 2013 to the Spring of 2014. Subsequent to that, CH2M HILL performed Preliminary Design services from the Summer of 2014 to the present on the section of Brighton Boulevard from 29 <sup>th</sup> Street to 44 <sup>th</sup> Street (just south of the I-70 interchange). CH2M HILL is in negotiations to performed Final Design services on that same section of road starting this summer thorough the end of 2015. Construction will occur in 2017.	The work CH2M HILL has and continues to perform on Brighton Boulevard has not contained the I-70 Interchange with Brighton since it was understood that would be covered by CDOT’s I-70 project. As a result, CH2M HILL’s efforts contained no work in the I-70 project limits and CH2M HILL gained no competitive advantages for the I-70 project from our work on Brighton Boulevard.
<b>2</b>	CH2M HILL project team member (Michelle Pinkerton) is related to Brian Pinkerton (Spouse), who works for the City and County of Denver (CCD) as the Major Projects Director	Brian Pinkerton is in charge of managing staff working on major projects for the CCD (see attached letter dated March 18,2015 for specific duties)	Brian has gone before the ethics committee at the CCD regarding the I-70 East Project and the ethics recommendation has found that his relationship with spouse is not a Conflict of Interest (per attached March 18, 2015 letter). Also, the ethics recommendation has been shared with CDOT.
<b>3</b>	CH2M HILL is the prime consultant for the Peoria Crossing Design Build Project procured for the CCD.	CH2M HILL performed the environmental document, preliminary engineering and procurement documents and was the owners (CCD) oversight manager for the final design and construction of the project. The limits of the improvement of this project is from just south of 33 <sup>rd</sup> Ave to 39 <sup>th</sup> Ave (just south of I-70). The RFQ states that the replacement of the Peoria structure over I-70 is estimated to be included in the I-70 East SOW.	The Peoria Crossing DB project was procured by CCD. The construction of the project is essentially complete and open to traffic. There are no ties with this project and the I-70 East project as the improvement for this project ends south of the I-70 Interchange.



4	Meeting facilitation for Colorado Blvd and Steele/Vasquez I-70 Interchanges.	CH2M HILL (one staff member) facilitated a one day meeting that included CDOT, CCD and Commerce City elected officials and staff. This meeting discussed the interchange of I-70 at Colorado Blvd and the Steele/Vasquez interchange.	This meeting was requested by CDOT to bring various stakeholders together for discussions purposes. This effort was encompassed in the publically available SDEIS and CH2M HILL gained no competitive advantages for the I-70 project.
5	City and County of Denver (CCD) National Environmental Policy Act (NEPA) training and advisory services.	CH2M HILL provided National Environmental Policy Act (NEPA) training for CCD staff in preparation of CCD's review of the I-70 East EIS.	These training services were requested by CCD to help their staff and City Council navigate the environmental impact statement (EIS) process, which was new to many CCD staff. CH2M HILL provided advice on effective processes for participating in the NEPA process but did not advise CCD on any details of the I-70 East project. CCD's comments on the SDEIS are publicly available, and CH2M HILL gained no competitive advantages for the I-70 project.
	City and County of Denver(CCD) On-Call Services Contract	CH2M HILL has an on-call service contract with CCD for projects throughout the City for various professional services which may or may not cross the I-70 project boundaries.	CH2M HILL will review each project opportunity carefully to ensure work under this service contract does not constitute a COI with the I-70 proposal or project.



June 11, 2015

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CH2M HILL Engineers, Inc., as Lead Engineer, does not believe it has any Organizational Conflicts of Interest relating to the Project, as defined in Section 5.3 of Part B of the RFQ, however, in the interest of full disclosure, we want to advise the Procuring Authorities of certain projects and relationships that exist with our firm as further described in in Attachment A.



**Attachment A – Final Organizational Conflicts of Interest Disclosure for  
CH2M HILL Engineers, Inc.**

	<b>Disclosure</b>	<b>Relevant facts</b>	<b>Comments</b>
<b>1</b>	Brighton Boulevard Project	CH2M HILL performed a corridor study on Brighton Boulevard from 29 <sup>th</sup> north to the City limits for the City and County of Denver (CCD) from the Summer of 2013 to the Spring of 2014. Subsequent to that, CH2M HILL performed Preliminary Design services from the Summer of 2014 to the present on the section of Brighton Boulevard from 29 <sup>th</sup> Street to 44 <sup>th</sup> Street (just south of the I-70 interchange). CH2M HILL is in negotiations to performed Final Design services on that same section of road starting this summer thorough the end of 2015. Construction will occur in 2017.	The work CH2M HILL has and continues to perform on Brighton Boulevard has not contained the I-70 Interchange with Brighton since it was understood that would be covered by CDOT’s I-70 project. As a result, CH2M HILL’s efforts contained no work in the I-70 project limits and CH2M HILL gained no competitive advantages for the I-70 project from our work on Brighton Boulevard.
<b>2</b>	CH2M HILL project team member (Michelle Pinkerton) is related to Brian Pinkerton (Spouse), who works for the City and County of Denver (CCD) as the Major Projects Director	Brian Pinkerton is in charge of managing staff working on major projects for the CCD (see attached letter dated March 18,2015 for specific duties)	Brian has gone before the ethics committee at the CCD regarding the I-70 East Project and the ethics recommendation has found that his relationship with spouse is not a Conflict of Interest (per attached March 18, 2015 letter). Also, the ethics recommendation has been shared with CDOT.
<b>3</b>	CH2M HILL is the prime consultant for the Peoria Crossing Design Build Project procured for the CCD.	CH2M HILL performed the environmental document, preliminary engineering and procurement documents and was the owners (CCD) oversight manager for the final design and construction of the project. The limits of the improvement of this project is from just south of 33 <sup>rd</sup> Ave to 39 <sup>th</sup> Ave (just south of I-70). The RFQ states that the replacement of the Peoria structure over I-70 is estimated to be included in the I-70 East SOW.	The Peoria Crossing DB project was procured by CCD. The construction of the project is essentially complete and open to traffic. There are no ties with this project and the I-70 East project as the improvement for this project ends south of the I-70 Interchange.



4	Meeting facilitation for Colorado Blvd and Steele/Vasquez I-70 Interchanges.	CH2M HILL (one staff member) facilitated a one day meeting that included CDOT, CCD and Commerce City elected officials and staff. This meeting discussed the interchange of I-70 at Colorado Blvd and the Steele/Vasquez interchange.	This meeting was requested by CDOT to bring various stakeholders together for discussions purposes. This effort was encompassed in the publically available SDEIS and CH2M HILL gained no competitive advantages for the I-70 project.
5	City and County of Denver (CCD) National Environmental Policy Act (NEPA) training and advisory services.	CH2M HILL provided National Environmental Policy Act (NEPA) training for CCD staff in preparation of CCD's review of the I-70 East EIS.	These training services were requested by CCD to help their staff and City Council navigate the environmental impact statement (EIS) process, which was new to many CCD staff. CH2M HILL provided advice on effective processes for participating in the NEPA process but did not advise CCD on any details of the I-70 East project. CCD's comments on the SDEIS are publicly available, and CH2M HILL gained no competitive advantages for the I-70 project.
	City and County of Denver(CCD) On-Call Services Contract	CH2M HILL has an on-call service contract with CCD for projects throughout the City for various professional services which may or may not cross the I-70 project boundaries.	CH2M HILL will review each project opportunity carefully to ensure work under this service contract does not constitute a COI with the I-70 proposal or project.

June 11, 2015

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Re: **Goodbee & Associates, Inc.**  
**Organizational Conflicts of Interest Disclosure (final submittal)**  
for the Request For Qualifications to Design, Build, Finance, Operate and Maintain the I-70 East Project

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Reference is made to Section 5.3 (Organizational Conflicts of Interest and Limitations on Proposer Team Membership) of Part B of the Request for Qualifications (RFQ) issued on March 25, 2015 to Design, Build, Finance, Operate and Maintain the I-70 East Project (the "Project").

Goodbee & Associates does not believe it has any Organizational Conflicts of Interest relating to the Project, as defined in Section 5.3 of Part B of the RFQ, however, in the interest of full disclosure, we want to advise the Procuring Authorities of certain projects and relevant relationships that exist with our firm as further described in Attachment A.

**Attachment A – Organizational Conflicts of Interest Disclosure for  
Goodbee & Associates, Inc. (GA)**

	<b>Disclosure</b>	<b>Relevant facts</b>	<b>Comments</b>
<b>1</b>	Colorado Bridge Enterprise (CBE) Sub-consultant to the CBE program management team since 2010	I-70 East is a CBE program eligible structure; CBE is slated to be the largest funding source for this project.	No actual or potential conflict of interest; GA role on the CBE team is strictly a limited administrative function with no involvement or influence on the project procurement process.



June 11, 2015

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Re: **Pinyon Environmental, Inc.**  
**Organizational Conflicts of Interest Disclosure (final submittal)**  
for the Request For Qualifications to Design, Build, Finance, Operate and Maintain the I-70 East Project

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Reference is made to Section 5.3 (Organizational Conflicts of Interest and Limitations on Proposer Team Membership) of Part B of the Request for Qualifications (RFQ) issued on March 25, 2015 to Design, Build, Finance, Operate and Maintain the I-70 East Project (the "Project").

Pinyon Environmental does not believe it has any Organizational Conflicts of Interest relating to the Project, as defined in Section 5.3 of Part B of the RFQ, however, in the interest of full disclosure, we want to advise the Procuring Authorities of certain projects and relationships that exist with our firm as further described in in Attachment A.

**Attachment A –Organizational Conflicts of Interest Disclosure for  
Pinyon Environmental, Inc.**

	<b>Disclosure</b>	<b>Relevant facts</b>	<b>Comments</b>
<b>1</b>	<b>CDOT I-70 East</b>	Environmental Impact Statement for the I-70 East Corridor led by Atkins. CDOT Proj No. FBR 0704-234 (19631) and AQC R600-165 (12599) CDOT PM: Peter Kozinski; 303-512-5991; <a href="mailto:peter.kozinski@state.co.us">peter.kozinski@state.co.us</a>	Pinyon is only supporting on the EIS phase of the project and not during the procurement phase.
<b>2</b>	<b>120<sup>th</sup> and Federal Improvements</b>	Categorical exclusion led by Atkins. CDOT Proj No. NH 128A-006 (17875) CDOT PM: Barb DeSarro; 303-398-6770; <a href="mailto:Barbara.desarro@state.co.us">Barbara.desarro@state.co.us</a>	Pinyon is only working with Atkins staff on this project and will not discuss other projects.
<b>3</b>	<b>US 287 and 69<sup>th</sup> Bridge Replacement</b>	Categorical exclusion led by Atkins. CDOT Proj No. Project FBR R600-417 CDOT PM: Thomas Magenis; 303-398-6716; <a href="mailto:thomas.magenis@state.co.us">thomas.magenis@state.co.us</a>	Pinyon is only working with Atkins staff on this project and will not discuss other projects.

June 16, 2015

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Re: **Tsiouvaras Simmons Holderness, Inc.**  
**Final Organizational Conflicts of Interest Disclosure**  
Request For Qualifications to Design, Build, Finance, Operate and Maintain the I-70 East Project

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Reference is made to Section 5.3 (Organizational Conflicts of Interest and Limitations on Proposer Team Membership) of Part B of the Request for Qualifications (RFQ) issued on March 25, 2015 to Design, Build, Finance, Operate and Maintain the I-70 East Project (the "Project").

**Tsiouvaras Simmons Holderness, Inc.**, as a Lead Engineer subcontractor, does not believe it has any Organizational Conflicts of Interest relating to the Project, as defined in Section 5.3 of Part B of the RFQ, however, in the interest of full disclosure, we want to advise the Procuring Authorities of certain projects and relationships that exist with our firm as further described in Attachment A.

**Attachment A – Final Organizational Conflicts of Interest Disclosure for  
Tsiouvaras Simmons Holderness, Inc. (TSH)**

	<b>Disclosure</b>	<b>Relevant facts</b>	<b>Comments</b>
1	I-70/Havana Design/Build	TSH is completing work on I-70 in the project area and is acting as the prime engineering consultant and Major Participant for this Design/Build project Contract: FBR 0704-230 Contact: Dave Kosmiski 303-404-7019	We do not believe that we have any organizational conflicts of interest; we are disclosing relevant contractual relationships involving CDOT and other entities listed in section 5.3.1.
2	Client: CDOT Consultant: TSH	TSH has the following active contractual relationships with CDOT: <ul style="list-style-type: none"> <li>• CDOT Region 1: Construction Services – NPS Contract: 14 HA1 65006 Contact: Jay Hendrickson 303-512-5991</li> <li>• CDOT Region 6: Construction Services- NPS Contract: 13 HA6 52263 Contact: Jay Hendrickson 303-512-5991</li> <li>• CDOT Region 1: CM &amp; Testing I-225 Parker to Mississippi Contract: 12 HA6 39267 Contact: Jerome Estes 303-757-9295</li> <li>• CDOT Region 1: Construction Mgmt &amp; Testing I-70 Peak Period Shoulder Lane Contract: 15 HA1 71832 Contact: Bob Smith 720-497-6927</li> <li>• CDOT Region 1: Construction Management and Testing Wadsworth – SH121 Contract: 15 HA1 XB 00007 Contact: Kevin Brown 720-497-6954</li> </ul>	We do not believe that we have any organizational conflicts of interest; we are disclosing relevant contractual relationships involving CDOT and other entities listed in section 5.3.1.

	Disclosure	Relevant facts	Comments
		<ul style="list-style-type: none"> <li>• I-25 Reconstruction Design @ 120<sup>th</sup> Ave to SH66 Contract: 14 HA4 60285 Contact: Dan Marcucci 303-546-5658</li> <li>• Colorado Bridge Enterprise –NPS Contract: 14 HAA 58185 Contact: Scott McDaniel 303-757-9799</li> <li>• CDOT HQ: General Engineering – NPS Contract: 15 HAA 72158 Contact: Mark Nord 303-512-4073</li> <li>• CDOT Bridge Preventive Maintenance Engineering Services Contract: 15 HAA 73840 Contact: Mike Mohseni 303-757-4300</li> <li>• CDOT Region 4: General Engineering –NPS Contract: 13 HA4 50916 Contact: Keith Sheaffer 970-350-2162</li> <li>• CDOT Region 3: SH13 North of Craig to Wyoming State Line Contract: 13 HA3 53235 Contact: Jennie Schnackenberg 970-826-5190</li> </ul>	
3	Prime Consultant: TSH Subconsultant: Yeh & Associates	Yeh has the following contractual relationships with TSH - Prime Consultant: <ul style="list-style-type: none"> <li>• CDOT: Region 1 Construction Services - NPS</li> <li>• CDOT: CM &amp; Testing I-225 Parker to Mississippi</li> <li>• CDOT HQ: General Engineering NPS</li> <li>• CDOT Region 4: US34 A &amp; D</li> <li>• CDOT Region 3: SH13 Wyoming South</li> <li>• CDOT Region 1: Old Ranch Interchange</li> </ul>	We do not believe that we have any organizational conflicts of interest; we are disclosing relevant contractual relationships involving CDOT and other entities listed in section 5.3.1.

	Disclosure	Relevant facts	Comments
		<ul style="list-style-type: none"> <li>• CCD Federal Blvd</li> <li>• CCD Colorado Center Pedestrian Bridge</li> <li>• North Meadows Extension</li> </ul>	
4	Prime Consultant: Yeh & Associates Subconsultant: TSH	Yeh has the following contractual relationships with TSH - Subconsultant <ul style="list-style-type: none"> <li>• CDOT Region 1: I-70 Twin Tunnels WB Widening Const. Admin. Project</li> </ul>	We do not believe that we have any organizational conflicts of interest; we are disclosing relevant contractual relationships involving CDOT and other entities listed in section 5.3.1.
5	Prime Consultant: TSH Subconsultant: Atkins	Atkins has the following contractual relationships - TSH Prime Consultant: <ul style="list-style-type: none"> <li>• CDOT R1: Construction Mgmt &amp; Testing I-70 Peak Period Shoulder Lane</li> <li>• CDOT: Region 1 Construction Services – NPS</li> </ul>	We do not believe that we have any organizational conflicts of interest; we are disclosing relevant contractual relationships involving CDOT and other entities listed in section 5.3.1.
6	Prime Consultant: Atkins Subconsultant : TSH	Atkins has the following contractual relationships with TSH as subconsultant: <ul style="list-style-type: none"> <li>• CDOT: Region 1 Construction Services – NPS</li> <li>• Colorado Bridge Enterprise Construction Management</li> <li>• CDOT Region 4: I-25 Reconstruction SH392 to SH14</li> </ul>	We do not believe that we have any organizational conflicts of interest; we are disclosing relevant contractual relationships involving CDOT and other entities listed in section 5.3.1.
7	Communications Infrastructure Group, LLC	Although we do not have a direct contractual relationship we are a Major Participant on the Cimarron Design/Build Project and CIG is part of the project team	We do not believe that we have any organizational conflicts of interest; we are disclosing relevant contractual relationships involving CDOT and other entities listed in section 5.3.1.
8	City and County of Denver	Although CCD is not specifically mentioned TSH has several ongoing contractual relationships and does have a project near 33 <sup>rd</sup> and Brighton Blvd.	We do not believe that we have any organizational conflicts of interest; we are disclosing relevant contractual relationships involving CCD and other entities listed in section 5.3.1.



June 18, 2015

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Re: **Kraemer North America, LLC**  
**Organizational Conflicts of Interest Disclosure**  
for the Request For Qualifications to Design, Build, Finance, Operate and Maintain the I-70 East Project

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Reference is made to Section 5.3 (Organizational Conflicts of Interest and Limitations on Proposer Team Membership) of Part B of the Request for Qualifications (RFQ) issued on March 25, 2015 to Design, Build, Finance, Operate and Maintain the I-70 East Project (the "Project").

Kraemer North America does not have any Organizational Conflicts of Interest relating to the Project, as defined in Section 5.3 of Part B of the RFQ, however, in the interest of full disclosure, we want to advise the Procuring Authorities of certain projects and relevant relationships that exist with our firm as further described in Attachment A.

Respectfully submitted,

F. Dave Zanetell, P.E.  
Senior Vice President  
Kraemer North America, LLC



**Attachment A – Organizational Conflicts of Interest Disclosure for  
Kraemer North America, LLC (Formerly Edward Kraemer & Sons, Inc.)**

Current relevant Contractual Relationships with CDOT

Job Name: I-70 Twin Tunnels

Contract No.: Package 2 – IM 0703-391; Package 3 – NHPP 0703-392 and West Bound - NHPP 0703-408

Project Manager: Ben Acimovic - (303)757-9294

Job Name: US 6 Design-Build

Contract No.: BR 0061-083

Project Manager: Kevin Sullivan - (303)349-7542

Job Name: I-70 Vail Underpass CM/GC

Contract No.: STA 0702-327

Project Manager: Jacob Rivera – (970)328-9937

Job Name: I-25/Arapahoe Road Interchange Reconstruction CM/GC

Contract No.: STU 0252-429

Project Manager: Telecia McCline – (303)512-5204

Job Name: US 85/SH86 Factory Shops to Allen Way

Contract No.: FSA 086A-053

Project Manager: Roman Jauregui (303)365-7255

Job Name: I-25/US 24 Cimarron Design-Build

Contract No.: IM 0252-423

Project Manager: Lesley Mace – (719)634-2323





June 19, 2015

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Re: **Interstate Highway Construction, Inc. (IHC)**  
**Organizational Conflicts of Interest Disclosure**  
for the Request For Qualifications to Design, Build, Finance, Operate and Maintain the I-70 East Project

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Reference is made to Section 5.3 (Organizational Conflicts of Interest and Limitations on Proposer Team Membership) of Part B of the Request for Qualifications (RFQ) issued on March 25, 2015 to Design, Build, Finance, Operate and Maintain the I-70 East Project (the "Project").

IHC does not have any potential Organizational Conflicts of Interest relating to the Project, as defined in Section 5.3 of Part B of the RFQ, however, in the interest of full disclosure, we want to advise the Procuring Authorities of certain projects and relevant relationships that exist with our firm as further described in Attachment A.

Jim Randall  
President and COO  
Interstate Highway Construction

Attachment A –Organizational Conflicts of Interest Disclosure for



INTERSTATE HIGHWAY CONSTRUCTION, INC.

	Disclosure	Relevant facts	Comments
1	I-76 & 136th Avenue Concrete Pavement Repair/Culverts	Contract Number: NHPP 076A-009, CDOT Project Manager Karl Packer, (303) 913-7640	Current CDOT Contract. Project is substantially complete awaiting financial closeout.
2	I-25, Lincoln to County Line (STU 0252-399), CDOT Project Manager James Moreau, (720) 951-1663	Current CDOT Contract. Project is currently scheduled to be completed in December 2015. IHC will not discuss the I-70 East project with CDOT personnel, and limit interactions to issues pertaining only to the I-25 project.	Current CDOT Contract. Project is substantially complete awaiting financial closeout.
3	Atkins	Atkins is a team member on the Kraemer/IHC JV for the C-470 pursuit currently underway. IHC will not discuss the I-70 East project with Atkins personnel, and limit interactions to issues pertaining only to the C-470 project.	Current CDOT Contract. Project is substantially complete awaiting financial closeout.

# 3.2.1. FORM D



AREA ELEMENTARY SCHOOL

## FORM D: LEGAL DISCLOSURES

**Proposer Name:** Front Range Mobility Group

### **Form D: Summary of Legal Liabilities and Proceedings**

**Question 1:**

List and briefly describe all instances during the last five years involving Reference Projects in relation to which any Core Proposer Team Member or any Affiliate of any of them:

- (a) was determined by a court of law or in an arbitration proceeding, a dispute review board proceeding or any other dispute resolution proceeding to be liable for a material breach of contract;
- (b) was otherwise acknowledged in writing to be liable for a material breach of contract;
- (c) had a contract terminated for cause or convenience; or
- (d) received a written waiver of another party’s right to terminate a contract for cause.

### **Response to Question 1**

<b>Equity Member and Lead Operator member: ACS Infrastructure Development Inc.</b>		
(1)	<u>Description:</u>	<b>Refer to Attachment 1</b>
	<u>Owner’s or Counterparty’s Representative:</u>	<b>Refer to Attachment 1</b>
<b>Equity Member and Lead Operator member: HOCHTIEF PPP Solutions North America, Inc.</b>		
(2)	<u>Description:</u>	<b>Refer to Attachment 2</b>
	<u>Owner’s or Counterparty’s Representative:</u>	<b>Refer to Attachment 2</b>
<b>Equity Member and Lead Operator member: AECOM Capital Inc.</b>		
(3)	<u>Description:</u>	None applicable
	<u>Owner’s or Counterparty’s Representative:</u>	None applicable
<b>Equity Member: John Laing Investments Limited</b>		
(4)	<u>Description:</u>	None applicable
	<u>Owner’s or Counterparty’s Representative:</u>	None applicable
<b>Lead Contractor Member: Flatiron Constructors, Inc.</b>		
(5)	<u>Description:</u>	<b>Refer to Attachment 2</b>
	<u>Owner’s or Counterparty’s Representative:</u>	<b>Refer to Attachment 2</b>
<b>Lead Contractor Member: Dragados USA, Inc.</b>		
(6)	<u>Description:</u>	<b>Refer to Attachment 3</b>
	<u>Owner’s or Counterparty’s Representative:</u>	<b>Refer to Attachment 3</b>
<b>Lead Contractor Member: URS Energy &amp; Construction, Inc.</b>		
(7)	<u>Description:</u>	None applicable
	<u>Owner’s or Counterparty’s Representative:</u>	None applicable
<b>Lead Engineer Member: CH2M HILL Engineers, Inc.</b>		
(8)	<u>Description:</u>	None applicable
	<u>Owner’s or Counterparty’s Representative:</u>	None applicable

**Colorado I-70 East Project**

	<b>Lead Engineer Member:</b> AECOM Technical Services, Inc.	
(9)	<u>Description:</u>	None applicable
	<u>Owner's or Counterparty's Representative:</u>	None applicable
	<b>Financially Responsible Party:</b> ACS Servicios y Concesiones S.L.	
(11)	<u>Description:</u>	<b>Refer to Attachment 1</b>
	<u>Owner's or Counterparty's Representative:</u>	<b>Refer to Attachment 1</b>
	<b>Financially Responsible Party:</b> HOCHTIEF Aktiengesellschaft	
(10)	<u>Description:</u>	<b>Refer to Attachment 2</b>
	<u>Owner's or Counterparty's Representative:</u>	<b>Refer to Attachment 2</b>
	<b>Financially Responsible Party:</b> Dragados S.A.	
(12)	<u>Description:</u>	<b>Refer to Attachment 4</b>
	<u>Owner's or Counterparty's Representative:</u>	<b>Refer to Attachment 4</b>
	<b>Financially Responsible Party:</b> AECOM	
(13)	<u>Description:</u>	None applicable
	<u>Owner's or Counterparty's Representative:</u>	None applicable
	<b>Financially Responsible Party:</b> John Laing Group plc	
(14)	<u>Description:</u>	None applicable
	<u>Owner's or Counterparty's Representative:</u>	None applicable
	<b>Financially Responsible Party:</b> CH2M HILL Companies, LTD	
(15)	<u>Description:</u>	None applicable
	<u>Owner's or Counterparty's Representative:</u>	None applicable

**Question 2:**

List and briefly describe (including as to the resolution) each arbitration, litigation, dispute review board and other dispute resolution proceeding (including to the extent settled prior to completion of the proceeding) occurring during the last five years related to Reference Projects, which involved:

- (a) a claim or dispute between the project owner(s) (or any public-private partnership project company, concessionaire, developer or the equivalent), on the one hand, and any Core Proposer Team Member or any Affiliate of any of them, on the other hand; and
- (b) an amount in excess of the lesser of:
  - (i) 2% of the original contract value; or
  - (ii) \$500,000 on projects with an original contract value in excess of \$25 million.

**Response to Question 2**

<b>Equity Member and Lead Operator member: ACS Infrastructure Development Inc.</b>		
(1)	Description:	Refer to Attachment 1
	Owner's or Counterparty's Representative:	Refer to Attachment 1
<b>Equity Member and Lead Operator member: HOCHTIEF PPP Solutions North America, Inc.</b>		
(2)	Description:	Refer to Attachment 2
	Owner's or Counterparty's Representative:	Refer to Attachment 2
<b>Equity Member and Lead Operator member: AECOM Capital Inc.</b>		
(3)	Description:	None applicable
	Owner's or Counterparty's Representative:	None applicable
<b>Equity Member: John Laing Investments Limited</b>		
(4)	Description:	None applicable
	Owner's or Counterparty's Representative:	None applicable
<b>Lead Contractor Member: Flatiron Constructors, Inc.</b>		
(5)	Description:	Refer to Attachment 2
	Owner's or Counterparty's Representative:	Refer to Attachment 2
<b>Lead Contractor Member: Dragados USA, Inc.</b>		
(6)	Description:	Refer to Attachment 5
	Owner's or Counterparty's Representative:	Refer to Attachment 5
<b>Lead Contractor Member: URS Energy &amp; Construction, Inc.</b>		
(7)	Description:	None applicable
	Owner's or Counterparty's Representative:	None applicable
<b>Lead Engineer Member: CH2M HILL Engineers, Inc.</b>		
(8)	Description:	None applicable
	Owner's or Counterparty's Representative:	None applicable
<b>Lead Engineer Member: AECOM Technical Services, Inc.</b>		
(9)	Description:	None applicable
	Owner's or Counterparty's Representative:	None applicable
<b>Financially Responsible Party: ACS Servicios y Concesiones S.L.</b>		
(11)	Description:	Refer to Attachment 1
	Owner's or Counterparty's Representative:	Refer to Attachment 1

**Colorado I-70 East Project**

	<b>Financially Responsible Party:</b> HOCHTIEF Aktiengesellschaft	
(10)	<u>Description:</u>	<b>Refer to Attachment 2</b>
	<u>Owner's or Counterparty's Representative:</u>	<b>Refer to Attachment 2</b>
	<b>Financially Responsible Party:</b> Dragados S.A.	
(12)	<u>Description:</u>	<b>Refer to Attachment 6</b>
	<u>Owner's or Counterparty's Representative:</u>	<b>Refer to Attachment 6</b>
	<b>Financially Responsible Party:</b> AECOM	
(13)	<u>Description:</u>	None applicable
	<u>Owner's or Counterparty's Representative:</u>	None applicable
	<b>Financially Responsible Party:</b> John Laing Group plc	
(14)	<u>Description:</u>	None applicable
	<u>Owner's or Counterparty's Representative:</u>	None applicable
	<b>Financially Responsible Party:</b> CH2M HILL Companies, LTD	
(15)	<u>Description:</u>	None applicable
	<u>Owner's or Counterparty's Representative:</u>	None applicable

**Form D – Attachment 1**

**Equity Member and Lead Operator Member:** ACS Infrastructure Development Inc.  
**Financially Responsible Party for ACS Infrastructure Development, Inc.:** ACS Servicios y Concesiones, S.L.

**Question #1 & #2**

The summary of Legal Liabilities and Proceedings is provided for ACS Servicios y Concesiones, S.L. (“ACS SyC”), as Financially Responsible Party for ACS Infrastructure Development, Inc. (“ACSID”), and ACSID, as Equity Member and Lead Operator member, and covers the activities of ACS SyC’s direct parent company (and ultimate parent company of ACSID), ACS Actividades de Construcción y Servicios, S.A., ACS SyC and its subsidiaries, including Iridium Concesiones de Infraestructuras, S.A. (“Iridium”) and ACSID, in each case in respect of Reference Projects located in the United States and Canada. ACS SyC is the sole owner of Iridium, which is the entity under the ACS Group that is responsible for the Group’s concessions business and is the sole owner of ACSID.

**Response to Question 2**

<b><u>Equity Member:</u></b> ACS Infrastructure Development, Inc.	
(2)	<p><b><u>Description:</u></b></p> <p>Autoroute 30</p> <p>Nouvelle Autoroute 30 CJV s.e.n.c. (“NA-30 CJV”) [Nouvelle Autoroute 30, s.e.n.c. (“NA 30”)] v. Ministre des Transports du Québec (“ MTQ”)</p> <p>Additional costs associated with the Minister Change no. 1: NA-30 CJV claimed additional costs as a result of changes requested by the MTQ to the design of the Beauharnois Canal Bridge. NA-30 CJV (through NA 30) sent a Demand Letter to MTQ on December 21, 2012. The matter has been settled.</p>
	<p><b><u>Owner’s or Counterparty’s Representative:</u></b></p> <p>Joceline Béland                  Directrice                  MTQ - Direction des projets de transport collectif et de la planification métropolitaine                  Tél: +1 (514) 864-1730 p 2297                  Fax: +1 (514) 864-2155                  joceline.beland@mtq.gouv.qc.ca</p>



This content has been redacted in accordance with Form B Confidential Contents Index

# 3.2.2.

## PART A - FORM E



# FORM E: CERTIFICATIONS

**Proposer Name:** Front Range Mobility Group (FRMG)

## Form E

### Part A: Summary of Certifications

No.	Entity Providing a completed Part B of Form E	Role of such Entity on Proposer <sup>30</sup>	Answered Yes to One or More Of Questions (1) through (8) of Part B?	
(1)	HOCHTIEF PPP Solutions North America, Inc.	Equity Member & Lead Operator Member	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
(2)	ACS Infrastructure Development Inc.	Equity Member & Lead Operator Member	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(3)	AECOM Capital, Inc.	Equity Member & Lead Operator Member	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
(4)	John Laing Investments Limited	Equity Member	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(5)	Flatiron Constructors, Inc.	Lead Contractor Member	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(6)	Dragados USA, Inc.	Lead Contractor Member	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
(7)	URS Energy and Construction, Inc.	Lead Contractor Member	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
(8)	CH2M Hill Engineers Inc.	Lead Engineer Member	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
(9)	AECOM Technical Services, Inc.	Lead Engineer Member	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
(10)	HOCHTIEF Aktiengesellschaft	Financially Responsible Party for HOCHTIEF PPP Solutions North America, Inc. and Flatiron Constructors, Inc.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
(11)	ACS Servicios y Concesiones S.L.	Financially Responsible Party for ACS Infrastructure Development Inc.	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(12)	AECOM	Financially Responsible Party for AECOM Capital, Inc., URS Energy and Construction, Inc. and AECOM Technical Services, Inc.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No

(13)	John Laing Group plc	Financially Responsible Party for John Laing Investments Limited	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(14)	Dragados S.A.	Financially Responsible Party for Dragados USA Inc.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
(15)	CH2M HILL Companies, LTD	Financially Responsible Party for CH2M Hill Engineers, Inc.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No

# 3.2.3.

## PART B - FORM E



This content has been redacted in accordance with Form B Confidential Contents Index

The Form E provided in respect of ACS Infrastructure Development, Inc. (“ACSID”) and ACS Servicios y Concesiones S.L. (“ACS SyC”) covers their respective affiliates in accordance with the instructions thereto, but with respect to entities under common ownership with ACSID and ACS SyC and (i) that are subsidiaries of HOCHTIEF Aktiengesellschaft, we refer to the Form E submitted by HOCHTIEF Aktiengesellschaft and (ii) that are subsidiaries of Dragados S.A. we refer to the Form E submitted by Dragados USA, Inc. and Dragados S.A.

**Colorado I-70 East Project**

**Proposer Name:** Front Range Mobility Group  
**Name of Team Member:** ACS Infrastructure Development Inc.  
**Role on Proposer:**  Equity Member  
 Lead Contractor  
 Lead Engineer  
 Lead Operator  
 Joint venturer in Lead Operator  
 Financially Responsible Party for [*Proposer to provide relevant entity*]

**Part B: Certifications**

<b><u>No.</u></b>	<b><u>Certification Questions</u></b>	<b><u>Yes</u></b>	<b><u>No</u></b>
(1)	Has the entity or any Affiliate or any current officer thereof been indicted or convicted of bid or other contract related crimes or violations (i.e., fraud, bribery, collusion, conspiracy, antitrust, etc.) or any other felony or serious misdemeanor within the past ten years?  <i>If yes, please explain, including the name of the relevant prosecuting agency, the applicable law(s) and the status of any appeal(s).</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(2)	Has the entity or any Affiliate ever sought protection under any provision of any bankruptcy act, law or regulation in any jurisdiction within the past ten years?  <i>If yes, please explain, including identification of the relevant jurisdiction(s) and applicable laws, and the status or outcome of any resulting bankruptcy process.</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(3)	Has the entity or any Affiliate ever been disqualified, removed, debarred or suspended from performing work for the US Federal government, any US state or local government, or any foreign governmental entity within the past ten years?  <i>If yes, please explain, including the name of the relevant public agency, the date, grounds and results of any such action:</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(4)	Has the entity or any Affiliate ever been found liable in a civil suit or found guilty in a criminal action for making any false claim or other material misrepresentation to a public entity within the past ten years?  <i>If yes, please explain, including owner contact information:</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(5)	Has any construction or project or operations and maintenance contract performed or managed by the entity or, to the knowledge of the undersigned, any Affiliate involved repeated or multiple failures to comply with safety rules, regulations or requirements within the past ten years?  <i>If yes, please explain:</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(6)	Has the entity or any Affiliate been found, adjudicated or determined by any Federal court, Federal agency, state court or state agency (including, but not limited to, the Equal Employment Opportunity Commission, the Office of Federal Contract Compliance Programs and any applicable Colorado governmental agency) to have violated any law or executive order relating to employment discrimination or affirmative action within the past ten years, (including but not limited to Title VII of the Civil Rights Act of 1964, as amended (42 U.S.C. Sections 2000 et seq.); the Equal Pay Act (29 U.S.C. Section 206(d)); and any applicable or similar Colorado law)?  <i>If yes, please explain:</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>



**Colorado I-70 East Project**

**No. Certification Questions**

- |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | <b><u>Yes</u></b>                   | <b><u>No</u></b>                    |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|-------------------------------------|
| (7) Has the entity or any Affiliate been found, adjudicated, or determined by any Federal court, Federal agency, state court or state agency to have violated or failed to comply with any law or regulation of the United States or any state within the past ten years governing prevailing wages (including but not limited to payment for health and welfare, pension, vacation, travel time, subsistence, apprenticeship or other training, or other fringe benefits) or overtime compensation?<br><br><i>If yes, please explain:</i>                                                                                                                                                                                                                                                               | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| (8) With respect to each of Questions 1-7 above, if not previously answered or included in a prior response on this Form, is any legally effective or recognized form of notice or warning, or investigation, proceeding, claim, matter, suit, indictment, etc., currently pending against the entity that could (assuming subsequent necessary actions are taken) result in the entity being found liable, guilty or in violation of any of laws or regulations referenced in Questions 1-7 above and/or subject to debarment, suspension, removal or disqualification by the Federal government, any state or local government, or any foreign governmental entity?<br><br><i>If yes, please explain and submit the information requested as to such similar items set out in Questions 1-7 above.</i> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| (9) Under penalty of perjury, the undersigned certifies on behalf of the entity for which he or she signs that each of the foregoing representations, certifications, statements and disclosures is correct, complete and not materially misleading:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |

[Signature Page Follows]

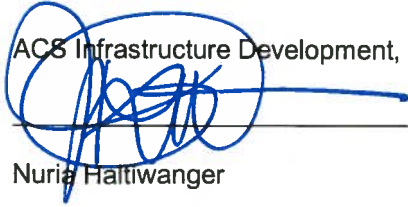
**Colorado I-70 East Project**



**Equity Member:**

ACS Infrastructure Development, Inc.

**By:**

A handwritten signature in blue ink, appearing to be "Nuria", is written over a horizontal line. The signature is enclosed in a blue circular scribble.

**Printed Name:**

Nuria Haitiwanger

**Title:**

Chief Executive Officer

**Proposer Name:** Front range Mobility Group  
**Name of Team Member:** AECOM Capital, Inc.  
**Role on Proposer:**  Equity Member  
 Lead Contractor  
 Lead Engineer  
 Lead Operator  
 Joint venturer in Lead Operator  
 Financially Responsible Party for [Proposer to provide relevant entity]

**Part B: Certifications**

<b><u>No.</u></b>	<b><u>Certification Questions</u></b>	<b><u>Yes</u></b>	<b><u>No</u></b>
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(1)	Has the entity or any Affiliate or any current officer thereof been indicted or convicted of bid or other contract related crimes or violations (i.e., fraud, bribery, collusion, conspiracy, antitrust, etc.) or any other felony or serious misdemeanor within the past ten years?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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*If yes, please explain, including the name of the relevant prosecuting agency, the applicable law(s) and the status of any appeal(s).*

**URS Corporation, an affiliate, discovered through an internal investigation that George Papadopoulos, its former Vice President and Boston Office Manager, overcharged two URS clients via the submission of non-bona fide expense reports.**

**URS terminated Mr. Papadopoulos' employment on February 13, 2009. On February 23, 2010, the Massachusetts Attorney General's Office filed criminal charges against Papadopoulos, and on April 21, 2010, after pleading guilty to larceny and procurement fraud, Papadopoulos was sentenced to 4-5 years in state prison. No criminal charges were filed against URS in connection with this matter.**

(2)	Has the entity or any Affiliate ever sought protection under any provision of any bankruptcy act, law or regulation in any jurisdiction within the past ten years?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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**No.**

*If yes, please explain, including identification of the relevant jurisdiction(s) and applicable laws, and the status or outcome of any resulting bankruptcy process.*

(3)	Has the entity or any Affiliate ever been disqualified, removed, debarred or suspended from performing work for the US Federal government, any US state or local government, or any foreign governmental entity within the past ten years?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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*If yes, please explain, including the name of the relevant public agency, the date, grounds and results of any such action:*

**AECOM Consultants Inc., an affiliate, = with activities in the Province of Quebec, Canada failed an internal technical assessment conducted by the Société Immobilière du Québec (SIQ) on a distressed Hospital expansion design project and as a result was unable to propose on SIQ Quebec City area healthcare contracts for a now-lapsed 2-year period. It should be noted**

**that the project in question is currently the subject of legal action against the SIQ by multiple stakeholders and AECOM has consistently maintained shared responsibility over issues with the project.**

- (4) Has the entity or any Affiliate ever been found liable in a civil suit or found guilty in a criminal action for making any false claim or other material misrepresentation to a public entity within the past ten years?

**No.**

*If yes, please explain, including owner contact information:*

- (5) Has any construction or project or operations and maintenance contract performed or managed by the entity or, to the knowledge of the undersigned, any Affiliate involved repeated or multiple failures to comply with safety rules, regulations or requirements within the past ten years?

*If yes, please explain:*

**URS Corporation, an Affiliate, does not believe it has committed “repeated or multiple failures to comply with safety rules, regulations or requirements.” Nonetheless, out of an abundance of caution, URS notes the following:**

**On August 14, 2006, while operating a bobcat on the 19th floor of a building under demolition at the Dallas Mercantile Complex in Dallas, Texas, an employee of URS subsidiary Cleveland Wrecking Company (“CWC”) struck a steel beam buried in a debris pile. The steel beam impacted a section of the concrete parapet, which fell to the street below fatally injuring a truck driver and laborer. In 2009, CWC partially settled with OSHA for two “other than serious” violations and one serious violation. In 2014, CWC settled the remaining disputed violations for one serious violation, one unclassified violation and various abatement measures.**

**On June 19, 2012, CWC was in the process of dismantling a large fuel storage tank at the Kern Power Plant in Bakersfield, California when a section of the steel wall unexpectedly collapsed and struck the boom lift from which one of its employees was working, fatally injuring the employee. CWC is appealing the OSHA citations for one regulatory, three general and one serious violations.**

**In connection with the same project, on August 3, 2013, during the implosion of two boilers, debris from the blast escaped the containment area and struck a bystander causing significant bodily injuries. A CWC subcontractor was responsible for the blasting operations. On January 31, 2014, Cal/OSHA issued two serious violations to CWC’s subcontractor. Neither URS nor CWC were cited in connection with this incident.**

- (6) Has the entity or any Affiliate been found, adjudicated or determined by any Federal court, Federal agency, state court or state agency (including, but not limited to, the Equal Employment Opportunity Commission, the Office of Federal Contract Compliance Programs and any applicable Colorado governmental agency) to have violated any law or executive order relating to employment discrimination or affirmative action within the past ten years, (including but not limited to Title VII of the Civil Rights Act of 1964, as amended (42 U.S.C. Sections 2000 et seq.); the Equal Pay Act (29 U.S.C. Section 206(d)); and any applicable or similar Colorado law)?

*If yes, please explain:*

**AECOM USA, Inc., an affiliate, is a joint venture partner that provides**

services to Washington D.C. airports. In 2014, the joint venture entered into a consent agreement with the EEOC regarding an age discrimination claim filed by an applicant for an office engineer position. The partner that actually refused the employment was also individually cited and entered into a consent decree in its own right. In addition to the payment of a sum of money by the JV there was also an agreement to provide training to JV personnel and post notices at the work site.

AECOM Government Services, Inc. , an affiliate, entered into two conciliation agreements in 2011 with the EEOC following the EEOC's determination the employees in question had been victims of discrimination. Both matters alleged disability discrimination. Both conciliation agreements contain a "No Admissions" clause as to the company's liability.

In August 2009, URS Energy & Construction, Inc. ("URS E&C"), an affiliate, was informed by the Office of Federal Contract Compliance Programs ("OFCCP") that, as a result of an audit conducted at its Princeton, NJ office, it had determined that URS E&C violated Executive Order 11246 in the hiring of technicians. No lawsuit was filed and URS E&C entered into an agreement with the OFCCP resolving the matter without admission of liability.

In November 2013, URS Energy & Construction, Inc. ("URS E&C") entered into an agreement with the Equal Employment Opportunity Commission (EEOC), and an employee at URS E&C's Hudson-Bergen Light Rail project in New Jersey, in settlement of the employee's claim of violation of the Americans with Disabilities Act with respect to her employment. No lawsuit was filed and URS E&C entered into the agreement without admission of liability.

Dexter Duren, an IT employee of Washington Demilitarization Company, LLC, an affiliate of AECOM Technical Services, Inc., claimed that he was denied two promotions on the basis of his race and in retaliation for raising an earlier EEOC complaint. In 2009, Mr. Duren prevailed on the retaliation claim with respect to the second promotion, and was ultimately awarded back pay, along with an order that he be paid as much as the manager in his department until his contract was completed.

**No.   Certification Questions**

**Yes   No**

- (7) Has the entity or any Affiliate been found, adjudicated, or determined by any Federal court, Federal agency, state court or state agency to have violated or failed to comply with any law or regulation of the United States or any state within the past ten years governing prevailing wages (including but not limited to payment for health and welfare, pension, vacation, travel time, subsistence, apprenticeship or other training, or other fringe benefits) or overtime compensation?

*If yes, please explain:*

**AECOM Technical Services, Inc., an affiliate, has been involved in one prevailing wage claim matter in the past 10 years. The incident involved water and waste water treatment plants belonging to the City of Glens Falls, New York. Work at the plants was performed using union members at their prescribed rate. After a complaint was filed with the New York Department of Labor (“NYDOL”) regarding work outside the plant boundaries, an investigation was conducted by NYDOL, and the company entered into a settlement agreement with the NYDOL in June 2008.**

**In 2011, AECOM Government Services, Inc., an affiliate, was audited by the U.S. Department of Labor (“DOL”) in response to a complaint filed by a union hourly employee regarding the failure to pay overtime premium for work performed on a project site. As a result of the DOL audit, the company was required to pay each affected employee the premium portion of their overtime hours and was assessed \$10 in liquidated damages per violation. The liquidated damages are payable to the client rather than the affected employees and may be reduced and/or waived by the client. To date the client has made no demand for payment.**

**On 12/10/09, Washington Demilitarization Company, LLC, entered into a Back Wage Compliance and Payment Agreement with the U.S. Department of Labor agreeing to pay back wages in connection with operations at its Umatilla, Oregon chemical demilitarization facility.**

**On 12/15/09, Washington Demilitarization Company, LLC, a URS subsidiary, and an affiliate, entered into a Back Wage Compliance and Payment Agreement with the U.S. Department of Labor agreeing to pay back wages in connection with operation at its Pine Bluff, Arkansas chemical demilitarization facility. In both cases, the Agreement executed by Washington Demilitarization Company, LLC provides that “Employer does not in any way admit liability for any wage and hour allegation or claim under any statute or the correctness of the findings of the Secretary.**

- (8) With respect to each of Questions 1-7 above, if not previously answered or included in a prior response on this Form, is any legally effective or recognized form of notice or warning, or investigation, proceeding, claim, matter, suit, indictment, etc., currently pending against the entity that could (assuming subsequent necessary actions are taken) result in the entity being found liable, guilty or in violation of any of laws or regulations referenced in Questions 1-7 above and/or subject to debarment, suspension, removal or disqualification by the Federal government, any state or local government, or any foreign governmental entity?

*If yes, please explain and submit the information requested as to such similar items set out in Questions 1-7 above.*

Washington Group International, Inc. (“WGI”), the company now named “URS Energy & Construction, Inc.”, was involved in a joint venture for one of several U.S. Agency for International Development (“USAID”) projects (NOPWASD) for approximately 20 years. In 2002 WGI brought arbitration proceedings before an arbitration tribunal in Egypt in which the joint venture asserted an affirmative claim for additional compensation for the construction of water and wastewater treatment facilities in Egypt. All USAID projects under the contracts (all of which are 10-20 years old) were completed and are fully operational.

In March 2003, WGI was notified by the Department of Justice that the federal government was investigating WGI for potential violations of the source, origin, and nationality regulations in connection with five of WGI’s USAID-financed host-country projects located in Egypt beginning in the early 1990s. In January 2004 WGI and the federal government and USAID agreed that WGI would not be suspended or debarred in association with the Government investigation.

In November 2004, the federal government filed an action in the United States District Court for the District of Idaho against WGI and its partners asserting violations under the Federal False Claims Act, the Federal Foreign Assistance Act of 1961 in association with specific USAID projects. The federal government seeks civil penalties and disgorgement of revenues for the alleged violations of the statutes.

In March 2005, WGI filed motions in the Bankruptcy Court in Nevada in association with its 2001 bankruptcy and in the Idaho District Court to dismiss the federal government’s claim for failure to give appropriate notice or otherwise preserve those claims. In August 2005, the Bankruptcy Court ruled that all federal government claims were barred in a written order. The federal government appealed the Bankruptcy Court’s order.

On April 17, 2006, the arbitration tribunal issued its award providing that the joint venture prevailed on its affirmative claims in the net amount of \$8.2 million, and that NOPWASD’s counterclaims were rejected.

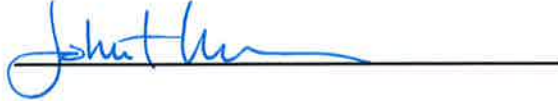
In December 2006, the Nevada District Court reversed the Bankruptcy Court’s order and remanded to the Bankruptcy Court for further proceedings. In December 2007, the federal government requested an order that the Bankruptcy Court abstain from exercising jurisdiction over this matter. In February 2008, the Bankruptcy Court denied the federal government’s motion. In November 2008, the Bankruptcy Court ruled that the federal government’s common law claims of unjust enrichment and payment by mistake are barred. WGI then renewed its motion to dismiss remaining government claims based on preclusion by bankruptcy. The Bankruptcy judge issued a ruling that the claims are not barred. In November 2012, WGI appealed the Bankruptcy Court’s decision to the Ninth Circuit Bankruptcy Appellate Panel. In August 2013, the Appellate Panel affirmed the Bankruptcy Court’s decision. In September 2013, WGI appealed the Appellate Panel’s decision to the United States Ninth Circuit Court of Appeals and the appeal is pending. The Idaho action has been stayed for several years pending the Bankruptcy court ruling.

WGI intends to continue to defend these matters vigorously and denies all allegations of wrongdoing.

- (9) Under penalty of perjury, the undersigned certifies on behalf of the entity for which he or she signs that each of the foregoing representations, certifications, statements and disclosures is correct, complete and not materially misleading:

**Equity Member and Lead Operator:** AECOM Capital Inc.

**By:**



**Printed Name:** John T. Livingston

**Title:** Chief Executive





**Colorado I-70 East Project**

**Proposer Name:** Front Range Mobility Group  
**Name of Team Member:** John Laing Investments Limited  
**Role on Proposer:**  Equity Member  
 Lead Contractor  
 Lead Engineer  
 Lead Operator  
 Joint venturer in Lead [Contractor][Engineer][Operator]  
 Financially Responsible Party

**Part B: Certifications**

<b><u>No.</u></b>	<b><u>Certification Questions</u></b>	<b><u>Yes</u></b>	<b><u>No</u></b>
(1)	Has the entity or any Affiliate or any current officer thereof been indicted or convicted of bid or other contract related crimes or violations (i.e., fraud, bribery, collusion, conspiracy, antitrust, etc.) or any other felony or serious misdemeanor within the past ten years?  <i>If yes, please explain, including the name of the relevant prosecuting agency, the applicable law(s) and the status of any appeal(s).</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(2)	Has the entity or any Affiliate ever sought protection under any provision of any bankruptcy act, law or regulation in any jurisdiction within the past ten years?  <i>If yes, please explain, including identification of the relevant jurisdiction(s) and applicable laws, and the status or outcome of any resulting bankruptcy process.</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(3)	Has the entity or any Affiliate ever been disqualified, removed, debarred or suspended from performing work for the US Federal government, any US state or local government, or any foreign governmental entity within the past ten years?  <i>If yes, please explain, including the name of the relevant public agency, the date, grounds and results of any such action:</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(4)	Has the entity or any Affiliate ever been found liable in a civil suit or found guilty in a criminal action for making any false claim or other material misrepresentation to a public entity within the past ten years?  <i>If yes, please explain, including owner contact information:</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(5)	Has any construction or project or operations and maintenance contract performed or managed by the entity or, to the knowledge of the undersigned, any Affiliate involved repeated or multiple failures to comply with safety rules, regulations or requirements within the past ten years?  <i>If yes, please explain:</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(6)	Has the entity or any Affiliate been found, adjudicated or determined by any Federal court, Federal agency, state court or state agency (including, but not limited to, the Equal Employment Opportunity Commission, the Office of Federal Contract Compliance Programs and any applicable Colorado governmental agency) to have violated any law or executive order relating to employment discrimination or affirmative action within the past ten years, (including but not limited to Title VII of the Civil Rights Act of 1964, as amended (42 U.S.C. Sections 2000 et seq.); the Equal Pay Act (29 U.S.C. Section 206(d)); and any applicable or similar Colorado law)?  <i>If yes, please explain:</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Colorado I-70 East Project



**No. Certification Questions**

(7) Has the entity or any Affiliate been found, adjudicated, or determined by any Federal court, Federal agency, state court or state agency to have violated or failed to comply with any law or regulation of the United States or any state within the past ten years governing prevailing wages (including but not limited to payment for health and welfare, pension, vacation, travel time, subsistence, apprenticeship or other training, or other fringe benefits) or overtime compensation? Yes  No

*If yes, please explain:*

(8) With respect to each of Questions 1-7 above, if not previously answered or included in a prior response on this Form, is any legally effective or recognized form of notice or warning, or investigation, proceeding, claim, matter, suit, indictment, etc., currently pending against the entity that could (assuming subsequent necessary actions are taken) result in the entity being found liable, guilty or in violation of any of laws or regulations referenced in Questions 1-7 above and/or subject to debarment, suspension, removal or disqualification by the Federal government, any state or local government, or any foreign governmental entity?

*If yes, please explain and submit the information requested as to such similar items set out in Questions 1-7 above.*

(9) Under penalty of perjury, the undersigned certifies on behalf of the entity for which he or she signs that each of the foregoing representations, certifications, statements and disclosures is correct, complete and not materially misleading:

Financially Responsible Party: John Laing Investments Limited

By: 

Printed Name: Anthony Phillips

Title: Head of North America

This content has been redacted in accordance with Form B Confidential Contents Index

**Proposer Name:** Front Range Mobility Group  
**Name of Team Member:** URS Energy & Construction, Inc.  
**Role on Proposer:**
 Equity Member  
 Lead Contractor  
 Lead Engineer  
 Lead Operator  
 Joint venturer in Lead Contractor  
 Financially Responsible Party for [Proposer to provide relevant entity]

**Part B: Certifications**

<b><u>No.</u></b>	<b><u>Certification Questions</u></b>	<b><u>Yes</u></b>	<b><u>No</u></b>
(1)	<p>Has the entity or any Affiliate or any current officer thereof been indicted or convicted of bid or other contract related crimes or violations (i.e., fraud, bribery, collusion, conspiracy, antitrust, etc.) or any other felony or serious misdemeanor within the past ten years?</p> <p><i>If yes, please explain, including the name of the relevant prosecuting agency, the applicable law(s) and the status of any appeal(s).</i></p> <p><b>URS Corporation, an affiliate, discovered through an internal investigation that George Papadopoulos, its former Vice President and Boston Office Manager, overcharged two URS clients via the submission of non-bona fide expense reports.</b></p> <p><b>URS terminated Mr. Papadopoulos’ employment on February 13, 2009. On February 23, 2010, the Massachusetts Attorney General’s Office filed criminal charges against Papadopoulos, and on April 21, 2010, after pleading guilty to larceny and procurement fraud, Papadopoulos was sentenced to 4-5 years in state prison. No criminal charges were filed against URS in connection with this matter.</b></p>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(2)	<p>Has the entity or any Affiliate ever sought protection under any provision of any bankruptcy act, law or regulation in any jurisdiction within the past ten years?</p> <p><b>No.</b></p> <p><i>If yes, please explain, including identification of the relevant jurisdiction(s) and applicable laws, and the status or outcome of any resulting bankruptcy process.</i></p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(3)	<p>Has the entity or any Affiliate ever been disqualified, removed, debarred or suspended from performing work for the US Federal government, any US state or local government, or any foreign governmental entity within the past ten years?</p> <p><i>If yes, please explain, including the name of the relevant public agency, the date, grounds and results of any such action:</i></p> <p><b>AECOM Consultants Inc., an affiliate, with activities in the Province of Quebec, Canada failed an internal technical assessment conducted by the Société Immobilière du Québec (SIQ) on a distressed Hospital expansion design project and as a result was unable to propose on SIQ Quebec City area healthcare contracts for a now-lapsed 2-year period. It should be noted that the project in question is currently the subject of legal action against the SIQ by multiple stakeholders and AECOM has consistently maintained shared responsibility over issues with the</b></p>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

<b><u>No.</u></b>	<b><u>Certification Questions</u></b>	<b><u>Yes</u></b>	<b><u>No</u></b>
-------------------	---------------------------------------	-------------------	------------------

- |     |                                                                                                                                                                                                                          |                          |                                     |
|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|-------------------------------------|
| (4) | Has the entity or any Affiliate ever been found liable in a civil suit or found guilty in a criminal action for making any false claim or other material misrepresentation to a public entity within the past ten years? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|-------------------------------------|

**No.**

*If yes, please explain, including owner contact information:*

- |     |                                                                                                                                                                                                                                                                                             |                                     |                          |
|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|--------------------------|
| (5) | Has any construction or project or operations and maintenance contract performed or managed by the entity or, to the knowledge of the undersigned, any Affiliate involved repeated or multiple failures to comply with safety rules, regulations or requirements within the past ten years? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|--------------------------|

*If yes, please explain:*

**URS Corporation, an Affiliate, does not believe it has committed “repeated or multiple failures to comply with safety rules, regulations or requirements.” Nonetheless, out of an abundance of caution, URS notes the following:**

**On August 14, 2006, while operating a bobcat on the 19th floor of a building under demolition at the Dallas Mercantile Complex in Dallas, Texas, an employee of URS subsidiary Cleveland Wrecking Company (“CWC”) struck a steel beam buried in a debris pile. The steel beam impacted a section of the concrete parapet, which fell to the street below fatally injuring a truck driver and laborer. In 2009, CWC partially settled with OSHA for two “other than serious” violations and one serious violation. In 2014, CWC settled the remaining disputed violations for one serious violation, one unclassified violation and various abatement measures.**

**On June 19, 2012, CWC was in the process of dismantling a large fuel storage tank at the Kern Power Plant in Bakersfield, California when a section of the steel wall unexpectedly collapsed and struck the boom lift from which one of its employees was working, fatally injuring the employee. CWC is appealing the OSHA citations for one regulatory, three general and one serious violations.**

**In connection with the same project, on August 3, 2013, during the implosion of two boilers, debris from the blast escaped the containment area and struck a bystander causing significant bodily injuries. A CWC subcontractor was responsible for the blasting operations. On January 31, 2014, Cal/OSHA issued two serious violations to CWC’s subcontractor. Neither URS nor CWC were cited in connection with this incident.**

- |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                     |                          |
|-----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|--------------------------|
| (6) | Has the entity or any Affiliate been found, adjudicated or determined by any Federal court, Federal agency, state court or state agency (including, but not limited to, the Equal Employment Opportunity Commission, the Office of Federal Contract Compliance Programs and any applicable Colorado governmental agency) to have violated any law or executive order relating to employment discrimination or affirmative action within the past ten years, (including but not limited to Title VII of the Civil Rights Act of 1964, as amended (42 U.S.C. Sections 2000 et seq.); the Equal Pay Act (29 U.S.C. Section 206(d)); and any applicable or similar Colorado law)? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|-----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|--------------------------|

*If yes, please explain:*

**No.   Certification Questions**

**Yes   No**

AECOM USA, Inc., an affiliate, is a joint venture partner that provides services to Washington D.C. airports. In 2014, the joint venture entered into a consent agreement with the EEOC regarding an age discrimination claim filed by an applicant for an office engineer position. The partner that actually refused the employment was also individually cited and entered into a consent decree in its own right. In addition to the payment of a sum of money by the JV there was also an agreement to provide training to JV personnel and post notices at the work site.

AECOM Government Services, Inc. , an affiliate, entered into two conciliation agreements in 2011 with the EEOC following the EEOC's determination the employees in question had been victims of discrimination. Both matters alleged disability discrimination. Both conciliation agreements contain a "No Admissions" clause as to the company's liability.

In August 2009, URS Energy & Construction, Inc. ("URS E&C") was informed by the Office of Federal Contract Compliance Programs ("OFCCP") that, as a result of an audit conducted at its Princeton, NJ office, it had determined that URS E&C violated Executive Order 11246 in the hiring of technicians. No lawsuit was filed and URS E&C entered into an agreement with the OFCCP resolving the matter without admission of liability.

In November 2013, URS Energy & Construction, Inc. ("URS E&C") entered into an agreement with the Equal Employment Opportunity Commission (EEOC), and an employee at URS E&C's Hudson-Bergen Light Rail project in New Jersey, in settlement of the employee's claim of violation of the Americans with Disabilities Act with respect to her employment. No lawsuit was filed and URS E&C entered into the agreement without admission of liability.

Dexter Duren, an IT employee of Washington Demilitarization Company, LLC, an affiliate of AECOM Technical Services, Inc., claimed that he was denied two promotions on the basis of his race and in retaliation for raising an earlier EEOC complaint. In 2009, Mr. Duren prevailed on the retaliation claim with respect to the second promotion, and was ultimately awarded back pay, along with an order that he be paid as much as the manager in his department until his contract was completed.

- (7) Has the entity or any Affiliate been found, adjudicated, or determined by any Federal court, Federal agency, state court or state agency to have violated or failed to comply with any law or regulation of the United States or any state within the past ten years governing prevailing wages (including but not limited to payment for health and welfare, pension, vacation, travel time, subsistence, apprenticeship or other training, or other fringe benefits) or overtime compensation?

*If yes, please explain:*

AECOM Technical Services, Inc., an affiliate, has been involved in one prevailing wage claim matter in the past 10 years. The incident involved water and waste water treatment plants belonging to the City of Glens Falls, New York. Work at the plants was performed using union members at their prescribed rate. After a complaint was filed with the New York Department of Labor ("NYDOL") regarding work outside the plant boundaries, an investigation was conducted by NYDOL, and the

**No.   Certification Questions**

**Yes   No**

company entered into a settlement agreement with the NYDOL in June 2008.

In 2011, AECOM Government Services, Inc., an affiliate, was audited by the U.S. Department of Labor (“DOL”) in response to a complaint filed by a union hourly employee regarding the failure to pay overtime premium for work performed on a project site. As a result of the DOL audit, the company was required to pay each affected employee the premium portion of their overtime hours and was assessed \$10 in liquidated damages per violation. The liquidated damages are payable to the client rather than the affected employees and may be reduced and/or waived by the client. To date the client has made no demand for payment.

On 12/10/09, Washington Demilitarization Company, LLC, entered into a Back Wage Compliance and Payment Agreement with the U.S. Department of Labor agreeing to pay back wages in connection with operations at its Umatilla, Oregon chemical demilitarization facility.

On 12/15/09, Washington Demilitarization Company, LLC, a URS subsidiary, and an affiliate, entered into a Back Wage Compliance and Payment Agreement with the U.S. Department of Labor agreeing to pay back wages in connection with operation at its Pine Bluff, Arkansas chemical demilitarization facility. In both cases, the Agreement executed by Washington Demilitarization Company, LLC provides that “Employer does not in any way admit liability for any wage and hour allegation or claim under any statute or the correctness of the findings of the Secretary.

- (8) With respect to each of Questions 1-7 above, if not previously answered or included in a prior response on this Form, is any legally effective or recognized form of notice or warning, or investigation, proceeding, claim, matter, suit, indictment, etc., currently pending against the entity that could (assuming subsequent necessary actions are taken) result in the entity being found liable, guilty or in violation of any of laws or regulations referenced in Questions 1-7 above and/or subject to debarment, suspension, removal or disqualification by the Federal government, any state or local government, or any foreign governmental entity?

*If yes, please explain and submit the information requested as to such similar items set out in Questions 1-7 above.*

Washington Group International, Inc. (“WGI”), the company now named “URS Energy & Construction, Inc.”, was involved in a joint venture for one of several U.S. Agency for International Development (“USAID”) projects (NOPWASD) for approximately 20 years. In 2002 WGI brought arbitration proceedings before an arbitration tribunal in Egypt in which the joint venture asserted an affirmative claim for additional compensation for the construction of water and wastewater treatment facilities in Egypt. All USAID projects under the contracts (all of which are 10-20 years old) were completed and are fully operational.

In March 2003, WGI was notified by the Department of Justice that the federal government was investigating WGI for potential violations of the source, origin, and nationality regulations in connection with five of WGI’s USAID-financed host-country projects located in Egypt beginning in the early 1990s. In January 2004 WGI and the federal government and USAID agreed that WGI would not be suspended or debarred in

**Colorado I-70 East Project**

**No. Certification Questions**

**Yes      No**

association with the Government investigation.

In November 2004, the federal government filed an action in the United States District Court for the District of Idaho against WGI and its partners asserting violations under the Federal False Claims Act, the Federal Foreign Assistance Act of 1961 in association with specific USAID projects. The federal government seeks civil penalties and disgorgement of revenues for the alleged violations of the statutes.

In March 2005, WGI filed motions in the Bankruptcy Court in Nevada in association with its 2001 bankruptcy and in the Idaho District Court to dismiss the federal government's claim for failure to give appropriate notice or otherwise preserve those claims. In August 2005, the Bankruptcy Court ruled that all federal government claims were barred in a written order. The federal government appealed the Bankruptcy Court's order.

On April 17, 2006, the arbitration tribunal issued its award providing that the joint venture prevailed on its affirmative claims in the net amount of \$8.2 million, and that NOPWASD's counterclaims were rejected.

In December 2006, the Nevada District Court reversed the Bankruptcy Court's order and remanded to the Bankruptcy Court for further proceedings. In December 2007, the federal government requested an order that the Bankruptcy Court abstain from exercising jurisdiction over this matter. In February 2008, the Bankruptcy Court denied the federal government's motion. In November 2008, the Bankruptcy Court ruled that the federal government's common law claims of unjust enrichment and payment by mistake are barred. WGI then renewed its motion to dismiss remaining government claims based on preclusion by bankruptcy. The Bankruptcy judge issued a ruling that the claims are not barred. In November 2012, WGI appealed the Bankruptcy Court's decision to the Ninth Circuit Bankruptcy Appellate Panel. In August 2013, the Appellate Panel affirmed the Bankruptcy Court's decision. In September 2013, WGI appealed the Appellate Panel's decision to the United States Ninth Circuit Court of Appeals and the appeal is pending. The Idaho action has been stayed for several years pending the Bankruptcy court ruling.

**WGI intends to continue to defend these matters vigorously and denies all allegations of wrongdoing.**

- (9) Under penalty of perjury, the undersigned certifies on behalf of the entity for which he or she signs that each of the foregoing representations, certifications, statements and disclosures is correct, complete and not materially misleading:

**[Lead Contractor Member]:** URS Energy & Construction, Inc.

**By:**  \_\_\_\_\_

**Printed Name:** Bruce Trott

**Title:** General Manager, Civil Construction & Mining Energy, Infrastructure & Industrial Construction





**Colorado I-70 East Project**

**Proposer Name:** Front Range Mobility Group  
**Name of Team Member:** CH2M HILL Engineers, Inc.  
**Role on Proposer:**  Equity Member  
 Lead Contractor  
 Lead Engineer  
 Lead Operator  
 Joint venturer in Lead Engineer  
 Financially Responsible Party for [*Proposer to provide relevant entity*]

**Part B: Certifications**

<b><u>No.</u></b>	<b><u>Certification Questions</u></b>	<b><u>Yes</u></b>	<b><u>No</u></b>
(1)	Has the entity or any Affiliate or any current officer thereof been indicted or convicted of bid or other contract related crimes or violations (i.e., fraud, bribery, collusion, conspiracy, antitrust, etc.) or any other felony or serious misdemeanor within the past ten years?  <i>If yes, please explain, including the name of the relevant prosecuting agency, the applicable law(s) and the status of any appeal(s).</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(2)	Has the entity or any Affiliate ever sought protection under any provision of any bankruptcy act, law or regulation in any jurisdiction within the past ten years?  <i>If yes, please explain, including identification of the relevant jurisdiction(s) and applicable laws, and the status or outcome of any resulting bankruptcy process.</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(3)	Has the entity or any Affiliate ever been disqualified, removed, debarred or suspended from performing work for the US Federal government, any US state or local government, or any foreign governmental entity within the past ten years?  <i>If yes, please explain, including the name of the relevant public agency, the date, grounds and results of any such action:</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(4)	Has the entity or any Affiliate ever been found liable in a civil suit or found guilty in a criminal action for making any false claim or other material misrepresentation to a public entity within the past ten years?  <i>If yes, please explain, including owner contact information:</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(5)	Has any construction or project or operations and maintenance contract performed or managed by the entity or, to the knowledge of the undersigned, any Affiliate involved repeated or multiple failures to comply with safety rules, regulations or requirements within the past ten years?  <i>If yes, please explain:</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(6)	Has the entity or any Affiliate been found, adjudicated or determined by any Federal court, Federal agency, state court or state agency (including, but not limited to, the Equal Employment Opportunity Commission, the Office of Federal Contract Compliance Programs and any applicable Colorado governmental agency) to have violated any law or executive order relating to employment discrimination or affirmative action within the past ten years, (including but not limited to Title VII of the Civil Rights Act of 1964, as amended (42 U.S.C. Sections 2000 et seq.); the Equal Pay Act (29 U.S.C. Section 206(d)); and any applicable or similar Colorado law)?  <i>If yes, please explain:</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Colorado I-70 East Project**

**No.   Certification Questions**

**Yes   No**

***In August 2012, CH2M HILL Plateau Remediation Company (“CH PRC”), an affiliate of CH2M HILL Engineers, Inc., received a violation notice from the Office of Federal Contract Compliance Programs (“OFCCP”) that CH PRC was not in compliance with the requirements of Executive Order 11246 due to failure to ensure its employees were compensated without regard to race and/or gender, as required by 41 CFR 60-1.4(a)(1). A Conciliation Agreement between OFCCP and CH PRC was entered into on March 2012 to remedy the violation with satisfactory completion by CH PRC of the agreement terms received from OFCCP on August 2012 which resolved the matter without admission of liability.***

- (7) Has the entity or any Affiliate been found, adjudicated, or determined by any Federal court, Federal agency, state court or state agency to have violated or failed to comply with any law or regulation of the United States or any state within the past ten years governing prevailing wages (including but not limited to payment for health and welfare, pension, vacation, travel time, subsistence, apprenticeship or other training, or other fringe benefits) or overtime compensation?

*If yes, please explain:*

***In 2011, CH2M HILL Constructors, Inc. (“CH2M”), an affiliate of CH2M HILL Engineers, Inc., received notice of a complaint filed with the U.S. Department of Labor (“DOL”) for failure to ensure its employees working at the Edwards AFB project were compensated correctly under the requirements of The McNamara-O’Hara Service Contract Act. A Back Wage Compliance and Payment Agreement was entered into on February 2012 with DOL to remedy the violation with satisfactory completion by CH2M of the agreement terms which resolved the matter.***

- (8) With respect to each of Questions 1-7 above, if not previously answered or included in a prior response on this Form, is any legally effective or recognized form of notice or warning, or investigation, proceeding, claim, matter, suit, indictment, etc., currently pending against the entity that could (assuming subsequent necessary actions are taken) result in the entity being found liable, guilty or in violation of any of laws or regulations referenced in Questions 1-7 above and/or subject to debarment, suspension, removal or disqualification by the Federal government, any state or local government, or any foreign governmental entity?

*If yes, please explain and submit the information requested as to such similar items set out in Questions 1-7 above.*

**Colorado I-70 East Project**

- (9) Under penalty of perjury, the undersigned certifies on behalf of the entity for which he or she signs that each of the foregoing representations, certifications, statements and disclosures is correct, complete and not materially misleading:



**Joint venturer  
in Lead**

**Engineer:** CH2M HILL Engineers, Inc.

**By:**



**Printed Name:** William J. Knapp

**Title:** Vice President

**Proposer Name:** Front Range Mobility Group  
**Name of Team Member:** AECOM Technical Services, Inc.  
**Role on Proposer:**
 Equity Member  
 Lead Contractor  
 Lead Engineer  
 Lead Operator  
 Joint venturer in Lead Engineer  
 Financially Responsible Party for AECOM Capital Inc. (Equity Member), AECOM Technical Services, Inc. (joint venturer in Lead Engineer), and URS Energy & Construction, Inc. (joint venturer in Lead Contractor)

**Part B: Certifications**

- | <b><u>No.</u></b> | <b><u>Certification Questions</u></b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <b><u>Yes</u></b>                   | <b><u>No</u></b>                    |
|-------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|-------------------------------------|
| (1)               | Has the entity or any Affiliate or any current officer thereof been indicted or convicted of bid or other contract related crimes or violations (i.e., fraud, bribery, collusion, conspiracy, antitrust, etc.) or any other felony or serious misdemeanor within the past ten years?<br><br><i>If yes, please explain, including the name of the relevant prosecuting agency, the applicable law(s) and the status of any appeal(s).</i><br><br><b>URS Corporation, an affiliate, discovered through an internal investigation that George Papadopoulos, its former Vice President and Boston Office Manager, overcharged two URS clients via the submission of non-bona fide expense reports.</b><br><br><b>URS terminated Mr. Papadopoulos' employment on February 13, 2009. On February 23, 2010, the Massachusetts Attorney General's Office filed criminal charges against Papadopoulos, and on April 21, 2010, after pleading guilty to larceny and procurement fraud, Papadopoulos was sentenced to 4-5 years in state prison. No criminal charges were filed against URS in connection with this matter.</b> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| (2)               | Has the entity or any Affiliate ever sought protection under any provision of any bankruptcy act, law or regulation in any jurisdiction within the past ten years?<br><br><b>No.</b><br><br><i>If yes, please explain, including identification of the relevant jurisdiction(s) and applicable laws, and the status or outcome of any resulting bankruptcy process.</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| (3)               | Has the entity or any Affiliate ever been disqualified, removed, debarred or suspended from performing work for the US Federal government, any US state or local government, or any foreign governmental entity within the past ten years?<br><br><i>If yes, please explain, including the name of the relevant public agency, the date, grounds and results of any such action:</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |

**AECOM Consultants Inc., an affiliate, with activities in the Province of**

Quebec, Canada failed an internal technical assessment conducted by the Société Immobilière du Québec (SIQ) on a distressed Hospital expansion design project and as a result was unable to propose on SIQ Quebec City area healthcare contracts for a now-lapsed 2-year period. It should be noted that the project in question is currently the subject of legal action against the SIQ by multiple stakeholders and AECOM has consistently maintained shared responsibility over issues with the project.

- (4) Has the entity or any Affiliate ever been found liable in a civil suit or found guilty in a criminal action for making any false claim or other material misrepresentation to a public entity within the past ten years?

No.

*If yes, please explain, including owner contact information:*

- (5) Has any construction or project or operations and maintenance contract performed or managed by the entity or, to the knowledge of the undersigned, any Affiliate involved repeated or multiple failures to comply with safety rules, regulations or requirements within the past ten years?

*If yes, please explain:*

URS Corporation, an Affiliate, does not believe it has committed “repeated or multiple failures to comply with safety rules, regulations or requirements.” Nonetheless, out of an abundance of caution, URS notes the following:

On August 14, 2006, while operating a bobcat on the 19th floor of a building under demolition at the Dallas Mercantile Complex in Dallas, Texas, an employee of URS subsidiary Cleveland Wrecking Company (“CWC”) struck a steel beam buried in a debris pile. The steel beam impacted a section of the concrete parapet, which fell to the street below fatally injuring a truck driver and laborer. In 2009, CWC partially settled with OSHA for two “other than serious” violations and one serious violation. In 2014, CWC settled the remaining disputed violations for one serious violation, one unclassified violation and various abatement measures.

On June 19, 2012, CWC was in the process of dismantling a large fuel storage tank at the Kern Power Plant in Bakersfield, California when a section of the steel wall unexpectedly collapsed and struck the boom lift from which one of its employees was working, fatally injuring the employee. CWC is appealing the OSHA citations for one regulatory, three general and one serious violations.

In connection with the same project, on August 3, 2013, during the implosion of two boilers, debris from the blast escaped the containment area and struck a bystander causing significant bodily injuries. A CWC subcontractor was responsible for the blasting operations. On January 31, 2014, Cal/OSHA issued two serious violations to CWC’s subcontractor. Neither URS nor CWC were cited in connection with this incident.

- (6) Has the entity or any Affiliate been found, adjudicated or determined by any Federal court, Federal agency, state court or state agency (including, but not limited to, the Equal Employment Opportunity Commission, the Office of Federal Contract Compliance Programs and any applicable Colorado governmental agency) to have violated any law or executive order relating to employment discrimination or affirmative action within the past ten years, (including but not limited to Title VII of the Civil Rights Act of 1964, as amended (42 U.S.C. Sections 2000 et seq.); the Equal Pay Act (29 U.S.C. Section 206(d)); and any applicable or similar Colorado law)?

*If yes, please explain:*

**AECOM USA, Inc., an affiliate, is a joint venture partner that provides services to Washington D.C. airports. In 2014, the joint venture entered into a consent agreement with the EEOC regarding an age discrimination claim filed by an applicant for an office engineer position. The partner that actually refused the employment was also individually cited and entered into a consent decree in its own right. In addition to the payment of a sum of money by the JV there was also an agreement to provide training to JV personnel and post notices at the work site.**

**AECOM Government Services, Inc. , an affiliate, entered into two conciliation agreements in 2011 with the EEOC following the EEOC's determination the employees in question had been victims of discrimination. Both matters alleged disability discrimination. Both conciliation agreements contain a "No Admissions" clause as to the company's liability.**

**In August 2009, URS Energy & Construction, Inc. ("URS E&C"), an affiliate, was informed by the Office of Federal Contract Compliance Programs ("OFCCP") that, as a result of an audit conducted at its Princeton, NJ office, it had determined that URS E&C violated Executive Order 11246 in the hiring of technicians. No lawsuit was filed and URS E&C entered into an agreement with the OFCCP resolving the matter without admission of liability.**

**In November 2013, URS Energy & Construction, Inc. ("URS E&C") entered into an agreement with the Equal Employment Opportunity Commission (EEOC), and an employee at URS E&C's Hudson-Bergen Light Rail project in New Jersey, in settlement of the employee's claim of violation of the Americans with Disabilities Act with respect to her employment. No lawsuit was filed and URS E&C entered into the agreement without admission of liability.**

**Dexter Duren, an IT employee of Washington Demilitarization Company, LLC, an affiliate of AECOM Technical Services, Inc., claimed that he was denied two promotions on the basis of his race and in retaliation for raising an earlier EEOC complaint. In 2009, Mr. Duren prevailed on the retaliation claim with respect to the second promotion, and was ultimately awarded back pay, along with an order that he be paid as much as the manager in his department until his contract was completed.**

**No. Certification Questions**

**Yes No**

- (7) Has the entity or any Affiliate been found, adjudicated, or determined by any Federal court, Federal agency, state court or state agency to have violated or failed to comply with any law or regulation of the United States or any state within the past ten years governing prevailing wages (including but not limited to payment for health and welfare, pension, vacation, travel time, subsistence, apprenticeship or other training, or other fringe benefits) or overtime compensation?

*If yes, please explain:*

**AECOM Technical Services, Inc. has been involved in one prevailing wage claim matter in the past 10 years. The incident involved water and waste water treatment plants belonging to the City of Glens Falls, New York. Work at the plants was performed using union members at their prescribed rate. After a complaint was filed with the New York Department of Labor (“NYDOL”) regarding work outside the plant boundaries, an investigation was conducted by NYDOL, and the company entered into a settlement agreement with the NYDOL in June 2008.**

**In 2011, AECOM Government Services, Inc., an affiliate, was audited by the U.S. Department of Labor (“DOL”) in response to a complaint filed by a union hourly employee regarding the failure to pay overtime premium for work performed on a project site. As a result of the DOL audit, the company was required to pay each affected employee the premium portion of their overtime hours and was assessed \$10 in liquidated damages per violation. The liquidated damages are payable to the client rather than the affected employees and may be reduced and/or waived by the client. To date the client has made no demand for payment.**

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**On 12/15/09, Washington Demilitarization Company, LLC, a URS subsidiary, and an affiliate, entered into a Back Wage Compliance and Payment Agreement with the U.S. Department of Labor agreeing to pay back wages in connection with operation at its Pine Bluff, Arkansas chemical demilitarization facility. In both cases, the Agreement executed by Washington Demilitarization Company, LLC provides that “Employer does not in any way admit liability for any wage and hour allegation or claim under any statute or the correctness of the findings of the Secretary.**

- (8) With respect to each of Questions 1-7 above, if not previously answered or included in a prior response on this Form, is any legally effective or recognized form of notice or warning, or investigation, proceeding, claim, matter, suit, indictment, etc., currently pending against the entity that could (assuming subsequent necessary actions are taken) result in the entity being found liable, guilty or in violation of any of laws or regulations referenced in Questions 1-7 above and/or subject to debarment, suspension, removal or disqualification by the Federal government, any state or local government, or any foreign governmental entity?

*If yes, please explain and submit the information requested as to such similar items set out in Questions 1-7 above.*

Washington Group International, Inc. (“WGI”), the company now named “URS Energy & Construction, Inc.”, was involved in a joint venture for one of several U.S. Agency for International Development (“USAID”) projects (NOPWASD) for approximately 20 years. In 2002 WGI brought arbitration proceedings before an arbitration tribunal in Egypt in which the joint venture asserted an affirmative claim for additional compensation for the construction of water and wastewater treatment facilities in Egypt. All USAID projects under the contracts (all of which are 10-20 years old) were completed and are fully operational.

In March 2003, WGI was notified by the Department of Justice that the federal government was investigating WGI for potential violations of the source, origin, and nationality regulations in connection with five of WGI’s USAID-financed host-country projects located in Egypt beginning in the early 1990s. In January 2004 WGI and the federal government and USAID agreed that WGI would not be suspended or debarred in association with the Government investigation.

In November 2004, the federal government filed an action in the United States District Court for the District of Idaho against WGI and its partners asserting violations under the Federal False Claims Act, the Federal Foreign Assistance Act of 1961 in association with specific USAID projects. The federal government seeks civil penalties and disgorgement of revenues for the alleged violations of the statutes.

In March 2005, WGI filed motions in the Bankruptcy Court in Nevada in association with its 2001 bankruptcy and in the Idaho District Court to dismiss the federal government’s claim for failure to give appropriate notice or otherwise preserve those claims. In August 2005, the Bankruptcy Court ruled that all federal government claims were barred in a written order. The federal government appealed the Bankruptcy Court’s order.

On April 17, 2006, the arbitration tribunal issued its award providing that the joint venture prevailed on its affirmative claims in the net amount of \$8.2 million, and that NOPWASD’s counterclaims were rejected.

In December 2006, the Nevada District Court reversed the Bankruptcy Court’s order and remanded to the Bankruptcy Court for further proceedings. In December 2007, the federal government requested an order that the Bankruptcy Court abstain from exercising jurisdiction over this matter. In February 2008, the Bankruptcy Court denied the federal government’s motion. In November 2008, the Bankruptcy Court ruled that the federal government’s common law claims of unjust enrichment and payment by mistake are barred. WGI then renewed its motion to dismiss remaining government claims based on preclusion by bankruptcy. The Bankruptcy judge issued a ruling that the claims are not barred. In November 2012, WGI appealed the Bankruptcy Court’s decision to the Ninth Circuit Bankruptcy Appellate Panel. In August 2013, the Appellate Panel affirmed the Bankruptcy Court’s decision. In September 2013, WGI appealed the Appellate Panel’s decision to the United States Ninth Circuit Court of Appeals and the appeal is pending. The Idaho action has been stayed for several years pending the Bankruptcy court ruling.

WGI intends to continue to defend these matters vigorously and denies all allegations of wrongdoing.





- (9) Under penalty of perjury, the undersigned certifies on behalf of the entity for which he or she signs that each of the foregoing representations, certifications, statements and disclosures is correct, complete and not materially misleading:

**Lead Engineer:** AECOM Technical Services, Inc.  
**Member**

**By:**  \_\_\_\_\_

**Printed Name:** Travis Boone

**Title:** Vice President

This content has been redacted in accordance with Form B Confidential Contents Index

The Form E provided in respect of ACS Infrastructure Development, Inc. (“ACSID”) and ACS Servicios y Concesiones S.L. (“ACS SyC”) covers their respective affiliates in accordance with the instructions thereto, but with respect to entities under common ownership with ACSID and ACS SyC and (i) that are subsidiaries of HOCHTIEF Aktiengesellschaft, we refer to the Form E submitted by HOCHTIEF Aktiengesellschaft and (ii) that are subsidiaries of Dragados S.A. we refer to the Form E submitted by Dragados USA, Inc. and Dragados S.A.



**Colorado I-70 East Project**

**Proposer Name:** Front Range Mobility Group

**Name of Team Member:** ACS Servicios y Concesiones, S.L.

- Role on Proposer:**
- Equity Member
  - Lead Contractor
  - Lead Engineer
  - Lead Operator
  - Joint venturer in Lead [Contractor][Engineer][Operator]
  - Financially Responsible Party for ACS Infrastructure Development, Inc.

**Part B: Certifications**

<b>No.</b>	<b><u>Certification Questions</u></b>	<b><u>Yes</u></b>	<b><u>No</u></b>
(1)	<p>Has the entity or any Affiliate or any current officer thereof been indicted or convicted of bid or other contract related crimes or violations (i.e., fraud, bribery, collusion, conspiracy, antitrust, etc.) or any other felony or serious misdemeanor within the past ten years?</p> <p><i>If yes, please explain, including the name of the relevant prosecuting agency, the applicable law(s) and the status of any appeal(s).</i></p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(2)	<p>Has the entity or any Affiliate ever sought protection under any provision of any bankruptcy act, law or regulation in any jurisdiction within the past ten years?</p> <p><i>If yes, please explain, including identification of the relevant jurisdiction(s) and applicable laws, and the status or outcome of any resulting bankruptcy process.</i></p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(3)	<p>Has the entity or any Affiliate ever been disqualified, removed, debarred or suspended from performing work for the US Federal government, any US state or local government, or any foreign governmental entity within the past ten years?</p> <p><i>If yes, please explain, including the name of the relevant public agency, the date, grounds and results of any such action:</i></p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(4)	<p>Has the entity or any Affiliate ever been found liable in a civil suit or found guilty in a criminal action for making any false claim or other material misrepresentation to a public entity within the past ten years?</p> <p><i>If yes, please explain, including owner contact information:</i></p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(5)	<p>Has any construction or project or operations and maintenance contract performed or managed by the entity or, to the knowledge of the undersigned, any Affiliate involved repeated or multiple failures to comply with safety rules, regulations or requirements within the past ten years?</p> <p><i>If yes, please explain:</i></p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(6)	<p>Has the entity or any Affiliate been found, adjudicated or determined by any Federal court, Federal agency, state court or state agency (including, but not limited to, the Equal Employment Opportunity Commission, the Office of Federal Contract Compliance Programs and any applicable Colorado governmental agency) to have violated any law or executive order relating to employment discrimination or affirmative action within the past ten years, (including but not limited to Title VII of the Civil Rights Act of 1964, as amended (42 U.S.C. Sections 2000 et seq.); the Equal Pay Act (29 U.S.C. Section 206(d)); and any applicable or similar Colorado law)?</p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>



Colorado I-70 East Project

**No. Certification Questions**

**Yes No**

*If yes, please explain:*

- (7) Has the entity or any Affiliate been found, adjudicated, or determined by any Federal court, Federal agency, state court or state agency to have violated or failed to comply with any law or regulation of the United States or any state within the past ten years governing prevailing wages (including but not limited to payment for health and welfare, pension, vacation, travel time, subsistence, apprenticeship or other training, or other fringe benefits) or overtime compensation?  Yes  No

*If yes, please explain:*

- (8) With respect to each of Questions 1-7 above, if not previously answered or included in a prior response on this Form, is any legally effective or recognized form of notice or warning, or investigation, proceeding, claim, matter, suit, indictment, etc., currently pending against the entity that could (assuming subsequent necessary actions are taken) result in the entity being found liable, guilty or in violation of any of laws or regulations referenced in Questions 1-7 above and/or subject to debarment, suspension, removal or disqualification by the Federal government, any state or local government, or any foreign governmental entity?  Yes  No

*If yes, please explain and submit the information requested as to such similar items set out in Questions 1-7 above.*

- (9) Under penalty of perjury, the undersigned certifies on behalf of the entity for which he or she signs that each of the foregoing representations, certifications, statements and disclosures is correct, complete and not materially misleading:  Yes  No

**Financially**

**Responsible Party:** ACS Servicios y Concesiones, S.L.

**By:**



**Printed Name:** Francisco Reinoso Torres

**Title:** Attorney-In-Fact



**Proposer Name:** Front range Mobility Group  
**Name of Team Member:** AECOM  
**Role on Proposer:**  Equity Member  
 Lead Contractor  
 Lead Engineer  
 Lead Operator  
 Joint venturer in Lead [Contractor][Engineer][Operator]  
 Financially Responsible Party for AECOM Capital Inc., AECOM Technical Services, Inc., and URS Energy & Construction, Inc.

**Part B: Certifications**

- | <b><u>No.</u></b> | <b><u>Certification Questions</u></b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <b><u>Yes</u></b>                   | <b><u>No</u></b>                    |
|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|-------------------------------------|
| (1)               | <p>Has the entity or any Affiliate or any current officer thereof been indicted or convicted of bid or other contract related crimes or violations (i.e., fraud, bribery, collusion, conspiracy, antitrust, etc.) or any other felony or serious misdemeanor within the past ten years?</p> <p><i>If yes, please explain, including the name of the relevant prosecuting agency, the applicable law(s) and the status of any appeal(s).</i></p> <p><b>URS Corporation, an affiliate, discovered through an internal investigation that George Papadopoulos, its former Vice President and Boston Office Manager, overcharged two URS clients via the submission of non-bona fide expense reports.</b></p> <p><b>URS terminated Mr. Papadopoulos' employment on February 13, 2009. On February 23, 2010, the Massachusetts Attorney General's Office filed criminal charges against Papadopoulos, and on April 21, 2010, after pleading guilty to larceny and procurement fraud, Papadopoulos was sentenced to 4-5 years in state prison. No criminal charges were filed against URS in connection with this matter.</b></p> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| (2)               | <p>Has the entity or any Affiliate ever sought protection under any provision of any bankruptcy act, law or regulation in any jurisdiction within the past ten years?</p> <p><b>No.</b></p> <p><i>If yes, please explain, including identification of the relevant jurisdiction(s) and applicable laws, and the status or outcome of any resulting bankruptcy process.</i></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| (3)               | <p>Has the entity or any Affiliate ever been disqualified, removed, debarred or suspended from performing work for the US Federal government, any US state or local government, or any foreign governmental entity within the past ten years?</p> <p><i>If yes, please explain, including the name of the relevant public agency, the date, grounds and results of any such action:</i></p> <p><b>AECOM Consultants Inc., an affiliate, = with activities in the Province of Quebec, Canada failed an internal technical assessment conducted by the</b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |

**Société Immobilière du Québec (SIQ) on a distressed Hospital expansion design project and as a result was unable to propose on SIQ Quebec City area healthcare contracts for a now-lapsed 2-year period. It should be noted that the project in question is currently the subject of legal action against the SIQ by multiple stakeholders and AECOM has consistently maintained shared responsibility over issues with the project.**

- (4) Has the entity or any Affiliate ever been found liable in a civil suit or found guilty in a criminal action for making any false claim or other material misrepresentation to a public entity within the past ten years?

**No.**

*If yes, please explain, including owner contact information:*

- (5) Has any construction or project or operations and maintenance contract performed or managed by the entity or, to the knowledge of the undersigned, any Affiliate involved repeated or multiple failures to comply with safety rules, regulations or requirements within the past ten years?

*If yes, please explain:*

**URS Corporation, an Affiliate, does not believe it has committed “repeated or multiple failures to comply with safety rules, regulations or requirements.” Nonetheless, out of an abundance of caution, URS notes the following:**

**On August 14, 2006, while operating a bobcat on the 19th floor of a building under demolition at the Dallas Mercantile Complex in Dallas, Texas, an employee of URS subsidiary Cleveland Wrecking Company (“CWC”) struck a steel beam buried in a debris pile. The steel beam impacted a section of the concrete parapet, which fell to the street below fatally injuring a truck driver and laborer. In 2009, CWC partially settled with OSHA for two “other than serious” violations and one serious violation. In 2014, CWC settled the remaining disputed violations for one serious violation, one unclassified violation and various abatement measures.**

**On June 19, 2012, CWC was in the process of dismantling a large fuel storage tank at the Kern Power Plant in Bakersfield, California when a section of the steel wall unexpectedly collapsed and struck the boom lift from which one of its employees was working, fatally injuring the employee. CWC is appealing the OSHA citations for one regulatory, three general and one serious violations.**

**In connection with the same project, on August 3, 2013, during the implosion of two boilers, debris from the blast escaped the containment area and struck a bystander causing significant bodily injuries. A CWC subcontractor was responsible for the blasting operations. On January 31, 2014, Cal/OSHA issued two serious violations to CWC’s subcontractor. Neither URS nor CWC were cited in connection with this incident.**

- (6) Has the entity or any Affiliate been found, adjudicated or determined by any Federal court, Federal agency, state court or state agency (including, but not limited to, the Equal Employment Opportunity Commission, the Office of Federal Contract Compliance Programs and any applicable Colorado governmental agency) to have violated any law or executive order relating to employment discrimination or affirmative action within the past ten years, (including but not limited to Title VII of the Civil Rights Act of 1964, as amended (42 U.S.C. Sections 2000 et seq.); the Equal Pay Act (29 U.S.C. Section 206(d)); and any applicable or similar Colorado law)?

*If yes, please explain:*

**AECOM USA, Inc., an affiliate, is a joint venture partner that provides services to Washington D.C. airports. In 2014, the joint venture entered into a consent agreement with the EEOC regarding an age discrimination claim filed by an applicant for an office engineer position. The partner that actually refused the employment was also individually cited and entered into a consent decree in its own right. In addition to the payment of a sum of money by the JV there was also an agreement to provide training to JV personnel and post notices at the work site.**

**AECOM Government Services, Inc. , an affiliate, entered into two conciliation agreements in 2011 with the EEOC following the EEOC's determination the employees in question had been victims of discrimination. Both matters alleged disability discrimination. Both conciliation agreements contain a "No Admissions" clause as to the company's liability.**

**In August 2009, URS Energy & Construction, Inc. ("URS E&C"), an affiliate, was informed by the Office of Federal Contract Compliance Programs ("OFCCP") that, as a result of an audit conducted at its Princeton, NJ office, it had determined that URS E&C violated Executive Order 11246 in the hiring of technicians. No lawsuit was filed and URS E&C entered into an agreement with the OFCCP resolving the matter without admission of liability.**

**In November 2013, URS Energy & Construction, Inc. ("URS E&C") entered into an agreement with the Equal Employment Opportunity Commission (EEOC), and an employee at URS E&C's Hudson-Bergen Light Rail project in New Jersey, in settlement of the employee's claim of violation of the Americans with Disabilities Act with respect to her employment. No lawsuit was filed and URS E&C entered into the agreement without admission of liability.**

**Dexter Duren, an IT employee of Washington Demilitarization Company, LLC, an affiliate of AECOM Technical Services, Inc., claimed that he was denied two promotions on the basis of his race and in retaliation for raising an earlier EEOC complaint. In 2009, Mr. Duren prevailed on the retaliation claim with respect to the second promotion, and was ultimately awarded back pay, along with an order that he be paid as much as the manager in his department until his contract was completed.**



**No. Certification Questions**

**Yes No**

- (7) Has the entity or any Affiliate been found, adjudicated, or determined by any Federal court, Federal agency, state court or state agency to have violated or failed to comply with any law or regulation of the United States or any state within the past ten years governing prevailing wages (including but not limited to payment for health and welfare, pension, vacation, travel time, subsistence, apprenticeship or other training, or other fringe benefits) or overtime compensation?

*If yes, please explain:*

**AECOM Technical Services, Inc., an affiliate, has been involved in one prevailing wage claim matter in the past 10 years. The incident involved water and waste water treatment plants belonging to the City of Glens Falls, New York. Work at the plants was performed using union members at their prescribed rate. After a complaint was filed with the New York Department of Labor (“NYDOL”) regarding work outside the plant boundaries, an investigation was conducted by NYDOL, and the company entered into a settlement agreement with the NYDOL in June 2008.**

**In 2011, AECOM Government Services, Inc., an affiliate, was audited by the U.S. Department of Labor (“DOL”) in response to a complaint filed by a union hourly employee regarding the failure to pay overtime premium for work performed on a project site. As a result of the DOL audit, the company was required to pay each affected employee the premium portion of their overtime hours and was assessed \$10 in liquidated damages per violation. The liquidated damages are payable to the client rather than the affected employees and may be reduced and/or waived by the client. To date the client has made no demand for payment.**

**On 12/10/09, Washington Demilitarization Company, LLC, entered into a Back Wage Compliance and Payment Agreement with the U.S. Department of Labor agreeing to pay back wages in connection with operations at its Umatilla, Oregon chemical demilitarization facility.**

**On 12/15/09, Washington Demilitarization Company, LLC, a URS subsidiary, and an affiliate, entered into a Back Wage Compliance and Payment Agreement with the U.S. Department of Labor agreeing to pay back wages in connection with operation at its Pine Bluff, Arkansas chemical demilitarization facility. In both cases, the Agreement executed by Washington Demilitarization Company, LLC provides that “Employer does not in any way admit liability for any wage and hour allegation or claim under any statute or the correctness of the findings of the Secretary.**

- (8) With respect to each of Questions 1-7 above, if not previously answered or included in a prior response on this Form, is any legally effective or recognized form of notice or warning, or investigation, proceeding, claim, matter, suit, indictment, etc., currently pending against the entity that could (assuming subsequent necessary actions are taken) result in the entity being found liable, guilty or in violation of any of laws or regulations referenced in Questions 1-7 above and/or subject to debarment, suspension, removal or disqualification by the Federal government, any state or local government, or any foreign governmental entity?

*If yes, please explain and submit the information requested as to such similar items set out in Questions 1-7 above.*

Washington Group International, Inc. (“WGI”), the company now named “URS Energy & Construction, Inc.,” was involved in a joint venture for one of several U.S. Agency for International Development (“USAID”) projects (NOPWASD) for approximately 20 years. In 2002 WGI brought arbitration proceedings before an arbitration tribunal in Egypt in which the joint venture asserted an affirmative claim for additional compensation for the construction of water and wastewater treatment facilities in Egypt. All USAID projects under the contracts (all of which are 10-20 years old) were completed and are fully operational.

In March 2003, WGI was notified by the Department of Justice that the federal government was investigating WGI for potential violations of the source, origin, and nationality regulations in connection with five of WGI’s USAID-financed host-country projects located in Egypt beginning in the early 1990s. In January 2004 WGI and the federal government and USAID agreed that WGI would not be suspended or debarred in association with the Government investigation.

In November 2004, the federal government filed an action in the United States District Court for the District of Idaho against WGI and its partners asserting violations under the Federal False Claims Act, the Federal Foreign Assistance Act of 1961 in association with specific USAID projects. The federal government seeks civil penalties and disgorgement of revenues for the alleged violations of the statutes.

In March 2005, WGI filed motions in the Bankruptcy Court in Nevada in association with its 2001 bankruptcy and in the Idaho District Court to dismiss the federal government’s claim for failure to give appropriate notice or otherwise preserve those claims. In August 2005, the Bankruptcy Court ruled that all federal government claims were barred in a written order. The federal government appealed the Bankruptcy Court’s order.

On April 17, 2006, the arbitration tribunal issued its award providing that the joint venture prevailed on its affirmative claims in the net amount of \$8.2 million, and that NOPWASD’s counterclaims were rejected.

In December 2006, the Nevada District Court reversed the Bankruptcy Court’s order and remanded to the Bankruptcy Court for further proceedings. In December 2007, the federal government requested an order that the Bankruptcy Court abstain from exercising jurisdiction over this matter. In February 2008, the Bankruptcy Court denied the federal government’s motion. In November 2008, the Bankruptcy Court ruled that the federal government’s common law claims of unjust enrichment and payment by mistake are barred. WGI then renewed its motion to dismiss remaining government claims based on preclusion by bankruptcy. The Bankruptcy judge issued a ruling that the claims are not barred. In November 2012, WGI appealed the Bankruptcy Court’s decision to the Ninth Circuit Bankruptcy Appellate Panel. In August 2013, the Appellate Panel affirmed the Bankruptcy Court’s decision. In September 2013, WGI appealed the Appellate Panel’s decision to the United States Ninth Circuit Court of Appeals and the appeal is pending. The Idaho action has been stayed for several years pending the Bankruptcy court ruling.

WGI intends to continue to defend these matters vigorously and denies all allegations of wrongdoing.

**Colorado I-70 East Project**



(9) Under penalty of perjury, the undersigned certifies on behalf of the entity for which he or she signs that each of the foregoing representations, certifications, statements and disclosures is correct, complete and not materially misleading:

**Financially Responsible:** AECOM

**By:**

A handwritten signature in blue ink, appearing to read "Troy Rudd", is written over a horizontal line.

**Printed Name:** Troy Rudd

**Title:** Senior Vice President, Finance and Treasurer



**Colorado I-70 East Project**

**Proposer Name:** Front Range Mobility Group  
**Name of Team Member:** John Laing Group plc  
**Role on Proposer:**
 Equity Member  
 Lead Contractor  
 Lead Engineer  
 Lead Operator  
 Joint venturer in Lead [Contractor][Engineer][Operator]  
 Financially Responsible Party for John Laing Investments Limited

**Part B: Certifications**

<b><u>No.</u></b>	<b><u>Certification Questions</u></b>	<b><u>Yes</u></b>	<b><u>No</u></b>
(1)	Has the entity or any Affiliate or any current officer thereof been indicted or convicted of bid or other contract related crimes or violations (i.e., fraud, bribery, collusion, conspiracy, antitrust, etc.) or any other felony or serious misdemeanor within the past ten years?  <i>If yes, please explain, including the name of the relevant prosecuting agency, the applicable law(s) and the status of any appeal(s).</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(2)	Has the entity or any Affiliate ever sought protection under any provision of any bankruptcy act, law or regulation in any jurisdiction within the past ten years?  <i>If yes, please explain, including identification of the relevant jurisdiction(s) and applicable laws, and the status or outcome of any resulting bankruptcy process.</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(3)	Has the entity or any Affiliate ever been disqualified, removed, debarred or suspended from performing work for the US Federal government, any US state or local government, or any foreign governmental entity within the past ten years?  <i>If yes, please explain, including the name of the relevant public agency, the date, grounds and results of any such action:</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(4)	Has the entity or any Affiliate ever been found liable in a civil suit or found guilty in a criminal action for making any false claim or other material misrepresentation to a public entity within the past ten years?  <i>If yes, please explain, including owner contact information:</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(5)	Has any construction or project or operations and maintenance contract performed or managed by the entity or, to the knowledge of the undersigned, any Affiliate involved repeated or multiple failures to comply with safety rules, regulations or requirements within the past ten years?  <i>If yes, please explain:</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(6)	Has the entity or any Affiliate been found, adjudicated or determined by any Federal court, Federal agency, state court or state agency (including, but not limited to, the Equal Employment Opportunity Commission, the Office of Federal Contract Compliance Programs and any applicable Colorado governmental agency) to have violated any law or executive order relating to employment discrimination or affirmative action within the past ten years, (including but not limited to Title VII of the Civil Rights Act of 1964, as amended (42 U.S.C. Sections 2000 et seq.); the Equal Pay Act (29 U.S.C. Section 206(d)); and any applicable or similar Colorado law)?  <i>If yes, please explain:</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>



Colorado I-70 East Project

**No. Certification Questions**

	<u>Yes</u>	<u>No</u>
(7) Has the entity or any Affiliate been found, adjudicated, or determined by any Federal court, Federal agency, state court or state agency to have violated or failed to comply with any law or regulation of the United States or any state within the past ten years governing prevailing wages (including but not limited to payment for health and welfare, pension, vacation, travel time, subsistence, apprenticeship or other training, or other fringe benefits) or overtime compensation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

*If yes, please explain:*

(8) With respect to each of Questions 1-7 above, if not previously answered or included in a prior response on this Form, is any legally effective or recognized form of notice or warning, or investigation, proceeding, claim, matter, suit, indictment, etc., currently pending against the entity that could (assuming subsequent necessary actions are taken) result in the entity being found liable, guilty or in violation of any of laws or regulations referenced in Questions 1-7 above and/or subject to debarment, suspension, removal or disqualification by the Federal government, any state or local government, or any foreign governmental entity?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------	-------------------------------------

*If yes, please explain and submit the information requested as to such similar items set out in Questions 1-7 above.*

(9) Under penalty of perjury, the undersigned certifies on behalf of the entity for which he or she signs that each of the foregoing representations, certifications, statements and disclosures is correct, complete and not materially misleading:	<input checked="" type="checkbox"/>	<input type="checkbox"/>
------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------	--------------------------

Financially Responsible Party: John Laing Group plc

By:

C.T. Cattermole

Printed Name: Carolyn Cattermole

Title: Group General Counsel and Company Secretary

This content has been redacted in accordance with Form B Confidential Contents Index



**Colorado I-70 East Project**

**Proposer Name:** Front Range Mobility Group  
**Name of Team Member:** CH2M HILL Companies, Ltd  
**Role on Proposer:**  Equity Member  
 Lead Contractor  
 Lead Engineer  
 Lead Operator  
 Joint venturer in Lead Engineer  
 Financially Responsible Party for CH2M HILL Engineers, Inc.

**Part B: Certifications**

<b><u>No.</u></b>	<b><u>Certification Questions</u></b>	<b><u>Yes</u></b>	<b><u>No</u></b>
(1)	<p>Has the entity or any Affiliate or any current officer thereof been indicted or convicted of bid or other contract related crimes or violations (i.e., fraud, bribery, collusion, conspiracy, antitrust, etc.) or any other felony or serious misdemeanor within the past ten years?</p> <p><i>If yes, please explain, including the name of the relevant prosecuting agency, the applicable law(s) and the status of any appeal(s).</i></p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(2)	<p>Has the entity or any Affiliate ever sought protection under any provision of any bankruptcy act, law or regulation in any jurisdiction within the past ten years?</p> <p><i>If yes, please explain, including identification of the relevant jurisdiction(s) and applicable laws, and the status or outcome of any resulting bankruptcy process.</i></p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(3)	<p>Has the entity or any Affiliate ever been disqualified, removed, debarred or suspended from performing work for the US Federal government, any US state or local government, or any foreign governmental entity within the past ten years?</p> <p><i>If yes, please explain, including the name of the relevant public agency, the date, grounds and results of any such action:</i></p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(4)	<p>Has the entity or any Affiliate ever been found liable in a civil suit or found guilty in a criminal action for making any false claim or other material misrepresentation to a public entity within the past ten years?</p> <p><i>If yes, please explain, including owner contact information:</i></p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(5)	<p>Has any construction or project or operations and maintenance contract performed or managed by the entity or, to the knowledge of the undersigned, any Affiliate involved repeated or multiple failures to comply with safety rules, regulations or requirements within the past ten years?</p> <p><i>If yes, please explain:</i></p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(6)	<p>Has the entity or any Affiliate been found, adjudicated or determined by any Federal court, Federal agency, state court or state agency (including, but not limited to, the Equal Employment Opportunity Commission, the Office of Federal Contract Compliance Programs and any applicable Colorado governmental agency) to have violated any law or executive order relating to employment discrimination or affirmative action within the past ten years, (including but not limited to Title VII of the Civil Rights Act of 1964, as amended (42 U.S.C. Sections 2000 et seq.); the Equal Pay Act (29 U.S.C. Section 206(d)); and any applicable or similar Colorado law)?</p> <p><i>If yes, please explain:</i></p>	<input checked="" type="checkbox"/>	<input type="checkbox"/>



Colorado I-70 East Project

**No. Certification Questions**

**Yes No**

*In August 2012, CH2M HILL Plateau Remediation Company ("CH PRC"), an affiliate of CH2M HILL Engineers, Inc., received a violation notice from the Office of Federal Contract Compliance Programs ("OFCCP") that CH PRC was not in compliance with the requirements of Executive Order 11246 due to failure to ensure its employees were compensated without regard to race and/or gender, as required by 41 CFR 60-1.4(a)(1). A Conciliation Agreement between OFCCP and CH PRC was entered into on March 2012 to remedy the violation with satisfactory completion by CH PRC of the agreement terms received from OFCCP on August 2012 which resolved the matter without admission of liability.*

- (7) Has the entity or any Affiliate been found, adjudicated, or determined by any Federal court, Federal agency, state court or state agency to have violated or failed to comply with any law or regulation of the United States or any state within the past ten years governing prevailing wages (including but not limited to payment for health and welfare, pension, vacation, travel time, subsistence, apprenticeship or other training, or other fringe benefits) or overtime compensation?

*If yes, please explain:*

*In 2011, CH2M HILL Constructors, Inc. ("CH2M"), an affiliate of CH2M HILL Engineers, Inc., received notice of a complaint filed with the U.S. Department of Labor ("DOL") for failure to ensure its employees working at the Edwards AFB project were compensated correctly under the requirements of The McNamara-O'Hara Service Contract Act. A Back Wage Compliance and Payment Agreement was entered into on February 2012 with DOL to remedy the violation with satisfactory completion by CH2M of the agreement terms which resolved the matter.*

- (8) With respect to each of Questions 1-7 above, if not previously answered or included in a prior response on this Form, is any legally effective or recognized form of notice or warning, or investigation, proceeding, claim, matter, suit, indictment, etc., currently pending against the entity that could (assuming subsequent necessary actions are taken) result in the entity being found liable, guilty or in violation of any of laws or regulations referenced in Questions 1-7 above and/or subject to debarment, suspension, removal or disqualification by the Federal government, any state or local government, or any foreign governmental entity?

*If yes, please explain and submit the information requested as to such similar items set out in Questions 1-7 above.*

- (9) Under penalty of perjury, the undersigned certifies on behalf of the entity for which he or she signs that each of the foregoing representations, certifications, statements and disclosures is correct, complete and not materially misleading:





**Colorado I-70 East Project**

**No. Certification Questions**

**Yes    No**

**Financially  
Responsible  
Party:**

CH2M HILL Companies, Ltd

**By:**

**Printed Name:** William J. Knapp

**Title:** Vice President





### 3.3 LEGAL ISSUES

FRMG has not identified any anticipated legal issues relating to or affecting or anticipated to affect Developer and/or any Core Proposer Team Member that need to be resolved in order for:

- » Proposer, assuming it is selected as a Short-listed Proposer, to deliver a Proposal in response to the RFP, and;
- » Developer and all Core Proposer Team Members, assuming Proposer is selected as Preferred Proposer, to perform its and their anticipated obligations under the Project Agreement or any related agreements, as applicable.

TECHNICAL  
EXPERIENCE

4



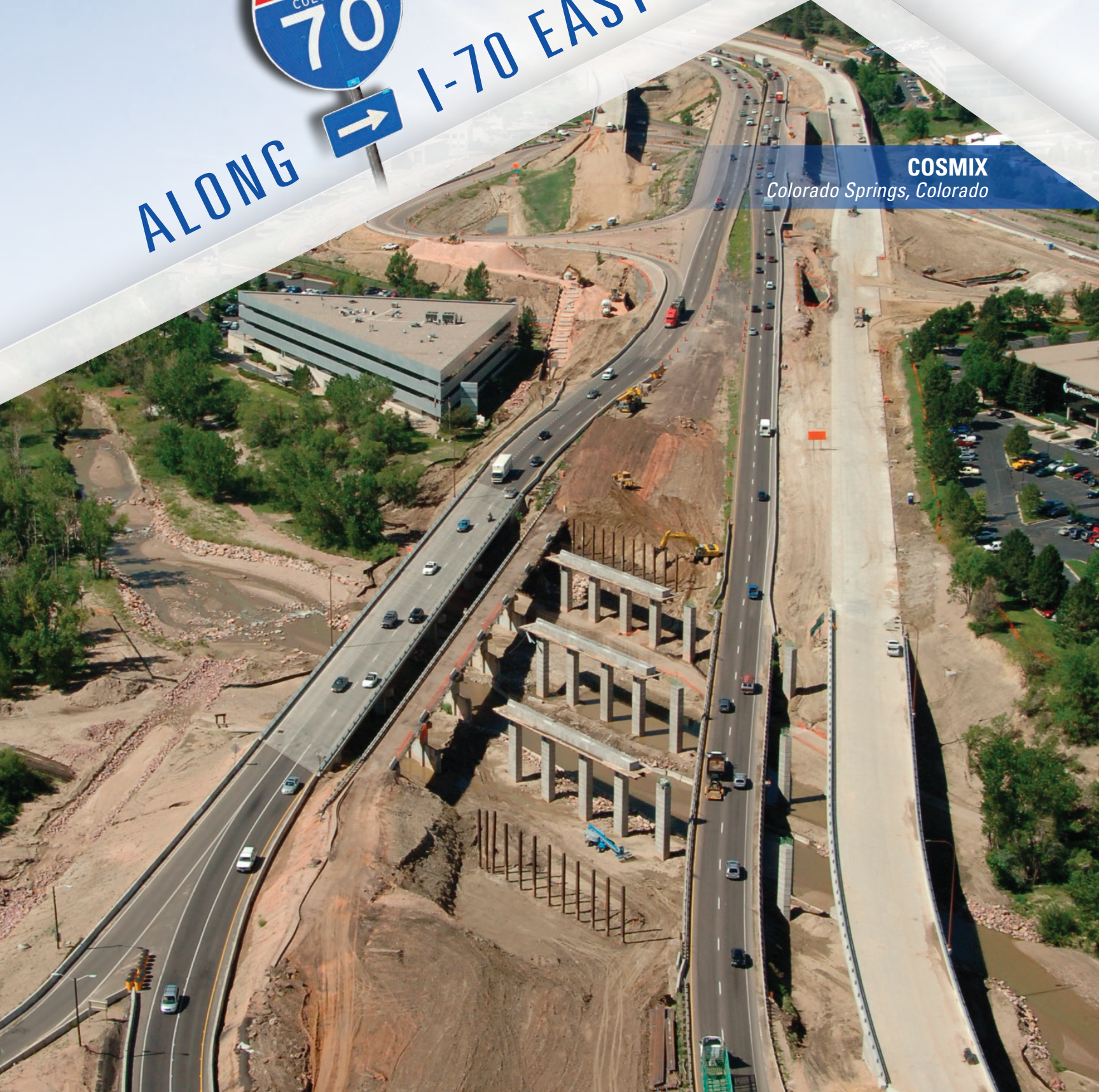
4. TECHNICAL EXPERIENCE

CONNECTING COMMUNITIES



ALONG I-70 EAST

**COSMIX**  
*Colorado Springs, Colorado*







## FRMG's Collective Project Experience

FRMG's Project Experience demonstrates our significant and relevant experience in projects that have similar technical complexities and challenges to the I-70 East Project.	NEAH	I-595	Portsmouth BP	Eagle P3	I-4	NWAH	I-405	A-30	Eastside	I-71/670	Golden Ears	I-15 North	TREX	SH161	A8	SFPR (South Fraser)
<b>1. TECHNICAL CRITERIA</b>																
b. Relevance the Project																
i. design and construction and operations and maintenance activities:																
A. With respect to Design and Construction activities																
i. roadway expansion and reconstruction, including interchange reconstruction	X	X	X		X	X	X	X		X	X	X	X	X	X	X
ii. demolition of existing infrastructure in urban environments	X	X	X	X		X	X	X	X	X	X	X	X	X	X	
iii. major excavation work, including groundwater consideration and/or drainage requirements	X	X	X	X		X	X	X	X	X	X	X	X	X		X
iv. complex traffic management in urban areas	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X
v. construction staging in confined spaces		X		X		X	X	X	X	X	X	X	X	X		X
vi. structures that include ventilation and/or fire life safety considerations		X		X				X	X	X	X		X	X		
vii. coordination with railroad and/or utility companies	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
B. with respect to operations and maintenance activities:																
I. Roadway Pavement and associated Infrastructure under environmental conditions that are similar to those affect the project	X	X	X			X		X			X			X	X	X
II. Interfaces with adjacent road operators	X	X				X		X			X			X	X	X
ii. workforce, subcontractor and stakeholder engagement and environmental monitoring and mitigation activities																
I. workforce development programs, including partnerships with local community organizations and/or apprenticeship programs	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X
II. achievement of or exceeding goals relating to participation of disadvantaged businesses, small businesses and/or other business that are subject to equivalent programs	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X
B. with respect to environmental monitoring and mitigation activities:																
I. air quality monitoring and mitigation in urban environments	X	X		X			X	X	X	X	X	X	X	X	X	X
II. noise monitoring and mitigation in urban environments	X	X		X			X	X	X	X	X	X	X	X	X	X



FRMG's Project Experience demonstrates our significant and relevant experience in projects that have similar technical complexities and challenges to the I-70 East Project.	NEAH	I-595	Portsmouth BP	Eagle P3	I-4	NWAH	I-405	A-30	Eastside	I-71/670	Golden Ears	I-15 North	TREX	SH161	A8	SFPR (South Fraser)
<b>2. FINANCIAL CRITERIA</b>																
2.1. Financial Qualifications and Capacity																
a. Relevant Financing experience																
i. the project's financing included a TIFIA loan that was closed by the project developer and not a public authority		X	X	X												
ii. the project's financing used PABs			X	X												
iii. the financed project was a highway or road project	X	X	X		X	X	X	X	X	X	X				X	
iv. the financed project was located in North America	X	X	X	X	X	X		X								



# Form F

## EQUITY MEMBERS





## Equity Member Project Experience

FRMG's Project Experience demonstrates our significant and relevant experience in projects that have similar technical complexities and challenges to the I-70 East Project.	NEAH	I-595	Portsmouth BP	Eagle P3	I-4
<b>1. TECHNICAL CRITERIA</b>					
b. Relevance the Project					
i. design and construction and operations and maintenance activities:					
A. With respect to Design and Construction activities					
i. roadway expansion and reconstruction, including interchange reconstruction	X	X	X		X
ii. demolition of existing infrastructure in urban environments	X	X	X	X	
iii. major excavation work, including groundwater considerations and/or drainage requirements	X	X	X	X	
iv. complex traffic management in urban areas	X	X		X	X
v. construction staging in confined spaces		X		X	
vi. structures that include ventilation and/or fire life safety considerations		X		X	
vii. coordination with railroad and/or utility companies	X	X	X	X	X
B. with respect to operations and maintenance activities:					
I. Roadway Pavement and associated Infrastructure under environmental conditions that are similar to those that affect the project	X	X	X		
II. Interfaces with adjacent road operators	X	X			
ii. workforce, subcontractor and stakeholder engagement and environmental monitoring and mitigation activities					
I. workforce development programs, including partnerships with local community organizations and/or apprenticeship programs	X	X	X	X	X
II. achievement of or exceeding goals relating to participation of disadvantaged businesses, small businesses and/or other business that are subject to equivalent programs	X	X	X	X	X
B. with respect to environmental monitoring and mitigation activities:					
I. air quality monitoring and mitigation in urban environments	X	X		X	
II. noise monitoring and mitigation in urban environments	X	X		X	
<b>2. FINANCIAL CRITERIA</b>					
2.1. Financial Qualifications and Capacity					
a. Relevant Financing experience					
i. the project's financing included a TIFIA loan that was closed by the project developer and not a public authority		X	X	X	
ii. the project's financing used PABs			X	X	
iii. the financed project was a highway or road project	X	X	X		X
iv. the financed project was located in North America	X	X	X	X	X

Colorado I-70 East Project

**Form F: Project Experience (NEAH)**

**Proposer Name:** Front Range Mobility Group

- Core Proposer Team Member(s) Involved:**
- Equity Member: **HOCHTEIF PPP Solutions North America, Inc.**
  - Equity Member: **ACS Infrastructure Development, Inc. (through Affiliate ACS Infrastructure Canada, Inc.)**
  - Lead Contractor
  - Lead Engineer
  - Lead Operator
  - Joint venturer in Lead Engineer: **AECOM Technical Services, Inc.**
  - Joint venturer in Lead Contractor: **Flatiron Constructors, Inc. (through Affiliate Flatiron Constructors, Canada Limited, Inc.)**
  - Joint venturer in Lead Contractor: **Dragados USA, Inc. (through Affiliate Dragados Canada, Inc.)**
  - Affiliate of Equity Member and joint venture in Lead Contractor: **ACS Infrastructure Development, Inc., ACS Infrastructure Canada, Inc.**
  - Affiliate of joint venture in Lead Contractor: **Flatiron Constructors Inc., Flatiron Constructors, Canada Limited.**

**Form F: Project/Transaction Description**

No.	Required Information	Response
<b>I. Background Information</b>		
(1)	Project Name:	Northeast Anthony Henday Drive
(2)	Type of Facility:	Construction and expansion/rehabilitation of a limited access highway with significant structures works
(3)	Owner/Procuring Authority:	Alberta Transportation
(4)	Brief Description of Project:	<p>The Northeast Anthony Henday Drive (NEAH) project in Alberta, Canada includes the design, construction, finance, operations, maintenance, and rehabilitation of approximately 17 miles of new six- and eight-lane divided freeway with 47 bridges in total, including two bridges across the North Saskatchewan River. The North Saskatchewan River bridges will stretch almost 1,000 feet. The southbound bridge includes a pedestrian and bicycle bridge suspended below the main deck.</p> <p>This project represents the largest single transaction entered into by Alberta Transportation. The transaction reached commercial and financial close on May 8 and May 11 2012, respectively. The design of the project is currently over 95% complete and construction is approximately 69% complete with substantial completion scheduled for October 1, 2016.</p>



*The NEAH project is a prime example of the integrated project management experience and capabilities of FRMG, as the tam working on it includes ACS, HOCHTIEF, Flatiron, Dragados, and AECOM Design performing very similar roles to those anticipated for the I-70 East Project.*

**Colorado I-70 East Project**

No.	Required Information	Response												
		<p>The team working on the NEAH project includes ACS, HOCHTIEF, Flatiron, Dragados, and AECOM Design performing very similar roles to those anticipated for the I-70 East Project. This will yield significant benefits for the Project as the team members are already collaborating efficiently with each other in a partnership framework today.</p> <p>This \$1.1-billion project, located within important agricultural, commercial and industrial areas, includes the construction of 5.6 miles and upgrading and expansion of 11.2 miles of existing six- and eight-lane divided roadway (totaling over 200 lane miles of highway works). The project also included significant structures works, including twin 1,000-foot bridge structures over the North Saskatchewan River and 47 additional bridge structures including 9 interchanges and 10 flyovers (8 of which are over railways).</p>												
(5)	Contract Term:	<p>Total Term Length: Construction: 4 Years O&amp;M: 30 Years</p> <p>Start Date: May 2012 End Date: October 2046</p>												
(6)	Current Status:	<p>Design is 95% Complete Construction is 69% Complete</p>												
(7)	<p>Key Dates and Milestones:</p> <p>Contract Execution Design Start Construction Start Substantial Completion Final Completion End of O&amp;M</p>	<table border="0"> <tr> <td>Anticipated/Contracted: May 2012</td> <td>Actual: May 2012</td> </tr> <tr> <td>Anticipated/Contracted: 2 months</td> <td>Actual: 2 months</td> </tr> <tr> <td>Anticipated/Contracted: June 2012</td> <td>Actual: June 2012</td> </tr> <tr> <td>Anticipated/Contracted: 44 months</td> <td>Actual: N/A</td> </tr> <tr> <td>Anticipated/Contracted: 44 months</td> <td>Actual: N/A</td> </tr> <tr> <td>Anticipated/Contracted: 44 months</td> <td>Actual: N/A</td> </tr> </table>	Anticipated/Contracted: May 2012	Actual: May 2012	Anticipated/Contracted: 2 months	Actual: 2 months	Anticipated/Contracted: June 2012	Actual: June 2012	Anticipated/Contracted: 44 months	Actual: N/A	Anticipated/Contracted: 44 months	Actual: N/A	Anticipated/Contracted: 44 months	Actual: N/A
Anticipated/Contracted: May 2012	Actual: May 2012													
Anticipated/Contracted: 2 months	Actual: 2 months													
Anticipated/Contracted: June 2012	Actual: June 2012													
Anticipated/Contracted: 44 months	Actual: N/A													
Anticipated/Contracted: 44 months	Actual: N/A													
Anticipated/Contracted: 44 months	Actual: N/A													
(8)	Relevance to the Project:	<p>The NEAH project demonstrates FRMG's ability to work together on projects with similar challenges as the I-70 East Project. The project is currently on time and on schedule. It demonstrates our ability to work together successfully across equity, design, construction, and operations and maintenance on a P3 project over \$1 billion in North America.</p>												

No.	Required Information	Response
		<p>The Equity Members, led by ACS and HOCHTIEF, successfully led the process to reach financial close of this project and implemented a planned financial package that combined a widely distributed placement of senior secured bonds and equity. The structure selected resulted in relationships with relevant players on the bond market, providing FRMG Equity Members ACSID and HOCHTIEF with unique access to different opportunities within this market that could be leveraged for the project.</p> <p><b>Roadway expansion and reconstruction:</b> Construction and rehabilitation of approximately 16.8 miles of divided freeway that included both new highway construction and roadway expansion. Similar to the I-70 East Project, operations and maintenance is required along the NEAH project during construction on the existing facility, as well as on the new construction.</p> <p><b>Demolition of existing infrastructure:</b> Extensive demolition of 14 bridges was completed on the project.</p> <p><b>Major excavation work:</b> The project includes over 15 million cubic yards of embankment and fill combined.</p> <p><b>Traffic management:</b> Traffic management was planned and coordinated with an in-house team that included both design and construction representatives to ensure optimal solutions for working in and around heavy existing traffic flows. A website portal was used to communicate timelines for traffic staging and detours. Construction on the existing facility will involve extensive traffic staging to open new infrastructure segments to traffic up to 3 years prior to final traffic availability to maintain traffic flow while reconstructing existing roadway</p> <p><b>Coordination with railroad and/or utilities:</b> The project includes significant coordination with 500+ utility owners, including major pipelines. Specifically, coordination efforts for structures over and around railroads are significant with 8 of 10 major flyovers for the project being over railroads.</p>

		<p style="text-align: center;"><b>OPERATIONS AND MAINTENANCE ACTIVITIES</b></p> <p>ACS and HOCHTIEF determined that the best value would be obtained by subcontracting most O&amp;M responsibilities during the operations period and assigning O&amp;M during construction to the Lead Contractor joint venture, each on a back-to-back basis. To achieve full compliance and performance of the activities, the O&amp;M provider guaranteed performance and provided liquid security equal to 75% of the annual operating fee.</p> <p>The concession team, including Equity Members HOCHTIEF and ACS, as well as Lead Contractor members Flatiron and Dragados, worked collaboratively with the O&amp;M provider (during operations) and designer AECOM to analyze the project traffic volumes/truck distribution across the new lanes to determine the optimal pavement structure (i.e., to meet the technical requirements over the project’s 30-year operations stage while minimizing the whole-life cost), which included an innovative design utilizing recycled aggregates and oils (up to 10% of the new asphalt pavement).</p> <p><b>Roadway pavement and associated infrastructure under similar environmental conditions:</b> Severe winter and climate conditions on the NEAH project are similar to the conditions on the I-70 East Project. O&amp;M in the construction period (currently underway) is managed by the Lead Contractor members, Flatiron and Dragados, who may leverage this experience on the I-70 East Project to support the provisions of O&amp;M services during construction.</p> <p><b>Interfaces with adjacent road operators:</b> The project requires coordination with adjacent operators/owners along the system (which is comprised of West, South West, South East and East legs of the right road). The DBJV has contracted with an O&amp;M contractor who is also responsible for the maintenance along the other ring road segments, creating significant efficiencies. Additionally, there are cooperation initiatives with key stakeholders including Alberta Highways with regard to pavement maintenance, for example.</p>
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**Colorado I-70 East Project**


II. Description of Team Member Involvement		
(9)	Proposer Team Member(s) (or Affiliates(s)) Involved:	<p><b>HOCHTIEF PPP Solutions North America, Inc.</b> was a 25% member of the Lead Developer: They are now responsible for providing support services and oversight to the Project Company and manages HOCHTIEF's investment. HOCHTIEF PPP Solutions GmbH (direct parent of HOCHTIEF PPP Solutions North America Inc.) is 25% Equity Member of the Project Company. HOCHTIEF AG is Financially Responsible Party for HOCHTIEF PPP Solutions entities and Flatiron.</p> <p><b>ACS Infrastructure Canada, Inc. (ACSIC):</b> An Affiliate of ACS Infrastructure Development, Inc. (ACSID), Equity Member of FRMG. Both ACSIC and ACSID are wholly owned North American subsidiaries of ACS SyC, a Core Proposer Team Member and Financially Responsible Party to ACSID. ACSIC is a 25% Equity Member of the consortium. Dragados Canada Inc., an Affiliate of ACSIC (and ACSID) held 33.75% of the Lead Contractor, thus satisfying the relevant threshold within (3)(a) of this Form F. ACSID and ACSIC share key resources and personnel in pursuing and managing concessions in North America. ACSID will benefit from its sister company ACSIC's experience on the NEAH project will be closely involved in developing and managing the I-70 East Project.</p> <p><b>Flatiron Constructors Canada Limited, a subsidiary of Core Proposer Team Lead Contractor Member Flatiron Constructors, Inc.,</b> is the managing partner for the DBJV with a 33.75% share.</p> <p><b>Dragados Canada, Inc. (DCA):</b> An Affiliate of Dragados USA, Inc. (DUSA). Both DCA and DUSA are wholly owned North American subsidiaries of Dragados, S.A., a Core Proposer Team member and Financially Responsible Party to Lead Contractor member DUSA. DCA acted as the managing partner of the Lead Contractor joint venture with 33.75% participation. DUSA will benefit significantly from its sister company DCA's experience on the NEAH project given the very close coordination between the two entities with respect to P3 projects in North America.</p> <p><b>AECOOM Technical Services, Inc.</b></p>
(10)	Role of Proposer Team (or Affiliates(s)) Member(s):	<p><b>HOCHTIEF PPP Solutions North America, Inc.:</b> Equity Member (25%). HOCHTIEF has been involved from the procurement stage through award, closing and now the construction period. HOCHTIEF acted as the lead Equity Member.</p>

**Colorado I-70 East Project**

		<p><b>ACS Infrastructure Canada Inc.:</b> (Affiliate of ACS Infrastructure Development, Inc.): Equity Member (25%). ACSIC has been involved as an Equity Member from the procurement stage through award, closing and now the construction period.</p> <p><b>Flatiron Constructors Canada Limida (FCCL):</b> A subsidiary of Lead Contractor Member Flatiron Constructors, Inc., is the managing partner with 33.75% share.</p> <p><b>Dragados Canada Inc.:</b> (Affiliate of Dragados USA, Inc.): Managing Lead Contractor member (33.75%).</p> <p><b>AECOM Technical Services, Inc.:</b> Lead Designer (50%)</p>
(11)	Key Personnel Involved, Roles & Responsibilities:	<p>Kent Peyton, proposed Design-Build Manager for the I-70 East Project, is the project manager leading the NEAH project. He will transfer his knowledge and experience of delivering successful projects to the I-70 East Project.</p> <p>Mike Smith (ACS), proposed O&amp;M Manager for the I-70 East Project, was involved in structuring the O&amp;M program. He cooperated closely with Heribert Bodarwe (HOCHTIEF) who was also actively involved in structuring the O&amp;M Program. Heribert will support Mike on this Project. This proven structure will create significant efficiencies.</p>
<b>III. Reference</b>		
(12)	Name:	Tom Loo, P. Eng.
(13)	Title & Employer (Current):	Executive Director Major Capital Projects
(14)	Title & Employer (at time of project/transaction):	Executive Director Major Capital Projects
(15)	Contact Info Phone Email	+1 (780) 415-4876 <a href="mailto:Tom.Loo@gov.ab.ca">Tom.Loo@gov.ab.ca</a>
(16)	Location Time Zone:	4999-98 Avenue – 3 <sup>rd</sup> Floor, Edmonton, AB Canada T6B 2X3 Mountain Standard Time
(17)	Other:	
<b>IV. Technical Information</b>		
(18)	Construction Value:	\$1.1 billion
(19)	Completion within/ above Budget:	Ongoing – completion expected October, 2016
(20)	O&M Value:	\$12.46 million /year
(21)	Length of Road under Operation (centerline miles):	16.8 Miles



**Colorado I-70 East Project**

<p>(22)</p>	<p>Key Technical Challenges and Solutions Implemented:</p>  <p><i>The NEAH project is the largest single provincial road project ever undertaken in the Province of Alberta</i></p>	<p><b>Largest Road Project Undertaken by the Province</b></p> <p><b>Challenge:</b> The NEAH project is the largest single provincial road project ever undertaken in the Province of Alberta, and included a number of key challenges, such as significant structures work, operations during construction and severe winter weather.</p> <p><b>Solution:</b> The design-build team divided the project into five construction segments to accommodate and optimize design development, environmental permitting, utility relocations, staffing, construction sub-trades and traffic management, allowing dedicated teams to concentrate on advancing the design and construction works for each segment to enable fast track delivery of the project. This complex scheduling and project management approach was implemented from the outset of the project to comply with key technical requirements during the construction period which included; maintaining access to all properties affected by construction and maintaining existing traffic movements at all interchanges and traffic detour standards on effected roadways.</p>
<p>(22)</p>		<p><b>Benefit:</b> The segmentation of the project is allowing for the implementation of an early construction completion certification process, which confirms all elements have been constructed as designed, completion of all as-built drawing packages, and appropriate sign-off of completed works by the Project Company and the authority allowing for the early opening of these sections. FMRG will utilize similar approaches on the I-70 East Project that will provide flexibility and effective allocation of resources, ensuring the I-70 East Project is completed as efficiently and quickly as possible.</p> <p><b>Severe Weather Delay and Mitigation Approach</b></p> <p><b>Challenge:</b> In June 2013, significant rains across Alberta caused the North Saskatchewan River to experience a 30-year flood event resulting in a rise in the water level of 9 feet breaching the cofferdam and flooding the in-river job site at the twin bridge crossing. This event caused the construction works of the bridges to be delayed for more than 8 weeks.</p>

		<p><b>Solution:</b> The design-build team developed a revised schedule that required crews working 7 days a week, in double shifts, in order to recover from the delay and advance the construction works to be done within the original short in-river works window for the North Saskatchewan River associated with the relevant CEAA, Nav Waters, and Fisheries and Oceans Canada environmental permits. Through constructive negotiations with Alberta Transportation and Nav Waters, the Project Company and design-build team were permitted to extend the in-water construction season.</p> <p><b>Benefit:</b> The challenges faced by this event have been overcome in large part by applying the comprehensive set of management systems and plans that were implemented at the outset of the project and have been updated on an ongoing basis since then. These include the Construction Quality Management Plan, the Environmental Management System, the Safety Program, Environmental Construction Operations Plans and the Design Quality Management Plan. FRMG, comprised of two of the same Lead Contractor Members and Equity Members, will implement similar, tailored management systems and plans on the Project to effectively mitigate project risks and overcome unforeseen challenges as they arise.</p>
<p><b>V. Financial Information</b></p>		
(23)	<p>Payment Mechanism:</p>	<p><u>Availability Payment:</u> The concessionaire will receive monthly availability payments during the operation period commencing upon opening of the project to traffic for a 30-year period. These monthly payments are comprised of a Capital Payment and an O&amp;M Payment (which includes the Major Rehabilitation Payment, the New O&amp;M Payments and Existing O&amp;M Payments). Monthly payments will be subject to various adjustments including adjustments based on traffic volume and performance/availability criteria.</p> <p><u>Construction Progress Payments:</u> The Province will make \$739 million in payments during construction (approximately 70% of the total construction costs) payable beginning with 30% completion and continuing quarterly up until 90% completion based on percent complete. The Province will also make a final progress payment once the project is open to traffic.</p>

Colorado I-70 East Project

		<p><u>Deduction Regime:</u> The concession agreement includes deductions to the availability payments for several non-compliance events due to performance and maintenance of the project facility, level of service, and highway availability levels.</p> <p><u>Inflation:</u> The monthly O&amp;M Payment payable by the Province will be indexed to the Maintenance Price Index prepared by Alberta Transportation.</p>
(24)	Source(s) of Revenues or Payments:	During the operations period, the concessionaire will receive availability payments that are split between Capital Payments (cost of debt service and equity payments) and O&M Payments, made in single, monthly payment (subject to deductions as noted above).
(25)	Proposer Team Member(s) Equity Investment:	HOCHTIEF's investment is \$14.4 million, or 25% of the overall long-term equity commitment. ACS's investment is \$14.4 million, or 25% of the overall long-term equity commitment. Equity was committed to the project in the form of a letter of credit at financial close.
(26)	Financing Method(s) and Value(s):	<p>The financial structure of the project included Senior secured A- rated taxable bonds in the amount of \$427 million and \$58 million of total equity. The bonds were issued in May 2012 with an average life of 22.6 years and a maturity date of March 31, 2046 (the final settlement date). The bonds are rated A (low) by Dominion Bond Rating Service (DBRS) and A- by Standard &amp; Poor (S&amp;P).</p> <p>The injection of the equity funding takes places in different steps toward the end of the construction period. The equity commitments are backed by three different letters of credit provided by the Equity Members in an amount equivalent to their percentage of ownership. The concessionaire receives construction payments in the order of \$739 million.</p>
(27)	Key Financial and Funding Challenges and Solutions Implemented:	<p><b>Challenge:</b> Sourcing financing for a complex project during a period of serious financial turbulence.</p> <p><b>Solution:</b> The consortium financed the Project during the credit crisis with senior debt totaling \$427 million on senior broadly marketed or widely distributed secured bonds. ACS and HOCHTIEF developed a competitive and stable financing solution to ensure value for money over the agreement term. The consortium secured commitments for bank financing and bond solutions, and held a competitive underwriter selection process.</p>

Colorado I-70 East Project

		<p><b>Benefit:</b> FRMG will leverage the experience gained on NEAH and other P3 projects to source the most competitive financing solution. Our approach on NEAH, and what we will employ on the I-70 East Project, also ensures redundancy to protect against fluctuations in the market.</p> <p><b>Challenge:</b> Senior bonding financing</p> <p><b>Solution:</b> ACS' and HOCHTIEF's uncommon and innovative approach included an underwriting competition and obtained a new benchmark since the credit crisis of 2008 by achieving a spread of less than 200 bps over the Government of Canada bonds of equivalent maturity. The bonds mature on March 31, 2046 and were rated A- by S&amp;P and A (low) by DBRS with a stable outlook, maintaining their preliminary ratings. This was one of the first Canadian projects rated according to S&amp;P's draft global project financing rating, a more stringent and conservative criteria that minimizes potential downgrade risk associated with future criteria transition.</p> <p><b>Benefit:</b> FRMG's experience in structuring senior debt in the bond markets, both tax-exempt and taxable, means that FRMG has the knowledge and relationships to run competitive processes that ensure the most competitive forms of debt are sourced for the Project.</p>
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Colorado I-70 East Project


**Form F: Project Experience (I-595 Corridor)**

**Proposer Name:** Front Range Mobility Group


**Core Proposer Team Member(s) Involved:**

- Equity Member: **ACS Infrastructure Development, Inc.**
- Lead **Contractor**
- Lead **Engineer**
- Lead **Operator**
- Joint **venturer** in Lead Contractor: **Dragados USA, Inc.**
- Joint venturer in Lead Engineer: **AECOM Technical Services, Inc.**
- Joint venturer in Lead Operator: **ACS Infrastructure Development, Inc.**
- Affiliate(s) (n/a)

**Form F: Project/Transaction Description**

No.	Required Information	Response
<b>I. Background Information</b>		
(1)	Project Name:	I-595 Corridor Improvements Project (I-595)
(2)	Type of Facility:	Interstate highway expansion (including general purpose lanes and frontage roads) with new reversible managed lanes.
(3)	Owner/Procuring Authority:	Florida Department of Transportation
(4)	Brief Description of Project:  <p><i>The I-595 Project was the first P3 in the State of Florida and the largest project in the history of the Florida Department of Transportation (FDOT) at time of construction.</i></p>	<p>The I-595 Corridor Improvements Project (I-595) is a \$1.7 billion (\$1.2 billion construction value) design-build-finance-operate-maintain (DBFOM) highway project. I-595 was the first P3 in the State of Florida and the largest project in the history of the Florida Department of Transportation at time of construction. The project included widening of the existing highway to accommodate three new 10.5-mile-long reversible toll lanes in the median of a six-lane interstate highway and improved traffic in the Fort Lauderdale area. The urban corridor has daily traffic volumes of 180,000 vehicles.</p> <p>As a P3 contract, this project included financing, design, construction, and all O&amp;M under a 35-year concession period. Dragados worked as the Lead Contractor, with AECOM as its Lead Designer. As concessionaire, ACS led the development and financing of the project and currently oversees the comprehensive maintenance program that began concurrently with the construction phase, as well as all operations and incident response needs along the urban highway corridor.</p>

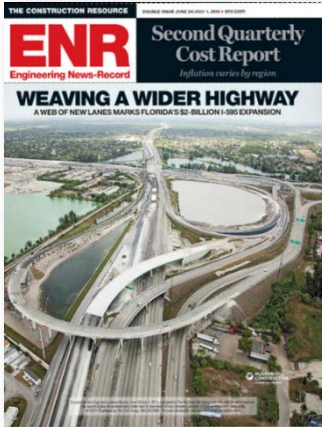
**Colorado I-70 East Project**

No.	Required Information	Response														
		<p>The project was financed through two different tranches of bank senior debt totaling \$781 million and a \$678 million TIFIA loan. Additionally ACS committed 100% of the equity with a letter of credit posted at financial close (\$208 million) prior to selling 50% of its share to the Teachers Insurance and Annuity Association – College Retirement Equities Fund (TIAA-CREF).</p> <p>The project reached Substantial Completion in March 2014 and was delivered ontime and within budget. It has successfully been in operations, led by ACS, since July 2009.</p>														
(5)	Contract Term:	<p style="text-align: center;">Total Term Length: 35 years            Start Date: March 3, 2009            End Date: March 2044</p>														
(6)	Current Status:	<p>Construction is 100% complete. The project is currently in the O&amp;M Phase.</p>														
(7)	<p><b>Key Dates and Milestones:</b></p> <p>Contract Execution            Design Start            Construction Start</p> <p>Substantial Completion            Operations Commencement            Final Completion            End of O&amp;M</p>	<table border="0"> <tr> <td>Anticipated/Contracted: March 3, 2009</td> <td>Actual: March 3, 2009</td> </tr> <tr> <td>Anticipated/Contracted: March 3, 2009</td> <td>Actual: March 3, 2009</td> </tr> <tr> <td>Anticipated/Contracted: 5 Months</td> <td>Actual: 5 Months; (note, advanced construction activities began 3.5 months after execution)</td> </tr> <tr> <td>Anticipated/Contracted: 60 months</td> <td>Actual: 60 months</td> </tr> <tr> <td>Anticipated/Contracted: 5 months</td> <td>Actual: 5 months</td> </tr> <tr> <td>Anticipated/Contracted: 66 months</td> <td>Actual: 66 months</td> </tr> <tr> <td>Anticipated/Contracted: 35 years</td> <td>Actual: n/a</td> </tr> </table> <p><i>*Durations from "Contract Execution"</i></p>	Anticipated/Contracted: March 3, 2009	Actual: March 3, 2009	Anticipated/Contracted: March 3, 2009	Actual: March 3, 2009	Anticipated/Contracted: 5 Months	Actual: 5 Months; (note, advanced construction activities began 3.5 months after execution)	Anticipated/Contracted: 60 months	Actual: 60 months	Anticipated/Contracted: 5 months	Actual: 5 months	Anticipated/Contracted: 66 months	Actual: 66 months	Anticipated/Contracted: 35 years	Actual: n/a
Anticipated/Contracted: March 3, 2009	Actual: March 3, 2009															
Anticipated/Contracted: March 3, 2009	Actual: March 3, 2009															
Anticipated/Contracted: 5 Months	Actual: 5 Months; (note, advanced construction activities began 3.5 months after execution)															
Anticipated/Contracted: 60 months	Actual: 60 months															
Anticipated/Contracted: 5 months	Actual: 5 months															
Anticipated/Contracted: 66 months	Actual: 66 months															
Anticipated/Contracted: 35 years	Actual: n/a															
(8)	<p>Relevance to the Project:</p>  <p><i>The I-595 Project received the P3 Project of the Year by American Road &amp; Transportation Builders Association and the North American Transport Deal of the Year by Project.</i></p>	<p>The I-595 project demonstrates FRMG's success in working together across each of the four core management levels (development/financing, design, construction, and O&amp;M). The project was the first transportation availability payment project that reached financial close in the US. Similar to the anticipated financing approach for the I-70 East Project, I-595 finance structure included a TIFIA loan. ACS, as the sole equity member from bid until construction, was able to close financing, in the midst of the turmoil of the financial markets at the end of 2008. Notably, ACSID switched from a PABs and TIFIA loan structure (similar to that envisioned by the Procuring Authorities), committed at financial close, to a 12-bank club and TIFIA loan shortly after having been awarded the project.</p>														

**Colorado I-70 East Project**

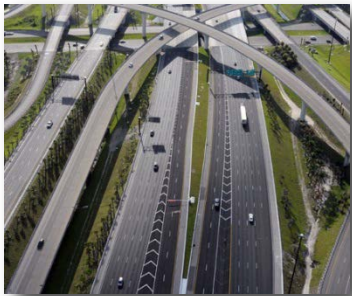
No.	Required Information	Response
	 <p><i>The I-595 Project was built in an urban corridor that accommodated daily traffic volumes of 180,000 vehicles.</i></p> <p><b><i>“We delivered it on the same day we said we would, five years earlier. It really shows this model will work. Florida DOT is very proud of this Project.”</i></b></p> <p>— Paul Lampley, FDOT Project Manager</p>	<p>The experience gained working with TIFIA on the first, availability payment project to close with TIFIA financing provided our team with an in-depth knowledge of TIFIA's approach to structuring and mitigating project risks, its processes and its procedures. FRMG's combined experience in closing TIFIA deals—will ensure our team can seamlessly implement a TIFIA financing approach into our structure, should it become available for Project.</p> <p>This project shares many similar challenges anticipated for the I-70 East Project: a widening of the existing highway and construction staging to accommodate three new toll lanes in a confined, urban corridor—all while managing extreme daily traffic volumes. The work on I-595 included reconstruction of major interchanges; demolition of structures; major excavations below a high water table; extensive coordination with utility and railroad companies; and ventilation systems to allow laborers to work in confined spaces.</p> <p>The project's technical challenges were successfully overcome with minimal impact to the traffic and surrounding neighborhoods by implementing proven strategies to mitigate noise, air quality, and other impacts associated with construction. Dragados and AECOM also engaged the local workforce, subcontractors, and stakeholders by exceeding the DBE and OJT goals.</p> <p><b>FRMG's Demonstrated Performance on the I-595 project includes:</b></p> <p><b>DESIGN AND CONSTRUCTION ACTIVITIES</b></p> <p><b>Roadway expansion, reconstruction and interchange reconstruction:</b> The project included expansion and reconstruction of 10.5 miles of the existing I-595 and the associated SR-84 to accommodate three reversible express lanes in the median of the I-595 corridor, which included reconstruction at each intersection along I-595. More than 60 bridges were built or reconstructed, including widening (partial or complete demolitions of existing structures at 7 crossroads and 2 major interchanges), new steel girder and concrete bridges with spans up to 158 feet long, and 7 braided ramps, including four-span steel girder bridges with post-tensioning caps and individual spans up to 212 feet long. Several miles of variable profile concrete retaining walls were necessary between parallel roadways to support the difference in elevations between parallel roads.</p>

Colorado I-70 East Project

No.	Required Information	Response
	 <p><i>The I-595 Project was recognized throughout the industry as an historic project due to the innovative financing and sheer magnitude at time of award.</i></p>	<p><b>Demolition of existing infrastructure in urban environments:</b> To accommodate the expansion of I-595 at each intersection, Dragados and AECOM widened the existing bridges, which included partial demolitions of the existing decks at each side of the existing structures while maintaining traffic through the intersection. Dragados and AECOM also planned and performed demolition of two other major bridges:</p> <ul style="list-style-type: none"> <li>• <u>Ramp N Bridge at University Drive Intersection:</u> Demolished and reconstructed two spans and intermediate piers and the end bent to accommodate the expansion of I-595 through the intersection.</li> <li>• <u>Bridge over the Florida Turnpike:</u> Completely demolished a two-span structure over the Florida Turnpike in a single weekend to minimize the impacts to traffic.</li> </ul> <p><b>Major excavation work, including groundwater considerations and/or drainage requirements:</b> Dragados' and AECOM's work included dredging the existing canal for reconstruction of I-595, as well as major excavation along westbound SR-84 to remove the existing deep layers of organic soils. This excavation work required installation of a drainage system, including trench box methods, and dewatering due to work being performed below the water table.</p> <p><b>Complex traffic management in urban areas:</b> The urban corridor had daily traffic volumes of 180,000 vehicles. Dragados and AECOM minimized impacts to the public by maintaining the same number of lanes available to the traveling public and the original speed limits (55 mph) through the various construction phases. They worked together to design and implement a detailed traffic control plan to maximize construction operations during off-peak hours and maintain access to existing properties along westbound SR-84 throughout the entire construction duration. Dragados ensured the safety of workers and vehicular traffic by installing 220,000 linear feet of temporary concrete barrier to separate the traffic from construction operations. Up-to-date construction bulletins were posted on the project website alerting the public to closures and new diversion routes. Dragados and AECOM coordinated with the local city officials, businesses, schools, and residential complexes to minimize impacts. The public information team reviewed the work schedule and communicated via message boards, emails, phone calls, and meetings to advise the stakeholders of planned activities and coordinate special requests.</p>



Colorado I-70 East Project

No.	Required Information	Response
	 <p><i>Dragados exceeded the 8.1% DBE goal for a final DBE participation of 13.6% and surpassed the OJT goal of 118 trainees with a final graduation of 164 trainee.</i></p>	<p>For example, an adjacent cemetery had services on various days from noon to 1:30 p.m., so Dragados worked to minimize construction operations during this time to accommodate these services. Biannual public workshops were held with the public and local officials to disseminate project information. For example, the public expressed interest in changing the original design/schedule in order to improve traffic flow on SR 84 a year earlier than required. With the cooperation of the owner and input from the public, Dragados and AECOM opened this particular roadway one year earlier to the relief of the traveling public.</p> <p><b>Construction staging in confined spaces:</b> The entire I-595 corridor is adjacent to an existing canal on its north side and to existing properties on its south side. Due to these constraints and to maintain traffic within the available right-of-way, Dragados was required to perform the majority of construction within very confined spaces. Trench box methods were used to install drainage pipes and relocate existing utilities. Temporary sheet piling was used to perform excavations for bridge foundations or to install drainage and conflict boxes along the project. Dragados also performed deep excavations necessary for a microtunnel machine in limited areas using sheetpiling.</p> <p><b>Structures that include ventilation and/or fire life safety considerations:</b> Dragados used a microtunnel machine to install five drainage pipes up to 72 inches in diameter and more than 500 feet long. This work required a ventilation system to allow personnel to work inside the excavation. In addition, the rehabilitation of an existing two-span steel box girder bridge required ventilation inside the girders to allow workers to perform the necessary reinforcing.</p> <p><b>Coordination with railroad and/or utility companies:</b> Dragados and AECOM coordinated, scheduled, and negotiated utility agreements with numerous overhead and underground utilities needed for the design and construction, including Florida Power and Light Distribution, FPL Transmission, FPL Fibernet, AT&amp;T Florida, AT&amp;T Long Distance, Comcast, Old Plantation Water Control District, and the cities of Davie and Sunrise. The work required coordination with numerous municipalities and third-party agencies, including NASA, throughout the urban corridor, and initially delayed the start of construction in mid-2010. The entire project team was able to recover this lost time through partnering and working together toward common goals.</p>

No.	Required Information	Response
	<p style="text-align: center;"><b><u>AWARD</u></b></p> <p style="text-align: center;"><i>Florida Transportation Business Association 2013 DBE Utilization Achievement Award for exceeding DBE utilization goals</i></p> <div style="background-color: #1a3d54; color: white; padding: 10px; text-align: center;"> <p><b>Dragados performed construction in environmentally sensitive areas that required compliance with several environmental permits, especially during dewatering and other activities to manage storm water during construction.</b></p> </div>	<p>For example, agency reviews were streamlined to 21 days from 28 and daily workshops were implemented to enhance communication among all parties. The work along I-595 just west of the ramp to the northbound I-95 required coordination with a railroad, including installation of two fiber optic cables under the railroad. The project also required coordination with another railroad company for the painting of an existing bridge over an active railroad.</p> <p><b><i>Workforce, subcontractor and stakeholder engagement activities:</i></b> Dragados and AECOM integrated local subcontractors into the Project team and achieved the Florida Transportation Business Assoc. 2013 DBE Utilization Achievement Award for exceeding DBE utilization goals. Dragados exceeded the 8.1% DBE goal for a final DBE participation of 13.6% and surpassed the OJT goal of 118 trainees with a final graduation of 164 trainees. AECOM agreed to a flow-down provision of the 8.1% DBE goal for design to better maximize opportunities for DBE firms to participate on the project. AECOM achieved 8.5% DBE participation for design.</p> <p><b><i>Environmental monitoring and mitigation activities:</i></b> For air quality monitoring and mitigation, the team implemented BMPs and mitigated fugitive dust to maintain air quality during construction. The Dragados and AECOM team also developed and implemented a detailed vibration monitoring plan for the entire duration of the project. This included special attention for installation of the precast concrete piles and prohibiting this work at nighttime to avoid disturbing the nearby neighborhoods. Dragados and AECOM were responsible for identifying, preparing, and complying with permits required from federal, state, and local jurisdictional regulatory agencies, including the U.S. Army Corps of Engineers (USACE), U.S. Coast Guard (USCG), Florida Dept. of Environmental Protection (FDEP), and several other regional and local water and conservation districts. Dragados and AECOM's Environmental Compliance Plan included the required permit compliance details, applicable NEPA commitments, and plan for managing contaminated materials during design, construction, and O&amp;M, including the transition periods between each phase. Dragados performed construction in environmentally-sensitive areas that required compliance with several environmental permits, especially during dewatering and other activities to manage storm water during construction.</p>

Colorado I-70 East Project

No.	Required Information	Response
	<p> <b>I-595 is a prime example of the depth of ACSID's experience with comparable projects, performance requirements, and responsibilities that are anticipated to be within the Developer's scope of work.</b> </p> <p> <b>ACS has successfully managed each interface between adjacent operators, which will be a key aspect of the upfront and ongoing responsibilities of the developer for the I 70 East Project.</b> </p>	<p>           The permits included groundwater influence and groundwater treatment system modeling, and required review by the EPA.             For work relating to hazardous materials, Dragados and AECOM identified reactive wastes in the I-595 corridor and performed the appropriate treatment and disposal following the applicable regulations.         </p> <p style="text-align: center;"> <b>OPERATIONS AND MAINTENANCE ACTIVITIES</b> </p> <p> <b>The concession company, I-595 Express</b>, led by ACS, is self-performing the O&amp;M of the overall O&amp;M requirements of the project, including the management of certain contracts for elements of the routine operations and maintenance activities. The project requires a significant operations program to handle the heavily trafficked corridor for east/west commuters.         </p> <p>           The completed project consists of general purpose lanes, collector and distributors on adjacent systems, frontage roads, major intersections, and managed lanes that utilize free flow toll technology. ACS will apply these lessons learned, as detailed further below, in working with the Procuring Authorities to manage the development and relationships related to the I-70 East Project through all stages of the concession, including O&amp;M.         </p> <p> <b>Interfaces with adjacent road operators</b> I-595 connects with I-75 in the west, the Florida Turnpike in the center, and a section of I-595 to the east that is operated and maintained by FDOT. I-595 Express works closely with the Florida Turnpike operators and FDOT subcontractors to manage interfaces at the various locations throughout the project. These interfaces have been consistent and reliable since the beginning of operations.         </p> <p>           I-595 is a prime example of the depth of ACS's experience with comparable projects, performance requirements, and responsibilities that are anticipated to be within the Developer's scope of work. The completed project consists of general purpose lanes, collector and distributors on adjacent systems, frontage roads, major intersections, and managed lanes that utilize free-flow toll technology. ACS will apply these lessons learned in working with FDOT to manage the development and relationships related to the project through all stages of the concession, including O&amp;M.         </p>

No.	Required Information	Response
		<p><b>Operations performance in a high traffic corridor:</b> ACS implemented and manages a significant operations program to handle the heavily trafficked corridor for east/west commuters, with 180,000 vehicles per day and an average of approximately 1,200 incidents per month. Operations includes management of 24/7 incident response, dedicated road patrols, and a Traffic Management Center to ensure the flow of traffic and reduce unavailability to the public.</p> <p>The incident response program maintains a safe, free-flowing facility to the public and offers assistance to the roadway's users in case of emergencies and incidents. Responsibilities include debris removal, police activities, break downs, accidents, and tire blowouts. For that reason, the developer has implemented proven 24/7 Road Ranger Program, which has been operating with a response time of only 3 minutes from notification (far exceeding the 15 minute contractual requirement). This program is also supplemented with a Severe Incident Response Vehicle (SIRV) and a Rapid Incident Scene Clearance Program, all aligned with the goal of keeping the highway safe and open to traffic.</p> <p><b>Toll Systems and ITS:</b> The project also demonstrates both ACS and Dragados experience in toll maintenance and operations. The I-595 corridor contains complete camera coverage and an Advanced Traffic Management System (ATMS) application to support traffic management and incident response. In addition, the reversible managed lanes are tolled and operate using Open-Road Tolling technology. I-595 Express was responsible for the development and installation and operation of the reversible express lane system. Tolling is performed by the FDOT; however, ACS coordinated, designed, and constructed all infrastructure required for the tolling system.</p>

No.	Required Information	Response
		<p><b>Significant Assets requiring Routine and Major Maintenance:</b> The major assets of the project are pavement and structures, much like that of I-595, which has an extensive inventory of large structures. On the I-595, these structures are inspected biennially. This includes significant structures in seven interchanges with other major roadways including the Florida Turnpike and more than 60 structures throughout the project. The team’s maintenance manual includes all routine and major maintenance activities necessary to ensure compliance with the request. In order to maintain these assets, a maintenance program geared toward the reliability of all assets, with a particular emphasis on pavement and structures, will modeled off the experience ACSID gained on I-595 and the numerous other highways under operations in North America. The experience ACS has gained from the development of this program will directly benefit the Project given the volume and type of structures anticipated along the Project corridor (both new construction and existing assets).</p>
<p><b>II. Description of Team Member Involvement</b></p>		
(9)	<p>Proposer Team Member(s) (or Affiliates(s)) Involved:</p>	<p><b>ACS Infrastructure Development, Inc.</b>  <b>Dragados USA, Inc.</b>  <b>AECOM Technical Service, Inc.</b></p>
(10)	<p>Role of Proposer Team Member(s) (or Affiliate(s)):</p>	<p><b>ACS Infrastructure Development, Inc.:</b> Equity Member (50%) and Lead Operator (50%). ACS has been involved from the procurement stage through award, the construction period and now in O&amp;M of the project.</p> <p><b>Dragados USA, Inc.:</b> Lead Contractor (100%)</p> <p><b>AECOM Technical Services, Inc.:</b> Lead Designer (100%)</p>
(11)	<p>Key Personnel Involved, Roles &amp; Responsibilities:</p>	<p><b>Michael Smith</b>, FRMG’s proposed <b>O&amp;M Manager</b>, plays a key role in the technical O&amp;M oversight of the I-595 project, managed by ACS. Michael’s firsthand knowledge of the day-to-day operational issues, including managing subcontracts and interacting with the owner regarding performance requirements, will bring highly-relevant and recent experience in the challenges and subsequent mitigations for O&amp;M along a high-traffic corridor under an availability payment structure.</p>
<p><b>III. Reference</b></p>		
(12)	<p>Name:</p>	<p>Gerry O’Reilly</p>
(13)	<p>Title &amp; Employer (Current):</p>	<p>Director of Transportation, District Four                      Florida Department of Transportation</p>


**Colorado I-70 East Project**

No.	Required Information	Response
(14)	Title & Employer (at time of project/transaction):	Director of Transportation Development, District Four Florida Department of Transportation
(15)	Phone & Email	(954) 777-4411 <a href="mailto:Gerry.Oreilly@dot.state.fl.us">Gerry.Oreilly@dot.state.fl.us</a>
(16)	Location & Time Zone:	Florida, USA, Eastern Time Zone (UTC-05:00)
(17)	Other:	N/A
<b>IV. Technical Information</b>		
(18)	Construction Value:	\$1.197 billion
(19)	Completion within/above Budget:	The project reached substantial completion on schedule and on budget. The final construction value was \$1.211 billion (or approximately 1% increase) due to FDOT-directed changes.
(20)	O&M Value:	\$40.225 million (average yearly, nominal)
(21)	Length of Road under Operation (centerline miles):	Approximately 10.5 miles
(22)	Key Technical Challenges and Solutions Implemented:	<p>In addition to the challenges relevant to the I-70 East Project highlighted in box (8), the I-595 Project included the following key technical challenges:</p> <p><b>ATCs and Innovation</b></p> <p><b>Challenge:</b> Nine interchanges and 63 bridges within the I-595 project presented numerous technical challenges in this constrained urban corridor, and were significant cost drivers. FDOT’s original design included an additional flyover at the most congested intersection of the project, which required demolishing the existing flyover due to geometric constraints. This was costly and presented potential traffic impacts during construction. Specifically, an existing 700-foot-long flyover structure was in conflict with the proposed construction of the expanded interstate below.</p> <p><b>Solution:</b> ACS, Dragados, and AECOM presented numerous Alternative Technical Concepts (ATCs) to FDOT that preserved existing structures on the I-595 corridor that were originally planned to be replaced. FDOT’s original design included an additional flyover at the most congested intersection of the project, which required demolishing the existing flyover due to geometric constraints. However, the team’s innovation refined the alignment by placing the new express lanes in the former eastbound lanes, rather than in the I-595 median.</p>



*ACS, Dragados, and AECOM developed innovative Alternative Technical Concepts (ATCs) for the flyover interchange structures that saved approximately \$40 million.*

Colorado I-70 East Project

No.	Required Information	Response
	 <p><i>Zero days were added to the construction schedule; 7 milestones were completed ahead of schedule in order to meet the project's aggressive schedule.</i></p>	<p>The flyover's foundations could then stay where they were, but the superstructure needed to be raised to meet vertical clearance requirements. The vertical conflict was eliminated by jacking and realigning most of the existing flyover structure and extending the length of one span to make room for the planned construction on I-595. The O&amp;M experts at ACS were closely involved during the process to ensure that the approach resulted in a whole lifecycle savings to FDOT by evaluating the routine and major maintenance impacts of this solution. Ultimately, this innovation saved ~ \$40 million.</p> <p><b>Benefit:</b> ACS, Dragados, and AECOM have demonstrated their ability to work collaboratively to identify and execute innovative technical solutions. FRMG will work to develop cost saving ATCs that reduce construction impacts and result in a whole lifecycle solution that brings best value to the Procuring Authorities, maximizing available funds for the Project.</p> <p><b>Challenge:</b> Construction work required coordination with numerous third-party agencies and municipalities. Initial coordination efforts resulted in a delay to construction start.</p> <p><b>Solution:</b> The entire project team was able to recover this lost time through partnering and working together toward common goals. For example, agency reviews were streamlined to 21 days, from 28 days, and daily workshops were implemented to enhance communication among all parties. Dragados and AECOM were co-located in a facility with ACS and FDOT representatives to streamline coordination. Regular meetings were held between the various team members and FDOT to discuss progress, solve pending issues, and coordinate the overall project. The project was ultimately completed on time and within budget.</p> <p><b>Benefit:</b> FMRG team members have proven ability to collaborate with project owners and key stakeholders to find a solution that overcomes unforeseen coordination issues and delays in a project. FRMG will draw on this experience to first develop a plan and schedule which reduces the risk of delay from coordination issues, and to quickly and collaboratively improve the approach should problems arise to protect the Project's schedule and budget.</p> <p><b>Efficient Approach to O&amp;M</b></p> <p><b>Challenge:</b> The project represented FDOT's first P3 to reach financial close and enter into operations.</p>

Colorado I-70 East Project

No.	Required Information	Response
	<p> <b>Dragados and AECOM, working together with ACS, were able to overcome initial challenges in coordinating with the owner and numerous third parties involved in the project.</b> </p>  <p> <i>As part of I-595 Express's incident response activities, we provide 24/7/365 road patrol service, Severe Incident Response Vehicle service, as well as Rapid Incident Scene Clearance support. ACS' average response time is 5 times faster than what is contractually required.</i> </p>	<p> <b>Solution:</b> ACS worked with FDOT maintenance managers to develop and implement an O&amp;M plan that adhered to FDOT requirements and also addressed the concerns of District Maintenance Engineers that had been responsible for maintaining the existing system for decades. ACS continues to work closely with FDOT to improve the O&amp;M approach and coordination between I-595 Express and the various stakeholders to ensure the project is performing as envisioned by FDOT.         </p> <p> <b>Benefit:</b> ACS has extensive experience working with owners in determining efficient approaches to the O&amp;M for projects that ensure the projects' goals are met while maintaining an efficient balance of risk and scope between the Developer and/or Lead Operator and the project owners. FRMG will work with the Procuring Authorities to similarly structure the long-term O&amp;M responsibilities for the Project to deliver the best value and achieve the Project's goals.         </p> <p> <b>Rapid Response Times to Incidents in an Urban Corridor with Managed Lanes</b> </p> <p> <b>Challenge:</b> I-595 Express is responsible for operating the Traffic Management Center for the I-595 Corridor 24/7 in this high-volume corridor. This includes the identification of traffic incidents, dispatch of services, police/fire interface, incident coordination, and reporting to the state-wide 511 system.         </p> <p>           As part of I-595 Express's incident response activities, we provide 24/7/365 road patrol service, Severe Incident Response Vehicle service, as well as Rapid Incident Scene Clearance support. All incident response activities have contractual time limits for response, which result in availability payment deductions if found non-compliant. I-595 Express is responsible for operating the Traffic Management Center for the I-595 Corridor 24/7.         </p> <p> <b>Solution:</b> By providing a 3-minute response time to traffic incidents, rather than the contractual 15 minutes, the team is providing a safer roadway for vehicular traffic.         </p> <p> <b>Benefit:</b> Based on the final scope for the Developer on the Project, FRMG will develop and successfully implement an operations program that ensures the corridor remains safe for the traveling public by providing rapid response times to incidents and leveraging extensive experience in coordinating with various response teams and stakeholders in both leading and supporting roles.         </p>



**Colorado I-70 East Project**

No.	Required Information	Response
<b>V. Financial Information</b>		
(23)	<p>Payment Mechanism:</p> <p><i>Experience Working Together</i>  <i>Dragados actively participated with ACS in the negotiations with the Owner of different payment milestones for the construction of the I-595 project. Since Dragados and ACS were sister companies working at two different levels of the Project team, they could align their interests and negotiate reasonable milestones that reduced the risks and allowed the project to be delivered on-time and within budget.</i></p>	<p><u>Availability Payment:</u> The concessionaire receives monthly availability payments during the operation period commencing upon substantial completion of the project through a 30-year period subject to deductions based on lane availability and any noncompliance points assessed in conjunction with the contract documents.</p> <p><u>Final Acceptance Payments:</u> FDOT will make \$685.5 million in payments (approximately 57% of the total construction costs) following Final Acceptance and over the first 5 years of operations (the "Final Acceptance Payments" or "FAPs"). These FAPs were subject to the accomplishment of seven milestones during the construction period, all of which were reached on time and in accordance with the concession agreement. The first FAP included a \$50 million bonus for reaching each interim milestone within the period stated in the concession agreement.</p> <p><u>Deduction Regime:</u> The concession agreement includes deductions to the availability payments for several non-compliance events due to performance and maintenance of the project facility, level of service, and highway availability levels.</p> <p><u>Inflation:</u> 70% of the availability payment is indexed at a fixed rate of 3% annually and the 30% remaining is indexed annually at CPI.</p>
(24)	<p>Source(s) of Revenues or Payments:</p>	<p>All payments are subject to availability of funds appropriated by the State of Florida. Additionally, a potential source of revenue for FDOT includes the tolls collected on the express lanes, which can be used to cover a portion of the availability payments to the concessionaire.</p>
(25)	<p>Proposer Team Member(s) Equity Investment:</p>	<p>ACS committed \$208 million in equity for the 100% interest in the project. During construction, ACS sold 50% of its share in the SPV to its partner TIAA-CREF. This equity was backed by a letter of credit posted at financial close until the equity injections were made during the last months of the construction period.</p>

No.	Required Information	Response
(26)	Financing Method(s) and Value(s):	<p>The financing package included a \$526-million short-term senior bank facility used to bridge the Final Acceptance Payments and a \$256-million hard mini-perm 10 years senior bank loan, both provided by 12 banks, including Spanish, French, and Australian banks. Additionally, subordinated debt was provided through a \$678-million TIFIA loan. The equity committed by ACS (as 100% equity member at financial close) amounted \$208 million and was backed by a letter of credit.</p> <p>The bank tranche loan totaling \$256 million, the \$678-million TIFIA loan, which received an investment grade rating (maintained through construction and into operations) and the equity investment will be repaid from availability payments received during the operation period.</p>
(27)	<p>Key Financial and Funding Challenges and Solutions Implemented:</p> <p><i>“We delivered it on the same day we said we would, five years earlier. It really shows this model will work. Florida DOT is very proud of this Project.”</i></p> <p>— Paul Lampley, FDOT Project Manager</p>	<p><b>Challenge:</b> Reaching financial close during critical challenges in the market.</p> <p><b>Solution:</b> ACS provided an investment grade, financeable solution at the height of the global financial crisis. ACS leveraged its strong relationships in the global banking industry to switch from the bond financing structure submitted at bid to a 12-bank club deal and TIFIA structure after the bond markets were no longer accessible, rendering the PABs solution secured for the proposal unattainable. ACS’ credibility in the P3 finance market, based on its strong relationships with the P3 lending community and aggressive pursuit of multiple finance alternatives throughout the bid process, made this significant, yet timely, change possible.</p> <p><b>Benefit:</b> FRMG will leverage its strong relationships in the P3 lending community and experience in overcoming adversity in the markets to ensure redundancy in financing solutions and provide execution certainty</p> <p><b>Challenge:</b> Closing FDOT’s first availability payment project and pioneering the use of TIFIA Loans in transportation availability payment projects</p> <p><b>Solution:</b> ACS successfully worked with FDOT in reaching Financial Close on their first transportation availability payment P3 project. This also represented the first AP project closed in the United States, and TIFIA’s first availability payment project as well. The 2009 final value for money analysis conducted after financial close concluded that the net present value of the P3 contract was 25% lower than the original 2007 estimate.</p>

**Colorado I-70 East Project**

No.	Required Information	Response
		<p><b>Benefit:</b> ACS' proven ability to pioneer new and innovative financing solutions in partnership with both experienced and inexperienced owners, even in the midst of an economic crisis, captures the same spirit and approach FRMG will pursue for the I-70 East Project.</p>

## Form F: Project Experience (Portsmouth Bypass)

**Proposer Name:** Front Range Mobility Group

**Core Proposer Team Member(s) Involved:**

- Equity Member: **ACS Infrastructure Development, Inc.**
- Lead Contractor
- Lead Engineer
- Lead Operator
- Joint venturer in Lead Contractor: **Dragados USA, Inc.**
- Joint venturer in Lead Operator: **ACS Infrastructure Development, Inc.**
- Affiliate of Equity Member and joint venture in Lead Operator:
- Affiliate of joint venture in Lead Operator:

### Form F: Project/Transaction Description

No.	Required Information	Response
<b>I. Background Information</b>		
(1)	Project Name:	Southern Ohio Veterans Memorial Highway (Portsmouth Bypass)
(2)	Type of Facility:	Greenfield limited access highway
(3)	Owner/Procuring Authority:	Ohio Department of Transportation
(4)	Brief Description of Project:	<p>The Southern Ohio Veterans Memorial Highway (referred to herein as Portsmouth Bypass) project is part of the Appalachian Development Highway System, a dedicated 3,000+ mile highway network stretching from New York to Mississippi. This \$557-million project includes the design, construction, financing, and O&amp;M of the roadway for a period of 35 years following substantial completion.</p> <p>The highway will be a new, 16-mile, four-lane, divided, limited-access highway around the City of Portsmouth in Scioto County, Ohio, and will connect US 23 at Lucasville to US 52 east of Portsmouth. The project includes five new interchanges at US 52, SR 140, Shumway Hollow Road, Lucasville-Minford Road, and US 23. The interchanges at US 52 and US 23 will be designed as system interchanges. The project is characterized by significant amounts of earthwork with approximately 20-million cubic yards of excavation.</p> <p><b>ACS</b> led the development and financing of the Project, including the O&amp;M program. The project included TIFIA and PABs as part of the financing structure. <b>Dragados</b> is leading the design-build joint venture.</p>

Colorado I-70 East Project

No.	Required Information	Response																
		<p>The project is being delivered on time and on budget. Commencement of construction is anticipated to occur at the end of June, approximately 3 months ahead of the schedule at award.</p>																
(5)	Contract Term:	<p>Total Term Length: Approximately 39 years, renewing biannually, including 44 months of construction and a 35-year operating period (commencing upon substantial completion).</p> <p>Start Date: December 5, 2014 End Date: December 14 2053</p>																
(6)	Current Status:	Under design and construction. Approximately 9.4% complete.																
(7)	<p>Key Dates and Milestones:</p> <p style="text-align: right;">Contract Execution</p> <p style="text-align: right;">Design Start</p> <p style="text-align: right;">Construction Start</p> <p style="text-align: right;">Substantial Completion</p> <p style="text-align: right;">Final Completion</p> <p style="text-align: right;">End of O&amp;M</p>	<table border="0"> <tr> <td>Anticipated/Contracted:</td> <td>Actual:</td> </tr> <tr> <td>December 5, 2014</td> <td>December 5, 2014</td> </tr> <tr> <td>Anticipated/Contracted: 1 month</td> <td>Actual: 1 month</td> </tr> <tr> <td>Anticipated/Contracted:</td> <td>Actual: N/A*</td> </tr> <tr> <td>Anticipated: 6* months / Contracted 10 months</td> <td></td> </tr> <tr> <td>Anticipated/Contracted: 48 months</td> <td>Actual: N/A</td> </tr> <tr> <td>Anticipated/Contracted: 52 months</td> <td>Actual: N/A</td> </tr> <tr> <td>Anticipated/Contracted: 39 years</td> <td>Actual: N/A</td> </tr> </table> <p>*Scheduled for June 24, 2015</p>	Anticipated/Contracted:	Actual:	December 5, 2014	December 5, 2014	Anticipated/Contracted: 1 month	Actual: 1 month	Anticipated/Contracted:	Actual: N/A*	Anticipated: 6* months / Contracted 10 months		Anticipated/Contracted: 48 months	Actual: N/A	Anticipated/Contracted: 52 months	Actual: N/A	Anticipated/Contracted: 39 years	Actual: N/A
Anticipated/Contracted:	Actual:																	
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Anticipated/Contracted: 39 years	Actual: N/A																	
(8)	Relevance to the Project:	<p>The Portsmouth Bypass represents the most recent PABs and TIFIA financed P3 project to reach financial close. As Equity Member and member of the Lead Operator, the experience ACS brings to FRMG will be key to our team's success, as the recent market knowledge will be instrumental to successfully evaluating and negotiating efficient terms with senior lenders and the TIFIA joint program office for a PABs and TIFIA solution, as currently under consideration by the Procuring Authorities for the Project.</p> <p style="text-align: center;"><b>DESIGN AND CONSTRUCTION ACTIVITIES</b></p> <p><b>Major excavation work:</b> The project involves a significant amount of excavation, including over 20 million cubic yards of excavation along a 16-mile corridor (primarily rock). Dragados worked with its local partners and designer to generate an efficient approach to managing this significant element of the scope, as further described below. Dragados will leverage this recent experience that is particularly relevant to the major excavation works for the I-70 East Project.</p>																

No.	Required Information	Response
	<p style="background-color: #1a237e; color: white; padding: 10px; text-align: center;">Portsmouth Bypass is the largest transportation project undertaken in Ohio's history</p>	<p><b><i>Coordination with railroad and/or utility companies:</i></b> The project includes construction work in the immediate vicinity of, under, or over several active rail lines. The currently identified affected railroads include the Norfolk Southern Corporation (NS) and CSX Transportation (CSXT). ODOT had entered into Railroad Agreements with each of the affected Railroads. Existing NS facilities are impacted at two separate locations on the project alignment. NS required that the new bridges accommodate a future additional track for this rail corridor, which the contractor must coordinate with NS closely to ensure meets this requirement. Existing CSXT facilities are impacted at two separate locations on the project alignment. The Lead Contractor is responsible for coordinating all utility locations along the corridor with the utility owners, including gas, sewer, water, power, and communications.</p> <p><b><i>Workforce development programs; achievement or exceeding goals relating to participation of disadvantaged businesses, small businesses and/or other businesses that are subject to equivalent programs:</i></b> The contractor joint venture led by Dragados, in coordination with ODOT, are developing and implementing a DBE and OJT plan that will ensure the project's goals are met or exceeded. This is particularly challenging given the rural location of the project. Dragados hosted several outreach events and introduced a comprehensive DBE information website early in the procurement, which has allowed the contractor to begin implementing constructive and sustainable packages for local contractors, including small and disadvantaged business to participate in the largest transportation project undertaken in the history of Ohio.</p> <p style="text-align: center;"><b>OPERATIONS AND MAINTENANCE ACTIVITIES</b></p> <p><b><i>Roadway pavement and associated infrastructure under similar environmental conditions:</i></b> The developer will be self-performing the O&amp;M of the project, which will commence upon substantial completion of the project at the end of 2018 and continue for 35 years. The O&amp;M team during procurement, led by ACS and Michael Smith (proposed Key Personnel member (O&amp;M Manager) for the Project), worked closely with its Lead Contractor partners to analyze critical features along the corridor, specifically pavement and the significant embankments and rock cuts along the corridor. The team developed a comprehensive O&amp;M program that will utilize a mix of in-house personnel and subcontractors to efficiently operate and maintain the project.</p>


No.	Required Information	Response
		By maintaining the management of the operations and maintenance responsibilities for the project, ACS' team has retained a significant degree of flexibility, which led to a highly competitive O&M approach that meets ODOT's objectives while remaining cost effective. Members of the Lead Operator in FRMG, including ACS, will draw on this important experience to develop and manage the operations and routine and long-term maintenance responsibilities of the Project.
<b>II. Description of Team Member Involvement</b>		
(9)	Proposer Team Member(s) (or Affiliate(s)) Involved:	<b>ACS Infrastructure Development, Inc.</b> <b>Dragados USA, Inc..</b>
(10)	Role of Proposer Team Member(s) (or Affiliate(s)):	<b>ACS Infrastructure Development Inc. (ACS)</b> is a 40% Equity Member of the consortium. Currently, ACS is leading the management of the developer entity during the construction phase, including the work of its design-build contractor (led by Dragados) and the Independent Quality Firm. The developer is self-performing the O&M of the project, which will commence upon substantial completion of the project at the end of 2018.  <b>Dragados USA, Inc.</b> is the managing partner of the Lead Contractor with a 50% share in the joint venture.
(11)	Key Personnel Involved, Roles & Responsibilities:	<b>Michael Smith</b> , O&M Manager at ACS and FRMG's proposed <b>O&amp;M Manager</b> for the I-70 East Project, developed the O&M proposal as part of the O&M team for the consortium. Specific challenges included analysis of the long-term O&M risks associated with high cuts and fills along the corridor related to slope stability and rockfall mitigation. Mike was an integral part of the team that worked with lenders, including TIFIA, and rating agencies to ensure a comprehensive understanding of the long-term O&M elements of the project and the concessionaires approach to managing and budgeting for risks over the term.
<b>III. Reference</b>		
(12)	Name:	Adam Sheets
(13)	Title & Employer (Current):	Senior Project Manager, Division of Innovative Delivery, ODOT
(14)	Title & Employer (at time of project/transaction):	Senior Project Manager, Division of Innovative Delivery, ODOT
(15)	Phone & Email	(614) 387-5169 adam.sheets@dot.state.oh.us
(16)	Location & Time Zone:	Columbus, Ohio, Eastern Time
(17)	Other:	N/A

Colorado I-70 East Project

No.	Required Information	Response
IV. Technical Information		
(18)	Construction Value:	\$429.70 million
(19)	Completion within/above Budget:	The project is on budget
(20)	O&M Value:	\$4.078 million
(21)	Length of Road under Operation (centerline miles):	Approximately 16 miles
(22)	Key Technical Challenges and Solutions Implemented:	<p><b>Significant Excavation Works and Blasting</b></p> <p><b>Challenge:</b> The Portsmouth Bypass requires a substantial amount of earthworks, including over 20-million cubic yards of excavation. With over 90% of excavated material being sandstone, large amounts of blasting operations are also required along the project corridor.</p> <p><b>Solution:</b> To reduce costs and mitigate associated risks with this volume of excavation, the Lead Contractor, led by Dragados, optimized the vertical profile of the project and reduced the overall excavation volume by approximately 20% compared to ODOT’s conceptual design. The optimized profile also reduced the overall height of the cuts and embankments, reducing long-term risks associated with slope stability and rockfall along the project. Additionally, Dragados’ team segmented the project into four strategic sections and balanced the earthworks (nearly equal cut and fill volumes within each) by producing new plans during the bid process that reduced the need for waste and borrow sites along the project corridor and limited hauling distances. Segmenting will also allow multiple excavation crews to work along the 16 mile project corridor simultaneously, expediting the work while providing flexibility and redundancy of workforce and equipment. Dragados’ team plans to reuse approximately 90% to 95% of the excavated material as fill. Not only does this approach reduce the impact of construction to surrounding properties and environment by limiting waste from the project and reducing hauling distances, the sandstone will serve as a better quality sub-base for the roadway (compared to the conceptual design), increasing the durability of the roadway and reducing the long-term maintenance and rehabilitation costs to the developer and ODOT.</p> <p><i>“The successful proposer’s design and construction costs were approximately 15% below the costs developed during the FHWA Major Project Cost Estimating Workshop...ODOT feels that we received great value while still maintaining our vision for the Bypass”</i></p> <p>—Mike Wawskiewicz, Senior Project Director, Division of Innovative Delivery, ODOT</p> <p><i>“This is an important project that will not only improve highway safety, but represents an important partnership between the public and private sector to advance our overall investment in this nation’s infrastructure. The Portsmouth Bypass will benefit the entire community by reducing the number of trucks in the city and opening up the area for economic development.”</i></p> <p>—Secretary Foxx, U.S. Transportation Secretary</p>



Colorado I-70 East Project

No.	Required Information	Response
		<p><b>Benefit:</b> Drawing on its international experience in performing large excavation works on highway projects meant Dragados performed a complete redesign of the vertical profile of the project during the RFP stage. This represented a significant investment on the part of Dragados' team, but ultimately resulted in value to ODOT and reduced the overall schedule and impact to the surrounding community and environment. FRMG will implement the same approach, implementing innovative and cost-saving concepts and techniques in order to deliver the best possible technical solution for the I-170 East Project.</p> <p><i>Geotechnical / Site Conditions along a Large Corridor</i></p> <p><b>Challenge:</b> With significant excavation work on this project, as described above, developing the construction approach and schedule required the Dragados team to review and consider over 900 geotechnical investigations conducted by or on behalf of ODOT for the project.</p> <p><b>Solution:</b> The team leveraged (and continues to leverage) the local experience of its team members who have completed several projects similar to the Portsmouth Bypass within the region to develop an efficient approach to managing the earthworks along the project corridor. Dragados' team also conducted site investigations prior to bid in order to test material, lowering risk overall on the project, which translated to a cost savings to ODOT.</p> <p><b>Benefit:</b> The significant earthworks for the I-70 East Project will necessitate a careful and comprehensive analysis of the geotechnical conditions along the corridor. FRMG will work with the Procuring Authorities to determine the most essential data in order to develop a competitive and sound proposal. FRMG will draw upon the experience from the Portsmouth Bypass and work with our local Lead Contractor members who have years of experience undertaking excavation work in the Denver region and are highly knowledgeable regarding the geotechnical challenges of the I-70 East Project.</p>

Colorado I-70 East Project

No.	Required Information	Response
V. Financial Information		
(23)	Payment Mechanism:	<p><u>Availability Payment:</u> ODOT will make payments to the developer commencing upon substantial completion of the project for a period of 35 years. Similar to other availability payment projects in North America, the annual Maximum Availability Payment (MAP) is paid monthly and is subject to deductions for the developer's failure to achieve the performance and availability requirements under the project agreement.</p> <p><u>Inflation:</u> The MAP is adjusted on the Substantial Completion Date and for each payment year thereafter using an adjustment formula that adjusts 20% of the MAP based on the change in the CPI and the remaining 80% of the MAP based on an annual increase of 1% per payment year.</p> <p><u>Deduction Regime:</u> The project agreement includes a standard deduction regime that includes deductions for noncompliance or nonperformance of the project (e.g., defects in the project impacting, failure to perform maintenance and major renewal work, etc.) and unavailability of the roadway. The deduction regime is similar to other US highway P3 projects and has been analyzed in depth by the O&amp;M experts who are members of the ACS team.</p> <p><u>Payments During Construction:</u> ODOT will make payments during construction in an amount up to \$44 million. Two payment of \$14.5 million each will be payable upon 70% and 80% completion of the construction work. The final \$15 million is payable upon substantial completion of the project. This payment (at substantial completion) is subject to any deductions incurred for noncompliance and/or unavailability during construction. Payments during construction are equal to approximately 10.2% of the Construction Value.</p>
(24)	Source(s) of Revenues or Payments:	<p>ODOT will make availability payments beginning upon substantial completion to the end of the term from funds appropriated by Ohio's General Assembly through its biennial appropriations process. The state will make payments to the developer from state highway funds and subsequently reimburse eligible federal highway funds amounts to the state. The developer receives a single availability payment from the state for all project costs, including O&amp;M and debt service.</p>

Colorado I-70 East Project

No.	Required Information	Response
		<p>ODOT will fund milestone payments using existing funds the state has received from the federal Appalachian Regional Commission or Appalachian Development Highway System projects. The State had previously appropriated and reserved these funds to use them to make payments to the developer during construction.</p>
(25)	<p>Proposer Team Member(s) Equity Investment:</p>	<p>ACS has committed \$19.5 million in equity or 40% of the total equity investment for the project. This is supported through a letter of credit delivered at financial close</p>
(26)	<p>Financing Method(s) and Value(s):</p>	<p>The project is financed through a combination of PABs proceeds, a TIFIA loan and equity investment; and backed by a letter of credit at financial close.</p> <p><b>Private Activity Bonds:</b> \$227,355,000 (principal amount). The bonds were rated BBB/Baa2 by Fitch and Moody's, respectively, and were underwritten by J.P. Morgan and Barclays Capital; additionally, \$108,315,000 of the bonds are insured by Assured Guaranty Municipal, which is rated AA by S&amp;P.</p> <p><b>TIFIA loan:</b> \$208,042,442</p> <p><b>Equity:</b> \$48,850,418</p>
(27)	<p>Key Financial and Funding Challenges and Solutions Implemented:</p>	<p><b>Challenge:</b> As Ohio's first P3 project, ACS undertook extensive diligence and discussions amongst ODOT, rating agencies, lenders, TIFIA and the sponsors to properly assess and mitigate appropriations risk in the project. As is common under availability payment P3s, there exists and underlying risk that the necessary appropriation is not made for each budgetary session. However, a unique and significant challenge on this project, and for the state, was the risk that payment owed with respect to any future termination compensation events for failure to appropriate could be characterized as debt, rendering the PPA unconstitutional.</p>

Colorado I-70 East Project

No.	Required Information	Response
		<p><b>Solution:</b> As this issue arose relatively late in the procurement process, the consortium worked with ODOT on a tight timeline to structure a final solution whereby a lease, entered into between the developer and ODOT, provides protection in the event the PPA ceases to be in full force and effect by ensuring certain rights survive the PPA and create a purchase option effectively mirroring the termination compensation that would be due under the PPA. Working closely with the lending community (underwriters as well as TIFIA), the consortium was able to successfully bring comfort to the market and achieve highly-competitive financing terms despite any perceived risks with respect this new mechanism in the P3 market.</p> <p><b>Benefit to the Project:</b> ACS was able to work collaboratively with ODOT to overcome key challenges in the PABs market related to appropriations risk, particularly given the new lease mechanism introduced. The Project will benefit from ACS' recent experience in structuring this deal and working with underwriters and investors to ensure a highly marketable deal in the municipal investor marketplace. ACS will similarly work with the Procuring Authorities to identify, and overcome, any potential structuring issues on its first availability payment project, leading to a lower price of debt and generating savings for the I-70 East Project.</p> <p><b>Challenge:</b> Achievement of investment grade rating while maintaining a competitive approach.</p> <p><b>Solution:</b> ACS was able to successfully secure investment grade ratings from two rating agencies of BBB/Baa2 (from Fitch and S&amp;P, respectively, and as required by TIFIA), despite several challenges related to the project. Notably, as Ohio's first P3 project, ACS worked with the rating agencies to educate each on the appropriations process, the lease structure and the protections that it affords lenders, and Ohio's strong record (reflected as well by its solid credit rating) of supporting similar contractual structures in other contexts. Additionally, the project's construction and long-term O&amp;M challenges were well understood by the sponsors and were appropriately mitigated through extensive due diligence shared with lenders and their advisors, and a strong security package further insulating the lenders from risks related to the contractor and the project's technical challenges during construction.</p>

Colorado I-70 East Project


No.	Required Information	Response
		<p><b>Benefit to the Project:</b> ACS and Dragados worked together to achieve the strong ratings target with the most efficient structure. FRMG will similarly approach the Project, evaluating the key technical and financial challenges and determining the best rating approach in order to provide a cost savings to the Procuring Authorities.</p> <p><i>Key Financial Innovations</i></p> <p><b>Implementation of TIFIA Loan and rural rate.</b> The project's financing included a \$208-million TIFIA loan. The project was awarded the rural rate, a special option under MAP-21 that decreases the standard TIFIA rate by half, or 1.27% at financial close. The team worked diligently with ODOT and the TIFIA JPO to implement this low-cost solution into the overall financing structure, which ultimately saved ODOT over \$70 million, by their estimate. Inclusion of TIFIA financing required extensive commercial discussions with and between each party, including a novel concept to ensure that TIFIA was comfortable that the initial and ongoing funding of the major maintenance reserve account was insulated against unforeseen increases in future major maintenance costs while protecting the competitiveness of the financing solution overall.</p> <p><b>Use of bond insurance to lower cost of debt:</b> ACS carefully analyzed and ultimately leveraged bond insurance on the project to deliver a competitive financing package. Assured Guaranty was introduced to the deal, and through significant financial analysis and collaboration with our underwriters in balancing the structure of the wrapped versus unwrapped bonds based on current market conditions and anticipated investor appetite, ACS ultimately wrapped a portion of the of the PABs (approximately 48%). The result broadened the pool of investors, driving a reduction in the cost of funds for the Project.</p>

## Form F: Project Experience (Eagle P3 Project)

**Proposer Name:** Front Range Mobility Group

- Core Proposer Team Member(s) Involved:**
- Equity Member: **John Laing Investments Limited**
  - Lead Contractor
  - Lead Engineer
  - Lead Operator
  - Joint venturer in Lead [Contractor][Engineer][Operator]: [Name]
  - Affiliate(s) of [Equity Member (Name)] [Lead Contractor] [Lead Engineer] [Lead Operator]: [Name]

### Form F: Project/Transaction Description

No.	Required Information	Response
<u>I. Background Information</u>		
(1)	Project Name:	Eagle P3 Project
(2)	Type of Facility:	Commuter light rail system traveling through urban areas
(3)	Owner/Procuring Authority:	Denver Regional Transportation District
(4)	Brief Description of Project:	<div style="display: flex;">  <div style="margin-left: 10px;"> <p>The project involves the design, build, finance, operation and maintenance of a commuter light rail system for Denver Regional Transportation District. This project was the first availability based P3 transit project in the United States, financed via a tax-exempt PAB issuance. The project comprises two new commuter rail lines and a portion of a third in the Denver metropolitan area totaling 36 miles. The project scope is to deliver and operate the entire rail system, including civil works, structures, electric rail vehicles and related integrated systems, provision of train crew, and maintenance of the rolling stock and infrastructure. The project includes a 34.5-year concession period.</p> <p>The project is being undertaken by a consortium in which John Laing is the co-majority shareholder. John Laing was closely involved with the financial close process; is playing a key board-level role during the construction phase; and is now taking a hands-on asset management role as the project transitions to operations.</p> <p>The project is currently 76% complete and the three new lines are expected to come into service in mid- and late-2016.</p> </div> </div> <p><i>The Denver Eagle project was awarded Project Finance Magazine's North American Transport Deal of the Year for 2010.</i></p>
(5)	Contract Term:	Total Term Length: 34.5 years Start Date: July 2010 End Date: December 2044

Colorado I-70 East Project

No.	Required Information	Response																																							
(6)	Current Status:	Under construction. The project is 76% complete as of March 31, 2015.																																							
(7)	Key Dates and Milestones:	<table border="0"> <tr> <td style="padding-right: 20px;">Contract execution</td> <td>Anticipated/Contracted: July, 2010</td> <td>Actual: July, 2010</td> </tr> <tr> <td style="padding-right: 20px;">Design Start</td> <td>Anticipated/Contracted: 1 month</td> <td>Actual: 1 month</td> </tr> <tr> <td style="padding-right: 20px;">Construction Start</td> <td>Anticipated/Contracted: 7 months</td> <td>Actual: 7 months</td> </tr> <tr> <td style="padding-right: 20px;">Substantial Completion</td> <td>Anticipated/Contracted*</td> <td>Actual*</td> </tr> <tr> <td style="padding-right: 20px;">Operations Commencement</td> <td>Anticipated/Contracted*</td> <td>Actual*</td> </tr> <tr> <td style="padding-right: 20px;">Final Completion</td> <td>Anticipated/Contracted: 24 months from</td> <td>Actual: N/A</td> </tr> <tr> <td></td> <td>revenue service commencement</td> <td></td> </tr> <tr> <td style="padding-right: 20px;">End of O&amp;M</td> <td>Anticipated/Contracted: 34.5 years from</td> <td>Actual: N/A</td> </tr> <tr> <td></td> <td>execution</td> <td></td> </tr> </table> <p>* The table below identifies the original and the Revised Revenue Service Target Dates (functionally equivalent under the contract to substantial completion and operations commencement). These are agreed extensions to the schedule as a result of additional work scope requested by the client—principally a station and track infrastructure, as well as additional rolling stock.</p> <table border="1"> <thead> <tr> <th>Anticipated Substantial Completion (Revenue Service Date)</th> <th>Original Contractual Date</th> <th>Agreed schedule extension</th> </tr> </thead> <tbody> <tr> <td>East Corridor - April 22, 2016 (70 mos.)</td> <td>Contractual Date January 29, 2016 (67 mos.)</td> <td>12 weeks</td> </tr> <tr> <td>NWES - July 25, 2016 (73 mos.)</td> <td>Contractual Date March 31, 2016 (69 mos.)</td> <td>17 weeks</td> </tr> <tr> <td>Gold Line - October 26, 2016 (76 mos.)</td> <td>Contractual Date July 1, 2016 (72 mos.)</td> <td>17 weeks</td> </tr> </tbody> </table>	Contract execution	Anticipated/Contracted: July, 2010	Actual: July, 2010	Design Start	Anticipated/Contracted: 1 month	Actual: 1 month	Construction Start	Anticipated/Contracted: 7 months	Actual: 7 months	Substantial Completion	Anticipated/Contracted*	Actual*	Operations Commencement	Anticipated/Contracted*	Actual*	Final Completion	Anticipated/Contracted: 24 months from	Actual: N/A		revenue service commencement		End of O&M	Anticipated/Contracted: 34.5 years from	Actual: N/A		execution		Anticipated Substantial Completion (Revenue Service Date)	Original Contractual Date	Agreed schedule extension	East Corridor - April 22, 2016 (70 mos.)	Contractual Date January 29, 2016 (67 mos.)	12 weeks	NWES - July 25, 2016 (73 mos.)	Contractual Date March 31, 2016 (69 mos.)	17 weeks	Gold Line - October 26, 2016 (76 mos.)	Contractual Date July 1, 2016 (72 mos.)	17 weeks
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(8)	Relevance to the Project:	<p>During the construction period, John Laing has played an important asset management role through the project's board of directors. John Laing's directors provide leadership, oversight, and rail expertise through regular board meetings, audits, and monthly reporting.</p> <p>As the project transitions into operations, John Laing is taking a hands-on operations role through supplying the Director of Operations via a secondment to the project company.</p>																																							


No.	Required Information	Response
		<p style="text-align: center;"><b>COORDINATION WITH RAILROAD AND/OR UTILITY</b></p> <p><i>Coordination with BNSF:</i> A key challenge has been interfacing with the various local utilities and railroad companies to deliver commitments made to relocate utilities or move railroad alignments. Diligent communication and co-operation with RTD has been necessary to obtain compliance with commitments. Regular (quarterly or more often) meetings with utilities or railroads have been conducted at the developer level. The most critical of these interfaces has been with BNSF Railway because relocation of their freight tracks is on the critical path to complete the two of the three line segments. Although challenging, the concessionaire successfully obtained BNSF's approval to relocate the tracks to perform the work April 15, 2015, and the work is proceeding on an accelerated 45-day schedule owing to their importance to the schedule. Another key element of coordination with BNSF has been obtaining their consent to permit installation of temporary track switches to allow for delivery of rolling stock, during periods when segments of the Eagle P3 guideway and track are still under construction. John Laing will bring to the I-70 East Project lessons learned regarding the value of leadership at the Developer level in coordinating with third parties, such as utilities and railroads. Regular, clear, and persistent communication with these stakeholders from the ultimate project management team within the Developer can make a critical difference.</p> <p><i>Coordination with Denver Union Station:</i> Another example of coordination with local authorities has been the interface with Denver Union Station, involving the concessionaires and their construction contractor. DTP must accept occupancy at newly constructed platforms at the station for the purposes of its future operations of the system. A number of issues have been identified including lack of elastomeric pads causing dropped track circuits (loss of power to trains), deficiencies in construction quality (underdrains, ballast, ties, etc.), unlevel and non-ADA compliant boarding pads, and improper caulking at the direct fixation fasteners. DTP has proposed resolutions including cutaway of a portion of boarding slabs (that would have been unused by passengers in any event) and has proposed completion of non-conforming work.</p> <p>The Denver Eagle P3 project has demonstrated to us the value of leadership and communication at the Developer level in coordinating with third parties.</p>




No.	Required Information	Response
		<p style="text-align: center;"><b>WORKFORCE, SUBCONTRACTOR AND STAKEHOLDER ENGAGEMENT AND ENVIRONMENTAL MONITORING AND MITIGATION ACTIVITIES</b></p> <p style="text-align: center;"><b>Workforce Development Programs</b></p> <p><b>Community Engagement Program:</b> DTP has placed an emphasis on engagement with the community, in particular youth groups. To date, DTP’s Community Engagement Program has resulted in over 1,600 hours of DTP personnel time being volunteered. As an example, in February-March, 2015, attended the Young Engineers of America robotics club and hosted the student group at the rolling stock maintenance facility for a tour and discussion on careers in transit. DTP also led the second in a series of two design competitions for the Colorado Association of Black Professional Engineers and Scientists’ youth program, called “Junior Engineers, Tomorrow’s Scientists,” or JETS.</p> <p><b>Workforce Initiative Now (WIN):</b> DTP is a participant in Workforce Initiative Now, which is a collaborative partnership among RTD, Community College of Denver, DTP, and the Urban League of Metropolitan Denver. WIN helps job seekers, companies, and local communities through the creation of career opportunities in the transportation and construction industries. This includes provision of training to job seekers and career placement with participating employers, of which DTP is one. DTP engages in bi-weekly coordination meetings with WIN and provides regular support including an annual financial contribution of \$50,000, which is supplemented by John Laing Charitable Trust Foundation support of \$15,000 annually. To date, DTP has hired 51 positions through the WIN program. This is well in excess of the goal of 40 positions established in collaboration with WIN at the start of the project.</p> <p><b>Safety Development:</b> The Eagle P3 project has been accepted into OSHA VPP with star status, a program which signifies projects recognized to have effective safety and health management systems and which maintain injury and illness rates below national Bureau of Labor Statistics averages for their respective industries. Key measures in place to foster safety include:</p> <ul style="list-style-type: none"> <li>• Independent safety audits (including periodic John Laing construction safety evaluation)</li> <li>• Bi-weekly safety committee</li> </ul>

No.	Required Information	Response
	<p><i>“I would like to send a thank you to Denver Transit Partners and John Laing for their commitment to empowering our community members who are WIN participants. This is why WIN is a national model, it has tremendous support from business members who see the value in the program.”</i></p> <p>— Angie Rivera-Malpiede, RTD Board of Directors, Civil Rights Committee Chair</p>	<ul style="list-style-type: none"> <li>• Adopt a Crew Member program which encourages direct and regular communication between field workers and management</li> <li>• Involvement of Zurich Insurance Group on a weekly basis</li> </ul> <p>To date, the project Total Case Incident Rate (TCIR) is 1.38, which is well below the industry norm of 3.2 (for Heavy and Civil Engineering and Construction).</p> <p>At the Developer level, there is considerable interface with the community in fostering railway safety awareness for businesses and residents whose property is in close proximity to the tracks. DTP has initiated Operation Lifesaver, which will provide presentations to the public. An RFP process is underway to engage a consultant to execute this.</p> <p>In each of these areas above, John Laing has played an active role through direct participation in these initiatives (donations and personnel involvement) and through leadership at the Developer level. Community engagement, workforce initiatives, and safety are among the most prominent metrics reported to the Developer on a monthly basis. John Laing is responsible for setting a high standard and holding project contractors to account. The same standard setting function will be brought to bear on the I-70 East Project, with the added benefit of familiarity with these activities in the local Denver context.</p> <p><b>Achievement or exceeding goals relating to participation of disadvantaged businesses, small businesses and/or other businesses that are subject to equivalent programs</b></p> <p>DTP has exceeded its DBE and SBE utilization goals. As of March 31 2015, \$255.9 million in design and construction work has been executed by DBE/SBE firms which exceeds the project’s goal of \$248 million. A further \$57 million is committed to DBE and SBE firms for execution during the remaining design-build period. DBE and SBE goals has risen throughout the design-build period due to scope changes, but these higher goals have been met. Of the 49 Letters of Intent DTP included in its April 2010 proposal to RTD, 48 have been converted to contracts.</p>
<b>II. Description of Team Member Involvement</b>		
(9)	Proposer Team Member(s) (or Affiliate(s)) Involved:	John Laing Investments Limited
(10)	Role of Proposer Team Member(s) (or Affiliate(s)):	Equity Investor (45%) and asset manager. John Laing is a 45% Equity Member. John Laing committed equity to Denver Transit Partners at Financial Close, and participated in the majority of the project development and procurement process.
(11)	Key Personnel Involved, Roles & Responsibilities:	N/A

## Colorado I-70 East Project

No.	Required Information	Response
<b>III. Reference</b>		
(12)	Name:	Dave Genova
(13)	Title & Employer (Current):	Interim General Manager of Regional Transportation District
(14)	Title & Employer (at time of project/transaction):	Formerly Assistant General Manager of Safety, Security and Facilities for RTD
(15)	Phone & Email	(303) 803-9233 david.genova@rtd-denver.com
(16)	Location & Time Zone:	Denver, Colorado – Mountain Time Zone
(17)	Other:	N/A
<b>IV. Technical Information</b>		
(18)	Construction Value:	\$1.27 billion
(19)	Completion within/above Budget:	Fixed price date certain construction contract. Scope changes agreed by client total value of \$278.5 million.  These scope changes generally relate to additional civil infrastructure and additional rolling stock resulting from the client's election to add another station.
(20)	O&M Value:	\$35.5 million
(21)	Length of Road under Operation (centerline miles):	Total of 36 miles of track; the East Corridor runs for 23 miles from Denver International Airport to Denver Union Station. The Gold Line runs for 11 miles from the western suburbs to Denver Union Station. A starter segment of the Northwest Rail corridor, concurrent with the Gold Line, will run separately for an additional 2 miles.
(22)	Key Technical Challenges and Solutions Implemented:   <p><i>John Laing initiated independent design checks to ensure the quality of bridge structures.</i></p>	<p><b><i>Independent Design Check of Structures</i></b></p> <p><b>Challenge:</b> During the construction period, it became apparent that some structures had design issues, which meant they were not compliant with certain specified codes and would require action. This was uncovered via DTP's QA process.</p> <p><b>Solution:</b> This was a risk that was borne by the project company (at no cost to the client) and allocated through the drop down contracts within the consortium. A collaborative and cooperative process with the client enabled reaching an agreed solution to address the structures in an acceptable manner and not delay the schedule. The solution involved column "jackets" that provided additional structural support where required.</p> <p>A key action taken at the equity level by DTP's special purpose project company was to require a "fresh" design team (within the DBJV but composed of individuals who had not worked on the project previously) to perform a design check in a systematic manner and categorize the affected structures as either meeting code, structurally adequate based on engineering judgment, or needing retrofit/replacement.</p>

No.	Required Information	Response
	 <p><i>Rolling stock commissioning is currently underway, under the direction of John Laing's Director of Operations</i></p>	<p>An external consultant was retained by DTP to verify these findings. The findings were then communicated to RTD for their concurrence.</p> <p>John Laing played a key role as an independent, long-term equity investor. Given that the design-build parties were also majority owners of the O&amp;M joint venture, there was a concern that the design-build solution to the design problem might have adverse long-term O&amp;M consequences. John Laing's independent view was crucial to ensure that the agreed upon solution fully took into account long-term O&amp;M costs and did not impose a short-term solution on the project. An independent consultant was retained to analyze the solution, quantify likely O&amp;M impacts, and perform a risk analysis of the probability of future unidentified maintenance.</p> <p><b>Benefit:</b> The issue was resolved to the satisfaction of the client from both a quality and schedule perspective. Additionally, the client had the security of knowing that multiple layers of oversight were in place within the consortium to ensure an appropriate long-term solution was found.</p> <p><i>Rolling Stock Commissioning</i></p> <p><b>Challenge:</b> The rolling stock Electric Multiple Units – EMUs is currently being delivered to the site in batches of four per month, and the acceptance testing process is underway. John Laing has significant experience in delivering infrastructure and very early in the project identified that on time delivery of the rolling stock, as well as testing and commissioning, were key issues that would need to be closely monitored at the Developer level, due to the impact on schedule and quality of service.</p> <p><b>Solution:</b> John Laing facilitated project personnel located in Korea to ensure quality and on-time delivery of the rolling stock. Although the vehicle warranty package is strong, as long-term equity investor, John Laing bears ultimate risk for the long-term performance of the vehicles. The technical challenge is to be proactive to ensure any delays or quality issues are quickly addressed.</p> <p>As the construction phase transitioned into operational preparedness, John Laing recruited a career railroad operator with experience in the UK and US to join DTP as Director of Operations, as a seconded employee of John Laing.</p>

Colorado I-70 East Project

No.	Required Information	Response
		<p>This addition to the Developer staffing has provided support, encouragement, and challenge to the contractors based on his previous experience. In addition, DTP initiated contact with other transit agencies in North America who utilize rolling stock from the same supplier (Hyundai Rotem) to learn from their experiences during the commissioning period.</p> <p><b>Benefit:</b> To date the rolling stock is arriving on schedule and commissioning is proceeding smoothly. The strong oversight at the Developer level is helping to keep this critical path item on course.</p>
<b>V. Financial Information</b>		
(23)	Payment Mechanism:	<p><b>Construction payments:</b> A total of \$1.14 billion of payments are provided during construction. These are drawn down monthly by DTP subject to maximum cumulative utilization caps for each year, as well as a sub-cap for amounts utilized to fund financing costs. The total of these Construction Payment Amounts and Financing Payment Amounts represent 69% of the overall capital cost of the project.</p> <p>There are also \$44 million of service payments anticipated to be drawn during the construction period for operations of lines brought into service early.</p> <p><b>Service payments:</b> During operations, there are availability based payments with a number of unique characteristics. The Service Payment is equal to an Availability Adjusted Service Payment, less Performance Deductions, plus Special Events Adjustments.</p> <ul style="list-style-type: none"> <li>• The Availability Adjusted Service Payment is based on a Base Service Payment for each segment of the system, escalated as per an index weighed to labor sub-index, materials sub-index, and Consumer Price Index. The escalated Base Service Payment is adjusted in accordance with defined metrics for Rolling Stock Availability, On-Time Performance, and Station Availability (each discussed below).</li> <li>• Performance Deductions are assessed based on the number of "STOP" points assessed in a given period</li> <li>• Special Events Adjustments are provided for periods in which the Concessionaire is required to supply greater service than the baseline service plan, due to accommodating events.</li> <li>• The payment stream is also split into a TABOR Secured Services Payment and an Appropriated Services Payment stream. This is discussed in greater detail below.</li> </ul>

No.	Required Information	Response
		<p><b>Payment Deductions Regime:</b> The key performance metrics used to determine abatements to the Service Payment are:</p> <ul style="list-style-type: none"> <li>• Rolling Stock Availability Ratio</li> <li>• On-Time Performance Ratio</li> <li>• Station Availability</li> <li>• Service Task Order Points (“STOP”)</li> </ul>
(24)	Source(s) of Revenues or Payments:	<p>A substantial portion of the construction payments were funded by federal New Starts grants.</p> <p>The availability payments are funded by:</p> <ul style="list-style-type: none"> <li>• A subordinate pledge of regional sales tax revenue (TABOR Secured Services Payment portion of the availability payment only).</li> <li>• Annual appropriation obligation of RTD, which is funded backed by surplus sales tax revenue, farebox revenue, and other government grants (Appropriated Services Payment).</li> </ul>
(25)	Proposer Team Member(s) Equity Investment:	<p>John Laing’s investment is \$24.4 million, which is 45% of the overall equity commitment. The equity is secured by a letter of credit and is anticipated to be injected on August 1, 2015.</p>
(26)	Financing Method(s) and Value(s):	<p>The project was financed with PABs, in a total amount of \$397.8 million. The PABs include serial bonds maturing between 9 and 16 years after issue, as well as tranches of term (amortizing) bonds maturing 19, 24, and 31 years after issue. The PABs are rated BBB- (Fitch) and Baa3 (Moody’s).</p>
(27)	Key Financial and Funding Challenges and Solutions Implemented:	<p>During the financial close phase of the project, John Laing’s role within the consortium was to provide financial, technical, and commercial support to the financial close effort, based upon experience in UK and international rail/transport P3s. This included participating actively in the structuring and marketing process for the PABs (e.g., representing the consortium on the bond roadshows), supporting the completion of the Information Memorandum for investors, and finalizing the financing arrangements for the investors, and finalizing the financing arrangements.</p> <p style="text-align: center;"><i>Colorado Taxpayer’s Bill of Rights</i></p> <p><b>Challenge:</b> Under the Taxpayer’s Bill of Rights, any multi-year government financial obligation requires voter approval. Alternatively, the obligation must be subject to budgetary appropriation on an annual basis. Colorado voters did approve a limited amount of long-term financial obligation (not subject to appropriation) associated with the overall FasTraks project; however, any committed amounts in excess of the approved amount would be subject to another referendum. Therefore, a significant portion of the availability payment would be exposed to appropriations risk.</p>

No.	Required Information	Response
		<p><b>Solution:</b> To strike a balance between conserving TABOR space, but not over-exposing the project to appropriations risk, the annual service payment was split into two segments: (1) a TABOR Secured Service Payment, which was secured by a pledge of sales tax revenues (previously approved by voters) and which exceeded annual debt service obligations; and (2) the Appropriated Service Payment, which was subject to annual appropriations risk. This solution relieved lenders of appropriations risk. As 45% equity investor, John Laing carried out the necessary due diligence on the appropriations risk to bear this risk at the equity level and played a role in educating investors on this particular element of the overall project risk profile.</p> <p><b>Benefit:</b> This solution prevented the increased risk and cost of debt capital that would have resulted had lenders been exposed to appropriations risk.</p> <p>FRMG will leverage this Colorado experience as needed to ensure competitively priced financing for the project.</p> <p><i>Project Risk Profile</i></p> <p>First rail project to use municipal tax exempt bond issue.</p> <p><b>Challenge:</b> As the first rail P3 project to be funded via a municipal tax exempt bond issue, underwriters, rating agencies and investors were not familiar with the project specific risk profile. Some key areas of concern were the payment mechanism and the expected level of deductions; the high level of gearing given the perceived risks; and the 6-month debt service reserve account which, although fairly typical for P3 concessions, was considered low by U.S. municipal market standards.</p> <p><b>Solution:</b> John Laing utilized its rail expertise to ensure the Lenders Technical Advisor report was clear and that risks relating to the rolling stock procurement, testing, and operation were well understood. This included representing the consortium during the bond roadshows. In particular, the rating agencies' downside operations period performance scenario was carefully scrutinized by John Laing to ensure it reflected a reasonable downside level of rail underperformance.</p> <p><b>Benefit:</b> John Laing's experience marketing a complex PAB transaction helped the consortium reach a deeper pool of lenders who are comfortable with the project risks, equaling more demand for the bonds and lower cost of capital. John Laing will utilize this experience to support FRMG is doing the same if a bond solution is ultimately used on the project.</p>

No.	Required Information	Response
		<p style="text-align: center;"><i>Change in Concession Length</i></p> <p><b>Challenge:</b> The bid version concession agreement called for a term of approximately 45 years, which exceeded the anticipated useful life of the rolling stock. Procurement of replacement rolling stock during the term of the concession would have been quite complex, with difficult conflicts of interest between RTD (who would have paid for the new rolling stock) and DTP who would have been held accountable for the performance of the rolling stock.</p> <p><b>Solution:</b> Based on a solution proposed by the DTP consortium, RTD elected to shorten the concession period to match the expected life of the rolling stock, which required a significant re-structuring of the financial model and equity structure within a 59-day window between nomination of preferred bidder and financial close. Having executed a binding commitment to acquire 45% of the equity at financial close, John Laing was closely involved in the restructuring of the concession and obtained all approvals to invest within the tight financial close timeline.</p> <p><b>Benefit:</b> Clear and open dialogue regarding risk allocation between RTD and the Concessionaire led to a significant improvement in the overall value of the P3 approach for RTD. There is a much clearer allocation of risk as the Concessionaire is fully responsible throughout the concession length for rolling stock that it has procured. FRMG will approach the Project with the same spirit of collaboration to ensure CDOT and the Procuring Authorities structure the best possible allocation of risk.</p>




**Form F: Project Experience (I-4 Ultimate, Florida)**

**Proposer Name:** Front Range Mobility Group


**Core Proposer Team Member(s) Involved:**

- Equity Member: **John Laing Investments Limited**
- Lead Contractor
- Lead Engineer
- Lead Operator
- Joint venturer in Lead [Contractor][Engineer][Operator]: [Name]
- Affiliate(s) of [Equity Member (Name)] [Lead Contractor] [Lead Engineer] [Lead Operator]: [Name]

**Form F: Project/Transaction Description**

No.	Required Information	Response
<b><u>I. Background Information</u></b>		
(1)	Project Name:	I-4 Ultimate
(2)	Type of Facility:	Highway reconstruction and expansion, including addition of new Express Lanes
(3)	Owner/Procuring Authority:	Florida Department of Transportation (FDOT)
(4)	Brief Description of Project:  <i>I-4 Ultimate won the North American Transport Deal of the Year at the IJ Global Americas Awards 2014.</i>	<p>The I-4 Ultimate project is a design, build, finance, operate, and maintain project. It is the largest P3 project ever undertaken in the United States based on a construction value, of over \$2.3 billion. The project consists of the complete replacement of the I-4 mainline and the addition of two new express lanes in each direction throughout a 21-mile section in the Orlando metropolitan area, the reconstruction of 15 major interchanges, supply of ITS equipment and associated civil infrastructure, and construction of 145 bridges.</p> <p>John Laing Investments Limited is a 50% Equity Member of I-4 Mobility Partners, the Developer Special Purpose Company established to deliver the project.</p> <p>The project reached financial close in September 2014 and is currently under construction.</p>
(5)	Contract Term:	<p>Total Term Length: 40 years</p> <p>Start Date: September 4, 2014</p> <p>End Date: September 4, 2054</p>

Colorado I-70 East Project


No.	Required Information	Response																					
(6)	Current Status:	Under construction. NTP2 achieved on February 1, 2015.																					
(7)	<p>Key Dates and Milestones:</p> <table border="0"> <tr> <td style="padding-left: 40px;">Contract execution</td> <td>Anticipated/Contracted :</td> <td>Actual : September 4, 2014</td> </tr> <tr> <td style="padding-left: 40px;">Design Start</td> <td>Anticipated/Contracted : 1 month</td> <td>Actual : 1 month</td> </tr> <tr> <td style="padding-left: 40px;">Construction Start</td> <td>Anticipated/Contracted : 5 months</td> <td>Actual : 5 months</td> </tr> <tr> <td style="padding-left: 40px;">Substantial Completion</td> <td>Anticipated/Contracted : 76 months</td> <td>Actual : N/A</td> </tr> <tr> <td style="padding-left: 40px;">Operations Commencement</td> <td>Anticipated/Contracted : 5 months*</td> <td>Actual : 5 months</td> </tr> <tr> <td style="padding-left: 40px;">Final Completion</td> <td>Anticipated/Contracted : 79 months</td> <td>Actual : N/A</td> </tr> <tr> <td style="padding-left: 40px;">End of O&amp;M</td> <td>Anticipated/Contracted :</td> <td>Actual : N/A</td> </tr> </table> <p style="margin-left: 40px;">September 4, 2054</p> <p style="margin-left: 40px;"><i>*Note: O&amp;M during construction commenced upon achievement of NTP2 i.e. +5 months from contract execution</i></p>	Contract execution	Anticipated/Contracted :	Actual : September 4, 2014	Design Start	Anticipated/Contracted : 1 month	Actual : 1 month	Construction Start	Anticipated/Contracted : 5 months	Actual : 5 months	Substantial Completion	Anticipated/Contracted : 76 months	Actual : N/A	Operations Commencement	Anticipated/Contracted : 5 months*	Actual : 5 months	Final Completion	Anticipated/Contracted : 79 months	Actual : N/A	End of O&M	Anticipated/Contracted :	Actual : N/A	
Contract execution	Anticipated/Contracted :	Actual : September 4, 2014																					
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Final Completion	Anticipated/Contracted : 79 months	Actual : N/A																					
End of O&M	Anticipated/Contracted :	Actual : N/A																					
(8)	<p>Relevance to the Project:</p>  <p><i>John Laing has a key leadership role in the I-4 Mobility Partners team, including provision of the project's Chief Executive Officer. We are co-located with the client and DBJV in a "Hub Office".</i></p>	<p>As an Equity Member, John Laing played a key process role throughout the procurement and closing process, including active roles in the financial, commercial, technical, and insurance work streams. This included working closely with the lead contractor to determine the length of the construction schedule considering impact on commuters and the local communities; construction means and methods, Project Technical Enhancements, and best value considerations including developing an O&amp;M and lifecycle pricing model.</p> <p>Since financial close, John Laing has taken a leadership role in the Developer, which is co-located with FDOT and its advisors, the lead contractor and lead engineer and O&amp;M team adjacent to the project site. John Laing has seconded the Chief Executive Officer, Commercial Director and Construction Oversight Engineer working full time on the project and is closely involved daily in the delivery of the full technical scope outlined below.</p> <p>John Laing has contributed in these capacities to the project attributes listed below.</p>																					

No.	Required Information	Response
		<p style="text-align: center;"><b>DESIGN AND CONSTRUCTION ACTIVITIES</b></p> <p><b>Roadway expansion and reconstruction:</b> Similar to the I-70 East Project, this project involves reconstruction and widening of an existing highway under high traffic conditions. The project includes widening 21 miles of I-4 to three general use lanes, adding two express lanes in each direction, modification and construction of auxiliary lanes, braided ramps, crossroad bypasses and various geometric improvements to eliminate operational deficiencies caused by merge, diverge, and weaving segments along the corridor. Traffic speed must be maintained to 60 mph or greater. In addition, the scope of work includes reconstruction, widening, and milling and resurfacing of 23 intersecting streets.</p> <p><b>Demolition of existing infrastructure:</b> The construction of 145 bridges includes 71 demolition and replacements. The roadway bisects downtown Orlando, as well as several residential neighborhoods. Demolition activities will be conducted within short time frames to minimize disruption and with appropriate community notification.</p> <p><b>Major excavation work:</b> The project incorporates significant excavation activities, including dewatering for activities and laying drainage trunk lines in areas with a higher water table.</p> <p><b>Complex traffic management:</b> FDOT requires the maintenance of a minimum number of open lanes of traffic throughout construction. The lead contractor will add capacity early in the schedule to relieve congestion during construction and the lead contractor has developed clear traffic staging phases for each of the four major construction areas.</p> <p>Alternative routes will be available to drivers, including commuter rail. I-4 Mobility Partners is working closely with FDOT to promote use of these alternatives to reduce congestion. This has included making use of a website, email, and social media to publicize lane closures. For example, recently the project website had 4,717 visits, and 7,616 e-newsletter subscribers. A mobile phone application is in the final stages of development and when released, it will provide real-time traffic updates. We anticipate that lessons learned from John Laing's experience with these strategies on the I-4 project will be applied on the I-70 East Project, which will require similar communication during construction.</p>

No.	Required Information	Response
		<p><b>Construction staging:</b> Locations for concrete batch plants, asphalt plants, and key site yards have been located within the right-of-way, including at key interchanges, to provide staging areas and set down space for equipment and materials.</p> <p><b>Coordination with railroad and/or utility:</b> There are over 1,200 utility conflicts with 41 utility owners. I-4 Mobility Partners is responsible for the costs of all relocation work.</p> <p style="text-align: center;"><b>OPERATIONS AND MAINTENANCE ACTIVITIES</b></p> <p><b>Roadway pavement and associated infrastructure under similar environmental conditions:</b> The Developer is responsible for O&amp;M during both construction and the operations period. The general scope of O&amp;M includes Service Patrol Operations, 24/7 incident response, routine pavement maintenance, traffic control, containment management, environmental compliance, permit evaluation to assist FDOT, structures inspection and maintenance including toll related structures, and ITS interface with toll systems.</p> <p>All O&amp;M activities are performance driven as is standard in P3 project delivery.</p> <p>I-4 Mobility Partners took over the O&amp;M responsibilities from FDOT at the Commencement of Construction Works (NTP2). O&amp;M responsibilities were passed down to the lead contractor during construction, which was determined by the project team to be the most efficient approach to fulfilling these obligations, after which it becomes the direct responsibility of the Developer entity at substantial completion. I-4 Mobility Partners will pursue a strategy of subcontracting the O&amp;M and rehabilitative maintenance activities to qualified providers, and will work with Infrastructure Corporation of America during the initial 5-year term. The Developer will retain the ultimate long-term pricing and quality risk.</p> <p>During the development phase, John Laing carried out considerable analysis on the appropriate delivery of O&amp;M during construction. Ultimately the best value for the bid was obtained by having an O&amp;M provider subcontracted to the lead contractor. We anticipate that this analysis and lessons learned will inform the development of the I-70 East Project, which has a similar scope of work during construction.</p>

No.	Required Information	Response
		<p style="text-align: center;"><b>WORKFORCE, SUBCONTRACTOR AND STAKEHOLDER ENGAGEMENT AND ENVIRONMENTAL MONITORING AND MITIGATION ACTIVITIES</b></p> <p><i>Workforce development programs:</i> On-the-job training is being utilized on the project. The purpose of the program is the movement of women, minorities, and disadvantaged persons into journey level positions to ensure that a competent workforce is available to meet highway construction hiring needs, and to address the historical underrepresentation of members of these groups in highway construction skilled crafts.</p> <p>The OJT program is aimed at developing full journeymen in the types of trade and job classifications involved in the work. The trainee goal for the project is 250 people. It is anticipated that 25% of apprentices or trainees in each occupation will be in their first year of apprenticeship or training.</p> <p><b>Achievement or exceeding goals relating to participation of disadvantaged businesses, small businesses and/or other businesses that are subject to equivalent programs</b></p> <p>The DBE goal for the project is 9% of the project costs and the non-DBE small businesses goal is 3%. These goals apply separately to each the design, construction, and O&amp;M responsibilities of the project.</p> <p>Although design and construction activities have only recently commenced, to date design activity is tracking well above goals with \$20.4 million of design work (15.6%) having been committed to DBE or SBE firms, compared to a goal of \$15.7 million (12%).</p> <p style="text-align: center;"><b>ENVIRONMENTAL MONITORING AND MITIGATION ACTIVITIES</b></p> <p><i>Noise monitoring and mitigation in urban environments:</i> I-4 Mobility Partners has focused on providing comprehensive notifications to the community for disruptive construction activity. For example, pile driving activity has recently begun. Notices have gone out to the potential affected properties and businesses, including through vibration surveys and FDOT mailings. Critical attractions, high-density business districts, hospitals, nursing homes, schools, and other high profile public and private entities within and outside of the 200-foot notification area are receiving more face-to-face notice and educational visits.</p>

Colorado I-70 East Project

No.	Required Information	Response
<b>II. Description of Team Member Involvement</b>		
(9)	Proposer Team Member(s) (or Affiliate(s)) Involved:	John Laing Investments Limited
(10)	Role of Proposer Team Member(s) (or Affiliate(s)):	John Laing is a 50% Equity Member of I-4 Mobility Partners, the developer established to deliver the I-4 Ultimate Project. John Laing invested or committed to invest equity at financial close and participated throughout the procurement process.
(11)	Key Personnel Involved, Roles & Responsibilities:	N/A
<b>III. Reference</b>		
(12)	Name:	Julie Adamson
(13)	Title & Employer (Current):	Public-Private Partnerships Coordinator, Office of Comptroller - Project Finance; Florida Department of Transportation
(14)	Title & Employer (at time of project/transaction):	Public-Private Partnerships Coordinator, Office of Comptroller - Project Finance; Florida Department of Transportation
(15)	Phone & Email	(850) 414-4623 julie.adamson@dot.state.fl.us
(16)	Location & Time Zone:	Florida, USA Eastern Standard Time
(17)	Other:	N/A
<b>IV. Technical Information</b>		
(18)	Construction Value:	\$2.323 million
(19)	Completion within/above Budget:	Design Build Contract is on a fixed-price, date-certain basis. Construction commenced in February 2015.
(20)	O&M Value:	\$23.5 million
(21)	Length of Road under Operation (centerline miles):	21 miles
(22)	Key Technical Challenges and Solutions Implemented:	<p><b>Optimization of Construction Schedule</b></p> <p><b>Challenge:</b> I-4 Ultimate is the largest availability-based P3 project in the United States to date. The sheer scope of the work, as well as the payment structure proposed by the client, which involved significant capital contributions in 2021 and 2022, resulted in the possibility of an extended construction schedule. This had implications not only for the lead contractor but also for the Equity Members through the cost of financing (negative carry) and the design of the liquidated damages regime with the lead contractor. Furthermore, construction schedule was identified by the client as an evaluation factor, with some weighting attached to a shorter schedule.</p>
	 <p><i>I-4 Ultimate is the largest availability-based P3 project in the United States to date (in capex terms).</i></p>	

No.	Required Information	Response
		<p><b>Solution:</b> John Laing led a collaborative approach with the DBJV to consider the impact of schedule on both financing source (bank or bond) and financing costs. John Laing supported a structured approach to assist the lead contractor in determining the risk implications of a shorter or longer construction schedule, together with possible impacts on pricing. This collaborative approach led to the determination that a construction-term bank financing strategy, coupled with a longer duration construction schedule, provided the lowest cost solution with the best impact under the client’s evaluation criteria.</p> <p><b>Benefit:</b> The project team received a solution that was optimized from a cost and schedule point of view. Although ultimately the schedule was longer in duration, it was outweighed by the cost savings achieved for FDOT. FRMG will similarly evaluate the term construction for the Project to deliver the most optimal solution to CDOT</p> <p><i>Integration of ITS and Electronic Tolling Equipment</i></p> <p><b>Challenge:</b> As a tolled roadway, the I-4 Project required the installation, integration, and testing of ITS and tolling equipment. This included the installation of civil infrastructure (gantries, control buildings), ITS equipment (dynamic messaging boards, CCTV cameras), and the tolling equipment itself. FDOT required that the developer accommodate a third-party tolling contractor to install the tolling equipment during the construction period, and further required that the concessionaire be responsible for the testing and end-to-end integration of the ITS and tolling equipment.</p> <p><b>Solution:</b> I-4 Mobility Partners worked collaboratively with FDOT during the procurement period to arrive at an equitable risk allocation for the end-to-end testing. The benefit to the client of having a single party responsible for the end-to-end testing was clear. From the outset, I-4 Mobility Partners accepted that it would perform this role. We worked with FDOT to develop appropriate contractual methods to deal with delays or defects caused by the third-party tolling equipment supplier. Within the consortium, the team ensured that the technical requirements were well understood by the DBJV and by lenders. Furthermore, we clearly demonstrated to lenders that the scheduling buffer afforded to the end-to-end testing was adequate and did not pose a significant completion risk.</p>

No.	Required Information	Response
		<p><b>Benefit:</b> FDOT obtained the benefit of a “single point of responsibility” for the testing and integration of the ITS and tolling equipment. FRMG team members will leverage their collective experience, including the developer on the project, to deliver similar scope on the project if required.</p>
<b>V. Financial Information</b>		
(23)	Payment Mechanism:	<p>There are three forms of payment from FDOT to the developer:</p> <ul style="list-style-type: none"> <li>• 17 Periodic Payments during construction totaling \$1.035 million, which will be made on fixed dates on the sole condition that the aggregate amount of Periodic Payments made will not exceed 70% of the value of work completed. The first Periodic Payment of \$45 million will be made upon 630 days following financial close, and the 17th and final Periodic Payment for \$132.5 million will be made on the Effective Date plus 1,990 days.</li> <li>• 2 Final Acceptance Payments (FAP) totaling \$688 million. The first FAP of \$300 million will be made on the earliest of Final Acceptance or July 1, 2020 (whichever is later). The Second FAP will be made on July 1 of the Fiscal Year immediately following the Fiscal Year in which the First FAP Date occurs, which is scheduled to occur on July 1, 2021 (i.e., 92 days following Final Acceptance)</li> <li>• Availability Payments from Substantial Completion to the End of Term paid monthly. These are subject to deductions according to the performance regime. The performance regime is driven by ‘Instances of Noncompliance,’ ‘Noncompliance Points,’ ‘O&amp;M Violation Adjustments,’ and ‘Unavailability Adjustments.’</li> </ul> <p>74% of total construction cost will be met by public sector contributions. As Equity Member, John Laing worked closely with the lead contractor in order to optimize the construction works and payment schedules to maximize use of these public capital contributions as sources of funds.</p> <p>35% of the monthly Availability Payment is linked to inflation (Consumer Price Index). The remainder is flat (not indexed).</p>
(24)	Source(s) of Revenues or Payments:	All payments are subject to availability of funds appropriated by the state of Florida.
(25)	Proposer Team Member(s) Equity Investment:	John Laing’s investment is \$30.3 million, which is 50% of the overall long-term equity commitment. This was committed to the project in the form of an Equity Bridge Loan at Financial Close.



No.	Required Information	Response
(26)	Financing Method(s) and Value(s):	<p>The project was financed using:</p> <ul style="list-style-type: none"> <li>• Short-term commercial bank debt</li> <li>• Short-term and long-term TIFIA loan tranches</li> <li>• Equity</li> </ul> <p>The 7-year, \$480.9 million bank debt is provided by CIBC, Credit Agricole, KfW IPEX-Bank, MUFG, Société Générale and Svensk Exportkredit and is priced at an all-in interest rate of 3.73% (including swap margin).</p> <p>The 7-year TIFIA Tranche A totals \$127.3 million and is priced at an all-in interest rate of 2.32%. TIFIA Tranche B, which has a 38-year tenor, totals \$822.2 million and is priced at an all-in interest rate of 3.17%.</p> <p>The project was assigned ratings of Baa1 (Moody's) and BBB (Standard and Poors), which represent a robust financing structure and strong risk allocation and mitigation. These strong investment grade ratings exceeded the minimum requirements of both TIFIA and the client Request for Proposals by two notches and one notch, respectively.</p>
(27)	Key Financial and Funding Challenges and Solutions Implemented:	<p><b><i>Closing USDOT's Third Largest TIFIA Loan in History</i></b></p> <p><b>Challenge:</b> I-4 Ultimate is funded by the largest TIFIA loan on an availability-based P3 to date, and the third largest TIFIA loan in history. The size of the TIFIA funding tranches were maximized to provide the lowest cost of financing possible to the client. The client had a strong desire to reach financial close within a 4 and 1/2-month period following the announcement of preferred bidder. This posed a challenge due to the complexity of the TIFIA loan package, particularly over the summer months where credit committee meetings operated on a less frequent basis. Therefore, working collaboratively with FDOT, TIFIA, and commercial lenders to hit key milestones in the Financial Close schedule was of critical importance.</p>

No.	Required Information	Response
		<p><b>Solution:</b> As 50% Equity Member, John Laing took a proactive and transparent approach with TIFIA. Promptly following the announcement of Preferred Bidder, the team provided TIFIA with a full due diligence package and guided them through key issues such as O&amp;M pricing, security package, and understanding technical risks. The team also ensured equity resources were fully devoted to achievement of key TIFIA milestones by promptly addressing other elements of the Financial Close process to ensure they were not a distraction. For example, a full contract with the lead contractor was developed prior to bid, and term sheets for the O&amp;M contractor and the quality assurance consultant were finalized early in the process. The team also brought in supplementary resources from our London and Australia offices to ensure timely achievement of milestones.</p> <p><b>Benefit:</b> The project reached financial close on September 4<sup>th</sup>, 2014, less than 4.5 months following notification of Preferred Bidder in late April 2014, and within the client's desired timeframe. This experience will be highly relevant to the I-70 East Project which will likely utilize TIFIA funding as well.</p> <p><b>Funding Flexibility</b></p> <p><b>Challenge:</b> Although the project benefited from a PABs allocation, due to the length of the construction period and the timing of FDOT's public capital contributions, it became apparent that a bond solution resulted in a high amount of negative carry.</p> <p><b>Solution:</b> During the procurement period, I-4 Mobility Partners ran a bank funding process simultaneously with the bond funding process. Term sheets and full due diligence packages were prepared for both bank lenders and bond underwriters. At the conclusion of the funding process and following finalization of construction schedule and draw curve, a bank solution provided better value for money. However, we still obtained credit approvals from two leading bond underwriters for a fully financed PAB solution in the scenario of unforeseen bank market disruption. This offered an extra layer of robustness and contingency to our client prior to financial close.</p> <p>The bank tranche represented the first commercial bank deal on a P3 project in the US since 2012, including a club of Canadian, European, and Japanese lenders. The 125bp margin set a new benchmark in the market and was</p>

No.	Required Information	Response
		<p>significantly lower cost of financing of the construction facility than that achieved by all other bidders.</p> <p>This funding solution significantly reduce the client's exposure to interest movements through fixed credit and hedging margins that were not subject to market changes over the full bid commitment period. Furthermore, surplus bank debt and hedge capacity was raised at RFP stage to deal with a variety of circumstances, including increases in interest rates and changes in scope.</p> <p><b>Benefit:</b> FDOT obtained an optimized financing solution. The bond underwriter commitments and excess bank funding available provided additional robustness, helping to assure a timely financial close. Given the scale and scope of the I-70 East Project process, a bank solution may be competitive and John Laing's experience in running multiple lending groups will help obtain best value for money for CDOT.</p> <p><i>Ensuring Affordability on the Project Based on Available Public Funds</i></p> <p><b>Challenge:</b> The client provided an annual "Availability Payment Upset Limit" threshold, representing an affordability cap. A bid that exceeded the upset limit in any year would have been non-compliant. The upset limit was extremely challenging, as evidenced by the fact that two out of the four bidders failed to meet it.</p> <p><b>Solution:</b> In order to meet the upset limit, a comprehensive price review exercise was undertaken with the lead contractor and the O&amp;M contractor. These were highly transparent, collaborative exercises where equity pricing decisions were also put on the table and mutually acceptable trade-offs were agreed to in order to collectively meet the requirements of the upset limit. All cost categories were thoroughly challenged to find the required savings and deliver best value to the client.</p> <p><b>Benefit:</b> The exercise was successful in driving sufficient cost savings to provide the client with the full scope of the project, within the affordability envelope that they had identified. Regardless of whether CDOT and the Procuring Authorities choose to use an "affordability envelope" FRMA's ability to work collaboratively and achieve cost savings across the team will be vital to obtaining value for money for CDOT.</p>

# Form F LEAD CONTRACTOR MEMBERS



AREA ELEMENTARY SCHOOL



## Lead Contractor Project Experience

FRMG's Project Experience demonstrates our significant and relevant experience in projects that have similar technical complexities and challenges to the I-70 East Project.	NEAH	I-595	NWAH	I-405	A-30	Eastside
<b>1. TECHNICAL CRITERIA</b>						
b. Relevance the Project						
i. design and construction and operations and maintenance activities:						
A. With respect to Design and Construction activities						
i. roadway expansion and reconstruction, including interchange reconstruction	X	X	X	X	X	
ii. demolition of existing infrastructure in urban environments	X	X	X	X	X	X
iii. major excavation work, including groundwater considerations and/or drainage requirements	X	X	X	X	X	X
iv. complex traffic management in urban areas	X	X	X	X	X	X
v. construction staging in confined spaces		X	X	X	X	X
vi. structures that include ventilation and/or fire life safety considerations		X			X	X
vii. coordination with railroad and/or utility companies	X	X	X	X	X	X
B. with respect to operations and maintenance activities:						
I. Roadway Pavement and associated Infrastructure under environmental conditions that are similar to those affect the project.	X	X	X		X	
II. Interfaces with adjacent road operators	X	X	X		X	
ii. workforce, subcontractor and stakeholder engagement and environmental monitoring and mitigation activities						
I. workforce development programs, including partnerships with local community organizations and/or apprenticeship programs	X	X	X	X	X	X
II. achievement of or exceeding goals relating to participation of disadvantaged businesses, small businesses and/or other business that are subject to equivalent programs	X	X	X	X	X	X
B. with respect to environmental monitoring and mitigation activities:						
I. air quality monitoring and mitigation in urban environments	X	X		X	X	X
II. noise monitoring and mitigation in urban environments	X	X		X	X	X
<b>2. FINANCIAL CRITERIA</b>						
2.1. Financial Qualifications and Capacity						
a. Relevant Financing experience						
i. the project's financing included a TIFIA loan that was closed by the project developer and not a public authority		X				
ii. the project's financing used PABs						
iii. the financed project was a highway or road project	X	X	X	X	X	X
iv. the financed project was located in North America	X	X	X		X	


Colorado I-70 East Project

**Form F: Project Experience (NEAH)**

**Proposer Name:** Front Range Mobility Group

- Core Proposer Team Member(s) Involved:**
- Equity Member: **HOCHTEIF PPP Solutions North America, Inc.**
  - Equity Member: **ACS Infrastructure Development, Inc. (through Affiliate ACS Infrastructure Canada, Inc.)**
  - Lead Contractor
  - Lead Engineer
  - Lead Operator
  - Joint venturer in Lead Engineer: **AECOM Technical Services, Inc.**
  - Joint venturer in Lead Contractor: **Flatiron Constructors, Inc. (through Affiliate Flatiron Constructors, Canada Limited, Inc.)**
  - Joint venturer in Lead Contractor: **Dragados USA, Inc. (through Affiliate Dragados Canada, Inc.)**
  - Affiliate of Equity Member and joint venture in Lead Contractor: **ACS Infrastructure Development, Inc., ACS Infrastructure Canada, Inc.**
  - Affiliate of joint venture in Lead Contractor: **Flatiron Constructors Inc., Flatiron Constructors, Canada Limited.**

**Form F: Project/Transaction Description**

No.	Required Information	Response
<b>I. Background Information</b>		
(1)	Project Name:	Northeast Anthony Henday Drive
(2)	Type of Facility:	Construction and expansion/rehabilitation of a limited access highway with significant structures works
(3)	Owner/Procuring Authority:	Alberta Transportation
(4)	Brief Description of Project: 	<p>The Northeast Anthony Henday Drive (NEAH) project in Alberta, Canada includes the design, construction, finance, operations, maintenance, and rehabilitation of approximately 17 miles of new six- and eight-lane divided freeway with 47 bridges in total, including two bridges across the North Saskatchewan River. The North Saskatchewan River bridges will stretch almost 1,000 feet. The southbound bridge includes a pedestrian and bicycle bridge suspended below the main deck.</p> <p>This project represents the largest single transaction entered into by Alberta Transportation. The transaction reached commercial and financial close on May 8 and May 11 2012, respectively. The design of the project is currently over 95% complete and construction is approximately 69% complete with substantial completion scheduled for October 1, 2016.</p>

*The NEAH project is a prime example of the integrated project management experience and capabilities of FRMG, as the tam working on it includes ACS, HOCHTIEF, Flatiron, Dragados, and AECOM Design performing very similar roles to those anticipated for the I-70 East Project.*

**Colorado I-70 East Project**

No.	Required Information	Response												
		<p>The team working on the NEAH project includes ACS, HOCHTIEF, Flatiron, Dragados, and AECOM Design performing very similar roles to those anticipated for the I-70 East Project. This will yield significant benefits for the Project as the team members are already collaborating efficiently with each other in a partnership framework today.</p> <p>This \$1.1-billion project, located within important agricultural, commercial and industrial areas, includes the construction of 5.6 miles and upgrading and expansion of 11.2 miles of existing six- and eight-lane divided roadway (totaling over 200 lane miles of highway works). The project also included significant structures works, including twin 1,000-foot bridge structures over the North Saskatchewan River and 47 additional bridge structures including 9 interchanges and 10 flyovers (8 of which are over railways).</p>												
(5)	Contract Term:	<p>Total Term Length: Construction: 4 Years O&amp;M: 30 Years</p> <p>Start Date: May 2012 End Date: October 2046</p>												
(6)	Current Status:	<p>Design is 95% Complete Construction is 69% Complete</p>												
(7)	<p>Key Dates and Milestones:</p> <p>Contract Execution Design Start Construction Start Substantial Completion Final Completion End of O&amp;M</p>	<table border="0"> <tr> <td>Anticipated/Contracted: May 2012</td> <td>Actual: May 2012</td> </tr> <tr> <td>Anticipated/Contracted: 2 months</td> <td>Actual: 2 months</td> </tr> <tr> <td>Anticipated/Contracted: June 2012</td> <td>Actual: June 2012</td> </tr> <tr> <td>Anticipated/Contracted: 44 months</td> <td>Actual: N/A</td> </tr> <tr> <td>Anticipated/Contracted: 44 months</td> <td>Actual: N/A</td> </tr> <tr> <td>Anticipated/Contracted: 44 months</td> <td>Actual: N/A</td> </tr> </table>	Anticipated/Contracted: May 2012	Actual: May 2012	Anticipated/Contracted: 2 months	Actual: 2 months	Anticipated/Contracted: June 2012	Actual: June 2012	Anticipated/Contracted: 44 months	Actual: N/A	Anticipated/Contracted: 44 months	Actual: N/A	Anticipated/Contracted: 44 months	Actual: N/A
Anticipated/Contracted: May 2012	Actual: May 2012													
Anticipated/Contracted: 2 months	Actual: 2 months													
Anticipated/Contracted: June 2012	Actual: June 2012													
Anticipated/Contracted: 44 months	Actual: N/A													
Anticipated/Contracted: 44 months	Actual: N/A													
Anticipated/Contracted: 44 months	Actual: N/A													
(8)	Relevance to the Project:	<p>The NEAH project demonstrates FRMG's ability to work together on projects with similar challenges as the I-70 East Project. The project is currently on time and on schedule. It demonstrates our ability to work together successfully across equity, design, construction, and operations and maintenance on a P3 project over \$1 billion in North America.</p>												

No.	Required Information	Response
		<p>The Equity Members, led by ACS and HOCHTIEF, successfully led the process to reach financial close of this project and implemented a planned financial package that combined a widely distributed placement of senior secured bonds and equity. The structure selected resulted in relationships with relevant players on the bond market, providing FRMG Equity Members ACSID and HOCHTIEF with unique access to different opportunities within this market that could be leveraged for the project.</p> <p><b>Roadway expansion and reconstruction:</b> Construction and rehabilitation of approximately 16.8 miles of divided freeway that included both new highway construction and roadway expansion. Similar to the I-70 East Project, operations and maintenance is required along the NEAH project during construction on the existing facility, as well as on the new construction.</p> <p><b>Demolition of existing infrastructure:</b> Extensive demolition of 14 bridges was completed on the project.</p> <p><b>Major excavation work:</b> The project includes over 15 million cubic yards of embankment and fill combined.</p> <p><b>Traffic management:</b> Traffic management was planned and coordinated with an in-house team that included both design and construction representatives to ensure optimal solutions for working in and around heavy existing traffic flows. A website portal was used to communicate timelines for traffic staging and detours. Construction on the existing facility will involve extensive traffic staging to open new infrastructure segments to traffic up to 3 years prior to final traffic availability to maintain traffic flow while reconstructing existing roadway</p> <p><b>Coordination with railroad and/or utilities:</b> The project includes significant coordination with 500+ utility owners, including major pipelines. Specifically, coordination efforts for structures over and around railroads are significant with 8 of 10 major flyovers for the project being over railroads.</p>



		<p style="text-align: center;"><b>OPERATIONS AND MAINTENANCE ACTIVITIES</b></p> <p>ACS and HOCHTIEF determined that the best value would be obtained by subcontracting most O&amp;M responsibilities during the operations period and assigning O&amp;M during construction to the Lead Contractor joint venture, each on a back-to-back basis. To achieve full compliance and performance of the activities, the O&amp;M provider guaranteed performance and provided liquid security equal to 75% of the annual operating fee.</p> <p>The concession team, including Equity Members HOCHTIEF and ACS, as well as Lead Contractor members Flatiron and Dragados, worked collaboratively with the O&amp;M provider (during operations) and designer AECOM to analyze the project traffic volumes/truck distribution across the new lanes to determine the optimal pavement structure (i.e., to meet the technical requirements over the project's 30-year operations stage while minimizing the whole-life cost), which included an innovative design utilizing recycled aggregates and oils (up to 10% of the new asphalt pavement).</p> <p><b>Roadway pavement and associated infrastructure under similar environmental conditions:</b> Severe winter and climate conditions on the NEAH project are similar to the conditions on the I-70 East Project. O&amp;M in the construction period (currently underway) is managed by the Lead Contractor members, Flatiron and Dragados, who may leverage this experience on the I-70 East Project to support the provisions of O&amp;M services during construction.</p> <p><b>Interfaces with adjacent road operators:</b> The project requires coordination with adjacent operators/owners along the system (which is comprised of West, South West, South East and East legs of the right road). The DBJV has contracted with an O&amp;M contractor who is also responsible for the maintenance along the other ring road segments, creating significant efficiencies. Additionally, there are cooperation initiatives with key stakeholders including Alberta Highways with regard to pavement maintenance, for example.</p>
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**Colorado I-70 East Project**

II. Description of Team Member Involvement		
(9)	Proposer Team Member(s) (or Affiliates(s)) Involved:	<p><b>HOCHTIEF PPP Solutions North America, Inc.</b> was a 25% member of the Lead Developer: They are now responsible for providing support services and oversight to the Project Company and manages HOCHTIEF's investment. HOCHTIEF PPP Solutions GmbH (direct parent of HOCHTIEF PPP Solutions North America Inc.) is 25% Equity Member of the Project Company. HOCHTIEF AG is Financially Responsible Party for HOCHTIEF PPP Solutions entities and Flatiron.</p> <p><b>ACS Infrastructure Canada, Inc. (ACSIC):</b> An Affiliate of ACS Infrastructure Development, Inc. (ACSID), Equity Member of FRMG. Both ACSIC and ACSID are wholly owned North American subsidiaries of ACS SyC, a Core Proposer Team Member and Financially Responsible Party to ACSID. ACSIC is a 25% Equity Member of the consortium. Dragados Canada Inc., an Affiliate of ACSIC (and ACSID) held 33.75% of the Lead Contractor, thus satisfying the relevant threshold within (3)(a) of this Form F. ACSID and ACSIC share key resources and personnel in pursuing and managing concessions in North America. ACSID will benefit from its sister company ACSIC's experience on the NEAH project will be closely involved in developing and managing the I-70 East Project.</p> <p><b>Flatiron Constructors Canada Limited, a subsidiary of Core Proposer Team Lead Contractor Member Flatiron Constructors, Inc.,</b> is the managing partner for the DBJV with a 33.75% share.</p> <p><b>Dragados Canada, Inc. (DCA):</b> An Affiliate of Dragados USA, Inc. (DUSA). Both DCA and DUSA are wholly owned North American subsidiaries of Dragados, S.A., a Core Proposer Team member and Financially Responsible Party to Lead Contractor member DUSA. DCA acted as the managing partner of the Lead Contractor joint venture with 33.75% participation. DUSA will benefit significantly from its sister company DCA's experience on the NEAH project given the very close coordination between the two entities with respect to P3 projects in North America.</p> <p><b>AECOOM Technical Services, Inc.</b></p>
(10)	Role of Proposer Team (or Affiliates(s)) Member(s):	<p><b>HOCHTIEF PPP Solutions North America, Inc.:</b> Equity Member (25%). HOCHTIEF has been involved from the procurement stage through award, closing and now the construction period. HOCHTIEF acted as the lead Equity Member.</p>

**Colorado I-70 East Project**

		<p><b>ACS Infrastructure Canada Inc.:</b> (Affiliate of ACS Infrastructure Development, Inc.): Equity Member (25%). ACSIC has been involved as an Equity Member from the procurement stage through award, closing and now the construction period.</p> <p><b>Flatiron Constructors Canada Limida (FCCL):</b> A subsidiary of Lead Contractor Member Flatiron Constructors, Inc., is the managing partner with 33.75% share.</p> <p><b>Dragados Canada Inc.:</b> (Affiliate of Dragados USA, Inc.): Managing Lead Contractor member (33.75%).</p> <p><b>AECOM Technical Services, Inc.:</b> Lead Designer (50%)</p>
(11)	Key Personnel Involved, Roles & Responsibilities:	<p>Kent Peyton, proposed Design-Build Manager for the I-70 East Project, is the project manager leading the NEAH project. He will transfer his knowledge and experience of delivering successful projects to the I-70 East Project.</p> <p>Mike Smith (ACS), proposed O&amp;M Manager for the I-70 East Project, was involved in structuring the O&amp;M program. He cooperated closely with Heribert Bodarwe (HOCHTIEF) who was also actively involved in structuring the O&amp;M Program. Heribert will support Mike on this Project. This proven structure will create significant efficiencies.</p>
<b>III. Reference</b>		
(12)	Name:	Tom Loo, P. Eng.
(13)	Title & Employer (Current):	Executive Director Major Capital Projects
(14)	Title & Employer (at time of project/transaction):	Executive Director Major Capital Projects
(15)	Contact Info Phone Email	+1 (780) 415-4876 <a href="mailto:Tom.Loo@gov.ab.ca">Tom.Loo@gov.ab.ca</a>
(16)	Location Time Zone:	4999-98 Avenue – 3 <sup>rd</sup> Floor, Edmonton, AB Canada T6B 2X3 Mountain Standard Time
(17)	Other:	
<b>IV. Technical Information</b>		
(18)	Construction Value:	\$1.1 billion
(19)	Completion within/ above Budget:	Ongoing – completion expected October, 2016
(20)	O&M Value:	\$12.46 million /year
(21)	Length of Road under Operation (centerline miles):	16.8 Miles

**Colorado I-70 East Project**

<p>(22)</p>	<p>Key Technical Challenges and Solutions Implemented:</p>  <p><i>The NEAH project is the largest single provincial road project ever undertaken in the Province of Alberta</i></p>	<p><b><i>Largest Road Project Undertaken by the Province</i></b></p> <p><b>Challenge:</b> The NEAH project is the largest single provincial road project ever undertaken in the Province of Alberta, and included a number of key challenges, such as significant structures work, operations during construction and severe winter weather.</p> <p><b>Solution:</b> The design-build team divided the project into five construction segments to accommodate and optimize design development, environmental permitting, utility relocations, staffing, construction sub-trades and traffic management, allowing dedicated teams to concentrate on advancing the design and construction works for each segment to enable fast track delivery of the project. This complex scheduling and project management approach was implemented from the outset of the project to comply with key technical requirements during the construction period which included; maintaining access to all properties affected by construction and maintaining existing traffic movements at all interchanges and traffic detour standards on effected roadways.</p>
<p>(22)</p>		<p><b>Benefit:</b> The segmentation of the project is allowing for the implementation of an early construction completion certification process, which confirms all elements have been constructed as designed, completion of all as-built drawing packages, and appropriate sign-off of completed works by the Project Company and the authority allowing for the early opening of these sections. FMRG will utilize similar approaches on the I-70 East Project that will provide flexibility and effective allocation of resources, ensuring the I-70 East Project is completed as efficiently and quickly as possible.</p> <p><b><i>Severe Weather Delay and Mitigation Approach</i></b></p> <p><b>Challenge:</b> In June 2013, significant rains across Alberta caused the North Saskatchewan River to experience a 30-year flood event resulting in a rise in the water level of 9 feet breaching the cofferdam and flooding the in-river job site at the twin bridge crossing. This event caused the construction works of the bridges to be delayed for more than 8 weeks.</p>

		<p><b>Solution:</b> The design-build team developed a revised schedule that required crews working 7 days a week, in double shifts, in order to recover from the delay and advance the construction works to be done within the original short in-river works window for the North Saskatchewan River associated with the relevant CEAA, Nav Waters, and Fisheries and Oceans Canada environmental permits. Through constructive negotiations with Alberta Transportation and Nav Waters, the Project Company and design-build team were permitted to extend the in-water construction season.</p> <p><b>Benefit:</b> The challenges faced by this event have been overcome in large part by applying the comprehensive set of management systems and plans that were implemented at the outset of the project and have been updated on an ongoing basis since then. These include the Construction Quality Management Plan, the Environmental Management System, the Safety Program, Environmental Construction Operations Plans and the Design Quality Management Plan. FRMG, comprised of two of the same Lead Contractor Members and Equity Members, will implement similar, tailored management systems and plans on the Project to effectively mitigate project risks and overcome unforeseen challenges as they arise.</p>
<p><b>V. Financial Information</b></p>		
(23)	<p>Payment Mechanism:</p>	<p><u>Availability Payment:</u> The concessionaire will receive monthly availability payments during the operation period commencing upon opening of the project to traffic for a 30-year period. These monthly payments are comprised of a Capital Payment and an O&amp;M Payment (which includes the Major Rehabilitation Payment, the New O&amp;M Payments and Existing O&amp;M Payments). Monthly payments will be subject to various adjustments including adjustments based on traffic volume and performance/availability criteria.</p> <p><u>Construction Progress Payments:</u> The Province will make \$739 million in payments during construction (approximately 70% of the total construction costs) payable beginning with 30% completion and continuing quarterly up until 90% completion based on percent complete. The Province will also make a final progress payment once the project is open to traffic.</p>

Colorado I-70 East Project

		<p><u>Deduction Regime:</u> The concession agreement includes deductions to the availability payments for several non-compliance events due to performance and maintenance of the project facility, level of service, and highway availability levels.</p> <p><u>Inflation:</u> The monthly O&amp;M Payment payable by the Province will be indexed to the Maintenance Price Index prepared by Alberta Transportation.</p>
(24)	Source(s) of Revenues or Payments:	During the operations period, the concessionaire will receive availability payments that are split between Capital Payments (cost of debt service and equity payments) and O&M Payments, made in single, monthly payment (subject to deductions as noted above).
(25)	Proposer Team Member(s) Equity Investment:	HOCHTIEF's investment is \$14.4 million, or 25% of the overall long-term equity commitment. ACS's investment is \$14.4 million, or 25% of the overall long-term equity commitment. Equity was committed to the project in the form of a letter of credit at financial close.
(26)	Financing Method(s) and Value(s):	<p>The financial structure of the project included Senior secured A- rated taxable bonds in the amount of \$427 million and \$58 million of total equity. The bonds were issued in May 2012 with an average life of 22.6 years and a maturity date of March 31, 2046 (the final settlement date). The bonds are rated A (low) by Dominion Bond Rating Service (DBRS) and A- by Standard &amp; Poor (S&amp;P).</p> <p>The injection of the equity funding takes places in different steps toward the end of the construction period. The equity commitments are backed by three different letters of credit provided by the Equity Members in an amount equivalent to their percentage of ownership. The concessionaire receives construction payments in the order of \$739 million.</p>
(27)	Key Financial and Funding Challenges and Solutions Implemented:	<p><b>Challenge:</b> Sourcing financing for a complex project during a period of serious financial turbulence.</p> <p><b>Solution:</b> The consortium financed the Project during the credit crisis with senior debt totaling \$427 million on senior broadly marketed or widely distributed secured bonds. ACS and HOCHTIEF developed a competitive and stable financing solution to ensure value for money over the agreement term. The consortium secured commitments for bank financing and bond solutions, and held a competitive underwriter selection process.</p>

Colorado I-70 East Project

		<p><b>Benefit:</b> FRMG will leverage the experience gained on NEAH and other P3 projects to source the most competitive financing solution. Our approach on NEAH, and what we will employ on the I-70 East Project, also ensures redundancy to protect against fluctuations in the market.</p> <p><b>Challenge:</b> Senior bonding financing</p> <p><b>Solution:</b> ACS' and HOCHTIEF's uncommon and innovative approach included an underwriting competition and obtained a new benchmark since the credit crisis of 2008 by achieving a spread of less than 200 bps over the Government of Canada bonds of equivalent maturity. The bonds mature on March 31, 2046 and were rated A- by S&amp;P and A (low) by DBRS with a stable outlook, maintaining their preliminary ratings. This was one of the first Canadian projects rated according to S&amp;P's draft global project financing rating, a more stringent and conservative criteria that minimizes potential downgrade risk associated with future criteria transition.</p> <p><b>Benefit:</b> FRMG's experience in structuring senior debt in the bond markets, both tax-exempt and taxable, means that FRMG has the knowledge and relationships to run competitive processes that ensure the most competitive forms of debt are sourced for the Project.</p>
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Colorado I-70 East Project


**Form F: Project Experience (I-595 Corridor)**

**Proposer Name:** Front Range Mobility Group

**Core Proposer Team Member(s) Involved:**

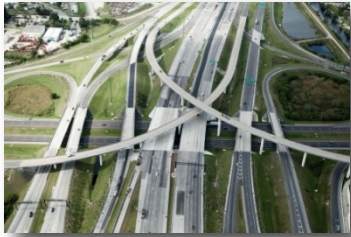
- Equity Member: **ACS Infrastructure Development, Inc.**
- Lead **Contractor**
- Lead **Engineer**
- Lead **Operator**
- Joint **venturer** in Lead Contractor: **Dragados USA, Inc.**
- Joint venturer in Lead Engineer: **AECOM Technical Services, Inc.**
- Joint venturer in Lead Operator: **ACS Infrastructure Development, Inc.**
- Affiliate(s) (n/a)

**Form F: Project/Transaction Description**

No.	Required Information	Response
<b>I. Background Information</b>		
(1)	Project Name:	I-595 Corridor Improvements Project (I-595)
(2)	Type of Facility:	Interstate highway expansion (including general purpose lanes and frontage roads) with new reversible managed lanes.
(3)	Owner/Procuring Authority:	Florida Department of Transportation
(4)	Brief Description of Project:  <p><i>The I-595 Project was the first P3 in the State of Florida and the largest project in the history of the Florida Department of Transportation (FDOT) at time of construction.</i></p>	<p>The I-595 Corridor Improvements Project (I-595) is a \$1.7 billion (\$1.2 billion construction value) design-build-finance-operate-maintain (DBFOM) highway project. I-595 was the first P3 in the State of Florida and the largest project in the history of the Florida Department of Transportation at time of construction. The project included widening of the existing highway to accommodate three new 10.5-mile-long reversible toll lanes in the median of a six-lane interstate highway and improved traffic in the Fort Lauderdale area. The urban corridor has daily traffic volumes of 180,000 vehicles.</p> <p>As a P3 contract, this project included financing, design, construction, and all O&amp;M under a 35-year concession period. Dragados worked as the Lead Contractor, with AECOM as its Lead Designer. As concessionaire, ACS led the development and financing of the project and currently oversees the comprehensive maintenance program that began concurrently with the construction phase, as well as all operations and incident response needs along the urban highway corridor.</p>



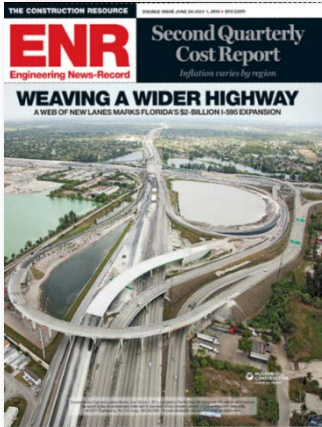
**Colorado I-70 East Project**

No.	Required Information	Response														
		<p>The project was financed through two different tranches of bank senior debt totaling \$781 million and a \$678 million TIFIA loan. Additionally ACS committed 100% of the equity with a letter of credit posted at financial close (\$208 million) prior to selling 50% of its share to the Teachers Insurance and Annuity Association – College Retirement Equities Fund (TIAA–CREF).</p> <p>The project reached Substantial Completion in March 2014 and was delivered ontime and within budget. It has successfully been in operations, led by ACS, since July 2009.</p>														
(5)	Contract Term:	<p>Total Term Length: 35 years            Start Date: March 3, 2009            End Date: March 2044</p>														
(6)	Current Status:	Construction is 100% complete. The project is currently in the O&M Phase.														
(7)	<p>Key Dates and Milestones:</p> <p>Contract Execution            Design Start            Construction Start</p> <p>Substantial Completion            Operations Commencement            Final Completion            End of O&amp;M</p>	<table border="0"> <tr> <td>Anticipated/Contracted: March 3, 2009</td> <td>Actual: March 3, 2009</td> </tr> <tr> <td>Anticipated/Contracted: March 3, 2009</td> <td>Actual: March 3, 2009</td> </tr> <tr> <td>Anticipated/Contracted: 5 Months</td> <td>Actual: 5 Months; (note, advanced construction activities began 3.5 months after execution)</td> </tr> <tr> <td>Anticipated/Contracted: 60 months</td> <td>Actual: 60 months</td> </tr> <tr> <td>Anticipated/Contracted: 5 months</td> <td>Actual: 5 months</td> </tr> <tr> <td>Anticipated/Contracted: 66 months</td> <td>Actual: 66 months</td> </tr> <tr> <td>Anticipated/Contracted: 35 years</td> <td>Actual: n/a</td> </tr> </table> <p><i>*Durations from "Contract Execution"</i></p>	Anticipated/Contracted: March 3, 2009	Actual: March 3, 2009	Anticipated/Contracted: March 3, 2009	Actual: March 3, 2009	Anticipated/Contracted: 5 Months	Actual: 5 Months; (note, advanced construction activities began 3.5 months after execution)	Anticipated/Contracted: 60 months	Actual: 60 months	Anticipated/Contracted: 5 months	Actual: 5 months	Anticipated/Contracted: 66 months	Actual: 66 months	Anticipated/Contracted: 35 years	Actual: n/a
Anticipated/Contracted: March 3, 2009	Actual: March 3, 2009															
Anticipated/Contracted: March 3, 2009	Actual: March 3, 2009															
Anticipated/Contracted: 5 Months	Actual: 5 Months; (note, advanced construction activities began 3.5 months after execution)															
Anticipated/Contracted: 60 months	Actual: 60 months															
Anticipated/Contracted: 5 months	Actual: 5 months															
Anticipated/Contracted: 66 months	Actual: 66 months															
Anticipated/Contracted: 35 years	Actual: n/a															
(8)	<p>Relevance to the Project:</p>  <p><i>The I-595 Project received the P3 Project of the Year by American Road &amp; Transportation Builders Association and the North American Transport Deal of the Year by Project.</i></p>	<p>The I-595 project demonstrates FRMG's success in working together across each of the four core management levels (development/financing, design, construction, and O&amp;M). The project was the first transportation availability payment project that reached financial close in the US. Similar to the anticipated financing approach for the I-70 East Project, I-595 finance structure included a TIFIA loan. ACS, as the sole equity member from bid until construction, was able to close financing, in the midst of the turmoil of the financial markets at the end of 2008. Notably, ACSID switched from a PABs and TIFIA loan structure (similar to that envisioned by the Procuring Authorities), committed at financial close, to a 12-bank club and TIFIA loan shortly after having been awarded the project.</p>														

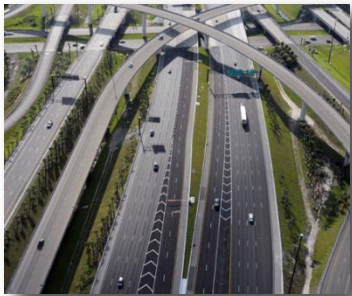
**Colorado I-70 East Project**

No.	Required Information	Response
	 <p><i>The I-595 Project was built in an urban corridor that accommodated daily traffic volumes of 180,000 vehicles.</i></p> <p><b><i>“We delivered it on the same day we said we would, five years earlier. It really shows this model will work. Florida DOT is very proud of this Project.”</i></b> — Paul Lampley, FDOT Project Manager</p>	<p>The experience gained working with TIFIA on the first, availability payment project to close with TIFIA financing provided our team with an in-depth knowledge of TIFIA's approach to structuring and mitigating project risks, its processes and its procedures. FRMG's combined experience in closing TIFIA deals—will ensure our team can seamlessly implement a TIFIA financing approach into our structure, should it become available for Project.</p> <p>This project shares many similar challenges anticipated for the I-70 East Project: a widening of the existing highway and construction staging to accommodate three new toll lanes in a confined, urban corridor—all while managing extreme daily traffic volumes. The work on I-595 included reconstruction of major interchanges; demolition of structures; major excavations below a high water table; extensive coordination with utility and railroad companies; and ventilation systems to allow laborers to work in confined spaces.</p> <p>The project's technical challenges were successfully overcome with minimal impact to the traffic and surrounding neighborhoods by implementing proven strategies to mitigate noise, air quality, and other impacts associated with construction. Dragados and AECOM also engaged the local workforce, subcontractors, and stakeholders by exceeding the DBE and OJT goals.</p> <p><b>FRMG's Demonstrated Performance on the I-595 project includes:</b></p> <p><b>DESIGN AND CONSTRUCTION ACTIVITIES</b></p> <p><b><i>Roadway expansion, reconstruction and interchange reconstruction:</i></b> The project included expansion and reconstruction of 10.5 miles of the existing I-595 and the associated SR-84 to accommodate three reversible express lanes in the median of the I-595 corridor, which included reconstruction at each intersection along I-595. More than 60 bridges were built or reconstructed, including widening (partial or complete demolitions of existing structures at 7 crossroads and 2 major interchanges), new steel girder and concrete bridges with spans up to 158 feet long, and 7 braided ramps, including four-span steel girder bridges with post-tensioning caps and individual spans up to 212 feet long. Several miles of variable profile concrete retaining walls were necessary between parallel roadways to support the difference in elevations between parallel roads.</p>

**Colorado I-70 East Project**

No.	Required Information	Response
	 <p><i>The I-595 Project was recognized throughout the industry as an historic project due to the innovative financing and sheer magnitude at time of award.</i></p>	<p><b>Demolition of existing infrastructure in urban environments:</b> To accommodate the expansion of I-595 at each intersection, Dragados and AECOM widened the existing bridges, which included partial demolitions of the existing decks at each side of the existing structures while maintaining traffic through the intersection. Dragados and AECOM also planned and performed demolition of two other major bridges:</p> <ul style="list-style-type: none"> <li>• <u>Ramp N Bridge at University Drive Intersection:</u> Demolished and reconstructed two spans and intermediate piers and the end bent to accommodate the expansion of I-595 through the intersection.</li> <li>• <u>Bridge over the Florida Turnpike:</u> Completely demolished a two-span structure over the Florida Turnpike in a single weekend to minimize the impacts to traffic.</li> </ul> <p><b>Major excavation work, including groundwater considerations and/or drainage requirements:</b> Dragados' and AECOM's work included dredging the existing canal for reconstruction of I-595, as well as major excavation along westbound SR-84 to remove the existing deep layers of organic soils. This excavation work required installation of a drainage system, including trench box methods, and dewatering due to work being performed below the water table.</p> <p><b>Complex traffic management in urban areas:</b> The urban corridor had daily traffic volumes of 180,000 vehicles. Dragados and AECOM minimized impacts to the public by maintaining the same number of lanes available to the traveling public and the original speed limits (55 mph) through the various construction phases. They worked together to design and implement a detailed traffic control plan to maximize construction operations during off-peak hours and maintain access to existing properties along westbound SR-84 throughout the entire construction duration. Dragados ensured the safety of workers and vehicular traffic by installing 220,000 linear feet of temporary concrete barrier to separate the traffic from construction operations. Up-to-date construction bulletins were posted on the project website alerting the public to closures and new diversion routes. Dragados and AECOM coordinated with the local city officials, businesses, schools, and residential complexes to minimize impacts. The public information team reviewed the work schedule and communicated via message boards, emails, phone calls, and meetings to advise the stakeholders of planned activities and coordinate special requests.</p>

Colorado I-70 East Project

No.	Required Information	Response
	 <p><i>Dragados exceeded the 8.1% DBE goal for a final DBE participation of 13.6% and surpassed the OJT goal of 118 trainees with a final graduation of 164 trainee.</i></p>	<p>For example, an adjacent cemetery had services on various days from noon to 1:30 p.m., so Dragados worked to minimize construction operations during this time to accommodate these services. Biannual public workshops were held with the public and local officials to disseminate project information. For example, the public expressed interest in changing the original design/schedule in order to improve traffic flow on SR 84 a year earlier than required. With the cooperation of the owner and input from the public, Dragados and AECOM opened this particular roadway one year earlier to the relief of the traveling public.</p> <p><b>Construction staging in confined spaces:</b> The entire I-595 corridor is adjacent to an existing canal on its north side and to existing properties on its south side. Due to these constraints and to maintain traffic within the available right-of-way, Dragados was required to perform the majority of construction within very confined spaces. Trench box methods were used to install drainage pipes and relocate existing utilities. Temporary sheet piling was used to perform excavations for bridge foundations or to install drainage and conflict boxes along the project. Dragados also performed deep excavations necessary for a microtunnel machine in limited areas using sheetpiling.</p> <p><b>Structures that include ventilation and/or fire life safety considerations:</b> Dragados used a microtunnel machine to install five drainage pipes up to 72 inches in diameter and more than 500 feet long. This work required a ventilation system to allow personnel to work inside the excavation. In addition, the rehabilitation of an existing two-span steel box girder bridge required ventilation inside the girders to allow workers to perform the necessary reinforcing.</p> <p><b>Coordination with railroad and/or utility companies:</b> Dragados and AECOM coordinated, scheduled, and negotiated utility agreements with numerous overhead and underground utilities needed for the design and construction, including Florida Power and Light Distribution, FPL Transmission, FPL Fibernet, AT&amp;T Florida, AT&amp;T Long Distance, Comcast, Old Plantation Water Control District, and the cities of Davie and Sunrise. The work required coordination with numerous municipalities and third-party agencies, including NASA, throughout the urban corridor, and initially delayed the start of construction in mid-2010. The entire project team was able to recover this lost time through partnering and working together toward common goals.</p>

No.	Required Information	Response
	<p style="text-align: center;"><b><u>AWARD</u></b></p> <p style="text-align: center;"><i>Florida Transportation Business Association 2013 DBE Utilization Achievement Award for exceeding DBE utilization goals</i></p> <div style="background-color: #1a3d54; color: white; padding: 10px; text-align: center;"> <p><b>Dragados performed construction in environmentally sensitive areas that required compliance with several environmental permits, especially during dewatering and other activities to manage storm water during construction.</b></p> </div>	<p>For example, agency reviews were streamlined to 21 days from 28 and daily workshops were implemented to enhance communication among all parties. The work along I-595 just west of the ramp to the northbound I-95 required coordination with a railroad, including installation of two fiber optic cables under the railroad. The project also required coordination with another railroad company for the painting of an existing bridge over an active railroad.</p> <p><b><i>Workforce, subcontractor and stakeholder engagement activities:</i></b> Dragados and AECOM integrated local subcontractors into the Project team and achieved the Florida Transportation Business Assoc. 2013 DBE Utilization Achievement Award for exceeding DBE utilization goals. Dragados exceeded the 8.1% DBE goal for a final DBE participation of 13.6% and surpassed the OJT goal of 118 trainees with a final graduation of 164 trainees. AECOM agreed to a flow-down provision of the 8.1% DBE goal for design to better maximize opportunities for DBE firms to participate on the project. AECOM achieved 8.5% DBE participation for design.</p> <p><b><i>Environmental monitoring and mitigation activities:</i></b> For air quality monitoring and mitigation, the team implemented BMPs and mitigated fugitive dust to maintain air quality during construction. The Dragados and AECOM team also developed and implemented a detailed vibration monitoring plan for the entire duration of the project. This included special attention for installation of the precast concrete piles and prohibiting this work at nighttime to avoid disturbing the nearby neighborhoods. Dragados and AECOM were responsible for identifying, preparing, and complying with permits required from federal, state, and local jurisdictional regulatory agencies, including the U.S. Army Corps of Engineers (USACE), U.S. Coast Guard (USCG), Florida Dept. of Environmental Protection (FDEP), and several other regional and local water and conservation districts. Dragados and AECOM's Environmental Compliance Plan included the required permit compliance details, applicable NEPA commitments, and plan for managing contaminated materials during design, construction, and O&amp;M, including the transition periods between each phase. Dragados performed construction in environmentally-sensitive areas that required compliance with several environmental permits, especially during dewatering and other activities to manage storm water during construction.</p>

**Colorado I-70 East Project**

No.	Required Information	Response
	<p> <b>I-595 is a prime example of the depth of ACSID's experience with comparable projects, performance requirements, and responsibilities that are anticipated to be within the Developer's scope of work.</b> </p> <p> <b>ACS has successfully managed each interface between adjacent operators, which will be a key aspect of the upfront and ongoing responsibilities of the developer for the I 70 East Project.</b> </p>	<p>           The permits included groundwater influence and groundwater treatment system modeling, and required review by the EPA.             For work relating to hazardous materials, Dragados and AECOM identified reactive wastes in the I-595 corridor and performed the appropriate treatment and disposal following the applicable regulations.         </p> <p style="text-align: center;"> <b>OPERATIONS AND MAINTENANCE ACTIVITIES</b> </p> <p> <b>The concession company, I-595 Express</b>, led by ACS, is self-performing the O&amp;M of the overall O&amp;M requirements of the project, including the management of certain contracts for elements of the routine operations and maintenance activities. The project requires a significant operations program to handle the heavily trafficked corridor for east/west commuters.         </p> <p>           The completed project consists of general purpose lanes, collector and distributors on adjacent systems, frontage roads, major intersections, and managed lanes that utilize free flow toll technology. ACS will apply these lessons learned, as detailed further below, in working with the Procuring Authorities to manage the development and relationships related to the I-70 East Project through all stages of the concession, including O&amp;M.         </p> <p> <b>Interfaces with adjacent road operators</b> I-595 connects with I-75 in the west, the Florida Turnpike in the center, and a section of I-595 to the east that is operated and maintained by FDOT. I-595 Express works closely with the Florida Turnpike operators and FDOT subcontractors to manage interfaces at the various locations throughout the project. These interfaces have been consistent and reliable since the beginning of operations.         </p> <p>           I-595 is a prime example of the depth of ACS's experience with comparable projects, performance requirements, and responsibilities that are anticipated to be within the Developer's scope of work. The completed project consists of general purpose lanes, collector and distributors on adjacent systems, frontage roads, major intersections, and managed lanes that utilize free-flow toll technology. ACS will apply these lessons learned in working with FDOT to manage the development and relationships related to the project through all stages of the concession, including O&amp;M.         </p>

No.	Required Information	Response
		<p><b>Operations performance in a high traffic corridor:</b> ACS implemented and manages a significant operations program to handle the heavily trafficked corridor for east/west commuters, with 180,000 vehicles per day and an average of approximately 1,200 incidents per month. Operations includes management of 24/7 incident response, dedicated road patrols, and a Traffic Management Center to ensure the flow of traffic and reduce unavailability to the public.</p> <p>The incident response program maintains a safe, free-flowing facility to the public and offers assistance to the roadway's users in case of emergencies and incidents. Responsibilities include debris removal, police activities, break downs, accidents, and tire blowouts. For that reason, the developer has implemented proven 24/7 Road Ranger Program, which has been operating with a response time of only 3 minutes from notification (far exceeding the 15 minute contractual requirement). This program is also supplemented with a Severe Incident Response Vehicle (SIRV) and a Rapid Incident Scene Clearance Program, all aligned with the goal of keeping the highway safe and open to traffic.</p> <p><b>Toll Systems and ITS:</b> The project also demonstrates both ACS and Dragados experience in toll maintenance and operations. The I-595 corridor contains complete camera coverage and an Advanced Traffic Management System (ATMS) application to support traffic management and incident response. In addition, the reversible managed lanes are tolled and operate using Open-Road Tolling technology. I-595 Express was responsible for the development and installation and operation of the reversible express lane system. Tolling is performed by the FDOT; however, ACS coordinated, designed, and constructed all infrastructure required for the tolling system.</p>

No.	Required Information	Response
		<p><b>Significant Assets requiring Routine and Major Maintenance:</b> The major assets of the project are pavement and structures, much like that of I-595, which has an extensive inventory of large structures. On the I-595, these structures are inspected biennially. This includes significant structures in seven interchanges with other major roadways including the Florida Turnpike and more than 60 structures throughout the project. The team’s maintenance manual includes all routine and major maintenance activities necessary to ensure compliance with the request. In order to maintain these assets, a maintenance program geared toward the reliability of all assets, with a particular emphasis on pavement and structures, will modeled off the experience ACSID gained on I-595 and the numerous other highways under operations in North America. The experience ACS has gained from the development of this program will directly benefit the Project given the volume and type of structures anticipated along the Project corridor (both new construction and existing assets).</p>
<p><b>II. Description of Team Member Involvement</b></p>		
(9)	<p>Proposer Team Member(s) (or Affiliates(s)) Involved:</p>	<p><b>ACS Infrastructure Development, Inc.</b>  <b>Dragados USA, Inc.</b>  <b>AECOM Technical Service, Inc.</b></p>
(10)	<p>Role of Proposer Team Member(s) (or Affiliate(s)):</p>	<p><b>ACS Infrastructure Development, Inc.:</b> Equity Member (50%) and Lead Operator (50%). ACS has been involved from the procurement stage through award, the construction period and now in O&amp;M of the project.</p> <p><b>Dragados USA, Inc.:</b> Lead Contractor (100%)</p> <p><b>AECOM Technical Services, Inc.:</b> Lead Designer (100%)</p>
(11)	<p>Key Personnel Involved, Roles &amp; Responsibilities:</p>	<p><b>Michael Smith</b>, FRMG’s proposed <b>O&amp;M Manager</b>, plays a key role in the technical O&amp;M oversight of the I-595 project, managed by ACS. Michael’s firsthand knowledge of the day-to-day operational issues, including managing subcontracts and interacting with the owner regarding performance requirements, will bring highly-relevant and recent experience in the challenges and subsequent mitigations for O&amp;M along a high-traffic corridor under an availability payment structure.</p>
<p><b>III. Reference</b></p>		
(12)	<p>Name:</p>	<p>Gerry O’Reilly</p>
(13)	<p>Title &amp; Employer (Current):</p>	<p>Director of Transportation, District Four                      Florida Department of Transportation</p>




**Colorado I-70 East Project**

No.	Required Information	Response
(14)	Title & Employer (at time of project/transaction):	Director of Transportation Development, District Four Florida Department of Transportation
(15)	Phone & Email	(954) 777-4411 <a href="mailto:Gerry.Oreilly@dot.state.fl.us">Gerry.Oreilly@dot.state.fl.us</a>
(16)	Location & Time Zone:	Florida, USA, Eastern Time Zone (UTC-05:00)
(17)	Other:	N/A
<b>IV. Technical Information</b>		
(18)	Construction Value:	\$1.197 billion
(19)	Completion within/above Budget:	The project reached substantial completion on schedule and on budget. The final construction value was \$1.211 billion (or approximately 1% increase) due to FDOT-directed changes.
(20)	O&M Value:	\$40.225 million (average yearly, nominal)
(21)	Length of Road under Operation (centerline miles):	Approximately 10.5 miles
(22)	Key Technical Challenges and Solutions Implemented:	<p>In addition to the challenges relevant to the I-70 East Project highlighted in box (8), the I-595 Project included the following key technical challenges:</p> <p><b>ATCs and Innovation</b></p> <p><b>Challenge:</b> Nine interchanges and 63 bridges within the I-595 project presented numerous technical challenges in this constrained urban corridor, and were significant cost drivers. FDOT’s original design included an additional flyover at the most congested intersection of the project, which required demolishing the existing flyover due to geometric constraints. This was costly and presented potential traffic impacts during construction. Specifically, an existing 700-foot-long flyover structure was in conflict with the proposed construction of the expanded interstate below.</p> <p><b>Solution:</b> ACS, Dragados, and AECOM presented numerous Alternative Technical Concepts (ATCs) to FDOT that preserved existing structures on the I-595 corridor that were originally planned to be replaced. FDOT’s original design included an additional flyover at the most congested intersection of the project, which required demolishing the existing flyover due to geometric constraints. However, the team’s innovation refined the alignment by placing the new express lanes in the former eastbound lanes, rather than in the I-595 median.</p>



*ACS, Dragados, and AECOM developed innovative Alternative Technical Concepts (ATCs) for the flyover interchange structures that saved approximately \$40 million.*

Colorado I-70 East Project

No.	Required Information	Response
	 <p><i>Zero days were added to the construction schedule; 7 milestones were completed ahead of schedule in order to meet the project's aggressive schedule.</i></p>	<p>The flyover's foundations could then stay where they were, but the superstructure needed to be raised to meet vertical clearance requirements. The vertical conflict was eliminated by jacking and realigning most of the existing flyover structure and extending the length of one span to make room for the planned construction on I-595. The O&amp;M experts at ACS were closely involved during the process to ensure that the approach resulted in a whole lifecycle savings to FDOT by evaluating the routine and major maintenance impacts of this solution. Ultimately, this innovation saved ~ \$40 million.</p> <p><b>Benefit:</b> ACS, Dragados, and AECOM have demonstrated their ability to work collaboratively to identify and execute innovative technical solutions. FRMG will work to develop cost saving ATCs that reduce construction impacts and result in a whole lifecycle solution that brings best value to the Procuring Authorities, maximizing available funds for the Project.</p> <p><b>Challenge:</b> Construction work required coordination with numerous third-party agencies and municipalities. Initial coordination efforts resulted in a delay to construction start.</p> <p><b>Solution:</b> The entire project team was able to recover this lost time through partnering and working together toward common goals. For example, agency reviews were streamlined to 21 days, from 28 days, and daily workshops were implemented to enhance communication among all parties. Dragados and AECOM were co-located in a facility with ACS and FDOT representatives to streamline coordination. Regular meetings were held between the various team members and FDOT to discuss progress, solve pending issues, and coordinate the overall project. The project was ultimately completed on time and within budget.</p> <p><b>Benefit:</b> FMRG team members have proven ability to collaborate with project owners and key stakeholders to find a solution that overcomes unforeseen coordination issues and delays in a project. FRMG will draw on this experience to first develop a plan and schedule which reduces the risk of delay from coordination issues, and to quickly and collaboratively improve the approach should problems arise to protect the Project's schedule and budget.</p> <p><b>Efficient Approach to O&amp;M</b></p> <p><b>Challenge:</b> The project represented FDOT's first P3 to reach financial close and enter into operations.</p>

Colorado I-70 East Project

No.	Required Information	Response
	<p><b>Dragados and AECOM, working together with ACS, were able to overcome initial challenges in coordinating with the owner and numerous third parties involved in the project.</b></p>  <p><i>As part of I-595 Express's incident response activities, we provide 24/7/365 road patrol service, Severe Incident Response Vehicle service, as well as Rapid Incident Scene Clearance support. ACS' average response time is 5 times faster than what is contractually required.</i></p>	<p><b>Solution:</b> ACS worked with FDOT maintenance managers to develop and implement an O&amp;M plan that adhered to FDOT requirements and also addressed the concerns of District Maintenance Engineers that had been responsible for maintaining the existing system for decades. ACS continues to work closely with FDOT to improve the O&amp;M approach and coordination between I-595 Express and the various stakeholders to ensure the project is performing as envisioned by FDOT.</p> <p><b>Benefit:</b> ACS has extensive experience working with owners in determining efficient approaches to the O&amp;M for projects that ensure the projects' goals are met while maintaining an efficient balance of risk and scope between the Developer and/or Lead Operator and the project owners. FRMG will work with the Procuring Authorities to similarly structure the long-term O&amp;M responsibilities for the Project to deliver the best value and achieve the Project's goals.</p> <p><b>Rapid Response Times to Incidents in an Urban Corridor with Managed Lanes</b></p> <p><b>Challenge:</b> I-595 Express is responsible for operating the Traffic Management Center for the I-595 Corridor 24/7 in this high-volume corridor. This includes the identification of traffic incidents, dispatch of services, police/fire interface, incident coordination, and reporting to the state-wide 511 system.</p> <p>As part of I-595 Express's incident response activities, we provide 24/7/365 road patrol service, Severe Incident Response Vehicle service, as well as Rapid Incident Scene Clearance support. All incident response activities have contractual time limits for response, which result in availability payment deductions if found non-compliant. I-595 Express is responsible for operating the Traffic Management Center for the I-595 Corridor 24/7.</p> <p><b>Solution:</b> By providing a 3-minute response time to traffic incidents, rather than the contractual 15 minutes, the team is providing a safer roadway for vehicular traffic.</p> <p><b>Benefit:</b> Based on the final scope for the Developer on the Project, FRMG will develop and successfully implement an operations program that ensures the corridor remains safe for the traveling public by providing rapid response times to incidents and leveraging extensive experience in coordinating with various response teams and stakeholders in both leading and supporting roles.</p>

**Colorado I-70 East Project**

No.	Required Information	Response
<b>V. Financial Information</b>		
(23)	<p>Payment Mechanism:</p> <p><i>Experience Working Together</i>  <i>Dragados actively participated with ACS in the negotiations with the Owner of different payment milestones for the construction of the I-595 project. Since Dragados and ACS were sister companies working at two different levels of the Project team, they could align their interests and negotiate reasonable milestones that reduced the risks and allowed the project to be delivered on-time and within budget.</i></p>	<p><u>Availability Payment:</u> The concessionaire receives monthly availability payments during the operation period commencing upon substantial completion of the project through a 30-year period subject to deductions based on lane availability and any noncompliance points assessed in conjunction with the contract documents.</p> <p><u>Final Acceptance Payments:</u> FDOT will make \$685.5 million in payments (approximately 57% of the total construction costs) following Final Acceptance and over the first 5 years of operations (the "Final Acceptance Payments" or "FAPs"). These FAPs were subject to the accomplishment of seven milestones during the construction period, all of which were reached on time and in accordance with the concession agreement. The first FAP included a \$50 million bonus for reaching each interim milestone within the period stated in the concession agreement.</p> <p><u>Deduction Regime:</u> The concession agreement includes deductions to the availability payments for several non-compliance events due to performance and maintenance of the project facility, level of service, and highway availability levels.</p> <p><u>Inflation:</u> 70% of the availability payment is indexed at a fixed rate of 3% annually and the 30% remaining is indexed annually at CPI.</p>
(24)	<p>Source(s) of Revenues or Payments:</p>	<p>All payments are subject to availability of funds appropriated by the State of Florida. Additionally, a potential source of revenue for FDOT includes the tolls collected on the express lanes, which can be used to cover a portion of the availability payments to the concessionaire.</p>
(25)	<p>Proposer Team Member(s) Equity Investment:</p>	<p>ACS committed \$208 million in equity for the 100% interest in the project. During construction, ACS sold 50% of its share in the SPV to its partner TIAA-CREF. This equity was backed by a letter of credit posted at financial close until the equity injections were made during the last months of the construction period.</p>

Colorado I-70 East Project

No.	Required Information	Response
(26)	Financing Method(s) and Value(s):	<p>The financing package included a \$526-million short-term senior bank facility used to bridge the Final Acceptance Payments and a \$256-million hard mini-perm 10 years senior bank loan, both provided by 12 banks, including Spanish, French, and Australian banks. Additionally, subordinated debt was provided through a \$678-million TIFIA loan. The equity committed by ACS (as 100% equity member at financial close) amounted \$208 million and was backed by a letter of credit.</p> <p>The bank tranche loan totaling \$256 million, the \$678-million TIFIA loan, which received an investment grade rating (maintained through construction and into operations) and the equity investment will be repaid from availability payments received during the operation period.</p>
(27)	<p>Key Financial and Funding Challenges and Solutions Implemented:</p> <p><i>“We delivered it on the same day we said we would, five years earlier. It really shows this model will work. Florida DOT is very proud of this Project.”</i></p> <p>— Paul Lampley, FDOT Project Manager</p>	<p><b>Challenge:</b> Reaching financial close during critical challenges in the market.</p> <p><b>Solution:</b> ACS provided an investment grade, financeable solution at the height of the global financial crisis. ACS leveraged its strong relationships in the global banking industry to switch from the bond financing structure submitted at bid to a 12-bank club deal and TIFIA structure after the bond markets were no longer accessible, rendering the PABs solution secured for the proposal unattainable. ACS’ credibility in the P3 finance market, based on its strong relationships with the P3 lending community and aggressive pursuit of multiple finance alternatives throughout the bid process, made this significant, yet timely, change possible.</p> <p><b>Benefit:</b> FRMG will leverage its strong relationships in the P3 lending community and experience in overcoming adversity in the markets to ensure redundancy in financing solutions and provide execution certainty</p> <p><b>Challenge:</b> Closing FDOT’s first availability payment project and pioneering the use of TIFIA Loans in transportation availability payment projects</p> <p><b>Solution:</b> ACS successfully worked with FDOT in reaching Financial Close on their first transportation availability payment P3 project. This also represented the first AP project closed in the United States, and TIFIA’s first availability payment project as well. The 2009 final value for money analysis conducted after financial close concluded that the net present value of the P3 contract was 25% lower than the original 2007 estimate.</p>

**Colorado I-70 East Project**

No.	Required Information	Response
		<p><b>Benefit:</b> ACS' proven ability to pioneer new and innovative financing solutions in partnership with both experienced and inexperienced owners, even in the midst of an economic crisis, captures the same spirit and approach FRMG will pursue for the I-70 East Project.</p>

Colorado I-70 East Project


**Form F: Project Experience (NWAH)**

**Proposer Name:** Front Range Mobility Group

**Core Proposer Team Member(s) Involved:**

- Equity Member: [Name]
- Lead Contractor
- Lead Engineer
- Lead Operator
- Joint venturer in Lead Engineer: **AECOM Technical Services, Inc.**
- Joint venturer in Lead Contractor: **Flatiron Constructors, Inc. (Through Affiliate Flatiron Constructors Canada Limited**
- Affiliate(s) of Lead Contractor: **Flatiron Constructors, Inc.: Flatiron Constructors Canada Limited**

**Form F: Project/Transaction Description**

No.	Required Information	Response
<b>I. Background Information</b>		
(1)	Project Name:	Northwest Anthony Henday
(2)	Type of Facility:	A new tolled highway with major bridges, interchanges, and connector roads around the major metropolitan center of Edmonton, Alberta in Canada.
(3)	Owner/Procuring Authority:	Alberta Transportation
(4)	Brief Description of Project:  <p><i>“I have to tell you that I am very impressed with the speed and efficiency of which your company is doing the North Anthony Henday project in Edmonton, Alberta. I have commented to Councilors and acquaintances in the Transportation department that your firm seems to be very well organized and a lot of local firms could learn from you. Very impressive”</i></p> <p>—Greg Lindgren, Community Member</p>	<p>This \$997 million design, build, finance, operate, maintain project was one of the largest projects in Alberta Transportation’s history. As a P3 contract, the project included financing, design, construction, and O&amp;M for 30 years, until 2041. Flatiron led the design-build joint venture team working with Lead Designer AECOM to deliver 13 miles of new four- and six-lane tolled, access controlled expressway with 27 bridges, 8 interchanges, 5 flyovers, and 2 crossings over railroads.</p> <p>Flatiron’s scope included 17 million cubic yards of excavation, over 26 miles of paving, construction of 28 MSE walls, extensive utility relocations, coordination with railroads, and environmental mitigation. Similar to the I-70 East Project, this project spanned multiple years and required construction to be performed during severe winter weather. In addition to carrying vehicle traffic, the highway is a vital route for the trucking industry to ship and receive goods throughout the region.</p>

**Colorado I-70 East Project**

No.	Required Information	Response														
		The project was delivered on time and within budget, opening to traffic on November 1, 2011, two years earlier than would have been possible with a conventional delivery model—saving taxpayers an estimated \$240 million. The project was recognized with an award for transportation innovation from Alberta Transportation.														
(5)	Contract Term:	Total Term Length: 30 years Start Date: August 2008 End Date: November, 2011														
(6)	Current Status:	Design and construction are 100% complete. The project is currently in the O&M phase, until 2041.														
(7)	Key Dates and Milestones:  Contract execution Design Start Construction Start  Substantial Completion  Operations Commencement Final Completion End of O&M	<table border="0"> <tr> <td>Anticipated/Contracted: July 2008</td> <td>Actual: July 2008</td> </tr> <tr> <td>Anticipated/Contracted:</td> <td>Actual:</td> </tr> <tr> <td>Anticipated/Contracted: 0 months</td> <td>Actual: 0 months (note: early work items started immediately)</td> </tr> <tr> <td>Anticipated/Contracted: 3 years</td> <td>Actual: 3 years (traffic availability)</td> </tr> <tr> <td>Anticipated/Contracted:</td> <td>Actual:</td> </tr> <tr> <td>Anticipated/Contracted: 3 years</td> <td>Actual: 5 years</td> </tr> <tr> <td>Anticipated/Contracted: 30 years</td> <td>Actual: Currently under operation until 2041</td> </tr> </table> <p><i>*The construction team achieved traffic availability on time, and toll revenue was generated on schedule. Final completion was delayed by reporting requirements and punch-list items that took longer than the allotted time. This delay did not impact the owner or the concessionaire, and all additional costs were covered by the construction team. The team have since applied these lessons learned to develop and implement procedures to avoid these types of delays and have applied these to the Northeast Anthony Henday project, which is currently under construction.</i></p>	Anticipated/Contracted: July 2008	Actual: July 2008	Anticipated/Contracted:	Actual:	Anticipated/Contracted: 0 months	Actual: 0 months (note: early work items started immediately)	Anticipated/Contracted: 3 years	Actual: 3 years (traffic availability)	Anticipated/Contracted:	Actual:	Anticipated/Contracted: 3 years	Actual: 5 years	Anticipated/Contracted: 30 years	Actual: Currently under operation until 2041
Anticipated/Contracted: July 2008	Actual: July 2008															
Anticipated/Contracted:	Actual:															
Anticipated/Contracted: 0 months	Actual: 0 months (note: early work items started immediately)															
Anticipated/Contracted: 3 years	Actual: 3 years (traffic availability)															
Anticipated/Contracted:	Actual:															
Anticipated/Contracted: 3 years	Actual: 5 years															
Anticipated/Contracted: 30 years	Actual: Currently under operation until 2041															



**Colorado I-70 East Project**

No.	Required Information	Response
(8)	<p>Relevance to the Project:</p>  <p><i>Like the I-70 East Project, Flatiron constructed 13 miles of new highway under a larger DBFOM contract, bringing relevant experience in managing large transportation projects and knowledge of life-cycle analysis.</i></p> <div style="background-color: #002060; color: white; padding: 10px; margin-top: 20px;"> <p><b>Complex Traffic Management:</b> To open the project to traffic as early as possible, the team opened the project in phases, which required extensive traffic management along a multi-lane expressway with existing highway traffic.</p> </div>	<p>This project is highly relevant to the I-70 East Project because it required design and construction of a highway facility under a larger DBFOM contract of similar size in North America. It is also similar in scope, as a multi-lane expressway with numerous bridges, walls, and extensive excavation. Additionally, our proposed project manager, Kent Peyton, successfully managed this project and is being proposed in this same role on this Project.</p> <p><b>Roadway Expansion and Reconstruction:</b> Like the I-70 East Project, Flatiron constructed 13 miles of new highway under a larger DBFOM contract, bringing relevant experience in managing large transportation projects and knowledge of life-cycle analysis.</p> <p><b>Demolition of Existing Infrastructure:</b> The DBJV demolished bridges and buildings. The project required noise mitigation measures some of which were designed into the project and others like pile driving only at night, were considered when construction methods were chosen.</p> <p><b>Major Excavation Work:</b> Similar to the I-70 East Project, this project included over 530 cubic feet of overburden excavation over the entire 13-mile distance. The project team also recycled asphalt and concrete materials to minimize the waste on the project. Similar to our preliminary approach on the I-70 East Project, this project was designed and constructed to minimize hauling and associated noise, pollution, and construction traffic.</p> <p><b>Complex Traffic Management:</b> To open the project to traffic as early as possible, the team opened the project in phases, which required extensive traffic management along a multi-lane expressway with existing highway traffic. These operations required coordination meetings, during which they generated Traffic Accommodation Strategies (TAS) that were reviewed by Alberta Transportation and the City of Edmonton. On-site reviews of the TAS were conducted and approved prior to implementation, during which safety of all traffic phasing plans was closely reviewed, evaluated and adjusted if necessary. These plans also included distribution of notifications of upcoming traffic disruptions and the viable detour route in order to prepare the public accordingly.</p>

No.	Required Information	Response
		<p><b>Construction Staging:</b> Construction of 13 miles of highway required complex staging and traffic management. Traffic management tactics utilized included lane diversions to manage highway traffic, cross road traffic, and truck traffic. Timely construction updates were planned and executed using, including Traffic Accommodation Strategies, signs and delineators, which notified traffic in advance and safely guided the public during construction.</p> <p><b>Coordination with Railroad and/or Utilities:</b> Like I-70 East Project, this project crossed major utilities and required both protection in place, as well as relocation, of 250 existing utilities, specifically: storm, sewer, electrical, telephone, and gas. When relocating any utilities a ministerial consent and a ground disturbance permit was required. To ensure a seamless relocation the team was in contact with a site representative from each utility company.</p> <p>Utility protection was coordinated with Alberta Infrastructure to accommodate the existing 250 utilities and municipal services during construction and design phase and relocated 7.5 miles of gas line. The team coordinated two rail crossings and worked closely with the railroad owners to ensure a rail representative was on site anytime there were crews working around the rail. Prior to any work around the railroads permits were put in place and all construction personnel received the proper training to work around the rail.</p> <p style="text-align: center;"><b>ENVIRONMENTAL MONITORING AND MITIGATION ACTIVITIES</b></p> <p>Sensitive environmental areas within or adjacent to the project site included wetlands, lakes, ponds, and other wildlife habitat. This required careful consideration during the planning, design and construction of this project.</p> <p>To help minimize environmental impacts, the team implemented a robust environmental management, monitoring and mitigation plan to ensure environmental protection measures were in place, and all regulations were followed. The team also established specialized sub-teams to implement these plans.</p>

**Colorado I-70 East Project**

No.	Required Information	Response
		<b>Noise monitoring and mitigation in urban environments:</b> At the beginning of the project, a noise mitigation study was performed and the project was designed and built so the maximum noise level was less than 65 dBA Leq, a weighted 24-hour equivalent sound level measure from approximately 1 mile from the property line. One of the noise mitigation methods, supported by local residents was to construct berms in the areas near neighborhoods.
<b>II. Description of Team Member Involvement</b>		
(9)	Proposer Team Member(s) (or Affiliate(s)) Involved:	<b>Flatiron Constructors Canada Limited (FCCL)</b> , a subsidiary of Lead Contractor Member Flatiron Constructors, Inc., acted as the managing partner of the Lead Contractor joint venture with 65% participation.  <b>AECOM Technical Services, Inc.</b>
(10)	Role of Proposer Team Member(s) (or Affiliate(s)):	<b>Flatiron Constructors Canada Limited</b> (Affiliate of Flatiron Constructors, Inc.): managing partner of Lead Contractor (65%).  <b>AECOM Technical Services, Inc.:</b> Lead Designer (60%)
(11)	Key Personnel Involved, Roles & Responsibilities:	Our team's proposed Design-Build Manager, Kent Peyton, served in this same role on the Northwest Anthony Henday project.
<b>III. Reference</b>		
(12)	Name:	Tom Loo, P. Eng.
(13)	Title & Employer (current):	Executive Director Major Capital Projects
(14)	Title & Employer (at time of project/transaction):	Executive Director Major Capital Projects
(15)	Phone & Email:	+1 (780) 415-4876 Tom.Loo@gov.ab.ca
(16)	Location & Time Zone:	Edmonton, AB Canada Mountain Standard Time
(17)	Other:	N/A
<b>IV. Technical Information</b>		
(18)	Construction Value:	\$997 million
(19)	Completion within/above Budget:	Completed within budget
(20)	O&M Value:	N/A
(21)	Length of Road under Operation (centerline miles):	13 miles

**Colorado I-70 East Project**

No.	Required Information	Response
(22)	Key Technical Challenges and Solutions Implemented:	<p style="text-align: center;"><i>Techniques used to Avoid Delays</i></p> <p><b>Challenge:</b> Similar to what will be required on the I-70 East Project, construction of Northwest Anthony Henday was performed during extremely cold temperatures that lasted longer than usual. Surfacing and paving activities could have been delayed by naturally occurring freeze-thaw cycles caused by the extreme weather.</p> <p><b>Solution:</b> Flatiron's team used an innovative frost-protection method that utilized a combination of Styrofoam, recycled asphalt pavement, and geotextile material. Flatiron installed this material with drainage underneath the subgrade to create a bridging surface between the poor soil and the finished surface. This enabled the team to achieve a high-quality roadway and avoid delays that could have been caused by the ground's freezing and thawing cycles.</p> <p>Additionally, the exposed roadway embankment was susceptible to weather impacts and posed a potential cost and schedule risk to the project. The team met this challenge by phasing the design and construction to strategically pave these areas sooner to mitigate impacts by weather on these materials. The team was able to balance this need, while maintaining large areas for continuous paving operations.</p> <p><b>Benefit to the Project:</b> This solution kept the project on budget and schedule. We offer the I-70 East Project experience gained from relevant projects like this one, where under a P3 model, the highway is being operated and maintained by the Developer for 30 years. Similar to what will be required on the Project, decisions regarding schedule and cost at the time of construction must also take into account the effect on long-term maintainability and operability. This understanding enables us to devise solutions that not only benefit the Project immediately, but also over the long term.</p>
<b>V. Financial Information</b>		
(23)	Payment Mechanism:	N/A
(24)	Source(s) of Revenues or Payments:	N/A
(25)	Proposer Team Member(s) Equity Investment:	N/A
(26)	Financing Method(s) and Value(s):	N/A
(27)	Key Financial and Funding Challenges and Solutions Implemented:	N/A


## Form F: Project Experience (I-405)

**Proposer Name:** Front Range Mobility Group

**Core Proposer Team Member(s) Involved:**

- Equity Member:
- Lead Contractor
- Lead Engineer
- Lead Operator
- Joint venturer in Lead Contractor: **Flatiron Constructors, Inc. (through Affiliate Flatiron West., Inc.)**
- Joint venturer in Lead Engineer: **AECOM Technical Services, Inc.**
- Affiliate of Equity Member and joint venture in Lead Operator:
- Affiliate of joint venture in Lead Operator:

### Form F: Project/Transaction Description

No.	Required Information	Response
<b>I. Background Information</b>		
(1)	Project Name:	I-405 Tolled Express Lanes (I-405)
(2)	Type of Facility:	Interstate expansion and reconstruction in an urban environment; including design and construction of new managed toll lanes, bridges, major intersections, and connector roads
(3)	Owner/Procuring Authority:	Washington State Department of Transportation
(4)	Brief Description of Project:  <p><b>“Flatiron is leading the design build team to add new toll lanes along one of Washington’s busiest corridors. The team successfully accommodated a late toll vendor on board by repackaging the design, keeping the project on schedule.”</b></p> <p>—Lisa Hodgson, WSDOT</p>	<p>Lead Contractor Flatiron and Lead Engineer AECOM are working together to deliver a 17-mile portion of Interstate 405 under a design-build contract. The team is converting High Occupancy Vehicle lanes to High Occupancy Toll lanes and adding two HOT lanes in each direction along a portion of the interstate, under average traffic in excess of 200,000 vehicles per day.</p> <p>Major work elements include bridge structures at an interchange, significant drainage, retrofitting the existing system, milling and overlaying the entire existing facility, paving, and constructing the complete ITS backbone and electrical illumination system.</p> <p>Work also included noise walls, landscaping, three mitigation sites (streambed and two wetlands), and ADA improvements (curve ramps and sidewalks). Additionally, Flatiron/AECOM designed protections in place for every utility except one (only one relocation required), and our team was responsible for managing those agreements and designs.</p>

**Colorado I-70 East Project**

No.	Required Information	Response												
(5)	Contract Term:	<p>Total Term Length: 3 years            Start Date: October 2012            End Date: September 2015</p>												
(6)	Current Status:	Construction is 85% complete.												
(7)	<p>Key Dates and Milestones:</p> <p style="padding-left: 40px;">Contract Execution</p> <p style="padding-left: 40px;">Design Start</p> <p style="padding-left: 40px;">Construction Start</p> <p style="padding-left: 40px;">Substantial Completion</p> <p style="padding-left: 40px;">Final Completion</p> <p style="padding-left: 40px;">End of O&amp;M</p>	<table border="0" style="width: 100%;"> <tr> <td style="width: 33%;">Anticipated/Contracted: Feb 9, 2012</td> <td style="width: 33%;">Actual: Oct 1, 2012</td> </tr> <tr> <td>Anticipated/Contracted: Jan 2012</td> <td>Actual: Jan 2012</td> </tr> <tr> <td>Anticipated/Contracted: 8 months</td> <td>Actual: 8 months</td> </tr> <tr> <td>Anticipated/Contracted: 36 months</td> <td>Actual: 35 months</td> </tr> <tr> <td>Anticipated/Contracted: 36 months</td> <td>Actual: N/A</td> </tr> <tr> <td>Anticipated/Contracted: 36 months</td> <td>Actual: N/A</td> </tr> </table>	Anticipated/Contracted: Feb 9, 2012	Actual: Oct 1, 2012	Anticipated/Contracted: Jan 2012	Actual: Jan 2012	Anticipated/Contracted: 8 months	Actual: 8 months	Anticipated/Contracted: 36 months	Actual: 35 months	Anticipated/Contracted: 36 months	Actual: N/A	Anticipated/Contracted: 36 months	Actual: N/A
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Anticipated/Contracted: 36 months	Actual: 35 months													
Anticipated/Contracted: 36 months	Actual: N/A													
Anticipated/Contracted: 36 months	Actual: N/A													
(8)	<p>Relevance to the Project:</p> <div style="background-color: #1a2b5c; color: white; padding: 10px; margin-top: 20px;"> <p><b>Flatiron phased this part of the I-405 project by shifting traffic toward the median to accommodate three girder lines of widening and a seismic retrofit underneath the entire northbound mainline bridge. All of the bridge work was performed under live traffic.</b></p> </div>	<p><b>Roadway Expansion and Reconstruction</b></p> <p>Like the I-70 East Project, Flatiron is adding Tolled Express Lanes along a 17-mile stretch of I-405, requiring extensive traffic management, stakeholder coordination, and working within confined space along an active interstate.</p> <p>The project includes major excavation and construction for a new braided ramp to separate vehicles entering and exiting I-405 at the interchange with State Route 522, further easing congestion and increasing safety. Other work includes a new Intelligent Transportation System network, widening and retrofitting an existing bridge, adding noise walls, upgrading barriers, and resurfacing much of the existing freeway.</p> <p>The Flatiron/AECOM team is also reconstructing two major interchanges. The first required widening of an existing mainline bridge over an interchange ramp. Flatiron phased this part of the I-405 project by shifting traffic toward the median to accommodate three girder lines of widening and a seismic retrofit underneath the entire northbound mainline bridge. All of the bridge work was performed under live traffic.</p> <p><b>Major Excavation Work</b></p> <p>This project's scope required retrofitting the roadway with advanced storm water treatment systems — new ditches that include filtration media to capture pollution in runoff. Flatiron is installing 15,000 linear feet of new media filter drains, and, for the first time on a WSDOT project, 10,000 linear feet of a more advanced version called a compost-amended bio-filtration swale. Our team has also managed 300,000 cubic yards of roadway excavation and 150,000 cubic yards of embankment for earthwork flow.</p>												

**Colorado I-70 East Project**

No.	Required Information	Response
	<p><b>Flatiron performed MOT activities that included more than 20 closures per night with up to 6 MOT crews. Flatiron developed over 200 individual Traffic Control and Detour Plans.</b></p>	<p>The project team earned 98% of a \$600,000 environmental incentive payment, maintaining water quality throughout the project.</p> <p><b>Complex Traffic Management in an Urban Environment</b></p> <p>The project is 17 miles long and is within one of Washington's most heavily traveled urban corridors — I-405 carries an average daily traffic of more than 200,000 vehicles. Similar to I-70 East Project, I-405 is critical to Seattle's traffic flow, connecting Seattle to Bellevue. Bellevue has influential stakeholders so traffic management had to minimize impact to those communities.</p> <p>Flatiron performed MOT activities that included more than 20 closures per night with up to 6 MOT crews. Flatiron developed over 200 individual Traffic Control and Detour Plans.</p> <p>The project also successfully achieved complex Toll Rollout to achieve Substantial Completion. This required the entire 17-mile-long project to be re-striped over a weekend to change the existing HOV lanes into a Live Dynamically Priced Toll Facility. The pre-toll rollout striping included intricate pre-roll out striping and signing activities to limit the amount of work required for the weekend toll roll out.</p> <p><b>Construction Staging in Confined Spaces</b></p> <p>Adding new managed lanes along this existing freeway, like the I-70 East Project, required extensive traffic management within an active interstate. Flatiron's MOT plan required traffic to be shifted to the outside to gain access to build the inside lanes, followed by a traffic shift to the middle to reconstruct the outside lanes.</p> <p>The next phase included striping and served as the pre-rollout configuration for a period of 270 days. Flatiron coordinated with the toll vendor, who during this pre-rollout phase used specialized equipment to run a series of tests over a 120-day period. Once the toll system passed the required tests, Flatiron and WSDOT performed a live rollout over a 54-hour weekend period, during which all miles of roadway were restriped; the buffer zone installed; and the tolling system successfully turned on.</p>

No.	Required Information	Response
	<p>The Flatiron/AECOM team was responsible for all utility relocations along this 17-mile stretch, which included four City jurisdictions and numerous private utilities.</p>	<p><b>Coordination with Railroad and/or Utility Companies</b></p> <p>The Flatiron/AECOM team was responsible for all utility relocations along this 17-mile stretch, which included four City jurisdictions and numerous private utilities. Flatiron managed the utility relocation process, entering into more than 20 separate Relocation Agreements and working closely with utility owners to design Protect-In-Place measures for every single utility except one.</p> <p><b>Workforce, Subcontractor and Stakeholder Engagement and Environmental Monitoring and Mitigation Activities</b></p> <p>This project required 15% apprentice utilization, which will be met when the project is completed in September, 2015.</p> <p><b>Environmental Monitoring and Mitigation Activities</b></p> <p>Flatiron implemented a comprehensive Environmental Compliance Monitoring program that included noise and air quality monitoring; permitting, implementing three separate mitigation sites; erosion and sedimentation control and water quality monitoring; and wildlife management. Flatiron was responsible for obtaining noise variances from local jurisdictions and monitoring and reporting project compliance. Washington State has the most strict construction water quality standards in the United States. Flatiron successfully achieved project compliance and has been awarded more than 95% of an available environmental incentive.</p>
<b>II. Description of Team Member Involvement</b>		
(9)	Proposer Team Member(s) (or Affiliate(s)) Involved:	<p><b>Flatiron West, Inc.</b>, a subsidiary of Flatiron Constructors, Inc.  <b>AECOM Technical Services, Inc.</b></p>
(10)	Role of Proposer Team Member(s) (or Affiliate(s)):	<p><b>Flatiron West, Inc.</b>, a subsidiary of Flatiron Constructors, Inc., is the Lead Contractor responsible for 100% of the I-405 project.  <b>AECOM Technical Services, Inc.</b>, is the Lead Designer.</p>
(11)	Key Personnel Involved, Roles & Responsibilities:	N/A
<b>III. Reference</b>		
(12)	Name:	Lisa Hodgson
(13)	Title & Employer (Current):	<p>Project Manager                      Washington State Department of Transportation</p>



**Colorado I-70 East Project**

No.	Required Information	Response
(14)	Title & Employer (at time of project/transaction):	Project Manager Washington State Department of Transportation
(15)	Phone & Email	(206) 437 7242 Hodgsol@wsdot.wa.gov
(16)	Location & Time Zone:	Bellevue, WA, Pacific Standard Time Zone
(17)	Other:	N/A
<b>IV. Technical Information</b>		
(18)	Construction Value:	\$155,500,000
(19)	Completion within/above Budget:	\$158,000,000 <i>(Additional value due to WSDOT requested changes)</i>
(20)	O&M Value:	N/A
(21)	Length of Road under Operation (centerline miles):	17 miles
(22)	Key Technical Challenges and Solutions Implemented:	<p><b>Installation of Tolling and ITS infrastructure</b></p> <p><b>Challenge:</b> The project required installation of Tolling and ITS infrastructure, including toll cabinets, toll reader boxes, and toll gantries to accommodate 21 new toll zones. Each toll zone required two gantries, 30 feet apart. The gantries were mono-tube steel structures on drilled shafts. Work also included the conduit system that connected those gantries to the reader and toll cabinets, including installation of 30 CCTV cameras as part of the ITS system, as well as a live-power transformers and a separate fiber optic communication system.</p> <p><b>Solution:</b> The Design and Construction team held a dedicated weekly Toll Vendor Task Force meeting during which the only topic was toll vendor coordination, not only during design, but also to discuss installation and how the team would accommodate the installation through traffic management. Toll installation required coordination with MOT during construction, and the toll vendor also attended MOT task force meetings.</p> <p><b>Benefit to Project:</b> The I-70 East project includes a toll infrastructure design and construction scope very similar to the I-405 project. Our team, which includes members of the I-405 Design and Construction team, will launch weekly Toll Task Force meetings to ensure that the design and construction of the tolling infrastructure meets the needs of the E-470 Toll Authority and its contractor responsible for installing the tolling equipment.</p>



No.	Required Information	Response
		<p><i>Accelerated Schedule</i></p> <p><b>Challenge:</b> The ITS task force discussed how design would be affected depending on which toll vendor, and associated tolling system, was chosen. The tolling vendor was procured under a separate contract with the owner, and that procurement was delayed. WSDOT did not select a toll vendor until 5 months after design had begun on the I-405 project. The Design and Construction team had already completed approximately half of the design and had begun construction before knowing which toll vendor WSDOT had selected. The chosen vendor’s technology had limitations, including a maximum allowable distance from the toll cabinet to the toll gantry.</p> <p><b>Solution:</b> Flatiron and AECOM redesigned some of these elements, and the team reconstructed part of the project in order to accommodate the limitations, including moving gantries and toll cabinets. Additionally, they had already begun construction and had to re-sequence the design packaging, breaking the design into smaller packages so that design could keep up with construction. The team was able to accommodate this relatively large impact without any additional cost to the owner.</p> <p><b>Benefit to Project:</b> Our team is flexible, experienced, and able to quickly adapt to unanticipated challenges. Our Design and Construction Management teams have the experience to quickly evaluate changed conditions and develop a mitigation plan to address these challenges. Our unparalleled local design resources give us the ability to quickly mobilize the necessary staff to respond to accelerated design requests without sacrifice to quality, while also minimizing impacts to the overall project schedule.</p> <p><i>Innovative Designs, Methods, and Materials</i></p> <p><b>Challenge:</b> The owner’s concept specified taking an existing on-ramp (where there was also mainline traffic) to get to an interchange, and a braided ramp design that required a large cut into a known slide zone, which was a big risk on the project.</p>

Colorado I-70 East Project

No.	Required Information	Response
		<p><b>Solution:</b> The Flatiron/AECOM team proposed an alternative technical concept (ATC) at the second bridge site, which mitigated two issues – reducing night work and excavation of a known slide zone. Flatiron's ATC adjusted traffic movements to remove live traffic from that work zone and built a temporary loop ramp on the other side. This eliminated night work and minimized noise impacts to a condo complex that was just 10 feet from the construction site.</p> <p>Flatiron/AECOM redesigned the geometry of the braided ramp, which eliminated a 200,000-yard cut in the slide zone. Not only did this reduce that slide zone risk, it also enabled the team to mine MSE wall backfill from onsite, changing a 600,000-yard off-haul job into a balanced project. The team also eliminated one of the noise walls by using an earthen berm instead, contributing to the earthwork balance on the project.</p> <p><b>Benefit to the Project:</b> The FRMG team has been studying the I-70 East Corridor for over 1 year, and has already developed some initial ideas to mitigate risk and reduce overall impacts to the project. For the I-405 project, the design-build team conducted several initial brainstorming sessions during the RFP phase, and developed a list of over 40 possible ATCs for further evaluation and consideration. The FRMG team will be convening similar brainstorming sessions, along with weekly Task Force team meetings throughout the RFP phase to further develop and refine the design of the I-70 East Project; and we look forward to CDOT's input during the one-on-one meetings.</p>
<b>V. Financial Information</b>		
(23)	Payment Mechanism:	N/A
(24)	Source(s) of Revenues or Payments:	N/A
(25)	Proposer Team Member(s) Equity Investment:	N/A
(26)	Financing Method(s) and Value(s):	N/A
(27)	Key Financial and Funding Challenges and Solutions Implemented:	N/A

Colorado I-70 East Project


**Form F: Project Experience (Autoroute 30)**

**Proposer Name:** Front Range Mobility Group

**Core Proposer Team Member(s) Involved:**


- Equity Member: **ACS Infrastructure Development, Inc. (through Affiliate ACS Infrastructure Canada Inc.)**
- Lead Contractor
- Lead Engineer
- Lead Operator
- Joint venturer in Lead Contractor: **Dragados USA, Inc. (through Affiliate Dragados Canada Inc.)**
- Joint venturer in Lead Operator: **ACS Infrastructure Development, Inc. (through Affiliate ACS Infrastructure Canada Inc.)**
- Affiliate of Equity Member and joint venture in Lead Operator: **ACS Infrastructure Development, Inc.: ACS Infrastructure Canada Inc.**
- Affiliate of joint venture in Lead Operator: **Dragados USA, Inc.: Dragados Canada Inc.**

**Form F: Project/Transaction Description**

No.	Required Information	Response
<b>I. Background Information</b>		
(1)	Project Name:	Autoroute 30
(2)	Type of Facility:	Interstate toll road with bridge and connector roads
(3)	Owner/Procuring Authority:	Ministère des Transports du Québec
(4)	Brief Description of Project:	<div style="display: flex;"> <div style="flex: 1;">  <p><i>The Autoroute 30 project included the design, build, finance, operations, and maintenance of a major highway with total construction costs over \$1 billion and similar technical, stakeholder engagement, and environmental challenges as those anticipated on the I-70 East Project.</i></p> </div> <div style="flex: 2;"> <p>The Autoroute 30 project is a design, build, finance, O&amp;M P3 project that provides the Montreal region with a four-lane tolled bypass highway via the South Shore. The overall \$1.6 billion highway project required the full design and construction of a 26.1-mile western section and operation and maintenance of an existing 19.9-mile eastern section. The project included the reconstruction of two major interchanges that required construction staging and complex traffic management to minimize impacts to densely populated areas. The lead contractor, managed by Dragados, excavated a total of 6.5 million cubic yards of earth, when a depressed main highway (similar to the envisioned included depressed section along I-70 East) and the Soulanges Canal Tunnel. Dragados encountered extremely difficult soils throughout the site that required groundwater considerations, drainage, and disposal of hazardous materials.</p> <p>ACS is a 50% member of the developer and led the highly-complex financing structure for the project that reached financial close in September 2008.</p> </div> </div>

No.	Required Information	Response																
	<p><i>“The Government of Canada is proud to have invested \$704.5 million for the completion of the Western section of Autoroute 30. This new corridor will reduce traffic congestion in and around Montréal, improve access to markets in Ontario, the Maritimes and the United States, and greatly contribute to the economic growth in Montérégie, in Montréal and across Québec.”</i></p> <p>—Honourable Denis Lebel, Minister of Transport, Infrastructure and Communities</p>	<p>ACS has been self-performing the O&amp;M of the existing 19.9-mile section since 2008 and the remainder of the project beginning in December 2012. As the managing member of the design-build joint venture, <b>Dragados</b> opened the western section on time in December 2012.</p> <p>In total, the concessionaire, Nouvelle Autoroute 30, S.E.N.C., is responsible for the long-term financing, operations, maintenance, and renewal work of 46 total miles. Responsibilities during the contract period include the monitoring of the network (both onsite and from the control room); emergency and incident response; routine maintenance of all the infrastructure and systems; major maintenance, including major pavement and bridge rehabilitation and the deployment of ITS and dynamic tolling equipment and systems; control and tolling management; and winter maintenance.</p> <p>The western (new) section of the project opened on schedule and on budget in December 2012 and the entire project has been in full operations since opening. The O&amp;M works have been satisfactory performed in accordance with the concession agreement requirements since this date.</p>																
(5)	Contract Term:	<p>Total Term Length: 34.5 years Start Date: June 2008 End Date: June 2043</p>																
(6)	Current Status:	Construction complete. Project is in full operations.																
(7)	<p>Key Dates and Milestones:</p> <p>Contract Execution</p> <p>Design Start</p> <p>Construction Start</p> <p>Operations Commencement:</p> <p>Service Commencement:</p> <p>Substantial Completion</p> <p>Final Completion</p> <p>End of O&amp;M</p>	<table border="0"> <tr> <td>Anticipated/Contracted: June 2008</td> <td>Actual: N/A</td> </tr> <tr> <td>Anticipated/Contracted: 3 months</td> <td>Actual: 3 months</td> </tr> <tr> <td>Anticipated/Contracted: 3 months</td> <td>Actual: 3 months</td> </tr> <tr> <td>Anticipated/Contracted: 54 months</td> <td>Actual: 54 months</td> </tr> <tr> <td>Anticipated/Contracted: 0 months</td> <td>Actual: 0 months</td> </tr> <tr> <td>Anticipated/Contracted: 54 months</td> <td>Actual: 54 months</td> </tr> <tr> <td>Anticipated/Contracted: 63 months</td> <td>Actual: 63 months</td> </tr> <tr> <td>Anticipated/Contracted: 34.5 years</td> <td>Actual: 34.5 years</td> </tr> </table>	Anticipated/Contracted: June 2008	Actual: N/A	Anticipated/Contracted: 3 months	Actual: 3 months	Anticipated/Contracted: 3 months	Actual: 3 months	Anticipated/Contracted: 54 months	Actual: 54 months	Anticipated/Contracted: 0 months	Actual: 0 months	Anticipated/Contracted: 54 months	Actual: 54 months	Anticipated/Contracted: 63 months	Actual: 63 months	Anticipated/Contracted: 34.5 years	Actual: 34.5 years
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Anticipated/Contracted: 63 months	Actual: 63 months																	
Anticipated/Contracted: 34.5 years	Actual: 34.5 years																	
(8)	Relevance to the Project:	<p>Similar to the Project, Autoroute 30 included the DBFOM of a highway project with construction costs over \$1 billion. It shares similar technical, stakeholder engagement, and environmental challenges as the Project and relevant challenges as further described below.</p>																

Colorado I-70 East Project

No.	Required Information	Response
	 <p><i>The A-30 includes major roadway expansion/ reconstruction, including two major bridges over water, 69 structures, 10 major intersections, a tunnel, two pump stations, and 24 walls (including noise mitigations walls).</i></p> <p><b><i>“Today, we can say mission accomplished. For the next 30 years, A30 Express will be responsible for the management, maintenance and rehabilitation of more than 73 kilometres of Autoroute 30. We will meet this new challenge with success.”</i></b></p> <p>—Mr. Denis Léonard, General Manager of NA-30 and Director of the public-private partnership project to complete Autoroute 30</p>	<p style="text-align: center;"><b>DESIGN AND CONSTRUCTION ACTIVITIES</b></p> <p><b><i>Roadway Expansion and reconstruction, including interchange reconstruction:</i></b> The Autoroute 30 project included a newly constructed 26-mile expansion of the existing highway network around Montreal, Quebec. The A-30 integrates new and existing assets throughout the corridor, including roadway, 2 major bridges over water, 69 structures, 10 major intersections, a tunnel, 2 pump stations, and 24 walls (including noise mitigations walls). Dragados reconstructed two major interchanges—the A-20/A-540 northern interchange (which services the Trans-Canada Highway and Highway 40) and the Châteauguay interchange (which re-built an area that originally crossed a six-lane urban avenue at grade).</p> <p>The project also included the complete provision, installation, commissioning, and maintenance of the ITS system, a preventive closure system for the bridge over the Beauharnois Canal, an electronic toll collection system with a multiprotocol system capable of reading ISO 1800 6C GEN2 and ISO 1800 6B transponders without requiring a change of configuration, and a toll plaza at the St. Lawrence Bridge.</p> <p><b><i>Demolition of existing infrastructure in urban environments:</i></b> Two bridges were demolished over one of the most important railroad lines in Canada that services the Montreal Port, as well as another bridge over an existing highway. Dragados’ team performed each of these major demolition operations in a single night to minimize impact to traffic and the surrounding communities.</p> <p><b><i>Major excavation work, including groundwater considerations and/or drainage requirements:</i></b> The project required more than 6.5 million cubic yards of excavation. This included the challenging Châteauguay urban area (constructed as a depressed main highway and included two-lane parallel service roads in a zone of potential liquefaction) and a tunnel under the Soulanges channel.</p> <p>Dragados’ team encountered extremely difficult soil conditions throughout the site and installed more than 6.4 million linear feet of sand drains, geotextile protection, long-term overburden techniques, and nearly 1 million cubic yards of lightweight fill. The team excavated more than 600,000 cubic yards of extremely soft clays under the water table that required temporary pumping during construction.</p>

No.	Required Information	Response
	<p><i>“We are very proud to be inaugurating the last stretch of Autoroute 30 today. This axial highway is vitally important to the region’s residents, but also to the entire metropolitan area. This new road infrastructure gives all users an optional alternative route and it integrates existing highways in a road system that will perform better than ever.”</i></p> <p>—Mr. Sylvain Gaudreault, Québec Minister of Transport</p>	<p>The work also required proper analysis, treatment, and disposal of groundwater and soils contaminated with residual petroleum hydrocarbons that were discovered in multiple areas of the project.</p> <p>Dragados’ work included construction of the Soulanges Canal Tunnel—280-foot-long, four-lane, reinforced concrete tunnel under the channel. The ground in this area was marine blue clay of very low bearing capacity, so the main concern was to avoid differential settlements between the tunnel and the motorway. A combination of clay, geotextile bentonite sheets, and PVC layers provided the necessary waterproofing strength for the tunnel. Because the vertical alignment of the motorway was at a low point at this location, Dragados built a pumping station at the site of the tunnel with an 800-gallons-per-second capacity and an 80-foot deep, 36-foot diameter well that discharged into the Ruisseau Majoeu creek, one of the small creeks that cross the motorway in this area.</p> <p><b>Complex traffic management in urban areas:</b> Construction of the A-20/A-540 northern interchange was one of the primary areas requiring complex traffic management, as it services multiple major highways. The interchange is a high-velocity traffic area and has a large number of trucks that use the Trans-Canada Highway, representing 30% of the usual traffic. Dragados’ complex MOT plan involved 14 major temporary traffic configurations to allow construction of 9 structures, including 3 bridges built over railways (implicating high-traffic management under federal railway standards and regulations), a roadway, 3 temporary links, and 12 temporary cross-linked detours.</p> <p>During the planning stages, a traffic analysis was performed for the A-20/A-540 Interchange that established the amount of traffic volume variations for 24 hours per day, each day of the week. Following a thorough analysis of this study, the Dragados team determined specific timelines for lane closures to minimize impacts to traffic, which were subsequently included into specific agreements with the Ministry of Transportation.</p> <p>Dragados implemented a quick mobility concrete barrier system (QMB system) for the construction of approximately 1 mile of the roadway interchange, all the while maintaining the traffic capacity, thus offering the required number of lanes for road-users during high-peak traffic periods.</p>

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No.	Required Information	Response
	<div style="background-color: #1a237e; color: white; padding: 10px; margin-bottom: 10px;"> <p>A 2008 value for money analysis by KPMG showed the P3 solution by the developer represented a lower cost of \$751 million (or 33%) in present value and faster completion and commissioning by 2 years compared to traditional delivery, resulting in greater economic spin-offs and better service to users.</p> </div> <div style="text-align: center;">  </div> <div style="color: #1a237e; font-style: italic;"> <p>Dragados built a tunnel under the Soulanges Canal, which required major excavation in an area with high groundwater and ventilation/fire-life safety considerations.</p> </div>	<p>Dragados implemented a total of 150 traffic movements, which were performed during a 3-month period, and variable message signs, construction of detour roads, temporary access roads and traffic lights, traffic intelligence management via traffic density detection device installations, and continuous traffic monitoring.</p> <p>The requirement for complex traffic management also required detailed safety procedures to ensure the safety of workers and the traveling public through the work zones. The project team used strategies such as buffer zones, attenuator trucks, radar detectors, variable messaging systems, speed reduction signage, and increased police surveillance, in partnership with the Sûreté du Québec (provincial Police).</p> <p>All configurations and traffic diversions were systematically and punctually communicated through press releases sent to all partners and stakeholders. Severely impacted stakeholders (such as residents living close to the project site, police and fire prevention services, and public transport agencies) were directly contacted to ensure they were well informed of future traffic configurations. The Dragados team also planned construction to accommodate special events such as the Formula 1 Event, national holidays, or religious festivities.</p> <p><b>Construction staging in confined spaces:</b> The best example of construction staging in confined spaces is Dragados' work on the residential area of Châteauguay, which included an interchange consisting of a below-surface highway and several connections to local roads, service roads, and national roads in close proximity to residential areas. A total of 12,000 meters of security barriers were installed over a 3-year construction period to maintain the safety and security of road-users and for workers.</p> <p><b>Structures that include ventilation and/or fire life safety considerations:</b> The work included a 230-foot-long tunnel under the Soulanges Canal that was required to meet ventilation requirements for tunnel structures.</p>





Colorado I-70 East Project

No.	Required Information	Response
		<p><b><i>Coordination with railroad and/or utility companies:</i></b>            Dragados' management approach included a dedicated utilities team with its own construction manager who dealt with all utility companies and coordinated the relocation and protection of each one, as well as determined who was responsible for the work (i.e., the design-builder or the utility company). The primary utility owners included: Saint Lawrence Seaway (operator of one of the largest riverine communication systems in the world, which connects the Great Lakes with the Atlantic Ocean); CSX (private railway operator); CN (public railway operator); and Hydro-Québec (power provider and one of the largest hydro-electric producers in the world). In the A-540/A-20 interchange area, three bridges over the CN federal railway required traffic redirection onto parallel bridges. The personnel working on these structures were specially trained by the CN. Dragados' team collaborated closely with the CN to ensure this work was built per the technical and safety/security requirements and minimized impacts to the rail operations.</p> <p><b><i>Workforce, Subcontractor and stakeholder engagement Activities:</i></b> The A-30 project was the largest and most important roadway project in the province of Quebec at time of construction, passing through four cities, seven municipalities, and several third party semi-public and federal proprietary land and infrastructures. This required significant community engagement efforts by ACS/Dragados. The team used several communication strategies to maintain good relations, such as a project website (<a href="http://www.na30.ca">http://www.na30.ca</a>); distribution of maintenance of traffic notices, press releases, and direct coordination with individual stakeholders, residents, local businesses, municipalities, police and fire agencies, schools, and public transportation agencies.</p> <p>Dragados worked as part of the project's "Impact Management Committee," which was created to inform various parties including the Ministry of Transport, the developer, and all municipalities and emergency services on specific temporary traffic configurations and other coordination efforts with the overarching goal to minimize impacts. The project team also coordinated closely with the Ministry of Transportation and the various municipalities to hold public information sessions, and also had a formal process to receive and respond to complaints and suggestions from the general public.</p> <p><b><i>Environmental Monitoring and Mitigation Activities:</i></b>            The project required complex environmental coordination due to the sensitive areas along the alignment. Dragados collaborated</p>

**Colorado I-70 East Project**

No.	Required Information	Response
	 <p><i>The A-30 project was the largest and most important roadway project in the province of Quebec at time of construction, passing through four cities, seven municipalities, and several third party semi-public and federal proprietary land and infrastructures.</i></p>	<p>with the Ministry of Fisheries and Oceans to protect the sensitive wildlife habitat in the low-rise islands in the Lake St-Louis area of the St-Lawrence River (Les Iles de la Paix), which are located close to the project ROW.</p> <p>The team was also required to properly analyze, treat, and dispose of contaminated groundwater and soils due to residual petroleum hydrocarbons and other hazardous materials, which were discovered in several areas throughout the project. Dust and water quality were monitored at least weekly to maintain compliance with the project requirements. The construction team also monitored noise levels, especially in the residential areas, and implemented mitigation measures as needed. This included installation of more than 400,000 square feet of noise walls.</p> <p style="text-align: center;"><b>OPERATIONS AND MAINTENANCE ACTIVITIES</b></p> <p><b>Roadway pavement and associated infrastructure under similar environmental conditions:</b> The developer is responsible for winter maintenance on the system. As A-30 is an urban corridor toll road with similar lane configuration and features, the summer and winter operational and routine maintenance activities are being undertaken by A-30's full-time staff, augmented when required by seasonal hires and subcontractors. The Winter Maintenance Plan for the project has been devised to meet the requirements of the winter O&amp;M specifications set out in the concession agreement, and the historical winter weather patterns of the last 10 years in the Montreal area. This detailed Winter Maintenance Plan has been put in place to ensure full compliance with the project requirements and an emphasis on rider safety. Various parameters have been identified and planned, including snow control, winter abrasives and chemical snow and ice control, as well as roadside snow and ice control. The concession utilizes historical weather patterns and statistical analysis to ensure compliance. As part of the winter plan, the maintenance team is providing 24-hour coverage of the system, including using snowplows, spreaders, and salt/chemical applications.</p> <p><b>Coordination with adjacent road operators:</b> The O&amp;M team works with multiple project stakeholders to manage the day-to-day operations of the A-30. This includes MTQ and its regional entities DOM and DEM, six different municipalities, four regional county municipalities, multiple utilities, environmental stakeholders, safety organizations, licensing organizations, and enforcement organizations for tolling.</p>


**Colorado I-70 East Project**

No.	Required Information	Response
	 <p><i>Dragados' team coordinated closely with the Ministry of Fisheries and Oceans to protect the wildlife habitats for the construction over and adjacent to the wetlands and other sensitive environmental areas.</i></p>  <p><i>The developer's full-time staff, augmented when required by seasonal hires and subcontractors, is providing 24-hour coverage of the system, including using snowplows, spreaders, and salt/chemical applications.</i></p>	<p><b><i>Operations, Maintenance and Renewal Work on Significant Structures:</i></b> ACS' concessionaire team is responsible for the long-term routine and major maintenance of several significant structural features along the project corridor. The O&amp;M team was actively involved in the early stages of the project and undertook a lifecycle-based approach when evaluating and providing input into the design options for both the project's roadway and structures. The goal was to strike a balance between the initial construction costs and the long-term maintenance and rehabilitation costs. Assets under management include:</p> <ul style="list-style-type: none"> <li>• The St. Lawrence River Bridge, 6,102-foot-long, 47-span, 148-foot-long span</li> <li>• The Beauharnois Channel, a 8,366-foot-long bridge over the Beauharnois Channel, built as two separate three-lane structures, featured different designs for its west and east sections. The 25-span, 148-foot-span west section and 17-span, 266-foot-span east section was designed with structural steel box girders that were launched from the west abutment.</li> <li>• A 236-foot-long, four-lane tunnel under the Soulanges Canal, including all fire safety and ventilation systems, similar to that which will be required on the I-70 East Project.</li> <li>• 10 major interchanges, 2 viaducts over the Saint Louis River, and 1 viaduct over the Châteauguay River.</li> <li>• Eighteen overpasses and underpasses and over 12 highway connections to existing roads and freeways.</li> <li>• A depressed main highway in the Châteauguay urban area was constructed as and included two-lane parallel service roads.</li> <li>• Sound barriers, bridges, drainage, utility relocations, signing and pavement markings, signalization, lighting, and landscaping</li> </ul>
<b>II. Description of Team Member Involvement</b>		
(9)	<p>Proposer Team Member(s) (or Affiliate(s)) Involved:</p>	<p><b>ACS Infrastructure Canada Inc. (ACSIC)</b>, an Affiliate of ACS Infrastructure Development, Inc. (ACSID), Equity Member and member of the Lead Operator of FRMG. Both ACSIC and ACSID are wholly owned North American subsidiaries of ACS SyC, a Core Proposer Team Member and Financially Responsible Party to ACSID. ACSIC is the lead Equity Member of the consortium with a 50% participation. ACSID and ACSIC share key resources and personnel in pursuing and managing concessions in North America. ACSID will benefit from its sister company ACSIC's experience on the SFPR project and will be closely involved in developing and managing the I-70 East Project.</p>


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No.	Required Information	Response
		<b>Dragados Canada Inc.</b> (DCA), an Affiliate of Dragados USA, Inc. (DUSA). Both DCA and DUSA are wholly owned North American subsidiaries of Dragados, S.A., a Core Proposer Team member and Financially Responsible Party to Lead Contractor member DUSA. DCA acted as the managing partner of the Lead Contractor joint venture with 40% participation. DUSA will benefit significantly from its sister company DCA's experience on the A-30 project given the very close coordination between the two entities with respect to P3 projects in North America.
(10)	Role of Proposer Team Member(s) (or Affiliate(s)):	<b>ACS Infrastructure Canada Inc.</b> (Affiliate of ACS Infrastructure Development, Inc.): Equity Member (75% at financial close, later reduced to 50%). ACSIC has been involved as a key sponsor from the procurement stage through award, closing, the construction period and now operations and management of the developer.  <b>Dragados Canada Inc.</b> (Affiliate of Dragados USA, Inc.): managing partner of the Lead Contractor (40%).
(11)	Key Personnel Involved, Roles & Responsibilities:	N/A
<b>III. Reference</b>		
(12)	Name:	Sandra Sultana
(13)	Title & Employer (Current):	Directrice, Direction de la gouvernance des projets stratégiques et des partenariats publicprivé, Québec Ministry of Transport
(14)	Title & Employer (at time of project/transaction):	Directrice, Direction de la gouvernance des projets stratégiques et des partenariats publicprivé, Québec Ministry of Transport
(15)	Phone & Email	(514) 873-4377 (ext. 30100) Sandra.Sultana@Mtg.gouv.qc.ca
(16)	Location & Time Zone:	Montreal, Quebec, Eastern Time Zone
(17)	Other:	N/A
<b>IV. Technical Information</b>		
(18)	Construction Value:	\$1.262 billion
(19)	Completion within/above Budget:	Final Amount: \$1.270 billion – Less than 1% (difference due to owner-directed changes)
(20)	O&M Value:	\$27,526 million
(21)	Length of Road under Operation (centerline miles):	46 miles

**Colorado I-70 East Project**

No.	Required Information	Response
(22)	<p>Key Technical Challenges and Solutions Implemented:</p>  <p><i>Construction of the Beauharnois Canal Bridge was performed over a navigable waterway and under stringent schedule restrictions so as not to impact shipping operations.</i></p>	<p><b>Environmental and Seasonal Construction Restrictions</b></p> <p><b>Challenge:</b> The Beauharnois Canal Bridge was the most complex and critical structure of the project; the bridge was subject to a very tight schedule and had to be designed so that it could be built in very challenging winter weather. The St. Lawrence Seaway Corporation imposed severe construction restrictions over their land, so Dragados’ team was not allowed to perform work over the shipping channel except during the 3 months of winter closure, and no work could be done with cranes or other lifting equipment over this main span.</p> <p><b>Solution:</b> Dragados proposed an innovative technical solution for the deck construction, which consisted of launching the deck from the east abutment over the canal and over the shipping channel, allowing the deck to be erected over the 150-meter-long main span over the shipping channel in a single operation in only 2 days. Since the launching method did not necessitate the use of cranes over the Seaway, the St. Lawrence Seaway Corporation allowed us to complete this work outside of the winter period.</p> <p><b>Benefit:</b> The I-70 East Project includes major excavation and structural work that will need to take into account the winter construction periods and subsequent restrictions. FRMG has experience locally and across North America in scheduling and implementing technical solutions that effectively mitigate schedule risks due to winter weather.</p> <p><b>Identifying, Handling, and Disposing of Contaminated Materials During Construction</b></p> <p><b>Challenge:</b> Dragados’ team encountered contaminated materials in several areas of the project during construction. This included polycyclic aromatic hydrocarbons at the site of an old mechanics facility; DDT and arsenic-based insecticides in the top layer of an old apple orchard; groundwater and soil contaminated with residual petroleum hydrocarbons at the Bellevue overpass and the A-20/A-540 northern interchange; barium and mercury contamination at one of the foundation locations of the Canal de Beauharnois bridge; and industrial and domestic waste in an old landfill that filled a portion of the old Beauharnois channel.</p>

**Colorado I-70 East Project**

No.	Required Information	Response
	<p style="text-align: center;"><b>AWARDS</b></p> <p><i>The 2008 “Project Finance Gold Award” from Canadian Council for Public Private Partnership</i></p> <p><i>The 2008 “Deal of the Year Award” from Project Finance International Magazine North American</i></p> <p><i>The 2008 “North American P3 Deal of the Year Award” from Euromoney Project Finance Magazine</i></p>  <p><i>Dragados maintained the safety of its employees and the public in carefully identifying, handling, and disposing of different types of contaminated soils at several locations along the Project.</i></p>	<p><b>Solution:</b> Dragados trained its construction staff in the identification, handling, and disposal of potential contaminated materials prior to starting construction activities. Dragados worked with specialized subconsultants to perform chemical analyses to determine the level of contamination at each site. The team then used this information to prepare location-specific procedures to safely handle and dispose of the contaminated materials. This included adjusting the project design to avoid contaminated areas where possible, use of specialized contractors to perform the work, disposing of contaminated soils at high security or specialized landfills, incinerating soils prior to excavation, and other approved measures.</p> <p><b>Benefit:</b> The I-70 corridor has several areas with known hazardous materials, such as the Asarco Superfund site, and other areas with a high potential for encountering contaminated soils. Dragados’ experience on the A-30 project will benefit the FRMG team in maintaining the safety of its employees and the public when performing similar work anticipated on the I-70 East Project.</p> <p><i>Winter Maintenance in Conditions Similar to the I-70 East Project</i></p> <p><b>Challenge:</b> Complex Winter Maintenance Requirements in a Large Corridor</p> <p><b>Solution:</b> To perform winter maintenance in this type of environment, careful weather monitoring is crucial for the safety of the users and the flow of traffic. As part of the ITS system that was installed on the new system, in addition to CCTV cameras, traffic counting devices, and dynamic message signs, ACS placed an electronic weather station on the project that monitors the weather conditions on the roadway. The weather station supplies live temperature and precipitation data to the O&amp;M staff so that they can adequately prepare for severe winter events. Relying on the local weather forecast and utilizing the ACS team’s own weather monitoring system will ensure that winter maintenance is delivered efficiently and effectively.</p> <p><b>Benefit:</b> The A-30 project demonstrates FRMG’s ability to successfully operate under similar climate conditions to the Project (and Denver area). Depending upon the ultimate scope for the Lead Operator, FRMG can leverage this crucial experience to effectively develop and budget for a comprehensive and highly-responsive winter maintenance program.</p> <p><b>Challenge:</b> Efficient, long-term management of complex assets</p>

Colorado I-70 East Project

No.	Required Information	Response
		<p><b>Solution:</b> ACS has employed innovative techniques to effectively and efficiently manage the numerous complex assets along the project. A Structure Management System (SMS) was implemented to carefully monitor structural elements and schedule their maintenance and rehabilitation in order to minimize projects costs and meet project performance requirements. The SMS stores specific condition information about the various elements of the structure. This information is continually updated with the results of periodic evaluations. Various levels of maintenance are then indicated such as: suitable for preventive maintenance, requires corrective maintenance, or in need of extensive repair. This allows us to determine the most advantageous timing for carrying out needed repairs within the context of programmed budgets and asset feature management.</p> <p><b>Benefit:</b> FRMG may utilize a similar approach for the Project that will allow us to efficiently manage the structures along the Project corridor, including existing and new construction.</p>
<b>V. Financial Information</b>		
(23)	Payment Mechanism:	Hybrid availability payment with toll revenue component
(24)	Source(s) of Revenues or Payments:	The Debt Service and Equity are repaid by Capital Payments made by MTQ (46% of total revenues) and toll revenue payments (35% of total revenues) and the O&M costs are covered by O&M payments (19% of total revenues) from MTQ.
(25)	Proposer Team Member(s) Equity Investment:	ACS' investment was \$90,089 (50% shareholder of project company) backed by a letter of credit, posted at financial close and available until the equity was injected towards the end of the construction period
(26)	Financing Method(s) and Value(s):	With a club deal of 13 Canadian and international lenders, the financial structure included two different tranches of debt: \$232 million revolving construction bridge loan, repaid via milestone payments received from Ministere des Transports du Quebec during construction; and \$642 million long-term amortizing senior debt with a 30-year maturity. The deferred equity contribution of \$180 million is backed by a letter of credit, posted at financial close and available until the equity was injected toward the end of the construction period. The project also incorporates a liquidity facility to cover the ramp-up traffic risk.
(27)	Key Financial and Funding Challenges and Solutions Implemented:	<b>Challenge:</b> The project required more than \$850 million in debt capital at a time when capital market conditions were suffering severe volatility caused by the financial crisis.

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No.	Required Information	Response
		<p><b>Solution:</b> ACS ran a competitive process with lenders to determine the different funding solutions available, not only to obtain the most competitive pricing, but also to have flexibility to change to an alternate financial solution should market conditions change. ACS ran in parallel a bond and a bank solution and negotiated both solutions with lenders. On the back of its deep relationships with AFP lenders, ACS was able to reach financial close with a club of 13 banks in September 2008, only 10 days after the collapse of Lehman Brothers.</p> <p><b>Benefit:</b> ACS has proven experience in sourcing financing and reaching financial close despite significant challenges in the financial markets. FRMG's Equity Members have the relationships and know-how to mitigate market risk by sourcing multiple financing structures in parallel and leveraging its strong relationships in the P3 lending community.</p>



Colorado I-70 East Project

**Form F: Project Experience (Eastside Extension)**

**Proposer Name:** Front Range Mobility Group

**Core Proposer Team Member(s) Involved:**

- Equity Member:
- Lead Contractor
- Lead Engineer
- Lead Operator
- Joint venturer in Lead Contractor:  
**URS Energy & Construction, Inc., an AECOM Company**
- Joint venturer in Lead Engineer:  
**AECOM Technical Services, Inc.**
- Affiliate(s) N/A



**Form F: Project/Transaction Description**

No.	Required Information	Response
<b>I. Background Information</b>		
(1)	Project Name:	Gold Line Eastside Light Rail Transit (LRT) Extension
(2)	Type of Facility:	Expansion to an existing system LRT in a congested urban area with major cut and cover construction.
(3)	Owner/Procuring Authority:	Los Angeles County Metropolitan Transportation Authority (Metro)
(4)	Brief Description of Project:	<p>AECOM (as a member of Eastside LRT Constructors) designed and constructed Metro's \$629.4-million Gold Line Eastside Extension project, a 5.9-mile LRT extension on busy city streets through one of the most densely populated areas of Los Angeles.</p> <p>The project included a 1.7-mile-long section of 21-foot diameter side-by-side tunnels and cut-and-cover construction of two underground stations and the portals at each end of the tunnel. The team placed 120,000 cubic yards of structural concrete, reconstructed 4 miles of street and civil work, and 3 miles of wet utility relocations (sewer, water, and storm drain). AECOM Technical Services also managed all design processes for the 4,000-sheet design submittals, coordinated all street and utility permits with third-party agencies, and managed the LRT system start-up and testing activities.</p> <p>Additional project features included major cut and cover sections that included ventilation and fire life safety considerations; large dual bore tunnels in a complex geologic environment; ground control to minimize settlements and impacts to streets, utilities, and structures; design in high-seismic zone area; and work in congested urban areas adjacent to residential and commercial structures.</p> <p>The project was completed on time and within budget in 2009.</p>



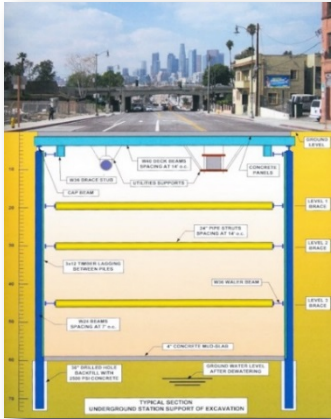
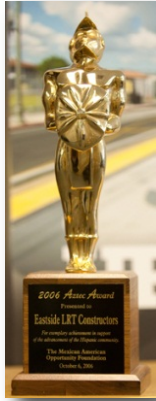
*The Eastside Extension Project was the first Metro project to be delivered via a design-build delivery method.*

**Colorado I-70 East Project**





No.	Required Information	Response																				
(5)	Contract Term:	<p style="text-align: center;">Term Length: 65 months            Start Date: June 2004            End Date: November 2009</p>																				
(6)	Current Status:	Construction complete; facility is in operation.																				
(7)	<p>Key Dates and Milestones:</p> <p style="padding-left: 40px;">Contract execution</p> <p style="padding-left: 80px;">Design Start</p> <p style="padding-left: 40px;">Construction Start</p> <p style="padding-left: 40px;">Operations Commencement</p> <p style="padding-left: 40px;">Service Completion</p> <p style="padding-left: 40px;">Substantial Completion</p> <p style="padding-left: 80px;">Final Completion</p> <p style="padding-left: 40px;">End of O&amp;M</p>	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%; padding-right: 10px;">Anticipated/Contracted: June 2004</td> <td style="width: 33%; padding-right: 10px;">Actual: June 2004</td> </tr> <tr> <td style="padding-right: 10px;">Anticipated/Contracted: 0 months</td> <td style="padding-right: 10px;">Actual: 0 months</td> </tr> <tr> <td style="padding-right: 10px;">Anticipated/Contracted: 1 month</td> <td style="padding-right: 10px;">Actual: 1 month</td> </tr> <tr> <td style="padding-right: 10px;">Anticipated/Contracted: N/A</td> <td style="padding-right: 10px;">Actual: N/A</td> </tr> <tr> <td style="padding-right: 10px;">Anticipated/Contracted: 60 months</td> <td style="padding-right: 10px;">Actual: 65 months</td> </tr> <tr> <td style="padding-right: 10px;">Anticipated/Contracted: 58 months</td> <td style="padding-right: 10px;">Actual: 58 months</td> </tr> <tr> <td colspan="2" style="padding-right: 10px;"><i>Change due to Client-approved time extension.</i></td> </tr> <tr> <td style="padding-right: 10px;">Anticipated/Contracted: 60 months</td> <td style="padding-right: 10px;">Actual: 65 months</td> </tr> <tr> <td colspan="2" style="padding-right: 10px;"><i>Change in final completion due to Client-approved time extension for Client-directed changes.</i></td> </tr> <tr> <td style="padding-right: 10px;">Anticipated/Contracted: N/A</td> <td style="padding-right: 10px;">Actual: N/A</td> </tr> </table>	Anticipated/Contracted: June 2004	Actual: June 2004	Anticipated/Contracted: 0 months	Actual: 0 months	Anticipated/Contracted: 1 month	Actual: 1 month	Anticipated/Contracted: N/A	Actual: N/A	Anticipated/Contracted: 60 months	Actual: 65 months	Anticipated/Contracted: 58 months	Actual: 58 months	<i>Change due to Client-approved time extension.</i>		Anticipated/Contracted: 60 months	Actual: 65 months	<i>Change in final completion due to Client-approved time extension for Client-directed changes.</i>		Anticipated/Contracted: N/A	Actual: N/A
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Anticipated/Contracted: N/A	Actual: N/A																					
(8)	<p>Relevance to the Project:</p> <div style="text-align: center;">  </div> <p><i>A 21-foot diameter twin bore tunnel was part of the Eastside Extension project.</i></p> <div style="text-align: center;">  </div> <p><i>The first phase of the major cut and cover excavation work for the stations and tunnel portal shafts was restricted by the many utility lines within the top 12 feet of the excavation.</i></p>	<p>The Eastside Extension project is a 5.9-mile extension that serves one of the most densely populated areas of Los Angeles. Running on concrete-embedded track from Union Station in downtown Los Angeles to Pomona Boulevard, it connects the communities of East Los Angeles and Little Tokyo to Long Beach, Hollywood, the San Fernando Valley, downtown Los Angeles, and Pasadena. It was built under a \$629.4-million design-build contract awarded in 2004 to Eastside LRT Constructors, a joint venture led by AECOM. AECOM Technical was also a member of the design JV.</p> <p>Specific details in relation to each of the evaluation criteria included:</p> <p><b><i>Roadway expansion, reconstruction and interchange reconstruction:</i></b> Approximately 4 miles of the dual-line extension were constructed at ground level or on bridges or other structures, and 1.7 miles were in 21-foot-diameter twin tunnels. The work required demolition and reconstruction of 4 miles of streets; widening and retrofitting of existing bridges for track placement (in coordination with CalTrans); asphalt concrete paving, base, and miscellaneous concrete for street improvements; and maintenance of traffic.</p>																				

No.	Required Information	Response
	 <p><i>AECOM led the construction effort on the Eastside Extension project in one of the most densely populated areas of Los Angeles.</i></p> <p><b>“...[Eastside Extension] has posted an exemplary safety record – more than 4 million construction hours without a lost-time work injury – making it perhaps the safest major public works project in U.S. history.”</b></p> <p><i>—Jose Ubaldo, Media Relations, Metro</i></p>	<p><b>Demolition of existing infrastructure in urban environments:</b> Excavation of the 1st/Boyle and 1st/Soto underground stations included demolition of structures, removal of contaminated materials, installation of instrumentation and decking, and rearrangement of utilities to accommodate the new infrastructure.</p> <p><b>Major excavation work, including groundwater considerations and/or drainage requirements:</b> AECOM used small excavators to carefully expose the utilities and remove surrounding earth so that the decking system and utility support could be installed. After the decking system was in place for the cut and cover section, AECOM's team then performed the remaining excavation below the decking system.</p> <p>AECOM's team used small dozers and front loaders to maneuver below the decking and around the shoring bracing system to transport the excavated material to the access shafts. Large or long-reach excavators at the shafts removed the dirt out of the excavation and into trucks for haul-off. Muck boxes and cranes were used to remove dirt when the excavations were deeper than 30 feet. Small loaders in the excavation filled the steel muck box with dirt, and a crane at ground level hoisted the muck box out of the excavation and emptied the box into a stockpile in the yard.</p> <p><b>Complex traffic management in urban areas:</b> AECOM's team successfully completed over 4 miles of street reconstruction in a very confined urban environment, with minimal impact to residences and businesses. During construction, station locations were protected and separated from adjacent residents, businesses, and traffic. The two underground stations were built under concrete deck panels, which allowed uninterrupted traffic movements during construction below. Deck panels were installed and removed during 72-hour street closures to minimize impact to traffic. Openings along the city streets were maintained to provide access for dirt removal during excavation, material delivery, and general access to the underground station.</p>

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No.	Required Information	Response
	 <p><i>Use of cut-and-cover construction ensured maximum traffic flow throughout the project duration.</i></p>  <p><i>The project implemented a rigorous DBE program and exceeded DBE participation goals (Goal: 13.7%; Actual: 16.3%). The project received the 2006 Aztec Award from the Mexican American Opportunity Foundation for its Jobs Program that increased local Latino participation on the project.</i></p>	<p><b>Construction staging in confined spaces:</b> The project was built in a very congested area of Los Angeles on city streets that required detailed staging in confined spaces. AECOM and AECOM Technical Services developed a phased approach to reconstruct intersections that could not be closed in order to maintain traffic through the area. The confined area presented material and equipment staging and access challenges that required considerable planning and coordination with the owner, cities, and other jurisdictional authorities and stakeholders.</p> <p><b>Structures that include ventilation and/or fire life safety considerations:</b> The underground stations along with the entire length of the dual bored tunnels required temporary ventilation during construction as well as final ventilation, fire suppression systems, and fire life safety systems. During the design phase, AECOM Technical Services conducted exit analyses in order to adequately design the system. During construction, AECOM's team provided multiple exit routes and training of project personnel to prepare for any emergencies. The completed underground stations were equipped with emergency contacting devices as well as passenger direct connecting phones to the Metro operations center to notify of any operations issues or emergencies. Fire suppression systems were installed throughout the stations, tunnels, and equipment rooms. Emergency walkways and portal exits were constructed to facilitate the safe exit of passengers during an incident.</p> <p><b>Coordination with railroad and/or utility companies:</b> This project included the design and construction of approximately \$23 million worth of utility work, a massive effort that required coordination with numerous utility companies. AECOM installed waterlines throughout the densely populated areas of Los Angeles, requiring coordination with existing utilities and coordination for tie-in with public agencies/users. AECOM provided careful coordination for shut-offs, switchovers, re-testing, and re-commissioning of all wet utilities to ensure minimal disruption to the community. AECOM also coordinated all street and utility permits with third-party agencies.</p>


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No.	Required Information	Response
	  <p><i>Cut-and-cover construction for underground stations.</i></p>   <p><i>Cut-and-cover construction for tunnel entry.</i></p>	<p>Many utilities are buried in the city streets of Los Angeles and had to remain in service during station construction. Utilities that interfered with the permanent structure or shoring piles had to be relocated. The decking system was approximately 5-feet deep, which required additional utilities to be lowered or relocated. The team designed a support system to support the worst-case weight of the utility. Lateral bracing was also required to resist seismic loads at all utilities and thrust loads in water lines.</p> <p>A unique risk sharing plan for utility work was jointly developed between AECOM's team and Metro that was incorporated into the contract with the goal to reduce project costs. During contract negotiations, a target price was established to perform required utility relocations. The Utility Shared Incentive Program allowed for cost savings or cost over-runs associated with utility relocations to be equally shared between AECOM's team and Metro. The program was jointly administered by both parties, resulting in a successful partnership that reduced costs and accelerated the schedule.</p> <p><b>Workforce, subcontractor and stakeholder engagement activities:</b> A dedicated community outreach coordinator was assigned to work with Metro's subconsultant to ensure that information provided to the public and media was current, accurate, and appropriate. AECOM's team maintained a constant commitment to local hiring and to local businesses by working closely with the Mexican American Opportunity Foundation, Craft Labor Unions, Greater Los Angeles African American Chamber of Commerce, and the Association of General Contractors. AECOM's team received the Angel Award presented by the East Los Angeles Community Youth Center in recognition of their community efforts.</p> <p>AECOM considered the public and local community in the station design. East Los Angeles is a 7.4-square mile area that is home to more than 126,000 residents, about 95% of whom share a Hispanic or Latino ancestry. Asian and American Indian and other nationalities also are represented in the culturally rich area. To highlight East Los Angeles' roots, the new Eastside Extension stations feature different themes celebrating the area's diversity and utilized local artists for much of the artwork.</p>

Colorado I-70 East Project

No.	Required Information	Response
	<p><b><u>Outstanding Safety</u></b></p> <p><i>As the managing partner of the JV, AECOM's Safety Program was implemented at the site and achieved more than 4.5 million work hours without a lost-time incident. From a press release on October 26, 2009 by Jose Ubaldo, Media Relations, "... The project has posted an exemplary safety record – more than 4 million construction hours without a lost-time work injury – making it perhaps the safest major public works project in U.S. history."</i></p>	<p>AECOM initiated stakeholder involvement during the design phase by receiving input in task force meetings from reviewing agencies and through both informal over-the-shoulder reviews and formal design reviews. As construction progressed, the stakeholders were involved in frequent construction schedule meetings to ensure that the team was delivering on time and with minimal impact to the public.</p> <p><b><i>Environmental monitoring and mitigation activities:</i></b> AECOM scheduled activities near residential areas to be performed during the day, whenever possible, to minimize noise and vibration impacts. In areas where construction activities were ongoing for a longer amount of time, the team installed sound panels, some over 30 feet tall.</p>
<b>II. Description of Team Member Involvement</b>		
(9)	Proposer Team Member(s) (or Affiliate(s)) Involved:	URS Energy & Construction, Inc., an AECOM Company AECOM Technical Services, Inc.
(10)	Role of Proposer Team Member(s) (or Affiliate(s)):	URS Energy & Construction, Inc., an AECOM Company was the managing partner of the design-build joint venture with 50% equity interest.
(11)	Key Personnel Involved, Roles & Responsibilities:	N/A
<b>III. Reference</b>		
(12)	Name:	Dennis Mori
(13)	Title & Employer (current):	Project Director, Metro
(14)	Title & Employer (at time of project/transaction):	Executive Officer – Capital Development, Metro
(15)	Phone & Email:	(213) 922-7238, MoriD@metro.net
(16)	Location & Time Zone:	Los Angeles, CA / Pacific Time Zone
(17)	Other:	N/A
<b>IV. Technical Information</b>		
(18)	Construction Value:	\$600 million
(19)	Completion within/above Budget:	\$629.4 million (approximately 4.9%) <i>Change in final contract values driven by Client-directed changes.</i>

**Colorado I-70 East Project**

No.	Required Information	Response
(20)	O&M Value:	N/A
(21)	Length of Road under Operation (centerline miles):	N/A
(22)	<p>Key Technical Challenges and Solutions Implemented:</p>  <p><i>Delays in acquisition of right-of-way and newly discovered archeology finds were potential schedule challenges on the project.</i></p>	<p><b><i>Delay in Acquisition of Property for Street Improvements and Cut and Cover Construction</i></b></p> <p><b>Challenge:</b> The project team experienced multiple challenges related to the acquisition of property needed for the widening of streets and location of stations. These challenges resulted in potential delays to the project.</p> <p><b>Solution:</b> AECOM's design and construction team worked with the owner to re-sequence activities to successfully mitigate these delays. One example is the relocation of Ramona High School (owned by Los Angeles Unified School District), which took over 1 year longer than anticipated. This property was needed to begin building one of the underground stations. AECOM's design and construction team worked collaboratively with the owner to re-sequence activities and focus resources on other areas of the project until the property became available to mitigate delay finishing the project on time and within budget. AECOM's team successfully mitigated this delay by building the trackwork in a confined space and re-routing one direction of the city traffic to detour around the bridge location.</p> <p><b>Benefit:</b> FRMG will benefit from AECOM's work with the owner on the Eastside Extension providing maximum flexibility to accommodate third-party delays. On projects of this size and complexity and with numerous third-party stakeholders (similar to I-70 East), the ability to re-sequence design and construction activities to help mitigate delays on the project is critical for delivering on time and within budget.</p> <p><b><i>Design Submittals Review and Approval Process</i></b></p> <p><b>Challenge:</b> The owner required project submittals and Requests for Information to be reviewed and responded to within 21 days. Due to the number of submittals (over 10,000), this posed a risk to delay the project.</p>

No.	Required Information	Response
		<p><b>Solution:</b> AECOM's design-build team and Metro partnered together to streamline the design review and approval process to keep the design and construction on schedule. After over 10,000 submittals, the average turn-around time was only 11 days. The project team accomplished this through engaging AECOM and reviewing agencies in the design process early through task force meetings and over-the-shoulder reviews, so there were "no surprises" when the formal review took place.</p> <p><b>Benefit:</b> FRMG team member AECOM &amp; AECOM Technical Service brings proven experience partnering together with an owner to overcome challenges associated with the design review and approval process that involved many reviewing agencies. FRMG plans to leverage those lessons learned and best practices with the Procuring Authorities to keep the I-70 East Project on schedule and within budget.</p> <p><i>Newly Discovered Archaeological Remains Presented Risk of Schedule Delay</i></p> <p><b>Challenge:</b> An unforeseen 1800s graveyard was discovered by AECOM's crews during a demolishing task. This discovery had potential to delay the project due to special protocols for archaeological findings.</p> <p><b>Solution:</b> Metro's archeological contractor sifted through the 28-foot setback of 4- to 114-foot excavations, 6 inches at a time, and discovered almost 40 skeletons. Despite delays in construction while this effort was completed, the project remained on schedule. AECOM worked closely with Metro to accommodate the required processes and procedures for this work. AECOM's team was able to re-sequence construction activities and assign resources to other areas of the project to mitigate any delays in the work due to the unforeseen discovery.</p> <p><b>Benefit:</b> There is potential for discovery of archaeological or other unforeseen items on any project with substantial excavation work. AECOM's experience working with the owner to mitigate delays associated with this work will benefit FRMG's efforts on the I-70 EAST Project, since this Project includes major excavation similar to AECOM's Gold Line Eastside Extension project.</p>



**Colorado I-70 East Project**

No.	Required Information	Response
<u>V. Financial Information</u>		
(23)	Payment Mechanism:	N/A
(24)	Source(s) of Revenues or Payments:	N/A
(25)	Proposer Team Member(s) Equity Investment:	N/A
(26)	Financing Method(s) and Value(s):	N/A
(27)	Key Financial and Funding Challenges and Solutions Implemented:	N/A

# Form F LEAD ENGINEER MEMBERS





## Lead Engineer Project Experience

FRMG's Project Experience demonstrates our significant and relevant experience in projects that have similar technical complexities and challenges to the I-70 East Project.	I-595	I-71/670	Golden Ears	I-15 North	TREX	SH161
<b>1. TECHNICAL CRITERIA</b>						
b. Relevance the Project						
i. design and construction and operations and maintenance activities:						
A. With respect to Design and Construction activities						
i. roadway expansion and reconstruction, including interchange reconstruction	X	X	X	X	X	X
ii. demolition of existing infrastructure in urban environments	X	X	X	X	X	X
iii. major excavation work, including groundwater considerations and/or drainage requirements	X	X	X	X	X	X
iv. complex traffic management in urban areas	X	X	X	X	X	X
v. construction staging in confined spaces	X	X	X	X	X	X
vi. structures that include ventilation and/or fire life safety considerations	X	X	X		X	X
vii. coordination with railroad and/or utility companies	X	X	X	X	X	X
B. with respect to operations and maintenance activities:						
I. Roadway Pavement and associated Infrastructure under environmental conditions that are similar to those affect the project	X		X			X
II. Interfaces with adjacent road operators	X		X			X
ii. workforce, subcontractor and stakeholder engagement and environmental monitoring and mitigation activities						
I. workforce development programs, including partnerships with local community organizations and/or apprenticeship programs	X	X	X	X	X	X
II. achievement of or exceeding goals relating to participation of disadvantaged businesses, small businesses, and/or other business that are subject to equivalent programs	X	X	X	X	X	X
B. with respect to environmental monitoring and mitigation activities:						
I. air quality monitoring and mitigation in urban environments	X	X	X	X	X	X
II. noise monitoring and mitigation in urban environments	X	X	X	X	X	X
<b>2. FINANCIAL CRITERIA</b>						
2.1. Financial Qualifications and Capacity						
a. Relevant Financing experience						
i. the project's financing included a TIFIA loan that was closed by the project developer and not a public authority	X					
ii. the project's financing used PABs						
iii. the financed project was a highway or road project	X	X	X			
iv. the financed project was located in North America	X					

Colorado I-70 East Project


**Form F: Project Experience (I-595 Corridor)**

**Proposer Name:** Front Range Mobility Group


**Core Proposer Team Member(s) Involved:**

- Equity Member: **ACS Infrastructure Development, Inc.**
- Lead **Contractor**
- Lead **Engineer**
- Lead **Operator**
- Joint **venturer** in Lead Contractor: **Dragados USA, Inc.**
- Joint venturer in Lead Engineer: **AECOM Technical Services, Inc.**
- Joint venturer in Lead Operator: **ACS Infrastructure Development, Inc.**
- Affiliate(s) (n/a)

**Form F: Project/Transaction Description**

No.	Required Information	Response
<b>I. Background Information</b>		
(1)	Project Name:	I-595 Corridor Improvements Project (I-595)
(2)	Type of Facility:	Interstate highway expansion (including general purpose lanes and frontage roads) with new reversible managed lanes.
(3)	Owner/Procuring Authority:	Florida Department of Transportation
(4)	Brief Description of Project:  <p><i>The I-595 Project was the first P3 in the State of Florida and the largest project in the history of the Florida Department of Transportation (FDOT) at time of construction.</i></p>	<p>The I-595 Corridor Improvements Project (I-595) is a \$1.7 billion (\$1.2 billion construction value) design-build-finance-operate-maintain (DBFOM) highway project. I-595 was the first P3 in the State of Florida and the largest project in the history of the Florida Department of Transportation at time of construction. The project included widening of the existing highway to accommodate three new 10.5-mile-long reversible toll lanes in the median of a six-lane interstate highway and improved traffic in the Fort Lauderdale area. The urban corridor has daily traffic volumes of 180,000 vehicles.</p> <p>As a P3 contract, this project included financing, design, construction, and all O&amp;M under a 35-year concession period. Dragados worked as the Lead Contractor, with AECOM as its Lead Designer. As concessionaire, ACS led the development and financing of the project and currently oversees the comprehensive maintenance program that began concurrently with the construction phase, as well as all operations and incident response needs along the urban highway corridor.</p>

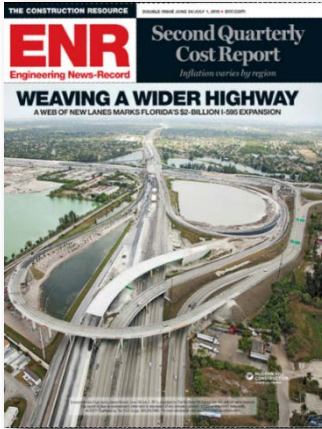
Colorado I-70 East Project

No.	Required Information	Response
		<p>The project was financed through two different tranches of bank senior debt totaling \$781 million and a \$678 million TIFIA loan. Additionally ACS committed 100% of the equity with a letter of credit posted at financial close (\$208 million) prior to selling 50% of its share to the Teachers Insurance and Annuity Association – College Retirement Equities Fund (TIAA–CREF).</p> <p>The project reached Substantial Completion in March 2014 and was delivered ontime and within budget. It has successfully been in operations, led by ACS, since July 2009.</p>
(5)	Contract Term:	<p>Total Term Length: 35 years Start Date: March 3, 2009 End Date: March 2044</p>
(6)	Current Status:	Construction is 100% complete. The project is currently in the O&M Phase.
(7)	<p>Key Dates and Milestones:</p> <p>Contract Execution Design Start Construction Start</p> <p>Substantial Completion Operations Commencement Final Completion End of O&amp;M</p>	<p>Anticipated/Contracted: March 3, 2009 Actual: March 3, 2009 Anticipated/Contracted: March 3, 2009 Actual: March 3, 2009 Anticipated/Contracted: 5 Months Actual: 5 Months; (note, advanced construction activities began 3.5 months after execution)</p> <p>Anticipated/Contracted: 60 months Actual: 60 months Anticipated/Contracted: 5 months Actual: 5 months Anticipated/Contracted: 66 months Actual: 66 months Anticipated/Contracted: 35 years Actual: n/a <i>*Durations from "Contract Execution"</i></p>
(8)	<p>Relevance to the Project:</p>  <p><i>The I-595 Project received the P3 Project of the Year by American Road &amp; Transportation Builders Association and the North American Transport Deal of the Year by Project.</i></p>	<p>The I-595 project demonstrates FRMG's success in working together across each of the four core management levels (development/financing, design, construction, and O&amp;M). The project was the first transportation availability payment project that reached financial close in the US. Similar to the anticipated financing approach for the I-70 East Project, I-595 finance structure included a TIFIA loan. ACS, as the sole equity member from bid until construction, was able to close financing, in the midst of the turmoil of the financial markets at the end of 2008. Notably, ACSID switched from a PABs and TIFIA loan structure (similar to that envisioned by the Procuring Authorities), committed at financial close, to a 12-bank club and TIFIA loan shortly after having been awarded the project.</p>

**Colorado I-70 East Project**

No.	Required Information	Response
	 <p><i>The I-595 Project was built in an urban corridor that accommodated daily traffic volumes of 180,000 vehicles.</i></p> <p><b><i>“We delivered it on the same day we said we would, five years earlier. It really shows this model will work. Florida DOT is very proud of this Project.”</i></b> — Paul Lampley, FDOT Project Manager</p>	<p>The experience gained working with TIFIA on the first, availability payment project to close with TIFIA financing provided our team with an in-depth knowledge of TIFIA's approach to structuring and mitigating project risks, its processes and its procedures. FRMG's combined experience in closing TIFIA deals—will ensure our team can seamlessly implement a TIFIA financing approach into our structure, should it become available for Project.</p> <p>This project shares many similar challenges anticipated for the I-70 East Project: a widening of the existing highway and construction staging to accommodate three new toll lanes in a confined, urban corridor—all while managing extreme daily traffic volumes. The work on I-595 included reconstruction of major interchanges; demolition of structures; major excavations below a high water table; extensive coordination with utility and railroad companies; and ventilation systems to allow laborers to work in confined spaces.</p> <p>The project's technical challenges were successfully overcome with minimal impact to the traffic and surrounding neighborhoods by implementing proven strategies to mitigate noise, air quality, and other impacts associated with construction. Dragados and AECOM also engaged the local workforce, subcontractors, and stakeholders by exceeding the DBE and OJT goals.</p> <p><b>FRMG's Demonstrated Performance on the I-595 project includes:</b></p> <p><b>DESIGN AND CONSTRUCTION ACTIVITIES</b></p> <p><b><i>Roadway expansion, reconstruction and interchange reconstruction:</i></b> The project included expansion and reconstruction of 10.5 miles of the existing I-595 and the associated SR-84 to accommodate three reversible express lanes in the median of the I-595 corridor, which included reconstruction at each intersection along I-595. More than 60 bridges were built or reconstructed, including widening (partial or complete demolitions of existing structures at 7 crossroads and 2 major interchanges), new steel girder and concrete bridges with spans up to 158 feet long, and 7 braided ramps, including four-span steel girder bridges with post-tensioning caps and individual spans up to 212 feet long. Several miles of variable profile concrete retaining walls were necessary between parallel roadways to support the difference in elevations between parallel roads.</p>

**Colorado I-70 East Project**

No.	Required Information	Response
	 <p><i>The I-595 Project was recognized throughout the industry as an historic project due to the innovative financing and sheer magnitude at time of award.</i></p>	<p><b>Demolition of existing infrastructure in urban environments:</b> To accommodate the expansion of I-595 at each intersection, Dragados and AECOM widened the existing bridges, which included partial demolitions of the existing decks at each side of the existing structures while maintaining traffic through the intersection. Dragados and AECOM also planned and performed demolition of two other major bridges:</p> <ul style="list-style-type: none"> <li>• <u>Ramp N Bridge at University Drive Intersection:</u> Demolished and reconstructed two spans and intermediate piers and the end bent to accommodate the expansion of I-595 through the intersection.</li> <li>• <u>Bridge over the Florida Turnpike:</u> Completely demolished a two-span structure over the Florida Turnpike in a single weekend to minimize the impacts to traffic.</li> </ul> <p><b>Major excavation work, including groundwater considerations and/or drainage requirements:</b> Dragados' and AECOM's work included dredging the existing canal for reconstruction of I-595, as well as major excavation along westbound SR-84 to remove the existing deep layers of organic soils. This excavation work required installation of a drainage system, including trench box methods, and dewatering due to work being performed below the water table.</p> <p><b>Complex traffic management in urban areas:</b> The urban corridor had daily traffic volumes of 180,000 vehicles. Dragados and AECOM minimized impacts to the public by maintaining the same number of lanes available to the traveling public and the original speed limits (55 mph) through the various construction phases. They worked together to design and implement a detailed traffic control plan to maximize construction operations during off-peak hours and maintain access to existing properties along westbound SR-84 throughout the entire construction duration. Dragados ensured the safety of workers and vehicular traffic by installing 220,000 linear feet of temporary concrete barrier to separate the traffic from construction operations. Up-to-date construction bulletins were posted on the project website alerting the public to closures and new diversion routes. Dragados and AECOM coordinated with the local city officials, businesses, schools, and residential complexes to minimize impacts. The public information team reviewed the work schedule and communicated via message boards, emails, phone calls, and meetings to advise the stakeholders of planned activities and coordinate special requests.</p>

No.	Required Information	Response
	 <p><i>Dragados exceeded the 8.1% DBE goal for a final DBE participation of 13.6% and surpassed the OJT goal of 118 trainees with a final graduation of 164 trainee.</i></p>	<p>For example, an adjacent cemetery had services on various days from noon to 1:30 p.m., so Dragados worked to minimize construction operations during this time to accommodate these services. Biannual public workshops were held with the public and local officials to disseminate project information. For example, the public expressed interest in changing the original design/schedule in order to improve traffic flow on SR 84 a year earlier than required. With the cooperation of the owner and input from the public, Dragados and AECOM opened this particular roadway one year earlier to the relief of the traveling public.</p> <p><b>Construction staging in confined spaces:</b> The entire I-595 corridor is adjacent to an existing canal on its north side and to existing properties on its south side. Due to these constraints and to maintain traffic within the available right-of-way, Dragados was required to perform the majority of construction within very confined spaces. Trench box methods were used to install drainage pipes and relocate existing utilities. Temporary sheet piling was used to perform excavations for bridge foundations or to install drainage and conflict boxes along the project. Dragados also performed deep excavations necessary for a microtunnel machine in limited areas using sheetpiling.</p> <p><b>Structures that include ventilation and/or fire life safety considerations:</b> Dragados used a microtunnel machine to install five drainage pipes up to 72 inches in diameter and more than 500 feet long. This work required a ventilation system to allow personnel to work inside the excavation. In addition, the rehabilitation of an existing two-span steel box girder bridge required ventilation inside the girders to allow workers to perform the necessary reinforcing.</p> <p><b>Coordination with railroad and/or utility companies:</b> Dragados and AECOM coordinated, scheduled, and negotiated utility agreements with numerous overhead and underground utilities needed for the design and construction, including Florida Power and Light Distribution, FPL Transmission, FPL Fibernet, AT&amp;T Florida, AT&amp;T Long Distance, Comcast, Old Plantation Water Control District, and the cities of Davie and Sunrise. The work required coordination with numerous municipalities and third-party agencies, including NASA, throughout the urban corridor, and initially delayed the start of construction in mid-2010. The entire project team was able to recover this lost time through partnering and working together toward common goals.</p>



No.	Required Information	Response
	<p style="text-align: center;"><b><u>AWARD</u></b></p> <p style="text-align: center;"><i>Florida Transportation Business Association 2013 DBE Utilization Achievement Award for exceeding DBE utilization goals</i></p> <div style="background-color: #1a3d54; color: white; padding: 10px; text-align: center;"> <p><b>Dragados performed construction in environmentally sensitive areas that required compliance with several environmental permits, especially during dewatering and other activities to manage storm water during construction.</b></p> </div>	<p>For example, agency reviews were streamlined to 21 days from 28 and daily workshops were implemented to enhance communication among all parties. The work along I-595 just west of the ramp to the northbound I-95 required coordination with a railroad, including installation of two fiber optic cables under the railroad. The project also required coordination with another railroad company for the painting of an existing bridge over an active railroad.</p> <p><b><i>Workforce, subcontractor and stakeholder engagement activities:</i></b> Dragados and AECOM integrated local subcontractors into the Project team and achieved the Florida Transportation Business Assoc. 2013 DBE Utilization Achievement Award for exceeding DBE utilization goals. Dragados exceeded the 8.1% DBE goal for a final DBE participation of 13.6% and surpassed the OJT goal of 118 trainees with a final graduation of 164 trainees. AECOM agreed to a flow-down provision of the 8.1% DBE goal for design to better maximize opportunities for DBE firms to participate on the project. AECOM achieved 8.5% DBE participation for design.</p> <p><b><i>Environmental monitoring and mitigation activities:</i></b> For air quality monitoring and mitigation, the team implemented BMPs and mitigated fugitive dust to maintain air quality during construction. The Dragados and AECOM team also developed and implemented a detailed vibration monitoring plan for the entire duration of the project. This included special attention for installation of the precast concrete piles and prohibiting this work at nighttime to avoid disturbing the nearby neighborhoods. Dragados and AECOM were responsible for identifying, preparing, and complying with permits required from federal, state, and local jurisdictional regulatory agencies, including the U.S. Army Corps of Engineers (USACE), U.S. Coast Guard (USCG), Florida Dept. of Environmental Protection (FDEP), and several other regional and local water and conservation districts. Dragados and AECOM's Environmental Compliance Plan included the required permit compliance details, applicable NEPA commitments, and plan for managing contaminated materials during design, construction, and O&amp;M, including the transition periods between each phase. Dragados performed construction in environmentally-sensitive areas that required compliance with several environmental permits, especially during dewatering and other activities to manage storm water during construction.</p>

**Colorado I-70 East Project**

No.	Required Information	Response
	<p> <b>I-595 is a prime example of the depth of ACSID's experience with comparable projects, performance requirements, and responsibilities that are anticipated to be within the Developer's scope of work.</b> </p> <p> <b>ACS has successfully managed each interface between adjacent operators, which will be a key aspect of the upfront and ongoing responsibilities of the developer for the I 70 East Project.</b> </p>	<p>           The permits included groundwater influence and groundwater treatment system modeling, and required review by the EPA.             For work relating to hazardous materials, Dragados and AECOM identified reactive wastes in the I-595 corridor and performed the appropriate treatment and disposal following the applicable regulations.         </p> <p style="text-align: center;"> <b>OPERATIONS AND MAINTENANCE ACTIVITIES</b> </p> <p> <b>The concession company, I-595 Express</b>, led by ACS, is self-performing the O&amp;M of the overall O&amp;M requirements of the project, including the management of certain contracts for elements of the routine operations and maintenance activities. The project requires a significant operations program to handle the heavily trafficked corridor for east/west commuters.         </p> <p>           The completed project consists of general purpose lanes, collector and distributors on adjacent systems, frontage roads, major intersections, and managed lanes that utilize free flow toll technology. ACS will apply these lessons learned, as detailed further below, in working with the Procuring Authorities to manage the development and relationships related to the I-70 East Project through all stages of the concession, including O&amp;M.         </p> <p> <b>Interfaces with adjacent road operators</b> I-595 connects with I-75 in the west, the Florida Turnpike in the center, and a section of I-595 to the east that is operated and maintained by FDOT. I-595 Express works closely with the Florida Turnpike operators and FDOT subcontractors to manage interfaces at the various locations throughout the project. These interfaces have been consistent and reliable since the beginning of operations.         </p> <p>           I-595 is a prime example of the depth of ACS's experience with comparable projects, performance requirements, and responsibilities that are anticipated to be within the Developer's scope of work. The completed project consists of general purpose lanes, collector and distributors on adjacent systems, frontage roads, major intersections, and managed lanes that utilize free-flow toll technology. ACS will apply these lessons learned in working with FDOT to manage the development and relationships related to the project through all stages of the concession, including O&amp;M.         </p>

No.	Required Information	Response
		<p><b>Operations performance in a high traffic corridor:</b> ACS implemented and manages a significant operations program to handle the heavily trafficked corridor for east/west commuters, with 180,000 vehicles per day and an average of approximately 1,200 incidents per month. Operations includes management of 24/7 incident response, dedicated road patrols, and a Traffic Management Center to ensure the flow of traffic and reduce unavailability to the public.</p> <p>The incident response program maintains a safe, free-flowing facility to the public and offers assistance to the roadway's users in case of emergencies and incidents. Responsibilities include debris removal, police activities, break downs, accidents, and tire blowouts. For that reason, the developer has implemented proven 24/7 Road Ranger Program, which has been operating with a response time of only 3 minutes from notification (far exceeding the 15 minute contractual requirement). This program is also supplemented with a Severe Incident Response Vehicle (SIRV) and a Rapid Incident Scene Clearance Program, all aligned with the goal of keeping the highway safe and open to traffic.</p> <p><b>Toll Systems and ITS:</b> The project also demonstrates both ACS and Dragados experience in toll maintenance and operations. The I-595 corridor contains complete camera coverage and an Advanced Traffic Management System (ATMS) application to support traffic management and incident response. In addition, the reversible managed lanes are tolled and operate using Open-Road Tolling technology. I-595 Express was responsible for the development and installation and operation of the reversible express lane system. Tolling is performed by the FDOT; however, ACS coordinated, designed, and constructed all infrastructure required for the tolling system.</p>

No.	Required Information	Response
		<p><b>Significant Assets requiring Routine and Major Maintenance:</b> The major assets of the project are pavement and structures, much like that of I-595, which has an extensive inventory of large structures. On the I-595, these structures are inspected biennially. This includes significant structures in seven interchanges with other major roadways including the Florida Turnpike and more than 60 structures throughout the project. The team’s maintenance manual includes all routine and major maintenance activities necessary to ensure compliance with the request. In order to maintain these assets, a maintenance program geared toward the reliability of all assets, with a particular emphasis on pavement and structures, will modeled off the experience ACSID gained on I-595 and the numerous other highways under operations in North America. The experience ACS has gained from the development of this program will directly benefit the Project given the volume and type of structures anticipated along the Project corridor (both new construction and existing assets).</p>
<p><b>II. Description of Team Member Involvement</b></p>		
(9)	<p>Proposer Team Member(s) (or Affiliates(s)) Involved:</p>	<p><b>ACS Infrastructure Development, Inc.</b>  <b>Dragados USA, Inc.</b>  <b>AECOM Technical Service, Inc.</b></p>
(10)	<p>Role of Proposer Team Member(s) (or Affiliate(s)):</p>	<p><b>ACS Infrastructure Development, Inc.:</b> Equity Member (50%) and Lead Operator (50%). ACS has been involved from the procurement stage through award, the construction period and now in O&amp;M of the project.</p> <p><b>Dragados USA, Inc.:</b> Lead Contractor (100%)</p> <p><b>AECOM Technical Services, Inc.:</b> Lead Designer (100%)</p>
(11)	<p>Key Personnel Involved, Roles &amp; Responsibilities:</p>	<p><b>Michael Smith</b>, FRMG’s proposed <b>O&amp;M Manager</b>, plays a key role in the technical O&amp;M oversight of the I-595 project, managed by ACS. Michael’s firsthand knowledge of the day-to-day operational issues, including managing subcontracts and interacting with the owner regarding performance requirements, will bring highly-relevant and recent experience in the challenges and subsequent mitigations for O&amp;M along a high-traffic corridor under an availability payment structure.</p>
<p><b>III. Reference</b></p>		
(12)	<p>Name:</p>	<p>Gerry O’Reilly</p>
(13)	<p>Title &amp; Employer (Current):</p>	<p>Director of Transportation, District Four                      Florida Department of Transportation</p>


**Colorado I-70 East Project**

No.	Required Information	Response
(14)	Title & Employer (at time of project/transaction):	Director of Transportation Development, District Four Florida Department of Transportation
(15)	Phone & Email	(954) 777-4411 <a href="mailto:Gerry.Oreilly@dot.state.fl.us">Gerry.Oreilly@dot.state.fl.us</a>
(16)	Location & Time Zone:	Florida, USA, Eastern Time Zone (UTC-05:00)
(17)	Other:	N/A
<b>IV. Technical Information</b>		
(18)	Construction Value:	\$1.197 billion
(19)	Completion within/above Budget:	The project reached substantial completion on schedule and on budget. The final construction value was \$1.211 billion (or approximately 1% increase) due to FDOT-directed changes.
(20)	O&M Value:	\$40.225 million (average yearly, nominal)
(21)	Length of Road under Operation (centerline miles):	Approximately 10.5 miles
(22)	Key Technical Challenges and Solutions Implemented:	<p>In addition to the challenges relevant to the I-70 East Project highlighted in box (8), the I-595 Project included the following key technical challenges:</p> <p><b>ATCs and Innovation</b></p> <p><b>Challenge:</b> Nine interchanges and 63 bridges within the I-595 project presented numerous technical challenges in this constrained urban corridor, and were significant cost drivers. FDOT’s original design included an additional flyover at the most congested intersection of the project, which required demolishing the existing flyover due to geometric constraints. This was costly and presented potential traffic impacts during construction. Specifically, an existing 700-foot-long flyover structure was in conflict with the proposed construction of the expanded interstate below.</p> <p><b>Solution:</b> ACS, Dragados, and AECOM presented numerous Alternative Technical Concepts (ATCs) to FDOT that preserved existing structures on the I-595 corridor that were originally planned to be replaced. FDOT’s original design included an additional flyover at the most congested intersection of the project, which required demolishing the existing flyover due to geometric constraints. However, the team’s innovation refined the alignment by placing the new express lanes in the former eastbound lanes, rather than in the I-595 median.</p>




*ACS, Dragados, and AECOM developed innovative Alternative Technical Concepts (ATCs) for the flyover interchange structures that saved approximately \$40 million.*

Colorado I-70 East Project

No.	Required Information	Response
	 <p><i>Zero days were added to the construction schedule; 7 milestones were completed ahead of schedule in order to meet the project's aggressive schedule.</i></p>	<p>The flyover's foundations could then stay where they were, but the superstructure needed to be raised to meet vertical clearance requirements. The vertical conflict was eliminated by jacking and realigning most of the existing flyover structure and extending the length of one span to make room for the planned construction on I-595. The O&amp;M experts at ACS were closely involved during the process to ensure that the approach resulted in a whole lifecycle savings to FDOT by evaluating the routine and major maintenance impacts of this solution. Ultimately, this innovation saved ~ \$40 million.</p> <p><b>Benefit:</b> ACS, Dragados, and AECOM have demonstrated their ability to work collaboratively to identify and execute innovative technical solutions. FRMG will work to develop cost saving ATCs that reduce construction impacts and result in a whole lifecycle solution that brings best value to the Procuring Authorities, maximizing available funds for the Project.</p> <p><b>Challenge:</b> Construction work required coordination with numerous third-party agencies and municipalities. Initial coordination efforts resulted in a delay to construction start.</p> <p><b>Solution:</b> The entire project team was able to recover this lost time through partnering and working together toward common goals. For example, agency reviews were streamlined to 21 days, from 28 days, and daily workshops were implemented to enhance communication among all parties. Dragados and AECOM were co-located in a facility with ACS and FDOT representatives to streamline coordination. Regular meetings were held between the various team members and FDOT to discuss progress, solve pending issues, and coordinate the overall project. The project was ultimately completed on time and within budget.</p> <p><b>Benefit:</b> FMRG team members have proven ability to collaborate with project owners and key stakeholders to find a solution that overcomes unforeseen coordination issues and delays in a project. FRMG will draw on this experience to first develop a plan and schedule which reduces the risk of delay from coordination issues, and to quickly and collaboratively improve the approach should problems arise to protect the Project's schedule and budget.</p> <p><b>Efficient Approach to O&amp;M</b></p> <p><b>Challenge:</b> The project represented FDOT's first P3 to reach financial close and enter into operations.</p>

Colorado I-70 East Project

No.	Required Information	Response
	<p> <b>Dragados and AECOM, working together with ACS, were able to overcome initial challenges in coordinating with the owner and numerous third parties involved in the project.</b> </p>  <p> <i>As part of I-595 Express's incident response activities, we provide 24/7/365 road patrol service, Severe Incident Response Vehicle service, as well as Rapid Incident Scene Clearance support. ACS' average response time is 5 times faster than what is contractually required.</i> </p>	<p> <b>Solution:</b> ACS worked with FDOT maintenance managers to develop and implement an O&amp;M plan that adhered to FDOT requirements and also addressed the concerns of District Maintenance Engineers that had been responsible for maintaining the existing system for decades. ACS continues to work closely with FDOT to improve the O&amp;M approach and coordination between I-595 Express and the various stakeholders to ensure the project is performing as envisioned by FDOT.         </p> <p> <b>Benefit:</b> ACS has extensive experience working with owners in determining efficient approaches to the O&amp;M for projects that ensure the projects' goals are met while maintaining an efficient balance of risk and scope between the Developer and/or Lead Operator and the project owners. FRMG will work with the Procuring Authorities to similarly structure the long-term O&amp;M responsibilities for the Project to deliver the best value and achieve the Project's goals.         </p> <p> <b>Rapid Response Times to Incidents in an Urban Corridor with Managed Lanes</b> </p> <p> <b>Challenge:</b> I-595 Express is responsible for operating the Traffic Management Center for the I-595 Corridor 24/7 in this high-volume corridor. This includes the identification of traffic incidents, dispatch of services, police/fire interface, incident coordination, and reporting to the state-wide 511 system.         </p> <p>           As part of I-595 Express's incident response activities, we provide 24/7/365 road patrol service, Severe Incident Response Vehicle service, as well as Rapid Incident Scene Clearance support. All incident response activities have contractual time limits for response, which result in availability payment deductions if found non-compliant. I-595 Express is responsible for operating the Traffic Management Center for the I-595 Corridor 24/7.         </p> <p> <b>Solution:</b> By providing a 3-minute response time to traffic incidents, rather than the contractual 15 minutes, the team is providing a safer roadway for vehicular traffic.         </p> <p> <b>Benefit:</b> Based on the final scope for the Developer on the Project, FRMG will develop and successfully implement an operations program that ensures the corridor remains safe for the traveling public by providing rapid response times to incidents and leveraging extensive experience in coordinating with various response teams and stakeholders in both leading and supporting roles.         </p>

Colorado I-70 East Project

No.	Required Information	Response
V. Financial Information		
(23)	<p>Payment Mechanism:</p> <p><i>Experience Working Together</i> <i>Dragados actively participated with ACS in the negotiations with the Owner of different payment milestones for the construction of the I-595 project. Since Dragados and ACS were sister companies working at two different levels of the Project team, they could align their interests and negotiate reasonable milestones that reduced the risks and allowed the project to be delivered on-time and within budget.</i></p>	<p><u>Availability Payment:</u> The concessionaire receives monthly availability payments during the operation period commencing upon substantial completion of the project through a 30-year period subject to deductions based on lane availability and any noncompliance points assessed in conjunction with the contract documents.</p> <p><u>Final Acceptance Payments:</u> FDOT will make \$685.5 million in payments (approximately 57% of the total construction costs) following Final Acceptance and over the first 5 years of operations (the "Final Acceptance Payments" or "FAPs"). These FAPs were subject to the accomplishment of seven milestones during the construction period, all of which were reached on time and in accordance with the concession agreement. The first FAP included a \$50 million bonus for reaching each interim milestone within the period stated in the concession agreement.</p> <p><u>Deduction Regime:</u> The concession agreement includes deductions to the availability payments for several non-compliance events due to performance and maintenance of the project facility, level of service, and highway availability levels.</p> <p><u>Inflation:</u> 70% of the availability payment is indexed at a fixed rate of 3% annually and the 30% remaining is indexed annually at CPI.</p>
(24)	<p>Source(s) of Revenues or Payments:</p>	<p>All payments are subject to availability of funds appropriated by the State of Florida. Additionally, a potential source of revenue for FDOT includes the tolls collected on the express lanes, which can be used to cover a portion of the availability payments to the concessionaire.</p>
(25)	<p>Proposer Team Member(s) Equity Investment:</p>	<p>ACS committed \$208 million in equity for the 100% interest in the project. During construction, ACS sold 50% of its share in the SPV to its partner TIAA-CREF. This equity was backed by a letter of credit posted at financial close until the equity injections were made during the last months of the construction period.</p>



Colorado I-70 East Project

No.	Required Information	Response
(26)	Financing Method(s) and Value(s):	<p>The financing package included a \$526-million short-term senior bank facility used to bridge the Final Acceptance Payments and a \$256-million hard mini-perm 10 years senior bank loan, both provided by 12 banks, including Spanish, French, and Australian banks. Additionally, subordinated debt was provided through a \$678-million TIFIA loan. The equity committed by ACS (as 100% equity member at financial close) amounted \$208 million and was backed by a letter of credit.</p> <p>The bank tranche loan totaling \$256 million, the \$678-million TIFIA loan, which received an investment grade rating (maintained through construction and into operations) and the equity investment will be repaid from availability payments received during the operation period.</p>
(27)	<p>Key Financial and Funding Challenges and Solutions Implemented:</p> <p><i>“We delivered it on the same day we said we would, five years earlier. It really shows this model will work. Florida DOT is very proud of this Project.”</i></p> <p>— Paul Lampley, FDOT Project Manager</p>	<p><b>Challenge:</b> Reaching financial close during critical challenges in the market.</p> <p><b>Solution:</b> ACS provided an investment grade, financeable solution at the height of the global financial crisis. ACS leveraged its strong relationships in the global banking industry to switch from the bond financing structure submitted at bid to a 12-bank club deal and TIFIA structure after the bond markets were no longer accessible, rendering the PABs solution secured for the proposal unattainable. ACS’ credibility in the P3 finance market, based on its strong relationships with the P3 lending community and aggressive pursuit of multiple finance alternatives throughout the bid process, made this significant, yet timely, change possible.</p> <p><b>Benefit:</b> FRMG will leverage its strong relationships in the P3 lending community and experience in overcoming adversity in the markets to ensure redundancy in financing solutions and provide execution certainty</p> <p><b>Challenge:</b> Closing FDOT’s first availability payment project and pioneering the use of TIFIA Loans in transportation availability payment projects</p> <p><b>Solution:</b> ACS successfully worked with FDOT in reaching Financial Close on their first transportation availability payment P3 project. This also represented the first AP project closed in the United States, and TIFIA’s first availability payment project as well. The 2009 final value for money analysis conducted after financial close concluded that the net present value of the P3 contract was 25% lower than the original 2007 estimate.</p>

**Colorado I-70 East Project**

No.	Required Information	Response
		<p><b>Benefit:</b> ACS' proven ability to pioneer new and innovative financing solutions in partnership with both experienced and inexperienced owners, even in the midst of an economic crisis, captures the same spirit and approach FRMG will pursue for the I-70 East Project.</p>

Colorado I-70 East Project


**FORM F: PROJECT EXPERIENCE (I-71/I-670 INTERCHANGE)**

**Proposer Name:** Front Range Mobility Group



**Core Proposer Team Member(s) Involved:**

- Equity Member
- Lead Contractor
- Lead Engineer
- Lead Operator
- Joint Venturer in Lead Engineer:  
**CH2M HILL Engineers, Inc.**
- Affiliate(s) of Lead Engineer: **CH2M HILL, Inc.**


**Form F: Project/Transaction Description**

No.	Required Information	Response
I. Background Information		
(1)	Project Name:	I-71/I-670 Interchange Reconstruction Design-Build (Phase 1 of the Columbus Crossroads Program)
(2)	Type of Facility:	Complex highway interchange reconstruction in urban downtown Columbus, Ohio, including an over-highway combined auto and pedestrian cap
(3)	Owner/Procuring Authority:	Ohio Department of Transportation (ODOT)
(4)	Brief Description of Project:    <i>The I-71/I-670 Interchange project was the first step in providing a once-in-a-generation opportunity to provide a connection between downtown and adjoining neighborhoods, and improve mobility along the Columbus transportation corridor.</i>	<p>The \$200 million design-build I-71/I-670 project reconstructed a highly traveled, downtown urban interchange that was a top five hot spot crash location in Ohio. This project was the first phase of the Columbus Crossroads Program. The new design increased capacity along I-71 and I-670 eastbound, reconfigured the overall interchange layout to eliminate weaving, improved connections into and out of downtown Columbus, and reconstructed several City of Columbus local streets to create urban avenues with unique aesthetic enhancements. The project included construction of a combined auto and pedestrian cap over the freeway on Long Street to reconnect neighborhoods to downtown and make the interchange a safer place for the citizens of Columbus.</p> <p>CH2M was the Lead Engineer on this project. Major construction elements included reconstruction of approximately 1 mile of I-71 and 1-1/2 miles of I-670 eastbound along with 18 ramps within the project area; 20 new bridges including 2 new flyover bridges, 2 reconstructed bridges, 26 retaining walls, 2 new local urban avenues, a realigned 60-inch storm sewer, and a new 54-inch micro-tunnel. This project involved intense public outreach activities, including over 70 public meetings and nearly 500 formal communications.</p> <p>The project was successfully delivered \$41 million under ODOT's estimate.</p>
(5)	Contract Term:	Total Contract Term: 36 months (May 2011 - November 2013)
(6)	Current Status:	Project is complete.

**Colorado I-70 East Project**

No.	Required Information	Response
(7)	<p>Key Dates and Milestones:</p> <p>Contract Execution Design Start Construction Start Substantial Completion</p> <p>Final Completion</p>	<p>May 2011 Anticipated: May 2011 Anticipated: June 2011 Anticipated: May 2014</p> <p>Anticipated: May 2014</p> <p>Actual: N/A Actual: May 2011 Actual: June 2011 (1 month) Actual: November 2013 (30 months after contract execution) Actual: November 2013 (36 months) (6 months ahead of schedule)</p>
(8)	<p>Relevance to the Project:</p>  <p><i>The Long Street Bridge nears completion in the picture above (bottom cap). The bridge accommodates vehicle and pedestrian traffic, and is a long-awaited connector for the neighborhoods that were physically divided with when the highway was constructed.</i></p>  <p><i>Completed Cleveland Avenue Bridge, one of 20 new bridges designed and constructed for this project.</i></p>	<p>Both this project and the I-70 East Project are in urban, downtown settings, requiring similar technical solutions for demolition and construction in tight spaces, and both requiring maintenance of traffic for both local and through-traffic. Similar to I-70 East, where the Elyria-Swansea neighborhood is divided by the I-70 viaduct, the Kings-Lincoln neighborhood in Columbus Ohio was physically separated from the rest of downtown Columbus when I-71 was constructed. This project helped to solve this issue by constructing an auto and pedestrian cap over the highway. Details of this story and others in relation to each of the key evaluation criteria are included below:</p> <p style="text-align: center;"><b>DESIGN AND CONSTRUCTION ACTIVITIES</b></p> <p><b>Roadway expansion, reconstruction and interchange reconstruction</b></p> <p>The project reconstructed approximately 1 mile of I-71 and 1-1/2 miles of I-670 eastbound along with 18 ramps within the highly urbanized project area, much like the area of the I-70 East project. In the build configuration, route continuity was improved on I-71 by flipping the alignment to locate mainline I-71 to the interior.</p> <p>The I-71 northbound ramps in both directions of I-670 were combined into a single right side exit to improve safety.</p> <p>Several grade-separated ramp braids in which entrance and exit ramps cross paths, but are physically separated with one ramp crossing over the other, were also constructed to improve operations at the interchange. A second lane of route continuity was also provided on I-670 eastbound through the I-71 Interchange. Two new flyover bridges were constructed to separate the I-670 eastbound through movement from the I-670 eastbound directional movements. The I-670 eastbound to I-71 ramp was also reconfigured to exit off the right side of I-670 eastbound, which improved driver expectations.</p>

**Colorado I-70 East Project**

No.	Required Information	Response
	 <p><i>The contract required construction of the interchange to take place while maintaining traffic on I-71 and I-670 Eastbound and to keep all system ramps open except for allowable closure periods.</i></p> <div style="background-color: #1a3d54; color: white; padding: 10px; text-align: center;"> <p><b>A multi-dimensional public information campaign was launched to communicate information about the I-71/I-670 construction and how to navigate through the project.</b></p> </div>	<p><b>Demolition of existing infrastructure in urban environments</b></p> <p>Recognizing the particular safety considerations for a project of this scope and size, the team developed detailed demolition plans for existing structures, particularly the existing eastbound I-670 flyover structure, to take into account safety, maintenance of traffic, and structural stability. Demolition included complete removal of two existing bridges and more than 20 retaining walls.</p> <p><b>Major excavation work, including groundwater considerations and/or drainage requirements</b></p> <p>The scope of work originally included the re-construction of a large siphon, which connected the drainage from one side of I-71 to the other side. Reconstruction of the siphon would have required significant traffic relocations in order to construct it in stages across the full width of I-71 and the traffic ramps in the vicinity of the siphon. Instead, the design team was able to re-design the profile of I-71 and the ramps so that the existing siphon could remain in place and in service during construction. This solution significantly reduced utility and motorists impacts while providing a \$1 million savings to taxpayers.</p> <p><b>Complex traffic management in urban areas</b></p> <p>The project involved improvements to a complex, constrained system. Similar to the challenges CDOT will face on I-70 East, both Columbus commuters and out-of-towners use the I-71/I-670 Interchange, so construction information needed to reach 1.5 million residents in the metropolitan area as well as “through” travelers. City street construction impacted transit riders, bicyclists, and pedestrians, as well as local neighborhood residents and businesses. To ensure traffic restrictions, road closures and detours were both vetted and communicated promptly, the D-B team collaborated with ODOT and key stakeholders through weekly MOT task force meetings.</p> <p>A multi-dimensional public information campaign was launched to communicate information about the I-71/I-670 construction and how to navigate through the project. The campaign included extensive media relations including more than 200 news releases, 100 different print/ broadcast stories, a project website and telephone hotline, and 150 electronic newsletters sent weekly to 1,600 stakeholders and media outlets during the construction season. The team further engaged the public by organizing one-on-one meetings with stakeholders and scheduling over 70 group presentations and public meetings.</p>

**Colorado I-70 East Project**

No.	Required Information	Response
	<p><b>The team coordinated fire life safety considerations with the Columbus Fire Department, installing a fire suppression system with dual controls—operational both from inside the tunnel and remotely.</b></p>	<p>A Community Involvement Officer worked directly with local residents, businesses, and organizations to alert them to potential disruptions and report any concerns.</p> <p><b>Construction staging in confined spaces</b></p> <p>To meet the demands of the project and critical MOT requirements, the team built the majority of the I-71 roadway “offline” by designing the construction phasing to utilize the existing roadway and proposed ramp alignments to maintain traffic, which increased efficiencies in constructing the proposed I-71 roadway.</p> <p>Additionally, after contract award, the project team devised a re-route of I-670 eastbound that removed approximately 67,000 vehicles per day from the project during the 2012 construction season. This I-670 eastbound re-route significantly advanced the project so that all mainline and ramp lanes of traffic were usable to the motoring public 7 months sooner than originally required.</p> <p>The project also established the local city streets adjacent to the interstate system as access points to the job site, considerably reducing the number of construction vehicles entering and exiting the work zone via the interstate.</p> <p><b>Structures that include ventilation and/or fire life safety considerations.</b></p> <p>A critical element of the project was the construction of the first cut-and-cover tunnel in Columbus. The team coordinated fire life safety considerations for the tunnel with the Columbus Fire Department, installing a fire suppression system with dual controls—operational both from inside the tunnel and remotely.</p> <p><b>Coordination with railroad and/or utility companies</b></p> <p>CH2M took a proactive approach to utility coordination by creating a utility matrix to itemize existing/proposed, private/public, above/below ground utilities and track conflicts, proposed work affected, required actions, schedules and progress.</p> <p><b>Roadway pavement and associated infrastructure under similar environmental conditions</b></p> <p>With four-season weather conditions similar to those in Colorado, the Columbus Crossroads paving work had to be phased so that reconstruction of each phase was completed by the end of the construction season. CH2M developed an alternative detour arrangement, which allowed the contractor more access to the site, reducing the number of traffic phases and increasing the paving work that could be accomplished at any one time.</p>

**Colorado I-70 East Project**


No.	Required Information	Response
	<p><b>Similar to the Elyria-Swansea neighborhood in Denver, Columbus' King-Lincoln neighborhood had been physically divided by the construction of I-71 highway.</b></p>  <p><i>The creation of the Long Street vehicle and pedestrian bridge with new greenspace and beautiful cultural wall reunites the King-Lincoln neighborhood to downtown Columbus. The cultural wall celebrates the people who contributed to the vibrancy of the neighborhood over the years.</i></p> <p>Photo Credit: ColumbusUnderground.com</p>  <p><i>Water tanks were kept in construction areas for dust suppression to minimize impacts to nearby businesses, residences, and properties.</i></p>	<p><b>Interfaces with adjacent operators.</b> ODOT's maintenance department was the primary O&amp;M stakeholder for this project. The City of Columbus Public Service department maintains city roads that lead to all highway ramps.</p> <p><b>Workforce development programs, including partnerships with local community organizations and/or apprenticeship programs</b></p> <p>The project was located in a highly-visible, historic urban setting in Columbus. Similar to the neighborhood of Elyria-Swansea in Denver, Columbus' King-Lincoln neighborhood had been physically divided by the construction of I-71 highway. To re-establish the community connection, a proactive program was launched to engage stakeholders in the design decision-making process for the pedestrian walkway across the new Long Street Bridge over the freeway.</p> <p>A community-based advisory committee provided input on the 240-foot Long Street Bridge Cultural Wall—a first of its kind mural to honor the legacy of the affected neighborhoods. Public meetings were held to seek input on the Wall artists and other aesthetic elements of the highway bridges and walls.</p> <p><b>Achievement or exceeding goals relating to participation of disadvantaged businesses, small businesses and/or other businesses that are subject to equivalent programs</b></p> <p>Both CH2M and the construction contractor have had a presence in the Columbus contracting community for several decades, and have established successful relationships with local and regional DBE and small business firms. To meet the 12% DBE goal, two DBE outreach events were held that attracted a total of 126 attendees, representing 95 currently certified and potential DBEs. Although no goal was required of CH2M, 2% of the firm's contract was awarded to a local DBE firm for traffic, signal, and lighting services.</p> <p><b>ENVIRONMENTAL MONITORING AND MITIGATION ACTIVITIES</b></p> <p><b>Air quality monitoring and mitigation in urban environments</b></p> <p>During project construction, dust mitigation measures were taken to minimize impacts to local residents and businesses. Daily construction site watering and visual monitoring were conducted to ensure compliance with environmental plans.</p> <p><b>Noise monitoring and mitigation in urban environments</b></p> <p>Construction activities on this project complied with state and federal noise requirements, including specific noise limits on individual equipment, adhering to equipment regulations during sensitive time periods, and training for construction staff on the noise mitigation requirements of the environmental plan.</p>

### Colorado I-70 East Project

No.	Required Information	Response
<b>II. Description of Team Member Involvement</b>		
(9)	Proposer Team Member(s) (or Affiliate(s)) Involved:	<b>CH2M HILL, Inc.</b> (CH2M, Inc.) is an Affiliate of CH2M HILL Engineers, Inc. (CH2M), a Core Proposer Team Member and Lead Engineer for FRMG. Both CH2M Inc. and CH2M, are wholly owned subsidiaries of CH2M HILL Companies, Ltd., the Financially Responsible Party to CH2M. CH2M Inc. and CH2M share key resources and personnel in pursuing and managing design in North America. CH2M will benefit from its sister company CH2M Inc.'s experience on this project as several of the same resources who worked on this project will be closely involved in developing and managing the I-70 East Project.
(10)	Role of Proposer Team Member(s) (or Affiliate(s)):	CH2M was Lead Designer, involved in all phases of the design. In addition, during construction CH2M provided full-time engineer-of-record representation on site to respond to RFIs, develop field design changes, review shop drawings, and prepare as-built drawings.
(11)	Key Personnel Involved, Roles & Responsibilities:	Chris Bisio, FRMG's proposed Design Manager was responsible for ensuring the required design resources were dedicated to the project; enforcing quality of design by CH2M and subcontractors; and meeting budget, schedule, and quality commitments. She was also responsible for project controls system used to monitor progress to keep the owner, contractor, and stakeholders informed.
<b>III. Reference – Contractor and Owner Reference</b>		
(12)	Name:	Ref. a. John Householder (Contractor) Ref. b. David Poling (Owner)
(13)	Title & Employer (current):	Ref. a. Asst. Vice President, Kokosing Const. Company, Inc. Ref. b. ODOT District 6 Project Manager
(14)	Title & Employer (at time of project/transaction):	Ref. a. Asst. Vice President, Kokosing Const. Company, Inc. Ref. b. ODOT District 6 Project Manager
(15)	Phone & Email:	Ref. a. 614-228-1029; <a href="mailto:jdj@kokosing.biz">jdj@kokosing.biz</a> Ref. b. 740-833-8000; <a href="mailto:dave.poling@dot.state.oh.us">dave.poling@dot.state.oh.us</a>
(16)	Location & Time Zone:	Ref. a. 886 McKinley Ave., Columbus, OH 43222-1187 (ET) Ref. b. 400 E. William Street Delaware, OH 43015 (EDT)
(17)	Other:	N/A
<b>IV. Technical Information</b>		
(18)	Construction Value:	\$241 million
(19)	Completion within/above Budget:	Final Construction Contract Price: \$200M Completed under ODOT's estimate of \$24 million
(20)	O&M Value:	N/A
(21)	Length of Road under Operation (centerline much):	1 mile of I-71 and 1 ½ miles of I-670 Eastbound



**Colorado I-70 East Project**

No.	Required Information	Response
(22)	<p>Key Technical Challenges and Solutions Implemented:</p>  <p><i>Modifications to the Long Street Cap location eliminated the need to relocate the sanitary sewer and it also allowed the Long Street Bridge and Cap to be a three-span structure rather than a two-span structure as initially required. This reduced structural depth and resulted in minimal profile adjustments for both I-71 and Long Street.</i></p>	<p><b>Relocation of Sanitary Sewer Siphon</b></p> <p><b>Challenge:</b> Re-locate an existing triple barrel sanitary sewer siphon under I-71.</p> <p><b>Solution:</b> Building the Long Street Cap on the north side of Long Street rather than the originally specified south side eliminated the need to relocate the sanitary sewer and it also allowed the Long Street Bridge and Cap to be a three-span structure rather than a two-span structure as initially required. These modifications reduced structural depth and resulted in minimal profile adjustments for both I-71 and Long Street.</p> <p><b>Benefit:</b> This approach achieved significant cost avoidance for ODOT, and was one of many factors contributing to a \$41M underrun from ODOT's estimate. This is an example of technical innovation that CH2M can bring to the I-70 East Project to optimize the project scope.</p> <p><b>Meeting Accelerated Construction Schedule</b></p> <p><b>Challenge:</b> Meet an accelerated construction schedule that required an integrated project team and multiple levels of review required by the D-B process.</p> <p><b>Solution:</b> CH2M's design team met this challenge through their efficient approach to developing the roadway and structural solutions. Re-routing I-760 eastbound traffic during construction allowed construction of more work areas concurrently and gave full use of the interstate and ramps to the public 7 months earlier than the original 37 months schedule that had been proposed by ODOT.</p> <p><b>Benefit:</b> CH2M's integrated team met the accelerated project schedule (6 months ahead of ODOT estimates). FRMG is already evaluating similar re-routing and construction phasing to implement on the I-70 East Project to minimize impacts to the community and traveling public.</p> <p><b>Partnering to Enable Innovation</b></p> <p><b>Challenge:</b> Limiting factors in ODOT original design constricted cost and schedule.</p> <p><b>Solution:</b> By working with ODOT to allow value-added ATCs, the contractor and CH2M were able to implement alternative pavement designs and provide design refinements to roadway geometry, which reduced construction complexity and required maintenance.</p>

**Colorado I-70 East Project**

No.	Required Information	Response
		<p><b>Benefit:</b> Open communication and collaboration with the D-B team allowed ODOT to realize further cost avoidance both during construction and long-term O&amp;M. A similar open partnering approach with CDOT will help maximize operating and lifecycle maintenance costs.</p>
<p><b>V. Financial Information (if an equity partner)</b></p>		
(23)	Payment Mechanism:	N/A
(24)	Source(s) of Revenues or Payments:	N/A
(25)	Proposer Team Member(s) Equity Investment:	N/A
(26)	Financing Method(s) and Value(s):	N/A
(27)	Key Financial and Funding Challenges and Solutions Implemented:	N/A

Colorado I-70 East Project


**Form F: Project Experience (Golden Ears Bridge)**

**Proposer Name:** Front Range Mobility Group


**Core Proposer Team Member(s) Involved:**


- Equity Member:
- Lead Contractor
- Lead Engineer
- Lead Operator
- Joint Venturer in Lead Engineer:  
**CH2M HILL Engineers, Inc.**
- Affiliate(s) of Lead Engineer: **CH2M HILL Canada Ltd.**

**Form F: Project/Transaction Description**

No.	Required Information	Response
<b>I. Background Information</b>		
(1)	Project Name:	Golden Ears Bridge (GEB) Project
(2)	Type of Facility:	Tolled bridge and highway construction, including reconstruction of arterial road connectors in an urban environment consisting of four different municipality stakeholders
(3)	Owner/Procuring Authority:	Greater Vancouver Transportation Authority (TransLink)
(4)	Brief Description of Project:  <p><i>The Golden Ears Bridge project was recognized worldwide for its innovative delivery: Canadian Council for Public Private Partnerships National Awards for Innovation and Excellence in Public Private Partnerships in 2009, and the United Kingdom's prestigious "Global Deal of the Year"—the highest award given by Infrastructure Journal.</i></p>	<p>This \$754-million-dollar design, build, finance, operate highway and bridge project is the first electronic tolled bridge in Western Canada, and was delivered to the Greater Vancouver Transportation Authority (TransLink) ahead of schedule. The Golden Ears Bridge project built a six-lane bridge across the Fraser River, over 8 miles of 2-, 4- and 6-lane highway, and controlled access arterial roads that connected the bridge to the existing road network on both sides of the Fraser River. The project also created municipal road upgrades that improved traffic flows and facilitated the integration of the new crossing into the existing road network.</p> <p>CH2M, was a design-build JV member (1/3 equity member of Golden Crossing Constructors) and viaduct bridge designers. The new bridge uses an electronic tolling system to track vehicles that cross to recover construction costs. The project included demolition of existing structures, excavation in high-water table areas, comprehensive Maintenance of Traffic (MOT) and 10 different railway crossings.</p> <p>The project significantly improved transportation mobility between four rapidly growing municipalities 18 miles east of Vancouver (Township of Langley and the City of Surrey to the District of Maple Ridge and the City of Pitt Meadows). The completed bridge opened to traffic on June 16, 2009, 2 weeks ahead of schedule.</p>

**Colorado I-70 East Project**

No.	Required Information	Response												
(5)	Contract Term:	Design: 4 months Construction: 40 months March 2006 to November 2009												
(6)	Current Status:	100% Complete. Opened to traffic in June 2009, 2 weeks ahead of schedule.												
(7)	<p>Key Dates and Milestones:</p> <p style="padding-left: 40px;">Contract Execution</p> <p style="padding-left: 40px;">Design Start</p> <p style="padding-left: 40px;">Construction Start</p> <p style="padding-left: 40px;">Substantial Completion</p> <p style="padding-left: 40px;">Final Completion</p> <p style="padding-left: 40px;">End of O&amp;M</p>	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%; padding-left: 20px;">Anticipated/Contracted: March 2006</td> <td style="width: 30%; padding-left: 20px;">Actual: N/A</td> </tr> <tr> <td style="padding-left: 20px;">Anticipated/Contracted: March 2006</td> <td style="padding-left: 20px;">Actual: March 2006</td> </tr> <tr> <td style="padding-left: 20px;">Anticipated/Contracted: July 2006</td> <td style="padding-left: 20px;">Actual: July 2006</td> </tr> <tr> <td style="padding-left: 20px;">Anticipated/Contracted: June 2009, 36 months from contract execution</td> <td style="padding-left: 20px;">Actual: June 2009, 2 weeks ahead of schedule</td> </tr> <tr> <td style="padding-left: 20px;">Anticipated/Contracted: November 2009</td> <td style="padding-left: 20px;">Actual: November 2009, 44 months from contract execution</td> </tr> <tr> <td style="padding-left: 20px;">Anticipated/Contracted: 2041, 35 years</td> <td style="padding-left: 20px;">Actual: N/A</td> </tr> </table>	Anticipated/Contracted: March 2006	Actual: N/A	Anticipated/Contracted: March 2006	Actual: March 2006	Anticipated/Contracted: July 2006	Actual: July 2006	Anticipated/Contracted: June 2009, 36 months from contract execution	Actual: June 2009, 2 weeks ahead of schedule	Anticipated/Contracted: November 2009	Actual: November 2009, 44 months from contract execution	Anticipated/Contracted: 2041, 35 years	Actual: N/A
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Anticipated/Contracted: June 2009, 36 months from contract execution	Actual: June 2009, 2 weeks ahead of schedule													
Anticipated/Contracted: November 2009	Actual: November 2009, 44 months from contract execution													
Anticipated/Contracted: 2041, 35 years	Actual: N/A													
(8)	<p>Relevance to the Project:</p>  <p><i>The project was designed and constructed under a fast-track, design-build schedule that involved complex construction phasing to coordinate work in multiple locations along the 9-mile-long project area.</i></p>	<p>Similar to the I-70 East Project, the project affected many different local stakeholders that needed connectivity and continued highway and arterial access during construction. Four different growing municipalities were affected by the project. Construction occurred in a developed urban area where businesses, residences, utilities, and railways co-existed, similar to the footprint of the I-70 East corridor. MOT was a key element of the design-build portion of the project, and through stakeholder engagement and constant public notifications, the project was phased and constructed while successfully keeping traffic moving and businesses open.</p> <p>The Golden Ears Bridge project team also worked with local Katzie First Nation citizens to provide workforce training and involve them in archaeological works during construction. This engagement of the local citizens is applicable to I-70 East Project, where workforce development is desired along the affected project area.</p> <p>Specific details in relation to each of the evaluation criteria are included below.</p>												

No.	Required Information	Response
	 <p><i>Because it was important to TransLink that the Golden Ears Bridge be distinct from other</i></p>	<p><b>Roadway expansion, reconstruction, and interchange reconstruction.</b></p> <p>The Golden Ears Bridge project included construction of</p> <ul style="list-style-type: none"> <li>• A 3,175-foot six-lane bridge across the Fraser River with spans of up to 790 feet</li> <li>• Over 8 miles of 2-, 4-, and 6-lane highway</li> <li>• Reconstruction of 7.5 miles of arterial roads</li> <li>• 17 bridges, including the main river bridge totaling 12,275 feet of bridge length and 1,205,558 square feet of bridge decking</li> <li>• Over 540,000 square feet of additional bridge structures</li> </ul> <p>The 9-mile overall project length is similar to the scale of the I-70 East highway widening.</p> <p>More than five utilities were relocated due to proximity to the construction site: fiber optic telephone cable; municipal storm sewer, sanitary sewer, and water, which required municipal approvals; Metro Vancouver sanitary sewer and water; underground power and transmission lines.</p> <p style="text-align: center;"><b>OPERATIONS AND MAINTENANCE ACTIVITIES</b></p> <p><b>Roadway pavement and associated infrastructure under similar environmental conditions</b></p> <p>Geotechnical conditions created challenges with high embankments adjacent to structures. However, during development of the construction schedule, CH2M discovered that extended pre-loading periods were available that would allow the use of mineral fills to induce settlement prior to construction of the paving structures. Low-cost mineral fills were used together with wick drains to eliminate 90% of the primary settlements before constructing the pavements.</p> <p><b>Interfaces with adjacent operators.</b></p> <p>O&amp;M activities for the Golden Ears Bridge require coordination with multiple agencies, including TransLink (the project owner and agency responsible for tolling activities); British Columbia’s Ministry of Transportation and Infrastructure, and local communities that maintain arterial and leading roads such as the Township of Langley, BC, and City of Pitt Meadows Operations and Public Works Department.</p>

No.	Required Information	Response
	<p><i>transportation infrastructure, the team developed an aesthetic theme that included public art.</i></p> <p><i>Urban design motifs drew upon the natural features of the area and the history of the "first people" with interpretive signage, bridge railings reflecting traditional fishing techniques, golden eagle art icons and sculptural lighting lanterns to distinguish and brand the network</i></p>	<p><b>WORKFORCE, SUBCONTRACTOR AND STAKEHOLDER ENGAGEMENT AND ENVIRONMENTAL MONITORING AND MITIGATION ACTIVITIES</b></p> <p><b>Stakeholder Engagement</b></p> <p>Stakeholder engagement is one of CDOT's key concerns for the I-70 East Project. On the Golden Ears Bridge project, the project team initiated multiple efforts to keep the public and businesses apprised of upcoming activities and traffic changes. The public outreach methods included one-on-one meetings, door-to-door distributions, and print and radio advertising. The project team also maintained a project "hotline" and website and participated in public open-houses and community liaison groups.</p> <p><b>Achievement or exceeding goals relating to participation of disadvantaged businesses, small businesses and/or other businesses that are subject to equivalent programs</b></p> <p>Because the project impacted the Katzie First Nation (KFN), an agreement was signed in 2004 that established responsibilities of the nation and the project owner. The project team met with the KFN during extensive consultation both before and during construction, listened to their issues, concerns, and goals; established a training program; and made a concerted effort to involve them in the construction of the project. In addition, KFN was involved in all archaeological works and were contracted to support the archaeologist with field work. Similar creative workforce development programs can be effective for the neighborhoods and areas affected by the I-70 East Project.</p> <p><b>ENVIRONMENTAL MONITORING AND MITIGATION ACTIVITIES</b></p> <p><b>Air quality monitoring and mitigation in urban environments.</b> The project team mitigated air quality issues by using a water truck to water down the dusty areas created by construction.</p> <p><b>Noise monitoring and mitigation in urban environments.</b></p> <ul style="list-style-type: none"> <li>• Bridge components were produced and preassembled off site, then floated into the area by barges on the Fraser River, shortening the construction schedule and creating the least possible disruption and minimizing the effects of noise, dust, and views of construction.</li> <li>• Night-time construction was implemented where feasible and practicable in commercial and industrial areas to reduce noise as well as impacts to businesses.</li> </ul>

No.	Required Information	Response
		<p>These abatement practices are directly applicable to the I-70 East Project, especially in the areas where the Elyria-Swansea residential neighborhood will be affected.</p> <p><b>Demolition of existing infrastructure in urban environments.</b></p> <p>In addition to demolition required for reconstruction of more than 7 miles of arterial roads, the project required demolition of a warehouse that, although located in an industrial area, was within 1 mile of a residential neighborhood. The steel structure was deconstructed by cutting or grinding weld points top down from one side of the building to the other. The components were then anchored to a crane during final cutting and removal. Demolition of existing structures in residential areas is directly applicable to I-70 East Project, where the existing viaduct will be demolished in the midst of the Elyria-Swansea neighborhood.</p> <p><b>Major excavation work, including groundwater considerations and/or drainage requirements.</b></p> <p>The TCH/Barnston underpass is a series of three structures built at approximately existing ground elevations. Construction required a land cut with sloped banks on one side of the structures and excavation to 8 meters. During excavation, a propping slab was constructed near the base of the excavation. Shoring was installed between the walls prior to and during excavation, and sheet piles were installed between structures to assist in excavation and provide support for the active roadway. Dewatering during excavation required that the water used meet specific standards prior to release because of nearby environmental streams and the Unnamed Creek.</p> <p>A combination pile wall was constructed and a fascia wall placed in front of the wall. Deep excavation and dewatering are key components of the Project's depressed section below the new partially covered lid.</p> <p><b>Complex traffic management in urban areas.</b></p> <p>Similar to the I-70 East Project, the design incorporated a phased construction approach and traffic staging to maintain traffic flow during construction. The team developed a comprehensive MOT Plan to keep traffic moving on local connecting roadways. The plan staggered lane closures and detours, and scheduled night work to minimize impacts to travelers as the local roadway network was reconstructed to accommodate the new bridge construction.</p>

No.	Required Information	Response
		<p>The project MOT Plan included the following:</p> <ul style="list-style-type: none"> <li>• Maintaining businesses access</li> <li>• Providing safe access and egress for all properties affected by the project, particularly for roads experiencing modifications to traffic patterns as a result of the project</li> <li>• Providing safety audits of road design, pre- and post-construction to reduce impacts</li> <li>• Conveying information on business access through the project's Communications Plan and through temporary signage</li> <li>• Including access to residential areas in the overall Construction Traffic Management Plan</li> <li>• Communicating the times and duration of construction activity to area residents via news outlets, websites, and webcams</li> <li>• Providing information to affected neighborhoods on routing/ detour options resulting from project related road closures</li> </ul> <p><b>Construction staging in confined spaces.</b> The project was designed and constructed under a fast-track, design-build schedule that involved complex construction phasing to coordinate work in multiple locations along a 9-mile long project area. Effective staging plans allowed full access to operating businesses throughout construction as well as maintaining traffic flows on the existing road network.</p> <p>A critical staging requirement was maintaining existing travel movements during construction of the south approach viaduct; construction had to accommodate both vehicle access and access to local businesses. The team took an innovative approach, using a large self-supporting structural form that spanned the roadway between piers to allow installation of rebar and concrete while traffic flowed below. Similar innovations may be applied to the I-70 East Project to enable efficient construction staging while the viaduct is demolished.</p>



No.	Required Information	Response
		<p><b>Coordination with railroad and/or utility companies.</b></p> <p>Similar to the I-70 East Project, the Golden Ears Bridge project had engineering challenges associated with railroads, as the project included a total of 10 railway crossings. CH2M applied for and obtained Rail Agreements for a variety of crossing types (at-grade, grade-separated, electrical crossings, and underground culverts), as well as for rail crossing warning systems. The team also liaised with CN and CP Rail on a regular basis during design and construction; served as onsite contact for CN and CP Rail to coordinate and facilitate requirements of Agreements; rights-of-entry, and requirements for construction activities near railways; and facilitated meditation regarding design around a rail crossing.</p>
<b>II. Description of Team Member Involvement</b>		
(9)	Proposer Team Member:	<p><b>CH2M HILL Canada Ltd.</b> (CH2M CAN) is an Affiliate of CH2M HILL Engineers, Inc. (CH2M), a Core Proposer Team Member and Lead Engineer for FRMG. Both CH2M CAN and CH2M are wholly owned subsidiaries of CH2M HILL Companies, Ltd., the Financially Responsible Party to CH2M. CH2M CAN and CH2M share key resources and personnel in pursuing and managing design in North America. CH2M will benefit from its sister company CH2M CAN's experience on this project as several of the same resources who worked on this project will be closely involved in developing and managing the I-70 East Project.</p>
(10)	Role of Proposer Team Member:	<p>As the lead designer, CH2M was fully responsible for planning, organizing, and executing the design; engineering during construction; design quality; and safety. CH2M was also the lead geotechnical and structural designer for several of the overpass and viaduct structures being built in conjunction with the main span, and was responsible for developing the structural standards for barriers, approach slabs, railings, and joint systems used throughout the project.</p>
(11)	Key Personnel Involved, Roles & Responsibilities:	<p>Chris Bisio, FRMG's proposed Design Manager, oversaw the quality of design deliverables for the CH2M design team and design subconsultants. She served as primary design interface with CH2M's constructor JV partner, established a comprehensive ISO 9001 quality management system, and addressed community needs and local regulations with the four affected communities.</p>
<b>III. Reference</b>		
(12)	Name:	Fred Cummings
(13)	Title & Employer (current):	Vice President Infrastructure, BC Rapid Transit Company

Colorado I-70 East Project

No.	Required Information	Response
(14)	Title & Employer (at time of project/transaction):	VP Major Construction Projects, TransLink
(15)	Phone & Email:	(604) 520-3641 FRED_CUMMINGS@bcrtc.bc.ca
(16)	Location & Time Zone:	Southcoast British Columbia Transportation Authority (TransLink) Suite 1100 – 4720, Kingsway, Burnaby, BC Timezone: Pacific
(17)	Other:	Robin Johnston, Project Manager Owner’s Engineer retained by Translink to manage the project Collings, Johnston Inc. Phone: (604) 608-1742, Email: robin_johnston@collingsjohnston.com 400 – 409 Granville Street, Vancouver, BC, V6C 1T2
<b>IV. Technical Information</b>		
(18)	Construction Value:	Initial Bid: \$746 million Final Construction Contract Price: \$754 million
(19)	Completion within/above Budget:	20 owner-initiated change orders increased price by \$8 million
(20)	O&M Value:	N/A
(21)	Length of Road under Operation (centerline miles):	8 miles
(22)	Key Technical Challenges and Solutions Implemented:	<p><b>Conquering Right-of-Way Challenges</b></p> <p><b>Challenge:</b> Design and construction of a bridge spanning the Westcon property.</p> <p><b>Solution:</b> Because right-of-way was not obtained for the Westcon property, the team designed and constructed a bridge that crosses over the Westcon building—a solution that came with several requirements, including:</p> <ul style="list-style-type: none"> <li>• High level of communication, pre-planning, and cooperation incorporated into work plans and quality systems</li> <li>• Construction access zones and schedules that minimized effect on Westcon production and material storage operations</li> <li>• Foundation locations and construction that employed methods that ensured that vibrations, settlements, or other effects did not interfere with smooth operation of sensitive equipment in the Westcon building</li> <li>• Girder and superstructure erection and construction carried out and coordinated with the property owner and project owner and providing a high level of safety to workers and the public</li> </ul>

Colorado I-70 East Project

No.	Required Information	Response
		<p><b>Benefits:</b> Through innovative design and construction, the project was able to move ahead despite right-of-way challenges, which may also be an issue for CDOT on I-70 East Project.</p> <p><i>Challenging Geotechnical Conditions</i></p> <p><b>Challenge:</b> Potential impact of differential settlements and complex seismic response on the multi-span viaduct.</p> <p><b>Solution:</b> The Viaduct is a complex, multi-span structure with varying skew foundations to accommodate live railway and vehicular traffic below. Structural solutions included provision for superstructure jacking to control differential settlements during the service life and using a unique, disconnected-spread-footings foundation concept developed with construction partners.</p> <p><b>Benefits:</b> Geotechnical issues were overcome, and the final bridge and connectors are structurally sound and safe. CH2M and the Lead Engineer team will leverage its geotechnical expertise on the I-70 East Project, especially in the depressed section of the Project—the most challenging portion of the corridor.</p> <p><i>Achieving a Compressed Schedule</i></p> <p><b>Challenge:</b> A compressed schedule required quick assembly of the main bridge, approach structures, and the associated network of access roads, and the schedule was impacted due to discovery of significant archaeological artifacts during earthwork.</p> <p><b>Solution:</b> The use of large-diameter bored piles (new to British Columbia), allowed more rapid and accurate assembly of steel and pre-built cable anchorages for the bridge. When a portion of the project was blocked from work for almost 2 years due to archaeological finds, resources were increased to avoid the schedule impacts.</p> <p><b>Benefits:</b> The Golden Ears Bridge opened two weeks ahead of schedule due to the innovation and dedication of the design-build team. CH2M will bring the same “can-do” mentality to the I-70 East Project, where contaminated soil and groundwater may cause similar project delays that were overcome during the Golden Ears Bridge design-build project.</p>
<b>V. Financial Information</b>		
(23)	Payment Mechanism:	N/A
(24)	Source(s) of Revenues or Payments:	N/A
(25)	Proposer Team Member(s) Equity Investment:	N/A

**Colorado I-70 East Project**

No.	Required Information	Response
(26)	Financing Method(s) and Value(s):	N/A
(27)	Key Financial and Funding Challenges and Solutions Implemented:	N/A

Colorado I-70 East Project


**Form F: Project Experience (I-15 North)**

**Proposer Name:** Front Range Mobility Group


**Core Proposer Team Member(s) Involved:**

- Equity Member:
- Lead Contractor
- Lead Engineer
- Lead Operator
- Joint Venturer in Lead Engineer
- CH2M HILL Engineers, Inc.**
- Affiliate of Lead Engineer: **CH2M HILL Constructors, Inc.**

**Form F: Project/Transaction Description**


No.	Required Information	Response
<b>I. Background Information</b>		
(1)	Project Name:	<b>I-15 North Design-Build Project – US95 to Craig Road</b>
(2)	Type of Facility:	Urban highway expansion including, interchange reconfiguration, auxiliary lanes, side streets, and bridges
(3)	Owner/Procuring Authority:	Nevada Department of Transportation (NDOT)
(4)	Brief Description of Project:  <p><i>Similar to the I-70 East Project, the I-15 North project was constructed in a very tight footprint.</i></p>	<p>This \$252-million design-build project, Nevada Department of Transportation’s first, rebuilt a 5.8-mile section of I-15 in Las Vegas. This project was constructed in a very tight urban footprint with businesses and residences that needed freeway access, and existing roadway infrastructure and interchanges that had to be demolished. Eleven bridges were constructed within a single mile of the confluence of four major highways, with daily traffic volumes of 175,000 motor vehicles moving through the project footprint.</p> <p>As lead engineer and managing partner of the design-build joint venture, North Corridor Constructors (NCC) Joint Venture, CH2M provided overall project management; design and design management; construction and construction management; safety management; traffic control; and overall quality management, including design and construction quality control.</p> <p>The project scope included design and construction of several new freeway ramps; the addition of through and auxiliary lanes over the project length; soundwalls; retaining walls; project-wide paving, drainage system improvement; and the complete reconstruction of the Lake Mead Boulevard Interchange. Dust mitigation and noise abatement were important, as the project was adjacent to several residential neighborhoods. MOT planning and construction staging were used to keep traffic moving and deliver the project 9 months ahead of schedule.</p>

**Colorado I-70 East Project**

No.	Required Information	Response
(5)	Contract Term:	Total Term Length: 36 months Start date: September 2007 End Date: December 2009
(6)	Current Status:	100% Complete December 2009 (9 months ahead of schedule)
(7)	Key Dates and Milestones:  <div style="display: flex; justify-content: space-between;"> <div style="width: 30%;">Contract execution</div> <div style="width: 30%;">Anticipated/Contracted: September 2007</div> <div style="width: 30%;">Actual: September 2007</div> </div> <div style="display: flex; justify-content: space-between;"> <div style="width: 30%;">Design Start</div> <div style="width: 30%;">Anticipated/Contracted: September 2007</div> <div style="width: 30%;">Actual: September 2007</div> </div> <div style="display: flex; justify-content: space-between;"> <div style="width: 30%;">Construction Start</div> <div style="width: 30%;">Anticipated/Contracted: March 12, 2009</div> <div style="width: 30%;">Actual: March 12, 2009</div> </div> <div style="display: flex; justify-content: space-between;"> <div style="width: 30%;">Substantial Completion</div> <div style="width: 30%;">Anticipated/Contracted: 36 months</div> <div style="width: 30%;">Actual: 28 months</div> </div> <div style="display: flex; justify-content: space-between;"> <div style="width: 30%;">Final Completion</div> <div style="width: 30%;">Anticipated/Contracted: 51 months</div> <div style="width: 30%;">Actual: 40 months</div> </div> <div style="display: flex; justify-content: space-between;"> <div style="width: 30%;">End of O&amp;M</div> <div style="width: 30%;">N/A</div> <div style="width: 30%;">N/A</div> </div>	
(8)	Relevance to the Project:   <p><i>NCC developed a project-wide aesthetic and landscaping theme consistent with NDOT's overall I-15 Landscape and Aesthetics Corridor Plan. NCC and NDOT incorporated the public's comments and made presentations to city leaders, recommending several changes to better accommodate stakeholder expectations and promote a sense of community in an older, financially challenged part of town.</i></p>	<p>Similar to the I-70 East Project, the I-15 project included highway expansion in an urban environment, with similar features including railway crossings, proximity to the Las Vegas Speedway (which creates peak traffic like the National Western Stock Show), air and noise impacts to nearby residences, and complex MOT issues.</p> <p>Specific details of the innovations our team applied to address these features in relation to each of the evaluation criteria are included below.</p> <p><b>Roadway expansion, reconstruction, and interchange reconstruction.</b> Similar in scope to I-70 East, this design-build project rebuilt and expanded a 5.8-mile section of I-15 within an extremely tight urban footprint starting at the most heavily used system-to-system interchange in the state and finishing short of the Las Vegas Speedway—home of several NASCAR events during the year. The project included new roadway lanes in both directions, reconstruction of interchanges that included modifications to the interstate control of access, 16 bridges, 17 miles of concrete barrier rail, 225,000 square feet of retaining walls, 406,000 tons of asphalt pavement, 29,126 linear feet of storm drain system, ITS, lighting, signals, and surface street improvements.</p>



No.	Required Information	Response
	<p><i>The project received the DBIA National Design-Build Merit Award (2010), AGC's Marvin M. Black Excellence in Partnering Award (2011), and NCA Safest Contractor of the Year Award (2009).</i></p>	<p>The scope widened I-15 from 6 lanes to 10 lanes from the "Spaghetti Bowl," a confluence of four major highways, to Lake Mead Boulevard; expanded I-15 from 4 and 5 lanes to 8 lanes from Lake Mead Boulevard to Craig Road; reconfigured the Lake Mead Boulevard interchange; and built auxiliary lanes between interchanges.</p> <p><b>Demolition of existing infrastructure in urban environments.</b> The demolition and reconstruction of a new interchange at Lake Mead was challenging because there was an Urgent Care directly off the interstate in an area that responds to many emergency calls day and night. Coordination with local emergency responders and adjacent businesses to develop clear and understandable detour signage and traffic plan, as well as working with the traffic management center to monitor the signals in the area, allowed for almost continuous access to the care facility. Similar challenges of avoiding disruptions to adjacent businesses will be faced during demolition of the I-70 East viaduct.</p> <p><b>Major excavation work, including groundwater considerations and/or drainage requirements.</b> Similar to what is anticipated the I-70 East, the scope of this project involved development of traditional drainage features within the urbanized area, including storm sewer design, treatment facilities, and agency permitting and coordination.</p> <p>Stormwater collection and conveyance facilities were constructed to intercept and remove surface runoff from the I-15 corridor. The drainage facilities were designed and constructed to limit drainage-related hazards within and outside the right-of-way while minimizing future O&amp;M costs, public inconvenience, flood damage, and water quality impacts.</p> <p>Work included design of a three-cell, 14-foot by 9-foot box culvert to contain the flood channel and allow the realignment of the south bound off-ramp to Lake Mead Boulevard.</p> <p>All the drainage designs had to be coordinated with the City of Las Vegas and the Clark County Flood Control Master Plan to minimize downstream impacts and/or preclude future projects that had different but imminent construction schedules.</p>


Colorado I-70 East Project

No.	Required Information	Response
	 <p><i>Eleven bridges were constructed within a single mile of the highly congested Spaghetti Bowl corridor, where four major highways intersect. MOT coordination was crucial for this segment of the construction.</i></p> <p><b><i>“CH2M’s approach, administered by a highly qualified team of design and construction professionals, provided ample opportunities for collaboration with NDOT staff in all areas including design, construction, overall project management, worker safety, traffic safety, quality control, and public outreach. The project team invested its time and energy well in making the award winning I-15 North Corridor Design-Build project a resounding success by its unwavering focus on the jointly established project goals.”</i></b></p> <p style="text-align: right;">–Rudy Malfabon, Deputy Director, Nevada Department of Transportation</p>	<p><b><i>Complex traffic management in urban areas.</i></b> Of the 14 new bridges and two bridge widening, 11 of the bridges and one of the widenings were constructed within a single mile of the highly congested I-15/ I-515/US93/US95 Spaghetti Bowl corridor, demanding careful MOT planning and implementation. Weekly MOT coordination meetings with key decision makers from the design-build team, NDOT, Cities of Las Vegas and North Las Vegas, and area traffic management agencies balanced project needs with convenience and safety for public and commercial vehicles. Similar MOT innovation will be required for construction activities of I-70 as the highway approaches the I-25/I-70 Mousetrap.</p> <p>To minimize impacts during construction, NCC provided a link to the Freeway and Arterial System of Transportation’s (FAST’s) traffic cameras to display real-time traffic images of I-15 and help commuters plan their travel routes in advance of getting in their vehicles to avoid delays. NCC provided weekly project schedule lane and road closure and general information updates using the NDOT website and other social media outlets, as well as dynamic message signs within the corridor and at locations to give direct users travel route options.</p> <p>NCC logged more than 1.3 million man hours worked with zero lost time incidents and reduced motor vehicle incidents within the work zone during construction—175,000 motor vehicles travelling through the project per day with 55 percent fewer incidents during a 20-month construction period when compared to the same period prior to construction.</p> <p><b><i>Construction staging in confined spaces.</i></b> The project team devised an innovative construction approach and revised MOT plan that called for constructing the most highly congested, right-of-way constricted portion of the project in two phases, rather than the three phases originally anticipated. This revised construction phasing provided cost efficiencies, increased worker and public safety, improved traffic flow, increased construction access, and reduced construction duration.</p>



**Colorado I-70 East Project**

No.	Required Information	Response
	 <p><i>Our public outreach success on the I-15 North Project was nationally recognized with two Pinnacle Awards from the Public Relations Society of America.</i></p>  <p><i>Construction and widening of the roadway had to be coordinated with both railroads and utilities, like the railroad overpass shown above.</i></p>	<p>With this revised construction phasing approach, which generally shifted both directions of traffic onto new pavement on one side of the interstate, NCC eliminated nightly road closures that would have reduced traffic to a single lane in each direction for 22 months. With this major lane shift, two lanes were kept open in each direction full time without interruption for 14 months. As a result, the number and duration of ramp closure and traffic shifts needed to accommodate the work were minimized because the construction would occur fully on one side and then the other. This resulted in reducing the project duration by 5 months.</p> <p>A large reason for the success was the public outreach effort to provide the background and reason for the lane closures and up to date traffic situation. The local leaders were also contacted and informed so they could respond to citizen questions. One of the biggest economic benefits of this acceleration effort and stakeholder outreach was that the Speedway NASCAR events were only impacted once instead of the planned 3 years. Similar innovative design approaches for construction staging can be applied to the I-70 East Project to minimize impacts to the National Western Stock Show and Rodeo, which generates similar peak traffic.</p> <p><b><i>Coordination with railroad and/or utility companies.</i></b>          CH2M's designers modified the horizontal curvature and centerline location to eliminate a complex widening under a railroad bridge and a utility bridge carrying a high-pressure gas line. CH2M staff coordinated closely with the railroad owner to demonstrate that this innovative alternative design would eliminate the need for work under the railroad crossing bridge. These modifications also resulted in reduced utility impacts and relocations, thus resulting in cost savings to the project and the utility owners.</p> <p><b><i>Roadway pavement and associated infrastructure under similar environmental conditions.</i></b> The structural pavement design considered the extreme temperatures that Las Vegas experiences. Similar considerations will be applied to the I-70 East design for all-weather pavement conditions to minimize long-term O&amp;M issues. Also addressed on the I-15 North project were the sign materials for exposure to the heat and weather conditions, as well as how placements would look against a backdrop of downtown Las Vegas. This aesthetic approach to signage is especially relevant to the I-70 East corridor, which is often the first real glimpse out-of-town travelers have of Denver and the mountain horizon.</p>

No.	Required Information	Response
	 <p><i>The proximity of nearby residences to portions of the project required dust and noise mitigation during the construction.</i></p>	<p><b>Interfaces with adjacent operators.</b> At the north end of the project, NDOT released the Craig Road project for construction at the same time NCC was beginning construction. The project team quickly identified the part of NCC's scope of work that would be within the project limits of the Craig Road project. Clear communication with all the parties involved resulted in part of NCC's scope being moved to the Craig Road project in order to facilitate and mitigate impacts to both the NCC and the Craig Road project schedule. In addition, through open communication, the Craig Road project and the NCC team were able to coordinate ramp and roadway closures that minimized impacts to the traveling public.</p> <p><b>WORKFORCE, SUBCONTRACTOR AND STAKEHOLDER ENGAGEMENT AND ENVIRONMENTAL MONITORING AND MITIGATION ACTIVITIES</b></p> <p>Throughout the duration of the I-15 North project, the team invited all project and community stakeholders, including the City of Las Vegas, the City of North Las Vegas, the Las Vegas Valley Water District, the Regional Traffic Commission, Metro Police, City of North Las Vegas Police Clark County Fire and Rescue and NV Energy, to the weekly Short Interval Schedule meeting. Monthly partnering meetings were also held in which schedules and key decisions and action responsibilities were tracked.</p> <p>Our public outreach success on the I-15 North Project was nationally recognized with two Pinnacle Awards from the Public Relations Society of America.</p> <p><b>Achievement or exceeding goals relating to participation of disadvantaged businesses, small businesses, small businesses, and or other business that are subject to equivalent programs.</b> Although there were no DBE goals in the contract, NCC voluntarily awarded 8.5% to DBE firms and 2.02% to MBE firms. CH2M's design-build project delivery team was an integrated unit made up of design engineers, construction professionals, craft labor, and project management personnel employed by the same firm, operating as a single entity with a vested interest in the success of the project. This approach enhanced our ability to seamlessly blend design subconsultants and construction subcontractors—DBEs in particular—into a single, efficient team.</p>

No.	Required Information	Response
		<p style="text-align: center;"><b>ENVIRONMENTAL MONITORING AND MITIGATION ACTIVITIES</b></p> <p><i>Air quality monitoring and mitigation activities in urban environments.</i> Construction phasing and staging were designed to minimize the amount of disturbed ground exposed at any given time, with special care taken during historically windy seasons or while storm fronts were moving through the area. Mitigation steps included water or dust palliative applied at a frequency appropriate to the type of soils disturbed to minimize fugitive dust generation.</p> <p><i>Noise monitoring and mitigation in urban environments.</i> Sound wall studies were completed as part of NEPA, and walls were constructed early in the construction phasing to minimize noise for the surrounding communities.</p>
<b>II. Description of Team Member Involvement</b>		
(9)	Proposer Team Member(s) (or Affiliate(s)) Involved:	<p><b>CH2M HILL Constructors, Inc.</b> (CH2M CCI) is an Affiliate of CH2M HILL Engineers, Inc. (CH2M), a Core Proposer Team Member and Lead Engineer for FRMG. Both CH2M CCI and CH2M are wholly owned subsidiaries of CH2M HILL Companies, Ltd., the Financially Responsible Party to CH2M. CH2M CCI and CH2M share key resources and personnel in pursuing and managing design in North America. CH2M will benefit from its sister company CH2M CCI's experience on this project as several of the same resources who worked on this project will be closely involved in developing and managing the I-70 East Project.</p>
(10)	Role of Proposer Team Member(s) (or Affiliate(s)):	<p><b>CH2M HILL Constructors, Inc.</b> Managing partner of North Corridor Constructors, a 50/50 joint venture, responsible for planning, organizing and executing of the design, construction, quality management, and safety on this complex project</p>
(11)	Key Personnel Involved, Roles & Responsibilities:	<p>Laura Baxter, FRMG's Proposed Utilities Manager, managed utility relocation and coordination services for both design and construction of water, sewer, electric, gas, street lighting, ITS, and landscaping for this \$252-million project.</p>
<b>III. Reference</b>		
(12)	Name:	Mary Martini
(13)	Title & Employer (current):	Project Manager / Region 1 Engineer, Nevada DOT
(14)	Title & Employer (at time of project/transaction):	Project Manager / Region 1 Engineer, Nevada DOT

Colorado I-70 East Project

No.	Required Information	Response
(15)	Phone & Email:	702.385.6501 mmartini@dot.state.nv.us
(16)	Location & Time Zone:	Las Vegas, Nevada, Pacific Time Zone
(17)	Other:	N/A
<b>IV. Technical Information</b>		
(18)	Construction Value:	\$242 million (bid price)
(19)	Completion within/above Budget:	Ten contract change orders for owner-directed added scope of \$9.8 million above budget. Change orders were kept to a minimum and the total cost for increased scope elements was 1.26 percent of the final contract value.  \$251.8 million (final construction price)
(20)	O&M Value:	N/A
(21)	Length of Road under Operation (centerline miles):	5.8 miles of the 1-15 freeway in North Las Vegas.
(22)	Key Technical Challenges and Solutions Implemented:	<p><b><i>Bridge Design and Construction in Congested Corridor</i></b></p> <p><b>Challenge:</b> A challenge of this project was the design and construction of 14 new bridges and two bridge widenings within a single mile of the highly congested I-15/I-515/US93/US95 corridor.</p> <p><b>Solution:</b> Our team coordinated weekly coordination meetings with key decision makers, provided a link to traffic cameras that displayed real-time traffic images, posted weekly road closures on NDOT's website, and used dynamic messaging within the corridor. This resulted in 55 percent fewer motor vehicle incidents than before construction.</p> <p><b>Benefits:</b> A well-conceived and communicated MOT plan ensured the successful delivery of NDOT's first design-build project. The FRMG team plans to use a similarly robust communication approach to assist CDOT, with timely communication to the traveling public and community about construction activities.</p> <p><b><i>Accelerated Project Schedule</i></b></p> <p><b>Challenge:</b> Meeting NDOT's accelerated schedule</p> <p><b>Solution:</b> The use of innovative design and construction methods reduced the project duration by 5 months. For example, an innovative design for the Lake Mead Drive interchange eliminated four bridges and simplified construction while also improving operations through increased capacity, utility, and safety for local and interstate traffic.</p>

**Colorado I-70 East Project**

No.	Required Information	Response
		<p><b>Benefits:</b> The entire project was delivered 9 months ahead of schedule due to the innovative approaches of the NCC team. This is the kind of innovation that CH2M and the rest of the FRMG team will bring to I-70 East to help CDOT maximize the project's scope.</p>
<p><b><u>V. Financial Information</u></b></p>		
(23)	Payment Mechanism:	N/A
(24)	Source(s) of Revenues or Payments:	N/A
(25)	Proposer Team Member(s) Equity Investment:	N/A
(26)	Financing Method(s) and Value(s):	N/A
(27)	Key Financial and Funding Challenges and Solutions Implemented:	N/A

Colorado I-70 East Project


**FORM F: PROJECT EXPERIENCE (T-REX)**

**Proposer Name:** Front Range Mobility Group

**Core Proposer Team Member(s) Involved:**

- Equity Member:
- Lead Contractor
- Lead Engineer
- Lead Operator
- Joint venturer in Lead Engineer:  
**AECOM Technical Services, Inc.**
- Affiliate(s) N/A

**Form F: Project/Transaction Description**

No	Required Information	Response
<b>I. Background Information</b>		
(1)	Project Name:	I-25 Transportation Expansion (T-REX) Project
(2)	Type of Facility:	Interstate expansion/reconstruction and light rail transit in an urban environment
(3)	Owner/Procuring Authority:	Colorado Department of Transportation and the Regional Transportation District
(4)	Brief Description of Project:   <p><i>The \$1.3 billion T-REX Project was the largest design-build project ever completed in Colorado at time of construction. AECOM worked as a major design subconsultant responsible for 30% of the overall design.</i></p>	<p>This \$1.3 billion project, completed in 2006, was the largest design-build project in Colorado at time of construction. The project included 17 miles of Interstate highway widening and reconstruction and 19 miles of LRT construction along Denver's Southeast I-25 corridor. The urban corridor has daily traffic volumes of more than 250,000 vehicles.</p> <p>The project was divided into nine areas. <b>AECOM</b>, as a major design subconsultant, was responsible for 30% of the overall project design, including the design of Segments 1.2, 3.1, 3.2, 3.3 and corridor-wide traffic engineering services. AECOM's design involved the reconstruction of multiple interchanges, new and widened bridges, a new drainage system, and improved bicycle and pedestrian access.</p> <p>AECOM's design for Segment 1.2 (1.1 miles of I-25, 1.1 miles of LRT) included the reconstruction of the University Boulevard Interchange, highway and LRT geometry, four bridge structures (three highway and LRT track), utility relocations, 11 retaining walls and seven sound walls, construction phasing, and traffic control design. AECOM also redesigned the Colorado Boulevard and Hampden Avenue interchanges and provided wall designs for other segments of the corridor.</p>

**Colorado I-70 East Project**

		<p>AECOM's design for Segments 3.1, 3.2, and 3.3 (6.5 miles of I-25, 6.5 miles of LRT) consisted of widening I-25 by adding one northbound and one southbound lane, widening five highway bridges, five interchanges, vertical and horizontal alignment and grading for the LRT line, design of eight new LRT bridges, and numerous wall designs throughout. AECOM was also responsible for the horizontal and vertical alignment, grading, and all structures for the completely grade-separated LRT system. The bridge widenings facilitated construction activities, lane switches, and maintenance of traffic during construction.</p> <p>The project finished 3.2% under budget and 22 months ahead of schedule in 2006.</p>																											
(5)	Contract Term:	<p style="text-align: right;">Total Term Length    5 years Start Date            June 2001 End Date                November 2006</p>																											
(6)	Current Status:	Construction complete.																											
(7)	Key Dates and Milestones:	<table border="0" style="width: 100%;"> <tr> <td style="width: 30%; text-align: right;">Contract Execution</td> <td>Anticipated/Contracted:</td> <td>Actual: N/A</td> </tr> <tr> <td></td> <td>June 2001</td> <td></td> </tr> <tr> <td style="text-align: right;">Design Start</td> <td>Anticipated/Contracted: 0 months</td> <td>Actual: 0 months</td> </tr> <tr> <td style="text-align: right;">Construction Start</td> <td>Anticipated/Contracted: 4 months</td> <td>Actual: 4 months</td> </tr> <tr> <td style="text-align: right;">Operations Commencement:</td> <td>Anticipated/Contracted: N/A</td> <td>Actual: N/A</td> </tr> <tr> <td style="text-align: right;">Service Commencement:</td> <td>Anticipated/Contracted: N/A</td> <td>Actual: N/A</td> </tr> <tr> <td style="text-align: right;">Substantial Completion</td> <td>Anticipated/Contracted: 7 years</td> <td>Actual: 5 years, 2 months</td> </tr> <tr> <td style="text-align: right;">Final Completion</td> <td>Anticipated/Contracted: 7 years</td> <td>Actual: 5 years, 4 months</td> </tr> <tr> <td style="text-align: right;">End of O&amp;M</td> <td>Anticipated/Contracted: N/A</td> <td>Actual: N/A</td> </tr> </table>	Contract Execution	Anticipated/Contracted:	Actual: N/A		June 2001		Design Start	Anticipated/Contracted: 0 months	Actual: 0 months	Construction Start	Anticipated/Contracted: 4 months	Actual: 4 months	Operations Commencement:	Anticipated/Contracted: N/A	Actual: N/A	Service Commencement:	Anticipated/Contracted: N/A	Actual: N/A	Substantial Completion	Anticipated/Contracted: 7 years	Actual: 5 years, 2 months	Final Completion	Anticipated/Contracted: 7 years	Actual: 5 years, 4 months	End of O&M	Anticipated/Contracted: N/A	Actual: N/A
Contract Execution	Anticipated/Contracted:	Actual: N/A																											
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Design Start	Anticipated/Contracted: 0 months	Actual: 0 months																											
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Operations Commencement:	Anticipated/Contracted: N/A	Actual: N/A																											
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Substantial Completion	Anticipated/Contracted: 7 years	Actual: 5 years, 2 months																											
Final Completion	Anticipated/Contracted: 7 years	Actual: 5 years, 4 months																											
End of O&M	Anticipated/Contracted: N/A	Actual: N/A																											
(8)	<p>Relevance to the Project:</p> <p style="text-align: center;"><b><u>AWARDS</u></b></p> <p><i>T-REX was recognized with more than 30 awards, including a National DBIA Transportation Award and the AGC's Build America Grand Award.</i></p>	<p>This T-REX project shares many similarities with the I-70 East Project, including its close proximity to the I-70 East corridor and similar work scopes and challenges. Specific details related to the evaluation criteria are included below.</p> <p><b>Roadway expansion, reconstruction and interchange reconstruction.</b></p> <p>AECOM provided design and construction support services for two segments totaling 7.6 miles of the I-25 project corridor. This work included interstate reconstruction and widening in conditions similar to the I-70 East Project and 7.6 miles of LRT design. AECOM designed seven interchanges, three highway bridges, nine LRT bridges, and five bridge widenings. The project scope also included design of more than 20 miles of retaining walls and 3 miles of sound walls. AECOM also provided corridor-wide traffic engineering services and MOT design.</p>																											

## Colorado I-70 East Project



*The Steele Street bridge designed by AECOM as part of Segment 1.2 provides neighborhood connection similar to what is proposed for the I-70 East Project. The bridge was demolished in February 2002, and it was rapidly replaced and opened by August 2002.*



*AECOM designed the innovative SPUI Interchange—the only one of its type along the I-25 corridor—at University Boulevard to maintain safe mobility of traffic through the interchange and minimize impacts to businesses and residential access.*

### **Demolition of existing infrastructure in urban environments.**

AECOM's design included demolishing portions of the I-25 mainline infrastructure in Segment 3 at the Bellevue, Orchard, and Arapahoe interchanges, and the entire Segment 1.2 from University to Colorado Boulevard. Similar to the proposed I-70 East Project, this project involved demolition and reconstruction of critical neighborhood bridge connections. The Steele Street Bridge was the second bridge to be demolished in February 2002, and it was rapidly replaced and opened by August 2002. Other bridges in Segment 3 were demolished to accommodate I-25 mainline widening. AECOM's design accounted for the safety of workers and the traveling public since the demolition of these structures was performed adjacent to live traffic.

### **Major excavation work, including groundwater considerations and/or drainage requirements.**

The I-25 corridor is constrained by ROW limitations throughout its entire length. This created the need for a significant retained excavation program, which generated millions of cubic yards of earthwork and over 2 million square feet of retaining walls. AECOM designed the retaining walls to facilitate bridge widening, maintain existing on-ramps during construction, and minimize ROW and final ramp configuration. AECOM also designed the walls on the LRT system at the grade separations at the Bellevue, Orchard, Arapahoe, Dry Creek, and County Line interchanges.

### **Complex traffic management in urban areas.**

Similar to the I-70 East Project, maintaining highway traffic and access to businesses, residences, and schools were critical items for CDOT and project stakeholders. AECOM designed MOT in Segments 1.2 and 3 of the project, and also prepared detour plans for the I-25 night closures using Santa Fe as the detour.

Other complex MOT design included the University interchange reconstruction, which included a temporary diamond configuration, as well as phasing and traffic control for an 18-foot drainage tunnel outfall to the South Platte River. At the south end, AECOM engineered a three-sided box for the LRT to cross below grade of the C-470. Construction of the box required complex construction staging to minimize impacts to the ramps and traveling public.





*The Steele Street Bridge design and construction required detailed planning an execution of the works to keep the workers and traveling public safe during the construction adjacent to live traffic.*

**Construction staging in confined spaces.**

Construction staging and safety near live traffic was a critical issue for the project team. AECOM prepared preliminary design and construction phasing for the Colorado Boulevard interchange reconstruction that included a cut-and-cover LRT tunnel. AECOM also designed several miles of mainline highway corridor construction staging and phasing plans that accommodated existing structures to be widened or demolished under live traffic, while providing three travel lanes during all phases of the construction. Wall construction in the depressed sections of Segment 1.2 required deep foundation walls with very tight tolerances.

**Coordination with railroad and/or utility companies.**

AECOM completed utility coordination for over 7 miles of the project. One of the most important concerns was ensuring that critical communications and utility services were not interrupted. AECOM’s utility work included design of wet utilities (including water, sanitary, and storm) and coordination with private utility companies and agencies (Xcel, Comcast, CenturyLink, Denver Water, and others) to identify horizontal and vertical corridors for utility relocations. AECOM staff participated in the Utility Relocation Work Order process, which assigned responsibility for designs, reviews, and relocations both from a timing and financial standpoint.


**Roadway pavement and associated infrastructure under similar environmental conditions.**

To facilitate construction along much of the corridor, the team was required to perform extensive dewatering and hazardous materials controls. Expansive soils were evident under the existing pavement and, in most cases, required full-depth reconstruction and soil improvements. AECOM implemented proven methods and techniques to minimize subsurface improvements and utilized existing infrastructure wherever possible. Environmental controls were put in place to limit the impact of noise and dust to the neighboring communities and prevent the disturbance of archeological resources during excavation.

**Interfaces with adjacent road operators.**

The project was unique in that it featured collaboration between CDOT, RTD, the Federal Highway Administration (FHWA), the Federal Transit Administration (FTA), and several counties, cities, and business districts.

**Colorado I-70 East Project**

	 <p><i>The City and County of Denver (CCD) was a major stakeholder, and AECOM worked closely with CCD as it related to the tie-in with the local street system, including University Boulevard, Steele Street, and access to the University of Denver LRT station from Buchtel Boulevard.</i></p>	<p><b>Noise Monitoring and Mitigation in Urban Environments</b></p> <p>Similar to the I-70 East Project, construction noise, permanent noise mitigation, and neighborhood sensitivity were key considerations incorporated into AECOM's design. AECOM worked closely with the corridor-wide acoustic consultants to ensure that the necessary sound wall designs met or exceeded standards and heights required to mitigate project-induced noise. AECOM designed over 3 miles of sound walls to protect numerous neighborhoods, including University Park, Corey Merrel, University Hills, Southmoor Park, and Hampden South. AECOM took special care to ensure that all mitigation measures were met for the design of the sound wall to protect Veterans Park near the University Boulevard Interchange.</p>
<p><b>II. Description of Team Member Involvement</b></p>		
(9)	<p>Proposer Team Member(s) (or Affiliate(s)) Involved:</p>	<p>AECOM Technical Services, Inc. (under previous corporate identity as TCB and DMJM)</p>
(10)	<p>Role of Proposer Team Member(s) (or Affiliate(s)):</p>	<p>AECOM Technical Services provided 30% of the primary design services on the project</p>
(11)	<p>Key Personnel Involved, Roles &amp; Responsibilities:</p>	<p>N/A</p>
<p><b>III. Reference – Contractor and Owner Reference</b></p>		
(12)	<p>Name:</p>	<p>Richard Clark</p>
(13)	<p>Title &amp; Employer (Current):</p>	<p>Regional Transportation District (RTD) AGM Capital Programs</p>
(14)	<p>Title &amp; Employer (at time of project/transaction):</p>	<p>Regional Transportation District (RTD) Project Director</p>
(15)	<p>Phone &amp; Email:</p>	<p>303.299.2184 Richard.Clarke@rtd-denver.com</p>
(16)	<p>Location &amp; Time Zone</p>	<p>Denver, Colorado / Mountain Time Zone</p>
(17)	<p>Other:</p>	<p>N/A</p>
<p><b>IV. Technical Information</b></p>		
(18)	<p>Construction Value:</p>	<p>Approximately \$1.3 billion</p>
(19)	<p>Completion within/above Budget:</p>	<p>Completed within budget</p>
(20)	<p>O&amp;M Value:</p>	<p>N/A</p>
(21)	<p>Length of Road under Operation (centerline miles):</p>	<p>17 miles</p>

## Colorado I-70 East Project

(22) Key Technical Challenges and Solutions Implemented:



*Similar to interchange reconstruction planned for I-70 East, active construction at the University Boulevard SPUI involved converting a partial clover-leaf to a temporary diamond interchange during construction.*

**AECOM coordinated and integrated its design with the work of other companies and agencies within the design build project team and won several awards for adhering to quality control policies and successfully meeting deadlines.**

AECOM focused on innovative design that minimized traffic congestion and commuter delays during the design-build process. AECOM's design innovation and commitment of resources were instrumental in meeting and exceeding the project goals, including resounding community support, minimal traffic disruptions, and completion of the project 22 months ahead of the schedule.

### *Innovative Interchange Geometry*

**Challenge:** Maintaining traffic on this congested urban corridor while minimizing ROW acquisition.

**Solutions:** The AECOM team implemented innovative design ideas to maintain safe and efficient traffic flow. For example, the University Boulevard interchange was designed as a single-point urban interchange (SPUI). A SPUI was a relatively new and innovative type of interchange at the time, and the only one of its type along the I-25 corridor. A SPUI's advantages over a traditional diamond interchange include a more compact layout requiring less ROW acquisition. In addition, a SPUI allows for concurrent left turns, which increases safety and provides greater capacity. This compact layout also allowed the team to convert an existing partial clover-leaf interchange to a temporary diamond interchange during construction.

**Benefit:** FRMG will benefit from AECOM's experience maintaining safe and efficient traffic flow on the T-REX project through development of innovative interchange designs. The FRMG team will explore similar design solutions as part of our commitment to maintain mobility and minimize impacts during construction on the I-70 East Project.

### *Structural Design Challenges*

**Challenge:** The preliminary design at the University Boulevard interchange called for a long, single-span structure requiring large, expensive girders that resulted in substandard clearance with the roadway underneath.

**Solutions:** AECOM opted, instead, for a three-span structure with one long interior span and two short-end spans, enabling the use of smaller, more efficient girders. This solution not only alleviated clearance concerns, but also resulted in significant savings over the conceptual design and a more pleasing appearance.

**Benefit:** AECOM brings proven experience providing design enhancements to reduce costs and minimize risks, while meeting all CDOT design criteria and addressing related third party concerns.

**Colorado I-70 East Project**

V. Financial Information		
(23)	Payment Mechanism:	N/A
(24)	Source(s) of Revenues or Payments:	N/A
(25)	Proposer Team Member(s) Equity Investment:	N/A
(26)	Financing Method(s) and Value(s):	N/A
(27)	Key Financial and Funding Challenges and Solutions Implemented:	N/A


## FORM F: PROJECT EXPERIENCE (SH-161)

**Proposer Name:** Front Range Mobility Group

**Core Proposer Team Member(s) Involved:**

- Equity Member:
- Lead Contractor
- Lead Engineer
- Lead Operator
- Joint venturer in Lead Engineer:  
**AECOM Technical Services, Inc.**
- Affiliate(s) N/A

### Form F: Project/Transaction Description




No.	Required Information	Response
<b>I. Background Information</b>		
(1)	Project Name:	President George Bush Turnpike (PGBT) Western Extension (SH-161), Phase 4
(2)	Type of Facility:	Toll road in an urban environment with bridges, major interchanges, and cut-and-cover ramps
(3)	Owner/Procuring Authority:	North Texas Tollway Authority (NTTA)
(4)	Brief Description of Project:   <p><i>The \$424 million design-build project was completed on time, within budget, and featured several similar design and construction challenges as I-70 East, such as demolition of structures, major interchange work, construction staging in an urban environment, cut and cover structures, and coordination with railroads and utility companies.</i></p>	<p>This \$424 million project was completed in October 2012 and was NTTA's first design-build project. The project involved design and construction of 6.5 miles of a tolled four-lane highway located between two existing frontage roads, and accommodates an ultimate configuration of four northbound and four southbound lanes. The project also includes two major interchanges where SH-161 intersects with I-20 and I-30.</p> <p><b>AECOM</b> served as Lead Engineer for this project. AECOM designed 44 bridges, nearly 1 million square feet of retaining walls, and two cut-and-cover direct connectors at the I-30 interchange.</p> <p>The project included construction of a Union Pacific Railroad bridge, coordination with more than 20 utility companies, and demolition of existing structures. AECOM also designed a maintenance of traffic plan to handle the complex urban bi-directional traffic on I-20 and I-30. The project was completed on time and within budget.</p>

**Colorado I-70 East Project**

No.	Required Information	Response																
		<p>The project met NTTA's defined project goals through an effective and highly-collaborative design-build process. The aggressive overall 32-month schedule required a very interactive and decisive design process, including multiple revisions from the original schematic design to provide functionality within corridor constraints as they developed. The team met all challenges and opened the facility to traffic and toll-revenue generation on time in October 2012.</p>																
(5)	Contract Term:	<p>Term Length: 3 years, 4 months            Start Date: November 2009 March 2013            End Date:</p>																
(6)	Current Status:	Construction complete.																
(7)	<p>Key Dates and Milestones:</p> <p>Contract Execution            Design Start            Construction Start            Operations Commencement:            Service Commencement:            Substantial Completion            Final Completion            End of O&amp;M</p>	<table border="0"> <tr> <td>Anticipated/Contracted: Nov. 2009</td> <td>Actual: N/A</td> </tr> <tr> <td>Anticipated/Contracted: 0 months</td> <td>Actual: 0 months</td> </tr> <tr> <td>Anticipated/Contracted: 11 months</td> <td>Actual: 11 months</td> </tr> <tr> <td>Anticipated/Contracted: N/A</td> <td>Actual: N/A</td> </tr> <tr> <td>Anticipated/Contracted: N/A</td> <td>Actual: N/A</td> </tr> <tr> <td>Anticipated/Contracted: 35 months</td> <td>Actual: 35 months</td> </tr> <tr> <td>Anticipated/Contracted: 40 months</td> <td>Actual: 40 months</td> </tr> <tr> <td>Anticipated/Contracted: N/A</td> <td>Actual: N/A</td> </tr> </table>	Anticipated/Contracted: Nov. 2009	Actual: N/A	Anticipated/Contracted: 0 months	Actual: 0 months	Anticipated/Contracted: 11 months	Actual: 11 months	Anticipated/Contracted: N/A	Actual: N/A	Anticipated/Contracted: N/A	Actual: N/A	Anticipated/Contracted: 35 months	Actual: 35 months	Anticipated/Contracted: 40 months	Actual: 40 months	Anticipated/Contracted: N/A	Actual: N/A
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Anticipated/Contracted: N/A	Actual: N/A																	
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Anticipated/Contracted: 40 months	Actual: 40 months																	
Anticipated/Contracted: N/A	Actual: N/A																	
(8)	<p>Relevance to the Project:</p> <div style="background-color: #000080; color: white; padding: 10px; border: 1px solid black;"> <p><b>Similar to the I-70 East Project, the work included demolition of structures, major excavation and earthwork, extensive coordination with railroad and utility companies, and construction of cut-and-cover structures.</b></p> </div>	<p>The SH-161 project shares many similar challenges with the I-70 East Project, and shows AECOM's success in exceeding goals similar to the Procuring Authority's goals. Construction of two major freeway interchanges required complex construction staging to accommodate bi-directional traffic.</p> <p>Specific details addressing the evaluation criteria are included below.</p> <p><b>Roadway expansion, reconstruction, and interchange reconstruction.</b></p> <p>The work on SH-161 included design and construction of two major interchanges where SH-161 connects with I-20 and I-30. The project has a total of 44 bridges totaling approximately 2 million square feet of bridge deck, and over 1 million square feet of retaining wall, 5.5 million cubic yards of earthwork, and 400,000 million cubic yards of concrete.</p>																

No.	Required Information	Response
	<div style="background-color: #1a3d54; color: white; padding: 10px; text-align: center;"> <p>Two of the three direct connectors are depressed and led to implementation of an innovative cut-and-cover construction technique to minimize impacts to the adjacent property owners and stay within the commitments made in the environmental documents. AECOM's expertise in cut and cover structures is highly beneficial to the I-70 East Project.</p> </div> <div>  </div> <div> <p><i>The SH-161 and I-30 five-level Interchange required close coordination with the public and multiple agencies due to the heavy bi-directional traffic.</i></p> </div>	<p>Also included in this project is the construction of a UPRR bridge located at Jefferson Street and Main Street, designed by others, that required an extensive amount of coordination with an adjacent contract to successfully tie the two projects together. AECOM's design scope included design of the roadway, drainage, structures, ITS/tolling, MOT, design services during construction, and survey in support of design and utilities.</p> <p><b>Demolition of existing infrastructure in urban environments.</b></p> <p>To accommodate construction of SH-161 and associated direct connectors, demolition of existing infrastructure at the I-20 and I-30 interchanges was required. At the I-20 interchange, The team demolished a ramp bridge at the I-20 interchange and removed retaining walls adjacent to the freeway and portions of a reversible HOV lane at the I-30 interchange. These demolition activities required detailed MOT plans to handle the traffic in this urban location.</p> <p><b>Major excavation work, including groundwater considerations and/or drainage requirements.</b></p> <p>Right-of-way constraints in this urban area required significant retained excavation that generated over 5.5 million cubic yards of earthwork and over 1 million square yards of retaining wall. After award, additional constraints were introduced due to unavailability of adjacent ROW that led to a complete redesign of three direct connectors in the I-30 Interchange. Acquiring the initially necessary ROW was no longer an option. The carefully designed interchange configuration fully maximizes the small ROW envelope.</p> <p><b>Complex traffic management in urban areas.</b></p> <p>This project included multi-level interchanges with I-20 and I-30, located on either end of the project corridor. Construction of the nine direct connector bridges, two frontage road bridges and cut-and-cover tunnels took place while managing heavy bi-directional traffic along these interstates. The work required coordination with multiple agencies, along with reconfiguration of the reversible HOV corridor to accommodate the bridge construction.</p>

**Colorado I-70 East Project**

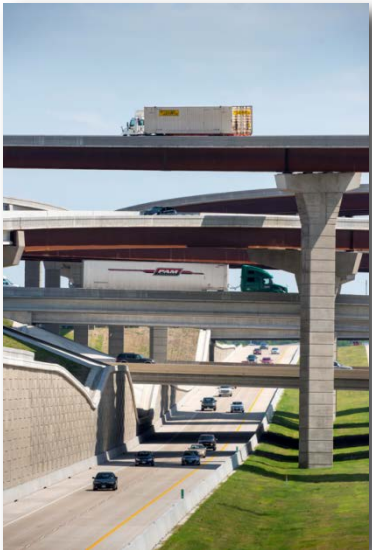
No.	Required Information	Response
	  <p><i>AECOM optimized the design of the cut-and-cover direct connectors through consultation with tunnel experts, the local fire marshal, and Addison toll tunnel maintenance staff.</i></p>  <p><i>Similar to the I-70 East Project, extensive coordination with the UPRR and an adjacent contract was required for the crossing over UPRR at Jefferson and Main.</i></p>	<p><b>Construction staging in confined spaces.</b></p> <p>At the I-30 Interchange, the team constructed the SH-161 immediately underneath the very heavily traveled I-30 mainlanes. An at-grade structure had been previously constructed on I-30 to serve as shoring during construction, but the construction operation and design of the temporary and permanent structural walls were still complicated by the confined conditions. AECOM designed cut walls exceeding 30 feet in a restricted area to support the I-30 mainlanes and frontage roads, which were under continuous traffic. AECOM redesigned two heavily traveled, bi-directional arterials adjacent to either side of a UPRR line crossing from at-grade crossings with SH-161 to grade-separated crossings. Due to the proximity of UPRR, both arterials were required to stay open and maintain bi-directional traffic throughout construction.</p> <p><b>Structures that include ventilation and/or life safety considerations.</b></p> <p>Two of the three direct connectors at the I-30 Interchange are depressed and led to implementation of an innovative cut-and-cover construction technique to minimize impacts to adjacent property owners and stay within the commitments made in the project's environmental clearance documents. AECOM's expertise in cut-and-cover structures will prove to be highly beneficial to the I-70 East Project. In an effort to assess all possible solutions and optimize the design, AECOM consulted with tunnel experts, the local fire marshal, and the City of Addison's toll tunnel maintenance staff. The structures include safety lighting and extra-wide shoulders on the inside of the curve for additional sight distance.</p> <p><b>Coordination with railroad and/or utility companies</b></p> <p>Similar to the I-70 East Project, this project includes construction of a UPRR bridge. The bridge, located at Jefferson Street and Main Street, was designed by others and required extensive coordination with an adjacent contract to successfully tie the two projects together. Underground fiber-optic communications cables for five different utility companies at the UPRR crossing could not remain underground due to overburden requirements under the SH-161 mainlanes. AECOM developed and designed a utility bridge to cross over SH-161 adjacent and parallel to the railroad bridge. This solution was essential to the success of the project.</p>



**Colorado I-70 East Project**

No.	Required Information	Response
	<p><b>AECOM adjusted the roadway geometry near Marshall Lane to avoid a high-pressure gas pipeline. These modifications helped to mitigate the safety risk inherent with utility relocations, and proved to be the best solution from a cost and schedule perspective.</b></p> <p><b>The UPRR bridge over two city streets was designed by others and required an extensive amount of coordination with an adjacent contract to successfully tie the two projects together. We anticipate a similar level of close coordination on the I-70 East Project.</b></p>	<p>The project included coordination with 20 utility companies regarding relocations or protect-in-place solutions. The AECOM design team modified the design of several bridge, roadway, and wall elements to avoid existing utilities. By lowering the bridge profiles at the I-30 Interchange, AECOM was able to avoid a conflict with high-voltage transmission lines.</p> <p><b>Interfaces with Adjacent Road Operators</b></p> <p>The City of Grand Prairie and the Texas Department of Transportation were major project stakeholders. The SH-161 project connects to Interstates on each end and all frontage roads are controlled by TxDOT. The project team worked with these stakeholders, beginning early with high-level schematics to develop construction sequencing to maintain traffic flow and to minimize switches.</p> <p><b>Achievement of/or exceeding goals relating to participation of disadvantaged businesses, small businesses and/or other businesses that are subject to equivalent programs.</b></p> <p>AECOM and the overall design team distributed more than 26 percent of design activities to D/M/W/SBE firms—exceeding the project goal.</p> <p style="text-align: center;"><b>ENVIRONMENTAL MONITORING AND MITIGATION ACTIVITIES</b></p> <p>After the 60% design submittals, it became apparent that a proposed detention pond was not the solution that NTTA or other stakeholders preferred due to long-term maintenance concerns. The AECOM design team reevaluated all options and revised the roadway profiles, bridge configurations, and enclosed storm drain design, eliminating the need for the pond.</p>
<b>II. Description of Team Member Involvement</b>		
(9)	Proposer Team Member(s) (or Affiliate(s)) Involved:	<b>AECOM Technical Services, Inc.</b>
(10)	Role of Proposer Team Member(s) (or Affiliate(s)):	<b>AECOM Technical Services, Inc.: Lead Designer (45%)</b>
(11)	Key Personnel Involved, Roles & Responsibilities:	N/A
<b>III. Reference</b>		
(12)	Name:	Wallace Heimer, PE
(13)	Title & Employer (current):	North Texas Tollway Authority (NTTA)
(14)	Title & Employer (at time of project/transaction):	North Texas Tollway Authority (NTTA)

**Colorado I-70 East Project**

No.	Required Information	Response
(15)	Phone & Email:	214.224.2059 wheimer@ntta.org
(16)	Location & Time Zone:	Plano, Texas / Central Time Zone
(17)	Other:	N/A
IV. Technical Information		
(18)	Construction Value:	\$424 million
(19)	Completion within/above Budget:	Completed under NTTA's estimate of \$610 million. Cost-saving measures included: geometric revisions and beam type change
(20)	O&M Value:	N/A
(21)	Length of Road under Operation (centerline miles):	6.5 miles
(22)	<p>Key Technical Challenges and Solutions Implemented:</p>  <p><i>The PGBT-WE / I-30 Five-Level Interchange: AECOM responded to the complex design challenges at the I-20 and I-30 interchanges by developing 12 significant ATCs to refine the geometry at key locations, saving an estimated \$10 million.</i></p>	<p><b>Structural and Geotechnical Challenges</b></p> <p><b>Challenge:</b> Similar to the I-70 East Project, the two multi-level interchanges at I-30 and I-20 presented numerous technical challenges in this urban environment with limited ROW. In particular, at the I-30 Interchange there was a significant amount of retained excavation. Expansive soils showed shrink and swell behavior, and in other areas soil characteristics were consistent with materials containing high levels of sulfates.</p> <p><b>Solutions:</b> AECOM designed bridge foundations and retaining walls (totaling nearly one million square feet) to ensure long-term safety of the facility, as this was a particular concern of NTTA. Drilled shaft foundations for bridges were embedded into weathered shale below the expansive clays. MSE walls were used for retaining walls in fill sections. Where indicated by geotechnical analysis, the foundation soils were improved by fill replacement methods. MSE walls were also used in cut sections where there was adequate space behind the wall to excavate and temporarily shore the existing embankment.</p> <p><b>Benefits:</b> AECOM's design solutions addressed NTTA's concerns with regard to long-term safety of the projects structural elements. AECOM coordinated this design with NTTA through working task group meetings; a similar approach will be applied to the I-70 East project to ensure our design addresses CDOT's concerns and goals.</p>

Colorado I-70 East Project

No.	Required Information	Response
		<p><i>Direct Connector Geometry</i></p> <p><b>Challenge:</b> The I-20 and I-30 interchanges included complex geometry that was a major cost component of the SH-161 project.</p> <p><b>Solutions:</b> Through the Alternative Technical Concept (ATC) process, the AECOM design team refined the geometry at the I-30 and I-20 interchanges in three key locations. In total, 12 significant ATCs were approved involving design optimization, material alternatives, and procedural optimization. These geometric ATCs alone created an estimated \$10 million savings by reducing structural quantities, enhancing safety and traffic operations, and reducing long-term life cycle costs.</p> <p><b>Benefits:</b> FRMG will benefit from AECOM's experience optimizing the geometry of the SH-161 interchange through working task force groups during the proposal phase. FRMG will implement a similar design optimization process on the I-70 East Project to develop cost-saving ATCs and other innovative design methods to reduce costs and mitigate risks.</p>
V. Financial Information		
(23)	Payment Mechanism:	N/A
(24)	Source(s) of Revenues or Payments:	N/A
(25)	Proposer Team Member(s) Equity Investment:	N/A
(26)	Financing Method(s) and Value(s):	N/A
(27)	Key Financial and Funding Challenges and Solutions Implemented:	N/A

# Form F LEAD OPERATOR MEMBERS





## Lead Operator Project Experience

<b>FRMG's Project Experience demonstrates our significant and relevant experience in projects that have similar technical complexities and challenges to the I-70 East Project.</b>	I-595	A-30	A-8	SFPR (South Fraser)
<b>1. TECHNICAL CRITERIA</b>				
b. Relevance the Project				
i. design and construction and operations and maintenance activities:				
A. With respect to Design and Construction activities				
i. roadway expansion and reconstruction, including interchange reconstruction	X	X	X	X
ii. demolition of existing infrastructure in urban environments	X	X	X	
iii. major excavation work, including groundwater considerations and/or drainage requirements	X	X		X
iv. complex traffic management in urban areas	X	X	X	X
v. construction staging in confined spaces	X	X		X
vi. structures that include ventilation and/or fire life safety considerations	X	X		
vii. coordination with railroad and/or utility companies	X	X	X	X
B. with respect to operations and maintenance activities:				
I. Roadway Pavement and associated Infrastructure under environmental conditions that are environmental conditions that are similar to those affect the project	X	X	X	X
II. Interfaces with adjacent road operators	X	X	X	X
ii. workforce, subcontractor and stakeholder engagement and environmental monitoring and mitigation activities				
I. workforce development programs, including partnerships with local community organizations and/or apprenticeship programs	X	X		X
II. achievement of or exceeding goals relating to participation of disadvantaged businesses, small businesses and/or other businesses that are subject to equivalent programs	X	X		X
B. with respect to environmental monitoring and mitigation activities:				
I. air quality monitoring and mitigation in urban environments	X	X	X	X
II. noise monitoring and mitigation in urban environments	X	X	X	X
<b>2. FINANCIAL CRITERIA</b>				
2.1. Financial Qualifications and Capacity				
a. Relevant Financing experience				
i. the project's financing included a TIFIA loan that was closed by the project developer and not a public authority	X			
ii. the project's financing used PABs				
iii. the financed project was a highway or road project	X	X	X	
iv. the financed project was located in North America	X	X		

Colorado I-70 East Project


**Form F: Project Experience (I-595 Corridor)**

**Proposer Name:** Front Range Mobility Group

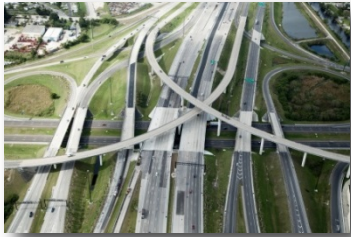
**Core Proposer Team Member(s) Involved:**

- Equity Member: **ACS Infrastructure Development, Inc.**
- Lead **Contractor**
- Lead **Engineer**
- Lead **Operator**
- Joint **venturer** in Lead Contractor: **Dragados USA, Inc.**
- Joint venturer in Lead Engineer: **AECOM Technical Services, Inc.**
- Joint venturer in Lead Operator: **ACS Infrastructure Development, Inc.**
- Affiliate(s) (n/a)

**Form F: Project/Transaction Description**

No.	Required Information	Response
<b>I. Background Information</b>		
(1)	Project Name:	I-595 Corridor Improvements Project (I-595)
(2)	Type of Facility:	Interstate highway expansion (including general purpose lanes and frontage roads) with new reversible managed lanes.
(3)	Owner/Procuring Authority:	Florida Department of Transportation
(4)	Brief Description of Project:  <p><i>The I-595 Project was the first P3 in the State of Florida and the largest project in the history of the Florida Department of Transportation (FDOT) at time of construction.</i></p>	<p>The I-595 Corridor Improvements Project (I-595) is a \$1.7 billion (\$1.2 billion construction value) design-build-finance-operate-maintain (DBFOM) highway project. I-595 was the first P3 in the State of Florida and the largest project in the history of the Florida Department of Transportation at time of construction. The project included widening of the existing highway to accommodate three new 10.5-mile-long reversible toll lanes in the median of a six-lane interstate highway and improved traffic in the Fort Lauderdale area. The urban corridor has daily traffic volumes of 180,000 vehicles.</p> <p>As a P3 contract, this project included financing, design, construction, and all O&amp;M under a 35-year concession period. Dragados worked as the Lead Contractor, with AECOM as its Lead Designer. As concessionaire, ACS led the development and financing of the project and currently oversees the comprehensive maintenance program that began concurrently with the construction phase, as well as all operations and incident response needs along the urban highway corridor.</p>

**Colorado I-70 East Project**

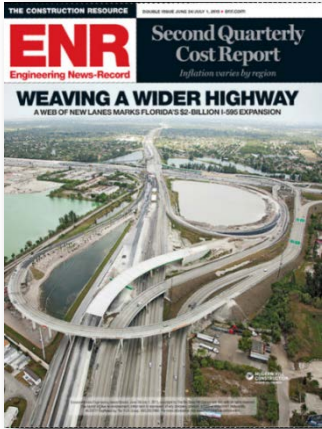
No.	Required Information	Response
		<p>The project was financed through two different tranches of bank senior debt totaling \$781 million and a \$678 million TIFIA loan. Additionally ACS committed 100% of the equity with a letter of credit posted at financial close (\$208 million) prior to selling 50% of its share to the Teachers Insurance and Annuity Association – College Retirement Equities Fund (TIAA–CREF).</p> <p>The project reached Substantial Completion in March 2014 and was delivered ontime and within budget. It has successfully been in operations, led by ACS, since July 2009.</p>
(5)	Contract Term:	<p>Total Term Length: 35 years Start Date: March 3, 2009 End Date: March 2044</p>
(6)	Current Status:	Construction is 100% complete. The project is currently in the O&M Phase.
(7)	<p>Key Dates and Milestones:</p> <p>Contract Execution Design Start Construction Start</p> <p>Substantial Completion Operations Commencement Final Completion End of O&amp;M</p>	<p>Anticipated/Contracted: March 3, 2009 Actual: March 3, 2009 Anticipated/Contracted: March 3, 2009 Actual: March 3, 2009 Anticipated/Contracted: 5 Months Actual: 5 Months; (note, advanced construction activities began 3.5 months after execution)  Anticipated/Contracted: 60 months Actual: 60 months Anticipated/Contracted: 5 months Actual: 5 months Anticipated/Contracted: 66 months Actual: 66 months Anticipated/Contracted: 35 years Actual: n/a <i>*Durations from "Contract Execution"</i></p>
(8)	<p>Relevance to the Project:</p>  <p><i>The I-595 Project received the P3 Project of the Year by American Road &amp; Transportation Builders Association and the North American Transport Deal of the Year by Project.</i></p>	<p>The I-595 project demonstrates FRMG's success in working together across each of the four core management levels (development/financing, design, construction, and O&amp;M). The project was the first transportation availability payment project that reached financial close in the US. Similar to the anticipated financing approach for the I-70 East Project, I-595 finance structure included a TIFIA loan. ACS, as the sole equity member from bid until construction, was able to close financing, in the midst of the turmoil of the financial markets at the end of 2008. Notably, ACSID switched from a PABs and TIFIA loan structure (similar to that envisioned by the Procuring Authorities), committed at financial close, to a 12-bank club and TIFIA loan shortly after having been awarded the project.</p>

**Colorado I-70 East Project**

No.	Required Information	Response
	 <p><i>The I-595 Project was built in an urban corridor that accommodated daily traffic volumes of 180,000 vehicles.</i></p> <p><b><i>“We delivered it on the same day we said we would, five years earlier. It really shows this model will work. Florida DOT is very proud of this Project.”</i></b> — Paul Lampley, FDOT Project Manager</p>	<p>The experience gained working with TIFIA on the first, availability payment project to close with TIFIA financing provided our team with an in-depth knowledge of TIFIA's approach to structuring and mitigating project risks, its processes and its procedures. FRMG's combined experience in closing TIFIA deals—will ensure our team can seamlessly implement a TIFIA financing approach into our structure, should it become available for Project.</p> <p>This project shares many similar challenges anticipated for the I-70 East Project: a widening of the existing highway and construction staging to accommodate three new toll lanes in a confined, urban corridor—all while managing extreme daily traffic volumes. The work on I-595 included reconstruction of major interchanges; demolition of structures; major excavations below a high water table; extensive coordination with utility and railroad companies; and ventilation systems to allow laborers to work in confined spaces.</p> <p>The project's technical challenges were successfully overcome with minimal impact to the traffic and surrounding neighborhoods by implementing proven strategies to mitigate noise, air quality, and other impacts associated with construction. Dragados and AECOM also engaged the local workforce, subcontractors, and stakeholders by exceeding the DBE and OJT goals.</p> <p><b>FRMG's Demonstrated Performance on the I-595 project includes:</b></p> <p><b>DESIGN AND CONSTRUCTION ACTIVITIES</b></p> <p><b><i>Roadway expansion, reconstruction and interchange reconstruction:</i></b> The project included expansion and reconstruction of 10.5 miles of the existing I-595 and the associated SR-84 to accommodate three reversible express lanes in the median of the I-595 corridor, which included reconstruction at each intersection along I-595. More than 60 bridges were built or reconstructed, including widening (partial or complete demolitions of existing structures at 7 crossroads and 2 major interchanges), new steel girder and concrete bridges with spans up to 158 feet long, and 7 braided ramps, including four-span steel girder bridges with post-tensioning caps and individual spans up to 212 feet long. Several miles of variable profile concrete retaining walls were necessary between parallel roadways to support the difference in elevations between parallel roads.</p>



Colorado I-70 East Project

No.	Required Information	Response
	 <p><i>The I-595 Project was recognized throughout the industry as an historic project due to the innovative financing and sheer magnitude at time of award.</i></p>	<p><b>Demolition of existing infrastructure in urban environments:</b> To accommodate the expansion of I-595 at each intersection, Dragados and AECOM widened the existing bridges, which included partial demolitions of the existing decks at each side of the existing structures while maintaining traffic through the intersection. Dragados and AECOM also planned and performed demolition of two other major bridges:</p> <ul style="list-style-type: none"> <li>• <u>Ramp N Bridge at University Drive Intersection:</u> Demolished and reconstructed two spans and intermediate piers and the end bent to accommodate the expansion of I-595 through the intersection.</li> <li>• <u>Bridge over the Florida Turnpike:</u> Completely demolished a two-span structure over the Florida Turnpike in a single weekend to minimize the impacts to traffic.</li> </ul> <p><b>Major excavation work, including groundwater considerations and/or drainage requirements:</b> Dragados' and AECOM's work included dredging the existing canal for reconstruction of I-595, as well as major excavation along westbound SR-84 to remove the existing deep layers of organic soils. This excavation work required installation of a drainage system, including trench box methods, and dewatering due to work being performed below the water table.</p> <p><b>Complex traffic management in urban areas:</b> The urban corridor had daily traffic volumes of 180,000 vehicles. Dragados and AECOM minimized impacts to the public by maintaining the same number of lanes available to the traveling public and the original speed limits (55 mph) through the various construction phases. They worked together to design and implement a detailed traffic control plan to maximize construction operations during off-peak hours and maintain access to existing properties along westbound SR-84 throughout the entire construction duration. Dragados ensured the safety of workers and vehicular traffic by installing 220,000 linear feet of temporary concrete barrier to separate the traffic from construction operations. Up-to-date construction bulletins were posted on the project website alerting the public to closures and new diversion routes. Dragados and AECOM coordinated with the local city officials, businesses, schools, and residential complexes to minimize impacts. The public information team reviewed the work schedule and communicated via message boards, emails, phone calls, and meetings to advise the stakeholders of planned activities and coordinate special requests.</p>

Colorado I-70 East Project

No.	Required Information	Response
	 <p><i>Dragados exceeded the 8.1% DBE goal for a final DBE participation of 13.6% and surpassed the OJT goal of 118 trainees with a final graduation of 164 trainee.</i></p>	<p>For example, an adjacent cemetery had services on various days from noon to 1:30 p.m., so Dragados worked to minimize construction operations during this time to accommodate these services. Biannual public workshops were held with the public and local officials to disseminate project information. For example, the public expressed interest in changing the original design/schedule in order to improve traffic flow on SR 84 a year earlier than required. With the cooperation of the owner and input from the public, Dragados and AECOM opened this particular roadway one year earlier to the relief of the traveling public.</p> <p><b>Construction staging in confined spaces:</b> The entire I-595 corridor is adjacent to an existing canal on its north side and to existing properties on its south side. Due to these constraints and to maintain traffic within the available right-of-way, Dragados was required to perform the majority of construction within very confined spaces. Trench box methods were used to install drainage pipes and relocate existing utilities. Temporary sheet piling was used to perform excavations for bridge foundations or to install drainage and conflict boxes along the project. Dragados also performed deep excavations necessary for a microtunnel machine in limited areas using sheetpiling.</p> <p><b>Structures that include ventilation and/or fire life safety considerations:</b> Dragados used a microtunnel machine to install five drainage pipes up to 72 inches in diameter and more than 500 feet long. This work required a ventilation system to allow personnel to work inside the excavation. In addition, the rehabilitation of an existing two-span steel box girder bridge required ventilation inside the girders to allow workers to perform the necessary reinforcing.</p> <p><b>Coordination with railroad and/or utility companies:</b> Dragados and AECOM coordinated, scheduled, and negotiated utility agreements with numerous overhead and underground utilities needed for the design and construction, including Florida Power and Light Distribution, FPL Transmission, FPL Fibernet, AT&amp;T Florida, AT&amp;T Long Distance, Comcast, Old Plantation Water Control District, and the cities of Davie and Sunrise. The work required coordination with numerous municipalities and third-party agencies, including NASA, throughout the urban corridor, and initially delayed the start of construction in mid-2010. The entire project team was able to recover this lost time through partnering and working together toward common goals.</p>

No.	Required Information	Response
	<p style="text-align: center;"><b><u>AWARD</u></b></p> <p style="text-align: center;"><i>Florida Transportation Business Association 2013 DBE Utilization Achievement Award for exceeding DBE utilization goals</i></p> <div style="background-color: #1a3d54; color: white; padding: 10px; text-align: center;"> <p><b>Dragados performed construction in environmentally sensitive areas that required compliance with several environmental permits, especially during dewatering and other activities to manage storm water during construction.</b></p> </div>	<p>For example, agency reviews were streamlined to 21 days from 28 and daily workshops were implemented to enhance communication among all parties. The work along I-595 just west of the ramp to the northbound I-95 required coordination with a railroad, including installation of two fiber optic cables under the railroad. The project also required coordination with another railroad company for the painting of an existing bridge over an active railroad.</p> <p><b><i>Workforce, subcontractor and stakeholder engagement activities:</i></b> Dragados and AECOM integrated local subcontractors into the Project team and achieved the Florida Transportation Business Assoc. 2013 DBE Utilization Achievement Award for exceeding DBE utilization goals. Dragados exceeded the 8.1% DBE goal for a final DBE participation of 13.6% and surpassed the OJT goal of 118 trainees with a final graduation of 164 trainees. AECOM agreed to a flow-down provision of the 8.1% DBE goal for design to better maximize opportunities for DBE firms to participate on the project. AECOM achieved 8.5% DBE participation for design.</p> <p><b><i>Environmental monitoring and mitigation activities:</i></b> For air quality monitoring and mitigation, the team implemented BMPs and mitigated fugitive dust to maintain air quality during construction. The Dragados and AECOM team also developed and implemented a detailed vibration monitoring plan for the entire duration of the project. This included special attention for installation of the precast concrete piles and prohibiting this work at nighttime to avoid disturbing the nearby neighborhoods. Dragados and AECOM were responsible for identifying, preparing, and complying with permits required from federal, state, and local jurisdictional regulatory agencies, including the U.S. Army Corps of Engineers (USACE), U.S. Coast Guard (USCG), Florida Dept. of Environmental Protection (FDEP), and several other regional and local water and conservation districts. Dragados and AECOM's Environmental Compliance Plan included the required permit compliance details, applicable NEPA commitments, and plan for managing contaminated materials during design, construction, and O&amp;M, including the transition periods between each phase. Dragados performed construction in environmentally-sensitive areas that required compliance with several environmental permits, especially during dewatering and other activities to manage storm water during construction.</p>

**Colorado I-70 East Project**

No.	Required Information	Response
	<p> <b>I-595 is a prime example of the depth of ACSID's experience with comparable projects, performance requirements, and responsibilities that are anticipated to be within the Developer's scope of work.</b> </p> <p> <b>ACS has successfully managed each interface between adjacent operators, which will be a key aspect of the upfront and ongoing responsibilities of the developer for the I 70 East Project.</b> </p>	<p>           The permits included groundwater influence and groundwater treatment system modeling, and required review by the EPA.             For work relating to hazardous materials, Dragados and AECOM identified reactive wastes in the I-595 corridor and performed the appropriate treatment and disposal following the applicable regulations.         </p> <p style="text-align: center;"> <b>OPERATIONS AND MAINTENANCE ACTIVITIES</b> </p> <p> <b>The concession company, I-595 Express</b>, led by ACS, is self-performing the O&amp;M of the overall O&amp;M requirements of the project, including the management of certain contracts for elements of the routine operations and maintenance activities. The project requires a significant operations program to handle the heavily trafficked corridor for east/west commuters.         </p> <p>           The completed project consists of general purpose lanes, collector and distributors on adjacent systems, frontage roads, major intersections, and managed lanes that utilize free flow toll technology. ACS will apply these lessons learned, as detailed further below, in working with the Procuring Authorities to manage the development and relationships related to the I-70 East Project through all stages of the concession, including O&amp;M.         </p> <p> <b>Interfaces with adjacent road operators</b> I-595 connects with I-75 in the west, the Florida Turnpike in the center, and a section of I-595 to the east that is operated and maintained by FDOT. I-595 Express works closely with the Florida Turnpike operators and FDOT subcontractors to manage interfaces at the various locations throughout the project. These interfaces have been consistent and reliable since the beginning of operations.         </p> <p>           I-595 is a prime example of the depth of ACS's experience with comparable projects, performance requirements, and responsibilities that are anticipated to be within the Developer's scope of work. The completed project consists of general purpose lanes, collector and distributors on adjacent systems, frontage roads, major intersections, and managed lanes that utilize free-flow toll technology. ACS will apply these lessons learned in working with FDOT to manage the development and relationships related to the project through all stages of the concession, including O&amp;M.         </p>

No.	Required Information	Response
		<p><b>Operations performance in a high traffic corridor:</b> ACS implemented and manages a significant operations program to handle the heavily trafficked corridor for east/west commuters, with 180,000 vehicles per day and an average of approximately 1,200 incidents per month. Operations includes management of 24/7 incident response, dedicated road patrols, and a Traffic Management Center to ensure the flow of traffic and reduce unavailability to the public.</p> <p>The incident response program maintains a safe, free-flowing facility to the public and offers assistance to the roadway's users in case of emergencies and incidents. Responsibilities include debris removal, police activities, break downs, accidents, and tire blowouts. For that reason, the developer has implemented proven 24/7 Road Ranger Program, which has been operating with a response time of only 3 minutes from notification (far exceeding the 15 minute contractual requirement). This program is also supplemented with a Severe Incident Response Vehicle (SIRV) and a Rapid Incident Scene Clearance Program, all aligned with the goal of keeping the highway safe and open to traffic.</p> <p><b>Toll Systems and ITS:</b> The project also demonstrates both ACS and Dragados experience in toll maintenance and operations. The I-595 corridor contains complete camera coverage and an Advanced Traffic Management System (ATMS) application to support traffic management and incident response. In addition, the reversible managed lanes are tolled and operate using Open-Road Tolling technology. I-595 Express was responsible for the development and installation and operation of the reversible express lane system. Tolling is performed by the FDOT; however, ACS coordinated, designed, and constructed all infrastructure required for the tolling system.</p>

No.	Required Information	Response
		<p><b>Significant Assets requiring Routine and Major Maintenance:</b> The major assets of the project are pavement and structures, much like that of I-595, which has an extensive inventory of large structures. On the I-595, these structures are inspected biennially. This includes significant structures in seven interchanges with other major roadways including the Florida Turnpike and more than 60 structures throughout the project. The team’s maintenance manual includes all routine and major maintenance activities necessary to ensure compliance with the request. In order to maintain these assets, a maintenance program geared toward the reliability of all assets, with a particular emphasis on pavement and structures, will modeled off the experience ACSID gained on I-595 and the numerous other highways under operations in North America. The experience ACS has gained from the development of this program will directly benefit the Project given the volume and type of structures anticipated along the Project corridor (both new construction and existing assets).</p>
<p><b>II. Description of Team Member Involvement</b></p>		
(9)	<p>Proposer Team Member(s) (or Affiliates(s)) Involved:</p>	<p><b>ACS Infrastructure Development, Inc.</b>  <b>Dragados USA, Inc.</b>  <b>AECOM Technical Service, Inc.</b></p>
(10)	<p>Role of Proposer Team Member(s) (or Affiliate(s)):</p>	<p><b>ACS Infrastructure Development, Inc.:</b> Equity Member (50%) and Lead Operator (50%). ACS has been involved from the procurement stage through award, the construction period and now in O&amp;M of the project.</p> <p><b>Dragados USA, Inc.:</b> Lead Contractor (100%)</p> <p><b>AECOM Technical Services, Inc.:</b> Lead Designer (100%)</p>
(11)	<p>Key Personnel Involved, Roles &amp; Responsibilities:</p>	<p><b>Michael Smith</b>, FRMG’s proposed <b>O&amp;M Manager</b>, plays a key role in the technical O&amp;M oversight of the I-595 project, managed by ACS. Michael’s firsthand knowledge of the day-to-day operational issues, including managing subcontracts and interacting with the owner regarding performance requirements, will bring highly-relevant and recent experience in the challenges and subsequent mitigations for O&amp;M along a high-traffic corridor under an availability payment structure.</p>
<p><b>III. Reference</b></p>		
(12)	<p>Name:</p>	<p>Gerry O’Reilly</p>
(13)	<p>Title &amp; Employer (Current):</p>	<p>Director of Transportation, District Four                      Florida Department of Transportation</p>


**Colorado I-70 East Project**

No.	Required Information	Response
(14)	Title & Employer (at time of project/transaction):	Director of Transportation Development, District Four Florida Department of Transportation
(15)	Phone & Email	(954) 777-4411 <a href="mailto:Gerry.Oreilly@dot.state.fl.us">Gerry.Oreilly@dot.state.fl.us</a>
(16)	Location & Time Zone:	Florida, USA, Eastern Time Zone (UTC-05:00)
(17)	Other:	N/A
<b>IV. Technical Information</b>		
(18)	Construction Value:	\$1.197 billion
(19)	Completion within/above Budget:	The project reached substantial completion on schedule and on budget. The final construction value was \$1.211 billion (or approximately 1% increase) due to FDOT-directed changes.
(20)	O&M Value:	\$40.225 million (average yearly, nominal)
(21)	Length of Road under Operation (centerline miles):	Approximately 10.5 miles
(22)	Key Technical Challenges and Solutions Implemented:	<p>In addition to the challenges relevant to the I-70 East Project highlighted in box (8), the I-595 Project included the following key technical challenges:</p> <p><b>ATCs and Innovation</b></p> <p><b>Challenge:</b> Nine interchanges and 63 bridges within the I-595 project presented numerous technical challenges in this constrained urban corridor, and were significant cost drivers. FDOT’s original design included an additional flyover at the most congested intersection of the project, which required demolishing the existing flyover due to geometric constraints. This was costly and presented potential traffic impacts during construction. Specifically, an existing 700-foot-long flyover structure was in conflict with the proposed construction of the expanded interstate below.</p> <p><b>Solution:</b> ACS, Dragados, and AECOM presented numerous Alternative Technical Concepts (ATCs) to FDOT that preserved existing structures on the I-595 corridor that were originally planned to be replaced. FDOT’s original design included an additional flyover at the most congested intersection of the project, which required demolishing the existing flyover due to geometric constraints. However, the team’s innovation refined the alignment by placing the new express lanes in the former eastbound lanes, rather than in the I-595 median.</p>



*ACS, Dragados, and AECOM developed innovative Alternative Technical Concepts (ATCs) for the flyover interchange structures that saved approximately \$40 million.*

Colorado I-70 East Project

No.	Required Information	Response
	 <p><i>Zero days were added to the construction schedule; 7 milestones were completed ahead of schedule in order to meet the project's aggressive schedule.</i></p>	<p>The flyover's foundations could then stay where they were, but the superstructure needed to be raised to meet vertical clearance requirements. The vertical conflict was eliminated by jacking and realigning most of the existing flyover structure and extending the length of one span to make room for the planned construction on I-595. The O&amp;M experts at ACS were closely involved during the process to ensure that the approach resulted in a whole lifecycle savings to FDOT by evaluating the routine and major maintenance impacts of this solution. Ultimately, this innovation saved ~ \$40 million.</p> <p><b>Benefit:</b> ACS, Dragados, and AECOM have demonstrated their ability to work collaboratively to identify and execute innovative technical solutions. FRMG will work to develop cost saving ATCs that reduce construction impacts and result in a whole lifecycle solution that brings best value to the Procuring Authorities, maximizing available funds for the Project.</p> <p><b>Challenge:</b> Construction work required coordination with numerous third-party agencies and municipalities. Initial coordination efforts resulted in a delay to construction start.</p> <p><b>Solution:</b> The entire project team was able to recover this lost time through partnering and working together toward common goals. For example, agency reviews were streamlined to 21 days, from 28 days, and daily workshops were implemented to enhance communication among all parties. Dragados and AECOM were co-located in a facility with ACS and FDOT representatives to streamline coordination. Regular meetings were held between the various team members and FDOT to discuss progress, solve pending issues, and coordinate the overall project. The project was ultimately completed on time and within budget.</p> <p><b>Benefit:</b> FMRG team members have proven ability to collaborate with project owners and key stakeholders to find a solution that overcomes unforeseen coordination issues and delays in a project. FRMG will draw on this experience to first develop a plan and schedule which reduces the risk of delay from coordination issues, and to quickly and collaboratively improve the approach should problems arise to protect the Project's schedule and budget.</p> <p><b>Efficient Approach to O&amp;M</b></p> <p><b>Challenge:</b> The project represented FDOT's first P3 to reach financial close and enter into operations.</p>



Colorado I-70 East Project

No.	Required Information	Response
	<p> <b>Dragados and AECOM, working together with ACS, were able to overcome initial challenges in coordinating with the owner and numerous third parties involved in the project.</b> </p>  <p> <i>As part of I-595 Express's incident response activities, we provide 24/7/365 road patrol service, Severe Incident Response Vehicle service, as well as Rapid Incident Scene Clearance support. ACS' average response time is 5 times faster than what is contractually required.</i> </p>	<p> <b>Solution:</b> ACS worked with FDOT maintenance managers to develop and implement an O&amp;M plan that adhered to FDOT requirements and also addressed the concerns of District Maintenance Engineers that had been responsible for maintaining the existing system for decades. ACS continues to work closely with FDOT to improve the O&amp;M approach and coordination between I-595 Express and the various stakeholders to ensure the project is performing as envisioned by FDOT.         </p> <p> <b>Benefit:</b> ACS has extensive experience working with owners in determining efficient approaches to the O&amp;M for projects that ensure the projects' goals are met while maintaining an efficient balance of risk and scope between the Developer and/or Lead Operator and the project owners. FRMG will work with the Procuring Authorities to similarly structure the long-term O&amp;M responsibilities for the Project to deliver the best value and achieve the Project's goals.         </p> <p> <b>Rapid Response Times to Incidents in an Urban Corridor with Managed Lanes</b> </p> <p> <b>Challenge:</b> I-595 Express is responsible for operating the Traffic Management Center for the I-595 Corridor 24/7 in this high-volume corridor. This includes the identification of traffic incidents, dispatch of services, police/fire interface, incident coordination, and reporting to the state-wide 511 system.         </p> <p>           As part of I-595 Express's incident response activities, we provide 24/7/365 road patrol service, Severe Incident Response Vehicle service, as well as Rapid Incident Scene Clearance support. All incident response activities have contractual time limits for response, which result in availability payment deductions if found non-compliant. I-595 Express is responsible for operating the Traffic Management Center for the I-595 Corridor 24/7.         </p> <p> <b>Solution:</b> By providing a 3-minute response time to traffic incidents, rather than the contractual 15 minutes, the team is providing a safer roadway for vehicular traffic.         </p> <p> <b>Benefit:</b> Based on the final scope for the Developer on the Project, FRMG will develop and successfully implement an operations program that ensures the corridor remains safe for the traveling public by providing rapid response times to incidents and leveraging extensive experience in coordinating with various response teams and stakeholders in both leading and supporting roles.         </p>

**Colorado I-70 East Project**

No.	Required Information	Response
<b>V. Financial Information</b>		
(23)	<p>Payment Mechanism:</p> <p><i>Experience Working Together</i>  <i>Dragados actively participated with ACS in the negotiations with the Owner of different payment milestones for the construction of the I-595 project. Since Dragados and ACS were sister companies working at two different levels of the Project team, they could align their interests and negotiate reasonable milestones that reduced the risks and allowed the project to be delivered on-time and within budget.</i></p>	<p><u>Availability Payment:</u> The concessionaire receives monthly availability payments during the operation period commencing upon substantial completion of the project through a 30-year period subject to deductions based on lane availability and any noncompliance points assessed in conjunction with the contract documents.</p> <p><u>Final Acceptance Payments:</u> FDOT will make \$685.5 million in payments (approximately 57% of the total construction costs) following Final Acceptance and over the first 5 years of operations (the “Final Acceptance Payments” or “FAPs”). These FAPs were subject to the accomplishment of seven milestones during the construction period, all of which were reached on time and in accordance with the concession agreement. The first FAP included a \$50 million bonus for reaching each interim milestone within the period stated in the concession agreement.</p> <p><u>Deduction Regime:</u> The concession agreement includes deductions to the availability payments for several non-compliance events due to performance and maintenance of the project facility, level of service, and highway availability levels.</p> <p><u>Inflation:</u> 70% of the availability payment is indexed at a fixed rate of 3% annually and the 30% remaining is indexed annually at CPI.</p>
(24)	<p>Source(s) of Revenues or Payments:</p>	<p>All payments are subject to availability of funds appropriated by the State of Florida. Additionally, a potential source of revenue for FDOT includes the tolls collected on the express lanes, which can be used to cover a portion of the availability payments to the concessionaire.</p>
(25)	<p>Proposer Team Member(s) Equity Investment:</p>	<p>ACS committed \$208 million in equity for the 100% interest in the project. During construction, ACS sold 50% of its share in the SPV to its partner TIAA-CREF. This equity was backed by a letter of credit posted at financial close until the equity injections were made during the last months of the construction period.</p>

No.	Required Information	Response
(26)	Financing Method(s) and Value(s):	<p>The financing package included a \$526-million short-term senior bank facility used to bridge the Final Acceptance Payments and a \$256-million hard mini-perm 10 years senior bank loan, both provided by 12 banks, including Spanish, French, and Australian banks. Additionally, subordinated debt was provided through a \$678-million TIFIA loan. The equity committed by ACS (as 100% equity member at financial close) amounted \$208 million and was backed by a letter of credit.</p> <p>The bank tranche loan totaling \$256 million, the \$678-million TIFIA loan, which received an investment grade rating (maintained through construction and into operations) and the equity investment will be repaid from availability payments received during the operation period.</p>
(27)	<p>Key Financial and Funding Challenges and Solutions Implemented:</p> <p><i>“We delivered it on the same day we said we would, five years earlier. It really shows this model will work. Florida DOT is very proud of this Project.”</i></p> <p>— Paul Lampley, FDOT Project Manager</p>	<p><b>Challenge:</b> Reaching financial close during critical challenges in the market.</p> <p><b>Solution:</b> ACS provided an investment grade, financeable solution at the height of the global financial crisis. ACS leveraged its strong relationships in the global banking industry to switch from the bond financing structure submitted at bid to a 12-bank club deal and TIFIA structure after the bond markets were no longer accessible, rendering the PABs solution secured for the proposal unattainable. ACS’ credibility in the P3 finance market, based on its strong relationships with the P3 lending community and aggressive pursuit of multiple finance alternatives throughout the bid process, made this significant, yet timely, change possible.</p> <p><b>Benefit:</b> FRMG will leverage its strong relationships in the P3 lending community and experience in overcoming adversity in the markets to ensure redundancy in financing solutions and provide execution certainty</p> <p><b>Challenge:</b> Closing FDOT’s first availability payment project and pioneering the use of TIFIA Loans in transportation availability payment projects</p> <p><b>Solution:</b> ACS successfully worked with FDOT in reaching Financial Close on their first transportation availability payment P3 project. This also represented the first AP project closed in the United States, and TIFIA’s first availability payment project as well. The 2009 final value for money analysis conducted after financial close concluded that the net present value of the P3 contract was 25% lower than the original 2007 estimate.</p>

**Colorado I-70 East Project**

No.	Required Information	Response
		<p><b>Benefit:</b> ACS' proven ability to pioneer new and innovative financing solutions in partnership with both experienced and inexperienced owners, even in the midst of an economic crisis, captures the same spirit and approach FRMG will pursue for the I-70 East Project.</p>

Colorado I-70 East Project


**Form F: Project Experience (Autoroute 30)**

**Proposer Name:** Front Range Mobility Group

**Core Proposer Team Member(s) Involved:**


- Equity Member: **ACS Infrastructure Development, Inc. (through Affiliate ACS Infrastructure Canada Inc.)**
- Lead Contractor
- Lead Engineer
- Lead Operator
- Joint venturer in Lead Contractor: **Dragados USA, Inc. (through Affiliate Dragados Canada Inc.)**
- Joint venturer in Lead Operator: **ACS Infrastructure Development, Inc. (through Affiliate ACS Infrastructure Canada Inc.)**
- Affiliate of Equity Member and joint venture in Lead Operator: **ACS Infrastructure Development, Inc.: ACS Infrastructure Canada Inc.**
- Affiliate of joint venture in Lead Operator: **Dragados USA, Inc.: Dragados Canada Inc.**

**Form F: Project/Transaction Description**

No.	Required Information	Response
<b>I. Background Information</b>		
(1)	Project Name:	Autoroute 30
(2)	Type of Facility:	Interstate toll road with bridge and connector roads
(3)	Owner/Procuring Authority:	Ministère des Transports du Québec
(4)	Brief Description of Project:	<div>  </div> <p><i>The Autoroute 30 project included the design, build, finance, operations, and maintenance of a major highway with total construction costs over \$1 billion and similar technical, stakeholder engagement, and environmental challenges as those anticipated on the I-70 East Project.</i></p> <p>The Autoroute 30 project is a design, build, finance, O&amp;M P3 project that provides the Montreal region with a four-lane tolled bypass highway via the South Shore. The overall \$1.6 billion highway project required the full design and construction of a 26.1-mile western section and operation and maintenance of an existing 19.9-mile eastern section. The project included the reconstruction of two major interchanges that required construction staging and complex traffic management to minimize impacts to densely populated areas. The lead contractor, managed by Dragados, excavated a total of 6.5 million cubic yards of earth, when a depressed main highway (similar to the envisioned included depressed section along I-70 East) and the Soulanges Canal Tunnel. Dragados encountered extremely difficult soils throughout the site that required groundwater considerations, drainage, and disposal of hazardous materials.</p> <p>ACS is a 50% member of the developer and led the highly-complex financing structure for the project that reached financial close in September 2008.</p>

No.	Required Information	Response																
	<p><i>“The Government of Canada is proud to have invested \$704.5 million for the completion of the Western section of Autoroute 30. This new corridor will reduce traffic congestion in and around Montréal, improve access to markets in Ontario, the Maritimes and the United States, and greatly contribute to the economic growth in Montérégie, in Montréal and across Québec.”</i></p> <p>—Honourable Denis Lebel, Minister of Transport, Infrastructure and Communities</p>	<p>ACS has been self-performing the O&amp;M of the existing 19.9-mile section since 2008 and the remainder of the project beginning in December 2012. As the managing member of the design-build joint venture, <b>Dragados</b> opened the western section on time in December 2012.</p> <p>In total, the concessionaire, Nouvelle Autoroute 30, S.E.N.C., is responsible for the long-term financing, operations, maintenance, and renewal work of 46 total miles. Responsibilities during the contract period include the monitoring of the network (both onsite and from the control room); emergency and incident response; routine maintenance of all the infrastructure and systems; major maintenance, including major pavement and bridge rehabilitation and the deployment of ITS and dynamic tolling equipment and systems; control and tolling management; and winter maintenance.</p> <p>The western (new) section of the project opened on schedule and on budget in December 2012 and the entire project has been in full operations since opening. The O&amp;M works have been satisfactory performed in accordance with the concession agreement requirements since this date.</p>																
(5)	Contract Term:	<p>Total Term Length: 34.5 years Start Date: June 2008 End Date: June 2043</p>																
(6)	Current Status:	Construction complete. Project is in full operations.																
(7)	<p>Key Dates and Milestones:</p> <p>Contract Execution</p> <p>Design Start</p> <p>Construction Start</p> <p>Operations Commencement:</p> <p>Service Commencement:</p> <p>Substantial Completion</p> <p>Final Completion</p> <p>End of O&amp;M</p>	<table border="0"> <tr> <td>Anticipated/Contracted: June 2008</td> <td>Actual: N/A</td> </tr> <tr> <td>Anticipated/Contracted: 3 months</td> <td>Actual: 3 months</td> </tr> <tr> <td>Anticipated/Contracted: 3 months</td> <td>Actual: 3 months</td> </tr> <tr> <td>Anticipated/Contracted: 54 months</td> <td>Actual: 54 months</td> </tr> <tr> <td>Anticipated/Contracted: 0 months</td> <td>Actual: 0 months</td> </tr> <tr> <td>Anticipated/Contracted: 54 months</td> <td>Actual: 54 months</td> </tr> <tr> <td>Anticipated/Contracted: 63 months</td> <td>Actual: 63 months</td> </tr> <tr> <td>Anticipated/Contracted: 34.5 years</td> <td>Actual: 34.5 years</td> </tr> </table>	Anticipated/Contracted: June 2008	Actual: N/A	Anticipated/Contracted: 3 months	Actual: 3 months	Anticipated/Contracted: 3 months	Actual: 3 months	Anticipated/Contracted: 54 months	Actual: 54 months	Anticipated/Contracted: 0 months	Actual: 0 months	Anticipated/Contracted: 54 months	Actual: 54 months	Anticipated/Contracted: 63 months	Actual: 63 months	Anticipated/Contracted: 34.5 years	Actual: 34.5 years
Anticipated/Contracted: June 2008	Actual: N/A																	
Anticipated/Contracted: 3 months	Actual: 3 months																	
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Anticipated/Contracted: 63 months	Actual: 63 months																	
Anticipated/Contracted: 34.5 years	Actual: 34.5 years																	
(8)	Relevance to the Project:	<p>Similar to the Project, Autoroute 30 included the DBFOM of a highway project with construction costs over \$1 billion. It shares similar technical, stakeholder engagement, and environmental challenges as the Project and relevant challenges as further described below.</p>																

Colorado I-70 East Project

No.	Required Information	Response
	 <p><i>The A-30 includes major roadway expansion/ reconstruction, including two major bridges over water, 69 structures, 10 major intersections, a tunnel, two pump stations, and 24 walls (including noise mitigations walls).</i></p> <p><b><i>“Today, we can say mission accomplished. For the next 30 years, A30 Express will be responsible for the management, maintenance and rehabilitation of more than 73 kilometres of Autoroute 30. We will meet this new challenge with success.”</i></b></p> <p>—Mr. Denis Léonard, General Manager of NA-30 and Director of the public-private partnership project to complete Autoroute 30</p>	<p style="text-align: center;"><b>DESIGN AND CONSTRUCTION ACTIVITIES</b></p> <p><b><i>Roadway Expansion and reconstruction, including interchange reconstruction:</i></b> The Autoroute 30 project included a newly constructed 26-mile expansion of the existing highway network around Montreal, Quebec. The A-30 integrates new and existing assets throughout the corridor, including roadway, 2 major bridges over water, 69 structures, 10 major intersections, a tunnel, 2 pump stations, and 24 walls (including noise mitigations walls). Dragados reconstructed two major interchanges—the A-20/A-540 northern interchange (which services the Trans-Canada Highway and Highway 40) and the Châteauguay interchange (which re-built an area that originally crossed a six-lane urban avenue at grade).</p> <p>The project also included the complete provision, installation, commissioning, and maintenance of the ITS system, a preventive closure system for the bridge over the Beauharnois Canal, an electronic toll collection system with a multiprotocol system capable of reading ISO 1800 6C GEN2 and ISO 1800 6B transponders without requiring a change of configuration, and a toll plaza at the St. Lawrence Bridge.</p> <p><b><i>Demolition of existing infrastructure in urban environments:</i></b> Two bridges were demolished over one of the most important railroad lines in Canada that services the Montreal Port, as well as another bridge over an existing highway. Dragados’ team performed each of these major demolition operations in a single night to minimize impact to traffic and the surrounding communities.</p> <p><b><i>Major excavation work, including groundwater considerations and/or drainage requirements:</i></b> The project required more than 6.5 million cubic yards of excavation. This included the challenging Châteauguay urban area (constructed as a depressed main highway and included two-lane parallel service roads in a zone of potential liquefaction) and a tunnel under the Soulanges channel.</p> <p>Dragados’ team encountered extremely difficult soil conditions throughout the site and installed more than 6.4 million linear feet of sand drains, geotextile protection, long-term overburden techniques, and nearly 1 million cubic yards of lightweight fill. The team excavated more than 600,000 cubic yards of extremely soft clays under the water table that required temporary pumping during construction.</p>

No.	Required Information	Response
	<p><i>“We are very proud to be inaugurating the last stretch of Autoroute 30 today. This axial highway is vitally important to the region’s residents, but also to the entire metropolitan area. This new road infrastructure gives all users an optional alternative route and it integrates existing highways in a road system that will perform better than ever.”</i></p> <p>—Mr. Sylvain Gaudreault, Québec Minister of Transport</p>	<p>The work also required proper analysis, treatment, and disposal of groundwater and soils contaminated with residual petroleum hydrocarbons that were discovered in multiple areas of the project.</p> <p>Dragados’ work included construction of the Soulanges Canal Tunnel—280-foot-long, four-lane, reinforced concrete tunnel under the channel. The ground in this area was marine blue clay of very low bearing capacity, so the main concern was to avoid differential settlements between the tunnel and the motorway. A combination of clay, geotextile bentonite sheets, and PVC layers provided the necessary waterproofing strength for the tunnel. Because the vertical alignment of the motorway was at a low point at this location, Dragados built a pumping station at the site of the tunnel with an 800-gallons-per-second capacity and an 80-foot deep, 36-foot diameter well that discharged into the Ruisseau Majoeu creek, one of the small creeks that cross the motorway in this area.</p> <p><b>Complex traffic management in urban areas:</b> Construction of the A-20/A-540 northern interchange was one of the primary areas requiring complex traffic management, as it services multiple major highways. The interchange is a high-velocity traffic area and has a large number of trucks that use the Trans-Canada Highway, representing 30% of the usual traffic. Dragados’ complex MOT plan involved 14 major temporary traffic configurations to allow construction of 9 structures, including 3 bridges built over railways (implicating high-traffic management under federal railway standards and regulations), a roadway, 3 temporary links, and 12 temporary cross-linked detours.</p> <p>During the planning stages, a traffic analysis was performed for the A-20/A-540 Interchange that established the amount of traffic volume variations for 24 hours per day, each day of the week. Following a thorough analysis of this study, the Dragados team determined specific timelines for lane closures to minimize impacts to traffic, which were subsequently included into specific agreements with the Ministry of Transportation.</p> <p>Dragados implemented a quick mobility concrete barrier system (QMB system) for the construction of approximately 1 mile of the roadway interchange, all the while maintaining the traffic capacity, thus offering the required number of lanes for road-users during high-peak traffic periods.</p>




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No.	Required Information	Response
	<p>A 2008 value for money analysis by KPMG showed the P3 solution by the developer represented a lower cost of \$751 million (or 33%) in present value and faster completion and commissioning by 2 years compared to traditional delivery, resulting in greater economic spin-offs and better service to users.</p>  <p><i>Dragados built a tunnel under the Soulanges Canal, which required major excavation in an area with high groundwater and ventilation/fire-life safety considerations.</i></p>	<p>Dragados implemented a total of 150 traffic movements, which were performed during a 3-month period, and variable message signs, construction of detour roads, temporary access roads and traffic lights, traffic intelligence management via traffic density detection device installations, and continuous traffic monitoring.</p> <p>The requirement for complex traffic management also required detailed safety procedures to ensure the safety of workers and the traveling public through the work zones. The project team used strategies such as buffer zones, attenuator trucks, radar detectors, variable messaging systems, speed reduction signage, and increased police surveillance, in partnership with the Sûreté du Québec (provincial Police).</p> <p>All configurations and traffic diversions were systematically and punctually communicated through press releases sent to all partners and stakeholders. Severely impacted stakeholders (such as residents living close to the project site, police and fire prevention services, and public transport agencies) were directly contacted to ensure they were well informed of future traffic configurations. The Dragados team also planned construction to accommodate special events such as the Formula 1 Event, national holidays, or religious festivities.</p> <p><b>Construction staging in confined spaces:</b> The best example of construction staging in confined spaces is Dragados' work on the residential area of Châteauguay, which included an interchange consisting of a below-surface highway and several connections to local roads, service roads, and national roads in close proximity to residential areas. A total of 12,000 meters of security barriers were installed over a 3-year construction period to maintain the safety and security of road-users and for workers.</p> <p><b>Structures that include ventilation and/or fire life safety considerations:</b> The work included a 230-foot-long tunnel under the Soulanges Canal that was required to meet ventilation requirements for tunnel structures.</p>

No.	Required Information	Response
		<p><b><i>Coordination with railroad and/or utility companies:</i></b>                      Dragados' management approach included a dedicated utilities team with its own construction manager who dealt with all utility companies and coordinated the relocation and protection of each one, as well as determined who was responsible for the work (i.e., the design-builder or the utility company). The primary utility owners included: Saint Lawrence Seaway (operator of one of the largest riverine communication systems in the world, which connects the Great Lakes with the Atlantic Ocean); CSX (private railway operator); CN (public railway operator); and Hydro-Québec (power provider and one of the largest hydro-electric producers in the world). In the A-540/A-20 interchange area, three bridges over the CN federal railway required traffic redirection onto parallel bridges. The personnel working on these structures were specially trained by the CN. Dragados' team collaborated closely with the CN to ensure this work was built per the technical and safety/security requirements and minimized impacts to the rail operations.</p> <p><b><i>Workforce, Subcontractor and stakeholder engagement Activities:</i></b> The A-30 project was the largest and most important roadway project in the province of Quebec at time of construction, passing through four cities, seven municipalities, and several third party semi-public and federal proprietary land and infrastructures. This required significant community engagement efforts by ACS/Dragados. The team used several communication strategies to maintain good relations, such as a project website (<a href="http://www.na30.ca">http://www.na30.ca</a>); distribution of maintenance of traffic notices, press releases, and direct coordination with individual stakeholders, residents, local businesses, municipalities, police and fire agencies, schools, and public transportation agencies.</p> <p>Dragados worked as part of the project's "Impact Management Committee," which was created to inform various parties including the Ministry of Transport, the developer, and all municipalities and emergency services on specific temporary traffic configurations and other coordination efforts with the overarching goal to minimize impacts. The project team also coordinated closely with the Ministry of Transportation and the various municipalities to hold public information sessions, and also had a formal process to receive and respond to complaints and suggestions from the general public.</p> <p><b><i>Environmental Monitoring and Mitigation Activities:</i></b>                      The project required complex environmental coordination due to the sensitive areas along the alignment. Dragados collaborated</p>

**Colorado I-70 East Project**

No.	Required Information	Response
	 <p><i>The A-30 project was the largest and most important roadway project in the province of Quebec at time of construction, passing through four cities, seven municipalities, and several third party semi-public and federal proprietary land and infrastructures.</i></p>	<p>with the Ministry of Fisheries and Oceans to protect the sensitive wildlife habitat in the low-rise islands in the Lake St-Louis area of the St-Lawrence River (Les Iles de la Paix), which are located close to the project ROW.</p> <p>The team was also required to properly analyze, treat, and dispose of contaminated groundwater and soils due to residual petroleum hydrocarbons and other hazardous materials, which were discovered in several areas throughout the project. Dust and water quality were monitored at least weekly to maintain compliance with the project requirements. The construction team also monitored noise levels, especially in the residential areas, and implemented mitigation measures as needed. This included installation of more than 400,000 square feet of noise walls.</p> <p style="text-align: center;"><b>OPERATIONS AND MAINTENANCE ACTIVITIES</b></p> <p><b>Roadway pavement and associated infrastructure under similar environmental conditions:</b> The developer is responsible for winter maintenance on the system. As A-30 is an urban corridor toll road with similar lane configuration and features, the summer and winter operational and routine maintenance activities are being undertaken by A-30's full-time staff, augmented when required by seasonal hires and subcontractors. The Winter Maintenance Plan for the project has been devised to meet the requirements of the winter O&amp;M specifications set out in the concession agreement, and the historical winter weather patterns of the last 10 years in the Montreal area. This detailed Winter Maintenance Plan has been put in place to ensure full compliance with the project requirements and an emphasis on rider safety. Various parameters have been identified and planned, including snow control, winter abrasives and chemical snow and ice control, as well as roadside snow and ice control. The concession utilizes historical weather patterns and statistical analysis to ensure compliance. As part of the winter plan, the maintenance team is providing 24-hour coverage of the system, including using snowplows, spreaders, and salt/chemical applications.</p> <p><b>Coordination with adjacent road operators:</b> The O&amp;M team works with multiple project stakeholders to manage the day-to-day operations of the A-30. This includes MTQ and its regional entities DOM and DEM, six different municipalities, four regional county municipalities, multiple utilities, environmental stakeholders, safety organizations, licensing organizations, and enforcement organizations for tolling.</p>


**Colorado I-70 East Project**

No.	Required Information	Response
	 <p><i>Dragados' team coordinated closely with the Ministry of Fisheries and Oceans to protect the wildlife habitats for the construction over and adjacent to the wetlands and other sensitive environmental areas.</i></p>  <p><i>The developer's full-time staff, augmented when required by seasonal hires and subcontractors, is providing 24-hour coverage of the system, including using snowplows, spreaders, and salt/chemical applications.</i></p>	<p><b><i>Operations, Maintenance and Renewal Work on Significant Structures:</i></b> ACS' concessionaire team is responsible for the long-term routine and major maintenance of several significant structural features along the project corridor. The O&amp;M team was actively involved in the early stages of the project and undertook a lifecycle-based approach when evaluating and providing input into the design options for both the project's roadway and structures. The goal was to strike a balance between the initial construction costs and the long-term maintenance and rehabilitation costs. Assets under management include:</p> <ul style="list-style-type: none"> <li>• The St. Lawrence River Bridge, 6,102-foot-long, 47-span, 148-foot-long span</li> <li>• The Beauharnois Channel, a 8,366-foot-long bridge over the Beauharnois Channel, built as two separate three-lane structures, featured different designs for its west and east sections. The 25-span, 148-foot-span west section and 17-span, 266-foot-span east section was designed with structural steel box girders that were launched from the west abutment.</li> <li>• A 236-foot-long, four-lane tunnel under the Soulanges Canal, including all fire safety and ventilation systems, similar to that which will be required on the I-70 East Project.</li> <li>• 10 major interchanges, 2 viaducts over the Saint Louis River, and 1 viaduct over the Châteauguay River.</li> <li>• Eighteen overpasses and underpasses and over 12 highway connections to existing roads and freeways.</li> <li>• A depressed main highway in the Châteauguay urban area was constructed as and included two-lane parallel service roads.</li> <li>• Sound barriers, bridges, drainage, utility relocations, signing and pavement markings, signalization, lighting, and landscaping</li> </ul>
<b>II. Description of Team Member Involvement</b>		
(9)	<p>Proposer Team Member(s) (or Affiliate(s)) Involved:</p>	<p><b>ACS Infrastructure Canada Inc. (ACSIC)</b>, an Affiliate of ACS Infrastructure Development, Inc. (ACSID), Equity Member and member of the Lead Operator of FRMG. Both ACSIC and ACSID are wholly owned North American subsidiaries of ACS SyC, a Core Proposer Team Member and Financially Responsible Party to ACSID. ACSIC is the lead Equity Member of the consortium with a 50% participation. ACSID and ACSIC share key resources and personnel in pursuing and managing concessions in North America. ACSID will benefit from its sister company ACSIC's experience on the SFPR project and will be closely involved in developing and managing the I-70 East Project.</p>


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No.	Required Information	Response
		<b>Dragados Canada Inc.</b> (DCA), an Affiliate of Dragados USA, Inc. (DUSA). Both DCA and DUSA are wholly owned North American subsidiaries of Dragados, S.A., a Core Proposer Team member and Financially Responsible Party to Lead Contractor member DUSA. DCA acted as the managing partner of the Lead Contractor joint venture with 40% participation. DUSA will benefit significantly from its sister company DCA's experience on the A-30 project given the very close coordination between the two entities with respect to P3 projects in North America.
(10)	Role of Proposer Team Member(s) (or Affiliate(s)):	<b>ACS Infrastructure Canada Inc.</b> (Affiliate of ACS Infrastructure Development, Inc.): Equity Member (75% at financial close, later reduced to 50%). ACSIC has been involved as a key sponsor from the procurement stage through award, closing, the construction period and now operations and management of the developer.  <b>Dragados Canada Inc.</b> (Affiliate of Dragados USA, Inc.): managing partner of the Lead Contractor (40%).
(11)	Key Personnel Involved, Roles & Responsibilities:	N/A
<b>III. Reference</b>		
(12)	Name:	Sandra Sultana
(13)	Title & Employer (Current):	Directrice, Direction de la gouvernance des projets stratégiques et des partenariats publicprivé, Québec Ministry of Transport
(14)	Title & Employer (at time of project/transaction):	Directrice, Direction de la gouvernance des projets stratégiques et des partenariats publicprivé, Québec Ministry of Transport
(15)	Phone & Email	(514) 873-4377 (ext. 30100) Sandra.Sultana@Mtg.gouv.qc.ca
(16)	Location & Time Zone:	Montreal, Quebec, Eastern Time Zone
(17)	Other:	N/A
<b>IV. Technical Information</b>		
(18)	Construction Value:	\$1.262 billion
(19)	Completion within/above Budget:	Final Amount: \$1.270 billion – Less than 1% (difference due to owner-directed changes)
(20)	O&M Value:	\$27,526 million
(21)	Length of Road under Operation (centerline miles):	46 miles

**Colorado I-70 East Project**

No.	Required Information	Response
(22)	<p>Key Technical Challenges and Solutions Implemented:</p>  <p><i>Construction of the Beauharnois Canal Bridge was performed over a navigable waterway and under stringent schedule restrictions so as not to impact shipping operations.</i></p>	<p><b><i>Environmental and Seasonal Construction Restrictions</i></b></p> <p><b>Challenge:</b> The Beauharnois Canal Bridge was the most complex and critical structure of the project; the bridge was subject to a very tight schedule and had to be designed so that it could be built in very challenging winter weather. The St. Lawrence Seaway Corporation imposed severe construction restrictions over their land, so Dragados’ team was not allowed to perform work over the shipping channel except during the 3 months of winter closure, and no work could be done with cranes or other lifting equipment over this main span.</p> <p><b>Solution:</b> Dragados proposed an innovative technical solution for the deck construction, which consisted of launching the deck from the east abutment over the canal and over the shipping channel, allowing the deck to be erected over the 150-meter-long main span over the shipping channel in a single operation in only 2 days. Since the launching method did not necessitate the use of cranes over the Seaway, the St. Lawrence Seaway Corporation allowed us to complete this work outside of the winter period.</p> <p><b>Benefit:</b> The I-70 East Project includes major excavation and structural work that will need to take into account the winter construction periods and subsequent restrictions. FRMG has experience locally and across North America in scheduling and implementing technical solutions that effectively mitigate schedule risks due to winter weather.</p> <p><b><i>Identifying, Handling, and Disposing of Contaminated Materials During Construction</i></b></p> <p><b>Challenge:</b> Dragados’ team encountered contaminated materials in several areas of the project during construction. This included polycyclic aromatic hydrocarbons at the site of an old mechanics facility; DDT and arsenic-based insecticides in the top layer of an old apple orchard; groundwater and soil contaminated with residual petroleum hydrocarbons at the Bellevue overpass and the A-20/A-540 northern interchange; barium and mercury contamination at one of the foundation locations of the Canal de Beauharnois bridge; and industrial and domestic waste in an old landfill that filled a portion of the old Beauharnois channel.</p>

**Colorado I-70 East Project**

No.	Required Information	Response
	<p style="text-align: center;"><b>AWARDS</b></p> <p><i>The 2008 “Project Finance Gold Award” from Canadian Council for Public Private Partnership</i></p> <p><i>The 2008 “Deal of the Year Award” from Project Finance International Magazine North American</i></p> <p><i>The 2008 “North American P3 Deal of the Year Award” from Euromoney Project Finance Magazine</i></p>  <p><i>Dragados maintained the safety of its employees and the public in carefully identifying, handling, and disposing of different types of contaminated soils at several locations along the Project.</i></p>	<p><b>Solution:</b> Dragados trained its construction staff in the identification, handling, and disposal of potential contaminated materials prior to starting construction activities. Dragados worked with specialized subconsultants to perform chemical analyses to determine the level of contamination at each site. The team then used this information to prepare location-specific procedures to safely handle and dispose of the contaminated materials. This included adjusting the project design to avoid contaminated areas where possible, use of specialized contractors to perform the work, disposing of contaminated soils at high security or specialized landfills, incinerating soils prior to excavation, and other approved measures.</p> <p><b>Benefit:</b> The I-70 corridor has several areas with known hazardous materials, such as the Asarco Superfund site, and other areas with a high potential for encountering contaminated soils. Dragados’ experience on the A-30 project will benefit the FRMG team in maintaining the safety of its employees and the public when performing similar work anticipated on the I-70 East Project.</p> <p><i>Winter Maintenance in Conditions Similar to the I-70 East Project</i></p> <p><b>Challenge:</b> Complex Winter Maintenance Requirements in a Large Corridor</p> <p><b>Solution:</b> To perform winter maintenance in this type of environment, careful weather monitoring is crucial for the safety of the users and the flow of traffic. As part of the ITS system that was installed on the new system, in addition to CCTV cameras, traffic counting devices, and dynamic message signs, ACS placed an electronic weather station on the project that monitors the weather conditions on the roadway. The weather station supplies live temperature and precipitation data to the O&amp;M staff so that they can adequately prepare for severe winter events. Relying on the local weather forecast and utilizing the ACS team’s own weather monitoring system will ensure that winter maintenance is delivered efficiently and effectively.</p> <p><b>Benefit:</b> The A-30 project demonstrates FRMG’s ability to successfully operate under similar climate conditions to the Project (and Denver area). Depending upon the ultimate scope for the Lead Operator, FRMG can leverage this crucial experience to effectively develop and budget for a comprehensive and highly-responsive winter maintenance program.</p> <p><b>Challenge:</b> Efficient, long-term management of complex assets</p>

Colorado I-70 East Project

No.	Required Information	Response
		<p><b>Solution:</b> ACS has employed innovative techniques to effectively and efficiently manage the numerous complex assets along the project. A Structure Management System (SMS) was implemented to carefully monitor structural elements and schedule their maintenance and rehabilitation in order to minimize projects costs and meet project performance requirements. The SMS stores specific condition information about the various elements of the structure. This information is continually updated with the results of periodic evaluations. Various levels of maintenance are then indicated such as: suitable for preventive maintenance, requires corrective maintenance, or in need of extensive repair. This allows us to determine the most advantageous timing for carrying out needed repairs within the context of programmed budgets and asset feature management.</p> <p><b>Benefit:</b> FRMG may utilize a similar approach for the Project that will allow us to efficiently manage the structures along the Project corridor, including existing and new construction.</p>
<b>V. Financial Information</b>		
(23)	Payment Mechanism:	Hybrid availability payment with toll revenue component
(24)	Source(s) of Revenues or Payments:	The Debt Service and Equity are repaid by Capital Payments made by MTQ (46% of total revenues) and toll revenue payments (35% of total revenues) and the O&M costs are covered by O&M payments (19% of total revenues) from MTQ.
(25)	Proposer Team Member(s) Equity Investment:	ACS' investment was \$90,089 (50% shareholder of project company) backed by a letter of credit, posted at financial close and available until the equity was injected towards the end of the construction period
(26)	Financing Method(s) and Value(s):	With a club deal of 13 Canadian and international lenders, the financial structure included two different tranches of debt: \$232 million revolving construction bridge loan, repaid via milestone payments received from Ministere des Transports du Quebec during construction; and \$642 million long-term amortizing senior debt with a 30-year maturity. The deferred equity contribution of \$180 million is backed by a letter of credit, posted at financial close and available until the equity was injected toward the end of the construction period. The project also incorporates a liquidity facility to cover the ramp-up traffic risk.
(27)	Key Financial and Funding Challenges and Solutions Implemented:	<b>Challenge:</b> The project required more than \$850 million in debt capital at a time when capital market conditions were suffering severe volatility caused by the financial crisis.



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No.	Required Information	Response
		<p><b>Solution:</b> ACS ran a competitive process with lenders to determine the different funding solutions available, not only to obtain the most competitive pricing, but also to have flexibility to change to an alternate financial solution should market conditions change. ACS ran in parallel a bond and a bank solution and negotiated both solutions with lenders. On the back of its deep relationships with AFP lenders, ACS was able to reach financial close with a club of 13 banks in September 2008, only 10 days after the collapse of Lehman Brothers.</p> <p><b>Benefit:</b> ACS has proven experience in sourcing financing and reaching financial close despite significant challenges in the financial markets. FRMG's Equity Members have the relationships and know-how to mitigate market risk by sourcing multiple financing structures in parallel and leveraging its strong relationships in the P3 lending community.</p>

## Form F: Project Experience (Highway A8 Ulm/Augsburg)

**Proposer Name:** Front Range Mobility Group

**Core Proposer Team Member(s) Involved:**

- Equity Member
- Lead Contractor
- Lead Engineer
- Lead Operator
- Joint venturer in Lead Operator:  
**HOCHTIEF PPP Solutions North America (through Affiliate HOCHTIEF Solutions GmbH)**
- Affiliate(s) of Equity Member and Lead Operator Member: **HOCHTIEF PPP Solutions North America Inc. (through Affiliate HOCHTIEF PPP Solutions GmbH)**


### Form F: Project/Transaction Description

No.	Required Information	Response
<b>I. Background Information</b>		
(1)	Project Name:	Highway A8 Ulm/Augsburg
(2)	Type of Facility:	Interstate highway expansion with 79 over- and underpasses, three new intersections and approximately 5 miles of noise mitigation structures
(3)	Owner/Procuring Authority:	Federal Ministry of Transport, Building and Urban Affairs, Germany, represented by Autobahndirektion Suedbayern
(4)	Brief Description of Project:	<p>The Highway A8 Ulm/Augsburg project is the first project in the second series of a highway upgrade effort in Germany, called "A-models". The project includes the planning, build, finance, operation and maintenance of a 25-mile-stretch of highway between major cities of Ulm and Augsburgs, and O&amp;M of approximately 10 miles of existing highway.</p> <p>HOCHTIEF PPP Solutions GmbH (Affiliate and direct parent of HOCHTIEF PPP Solutions North America Inc.) has a 50% share in Pansuevia ("the Developer"), who manages the P3 project to upgrade and expand 25 miles of the 60-year-old highway to a state-of-the-art facility, all while maintaining full operations along the corridor. The highway has an AADT of 60,000 with up to 90,000 vehicles per day during peak times.</p> <p>In addition, HOCHTIEF PPP Solutions GmbH is a 50% shareholder in the Operations Company Pansuevia Services ("Lead Operator") providing the operations and maintenance, including pavement maintenance under comparable climate conditions with harsh winters, snow maintenance and on-going day-to-day operations management.</p>



*The A8 Project between the major cities of Ulm and Augsburg is the first of the latest series of availability based P3 Projects (so called A-models) to expand the existing highly frequented German highway network.*

**Colorado I-70 East Project**

		<p>This project exemplifies HOCHTIEF's capability to provide such services in a complex construction and operations environment similar to the I-70 East Project.</p> <p>The Lead Operator is performing the O&amp;M including road patrolling, traffic management, emergency and incident response, inspections, landscaping, cleaning, road, drainage and signage maintenance, repair works, and winter service. These services were also being provided during the construction phase.</p>
(5)	Contract Term:	<p>Total Term Length : 30 years          Start Date : June 1, 2011          End Date : May 30, 2041</p>
(6)	Current Status:	Under construction/ operation of existing road and already completed segments
(7)	<p>Key Dates and Milestones:</p> <p>Contract Execution          Design Start          Construction Start          O&amp;M Start          Substantial Completion          Final Completion          End of O&amp;M</p>	<p>Anticipated/Contracted : June 1, 2011    Actual : June 1, 2011          Anticipated/Contracted : 0 Months        Actual : 0 Months          Anticipated/Contracted : 0 Months        Actual : 0 Months          Anticipated/Contracted : 4 Months        Actual : 4 Months          Anticipated/Contracted : 52 Months       Actual : 52 Months          Anticipated/Contracted : 61 Months       Actual : 61 Months          Anticipated/Contracted : 30 Years        Actual : 30 Years</p>
(8)	<p>Relevance to the Project:</p>  <p><i>The project required massive earthwork along the 25-mile corridor.</i></p>	<p><b>i.A Design and Construction Activities</b></p> <p><b>Roadway Expansion and Reconstruction</b></p> <p>The project included the reconstruction and expansion of 25 miles of a 60-year-old, four-lane highway to a six-lane configuration. All works were undertaken in high traffic conditions, with up to 90,000 vehicles per day along the corridor. To enhance noise protection along the road, the project includes construction of 5 miles of noise barrier structures. HOCHTIEF is the managing partner of the Design-Build Joint Venture. Major construction features include 5.5-million cubic yards of earthworks, three new interchanges and 76 new bridges, including two landscaped "wild crossings."</p> <p><b>Demolition of Existing Infrastructure</b></p> <p>Work comprises the demolition and reconstruction of 76 bridges and crossing structures and the complete remodeling of the existing road structure.</p>

## Colorado I-70 East Project



*Seventy-six bridge and crossing structures are part of the A8 project.*



*The project's location requires a Winter Maintenance Program with substantial resource and equipment back-up plans, similar to the I-70 East Project.*

### Major Excavation Work

The project includes massive earthwork along the whole alignment for a total of 5.5 million cubic yards.

### Complex Traffic Management

Given the high traffic volume, including a large percentage of trucks, traffic during construction must be managed in a way that ensures full operation of the highway. The Lead Operator commenced operations of the full corridor in October 2011 and worked closely with the responsible public transportation departments to ensure seamless integration with adjacent operators and facilities.

### Construction Staging

The contractor completes the construction in three main phases to compress the schedule and allow for most efficient operation of the whole highway alignment. Ensuring ongoing operation of the existing highway and minimizing impact for the adjacent communities were key factors in the ultimate staging schedule.

### i.B. Operations and Maintenance Activities

On October 1, 2011, Pansuevia Services commenced full operations of the project. The Lead Operator is responsible for all operational contract obligations including road patrolling, traffic management, emergency and incident response, inspections, landscaping, cleaning, reactive and preventative repair maintenance for all road assets, and winter maintenance.

***Roadway pavement and associated infrastructure under similar environmental conditions:*** Roadway pavement and associated infrastructure are of significant importance for the project due to severe winter conditions that result from the project's close proximity to mountain areas. Winter maintenance is fully self-performed with all-year-around staff, familiar with the regional conditions and thoroughly trained on all in-house winter equipment. All winter services start with an alarm program incorporating information collected by weather sensors, forecast models, and patroller information. With this information available, a cascading alarm protocol is executed – alarming staff (and potentially subcontractors, if needed), preparing equipment and increasing patrol frequencies and salting activities. At the highest level of the alarm protocol, all winter equipment is deployed. Due to the centralized location of the maintenance yard, all parts of the highway can be serviced within the 2- hour plowing cycle time.



*Local Staff of the Operations Company attends regular in-house training sessions.*




*Regular information of the local business community about business opportunities and the status of works, including potential re-routing and lane closures, are integral part of the success of the A8 project.*

A shift plan, which can include back-up sub-contractors in defined extreme situations, ensures that continuing storms can be serviced on a 24/7 basis. With a stored salt capacity of 2,000 tons, most winter scenarios can be managed with up to one refill. Long-term salt procurement contracts guarantee fast delivery of salt, if necessary. In total, the Operator employs about 20 full-time fully winter-trained staff and management. Winter service assessments with the public authority have proven very successful to continue improvements.


**Coordination with adjacent road operators:** The Lead Operator Developer has well established relationships with the operational community, locally and at the state level, and understands the importance of cooperation. Safety training, exchange of best practices, and support in respect to winter material are only some examples of this collaboration.

**Traffic management and emergency/incident response services:** The A8 is located between the two industrial centers, Stuttgart and Munich, and therefore highly frequented by regional traffic (with a high percentage of trucks) and local commuting traffic. Peak traffic can reach 90,000 vehicles per day. The construction activities implied further challenges for managing traffic flow. Fast response and rectification times are crucial under these conditions. A clearly determined protocol determines 24/7 actions in regard to traffic monitoring, incident/accident identification, the notification of regulatory bodies, and activation of the Lead Operator's traffic management crews, ambulances, towing and cleaning services. The Lead Operator deploys personnel within minutes; on-site, the crews work in tandem with emergency personnel to ensure a high level of safety for the public and on-site personnel. Employees are trained to reopen the highway to the safest conditions possible in the shortest period of time.


The Lead Operator maintains strong relationships with adjacent road operators, which are important as accidents and incidents can impact the traffic flow on other highway sections or on the secondary road network that is under federal operations responsibility.

	 <p><i>Being integrated in the local community is sustaining project support.</i></p>	<p><b>ii.A Workforce, Subcontractor and Stakeholder Engagement and Environmental Monitoring and Mitigation Activities</b></p> <p><b>Workforce development programs</b></p> <p>The Lead Operator employs mainly local staff who are regularly trained in line with the Lead Operators's emphasis on advancing qualification and safety of its employees. Being a subsidiary of a larger organization allows use of well-developed training models that were successfully implemented on other projects. The continuing opportunity to exchange experience with other HOCHTIEF projects ensures that best practices are shared across the organization and allow for continuous improvement. In addition, the developer participates in apprenticeship programs and provides opportunities for school graduates.</p> <p>Another key focus is the close cooperation with the local business community. Early in the project, the Project Company, Lead Operator and Lead Contractor started a detailed information program to ensure potential business opportunities are effectively communicated.</p> <p><b>ii.B Environmental Monitoring and Mitigation Activities</b></p> <p><b>Noise monitoring and mitigation in urban environments</b></p> <p>A core goal of the A8 project is the long-term mitigation of noise for adjacent communities that struggled for a long time with the increasing traffic volume. The Developer is responsible to reduce the road noise along the alignment, which includes the construction and maintenance of approximately miles of noise barriers, which will be maintained and rehabilitated by the Lead Operator during the whole project term.</p>
<p><b>II. Description of Team Member Involvement</b></p>		
(9)	<p>Proposer Team Member(s) (or Affiliate(s)) Involved:</p>	<p>HOCHTIEF PPP Solutions GmbH, and Affiliate of core team Equity Member and Lead Operator HOCHTIEF PPP Solutions North America, Inc.</p>
(10)	<p>Role of Proposer Team Member(s) (or Affiliate(s)):</p>	<p>HOCHTIEF PPP Solutions North America Inc.'s direct parent HOCHTIEF PPP Solutions GmbH is 50% member of the Developer Pansuevia and 50% member of the Lead Operator Pansuevia Services. HOCHTIEF PPP Solutions GmbH and NA: Heribert Bodarwe, a working group for the lead O&amp;M member of FRMG, HOCHTIEF PPP Solutions North America, Inc., was directly involved in the A8 project in a similar function. This will allow FRMG to draw directly upon this project experience for the I-70 East Project.</p>

**Colorado I-70 East Project**

		HOCHTIEF Solutions AG, affiliate of Hochtief PPP Solutions and Flatiron, is 50% managing partner of the Lead Contractor. The Project Structure is highly relevant to the I-70 East Project as it comprises a similar vertical integration structure and the O&M is provided by a Lead Operator managed by HOCHTIEF.
(11)	Key Personnel Involved, Roles & Responsibilities:	N/A
<b>III. Reference</b>		
(12)	Name:	Mr. Paul Lichtenwald
(13)	Title & Employer (current):	President Autobahndirektion Suedbayern
(14)	Title & Employer (at time of project/transaction):	President Autobahndirektion Suedbayern
(15)	Phone & Email:	+49 (0)89 54552-200 Paul.Lichtenwald@abdsb.bayern.de
(16)	Location & Time Zone:	Munich, Germany, UTC +1.00 h
(17)	Other:	N/A
<b>IV. Technical Information</b>		
(18)	Construction Value:	\$450 million
(19)	Completion within/above Budget:	Expected to be completed within budget.
(20)	O&M Value:	\$6.18 million
(21)	Length of Road under Operation (centerline miles):	35 centerline miles
(22)	Key Technical Challenges and Solutions Implemented:	<p><i>Handling of unforeseen climate conditions, including flooding, storms and severe winters</i></p> <p><b>Challenge:</b> In 2013, during construction, one of the most devastating flood events took place in Southern Germany.</p> <p><b>Solution:</b> This required from the Lead Operator significant measures to ensure traffic availability on the alignment can be at a maximum as safely manageable and short term incidence management and response needed to be intensified. By cooperating very closely with the Lead Contractor, led by HOCHTIEF, the Lead Operator was able to mitigate flooding impacts to the largest extend possible. In addition, the project area was impacted by an unusual long winter period, which required very intense management of resources and equipment to ensure availability of the road.</p>
	 <p><i>Fast mitigation of storm damage is one of the tasks of the Lead Operator.</i></p>	

**Colorado I-70 East Project**

	 <p><i>Moving traffic safely during construction requires close cooperation with the Design-Build Contractor, Governing Bodies and Information and Guidance for Highway Users.</i></p>	<p><b>Benefit to the Project:</b> As a testament of the positive cooperation between the Lead Contractor and Lead Operator, the first stretch of the expanded highway was completed in a time allowing the overall project to stay on track for on-time completion. A similar vertical integration structure is in place for FRMG on the I-70 East Project.</p> <p><i>Providing highest availability of the highway during complex construction staging</i></p> <p><b>Challenge:</b> The construction phase posed a high level of risk due to lane changes, lane mergers and visual distractions for up to 90,000 vehicles per day, including a high percentage of trucks.</p> <p><b>Solution:</b> Beginning during the early stages of development of the project, the Developer, Lead Operator and the Lead Contractor coordinated closely to implement a construction program which allows safe operation of the highway. The Lead Operator placed a high degree of emphasis on an incidence mitigation and response program which minimized potential traffic impacts and allows for fast response. By cooperating closely with the Lead Contractor and the public governing bodies, potential hazards were reduced and impacts to the ongoing traffic kept to an absolute minimum.</p> <p><b>Benefit to the Project:</b> A key element of the strategy on this project is the public information program HOCHTIEF implemented, which ensures timely information about all potential traffic changes. Given the high percentage of user are local residents who live and work in communities surrounding the project, this same approach helps to limit the impact of works and traffic changes during the construction period.</p>
<p><b>V. Financial Information</b></p>		
(23)	<p>Payment Mechanism:</p>	<p>The project includes a shadow toll payment mechanism. The Developer receives a uniform indexed toll rate assessed per-vehicle-km on the actual Heavy Good Vehicles traffic volumes on the project's stretch of the A8 Highway.</p>
(24)	<p>Source(s) of Revenues or Payments:</p>	<p>Construction works are financed via equity and debt. Repayment occurs from the Project's monthly shadow toll payments receivable from the German state. These payments are made by the Federal Government.</p>
(25)	<p>Proposer Team Member(s) Equity Investment:</p>	<p>HOCHTIEF's investment was \$40.47 million (50% of the required equity)</p>



**Colorado I-70 East Project**

(26)	Financing Method(s) and Value(s):	The project received long-term financing via a 20 year commercial bank loan from UniCredit, BBVA and L-Bank and a loan from the multilateral financing institution European Investment Bank.
(27)	Key Financial and Funding Challenges and Solutions Implemented:	The project is the first project of the second wave of so-called A-models. The contractual structure was adjusted from previous Federal German highway P3 projects. The project uses a Loan Guarantee Instrument for TEN Projects from the European Investment Bank which is a limited guarantee covering a certain part of the project's traffic risk.

Colorado I-70 East Project


**Form F: Project Experience (SFPR)**

**Proposer Name:** Front Range Mobility Group

**Core Proposer Team Member(s) Involved:**

- Equity Member: **ACS Infrastructure Development, Inc. (through Affiliate ACS Infrastructure Canada Inc.)**
- Lead Contractor
- Lead Engineer
- Lead Operator
- Joint venturer in Lead Contractor: **Dragados USA, Inc. (through Affiliate Dragados Canada Inc.)**
- Joint venturer in Lead Operator: **ACS Infrastructure Development, Inc. (through Affiliate ACS Infrastructure Canada Inc.)**
- Affiliate of Equity Member and joint venture in Lead Operator: **ACS Infrastructure Development, Inc.: ACS Infrastructure Canada Inc.**
- Affiliate of joint venture in Lead Operator: **Dragados USA, Inc.: Dragados Canada Inc.**


**Form F: Project/Transaction Description**

No.	Required Information	Response
<b>I. Background Information</b>		
(1)	Project Name:	South Fraser Perimeter Road Project
(2)	Type of Facility:	New limited access highway
(3)	Owner/Procuring Authority:	British Columbia Ministry of Transportation
(4)	Brief Description of Project:	 <p>The South Fraser Perimeter Road project includes the design, build, finance, operations, and maintenance of a new four-lane, 50 mph route along the south side of the Fraser River from Deltaport Way in southwest Delta to 176th Street (Highway 15) in Surrey, with connections to Highways 1, 15, 91, 99, and TransLink's Golden Ears Bridge. For Vancouver, the route will take a significant step toward improving Metro Vancouver's major road network. It will benefit commuters, the trucking industry, and tourists by connecting primary gateway facilities, as well as facilitating access to borders, the Tsawwassen ferry terminal, and the BC Interior.</p>

Colorado I-70 East Project

No.	Required Information	Response
	<p><b><i>“This valuable renewal project has transformed a construction wasteland into valuable industrial land, while providing the highest standards of environmental protection to the surrounding area, including Burns Bog and the Fraser River ecosystems. This is an environmental, agricultural and economic success story that will benefit communities and families for years to come.”</i></b>            —Terry Lake, Minister of Environment</p> <p><b><i>“The SFPR is more than a highway project; it includes one of the largest environmental and agricultural mitigation enhancement plans for a highway construction project of this size in BC’s history.”</i></b>            —Mary Polak, Minister of Transportation and Infrastructure</p>	<p>The general scope of operations, maintenance, and rehabilitation includes all services associated with the planning, management, and delivery of the operations, maintenance, and asset preservation activities to ensure compliance with all performance measures set out in the concession agreement. These include maintaining the highway, including road pavement, structures, pavement markings, drainage infrastructure, closed landfill sites, electrical systems, winter maintenance and traffic counting devices; rehabilitating the road pavement and structures; and managing the long-term structural integrity of the highway by considering good asset management practices during the design and construction phase of the project.</p> <p>The project is located within environmental conditions similar to that of the I-70 East Project. ACS, working in close collaboration with Dragados, developed an innovative approach to ensure a best value whole life solution to the pavement on the project given the challenging geological conditions, as further described below. Additionally, the concessionaire must interface with adjacent operators given that the project connects with the Trans-Canada Highway and Port Mann Bridge toll road in the east, Highway 91 and the Alex Fraser Bridge in the middle, and Highway 99 in the west. Each connection requires careful interface to properly manage incident response and, in particular, snow and ice activities.</p>
(5)	Contract Term:	Total Term Length: 24 Years Start Date: April 2010 End Date: 2034
(6)	Current Status:	Construction complete. In operations.

Colorado I-70 East Project

No.	Required Information	Response
(7)	<p>Key Dates and Milestones:</p> <p>Contract Execution</p> <p>Design Start</p> <p>Construction Start</p> <p>Service Commencement</p> <p>Substantial Completion</p> <p>Final Completion</p> <p>End of O&amp;M</p>	<p>Anticipated/Contracted: July 2010 Actual: N/A</p> <p>Anticipated/Contracted: 0 Months Actual: 0 Months</p> <p>Anticipated/Contracted: 0 Months Actual: 0 Months</p> <p>Anticipated/Contracted: Eastern Segment, 30 Months; Western Segment 48 Months Actual: Eastern Segment, 29 Months; Western Segment 42 Months</p> <p>Anticipated/Contracted: Eastern Segment 30 Months; Western Segment 48 Months Actual: Eastern Segment 29 Months; Western Segment 42 Months (6 months ahead of schedule)</p> <p>Anticipated/Contracted: 54 Months Actual: 47 Months</p> <p>Anticipated/Contracted: 2034 Actual: n/a</p>
(8)	<p>Relevance to the Project:</p>  <p><b>Awards</b></p> <p><i>Awards for Engineering Excellence/Award of Merit</i></p> <p><i>Association of Consulting Engineering Companies of British Columbia, 2012</i></p> <p><b>Awards of Excellence</b></p> <p><i>Association of Consulting Engineering Companies of British Columbia, 2013</i></p>	<p>SFPR included the design, build, finance, operation, and maintenance of a major highway project that shares similar challenges as the I-70 East Project and relevant challenges as further described below.</p> <p><b>Roadway Expansion and reconstruction, including interchange reconstruction:</b> The project included widening existing bridges and bridge/culverts along the corridor to accommodate the new roadway. Extensive MOT coordination was required to maintain traffic flow where interchange reconstruction/ expansion was required.</p> <p><b>Complex Traffic Management and Construction Staging:</b> Complex terrain and traffic patterns, particularly for reconstruction of interchanges along the project, required significant MOT coordination with the affected interchanges/ crossings despite being a highway project in new terrain. The work site constraints along the project corridor included existing roadway and railway corridors and construction through industrial and residential areas. These features had to be properly tied into the new construction and required coordination with various agencies and the local communities to properly stage construction in order to limit the impact of construction on these stakeholders.</p>

No.	Required Information	Response
	<p>ACS' team established collaborative relationships with the stakeholders so that all objectives were met.</p> <p>During the development of the project, ACS' team took a highly integrated approach to solve the project's most challenging problems through extensive interaction among the maintenance and rehabilitation team, the design team, and Dragados' construction team.</p>	<p><b>Coordination with railroad and/or utility companies:</b> The project required close coordination with BNSF Railroad, Southern Railroad, and CN Railroad operations during construction. This coordination is continuing through the operating period as the railroads are key stakeholders given their significant presence along the corridor. The project corridor crosses a number of existing utilities, including BC Hydro, Fortis Gas, Metro Vancouver, the Corporation of Delta, City of Surrey, TELUS, Delta Irrigation District, and private methane supply facilities. All utilities include major components of the regional infrastructure that interacted directly with the overall project scope. ACS' team established collaborative relationships with the stakeholders so that all objectives were met and that must be maintained through the operating term to accommodate utility adjustments, as required, by the utility companies.</p> <p><b>Roadway pavement and associated infrastructure under similar environmental conditions:</b> Pavement is a major asset on the SFPR project. ACS recognizes the importance of the SFPR to the overall transportation system of Vancouver and is committed to continuing to provide a safe, well maintained traffic corridor while minimizing interruptions to traffic flow. ACS maintains and rehabilitates the SFPR during the term of the operations period to maximize the value of SFPR at handback.</p> <p><b>Interfaces with adjacent road operators:</b> SFPR connects with the Trans-Canada Highway and Port Mann Bridge toll road in the east, Highway 91 and the Alex Fraser Bridge in the middle, and Highway 99 in the west. Each connection requires careful interface in order to properly manage incident response and snow and ice activities. ACS' team has frequent communications with other road operators in the region in order to manage these interfaces.</p> <p><b>Life Cycle Optimization and Multidisciplinary Integration:</b> During the development of the project, ACS' team took a highly integrated approach to solve the project's most challenging problems through extensive interaction among the maintenance and rehabilitation team, the design team, and Dragados' construction team. Each element of the highway was selected using lifecycle cost techniques, considering not only initial design and construction costs, but also operations, maintenance and rehabilitation costs, renewal costs, and other environmental and local constraints. In this way, ACS' team could guarantee the selection of the most efficient solution, considering all phases of our projects including the operations phase.</p>

Colorado I-70 East Project

No.	Required Information	Response
	<p style="text-align: center;">ACS' team, in coordination with Dragados, developed a very detailed Environmental Management Plan, which included environmental performance indicators, an environmental quality plan, environmental audit systems.</p>	<p><b>Winter Maintenance in a Critical Transportation Corridor:</b> ACS' team is responsible for winter maintenance on the system. The project is located in an urban corridor with similar lane configuration and features. Summer and winter operational and routine maintenance activities are undertaken by the ACS team's full-time staff, which is augmented when required by seasonal hires and subcontractors. The Winter Maintenance Plan has been devised to meet the requirements of the winter O&amp;M specifications set out in the concession agreement, and the historical winter weather patterns of the last 10 years in the Vancouver area, with an emphasis on rider safety. Various parameters were identified and planned, including snow control, winter abrasives, chemical snow and ice control, and roadside snow and ice control. As part of the winter plan, ACS' team has provided for 24-hour coverage of the system, as well as utilization of snowplows, spreaders, and salt/ chemical applications.</p> <p><b>Environmental Monitoring and Mitigation Activities:</b> The construction and operation of the project had potential significant impacts on the environment in the surrounding area. The impacts included air quality, agricultural land reserves, archaeological sites, fisheries in the numerous watercourses that are crossed by the project, vegetation, and wildlife. The preservation and restoration of the listed environmental items were key contractual requirements and hence critical factors during construction and operations. During the procurement stage, ACS' and Dragados' team worked to analyze the environmental requirements of the project, the mitigation measures, and the necessary permit processes to define a realistic and efficient work schedule that would guarantee the successful completion of the project on time. Subsequently, in the implementation stage, ACS' team, in coordination with Dragados, developed a very detailed Environmental Management Plan, which included environmental performance indicators, an environmental quality plan, environmental audit systems. The team deployed an environmental team with highly qualified professionals, including an environmental director, environmental manager, and environmental discipline leads that implemented the EMP daily.</p>

No.	Required Information	Response
<b>II. Description of Team Member Involvement</b>		
(9)	Proposer Team Member(s) (or Affiliate(s)) Involved:	<p><b>ACS Infrastructure Canada Inc. (ACSIC)</b>, an Affiliate of ACS Infrastructure Development, Inc. (ACSID), Equity Member of FRMG. Both ACSIC and ACSID are wholly owned North American subsidiaries of ACS SyC, a Core Proposer Team Member and Financially Responsible Party to ACSID. ACSIC is the lead Equity Member of the consortium with a 75% share at financial close, later reduced to 50%. ACSID and ACSIC share key resources and personnel in pursuing and managing concessions in North America. ACSID will benefit from its sister company ACSIC's experience on the SFPR project. ACSIC will be closely involved in developing and managing the I-70 East Project.</p> <p><b>Dragados Canada Inc. (DCA)</b>, an Affiliate of Dragados USA, Inc. (DUSA). Both DCA and DUSA are wholly owned North American subsidiaries of Dragados, S.A., a Core Proposer Team member and Financially Responsible Party to Lead Contractor member DUSA. DCA acted as the managing partner of the Lead Contractor joint venture with 41.8% participation. DUSA will benefit significantly from its sister company DCA's experience on the SFPR project given the very close coordination between the two entities with respect to P3 projects in North America.</p>
(10)	Role of Proposer Team Member(s) (or Affiliate(s)):	<p><b>ACS Infrastructure Canada Inc. (Affiliate of ACS Infrastructure Development, Inc.):</b> Equity Member (75% at financial close, later reduced to 50%). ACSIC has been involved as a key sponsor from the procurement stage through award, closing, and now the construction period.</p> <p><b>Dragados Canada Inc. (Affiliate of Dragados USA, Inc.):</b> Managing partner of the Lead Contractor (41.8%)</p>
(11)	Key Personnel Involved, Roles & Responsibilities:	N/A
<b>III. Reference</b>		
(12)	Name:	Geoff Freer
(13)	Title & Employer (current):	Executive Project Director, Massey Replacement Project, British Columbia Ministry of Transportation
(14)	Title & Employer (at time of project/transaction):	Project Director, South Fraser Perimeter Road, British Columbia Ministry of Transportation
(15)	Phone & Email:	(604) 775-0349 geoff.freer@gatewayprogram.bc.ca
(16)	Location & Time Zone:	British Columbia, Canada, Pacific Time.

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No.	Required Information	Response
(17)	Other:	N/A
<b>IV. Technical Information</b>		
(18)	Construction Value:	\$496 million
(19)	Completion within/above Budget:	The developer held a fixed price date certain construction contract with the Lead Contractor. Scope changes implemented by client totaled \$51.34 million.
(20)	O&M Value:	\$9.893 million
(21)	Length of Road under Operation (centerline miles):	25 miles
(22)	Key Technical Challenges and Solutions Implemented:	<p><b><i>Differential Settlement of Compressible Soils</i></b></p> <p><b>Challenge:</b> One of the biggest challenges overcome by ACS' team in regards to long-term O&amp;M included differential settlement of compressible soils. According to initial geotechnical studies, the corridor is comprised of clay, silt, peat, and other organic soils that are compressible and will undergo long-term consolidation settlement when subjected to loading from embankment fills and foundations. Preload treatment of inorganic compressible soils, such as clays and silts, would be effective in significantly reducing post-construction settlement. Some long-term, creep-like settlement would still occur due to secondary consolidation, although the magnitude of differential settlement could be controlled within specified limits with proper surcharge design. Natural organic soils such as peat and man-made landfill would undergo large long-term settlement, including large differential settlement, even after preload treatment.</p> <p><b>Solution:</b> ACS' team developed a comprehensive pavement rehabilitation plan. The rehabilitation works on pavements have been divided into those works that will be performed on the segments on soft soils and those that will be performed on segments where no settlements are expected (on relatively incompressible soils). On the sections with incompressible soils, usual pavement rehabilitation provisions have been defined, namely, replacing the wearing course every 10 years (twice in the operating period) and minor provisions for crack sealing and patching. On the segments with compressible soils, comprehensive schedules of monitoring and rehabilitations have been planned to reduce the initial pavement thickness during construction and with a plan to significantly increase thickness in year 5 of the operating period to correct for post-construction settlements, protecting the overall ride quality for users while reducing the overall lifecycle cost to the client.</p>



**Colorado I-70 East Project**

No.	Required Information	Response
		<p><b>Benefit:</b> FRMG team members ACS and Dragados continually evaluate each P3 project from a true development perspective where the overall costs and benefits between upfront capital costs and long term maintenance rehabilitation are carefully weighed to ensure the costs are optimized from a net present value perspective. While significant geological concerns, such as those presented on SFPR, are not anticipated to be as large a risk on the I-70 East Project, FRMG will employ the same analysis and collaborative approach to deliver the best value, whole-life solution for the Project.</p>
<b>V. Financial Information</b>		
(23)	Payment Mechanism:	<p>The concessionaire receives monthly availability payments during the term. The availability payments were indexed in such a manner as to match the inflation in the cost base, which created a natural hedge for inflation. Removing this risk from the project enhanced the transaction and provided increased value for the money.</p>
(24)	Source(s) of Revenues or Payments:	<p>During the operations period, the concessionaire will receive availability payments, subject to deductions for noncompliance and unavailability of the project.</p>
(25)	Proposer Team Member(s) Equity Investment:	<p>ACS' investment was \$18 million at financial close, or 75% of the overall long-term equity commitment. ACS later sold 25% of its equity share. ACS' share of the equity for the project was provided through a 4-year Equity Bridge Loan contributed at financial close.</p>
(26)	Financing Method(s) and Value(s):	<p>The total amount of funds raised by the concessionaire (\$160 million limited by the project agreement) included a \$135 million, 23-year long-term senior loan and \$25 million in equity. The federal government provided \$178 million and the Province \$226 million through milestone payments in order to fund the construction costs.</p>
(27)	Key Financial and Funding Challenges and Solutions Implemented:	<p><b>Challenge.</b> Sourcing financing for a complex project during financial market turbulence.</p> <p><b>Solution.</b> ACS was able to source the financing for the project during the credit crisis using a long-term bank financing facility on the following terms: \$135 million, 23-year, long-term debt issued with a 5-year grace period for debt principal repayments and capitalized interests during construction. In addition to the senior financing, ACS introduced an innovative equity bridge loan structure sourced from the bank market, on the basis of: \$18 million, 4-year bank debt at sponsor level to be contributed at financial close.</p>

Colorado I-70 East Project

No.	Required Information	Response
	<p>The SFPR project included unique innovations, including the Equity Bridge Facility, which was considered a significant achievement in the SFPR financing structure</p>	<p><b>Benefit:</b> ACS has proven experience in sourcing financing and reaching financial close despite significant challenges in the financial markets. FRMG's Equity Members have the relationships and know-how to mitigate market risk by sourcing multiple financing structures in parallel and leveraging its strong relationships in the P3 lending community.</p> <p>The SFPR project included unique innovations, including the Equity Bridge Facility, which was considered a significant achievement in the SFPR financing structure given that it was sourced after a period of several years in which banks would not finance such a facility. This resulted in a competitive form of equity investment and ultimately greater value for money for the owner.</p>



## FORM G: SAFETY QUESTIONNAIRE

**Proposer Name:** Front Range Mobility Group  
**Name of Team Member:** Flatiron Constructors, Inc.  
**Role on Proposer:**
 Lead Contractor  
 Lead Engineer  
 Lead Operator  
 Joint venturer in Lead Contractor: Dragados/Flatiron/URS (an unincorporated Joint Venture)

### **Form G: Safety Questionnaire**

#### **A. Required Statistics**

(1) Please provide the following information:

<b>Data Series</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
<b>Fatalities</b>				
Total Number of Fatalities (Workers):	0	0	0	0
Fatal Injury Rate:	0	0	0	0
Total Number of Fatalities (Members of the Public):	0	0	0	0
<b>Other Incidents</b>				
Total Number of Non-fatal Recordable Cases:	7	3	1	2
- Cases with Days Away from Work:	4	0	0	0
- Cases with Job Transfer or Restriction:	3	3	1	0
- Other Non-fatal Recordable Cases:	0	0	0	2
OSHA Incident Rate:	1.91	1.72	1.19	1.98
DART Rate:	.07	.03	.01	0
Total Number of Non-fatal Injuries to Members of the Public:	Not tracked	Not tracked	Not tracked	Not tracked
<b>Lost Work Days</b>				
Total Lost Work Days:	197	0	0	0
Lost Workday Index:	53.6	0	0	0

Data Series	2011	2012	2013	2014
<b>Cost of Accidents</b>				
Cost of Accident per Employee:	\$2,556.71	\$105.36	\$131.39	\$12.05
Cost of Accidents involving Members of the Public:	Not tracked	Not tracked	Not tracked	Not tracked
<b>Safety Metrics</b>				
EMR:	0.87	0.86	0.76	0.71

**Where:**

- (a) Fatal Injury Rate = (Number of fatal work injuries x 200,000,000) / total employee hours worked during the calendar year.
- (b) Non-fatal Recordable Cases refers to non-fatal occupation injuries and illnesses for Heavy and Civil Engineering Construction, as defined by the North American Industry Classification System (NAICS 237).
- (c) OSHA Incident Rate = (Number of cases of injury and illness x 200,000) / total employee hours worked during the calendar year.
- (d) DART Rate = (Number of recordable incidents of injury or illness that resulted in days away (lost), restricted or transferred during the calendar year) / 100 full time employees.
- (e) Lost Workday Index = (Number of lost workdays x 200,000) / total employee hours worked during the calendar year.
- (f) Cost of Accident per Employee = Total cost of accidents / average number of employees.
- (g) EMR refers to the National Council on Compensation Insurance (NCCI) Experience Modification Rating.

**B. Questions Regarding Safety Record and Approach**

- (1) How is your entity’s management included in the accident reduction process?

*Response:*

*Our Incident Report Group that consist of the Project Manager, Area Manager, Superintendents, and Construction Manager are included in the development of the Incident Management Plan. This plan includes accident prevention, this team ensures that the appropriate measures, such as signage, barriers and proper protection is in place prior to any construction activity. All employees are provided accident reports and report summaries during quarterly safety stand-down meetings to cover how to prevent these accidents in the future. Our Executive Safety Committee is provided accident reports and summaries monthly in order to ensure that the Incident Report Group is getting the materials needed to reduce accidents in a timely manner.*

- (2) How often do you hold site meetings for supervisors for a typical Reference Project? If you do not hold meetings, why not?

*Response:*

*We hold site meetings for supervisors on a weekly basis.*

- (3) How often do you conduct project safety inspections? Who conducts these inspections? If you do not, why not?

*Response:*

*Our Safety Manager, Project Manager, Superintendents, Construction Manager, and Area Managers are responsible for performing weekly safety inspections.*

- (4) Please describe your written safety program. If you do not have one, explain why.

*Response:*

*Our written safety program consist of training on the following topics which are also part of our orientation program for new hires.*

- *Construction Absolutes*
- *Substance Abuse Policy*
- *Reporting Industries*
- *Aerial Lifts/Elevated*
- *Work Platforms*
- *Confined Space*
- *Cranes and Suspended Loads*
- *Electrical Safety*
- *Fall and Fire Protection*
- *First Aid Kit*
- *Hand and Power Tools*
- *Hazard Communication*
- *Ladders*
- *Material Handling*
- *Personal Protective Equipment*
- *Safety Devices and Safety Meetings*
- *JHAs and DR's*
- *Stretch and Flex*
- *Trenching and Excavating*
- *Welding and Cutting*

- (5) Please describe your preferred methods for securing worksites in urban environments, including as such methods may promote the safety of members of the local community.


*Response:*

*We prefer to use temporary concrete barriers in urban environments in order to protect/separate the public, both vehicular and pedestrian/recreational, from construction activities. We place signs of reduced speeds at least 200 yards prior to the worksites, as well as utilize Portable message boards to inform members of the local community of upcoming lane closures or detours Flatiron also conducts training to construction personnel on prevention and safety awareness around vehicles traveling the corridor.*

- (6) Please describe your orientation or training program for new hires and for newly promoted individuals (including foremen), including any safety related elements. If you do not have such a program, explain why.

*Response:*

*Our training programs have various levels of employee orientation, training and on-going education; this will help prevent damage to tools, equipment and materials while also helping to prevent or reduce hazardous exposures to employees, subcontractors, and the general public that could result in personal or occupational injury. Our training programs begin on day one with the New Hire training. New hires go through three separate orientation segments outlined below.*

<b>New Hire Orientation</b>				
Training Procedure Structure Chart				
	<b>LEVEL 1</b>	<b>LEVEL 2</b>	<b>LEVEL 3</b>	<b>DOCUMENT DISTRIBUTION</b>
<b>Training intervals from Date of Hire</b>	At hiring	45 days	90 days	
<b>Conducted by</b>	Safety Department	Safety Department & Superintendent	One of the Project's Field Managers	
<b>Items needed to complete orientation</b>	1. Employee Booklet with Acknowledgement to be signed by employee 2. Orientation Checklist 3. Orientation Sticker	1. Orientation Checklist 2. Orientation Sticker	Blue Hard Hat with name tag	Copy of signed Acknowledgement from Employee Booklet to Corporate Safety Copy of Orientation Checklists to Corporate Safety
<b>Instruction methods</b>	1. PowerPoint or 2. Picture Book	3. PowerPoint or 4. Picture Book	Discussion	
<b>PowerPoint instruction tools</b>	Instructor Notes (.pdf)	Instructor Notes (.pdf)		
<b>Picture Book instruction tools</b>	Instructor Notes (.pdf)	Instructor Notes (.pdf)		
<b>Level 3 questions</b>			Instructions and questions for Level 3	Copy of the summarized responses to Corporate Safety
<b>Post-training</b>	Level 1 Quiz	Level 2 Quiz	Sign-off sheet	Copy of quizzes and sign-off sheet to Corporate Safety

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*Flatiron also employs a Green Hard Hat Program for the new hire workers that have little experience in construction; the Green Hard Hat will indicate that they are new to the site. We will pair a green hard hat with a white hard hat to ensure that the new hires will get the mentoring and on the job training that they need. Once the worker wearing the green hard hat has been working on the project for three months, a new color hard hat will be given to the worker until they are able to perform a given task without supervision. Competency checks will be conducted on all operators of equipment prior to the*

worker being allowed to operate without supervision. We also have a mandatory Leadership for Safety Excellence, a two-day course on the role of the supervisor and foreman in inspection, investigation and training.

Flatiron is also a Diamond Class sponsor of the Safety Trained Supervisor (STS) certification from the Council on Certification of Health, Environmental and Safety Technologists (CCHST). Flatiron is committed to safety training and has been recognized by the CCHST for being one of a handful of companies with the most STS Certified supervisors.

- (7) With respect to no. (6) above, for any program that relates to foremen, indicate whether it includes instruction on the following:

Topic	Yes	No
Safety Work Practices	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Safety Supervision	<input checked="" type="checkbox"/>	<input type="checkbox"/>
On-site Meetings	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Emergency Procedures	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Accident Investigation	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Fire Protection and Prevention	<input checked="" type="checkbox"/>	<input type="checkbox"/>
New Worker Orientation	<input checked="" type="checkbox"/>	<input type="checkbox"/>

- (8) How often does your entity hold safety meetings which extend to the laborer level, and how does this vary by type of project? If you do not hold such meetings, explain why not.

*Response:*

Flatiron conducts a weekly Monday morning safety meeting at the laborer level to discuss safety, project status, upcoming Job Hazard Analysis (JHA) and other information that supports safe operations. These weekly Monday morning safety meetings vary based on the type of construction activities coming up and how to mitigate risk. For example, if there is an extensive construction activity beginning in a heavily traveled section of the project a topic that will be heavily covered would be traffic management. We hold these meeting weekly for all projects depending on the type of project the topics of discussion will vary.

- (9) Please explain any program or written practices that expressly address the safety of the traveling public and the safety of personnel within the construction area. If the entity has no such program or practices, explain why not.

*Response:*

Flatiron conducts traffic control studies in order to improve work-site safety for the traveling public. We work with local law enforcement to establish speeding penalties and enforcing these penalties in order to maintain safety of traffic public. We conform to local agencies requirements for work zone traffic planning. Flatiron also develops extensive traffic management plans and trains all on-site project personnel on this plan.

- (10) Please describe any differences between the entity's standard or typical safety program or practices



as described in your responses to (1) through (9) above and (a) the entity’s safety program or practices on projects similar to this Project in size and scope and/or (b) the anticipated safety program or practices for this Project as may be preliminarily anticipated in the statement of technical approach included in the SOQ in accordance with Section 5 of the Volume 1 Requirements.

Response:

(a) Flatiron will always use our standard safety program as a base to a project specific safety program. Projects similar in size and scope such as our I-405 project will vary slightly from our above described safety procedures. For instance, our MOT plans and traffic management provided a safer working environment for our construction crews and a safer environment for the traveling public by minimizing the exposure/risk that results in better safety numbers. For example, Flatiron shifted traffic to the outside and rebuilt the inside lanes, followed by a traffic shift to the middle to reconstruct and widen the outside lanes. For projects similar in size and scope of the I-70 project we also will phase the construction in a way that keeps our working crews away and separated from the traveling public and discuss proper safety procedures when working close to the traveling public in the weekly Monday meetings.

(b) Flatiron’s above described (1-9) corporate safety program slightly varies from the approach we will use on the I-70, through the emphasis of flaggers at the entrance and exit points of the work zone. However, for projects similar to I-70 project we have implemented similar practices through a site specific safety plan.

For the I-70 project as described in Section 5 of the Volume 1 requirements we will base our safety plan and procedures on leading firms with zero tolerance corporate safety standards, policies, and procedures. We will include the anticipated safety practices for various operations on the I-70 East project reflected in the below. Along with these safety practices we anticipate using various methods of communication, such as variable message boards along the project to keep the traveling public informed, the more informed of construction activities the safer they will be.

Potential Risk	Mitigation Approach
<p><b>Worker and Traffic Interface, separation</b></p>	<ul style="list-style-type: none"> <li>• Separate work zones from traffic with the use of portable concrete barriers (with space to accommodate lateral deflection, debris shielding) and fencing</li> <li>• Workers and subcontractors will only cross live lanes of traffic in a vehicle and at designated areas (could use flaggers if crossings are required)</li> <li>• Work zone entrances and exits are clearly identified and barricaded to prevent accidental access by the traveling and general public</li> <li>• Workers are trained in the appropriate process to ingress and egress from these zones and in traffic courtesy protocols</li> </ul>
<p><b>Work zone safety</b></p>	<ul style="list-style-type: none"> <li>• All workers, subcontractors, vendors, and visitors shall be required to wear proper high visibility clothing and proper personal protective equipment (PPE)</li> <li>• Construction pick-up trucks, cars, and equipment are made highly visible to our workers and the traveling public by using light bars and flags</li> <li>• Design for safe speeds, lane changes, merging, and proper signage so the traveling public can safely and easily navigate work areas</li> <li>• Oversight by appropriate personnel to confirm that signage is clear, illuminated arrows are working, VMS messages are correct, flaggers are safely and effectively positioned</li> <li>• Work zones that impact live traffic lanes include a traffic attenuator truck or trailer</li> <li>• Use of attenuator trucks, when needed, to help both the travelling public as</li> </ul>

	<p>well as the work crews in the event of an incident</p>
<p><b>Material delivery and heavy equipment movement in and out of the work zone</b></p>	<ul style="list-style-type: none"> <li>• Reduce worker and equipment conflicts by establishing traffic patterns within work zones and using ground control procedures</li> <li>• Establish designated routes for material deliveries</li> <li>• Clearly identify and block access to environmentally sensitive areas</li> <li>• Use rock zones/track pads to minimize the transfer of dirt/debris onto travel way</li> <li>• Use signage and flaggers at work zone entrances and exits to warn the traveling public of slow moving vehicles hazards</li> </ul>
<p><b>Bridge demolition and Construction</b></p>	<ul style="list-style-type: none"> <li>• Use proper safe equipment with trained and qualified operators</li> <li>• Schedule activities appropriately to reduce impacts to the public</li> <li>• Work during low traffic periods (e.g. nights) and separate work zone from traffic</li> <li>• Conduct work in a planned, controlled manner to reduce dust, and eliminate worker exposure to the swing radius of a crane, heavy equipment movement, and/or debris</li> <li>• We will abide by the demolition-specific plans/engineering to ensure the viaduct is safely dismantled</li> <li>• Provide constant safety oversight during bridge demolition/construction activities</li> </ul>
<p><b>Night Work</b></p>	<ul style="list-style-type: none"> <li>• Develop a detailed JHA, work plan, and schedule prior to commencing any night work</li> <li>• Use temporary lighting for the work zone, travel way, and sidewalks</li> <li>• Use uniformed traffic control as necessary to increase motorist compliance/safety</li> <li>• Provide notification to the public</li> </ul>



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**FORM G: SAFETY QUESTIONNAIRE**

**Proposer Name:** Front Range Mobility Group  
**Name of Team Member:** Dragados USA, Inc.  
**Role on Proposer:**
 Lead Contractor  
 Lead Engineer  
 Lead Operator  
 Joint venturer in Lead Contractor: Dragados/Flatiron/URS (an unincorporated Joint Venture)

**Form G: Safety Questionnaire**

**A. Required Statistics**

(1) Please provide the following information:

<b>Data Series</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
<b><u>Fatalities</u></b>				
Total Number of Fatalities (Workers):	1	0	0	0
Fatal Injury Rate:	43.3	0	0	0
Total Number of Fatalities (Members of the Public):	0	0	0	0
<b><u>Other Incidents</u></b>				
Total Number of Non-fatal Recordable Cases:	114	30	7	14
- Cases with Days Away from Work:	63	27	5	3
- Cases with Job Transfer or Restriction:	0	0	0	0
- Other Non-fatal Recordable Cases:	0	0	0	0
OSHA Incident Rate:	3.10	4.94	2.28	2.2
DART Rate:	2.7	1.4	0.32	0.5
Total Number of Non-fatal Injuries to Members of the Public:	0	0	0	0
<b><u>Lost Work Days</u></b>				
Total Lost Work Days:	1777	1655	294	30
Lost Workday Index:	77.07	86.02	19.3	4.6

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<b>Cost of Accidents</b>				
Cost of Accident per Employee:	<b>\$417.01</b>	<b>\$905.20</b>	<b>\$134.99</b>	<b>\$515.19</b>
Cost of Accidents involving Members of the Public:	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Safety Metrics</b>				
EMR:	<b>.82</b>	<b>.87</b>	<b>.96</b>	<b>.95</b>

**Where:**

- (a) Fatal Injury Rate = (Number of fatal work injuries x 200,000,000) / total employee hours worked during the calendar year.
- (b) Non-fatal Recordable Cases refers to non-fatal occupation injuries and illnesses for Heavy and Civil Engineering Construction, as defined by the North American Industry Classification System (NAICS 237).
- (c) OSHA Incident Rate = (Number of cases of injury and illness x 200,000) / total employee hours worked during the calendar year.
- (d) DART Rate = (Number of recordable incidents of injury or illness that resulted in days away (lost), restricted or transferred during the calendar year) / 100 full time employees.
- (e) Lost Workday Index = (Number of lost workdays x 200,000) / total employee hours worked during the calendar year.
- (f) Cost of Accident per Employee = Total cost of accidents / average number of employees.
- (g) EMR refers to the National Council on Compensation Insurance (NCCI) Experience Modification Rating.

**B. Questions Regarding Safety Record and Approach**

- (1) How is your entity’s management included in the accident reduction process?

*Response:* **Dragados USA (DUSA) management is included in all aspects of the incident reduction process. For example, following any incident involving medical attention, public interruption or injury, property damage in excess of one-thousand dollars (\$1000), or media event, DUSA will coordinate and chair a Post-Incident Review Meeting within 48 hours of the incident. DUSA’s key project management staff including, the DUSA Project Manager, Superintendent, Project Safety Manager, and responsible Foremen, the lower-tier contractor’s principal/executive, project manager/safety manager/ Superintendent, responsible Foreman, and the injured party are required to attend. The Executive Vice President and Corporate Safety Director are also invited to attend to ensure DUSA leadership are involved in the accident reduction process. The minutes from the Post Incident Review Meeting shall be distributed to the project team, the Executive Vice President, and to other interested parties (i.e. insurance company, OWNER).**

- (2) How often do you hold site meetings for supervisors for a typical Reference Project? If you do not hold meetings, why not?

*Response:* **Weekly**

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- (3) How often do you conduct project safety inspections? Who conducts these inspections? If you do not, why not?

**Response:** **Daily/Weekly project safety inspections are conducted by Superintendent and Safety Manager**

- (4) Please describe your written safety program. If you do not have one, explain why.

**Response:** **Our Safety program has been developed by DUSA as part of a comprehensive Environmental, Health, and Safety Program dedicated to the prevention of injuries, illnesses, property damage, and environmental impact on projects conducted by DUSA. The written Manual for this program:**

- a. **Establishes safety, health and environmental guidelines, expectations, and responsibilities for construction projects.**
- b. **Establishes and communicates the list of goals and objectives to be achieved by construction projects.**
- c. **Outlines the expected components of the Safety Management System(s) to be utilized by construction projects.**
- d. **Is intended to be a reference guide to be utilized by DUSA management and subcontractors during all phases of construction projects.**
- e. **Outlines the responsibilities and duties of DUSA managers and subcontractors conducting operations on construction projects of DUSA.**

- (5) Please describe your preferred methods for securing worksites in urban environments, including as such methods may promote the safety of members of the local community.

**Response:** **Dragados' preferred methods for securing worksites in urban environments are tailored to the specific needs of each project. We typically use methods such as fences and other barricades to separate the work zones from the public, security cameras, paid security staff, signing, sufficient lighting, telephone numbers to report suspicious activity, employee check-ins to ensure a secure work site and to promote the safety of members of the local communities.**

**In general, our safety plan includes security policies and procedures to protect property and prevent damage or loss to the work, materials, and equipment, as well as the environment. Our security program achieves an effective balance between security requirements and effective operations. It protects employees, equipment, proprietary information, materials, offices, and facilities, by specifically addressing security vulnerabilities, incident response procedures, emergency evacuation, hiring, standards of personal conduct, grounds for termination of employment, workplace violence prevention and response, mail and shipping security, law enforcement coordination, information protection, hazardous material (HAZMAT) handling, asset protection, security awareness, and threat response.**

**We conduct site security assessments and risk analyses prior to starting any work activity. Dragados' safety personnel perform security audits and site visits to confirm that the established security policies, procedures, and threat reduction measures are implemented in accordance with the conditions of the risk analysis, and are appropriate to current risk/threat conditions.**

**Our safety and security plans include details from our public information program about construction activities and safety measures. This includes items such as identification of sensitive receptors, impacted residents and businesses, and pedestrian and motorist routes**

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affected by the Project. We coordinate regularly with emergency responders and facilities to make sure they have safe and efficient access to and through our construction areas.

As part of our safety and security plans for work in urban environments, we include traffic control and safe work procedures in areas of heavy traffic. Examples of methods we use to maintain the safety of our employees and the traveling public as they move through our construction areas include the following:

- All barricades of public streets and highways must meet standards as established in the Manual on Uniform Traffic Control Devices (MUTCD) and per the approved project traffic control plan. No changes to the traffic control plan will be made unless the change has been approved by the appropriate engineer.
- Crews are required to inspect the traffic control devices in their work areas at the beginning and end of each shift.
- If barricades must be moved to perform work, or to allow construction traffic into the work area, the crews are required to always place barricade back in position.
- Each area of the Project will have at least one employee that has been trained on the state’s MUTCD. All flaggers will have completed and passed flagger certification training.

- (6) Please describe your orientation or training program for new hires and for newly promoted individuals (including foremen), including any safety related elements. If you do not have such a program, explain why.

*Response:* **Response: Each new employee to a Dragados USA project will receive new hire orientation training, at each project, as set out in the Health and Safety Program (HASP). This training is designed to orientate employees to Dragados USA and to our Safety, Health and Environmental Policy and Safety, Health and Environmental Management System (SHEMS). Personnel performing the tasks that can cause safety hazards, environmental impacts, and/or significant environmental aspects shall be competent on the basis of appropriate education, training and/or experience (this is defined as being competent to carry out a task and should not be confused with the term “Competent Person”). To ensure competence, various forms of training will be utilized. Such personnel shall receive training which includes, but shall not be limited to, general awareness training, hazards and significant environmental impacts, actual or potential, of their work activities, benefits of improved personal performance, their roles and responsibilities in achieving conformance with the Safety, Health and Environmental policy and procedures and with the requirements of the SHEMS.**

- (7) With respect to no. (6) above, for any program that relates to foremen, indicate whether it includes instruction on the following:

Topic	Yes	No
Safety Work Practices	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Safety Supervision	<input checked="" type="checkbox"/>	<input type="checkbox"/>
On-site Meetings	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Emergency Procedures	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Accident	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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Topic	Yes	No
Investigation		
Fire Protection and Prevention	<input checked="" type="checkbox"/>	<input type="checkbox"/>
New Worker Orientation	<input checked="" type="checkbox"/>	<input type="checkbox"/>

- (8) How often does your entity hold safety meetings which extend to the laborer level, and how does this vary by type of project? If you do not hold such meetings, explain why not.

*Response:* **The DUSA Project Safety Manager coordinates and chairs a Mass Safety Meeting at least once per month. This meeting may be held in the field or in a room large enough to safely hold the number of attendees.**

**Weekly tool box meetings are held by all work crews. These are conducted by foreman with input by superintendents.**

**All projects perform the same meetings as required by the Corporate Health and Safety Plan**

- (9) Please explain any program or written practices that expressly address the safety of the traveling public and the safety of personnel within the construction area. If the entity has no such program or practices, explain why not.

*Response:* **Traffic Control Plan**

**Where the public, either vehicular or pedestrian traffic, may be impacted, interrupted, or re-routed, DUSA shall compile and provide a Traffic Control Plan. The Traffic Control Plan is the submitted to the owner or client and any required public agency for review and comment.**

**The Traffic Control Plan shall include the following:**

- (a) Project location and Contractor Name;**
- (b) The purpose for the obstruction;**
- (c) The duration of the obstruction;**
- (d) A sketch, either hand or computer drawn, showing the street names, obstruction location, placement and types of signs, and the protective measures (barrels, plates, cones, arrow-boards, etc.) used to protect the Employees and the public;**
- (e) The excavation size, Dig Safe or utility locator number, and associated utility permit numbers (where applicable);**
- (f) The location of equipment (i.e. crane or concrete pump), including the size, weight, and ground bearing pressures).**

**Where the impact/interruption/traffic re-routing occurs in the city/town, the approved Traffic Control Plan shall be submitted to the appropriate Department of Public Works along with the permit application for the operation. These permits include: Sidewalk Obstruction (No Excavation), Street Excavation, Crane/Boom Truck/Pump Truck Placement, and Temporary Construction Access.**

**NOTE: the Traffic Control Plan shall be submitted to the responsible municipality or department overseeing roadway work.**

**Public Protection Requirements**

**When it is necessary to maintain public use of work areas involving sidewalks, entrances to buildings, lobbies, corridors, aisles, stairways and vehicular roadways, DUSA with the responsible Subcontractor shall protect the public with appropriate guardrails, barricades,**

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temporary fences, overhead protection, temporary partitions, shields, mirrors, and adequate visibility.

Sidewalks, entrances to buildings, lobbies, corridors, aisles, doors or exits shall be kept clear of obstructions to permit safe entrance and exit of the public at all times.

Appropriate warnings and instructional safety signs shall be conspicuously posted where necessary. In addition, a flag person shall control the movement of motorized equipment in areas where the public might be endangered as allowed by local regulations.

Where work must be performed above building entrances and exits, whether on the construction site or part of a public area, canopies shall be installed and enclosed so as to fully protect pedestrians from falling objects. These canopies shall be capable of withstanding the maximum forces that could be applied from potential falling objects, considering the maximum fall distance from the elevated work area to the canopy.

In areas adjacent to public walkways or travelways, canopies shall be installed and enclosed so as to fully protect pedestrians and vehicles from falling objects. These canopies shall be capable of withstanding the maximum forces that could be applied from potential falling objects, considering the maximum fall distance from the elevated work area to the canopy. In addition to the site fence required by the contract, drawings, and contract documents, the following shall apply:

- (a) A temporary fence shall be provided around the perimeter of above ground operations adjacent to public areas. Perimeter fences shall be at least six (6) feet high. They may be constructed of wood or metal frame and sheathing, wire mesh, or a combination of both. When the fence is adjacent to a sidewalk near a street intersection, at least the upper portion of fence shall be open wire mesh.
- (b) Guardrails shall be provided on both sides of vehicular and pedestrian bridges, ramps, runways, and platforms. Pedestrian walkways elevated above adjoining surfaces, or walkways within six (6) feet of the top of excavated slopes or vertical banks shall be protected with guardrails. Guardrails shall be constructed in accordance with Section 13.F of this Manual.
- (c) A crosswalk must contain: striping, curb cut for handicap access.

Barricades meeting local requirements shall be provided where sidewalk shed or bridges, fences, or guardrails as referenced above are not required between work areas and pedestrian walkways, roadways or occupied buildings. Barricades shall be secured against accidental displacement and shall be maintained in place except where temporary removal is necessary to perform the work. During the period a barricade is temporarily removed for the purpose of work, a watchman shall be placed at all openings.

Temporary sidewalks shall be provided, as directed, when a permanent sidewalk is obstructed by the Contractors operation. They shall be installed in accordance with the requirements listed above.

Warning lights shall be maintained from dusk to sunrise around excavations, barricades or obstruction in the public areas. Illumination shall be provided from dusk to sunrise for all temporary walkways in both public and construction areas.

- (10) Please describe any differences between the entity's standard or typical safety program or practices as described in your responses to (1) through (9) above and (a) the entity's safety program or practices on projects similar to this Project in size and scope and/or (b) the anticipated safety program or practices for this Project as may be preliminarily anticipated in the statement of technical approach included in the SOQ in accordance with Section 5 of the Volume 1 Requirements.

*Response:*



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(a) Dragados will always use our standard safety program as the foundation for developing project-specific safety programs. Projects similar in size and scope, such as our I-595 Corridor Improvements Project in Florida, will vary slightly from our above described safety procedures to highlight specific hazards unique to that Project. For instance, our MOT plans and traffic management was a key concern on the I-595 project due to highway construction in a dense urban environment. Our safety plan addressed the specific safety concerns along the corridor and trained each employee on them. This provided a safer working environment for our construction crews and a safer environment for the traveling public by minimizing the exposure/risk that results in better safety numbers.

(b) Dragados' above described (1-9) corporate safety program slightly varies from the approach we will use on the I-70, through the emphasis of flaggers at the entrance and exit points of the work zone. However, for projects similar to I-70 project, we have implemented similar practices through a site specific safety plan.

For the I-70 project as described in Section 5 of the Volume 1 requirements, we will base our safety plan and procedures on the best practices of the joint venture members' individual safety plans with the goal of zero tolerance corporate safety standards, policies, and procedures. We will include the anticipated safety practices for various operations on the I-70 East project reflected in the table below. Along with these safety practices, we anticipate using various methods of communication, such as variable message boards along the project to keep the traveling public informed, the more informed of construction activities the safer they will be.

Potential Risk	Mitigation Approach
Worker and Traffic Interface, separation	<ul style="list-style-type: none"> <li>• Separate work zones from traffic with the use of portable concrete barriers (with space to accommodate lateral deflection, debris shielding) and fencing</li> <li>• Workers and subcontractors will only cross live lanes of traffic in a vehicle and at designated areas (could use flaggers if crossings are required)</li> <li>• Work zone entrances and exits are clearly identified and barricaded to prevent accidental access by the traveling and general public</li> <li>• Workers are trained in the appropriate process to ingress and egress from these zones and in traffic courtesy protocols</li> </ul>
Work zone safety	<ul style="list-style-type: none"> <li>• All workers, subcontractors, vendors, and visitors shall be required to wear proper high visibility clothing and proper personal protective equipment (PPE)</li> <li>• Construction pick-up trucks, cars, and equipment are made highly visible to our workers and the traveling public by using light bars and flags</li> <li>• Design for safe speeds, lane changes, merging, and proper signage so the traveling public can safely and easily navigate work areas</li> <li>• Oversight by appropriate personnel to confirm that signage is clear, illuminated arrows are working, VMS messages are correct, flaggers are safely and effectively positioned</li> <li>• Work zones that impact live traffic lanes include a traffic attenuator truck or trailer</li> <li>• Use of attenuator trucks, when needed, to help both the travelling public as well as the work crews in the event of an incident</li> </ul>

Potential Risk	Mitigation Approach
Material delivery and heavy equipment movement in and out of the work zone	<ul style="list-style-type: none"> <li>• Reduce worker and equipment conflicts by establishing traffic patterns within work zones and using ground control procedures</li> <li>• Establish designated routes for material deliveries</li> <li>• Clearly identify and block access to environmentally sensitive areas</li> <li>• Use rock zones/track pads to minimize the transfer of dirt/debris onto travel way</li> <li>• Use signage and flaggers at work zone entrances and exits to warn the traveling public of slow moving vehicles hazards</li> </ul>
Bridge demolition and Construction	<ul style="list-style-type: none"> <li>• Use proper safe equipment with trained and qualified operators</li> <li>• Schedule activities appropriately to reduce impacts to the public</li> <li>• Work during low traffic periods (e.g. nights) and separate work zone from traffic</li> <li>• Conduct work in a planned, controlled manner to reduce dust, and eliminate worker exposure to the swing radius of a crane, heavy equipment movement, and/or debris</li> <li>• We will abide by the demolition-specific plans/engineering to ensure the viaduct is safely dismantled</li> <li>• Provide constant safety oversight during bridge demolition/construction activities</li> </ul>
Night Work	<ul style="list-style-type: none"> <li>• Develop a detailed JHA, work plan, and schedule prior to commencing any night work</li> <li>• Use temporary lighting for the work zone, travel way, and sidewalks</li> <li>• Use uniformed traffic control as necessary to increase motorist compliance/safety</li> <li>• Provide notification to the public</li> </ul>

## FORM G: SAFETY QUESTIONNAIRE

**Proposer Name:** Front Range Mobility Group  
**Name of Team Member:** URS Energy & Construction, Inc. (AECOM Construction)  
**Role on Proposer:**
 Lead Contractor  
 Lead Engineer  
 Lead Operator  
 Joint venturer in Lead Contractor: Dragados/Flatiron/URS (an unincorporated Joint Venture)

### **Form G: Safety Questionnaire**

#### **A. Required Statistics**

(1) Please provide the following information:

<b>Data Series</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
<b>Fatalities</b>				
Total Number of Fatalities (Workers):	1	1	0	0
Fatal Injury Rate:	0.0047	0.0045	0	0
Total Number of Fatalities (Members of the Public):	0	0	0	0
<b>Other Incidents</b>				
Total Number of Non-fatal Recordable Cases:	78	77	95	83
- Cases with Days Away from Work:	13	6	15	2
- Cases with Job Transfer or Restriction:	16	28	16	9
- Other Non-fatal Recordable Cases:	49	43	64	72
OSHA Incident Rate:	0.38	0.40	0.51	0.75
DART Rate:	0.29	0.34	0.31	0.11
Total Number of Non-fatal Injuries to Members of the Public:	0	0	0	0
<b>Lost Work Days</b>				
Total Lost Work Days:	1,357	441	889	75
Lost Workday Index:	6.53	2.24	4.74	0.67

Data Series	2011	2012	2013	2014
<b>Cost of Accidents</b>				
Cost of Accident per Employee:	424.72	309.89	175.16	395.44
Cost of Accidents involving Members of the Public:	0	0	0	0
<b>Safety Metrics</b>				
EMR	0.48	0.47	0.45	0.45

**Where:**

- (a) Fatal Injury Rate = (Number of fatal work injuries x 200,000,000) / total employee hours worked during the calendar year.
- (b) Non-fatal Recordable Cases refers to non-fatal occupation injuries and illnesses for Heavy and Civil Engineering Construction, as defined by the North American Industry Classification System (NAICS 237).
- (c) OSHA Incident Rate = (Number of cases of injury and illness x 200,000) / total employee hours worked during the calendar year.
- (d) DART Rate = (Number of recordable incidents of injury or illness that resulted in days away (lost), restricted or transferred during the calendar year) / 100 full time employees.
- (e) Lost Workday Index = (Number of lost workdays x 200,000) / total employee hours worked during the calendar year.
- (f) Cost of Accident per Employee = Total cost of accidents / average number of employees.
- (g) EMR refers to the National Council on Compensation Insurance (NCCI) Experience Modification Rating.

**B. Questions Regarding Safety Record and Approach**

- (1) How is your entity’s management included in the accident reduction process?

*Response:*

Safety Health & Environment (SH&E) is not only a priority in AECOM but a Core Value that is consistent across the organization. AECOM’s company-wide SH&E Management System (“SH&E System”) sets out the policies and commitments for AECOM and has been developed to ensure that employees (including management), subcontractors and clients of AECOM fully understand, and are themselves committed to, this corporate responsibility. The SH&E System includes procedures, data and records required by BS OHSAS 18001 and ISO 14001. Additional procedures are included to ensure consistent methods, effective controls and comprehensive records. The SH&E System also aligns with structure outlined in the Integrated Management System (IMS) Manual (G1-001-MN1) used company-wide. For details on the 4-tier structure of AECOM’s SH&E System including its written manuals, processes and procedures refer to question 4.

## Colorado I-70 East Project

Management is at the core of AECOM's SH&E System, including its efforts for accident reduction. AECOM remains committed to the goal of zero safety related incidents, and will continue to foster our belief that all injuries are preventable. Our core values and business principles will guide our efforts to provide the systems, tools, and processes that inspire our employees and subcontractors to embrace our aspirations, understand their personal responsibilities in achieving our goals, and exhibit the individual behaviors that are fundamental to our success.

We are continuing to improve our safety program that stresses communication, education, safe work practices and procedures, and tracking of leading indicators of safety performance (e.g., Near Miss Reporting and Safety Observations/Conversations).

As our work force grows, and with an ever increasing number of clients and projects, so does our commitment to corporate responsibility for employee safety, health, and environment. As an expression of this commitment, a SH&E Management System that sets out the policies and commitments for AECOM has been developed to ensure that employees and clients of AECOM fully understand, and are themselves committed to, this corporate responsibility.

Deep-rooted in this program, our "Culture of Caring" sets an expectation for each employee, contractor and business partner to take personal responsibility for keeping his or her colleagues, and others associated with our work, safe. Whether located on a project site, in the office or at home, we embrace safety as a lifestyle choice by maintaining essential safety procedures and behaviors everywhere we go.

### Safety for Life

"Safety for Life" is AECOM's comprehensive internal SH&E program that drives AECOM toward proactively incorporating safety standards and innovative techniques into everything we do – with the ultimate goal of achieving zero work-related injuries and/or illnesses; preventing damage to property and the environment; and maintaining an overall environmentally friendly and sustainable workplace.

Our vision is to lead our industry in safety by further enhancing our already world-class safety management systems. These systems will meet global standards for certification and will provide a safe working environment for our employees. These systems will also be executable by our project teams and will continue to meet the strictest requirements of our clients who are most focused on safety.

AECOM's nine "life preserving principles" that form the core of our foundation are described below:

- **Demonstrated management commitment** – Our executive, senior and project managers will lead the SH&E improvement process and continuously demonstrate support and commitment
- **Employee Participation** – Our employees will be encouraged and empowered to become actively engaged in our safety processes through their active participation in safety committees, training, audits, observations and inspections. Employees will be encouraged to participate in health initiatives and adopt a healthy lifestyle
- **Budgeting and Staffing for Safety** – Our safety staff will be competent, fully trained and qualified to provide technical resources to our internal and external client. A budget to support safety activities will be included in project proposals.

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- **Pre-Planning** – Our design, engineering, project and construction management staffs will deploy effective risk-mitigation efforts to design, plan and build safety into every project. Pre-project and pre-task planning will be an effective tool in protecting our employees and the environment.
- **Contractor Management** – Our project staff will work closely with our sub-consultants, subcontractors, contractors and Joint Venture Partners to provide a safe work environment for employees and members of the public. Our goal of SH&E performance excellence will be equally shared by all project participants.
- **Recognition and Rewards** – Our employees will be recognized for their efforts in working safely and their support of our safety efforts.
- **Safety, Orientation and Training** – Our employees will be provided with effective safety training in order to identify and mitigate hazards in the workplace to prevent injuries to themselves and others who may be affected by their actions.
- **Incident Investigations** – Our managers and safety professionals will investigate all recordable incidents and serious near misses to identify contributing factors and root causes in order to prevent a reoccurrence. Lessons Learned shall be identified, communicated and implemented.
- **Fit for Duty** - Our employees are responsible to report to work each day fit for duty and not to pose a health and safety hazard to themselves or others

- (2) How often do you hold site meetings for supervisors for a typical Reference Project? If you do not hold meetings, why not?

*Response:*

On construction projects, supervisor site meetings are held weekly. These are led by the Project Manager or Superintendent, and are a chance for the field supervision and management to formally discuss any safety issues. In these meetings a review of incidents that have occurred, action items derived from the incidents, and lessons learned are discussed. Details are discussed pertaining to significant incidents that have occurred within the industry, and precautions put in place to ensure these do not happen within AECOM. The weekly supervisors' safety meeting also allows management and supervisors a chance to evaluate their own safety performance and strive to develop a positive safety culture.

- (3) How often do you conduct project safety inspections? Who conducts these inspections? If you do not, why not?

*Response:*

AECOM conducts inspections of our project sites on both a daily and weekly basis.

The safety professionals on the project are tasked with daily inspections along with all foreman and superintendents.

Management conducts regular weekly Management Site Visits, which provide an additional check on our operations. Project management individuals are expected to accompany the safety manager on a weekly basis to do an entire project safety inspection.

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Additionally, SH&E corporate management will periodically conduct audits of the project as part of our leading metric program.

- (4) Please describe your written safety program. If you do not have one, explain why.

*Response:*

AECOM's SH&E Program is an integral part of the company's overall business plan. Based on proven management principles and practices, the program consists of an organized framework that is continually monitored and periodically reviewed in response to changing internal and external factors. The program establishes the minimum requirements for management involvement, responding to SH&E incidents, monitoring SH&E performance, and communicating with staff regarding their occupational health and safety obligations. It is meant to supplement the standards set by AECOM's clients and state, provincial, territorial, and federal regulatory agencies.

AECOM's SH&E Program Manual establishes a uniform, systematic and cost-effective approach to administrating SH&E issues and concerns associated with AECOM personnel and services. The SH&E Program Management System has been structured to align itself with the key elements of OHSAS 18001 (Occupational Health and Safety Assessment Series), ISO 14001 (the International Standard for Environmental Management Systems), CSA Z1000-06 (Canadian Standards Association OH&S Management System), COR (Provincial Certificate of Recognition programs in Canada) and Regulatory Agency Requirements.

All AECOM employees in the Americas are responsible for maintaining compliance with the SH&E Policy, Program Manual, and Standard Operating Procedures. Subject to the scope of a contract, elements of AECOM's SH&E Program may be applied to subcontractors and equipment suppliers to maintain an adequate level of SH&E awareness, control and cooperation with AECOM and with our clients' needs.

The written program consists of the following four levels of documentation:

1. **Tier I – SH&E Policy Statement** – The SH&E Policy Statement confirms AECOM's commitment to protect both the health and safety of everyone who may be affected by our activities and services, as well as protecting the environment. The SH&E Policy Statement is published and communicated to all employees through the company intranet and postings. The Policy Statement is available, upon request, to the public and other interested parties. AECOM subcontractors are made aware of SH&E expectations as they relate to products, services and operations either provided to or on behalf of AECOM. The Policy is reviewed annually as part of the SH&E Management Review process to ensure policies remain appropriate to the activities, products and services of AECOM and continue to meet SH&E objectives.
2. **Tier II – SH&E Management System Manual & Tier II Requirements** – This document applies to all operations globally. The document provides a description of the scope of the SH&E Management System, its elements, interaction between elements and referenced documentation. The Tier II Requirements are the minimum SH&E requirements which are required to be implemented.
3. **Tier III Procedures** – These procedures and supplemental documents are developed based on Geography and/or Business Group requirements (including design, construction and O&M services as are relevant to this Project). These must be consistent with all requirements of the associated Tier II Procedure, only providing additional Region or Business Group details or

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requirements. At this level, Tier III and Tier IV, management develops project and scope of work specific procedures for each project.

4. **Tier IV Procedures** – These documents are developed based on project-specific or local requirements.

In addition to the Tier II requirements identified above, AECOM achieves SH&E commitments through our Safety for Life program which is AECOM's comprehensive internal program that drives AECOM toward proactively incorporating our SH&E standards and innovative techniques into everything we do – with the ultimate goal of achieving zero work-related injuries and/or illnesses, preventing damage to property and the environment, and maintaining an overall environmentally friendly and sustainable workplace.

- (5) Please describe your preferred methods for securing worksites in urban environments, including as such methods may promote the safety of members of the local community.

### *Response:*

Securing worksites is key to ensure the safety of both staff and members of the community. AECOM understands that each project has unique requirements and constraints and therefore all projects involving field work, including projects in urban environments, are required to perform a hazard assessment addressing physical and chemical hazards. The hazard assessment is documented, based on AECOM's project-specific role, nature of its services and analysis of safety risk. Prior to the start of activities, hazard assessments are reviewed and approved by the project manager and regional SH&E manager for execution. The hazard assessment, which also includes an evaluation of the project site, local conditions, and contract stipulations, is completed to determine a need for any of the following measures, including securing worksites:

1. Access Control
2. Vehicle Registration
3. Fencing
4. Security Guards
5. Outside Lighting
6. Secure Storage Areas
7. Alarm Systems
8. Identification badges for employees and visitors

AECOM also uses a Site Security Checklist to evaluate site security measures. Where physical security of the project site is required, project management, with the assistance of project Safety personnel, is responsible for organizing and supervising security guards. A local bonded security force may be used for this purpose. As an alternative, an in-house security organization may be established.

To secure worksites in urban environments, it is necessary to anticipate and plan for dense traffic adjacent to the worksite, and take measures to protect drivers, cyclists, pedestrians and workers. For each project, AECOM develops a comprehensive set of safety plans and procedures for the entire work team, while strictly following all local, state and federal regulations. When required by location regulations or when there is a potential for disruption of traffic, AECOM prepares a Traffic Control Plan in accordance with the Manual on Uniform Traffic Control Devices as well as state and local standards. AECOM also prepares a detailed Traffic Protection Plan taking into account the organized, systematic, safe conduct of the project, including, as applicable, detours, staging sequences, work vehicle access and egress from work sites, temporary barriers, removal of old pavement markings and selection and planned implementation of appropriate typical layouts for traffic control.

Special considerations for securing worksites in urban environments include:



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- Allowing adequate transition areas for drivers to react to traffic shifts in advance of the work site, especially in high-speed traffic areas
  - Providing clear advance warning signs, devices, and markings, appropriate for the volume and speed of traffic, including variable message signs where appropriate
  - Adjusting signal phasing as necessary at intersections to accommodate anticipated changes in traffic volumes, or maintaining adjusting detectors in the pavement
  - Providing adequate barrier protection between traffic and construction operations, particularly in high-speed areas
  - Establishing safe access and walkways for pedestrians, even on roadway sections that are closed
  - Coordinating with local transit authorities to maintain safe access to transit stops
  - Establishing signed alternate routes for bicyclists as needed, separate from the pedestrian paths
  - Providing for increased use of warning lights, safety lighting, advance warning systems and reflective Personal Protective Equipment for nighttime work
- (6) Please describe your orientation or training program for new hires and for newly promoted individuals (including foremen), including any safety related elements. If you do not have such a program, explain why.

*Response:*

AECOM has a comprehensive orientation and training program for new hires and newly promoted individuals which applies to all projects across the company, including design, construction and O&M staff.

AECOM places a great deal of emphasis on health and safety training for its employees. Newly hired employees are provided with SH&E Orientation training, which covers budgeting and staffing for safety, pre-planning, task hazard analysis, incident reporting and investigation, contractor management and "fit for duty" policies. AECOM also provides annual "refresher" courses for on these overarching safety policies.

Approximately 60% of AECOM's technical operations staff, and 100% of those who work at hazardous waste sites, have attended an initial 40-hour HAZWOPER health and safety training course. AECOM's supervisors and project managers have also attended an 8-hour HAZWOPER Supervisor training course. AECOM provides field safety training to all staff involved in onsite project work and office safety training to all employees.

AECOM has implemented a Training Needs Assessment (TNA) tool to help individual employees and their supervisors determine their unique SH&E training needs. The electronic tool asks for basic job function input and the output is a list of recommended SH&E training customized to the employee's assigned roles and responsibilities. The employee then reviews the training with their Supervisor, who then approves the training, and dates are set by the employee for completion of assigned training.

Safety training modules include, but are not limited to: incident investigation awareness; confined space awareness; fall protection; personal protective equipment usage; hearing safety; mobile and heavy equipment safety; vehicle and driver safety; fire extinguisher usage; cold stress prevention; bear safety; natural biological hazards; trenching and excavation; traffic safety; water safety; and railroad general roadway worker protection awareness.

AECOM uses a blended learning approach to delivering training. Our operations-based SH&E managers provide live training to employees within their regions, and training is tailored to meet the

## Colorado I-70 East Project

operational needs and challenges faced by the specific employees receiving training. Additionally, AECOM uses web-based training and internally developed “eLearning” to fulfill training needs while offering a flexible training schedule to our employees. By implementing a blended learning approach to training we maintain compliance with applicable regulations and client requirements while providing SH&E training to our employees with minimal impact to project schedules.

AECOM is officially recognized as a Diamond-level sponsor of the Board of Certified Safety Professional's Safety Trained Supervisor (STS) program, a ranking based on the number of STS certifications achieved. Since 1998, AECOM has provided training and support for more than 3,000 supervisors and managers to achieve their certifications. The STS program has been our best tool to ensure management and supervisors plan monitor oversee and carry out their work responsibilities in a safe manner. Below are parts of the training program for new hires and for newly promoted individuals (including foremen), and the respective examinations:

- Part 1. Conduct risk assessments by performing pre-task hazard analyses and evaluating PPE, tools, equipment and job expectations, in order to mitigate hazardous conditions and minimizing the risk of incident or injury.
- Part 2. Confirm that employees have the necessary job specific technical skills and qualifications by observing work practices or reviewing training records in order to ensure competent staff.
- Part 3. Ensure that personnel in the work area are oriented to safety and health considerations by communicating hazardous conditions and monitoring behaviors in order to help ensure that applicable rules and emergency action plans are understood.
- Part 4. Evaluate work practices by observing employees' behavior and the use of PPE, tools and equipment in order to minimize the risk of incident or injury and to comply with applicable standards.
- Part 5. Ensure safety and health standards are implemented through coaching and by correcting observed deficiencies in order to maintain a safe and healthful work environment.
- Part 6. Take appropriate action when confronted with unsafe acts and conditions by exercising stop work authority, modifying tasks, escalating issues to higher management, consulting with qualified professionals (when outside of capabilities) and disciplining employees in order to minimize the risk of incident or injury.
- Part 7. Facilitate a positive, proactive culture by anticipating hazards, modeling and coaching safe behavior, reporting incidents, encouraging employee participation and communicating performance measures in order to enhance safety and health.
- Part 8. Evaluate employees using safety performance and behavior as key criteria in order to hold employees accountable for safety.
- Part 9. Participate in investigations that determine causes, identify corrective actions, document lessons learned and address employee concerns using recognized investigation techniques in order to minimize the risk of workplace incidents.
- Part 10. Verify the effectiveness of emergency action plans through training and practice in order to ensure effective response in crises.
- Part 11. Coordinate operations and work processes with other supervisors by communicating effectively in order to minimize risk.
- Part 12. Perform safety and health related recordkeeping in accordance with applicable standards using established procedures in order to document essential processes.
- Part 13. Complying with company ethics and policies by resolving issues consistently with these requirements in order to protect the interest of employees, employers and other stakeholders.

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(7) With respect to no. (6) above, for any program that relates to foremen, indicate whether it includes instruction on the following:

Topic	Yes	No
Safety Work Practices	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Safety Supervision	<input checked="" type="checkbox"/>	<input type="checkbox"/>
On-site Meetings	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Emergency Procedures	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Accident Investigation	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Fire Protection and Prevention	<input checked="" type="checkbox"/>	<input type="checkbox"/>
New Worker Orientation	<input checked="" type="checkbox"/>	<input type="checkbox"/>

(8) How often does your entity hold safety meetings which extend to the laborer level, and how does this vary by type of project? If you do not hold such meetings, explain why not.

*Response:*

AECOM conducts safety meetings with all field employees on a daily basis. These safety meetings at a minimum are held at the beginning of each shift. The intent of this safety meeting being at the start of the shift is to get the team members starting to think about safety from the very first minute they begin work. In addition to the safety meeting a Job Hazard Analysis (JHA) will be reviewed with participation from all employees in each work crew. The JHA will be signed off by all members of the team and updated throughout the day if the job changes or conditions change. These meetings only vary by project in the material that is discussed. All meetings are to be relevant to the work being conducted.

(9) Please explain any program or written practices that expressly address the safety of the traveling public and the safety of personnel within the construction area. If the entity has no such program or practices, explain why not.

*Response:*

AECOM's SH&E Management System includes a procedure for "Work Zone Traffic Control" (which includes a written plan) to address the safety of the traveling public. At a minimum, this safety plan includes information on the following, as needed:

- a) Pedestrian and worker safety;
- b) Temporary traffic control elements, including (but not limited to) temporary traffic control zones, advance warning zones, transition areas, activity areas, termination areas, tapers,
- c) buffers, detours, etc.;
- d) Flagger controls, including high-visibility safety apparel, hand-signaling devices, and flagger procedures;
- e) Temporary traffic control zone devices, including (but not limited to) signs, illuminated/flashing panels, warning devices, channelizing devices, drums, barricades, pavement markings; and

**Colorado I-70 East Project**

- f) Temporary traffic control zone activities, including scope of work, duration, location, and portions of the roadway/shoulder affected.

(10) Please describe any differences between the entity's standard or typical safety program or practices as described in your responses to (1) through (9) above and (a) the entity's safety program or practices on projects similar to this Project in size and scope and/or (b) the anticipated safety program or practices for this Project as may be preliminarily anticipated in the statement of technical approach included in the SOQ in accordance with Section 5 of the Volume 1 Requirements.

*Response:*

- (a) AECOM's approach to a safety program and safety practices on projects similar to this Project in size and scope are the essentially the same as described in this form, which is our standard (corporate) approach to SH&E. The only differences are at the Tier III and IV level at which AECOM develops client and project specific procedures.

AECOM recognizes that every project presents its own unique set of hazards, therefore AECOM's standard processes for SH&E includes the identification and evaluation of these hazards for each project, including the evaluation of risks, and the determination of the necessary controls to minimize risks on the project via a project specific plan that is based on AECOM's corporate standards as described in the previous answers on this form. The evaluation which includes hazards created by AECOM operations, by other contractors, as well as the general public considers both routine and non-routine tasks. The individual performing the assessment is experienced in the type of work under evaluation, and reviews the relevant Safety Management Standards (SMS), regulatory requirements, and employee capabilities. AECOM, with its partners, anticipates taking a different approach for this Project.

- (b) The unique mix of residential, urban, and high-traffic nature of the I-70 East corridor demands a special safety commitment to protect our staff, craft, CDOT personnel and the public that comes in contact with our work areas. Our construction joint venture is comprised of industry leading firms with zero tolerance corporate safety standards, policies, and procedures that will guide our safety plan, which will be tailored to meet specific project needs through risk assessment and mitigation. The anticipated safety program or practices for the Project as preliminarily anticipated include the development of a specific safety plan for the I-70 East project that draws upon the best practices and procedures from each firm comprising FRMG. Our safety and health approach on the I-70 East project will also address all items that not only affect our construction personnel, but the traveling public as well, including worker and traffic safety, work zone safety, MOT, air and noise pollution, material handling and storage, movement of heavy equipment, bridge demolition and construction, and night work. In the following table we have identified potential safety risks and our mitigation approach.

Potential Risk	Mltigation Approach
<b>Worker and Traffic Interface, separation</b>	Separate work zones from traffic with the use of portable concrete barriers (with space to accommodate lateral deflection, debris shielding) and fencing
	Workers and subcontractors will only cross live lanes of traffic in a vehicle and at designated areas (could use flaggers if crossings are required)
	Work zone entrances and exits are clearly identified and barricaded to prevent accidental

	<p>access by the traveling and general public</p> <p>Workers are trained in the appropriate process to ingress and egress from these zones and in traffic courtesy protocols</p>
<b>Work zone safety</b>	<p>All workers, subcontractors, vendors, and visitors shall be required to wear proper high visibility clothing and proper personal protective equipment (PPE)</p> <p>Construction pick-up trucks, cars, and equipment are made highly visible to our workers and the traveling public by using light bars and flags</p> <p>Design for safe speeds, lane changes, merging, and proper signage so the traveling public can safely and easily navigate work areas</p> <p>Oversight by appropriate personnel to confirm that signage is clear, illuminated arrows are working, VMS messages are correct, flaggers are safely and effectively positioned</p> <p>Work zones that impact live traffic lanes include a traffic attenuator truck or trailer</p>
<b>Material delivery and heavy equipment movement in and out of the work zone</b>	<p>Reduce worker and equipment conflicts by establishing traffic patterns within work zones and using ground control procedures</p> <p>Establish designated routes for material deliveries</p> <p>Clearly identify and block access to environmentally sensitive areas</p> <p>Use rock zones/track pads to minimize the transfer of dirt/debris onto travel way</p> <p>Use signage and flaggers at work zone entrances and exits to warn the traveling public of slow moving vehicles hazards</p>
<b>Bridge demolition and Construction</b>	<p>Use proper safe equipment with trained and qualified operators</p> <p>Schedule activities appropriately to reduce impacts to the public</p> <p>Work during low traffic periods (e.g. nights) and separate work zone from traffic</p> <p>Conduct work in a planned, controlled manner to reduce dust, and eliminate worker exposure to the swing radius of a crane, heavy equipment movement, and/or debris</p> <p>Provide constant safety oversight during bridge demolition/construction activities</p> <p>Plan for the lifting/erecting of girders using formal "critical lift" planning</p>
<b>Night Work</b>	<p>Develop a detailed Job Hazard Analysis (JHA), work plan, and schedule prior to commencing any night work</p> <p>Use temporary lighting for the work zone, travel way, and sidewalks</p> <p>Use uniformed traffic control as necessary to increase motorist compliance/safety</p> <p>Provide notification to the public</p>

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**FORM G: SAFETY QUESTIONNAIRE**

**Proposer Name:** Front Range Mobility Group  
**Name of Team Member:** CH2M Hill Engineers, Inc.  
**Role on Proposer:**
 Lead Contractor  
 Lead Engineer  
 Lead Operator  
 Joint venturer in Lead Engineer: CH2M Hill Engineers/AECOM Technical Services (an unincorporated joint venture)

**Form G: Safety Questionnaire**

**A. Required Statistics**

(1) Please provide the following information:

Data Series	2011	2012	2013	2014
<b>Fatalities</b>				
Total Number of Fatalities (Workers):	0	0	0	0
Fatal Injury Rate:	0	0	0	0
Total Number of Fatalities (Members of the Public):	0	0	0	0
<b>Other Incidents</b>				
Total Number of Non-fatal Recordable Cases:	11	9	6	13
- Cases with Days Away from Work:	1	3	0	8
- Cases with Job Transfer or Restriction:	1	1	0	4
- Other Non-fatal Recordable Cases:	10	6	6	5
OSHA Incident Rate:	0.33	0.19	0.12	0.26
DART Rate:	0.03	0.06	0.00	0.16
Total Number of Non-fatal Injuries to Members of the Public:	0	0	0	0
<b>Lost Work Days</b>				
Total Lost Work Days:	9	99	0	330
Lost Workday Index:	0.27	2.11	0.00	10.27

<b>Cost of Accidents</b>				
Cost of Accident per Employee:	NA	NA	NA	NA
Cost of Accidents involving Members of the Public:	0	0	0	0
<b>Safety Metrics</b>				
EMR:	0.66	0.68	0.63	0.64

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### Where:

- (a) Fatal Injury Rate = (Number of fatal work injuries x 200,000,000) / total employee hours worked during the calendar year.
- (b) Non-fatal Recordable Cases refers to non-fatal occupation injuries and illnesses for Heavy and Civil Engineering Construction, as defined by the North American Industry Classification System (NAICS 237).
- (c) OSHA Incident Rate = (Number of cases of injury and illness x 200,000) / total employee hours worked during the calendar year.
- (d) DART Rate = (Number of recordable incidents of injury or illness that resulted in days away (lost), restricted or transferred during the calendar year) / 100 full time employees.
- (e) Lost Workday Index = (Number of lost workdays x 200,000) / total employee hours worked during the calendar year.
- (f) Cost of Accident per Employee = Total cost of accidents / average number of employees.
- (g) EMR refers to the National Council on Compensation Insurance (NCCI) Experience Modification Rating.

### B. Questions Regarding Safety Record and Approach

- (1) How is your entity's management included in the accident reduction process?

*Response:* CH2M's management team reviews every recordable and DART incident so our company can learn from the incident. Management is actively involved to ascertain the root causes of the incident and what could have been done differently to prevent something similar. Our management team also believes strongly in our "Don't Walk By" program—which is an outreach initiative we developed to promote each employee being responsible for preventing incidents. Employees are empowered by management to look for safety hazards, fix them if they can, report them, and help their team to learn from near incident.

- (2) How often do you hold site meetings for supervisors for a typical Reference Project? If you do not hold meetings, why not?

*Response:* It depends on the scope of the project. For this type of project we hold weekly meetings for all supervisors and hold daily meetings among work crews to discuss hazards in daily work tasks.

- (3) How often do you conduct project safety inspections? Who conducts these inspections? If you do not, why not?

*Response:* It depends on the scope of the project. CH2M conducts pre-task plans; where we plan out the work of the day or week and identify the potential hazards on the site. We also conduct weekly inspections on engineering services during construction projects to assess the site safety conditions and behaviors for our employees' site work as well as for our subcontractors. The site safety coordinator conducts the inspections for the work. The site safety coordinator collaborates with the project manager and site team to make sure any safety concerns are communicated up the chain

## Colorado I-70 East Project

established by the project/program team and client. Depending on the frequency of site visits and the nature of the work we're doing, we build a customized inspection schedule tailored for the work. It is always detailed in our field safety instruction (safety plan).

- (4) Please describe your written safety program. If you do not have one, explain why.

*Response:* CH2M completes a project and site-specific written safety plan (field safety instruction) for each field project. We review the scope of work with the project team and then develop a plan based on those risks. The project manager, site safety coordinator, and corporate health and safety lead review the written safety program and approve. After approval, the project manager and site safety coordinator brief the project team and subcontractors on the contents of the safety program.

- (5) Please describe your preferred methods for securing worksites in urban environments, including as such methods may promote the safety of members of the local community.

*Response:* Our project team, security team, and health and safety group work together to identify the security concerns in the specific location where we do work. We look at the concerns inherent to the area, and also complete a site tour to ensure we understand the daily and weekly concerns that could be present when we are working in the area. We develop a plan, communication protocol, and put in place measures in coordination with the client, contractor, security or law enforcement to protect staff and ensure continuity for the community.

- (6) Please describe your orientation or training program for new hires and for newly promoted individuals (including foremen), including any safety related elements. If you do not have such a program, explain why.

*Response:* Upon new hire and within 30 days of employment, the employee will complete new hire orientation for CH2M's health, safety, and environment program. After being brought on-board, the supervisor works with the health, safety, and environment team to identify the training that is required for the employees work tasks. Based on that assessment, the employee takes trainings for their new assignment. This same assessment is completed for newly promoted employees.

- (7) With respect to no. (6) above, for any program that relates to foremen, indicate whether it includes instruction on the following:

Topic	Yes	No
Safety Work Practices	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Safety Supervision	<input checked="" type="checkbox"/>	<input type="checkbox"/>
On-site Meetings	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Emergency Procedures	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Accident Investigation	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Fire Protection and Prevention	<input type="checkbox"/>	<input checked="" type="checkbox"/>



**Colorado I-70 East Project**

Topic	Yes	No
New Worker Orientation	<input checked="" type="checkbox"/>	<input type="checkbox"/>

- (8) How often does your entity hold safety meetings which extend to the laborer level, and how does this vary by type of project? If you do not hold such meetings, explain why not.

*Response:* This is not applicable to CH2M. We don't specifically hire craft labor for construction projects. We do hold regular daily, weekly and monthly safety meetings depending on scope and project setup where all employees on our team report on safety concerns.

- (9) Please explain any program or written practices that expressly address the safety of the traveling public and the safety of personnel within the construction area. If the entity has no such program or practices, explain why not.

*Response:* Included in CH2M's written safety program, we have sections on traffic control, working near roadways, and traveling safely to project sites and client meetings. We also have sections on safety around heavy equipment and safety walking on slopes/hills.

- (10) Please describe any differences between the entity's standard or typical safety program or practices as described in your responses to (1) through (9) above and (a) the entity's safety program or practices on projects similar to this Project in size and scope and/or (b) the anticipated safety program or practices for this Project as may be preliminarily anticipated in the statement of technical approach included in the SOQ in accordance with Section 5 of the Volume 1 Requirements.

*Response:* CH2M's written safety plan and procedures are built on our corporate-wide philosophy and culture of Target Zero; which is a drive toward zero incidents, zero injuries and zero environmental impacts. We drive this culture through our enterprise-wide safety operating standards, policies, and procedures. These standards, policies, procedures and culture would apply to projects similar in size and scope to the Project. We will customize the safety plan for the I-70 East project based on the hazards we expect in the field. In addition to adhering to our site-specific safety plan, CH2M, as a member of the Lead Engineer, will follow the safety program of the Lead Contractor. In cases where the Lead Contractor's field safety procedures are more stringent than CH2M's normal procedures, the Lead Contractor's procedures will apply. In addition, CH2M personnel and design subconsultants will undergo safety training as prescribed by the Lead Contractor's safety program. Along with these safety practices and procedures on the job-site, we will ensure communication with the public through variable message boards along the project to keep the traveling public informed.

## FORM G: SAFETY QUESTIONNAIRE

**Proposer Name:** Front Range Mobility Group  
**Name of Team Member:** AECOM Technical Services, Inc. (AECOM Design)  
**Role on Proposer:**
 Lead Contractor  
 Lead Engineer  
 Lead Operator  
 Joint venturer in Lead Engineer: CH2M Hill Engineers/AECOM Technical Services (an unincorporated joint venture)

### **Form G: Safety Questionnaire**

#### **A. Required Statistics**

(1) Please provide the following information:

<b>Data Series</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
<b>Fatalities</b>				
Total Number of Fatalities (Workers):	0	0	0	0
Fatal Injury Rate:	0.0	0.0	0.0	0.0
Total Number of Fatalities (Members of the Public):	0	0	0	0
<b>Other Incidents</b>				
Total Number of Non-fatal Recordable Cases:	61	54	36	29
- Cases with Days Away from Work:	19	10	8	2
- Cases with Job Transfer or Restriction:	7	7	5	5
- Other Non-fatal Recordable Cases:	35	37	23	22
OSHA Incident Rate:	0.57	0.50	0.40	0.34
DART Rate:	0.24	0.16	0.15	0.08
Total Number of Non-fatal Injuries to Members of the Public:	0	0	0	0
<b>Lost Work Days</b>				
Total Lost Work Days:	210	262	47	422
Lost Workday Index:	0.18	0.09	0.09	0.02

Data Series	2011	2012	2013	2014
<b>*Cost of Accidents</b>				
Cost of Accident per Employee:	*	*	*	*
Cost of Accidents involving Members of the Public:	*	*	*	*
<b>Safety Metrics</b>				
EMR:	0.64	0.66	0.53	0.50

\* "Cost of Accidents" Information is tracked by AECOM but is considered Company Confidential.

**Where:**

- (a) Fatal Injury Rate = (Number of fatal work injuries x 200,000,000) / total employee hours worked during the calendar year.
- (b) Non-fatal Recordable Cases refers to non-fatal occupation injuries and illnesses for Heavy and Civil Engineering Construction, as defined by the North American Industry Classification System (NAICS 237).
- (c) OSHA Incident Rate = (Number of cases of injury and illness x 200,000) / total employee hours worked during the calendar year.
- (d) DART Rate = (Number of recordable incidents of injury or illness that resulted in days away (lost), restricted or transferred during the calendar year) / 100 full time employees.
- (e) Lost Workday Index = (Number of lost workdays x 200,000) / total employee hours worked during the calendar year.
- (f) Cost of Accident per Employee = Total cost of accidents / average number of employees.
- (g) EMR refers to the National Council on Compensation Insurance (NCCI) Experience Modification Rating.

**B. Questions Regarding Safety Record and Approach**

- (1) How is your entity’s management included in the accident reduction process?

*Response:*

Safety Health & Environment (SH&E) is not only a priority in AECOM but a Core Value that is consistent across the organization. AECOM’s company-wide SH&E Management System (“SH&E System”) sets out the policies and commitments for AECOM and has been developed to ensure that employees (including management), subcontractors and clients of AECOM fully understand, and are themselves committed to, this corporate responsibility. The SH&E System includes procedures, data and records required by BS OHSAS 18001 and ISO 14001. Additional procedures are included to ensure consistent methods, effective controls and comprehensive records. The SH&E System also aligns with structure outlined in the Integrated Management System (IMS) Manual (G1-001-MN1) used company-wide. For details on the 4-tier structure of AECOM’s SH&E System including its written manuals, processes and procedures refer to question 4.

Management is at the core of AECOM's SH&E System, including its efforts for accident reduction. For Design services (Tier III of the SH&E System), AECOM senior managers are involved in SH&E management in multiple ways to assist in accident reduction. AECOM senior managers are personally responsible for the safety of the personnel that they manage. Their annual compensation is based in part on the SH&E performance of the people they are responsible for managing. AECOM senior managers also provide the resources to successfully carry out the AECOM's "Safety for Life" SH&E management system and provide the support for needed training and for ensuring that our clients and our AECOM SH&E Standard Operating Procedures are followed. Senior Management also participates in project safety reviews and incident investigations.

AECOM's executive management has made safety one of AECOM's eight core values. Safety performance is also a critical evaluation criteria in annual performance assessments for employees, supervisors and management.

- (2) How often do you hold site meetings for supervisors for a typical Reference Project? If you do not hold meetings, why not?

*Response:*

On design projects, supervisor site meetings are held daily, weekly and/or monthly, depending on the project's particular needs. In addition, AECOM participates in the "all hands" meetings conducted by the contractor, which typically occur at least once per week, depending on the activities underway.

- (3) How often do you conduct project safety inspections? Who conducts these inspections? If you do not, why not?

*Response:*

AECOM conducts inspections of our project sites on both a daily and weekly basis.

The safety professionals on the project are tasked with daily inspections along with all foreman and superintendents.

Management conducts regular weekly Management Site Visits, which provide an additional check on our operations. Project management individuals are expected to accompany the safety manager on a weekly basis to do an entire project safety inspection.

Additionally, SH&E corporate management will periodically conduct audits of the project as part of our leading metric program.

- (4) Please describe your written safety program. If you do not have one, explain why.

*Response:*

AECOM's SH&E Program is an integral part of the company's overall business plan. Based on proven management principles and practices, the program consists of an organized framework that is continually monitored and periodically reviewed in response to changing internal and external factors. The program establishes the minimum requirements for management involvement, responding to SH&E incidents, monitoring SH&E performance, and communicating with staff regarding their occupational health and safety obligations. It is meant to supplement the standards set by AECOM's clients and state, provincial, territorial, and federal regulatory agencies.

AECOM's SH&E Program Manual establishes a uniform, systematic and cost-effective approach to administrating SH&E issues and concerns associated with AECOM personnel and services. The SH&E Program Management System has been structured to align itself with the key elements of OHSAS 18001 (Occupational Health and Safety Assessment Series), ISO 14001 (the International Standard for

Environmental Management Systems), CSA Z1000-06 (Canadian Standards Association OH&S Management System), COR (Provincial Certificate of Recognition programs in Canada) and Regulatory Agency Requirements.

All AECOM employees in the Americas are responsible for maintaining compliance with the SH&E Policy, Program Manual, and Standard Operating Procedures. Subject to the scope of a contract, elements of AECOM's SH&E Program may be applied to subcontractors and equipment suppliers to maintain an adequate level of SH&E awareness, control and cooperation with AECOM and with our clients' needs.

The written program consists of the following four levels of documentation:

1. **Tier I – SH&E Policy Statement** – The SH&E Policy Statement confirms AECOM's commitment to protect both the health and safety of everyone who may be affected by our activities and services, as well as protecting the environment. The SH&E Policy Statement is published and communicated to all employees through the company intranet and postings. The Policy Statement is available, upon request, to the public and other interested parties. AECOM subcontractors are made aware of SH&E expectations as they relate to products, services and operations either provided to or on behalf of AECOM. The Policy is reviewed annually as part of the SH&E Management Review process to ensure policies remain appropriate to the activities, products and services of AECOM and continue to meet SH&E objectives.
2. **Tier II – SH&E Management System Manual & Tier II Requirements** – This document applies to all operations globally. The document provides a description of the scope of the SH&E Management System, its elements, interaction between elements and referenced documentation. The Tier II Requirements are the minimum SH&E requirements which are required to be implemented.
3. **Tier III Procedures** – These procedures and supplemental documents are developed based on Geography and/or Business Group requirements (including design, construction and O&M services as are relevant to this Project). These must be consistent with all requirements of the associated Tier II Procedure, only providing additional Region or Business Group details or requirements. At this level, Tier III and Tier IV, management develops project and scope of work specific procedures for each project.
4. **Tier IV Procedures** – These documents are developed based on project-specific or local requirements.

In addition to the Tier II requirements identified above, AECOM achieves SH&E commitments through our Safety for Life program which is AECOM's comprehensive internal program that drives AECOM toward proactively incorporating our SH&E standards and innovative techniques into everything we do – with the ultimate goal of achieving zero work-related injuries and/or illnesses, preventing damage to property and the environment, and maintaining an overall environmentally friendly and sustainable workplace.

- (5) Please describe your preferred methods for securing worksites in urban environments, including as such methods may promote the safety of members of the local community.

*Response:*

Securing worksites is key to ensure the safety of both staff and members of the community. AECOM understands that each project has unique requirements and constraints and therefore all projects involving field work, including projects in urban environments, are required to perform a hazard assessment addressing physical and chemical hazards. The hazard assessment is documented, based on AECOM's project-specific role, nature of its services and analysis of safety risk. Prior to the start of activities, hazard assessments are reviewed and approved by the project manager and regional

SH&E manager for execution. The hazard assessment, which also includes an evaluation of the project site, local conditions, and contract stipulations, is completed to determine a need for any of the following measures, including securing worksites:

1. Access Control
2. Vehicle Registration
3. Fencing
4. Security Guards
5. Outside Lighting
6. Secure Storage Areas
7. Alarm Systems
8. Identification badges for employees and visitors

AECOM also uses a Site Security Checklist to evaluate site security measures. Where physical security of the project site is required, project management, with the assistance of project Safety personnel, is responsible for organizing and supervising security guards. A local bonded security force may be used for this purpose. As an alternative, an in-house security organization may be established.

To secure worksites in urban environments, it is necessary to anticipate and plan for dense traffic adjacent to the worksite, and take measures to protect drivers, cyclists, pedestrians and workers. For each project, AECOM develops a comprehensive set of safety plans and procedures for the entire work team, while strictly following all local, state and federal regulations. When required by location regulations or when there is a potential for disruption of traffic, AECOM prepares a Traffic Control Plan in accordance with the Manual on Uniform Traffic Control Devices as well as state and local standards. AECOM also prepares a detailed Traffic Protection Plan taking into account the organized, systematic, safe conduct of the project, including, as applicable, detours, staging sequences, work vehicle access and egress from work sites, temporary barriers, removal of old pavement markings and selection and planned implementation of appropriate typical layouts for traffic control.

Special considerations for securing worksites in urban environments include:

- Allowing adequate transition areas for drivers to react to traffic shifts in advance of the work site, especially in high-speed traffic areas
- Providing clear advance warning signs, devices, and markings, appropriate for the volume and speed of traffic, including variable message signs where appropriate
- Adjusting signal phasing as necessary at intersections to accommodate anticipated changes in traffic volumes, or maintaining adjusting detectors in the pavement
- Providing adequate barrier protection between traffic and construction operations, particularly in high-speed areas
- Establishing safe access and walkways for pedestrians, even on roadway sections that are closed
- Coordinating with local transit authorities to maintain safe access to transit stops
- Establishing signed alternate routes for bicyclists as needed, separate from the pedestrian paths
- Providing for increased use of warning lights, safety lighting, advance warning systems and reflective Personal Protective Equipment for nighttime work

- (6) Please describe your orientation or training program for new hires and for newly promoted individuals (including foremen), including any safety related elements. If you do not have such a program, explain why.

*Response:*

AECOM has a comprehensive orientation and training program for new hires and newly promoted individuals which applies to all projects across the company, including design, construction and O&M staff.

AECOM places a great deal of emphasis on health and safety training for its employees. Newly hired employees are provided with SH&E Orientation training, which covers budgeting and staffing for safety, pre-planning, task hazard analysis, incident reporting and investigation, contractor management and "fit for duty" policies. AECOM also provides annual "refresher" courses for on these overarching safety policies.

Approximately 60% of AECOM's technical operations staff, and 100% of those who work at hazardous waste sites, have attended an initial 40-hour HAZWOPER health and safety training course. AECOM's supervisors and project managers have also attended an 8-hour HAZWOPER Supervisor training course. AECOM provides field safety training to all staff involved in onsite project work and office safety training to all employees.

AECOM has implemented a Training Needs Assessment (TNA) tool to help individual employees and their supervisors determine their unique SH&E training needs. The electronic tool asks for basic job function input and the output is a list of recommended SH&E training customized to the employee's assigned roles and responsibilities. The employee then reviews the training with their Supervisor, who then approves the training, and dates are set by the employee for completion of assigned training.

Safety training modules include, but are not limited to: incident investigation awareness; confined space awareness; fall protection; personal protective equipment usage; hearing safety; mobile and heavy equipment safety; vehicle and driver safety; fire extinguisher usage; cold stress prevention; bear safety; natural biological hazards; trenching and excavation; traffic safety; water safety; and railroad general roadway worker protection awareness.

AECOM uses a blended learning approach to delivering training. Our operations-based SH&E managers provide live training to employees within their regions, and training is tailored to meet the operational needs and challenges faced by the specific employees receiving training. Additionally, AECOM uses web-based training and internally developed "eLearning" to fulfill training needs while offering a flexible training schedule to our employees. By implementing a blended learning approach to training we maintain compliance with applicable regulations and client requirements while providing SH&E training to our employees with minimal impact to project schedules.

AECOM is officially recognized as a Diamond-level sponsor of the Board of Certified Safety Professional's Safety Trained Supervisor (STS) program, a ranking based on the number of STS certifications achieved. Since 1998, AECOM has provided training and support for more than 3,000 supervisors and managers to achieve their certifications. The STS program has been our best tool to ensure management and supervisors plan monitor oversee and carry out their work responsibilities in a safe manner. Below are parts of the training program for new hires and for newly promoted individuals (including foremen), and the respective examinations:

- Part 1. Conduct risk assessments by performing pre-task hazard analyses and evaluating PPE, tools, equipment and job expectations, in order to mitigate hazardous conditions and minimizing the risk of incident or injury.
- Part 2. Confirm that employees have the necessary job specific technical skills and qualifications by observing work practices or reviewing training records in order to ensure competent staff.
- Part 3. Ensure that personnel in the work area are oriented to safety and health considerations by communicating hazardous conditions and monitoring behaviors in order to help ensure that applicable rules and emergency action plans are understood.
- Part 4. Evaluate work practices by observing employees' behavior and the use of PPE, tools and equipment in order to minimize the risk of incident or injury and to comply with applicable standards.
- Part 5. Ensure safety and health standards are implemented through coaching and by correcting observed deficiencies in order to maintain a safe and healthful work environment.
- Part 6. Take appropriate action when confronted with unsafe acts and conditions by exercising stop work authority, modifying tasks, escalating issues to higher management,

consulting with qualified professionals (when outside of capabilities) and disciplining employees in order to minimize the risk of incident or injury.

- Part 7. Facilitate a positive, proactive culture by anticipating hazards, modeling and coaching safe behavior, reporting incidents, encouraging employee participation and communicating performance measures in order to enhance safety and health.
- Part 8. Evaluate employees using safety performance and behavior as key criteria in order to hold employees accountable for safety.
- Part 9. Participate in investigations that determine causes, identify corrective actions, document lessons learned and address employee concerns using recognized investigation techniques in order to minimize the risk of workplace incidents.
- Part 10. Verify the effectiveness of emergency action plans through training and practice in order to ensure effective response in crises.
- Part 11. Coordinate operations and work processes with other supervisors by communicating effectively in order to minimize risk.
- Part 12. Perform safety and health related recordkeeping in accordance with applicable standards using established procedures in order to document essential processes.
- Part 13. Complying with company ethics and policies by resolving issues consistently with these requirements in order to protect the interest of employees, employers and other stakeholders.

(7) With respect to no. (6) above, for any program that relates to foremen, indicate whether it includes instruction on the following:

Topic	Yes	No
Safety Work Practices	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Safety Supervision	<input checked="" type="checkbox"/>	<input type="checkbox"/>
On-site Meetings	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Emergency Procedures	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Accident Investigation	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Fire Protection and Prevention	<input checked="" type="checkbox"/>	<input type="checkbox"/>
New Worker Orientation	<input checked="" type="checkbox"/>	<input type="checkbox"/>

(8) How often does your entity hold safety meetings which extend to the laborer level, and how does this vary by type of project? If you do not hold such meetings, explain why not.

*Response:*

AECOM conducts safety meetings with all field employees on a daily basis. This occurs either through participation in the contractor’s daily safety meetings or through AECOM-led meetings, depending on the work to be conducted. The purpose of these meetings is to review fundamental SH&E preparations; review the relevant Task Hazard Analysis; establish emergency response requirements for the particular job; verify fit for duty status; and establish safe work behaviors that will be performed and may be observed during the day. These meetings include all on-site workers, including subcontractors, and extend to the laborer level. All meetings are to be relevant to the work being conducted.



- (9) Please explain any program or written practices that expressly address the safety of the traveling public and the safety of personnel within the construction area. If the entity has no such program or practices, explain why not.

*Response:*

AECOM's SH&E Management System includes a procedure for "Work Zone Traffic Control" (which includes a written plan) to address the safety of the traveling public. At a minimum, this safety plan includes information on the following, as needed:

- a) Pedestrian and worker safety;
  - b) Temporary traffic control elements, including (but not limited to) temporary traffic control zones, advance warning zones, transition areas, activity areas, termination areas, tapers,
  - c) buffers, detours, etc.;
  - d) Flagger controls, including high-visibility safety apparel, hand-signaling devices, and flagger procedures;
  - e) Temporary traffic control zone devices, including (but not limited to) signs, illuminated/flashing panels, warning devices, channelizing devices, drums, barricades, pavement markings; and
  - f) Temporary traffic control zone activities, including scope of work, duration, location, and portions of the roadway/shoulder affected.
- (10) Please describe any differences between the entity's standard or typical safety program or practices as described in your responses to (1) through (9) above and (a) the entity's safety program or practices on projects similar to this Project in size and scope and/or (b) the anticipated safety program or practices for this Project as may be preliminarily anticipated in the statement of technical approach included in the SOQ in accordance with Section 5 of the Volume 1 Requirements.

*Response:*

- (a) AECOM's approach to a safety program and safety practices on projects similar to this Project in size and scope are the essentially the same as described in this form, which is our standard (corporate) approach to SH&E. The only differences are at the Tier III and IV level at which AECOM develops client and project specific procedures.

AECOM recognizes that every project presents its own unique set of hazards, therefore AECOM's standard processes for SH&E includes the identification and evaluation of these hazards for each project, including the evaluation of risks, and the determination of the necessary controls to minimize risks on the project via a project specific plan that is based on AECOM's corporate standards as described in the previous answers on this form. The evaluation which includes hazards created by AECOM operations, by other contractors, as well as the general public considers both routine and non-routine tasks. The individual performing the assessment is experienced in the type of work under evaluation, and reviews the relevant procedure, regulatory requirements, and employee capabilities. AECOM, with its partners, anticipates taking a different approach for this Project.

- (b) The anticipated safety program or practices for this Project as may be preliminarily anticipated are described in the statement of technical approach included in the SOQ and further detailed in the Lead Contractor's Form G. In addition to adhering to its own SH&E Program Manual and developing project-specific safety documentation, AECOM, as a member of the Lead Engineer, will adopt the safety program of the Lead Contractor. In cases where the Lead Contractor's field safety procedures are more stringent than AECOM's normal procedures, the Lead Contractor's procedures will apply. In addition, AECOM personnel and AECOM's design subconsultants will undergo safety training as prescribed by the Lead Contractor's safety program.

## FORM G: SAFETY QUESTIONNAIRE

**Proposer Name:** Front Range Mobility Group  
**Name of Team Member:** HOCHTIEF PPP Solutions North America, Inc.  
**Role on Proposer:**
 Lead Contractor  
 Lead Engineer  
 Lead Operator  
 Joint venturer in Lead Operator: ACS/HOCHTIEF/AECOM (an unincorporated Joint Venture)

### **Form G: Safety Questionnaire**

#### **A. Required Statistics**

(1) Please provide the following information:

<b>Data Series</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
<b>Fatalities</b>				
Total Number of Fatalities (Workers):	n/a*	n/a*	n/a*	n/a*
Fatal Injury Rate:	n/a*	n/a*	n/a*	n/a*
Total Number of Fatalities (Members of the Public):	n/a*	n/a*	n/a*	n/a*
<b>Other Incidents</b>				
Total Number of Non-fatal Recordable Cases:	n/a*	n/a*	n/a*	n/a*
- Cases with Days Away from Work:	n/a*	n/a*	n/a*	n/a*
- Cases with Job Transfer or Restriction:	n/a*	n/a*	n/a*	n/a*
- Other Non-fatal Recordable Cases:	n/a*	n/a*	n/a*	n/a*
OSHA Incident Rate:	n/a*	n/a*	n/a*	n/a*
DART Rate:	n/a*	n/a*	n/a*	n/a*
Total Number of Non-fatal Injuries to Members of the Public:	n/a*	n/a*	n/a*	n/a*
<b>Lost Work Days</b>				
Total Lost Work Days:	n/a*	n/a*	n/a*	n/a*
Lost Workday Index:	n/a*	n/a*	n/a*	n/a*

Data Series	2011	2012	2013	2014
<b>Cost of Accidents</b>				
Cost of Accident per Employee:	n/a*	n/a*	n/a*	n/a*
Cost of Accidents involving Members of the Public:	n/a*	n/a*	n/a*	n/a*
<b>Safety Metrics</b>				
EMR	n/a*	n/a*	n/a*	n/a*

\*The required statistics are not applicable for HOCHTIEF PPP Solutions North America Inc., as these statistics/ratings are carried by affiliates like Project Companies for their relevant self-performance (as applicable) or by sub-contractors for their relevant performance (as applicable).

**Where:**

- (a) Fatal Injury Rate = (Number of fatal work injuries x 200,000,000) / total employee hours worked during the calendar year.
- (b) Non-fatal Recordable Cases refers to non-fatal occupation injuries and illnesses for Heavy and Civil Engineering Construction, as defined by the North American Industry Classification System (NAICS 237).
- (c) OSHA Incident Rate = (Number of cases of injury and illness x 200,000) / total employee hours worked during the calendar year.
- (d) DART Rate = (Number of recordable incidents of injury or illness that resulted in days away (lost), restricted or transferred during the calendar year) / 100 full time employees.
- (e) Lost Workday Index = (Number of lost workdays x 200,000) / total employee hours worked during the calendar year.
- (f) Cost of Accident per Employee = Total cost of accidents / average number of employees.
- (g) EMR refers to the National Council on Compensation Insurance (NCCI) Experience Modification Rating.

**Questions Regarding Safety Record and Approach**

- (1) How is your entity's management included in the accident reduction process?

*Response:*

Our entity is usually via our relevant Project Company (and as applicable via our Operations Company) involved in the accident reduction process over the life span of a project. It starts with the initial road safety audit. This audit suggests physical design improvements to enhance safety. We implement these measures before opening of the highway. Further, during the operational phase, the Safety Manager is overseeing, managing and auditing all operational safety measures. Accident statistics are being created and assessed. If applicable, further operational procedures are initiated. External safety consultants support this process.

- (2) How often do you hold site meetings for supervisors for a typical Reference Project? If you do not hold meetings, why not?

*Response:*

There are daily meeting with all staff including supervisors.

- (3) How often do you conduct project safety inspections? Who conducts these inspections? If you do not, why not?

*Response:*

Safety inspections are performed on a weekly basis by the Project Company management.

- (4) Please describe your written safety program. If you do not have one, explain why.

*Response:*

Our entity retains the responsibility for all written safety programs, customized for each individual project. Typically, a Safety Plan outlines the following elements:

- Process chart to achieve highest level of safety;
- Organization chart to execute efficient safety programs;
- Unambiguous responsibility matrix to determine job responsibilities;
- Reporting lines to clarify internal and external reporting streams ;
- Regulatory standards to follow, such as National Electric Safety Code (NESC), the Occupational Safety and Health Administration (OSHA), and any Standards or practices for safe installation or maintenance of required equipment per the Concession Agreement;
- Stakeholder management including state, local and federal safety organizations and regulatory bodies;
- Safety improvement metrics to continuously improve the level of safety;

- (5) Please describe your preferred methods for securing worksites in urban environments, including as such methods may promote the safety of members of the local community.

*Response:*

Besides public safety, worksite security is the main objective in all our O&M Projects. All worksites are secured according to public safety regulations: they are fenced off and clearly marked as work zone. All entrances/exits are unambiguously identifiable, to the public and staff. Worksites are allowed to be entered only with safety gear. Long term-worksites are monitored and on-call staff available after hours. All worksites are prepared for night work. In regard to the promotion of local safety local communities are initially and then on an ongoing basis informed about the worksites' safety and environmental impacts. Safety measures for local communities include safe access to private properties, private property protection.

- (6) Please describe your orientation or training program for new hires and for newly promoted individuals (including foremen), including any safety related elements. If you do not have such a program, explain why.

*Response:*

Workplace safety and health orientation begins on the first day of initial employment or job transfer. New employees go through a defined orientation/job transfer program and shall not start to work until they have demonstrated a clear understanding of the project and the relevant Project Company's or our in-house Safety Plan (depending on the kind of employment). Concretely, upon start of employment, each new employee is given a copy of the Safety Plan. The Plan is explained and practical features demonstrated through training. It is expected that all employees comply with safety requirements after having received the training. Newly promoted employees may not perform work in unusually hazardous areas or operate specialized equipment until they have received a safety orientation from his/her supervisor.

- (7) With respect to no. (6) above, for any program that relates to foremen, indicate whether it includes instruction on the following:

Topic	Yes	No
Safety Work Practices	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Safety Supervision	<input checked="" type="checkbox"/>	<input type="checkbox"/>
On-site Meetings	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Emergency Procedures	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Accident Investigation	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Fire Protection and Prevention	<input checked="" type="checkbox"/>	<input type="checkbox"/>
New Worker Orientation	<input checked="" type="checkbox"/>	<input type="checkbox"/>

- (8) How often does your entity hold safety meetings which extend to the laborer level, and how does this vary by type of project? If you do not hold such meetings, explain why not.

*Response:*

Safety meetings are held typically on a bi-weekly basis. Attendees are all staff, patrollers, technicians, and laborers with access to hazardous materials, specialized machinery or dangerous worksites. By performing regular on-site inspections and training the concessionaire ensures that safety procedures are followed. If deficiencies are detected ad hoc meetings are being called for, procedures revisited and adjusted. In addition, external, independently performed safety audits support in identifying improvement potentials.

- (9) Please explain any program or written practices that expressly address the safety of the traveling public and the safety of personnel within the construction area. If the entity has no such program or practices, explain why not.

*Response:*

Typically, safety programs for the travelling public include: a) a work zone design which follows all regulatory standards in regard to speed limits, lane reduction design, length of the construction zones, entrances/exits, markings, and protective barriers. Additional features can include billboards informing the travelling public about specifics of the construction zones. b) Operational protocols in regard to accident, incident management, towing, MOT, cleaning and re-opening procedures (laid out in the Emergency Response Plan).

In addition, regular safety training is mandatory for all personnel of any construction areas. Compliance with safety regulations strictly controlled. Independent external safety audits/checks allow for effectiveness of these programs.

- (10) Please describe any differences between the entity's standard or typical safety program or practices as described in your responses to (1) through (9) above and (a) the entity's safety program or practices on

projects similar to this Project in size and scope and/or (b) the anticipated safety program or practices for this Project as may be preliminarily anticipated in the statement of technical approach included in the SOQ in accordance with Section 5 of the Volume 1 Requirements.

*Response:*

Our safety programs and practices described above are implemented on major P3 projects in North America. The scope, environmental, and procedures are similar to the I-70 East Project. The Safety Program during Operations will be specifically developed with the other Lead Operator Members for the Project, using knowledge and lessons learned on other P3 Projects globally and applying the specific requirements in the RFP and Project Agreement (i.e. scope, service standards).



Colorado I-70 East Project

**FORM G: SAFETY QUESTIONNAIRE**

**Proposer Name:** Front Range Mobility Group  
**Name of Team Member:** ACS Infrastructure Development Inc.  
**Role on Proposer:**  Lead Contractor  
 Lead Engineer  
 Lead Operator  
 Joint venturer in Lead Operator: ACS/HOCHTIEF/AECOM (an unincorporated Joint Venture)

**Form G: Safety Questionnaire**

**A. Required Statistics**

(1) Please provide the following information:

<b>Data Series</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
<b><u>Fatalities</u></b>				
Total Number of Fatalities (Workers):	0	0	0	0
Fatal Injury Rate:	0	0	0	0
Total Number of Fatalities (Members of the Public):	0	0	0	0
<b><u>Other Incidents</u></b>				
Total Number of Non-fatal Recordable Cases:	2	3	0	2
- Cases with Days Away from Work:	1	1	0	1
- Cases with Job Transfer or Restriction:	0	0	0	0
- Other Non-fatal Recordable Cases:	1	2	0	1
OSHA Incident Rate:	8.45	12.3	0	6.78
DART Rate:	4.23	4.11	0	3.39
Total Number of Non-fatal Injuries to Members of the Public:	0	0	0	0
<b><u>Lost Work Days</u></b>				
Total Lost Work Days:	71	69	0	9
Lost Workday Index:	300.1	283.6	0	30.52

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<b>Cost of Accidents</b>				
Cost of Accident per Employee:	Not available	Not available	Not available	<b>\$497</b>
Cost of Accidents involving Members of the Public:	Not available	Not available	Not available	<b>\$3,127</b>
<b>Safety Metrics</b>				
EMR:	<b>.82</b>	<b>.87</b>	<b>.95</b>	<b>.86</b>

**Where:**

- (a) Fatal Injury Rate = (Number of fatal work injuries x 200,000,000) / total employee hours worked during the calendar year.
- (b) Non-fatal Recordable Cases refers to non-fatal occupation injuries and illnesses for Heavy and Civil Engineering Construction, as defined by the North American Industry Classification System (NAICS 237).
- (c) OSHA Incident Rate = (Number of cases of injury and illness x 200,000) / total employee hours worked during the calendar year.
- (d) DART Rate = (Number of recordable incidents of injury or illness that resulted in days away (lost), restricted or transferred during the calendar year) / 100 full time employees.
- (e) Lost Workday Index = (Number of lost workdays x 200,000) / total employee hours worked during the calendar year.
- (f) Cost of Accident per Employee = Total cost of accidents / average number of employees.
- (g) EMR refers to the National Council on Compensation Insurance (NCCI) Experience Modification Rating.

**B. Questions Regarding Safety Record and Approach**

- (1) How is your entity’s management included in the accident reduction process?

*Response: At each concession the Safety Manager (either required or appointed) is involved in all accident investigations in order to review procedures, investigate procedural errors, and make improvements.*

- (2) How often do you hold site meetings for supervisors for a typical Reference Project? If you do not hold meetings, why not?

*Response: Supervisor site meetings are held weekly, including safety review meetings, as well as daily self-safety reviews. During these meetings, our personnel make a review of incidents that have occurred, analysis of the team’s response to such incidents and a discussion of lessons learned.*

- (3) How often do you conduct project safety inspections? Who conducts these inspections? If you do not, why not?



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*Response: Comprehensive project safety inspections are performed monthly by project Safety Managers*

- (4) Please describe your written safety program. If you do not have one, explain why.

*Response: Each project safety plan is developed specifically for the project. In general the project Safety plan outlines the following.*

*Safety is of utmost importance to the Concessionaire. As such safety programs involving training, enforcement and oversight are key components of the Safety Plan. The main components of the plan will follow the project requirements outlined in the concession agreement. These items are as follows:*

- Responsibility for ensuring that all equipment used by the Concessionaire is maintained in a safe and efficient manner in accordance with State, Local and Federal laws, safety organizations, regulations and guidelines pertaining to the providing the required services.*
- Following all safety requirements outlined in the National Electric Safety Code (NESC), the Occupational Safety and Health Administration (OSHA), and any Standards or practices for safe installation or maintenance of required equipment per the Concession Agreement.*
- Responsibility for any injury to persons or damage to property that occurs during performing any of the maintenance services under the project.*
- Responsibility for the safety of its personnel and for maintaining the safety required and providing safety equipment and procedures for the protection of employees and the public throughout the areas of the applicable O&M limits.*
- Responsibility for the burden of any of the direct and associated and/or indirect costs for any deficiency that may cause harm to life, property or violate any rules or regulations such as ADA, OSHA or others.*

*In addition to these requirements, the Concessionaire has included additional activities that it considers to be prudent practices relative to the health and safety of its employees, tailored specifically to the unique safety requirements and considerations of each project.*

- (5) Please describe your preferred methods for securing worksites in urban environments, including as such methods may promote the safety of members of the local community.

*Response: Proper MOT (MUTCD guidelines) and lane closure procedures, truck mounted attenuators, mobile barrier systems, lighting for night time activities, public advisories (during and prior to work), mobile message boards to alert driver.*

- (6) Please describe your orientation or training program for new hires and for newly promoted individuals (including foremen), including any safety related elements. If you do not have such a program, explain why.

*Response: Workplace safety and health orientation begins on the first day of initial employment or job transfer. New employees shall not begin work until they have read and demonstrated an understanding of the Concessionaire's Safety Plan or DOT requirements and have attended the New Employee Orientation training. In addition, new employees may not perform work in unusually hazardous areas or operate specialized equipment until they have received a safety orientation from his/her supervisor.*

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*Upon employment, each employee is given a copy of the Safety Plan. Each employee has the responsibility to review these documents and will be expected to comply with these requirements. If an employee cannot meet the requirements found in this Safety Plan, the employee must immediately notify the local supervisor for additional information. If an employee has a question or concern with any information found in the documents, the employee must ask their immediate supervisor for a clarification.*

*All new employees receive New Employee Orientation prior to being released to the field. After the training has been completed, the Supervisor will conduct training on PPE and other job specific requirements and procedures. Employee will receive a more comprehensive training program consisting of approximately 10 hours of OSHA regulation instruction.*

- (7) With respect to no. (6) above, for any program that relates to foremen, indicate whether it includes instruction on the following:

Topic	Yes	No
Safety Work Practices	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Safety Supervision	<input checked="" type="checkbox"/>	<input type="checkbox"/>
On-site Meetings	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Emergency Procedures	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Accident Investigation	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Fire Protection and Prevention	<input checked="" type="checkbox"/>	<input type="checkbox"/>
New Worker Orientation	<input checked="" type="checkbox"/>	<input type="checkbox"/>

- (8) How often does your entity hold safety meetings which extend to the laborer level, and how does this vary by type of project? If you do not hold such meetings, explain why not.

*Response: All projects hold weekly safety briefings to review safety procedures. In addition monthly, quarterly, and annual safety training and inspections of equipment are performed.*

- (9) Please explain any program or written practices that expressly address the safety of the traveling public and the safety of personnel within the construction area. If the entity has no such program or practices, explain why not.

*Response: Each project has a written Safety Plan that is updated throughout the concession period. This Plan outlines the procedures and practices for protecting the public and the employees of the concessionaire.*

- (10) Please describe any differences between the entity's standard or typical safety program or practices as described in your responses to (1) through (9) above and (a) the entity's safety program or practices on projects similar to this Project in size and scope and/or (b) the anticipated safety program or

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practices for this Project as may be preliminarily anticipated in the statement of technical approach included in the SOQ in accordance with Section 5 of the Volume 1 Requirements.

*Response: Our safety program and practices described above are implemented on major P3 projects in North America. The scope, environmental, and procedures are similar to the I-70 East Project. The Safety Program during Operations will be specifically developed with the other Lead Operator Members for the Project, using knowledge and lessons learned on other concessions globally and applying the specific requirements in the RFP and Project Agreement (i.e. scope, service standards).*

## Form G: Safety Questionnaire

**Proposer Name:** Front Range Mobility Group  
**Name of Team Member:** AECOM Capital, Inc.  
**Role on Proposer:**
 Lead Contractor  
 Lead Engineer  
 Lead Operator  
 Joint venturer in Lead Operator: ACS/HOCHTIEF/AECOM (an unincorporated Joint Venture)

### Form G: Safety Questionnaire

#### A. Required Statistics

(1) Please provide the following information:

Data Series	2011	2012	2013	2014
<b>Fatalities</b>				
Total Number of Fatalities (Workers):	n/a <sup>1</sup>	n/a	n/a	n/a
Fatal Injury Rate:	n/a	n/a	n/a	n/a
Total Number of Fatalities (Members of the Public):	n/a	n/a	n/a	n/a
<b>Other Incidents</b>				
Total Number of Non-fatal Recordable Cases:	n/a	n/a	n/a	n/a
- Cases with Days Away from Work:	n/a	n/a	n/a	n/a
- Cases with Job Transfer or Restriction:	n/a	n/a	n/a	n/a
- Other Non-fatal Recordable Cases:	n/a	n/a	n/a	n/a
OSHA Incident Rate:	n/a	n/a	n/a	n/a
DART Rate:	n/a	n/a	n/a	n/a
Total Number of Non-fatal Injuries to Members of the Public:	n/a	n/a	n/a	n/a
<b>Lost Work Days</b>				
Total Lost Work Days:	n/a	n/a	n/a	n/a
Lost Workday Index:	n/a	n/a	n/a	n/a

<sup>1</sup> Safety numbers for the Team Member are not comparable because the safety records for the O&M projects lie with other affiliates, this is the case for all instances in the table in A(1) which have "n/a".

<b>Cost of Accidents</b>				
Cost of Accident per Employee:	n/a	n/a	n/a	n/a
Cost of Accidents involving Members of the Public:	n/a	n/a	n/a	n/a
<b>Safety Metrics</b>				
EMR:	0.64	0.66	0.53	0.50

**Where:**

- (a) Fatal Injury Rate = (Number of fatal work injuries x 200,000,000) / total employee hours worked during the calendar year.
- (b) Non-fatal Recordable Cases refers to non-fatal occupation injuries and illnesses for Heavy and Civil Engineering Construction, as defined by the North American Industry Classification System (NAICS 237).
- (c) OSHA Incident Rate = (Number of cases of injury and illness x 200,000) / total employee hours worked during the calendar year.
- (d) DART Rate = (Number of recordable incidents of injury or illness that resulted in days away (lost), restricted or transferred during the calendar year) / 100 full time employees.
- (e) Lost Workday Index = (Number of lost workdays x 200,000) / total employee hours worked during the calendar year.
- (f) Cost of Accident per Employee = Total cost of accidents / average number of employees.
- (g) EMR refers to the National Council on Compensation Insurance (NCCI) Experience Modification Rating.

**B. Questions Regarding Safety Record and Approach**

- (1) How is your entity’s management included in the accident reduction process?

*Response:*

Safety Health & Environment (SH&E) is not only a priority in AECOM but a Core Value that is consistent across the organization. AECOM’s company-wide SH&E Management System (“SH&E System”) sets out the policies and commitments for AECOM and has been developed to ensure that employees (including management), subcontractors and clients of AECOM fully understand, and are themselves committed to, this corporate responsibility. The SH&E System includes procedures, data and records required by BS OHSAS 18001 and ISO 14001. Additional procedures are included to ensure consistent methods, effective controls and comprehensive records. The SH&E System also aligns with structure outlined in the Integrated Management System (IMS) Manual (G1-001-MN1) used company-wide. For details on the 4-tier structure of AECOM’s SH&E System including its written manuals, processes and procedures refer to question 4.

Management is at the core of AECOM’s SH&E System, including its efforts for accident reduction. AECOM remains committed to the goal of zero safety related incidents, and will continue to foster our belief that all injuries are preventable. Our core values and business principles will guide our

efforts to provide the systems, tools, and processes that inspire our employees and subcontractors to embrace our aspirations, understand their personal responsibilities in achieving our goals, and exhibit the individual behaviors that are fundamental to our success.

We are continuing to improve our safety program that stresses communication, education, safe work practices and procedures, and tracking of leading indicators of safety performance (e.g., Near Miss Reporting and Safety Observations/Conversations).

As our work force grows, and with an ever increasing number of clients and projects, so does our commitment to corporate responsibility for employee safety, health, and environment. As an expression of this commitment, a SH&E Management System that sets out the policies and commitments for AECOM has been developed to ensure that employees and clients of AECOM fully understand, and are themselves committed to, this corporate responsibility.

Deep-rooted in this program, our “Culture of Caring” sets an expectation for each employee, contractor and business partner to take personal responsibility for keeping his or her colleagues, and others associated with our work, safe. Whether located on a project site, in the office or at home, we embrace safety as a lifestyle choice by maintaining essential safety procedures and behaviors everywhere we go.

### Safety for Life

“Safety for Life” is AECOM’s comprehensive internal SH&E program that drives AECOM toward proactively incorporating safety standards and innovative techniques into everything we do – with the ultimate goal of achieving zero work-related injuries and/or illnesses; preventing damage to property and the environment; and maintaining an overall environmentally friendly and sustainable workplace.

Our vision is to lead our industry in safety by further enhancing our already world-class safety management systems. These systems will meet global standards for certification and will provide a safe working environment for our employees. These systems will also be executable by our project teams and will continue to meet the strictest requirements of our clients who are most focused on safety.

AECOM’s nine “life preserving principles” that form the core of our foundation are described below:

- **Demonstrated management commitment** – Our executive, senior and project managers will lead the SH&E improvement process and continuously demonstrate support and commitment
- **Employee Participation** – Our employees will be encouraged and empowered to become actively engaged in our safety processes through their active participation in safety committees, training, audits, observations and inspections. Employees will be encouraged to participate in health initiatives and adopt a healthy lifestyle
- **Budgeting and Staffing for Safety** – Our safety staff will be competent, fully trained and qualified to provide technical resources to our internal and external client. A budget to support safety activities will be included in project proposals.
- **Pre-Planning** – Our design, engineering, project and construction management staffs will deploy effective risk-mitigation efforts to design, plan and build safety into every project. Pre-project and pre-task planning will be an effective tool in protecting our employees and the environment.
- **Contractor Management** – Our project staff will work closely with our sub-consultants, subcontractors, contractors and Joint Venture Partners to provide a safe work environment for

employees and members of the public. Our goal of SH&E performance excellence will be equally shared by all project participants.

- **Recognition and Rewards** – Our employees will be recognized for their efforts in working safely and their support of our safety efforts.
- **Safety, Orientation and Training** – Our employees will be provided with effective safety training in order to identify and mitigate hazards in the workplace to prevent injuries to themselves and others who may be affected by their actions.
- **Incident Investigations** – Our managers and safety professionals will investigate all recordable incidents and serious near misses to identify contributing factors and root causes in order to prevent a reoccurrence. Lessons Learned shall be identified, communicated and implemented.
- **Fit for Duty** - Our employees are responsible to report to work each day fit for duty and not to pose a health and safety hazard to themselves or others

- (2) How often do you hold site meetings for supervisors for a typical Reference Project? If you do not hold meetings, why not?

*Response:*

On O&M projects, supervisor site meetings are held weekly. These are led by the Project Manager or Superintendent, and are a chance for the field supervision and management to formally discuss any safety issues. In these meetings a review of incidents that have occurred, action items derived from the incidents, and lessons learned are discussed. Details are discussed pertaining to significant incidents that have occurred within the industry, and precautions put in place to ensure these do not happen within AECOM. The weekly supervisors' safety meeting also allows management and supervisors a chance to evaluate their own safety performance and strive to develop a positive safety culture.

- (3) How often do you conduct project safety inspections? Who conducts these inspections? If you do not, why not?

*Response:*

AECOM conducts inspections of our project sites on both a daily and weekly basis.

The safety professionals on the project are tasked with daily inspections along with all foreman and superintendents.

Management conducts regular weekly Management Site Visits, which provide an additional check on our operations. Project management individuals are expected to accompany the safety manager on a weekly basis to do an entire project safety inspection.

Additionally, SH&E corporate management will periodically conduct audits of the project as part of our leading metric program.

- (4) Please describe your written safety program. If you do not have one, explain why.

*Response:*

AECOM's SH&E Program is an integral part of the company's overall business plan. Based on proven management principles and practices, the program consists of an organized framework that is continually monitored and periodically reviewed in response to changing internal and external factors. The program establishes the minimum requirements for management involvement,

responding to SH&E incidents, monitoring SH&E performance, and communicating with staff regarding their occupational health and safety obligations. It is meant to supplement the standards set by AECOM's clients and state, provincial, territorial, and federal regulatory agencies.

AECOM's SH&E Program Manual establishes a uniform, systematic and cost-effective approach to administrating SH&E issues and concerns associated with AECOM personnel and services. The SH&E Program Management System has been structured to align itself with the key elements of OHSAS 18001 (Occupational Health and Safety Assessment Series), ISO 14001 (the International Standard for Environmental Management Systems), CSA Z1000-06 (Canadian Standards Association OH&S Management System), COR (Provincial Certificate of Recognition programs in Canada) and Regulatory Agency Requirements.

All AECOM employees in the Americas are responsible for maintaining compliance with the SH&E Policy, Program Manual, and Standard Operating Procedures. Subject to the scope of a contract, elements of AECOM's SH&E Program may be applied to subcontractors and equipment suppliers to maintain an adequate level of SH&E awareness, control and cooperation with AECOM and with our clients' needs.

The written program consists of the following four levels of documentation:

1. **Tier I – SH&E Policy Statement** – The SH&E Policy Statement confirms AECOM's commitment to protect both the health and safety of everyone who may be affected by our activities and services, as well as protecting the environment. The SH&E Policy Statement is published and communicated to all employees through the company intranet and postings. The Policy Statement is available, upon request, to the public and other interested parties. AECOM subcontractors are made aware of SH&E expectations as they relate to products, services and operations either provided to or on behalf of AECOM. The Policy is reviewed annually as part of the SH&E Management Review process to ensure policies remain appropriate to the activities, products and services of AECOM and continue to meet SH&E objectives.
2. **Tier II – SH&E Management System Manual & Tier II Requirements** – This document applies to all operations globally. The document provides a description of the scope of the SH&E Management System, its elements, interaction between elements and referenced documentation. The Tier II Requirements are the minimum SH&E requirements which are required to be implemented.
3. **Tier III Procedures** – These procedures and supplemental documents are developed based on Geography and/or Business Group requirements (including design, construction and O&M services as are relevant to this Project). These must be consistent with all requirements of the associated Tier II Procedure, only providing additional Region or Business Group details or requirements. At this level, Tier III and Tier IV, management develops project and scope of work specific procedures for each project.

In addition to the Tier II requirements identified above, AECOM achieves SH&E commitments through our Safety for Life program which is AECOM's comprehensive internal program that drives AECOM toward proactively incorporating our SH&E standards and innovative techniques into everything we do – with the ultimate goal of achieving zero work-related injuries and/or illnesses, preventing damage to property and the environment, and maintaining an overall environmentally friendly and sustainable workplace.

- (5) Please describe your preferred methods for securing worksites in urban environments, including as such methods may promote the safety of members of the local community.

*Response:*



Securing worksites is key to ensure the safety of both staff and members of the community. AECOM understands that each project has unique requirements and constraints and therefore all projects involving field work, including projects in urban environments, are required to perform a hazard assessment addressing physical and chemical hazards. The hazard assessment is documented, based on AECOM's project-specific role, nature of its services and analysis of safety risk. Prior to the start of activities, hazard assessments are reviewed and approved by the project manager and regional SH&E manager for execution. The hazard assessment, which also includes an evaluation of the project site, local conditions, and contract stipulations, is completed to determine a need for any of the following measures, including securing worksites:

1. Access Control
2. Vehicle Registration
3. Fencing
4. Security Guards
5. Outside Lighting
6. Secure Storage Areas
7. Alarm Systems
8. Identification badges for employees and visitors

AECOM also uses a Site Security Checklist to evaluate site security measures. Where physical security of the project site is required, project management, with the assistance of project Safety personnel, is responsible for organizing and supervising security guards. A local bonded security force may be used for this purpose. As an alternative, an in-house security organization may be established.

To secure worksites in urban environments, it is necessary to anticipate and plan for dense traffic adjacent to the worksite, and take measures to protect drivers, cyclists, pedestrians and workers. For each project, AECOM develops a comprehensive set of safety plans and procedures for the entire work team, while strictly following all local, state and federal regulations. When required by location regulations or when there is a potential for disruption of traffic, AECOM prepares a Traffic Control Plan in accordance with the Manual on Uniform Traffic Control Devices as well as state and local standards. AECOM also prepares a detailed Traffic Protection Plan taking into account the organized, systematic, safe conduct of the project, including, as applicable, detours, staging sequences, work vehicle access and egress from work sites, temporary barriers, removal of old pavement markings and selection and planned implementation of appropriate typical layouts for traffic control.

Special considerations for securing worksites in urban environments include:

- Allowing adequate transition areas for drivers to react to traffic shifts in advance of the work site, especially in high-speed traffic areas
- Providing clear advance warning signs, devices, and markings, appropriate for the volume and speed of traffic, including variable message signs where appropriate
- Adjusting signal phasing as necessary at intersections to accommodate anticipated changes in traffic volumes, or maintaining adjusting detectors in the pavement
- Providing adequate barrier protection between traffic and construction operations, particularly in high-speed areas
- Establishing safe access and walkways for pedestrians, even on roadway sections that are closed
- Coordinating with local transit authorities to maintain safe access to transit stops
- Establishing signed alternate routes for bicyclists as needed, separate from the pedestrian paths

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- Providing for increased use of warning lights, safety lighting, advance warning systems and reflective Personal Protective Equipment for nighttime work
- (6) Please describe your orientation or training program for new hires and for newly promoted individuals (including foremen), including any safety related elements. If you do not have such a program, explain why.

*Response:*

AECOM has a comprehensive orientation and training program for new hires and newly promoted individuals which applies to all projects across the company, including design, construction and O&M staff.

AECOM places a great deal of emphasis on health and safety training for its employees. Newly hired employees are provided with SH&E Orientation training, which covers budgeting and staffing for safety, pre-planning, task hazard analysis, incident reporting and investigation, contractor management and "fit for duty" policies. AECOM also provides annual "refresher" courses for on these overarching safety policies.

Approximately 60% of AECOM's technical operations staff, and 100% of those who work at hazardous waste sites, have attended an initial 40-hour HAZWOPER health and safety training course. AECOM's supervisors and project managers have also attended an 8-hour HAZWOPER Supervisor training course. AECOM provides field safety training to all staff involved in onsite project work and office safety training to all employees.

AECOM has implemented a Training Needs Assessment (TNA) tool to help individual employees and their supervisors determine their unique SH&E training needs. The electronic tool asks for basic job function input and the output is a list of recommended SH&E training customized to the employee's assigned roles and responsibilities. The employee then reviews the training with their Supervisor, who then approves the training, and dates are set by the employee for completion of assigned training.

Safety training modules include, but are not limited to: incident investigation awareness; confined space awareness; fall protection; personal protective equipment usage; hearing safety; mobile and heavy equipment safety; vehicle and driver safety; fire extinguisher usage; cold stress prevention; bear safety; natural biological hazards; trenching and excavation; traffic safety; water safety; and railroad general roadway worker protection awareness.

AECOM uses a blended learning approach to delivering training. Our operations-based SH&E managers provide live training to employees within their regions, and training is tailored to meet the operational needs and challenges faced by the specific employees receiving training. Additionally, AECOM uses web-based training and internally developed "eLearning" to fulfill training needs while offering a flexible training schedule to our employees. By implementing a blended learning approach to training we maintain compliance with applicable regulations and client requirements while providing SH&E training to our employees with minimal impact to project schedules.

Additionally, AECOM is officially recognized as a Diamond-level sponsor of the Board of Certified Safety Professional's Safety Trained Supervisor (STS) program, a ranking based on the number of STS certifications achieved. Since 1998, AECOM has provided training and support for more than 3,000 supervisors and managers to achieve their certifications. The STS program has been our best tool to ensure management and supervisors plan monitor oversee and carry out their work responsibilities in a safe manner. Below are parts of the training program for new hires and for newly promoted individuals (including foremen), and the respective examinations:

- Part 1. Conduct risk assessments by performing pre-task hazard analyses and evaluating

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PPE, tools, equipment and job expectations, in order to mitigate hazardous conditions and minimizing the risk of incident or injury.

- Part 2. Confirm that employees have the necessary job specific technical skills and qualifications by observing work practices or reviewing training records in order to ensure competent staff.
- Part 3. Ensure that personnel in the work area are oriented to safety and health considerations by communicating hazardous conditions and monitoring behaviors in order to help ensure that applicable rules and emergency action plans are understood.
- Part 4. Evaluate work practices by observing employees' behavior and the use of PPE, tools and equipment in order to minimize the risk of incident or injury and to comply with applicable standards.
- Part 5. Ensure safety and health standards are implemented through coaching and by correcting observed deficiencies in order to maintain a safe and healthful work environment.
- Part 6. Take appropriate action when confronted with unsafe acts and conditions by exercising stop work authority, modifying tasks, escalating issues to higher management, consulting with qualified professionals (when outside of capabilities) and disciplining employees in order to minimize the risk of incident or injury.
- Part 7. Facilitate a positive, proactive culture by anticipating hazards, modeling and coaching safe behavior, reporting incidents, encouraging employee participation and communicating performance measures in order to enhance safety and health.
- Part 8. Evaluate employees using safety performance and behavior as key criteria in order to hold employees accountable for safety.
- Part 9. Participate in investigations that determine causes, identify corrective actions, document lessons learned and address employee concerns using recognized investigation techniques in order to minimize the risk of workplace incidents.
- Part 10. Verify the effectiveness of emergency action plans through training and practice in order to ensure effective response in crises.
- Part 11. Coordinate operations and work processes with other supervisors by communicating effectively in order to minimize risk.
- Part 12. Perform safety and health related recordkeeping in accordance with applicable standards using established procedures in order to document essential processes.
- Part 13. Complying with company ethics and policies by resolving issues consistently with these requirements in order to protect the interest of employees, employers and other stakeholders.

- (7) With respect to no. (6) above, for any program that relates to foremen, indicate whether it includes instruction on the following:

Topic	Yes	No
Safety Work Practices	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Safety Supervision	<input checked="" type="checkbox"/>	<input type="checkbox"/>
On-site Meetings	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Emergency Procedures	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Accident Investigation	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Fire Protection and Prevention	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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Topic	Yes	No
New Worker Orientation	<input checked="" type="checkbox"/>	<input type="checkbox"/>

- (8) How often does your entity hold safety meetings which extend to the laborer level, and how does this vary by type of project? If you do not hold such meetings, explain why not.

*Response:*

AECOM conducts safety meetings with all field employees on a daily basis, including employees engaged in O&M work. These safety meetings at a minimum are held at the beginning of each shift. The intent of this safety meeting being at the start of the shift is to get the team members starting to think about safety from the very first minute they begin work. In addition to the safety meeting a Job Hazard Analysis (JHA) will be reviewed with participation from all employees in each work crew. The JHA will be signed off by all members of the team and updated throughout the day if the job changes or conditions change. These meetings only vary by project in the material that is discussed. All meetings are to be relevant to the work being conducted.

- (9) Please explain any program or written practices that expressly address the safety of the traveling public and the safety of personnel within the construction area. If the entity has no such program or practices, explain why not.

*Response:*

AECOM's SH&E Management System includes a procedure for "Work Zone Traffic Control" (which includes a written plan) to address the safety of the traveling public. At a minimum, this safety plan includes information on the following, as needed:

- a) Pedestrian and worker safety;
  - b) Temporary traffic control elements, including (but not limited to) temporary traffic control zones, advance warning zones, transition areas, activity areas, termination areas, tapers,
  - c) buffers, detours, etc.;
  - d) Flagger controls, including high-visibility safety apparel, hand-signaling devices, and flagger procedures;
  - e) Temporary traffic control zone devices, including (but not limited to) signs, illuminated/flashing panels, warning devices, channelizing devices, drums, barricades, pavement markings; and
  - f) Temporary traffic control zone activities, including scope of work, duration, location, and portions of the roadway/shoulder affected.
- (10) Please describe any differences between the entity's standard or typical safety program or practices as described in your responses to (1) through (9) above and (a) the entity's safety program or practices on projects similar to this Project in size and scope and/or (b) the anticipated safety program or practices for this Project as may be preliminarily anticipated in the statement of technical approach included in the SOQ in accordance with Section 5 of the Volume 1 Requirements.

*Response:*

- (a) AECOM's approach to a safety program and safety practices on projects similar to this Project in size and scope are the essentially the same as described in this form, which is our standard (corporate) approach to SH&E. The only differences are at the Tier III and IV level at which AECOM develops client and project specific procedures.

## Colorado I-70 East Project

AECOM recognizes that every project presents its own unique set of hazards, therefore AECOM's standard processes for SH&E includes the identification and evaluation of these hazards for each project, including the evaluation of risks, and the determination of the necessary controls to minimize risks on the project via a project specific plan that is based on AECOM's corporate standards as described in the previous answers on this form. The evaluation which includes hazards created by AECOM operations, by other contractors, as well as the general public considers both routine and non-routine tasks. The individual performing the assessment is experienced in the type of work under evaluation, and reviews the relevant procedures, regulatory requirements, and employee capabilities. AECOM, with its partners, anticipates taking a different approach for this Project.

- (b) Response: Our safety program and practices described above are implemented on major P3 projects in North America. The scope, environmental, and procedures are similar to the I-70 East Project. The Safety Program during Operations will be specifically developed with the other Lead Operator Members for the Project, using knowledge and lessons learned on other concessions globally and applying the specific requirements in the RFP and Project Agreement (i.e. scope, service standards).



## FORM H: STAKEHOLDER AND ECONOMIC ENGAGEMENT QUESTIONNAIRE

**Proposer Name:** Front Range Mobility Group

### Form H: Stakeholder and Economic Engagement Questionnaire



**No. Questions & Responses**

(1) **Describe your experience on Reference Projects located in neighborhoods designated as environmental justice communities.**




Response:

The Front Range Mobility Group (FRMG) team members are familiar with the environmental justice issues in the Globeville-Elryia-Swansea (GES) Neighborhoods of Denver from the legacy of the Asarco Superfund site, including impacts from air; noise; odor pollution; and hazardous materials. Protecting the health, safety, and environment of communities where we work is a core value of our team; and we have a proven track-record of managing similar issues on past projects. Our local team members, such as Flatiron and CH2M (both headquartered in the greater Denver area), are especially well-vested in managing the environmental sensitivities in the GES neighborhoods.

From our past experience working in environmental justice communities on Reference Projects discussed in the table below, we know the importance of partnering with the community early in the process to address related community concerns expressed in the Final Environmental Impact Statement (FEIS) and other project documents. Consistent with our approach on similar projects, we plan to utilize the U.S. Environmental Protection Agency’s (EPA’s) published framework for addressing environmental justice issues through a collaborative, community-based approach.

Reference Project	Experience in Neighborhoods Designated as Environmental Justice Communities
 <p>Gold Line Eastside LRT Extension Los Angeles, CA \$629.4 million AECOM</p>	<p>To address environmental justice concerns relating to the project, AECOM maintained a commitment to local hiring and to support and develop local businesses. The team worked closely with the Mexican American Opportunity Foundation, Craft Labor Unions, Greater Los Angeles African American Chamber of Commerce, and the Association of General Contractors. The project received the Angel Award presented by the East Los Angeles Community Youth Center in recognition of their community efforts.</p> <p>AECOM also included the public and local community in the station design. East Los Angeles is a 7.4-square mile area that is home to more than 126,000 residents, about 95% of whom share a Hispanic or Latino ancestry. To highlight East Los Angeles’ roots, the new Eastside Extension stations feature different themes, including a cultural wall and station identifying with local artists and culture celebrating the area’s diversity.</p>
 <p>I-225 LRT Extension Aurora, CO \$225 million AECOM</p>	<p>To accommodate the needs of the City of Aurora and RTD, ROW was needed in multiple locations within environmental justice areas. AECOM minimized impacts by optimizing the design to compress the overall footprint and reduce the number of relocations where viable. The design team also provided reasonable access to businesses, residences, and community facilities within the project area.</p> <p>The overall project created jobs for residents in the area to help construct, operate, and maintain the I-225 LRT. It also improved transit accessibility to jobs and community facilities near stations and the region as a whole. RTD estimated that over 56,000 jobs and 17,000 households would be located within 0.5 miles of stations by 2035.</p>

**Question 1 Response continued:**

Reference Project	Experience in Neighborhoods Designated as Environmental Justice Communities
 <p>I-71 / I-670 Columbus Crossing Columbus, OH \$200 million CH2M<sup>1</sup></p>	<p>Once the cultural and commercial heart of Columbus for African Americans, the King-Lincoln neighborhood was essentially cut off from downtown with the creation of I-71 in the 1960s. This caused significant socioeconomic decline in the area.</p> <p>CH2M's I-71/I-670 Columbus Crossing project increased capacity along the highway corridor while improving connections into and out of downtown Columbus. Local community involvement, education campaigns, and communication about the I-71/I-670 construction were part of the project's successful environmental justice program. A Community Involvement Officer led a massive campaign of media relations (over 200 news releases, 100 different printed/broadcast stories, a project website and telephone hotline, and weekly newsletters to 1,600 stakeholders). Additionally, one-on-one meetings with stakeholders were conducted, and over 70 group presentations and public meetings were held.</p> <p>Critical to project success was the Long Street Bridge — a vehicle and pedestrian bridge that connected the Lincoln-King neighborhood with the rest of the city, and helped to position this neighborhood for rebirth while alleviating some socio-economic issues. The bridge was built with a park-like cap to accommodate local and disadvantaged business development. It features a unique cultural wall composed of up to 60 informative panels displaying 139 images that celebrate the neighborhood's African-American heritage. The wall was designed by local artists with input from a community-based advisory group and public meetings, more than 1,000 local residents turned out to celebrate the Long Street Bridge's opening.</p>
 <p>I-15 North Corridor Las Vegas, NV \$251 million CH2M<sup>1</sup></p>	<p>The I-15 North project required addressing several elements related to environmental justice issues due to the project's location in the urban area of North Las Vegas with disadvantaged neighborhoods. The project team conducted neighborhood meetings with multilingual interpreters, and implemented a comprehensive communications plan using several media tools such as newspaper, radio, television, mailings, and internet communications.</p>
 <p>Cooper River Bridge Charleston, SC \$540 million Flatiron</p>	<p>The project included design and construction through disadvantaged and low-income neighborhoods, requiring displacement of some residents and the need to address issues relating to environmental justice. Flatiron's team developed context-sensitive solutions to assess and minimize community impacts. A committee consisting of representatives from Flatiron, the Owner, Federal Highway Administration (FHWA), and consultants was created to analyze related issues and develop solutions to minimize adverse impacts associated with construction.</p> <p>In response to the community's grassroots efforts to advocate for bicycle and pedestrian facilities on the new bridge, Flatiron's team incorporated these facilities into the project. A community liaison worked with the communities to assess their desires and used strategies such as video renderings to communicate how the corridor would remain pedestrian-friendly.</p>

- (2) **To the extent not addressed in the response to (1) above, describe Proposer's experience on Reference Projects where environmental concerns (including noise, air quality, ground water, and/or hazardous materials management concerns), traffic management concerns, concerns regarding access to businesses, residences and other resources located within the affected community, and the generalized impacts of construction were among the primary concerns of the local community.**



Response:

The I-70 East Corridor is characterized through areas of commercial distribution, small businesses, manufacturing, and residential areas. Our team brings recent and relevant experience managing construction in similar diverse and densely populated areas with intense commerce on Reference Projects in Colorado and throughout North America. We commit to bring our best practices and most experienced individuals to effectively minimize construction-related impacts.




**Question 2 Response continued:**

On all of our Reference Projects, the FRMG team members continually monitor performance in meeting the environmental requirements and make adjustments to our approach whenever necessary to maintain our commitment for continued improvement. We also commit to being good neighbors during and after construction, partnering with local communities, and working closely with the owners to measure the effectiveness of our efforts. This not only includes informing the public of upcoming construction activities so they can plan accordingly, but also engaging them early in the design process, prior to starting construction, and actively listening to their input throughout construction to continually minimize impacts wherever possible.

Reference Project	Relevant Experience
 <p>Denver Eagle P3 Denver, CO \$1.27 billion John Laing</p>	<p><b>Business and Residential Concerns:</b> The Public Information group from John Laing's project team (Denver Transit Partners) works with local business owners, residents, and other community stakeholders to provide timely notification regarding closures, detours, and other construction impacts. This includes outreach to affected neighborhoods and business via speaking engagements, door hangers, letters, and email notifications. For example, a recent quarterly communication effort included distribution of more than 129,000 construction-related notifications to businesses and residents; meetings or phone calls with more than 650 stakeholders regarding project-related concerns; public project tours for 364 participants; and a website and regular newsletter to inform the community of progress and to publicize site tours available to the public.</p>
 <p>Denver Union Station Denver, CO \$374 million AECOM</p>	<p><b>Environmental Concerns:</b> Denver Union Station was constructed on an old rail yard in downtown Denver where the accumulation of a century of debris created a significant need for removal of contaminated soils, treatment of discharged groundwater, and noise mitigation during construction. Throughout dewatering, the project team treated contaminated groundwater before discharging it. AECOM worked with the Project Authority and the Contractor to identify locations of coal base fill material and to excavate these materials and properly dispose of them in approved landfills.</p>
 <p>I-25 T-REX Denver, CO \$1.3 billion AECOM<sup>ii</sup></p>	<p><b>Environmental Concerns:</b> Construction noise, permanent noise mitigation, and neighborhood sensitivity were key considerations incorporated into AECOM's design. AECOM designed over 3 miles of sound walls to protect numerous neighborhoods adjacent to the project. AECOM worked closely with the corridor-wide acoustic consultants to ensure that the necessary sound wall designs met or exceeded standards and heights required to mitigate noise.</p> <p><b>Traffic Management Concerns:</b> Maintaining highway traffic and access to businesses, residences, and schools were critical items for CDOT and project stakeholders. AECOM designed maintenance of traffic (MOT) in Segments 1.2 and 3 of the project, and also prepared detour plans for the I-25 night closures using Santa Fe as the detour.</p>
 <p>I-4 Ultimate Orlando, FL \$2.3 billion (construction cost) John Laing</p>	<p><b>Community Concerns:</b> All activities are pursuant to a Public Communications Plan that has been approved by FDOT. John Laing's project team uses a combination of a project website, email, and social media to publicize lane closures. In a recent week, the project website had 4,717 visits and there were 7,616 e-newsletter subscribers. A mobile phone application is in final stages of development, and will provide real-time traffic updates throughout the project.</p> <p>The team notifies the community of potentially disruptive construction activities. One example is for recent pile-driving activities, where notices (including vibration surveys and FDOT mailings) were sent to potentially affected properties. The team also provides face-to-face and educational visits for the key stakeholders, such as high-density business districts, hospitals, nursing homes, schools, and other high-profile public and private entities within and outside of the designated 200-foot notification area.</p>

**Question 2 Response continued:**

Reference Project	Relevant Experience
 <p>I-405 Express Toll Lanes Bellevue, WA \$200 million Flatiron, AECOM</p>	<p><b>Traffic Management Concerns:</b> To minimize impacts to the communities and stakeholders in and around the City of Bellevue, Flatiron performed a majority of the MOT activities at off-peak hours. Flatiron and AECOM worked together to develop over 200 individual traffic control and detour plans to accommodate an elaborate toll rollout to achieve Substantial Completion, wherein the entire 17-mile-long project was re-stripped over a single weekend to change the existing HOV lanes into a live dynamically priced toll facility.</p> <p><b>Environmental Concerns:</b> Flatiron executed an environmental compliance monitoring program that included noise and air quality monitoring, three separate mitigation sites, erosion control, water quality monitoring, and wildlife management. Flatiron obtained required noise variances from local jurisdictions and monitored and reported on the team's compliance. Flatiron successfully complied with Washington State's stringent construction water quality standards (the strictest in the US), having been awarded more than 95 percent of an available environmental incentive.</p>
 <p>Northeast Anthony Henday Drive Edmonton, AB (Canada) \$1.8 billion ACS<sup>iii</sup>, HOCHTIEF<sup>iv</sup>, Flatiron<sup>v</sup>, Dragados<sup>vi</sup>, AECOM</p>	<p><b>Traffic Management Concerns:</b> The ACS, HOCHTIEF, Flatiron, Dragados, and AECOM project team presented an innovative alignment configuration to move the mainline and cross street alignment to facilitate complex traffic management and maintain mobility throughout the corridor. Traffic management was planned and coordinated with an in-house team, including members of both AECOM's design and Flatiron's and Dragados' construction representatives, to ensure optimal solutions. The project team also uses a website to communicate timelines and other details for traffic staging and detours to the public.</p>
 <p>Northwest Anthony Henday Drive Edmonton, AB (Canada) \$995 million Flatiron<sup>v</sup>, AECOM</p>	<p><b>Traffic Management Concerns:</b> Due to multiple new interchanges and existing road crossings, Flatiron and AECOM team carefully planned traffic management to minimize traffic disruption and keep motorists informed through a website and other communication methods. Detours and traffic shifts were scheduled largely on weekends and evenings to minimize traffic disruption.</p> <p><b>Environmental Concerns:</b> To mitigate groundwater concerns and related environmental impacts, the drainage system was designed to address the quantity of stormwater runoff as well as the quality aspects of roadway drainage, all while avoiding conflicts with the roadway right-of-way, utilities, and existing wetlands. A naturalized storm water management pond system was integrated into the overall wetlands restoration, and adjacent cultivated lands were restored to a naturalized state. The team also implemented erosion controls to minimize potential sediment release into local water bodies such as Kirk Lake. The expert environmental team identified and tagged three rare species of plants prior to construction disturbance that were subsequently transplanted to protected areas.</p>
 <p>I-595 Corridor Improvements Project Broward County, FL \$1.2 billion (construction cost) ACS, Dragados, AECOM</p>	<p><b>Community Concerns:</b> From award to operations, the ACS, Dragados, and AECOM team has worked with affected stakeholders to address traffic concerns in this urban corridor with daily traffic volumes in excess of 180,000 vehicles. All communication efforts have been channeled through the public communications office at the Project office, with support of the FDOT Public Information Office. The team continuously reviewed surveys and public outreach and held several one-on-one meetings with impacted business to gauge the satisfaction of users, businesses, and residents. Throughout construction and into operations, the project team has achieved satisfaction levels of more than 95 percent.</p> <p><b>Environmental Concerns:</b> The team's project-wide vibration monitoring plan included special attention for installation of the precast concrete piles and prohibiting this work at night to avoid disturbing nearby neighborhoods. Dragados performed construction in environmentally-sensitive areas that required compliance with several permits from the USACE, U.S. Coast Guard, and other regional and local regulatory agencies. The permits included groundwater influence and groundwater treatment system modeling, and required review by the EPA. For work relating to hazardous materials, the team identified reactive wastes in the I-595 corridor and performed the appropriate treatment and disposal following applicable regulations.</p>

**Question 2 Response continued:**

Reference Project	Relevant Experience
 <p> <b>Autoroute 30</b>                      Quebec, Canada                      \$1.26 billion                      ACS<sup>iii</sup>, Dragados<sup>vi</sup> </p>	<p> <b>Environmental Concerns:</b> The ACS and Dragados team analyzed, treated, and disposed of contaminated groundwater and soils due to residual petroleum hydrocarbons, which were discovered in several areas of the project. Dust and water quality were monitored at least weekly to maintain compliance with the requirements. The team also monitored the noise and implemented mitigation measures—especially in the residential areas, to ensure that levels remained in compliance. This included installation of more than 400,000 square feet of noise walls.                 </p> <p> <b>Traffic Management Concerns:</b> The MOT plan at the A-20/A-540 northern interchange involved 14 major temporary traffic configurations to build nine structures, including three bridges over railways (implicating high-traffic management under federal railway standards and regulations), a roadway, and 12 temporary cross-linked detours. All configurations and detours were communicated through press releases sent to all partners and stakeholders. Severely impacted stakeholders were contacted directly to ensure they were well informed of traffic configurations.                 </p>
 <p> <b>183A Turnpike</b>                      Austin, TX                      \$180 million                      AECOM                 </p>	<p> <b>Community and Environmental Concerns:</b> This new toll highway bisected a developed community so neighborhood access, highway/construction noise, and air quality during construction were significant concerns to nearby residents. The new alignment was placed 30 feet beneath existing grade to minimize noise and visual impacts; and a new bridge was incorporated to retain connections between the neighborhoods. The design and construction team opted to use a mill-and-grind technique to achieve the 30-foot rock cut in lieu of more traditional blasting methods to minimize impacts to adjacent homes. The project team continually monitored dust and air quality associated with the rock cut and consulted with the adjacent neighborhoods to address questions and concerns throughout construction.                 </p>
 <p> <b>ROC 52</b>                      Rochester, MN                      \$240 million                      AECOM                 </p>	<p> <b>Traffic Management Concerns:</b> Rochester is the center of commerce in southeastern Minnesota and home to the Mayo Clinic (host to over 1.5 million clinic patients each year). Maintaining access to all businesses and residences along the 11-mile-long project corridor and minimizing construction impacts was critical.                 </p> <p> <b>Environmental Concerns:</b> To mitigate noise concerns, the team designed and constructed noise walls early in the project. AECOM's team also worked with the surrounding community to incorporate their input on aesthetics of the walls. As a result of the special aesthetics efforts, the project won several awards from the Rochester Committee on Urban Design and Environment.                 </p>
 <p> <b>Golden Ears Bridge Project</b>                      British Columbia, Canada                      \$750 million                      CH2M<sup>i</sup> </p>	<p> <b>Environmental Concerns:</b> The team implemented night construction in commercial and industrial areas where feasible to reduce noise and impacts to businesses. Bridge components were produced and preassembled off site, then floated into the area by barges on the Fraser River, shortening the construction schedule and creating the least possible disruption to nearby businesses.                 </p> <p> <b>Community and Traffic Management Concerns:</b> CH2M's team kept traffic moving on local roadways and maintained access to local businesses. The plan staggered lane closures and detours; scheduled night work to minimize impacts throughout construction; and conveyed information about business access through the project's Communications Plan and with temporary signage.                 </p>
 <p> <b>I-15 North</b>                      Las Vegas, NV                      \$250 million                      CH2M<sup>i</sup> </p>	<p> <b>Traffic Management Concerns:</b> Eleven of the 14 new bridges and one of the bridge widenings were built within 1 mile of the highly congested I-15/I-515/US93/US95 Spaghetti Bowl corridor, demanding careful MOT planning. The team held weekly MOT coordination meetings with the design-build team, NDOT, the Cities of Las Vegas and North Las Vegas, and area traffic management agencies to safely plan and execute the MOT throughout the project. CH2M's design team significantly minimized traffic impacts by reducing the total number of construction phases from three to two, which helped to achieve early project completion by 6 months.                 </p> <p>                     To minimize impacts during construction, the team provided a link to the local traffic cameras to display real-time traffic images of I-15 and help commuters plan their travel routes in advance. The team also provided weekly lane and road closure information and general updates using the project website and other social media as well as dynamic message signs within the corridor to give users travel route options.                 </p>

## Colorado I-70 East Project

- (3) **Sharing information with the local community will be critical to a successful Project. Describe Proposer’s preferred methods of (a) engagement with local communities, including with residents living in close proximity to a Reference Project, and (b) coordination of such activities with the owner.**

Response:

The I-70 East Project will continue to receive considerable attention from impacted residents, the media, and other regional stakeholders. We will structure our community involvement to build a positive brand for the Project and will work in tandem with CDOT and the Procuring Authorities on implementing these activities at every step. Our team members know and have worked with all of CDOT’s public involvement consultants and will be ready to begin work in collaboration with them on Day 1. This partnership will continue from the initial planning, through construction completion and into operations.

FRMG understands the challenges that a project of this size, duration, and social and economic impact creates. We bring proven experience from Reference Projects, such as those mentioned previously in Section 2.1.4 and Section 4.1, Form F, as our foundation to communicate effectively with the community and residents living in close proximity to the Project.

Our goal is for 100 percent of community members impacted by the Project to know where to obtain project-related information and how to reach our team. The most affected stakeholders include the neighborhoods of Globeville, Elyria, Swansea, Park Hill, Stapleton, Montbello, and Gateway, along with Swansea Elementary School, Swansea Park, Globeville Community Centers, the Growhaus, Focus Points Family Resource Center, Swansea LiveWell, more than 1,200 local businesses and associations, and local historically designated landmarks. We are also aware that vocal opposition may originate from outside the “affected area,” including commuters, local activists, political groups, business and leisure travelers, and travelers utilizing I-70 to attend civic and community activities.

**CASE STUDY: Public Confidence Restored After Collapse of I-35W Bridge**

On Flatiron’s I-35W Bridge Replacement project in Minneapolis, the project team held weekly **“Sidewalk Superintendent Talks”** to keep the public informed of the construction process, even in minus 20 degree weather, and to re-establish public trust following the collapse of the old bridge. An estimated 5,000 residents participated in walking tours next to the site.

A project website linked to webcams and kiosks set up at three locations around Minneapolis documented the construction process and explained the activities underway as well as provided a preview of upcoming activities.

Efforts were recognized with a national award for Community Outreach by the American Road and Transportation Builder’s Association

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*“With the completion of the I-35W project, we have proven what many people at the start of the project thought not possible. The dedication and collaborative spirit of the design/build team made it possible. Working together as partners, we’ve achieved excellence in design, construction, and communication.” —Jon Chiglo, Project Manager Minnesota Department of Transportation*

**(a) Preferred methods of engagement**

We have developed effective methods of public engagement strategies on hundreds of successful projects in Colorado and throughout the world that are tailored to the specific needs of each community. Our team will draw on this experience to implement the best practices to involve impacted stakeholders on the I-70 East Project. FRMG will take special care to engage with disadvantaged and vulnerable segments of the population in a culturally appropriate manner.

## Colorado I-70 East Project

### **Question 3 Response continued:**

#### *Understanding the Project and Integrating into the Communities*

One of our primary methods of engaging local communities on all of our Reference Projects is through partnerships with local companies and personnel who have been living and working in the area for decades. For example, on the I-595 Project in Florida, ACS and Dragados partnered with AECOM as lead designer and other local consultant firms that had been working in the Fort Lauderdale area for several years, so that the approach to design, construction, and community engagement could be tailored specifically to the key concerns of the area. As the first P3 transportation project in the State of Florida, this approach of combining international expertise on P3 projects with local companies' knowledge of the area was critical in communicating construction activities with the communities and coordinating such efforts with the owner.

On the I-70 East Project, by understanding the history, relevance, and place of the Project in the comprehensive North Denver Cornerstone Collaborative, we can foster the public interest on this Project. Our general approach will include developing communication solutions tailored to the local situation, monitoring their effectiveness, and making adjustments as needed.

FRMG has brought together key team members at the project management levels that have relevant experience on similar projects in the Denver area and throughout Colorado. Flatiron and CH2M hold their corporate headquarters in Colorado and have been partnering with the local communities for almost 70 years. John Laing, AECOM, Kraemer, and other local consultants also bring invaluable experience delivering some of Colorado's largest and most complex projects to date. Whether it is the T-REX Project (largest transportation contract in Colorado history), Denver Eagle P3 (first full DBFOM transit P3 in the U.S.), COSMIX (largest improvement project in Colorado Springs' history), or other major projects, our team members bring a proven track record delivering in Colorado.

Our team's employees have volunteered to teach engineering and computer modeling to local Colorado elementary students (pictured). This approach could be used to create excitement and engage students at Swansea Elementary School in the I-70 East project, similar to educational workshops that Flatiron hosted for students on the \$234 million I-35W Bridge Replacement Project in Minneapolis.



We have also included Kathy Berumen as our Community & Public Relations Manager due to her experience on two of the most recent complex, urban design-build projects in the Denver metro area (RTD FasTracks projects). She is intimately familiar with the Metro Denver area, its neighborhoods, residents, and community leaders. Kathy will work seamlessly with CDOT and the Procuring Authorities' public involvement team to uphold its communication and community engagement commitments for the Project.

#### *Effective Communication Tools*

We will work with CDOT and the Procuring Agencies to develop a Communications Plan that blends seamlessly into CDOT's previous efforts. Our preferred communication tools for the I-70 East Project includes the use of CDOT's existing mobile apps and the development of new apps to provide time-sensitive updates. We will offer to participate in CDOT's Community Leader meetings, identify

**Question 3 Response continued:**

existing community meetings (i.e., with the Denver Workforce Board), and plan targeted neighborhood meetings that are customized to fit the audience. Participation in community functions (i.e., festivals, school fairs, church carnivals, local sporting events, theater presentations) will be paramount to our outreach efforts. We will include construction updates in both CDOT's and the community's existing communication forums (i.e., newsletters, websites).

Similar to our approach on several Reference Projects discussed in response to Question 2, we will use email, telephone, social media, and text messaging as primary communication methods as well as informational flyers, mailers, newsletters, and door-to-door notifications where appropriate, to provide notifications of meetings; construction impacts; detours; and road closures. We will also create Project billboards, signage, and information centers advertising the same. All collateral materials will list our Project Hotline, contact email address, and website.

We plan to develop and distribute a "Pre-construction Brochure" as a primary tool to communicate with affected stakeholders. Complemented with updates and modified spin-offs throughout the Project, this brochure will define basic information regarding the construction timeframe, enhancements as a result of the Project, how to get around during construction, and where to get information. A Work Zone Safety Brochure addressing pedestrians, cyclists, and drivers will also be distributed to directly affected neighborhoods prior to construction. We will employ local media outlets in our outreach efforts to ensure mass distribution of Project information and impacts.

Other methods of engaging local communities that we have found successful on our Reference Projects that we plan to implement on the I-70 East Project include the following:

- A proactive and ongoing subcontracting outreach plan that identifies opportunities for small and disadvantaged business enterprises (SB/DBEs) and firms to deliver them. We held our first outreach event on June 18 at the National Western Stock Show Complex in Denver, and we will continue these efforts throughout the proposal phase and into project execution.
- A plan to collaborate with the Colorado Workforce Development Council and Denver Workforce Development Investment Board to share opportunities, develop a protégé program, link up with DBEs looking to grow their skillset and expand their business, and generally augment the local labor force. This will include a Local Workforce Employment Program Office that provides information on recruiting, job openings, internships, training, and workforce development and skills programs for unemployed and underemployed citizens.
- Visionary Working Groups that involve the community in project decisions and allow local residents, businesses, and artists to provide input on non-structural aspects of the design.
- A detailed Business Outreach Plan that helps businesses plan before construction, mitigates impacts during construction, and maximizes local purchases of products and services from businesses close proximity to the Project.
- A School Outreach Plan specifically addressing "Safety First." We will also explore opportunities to partner with the local schools to support science fairs or community service projects with students in the area.
- A "Walk the Line" program designed to integrate the Project team into the community, similar to the "Sidewalk Superintendent Talks" Flatiron used on the I-35W Replacement Bridge in Minnesota.

## Colorado I-70 East Project

### **Question 3 Response continued:**

- Regular community surveys during construction to help plan tasks and adjust construction and traffic management strategies. Examples include asking specific questions such as whether or not people prefer a full weekend closure versus intermittent lane closures for a month.
- A user-friendly website that highlights important information, such as traffic detours, lowered speed limits, and lane closures. We have also found it helpful to include a “last updated” date to time-sensitive material and general project information on a FAQ page.
- Trans-creation of all collateral materials into Spanish and other languages, as appropriate.
- Spanish translation services at community and public forum meetings. We are also prepared to conduct some meetings primarily in Spanish when suitable for the targeted audience.
- Trained employees as a good source of messaging. Our Public Involvement (PI) team will train employees as part of their initial orientation to be front-line ambassadors with the local community.
- Enlistment of local community members as Project ambassadors to help educate the general public on the benefits of the Project.

### ***Minimizing Impacts During Construction***

In addition to developing, implementing, and measuring effective communications, it is also important to reduce adverse impacts of construction on stakeholders. Below we have identified some of the affected stakeholders, their concerns, and our team’s approach to mitigating impacts that have proven successful on past Reference Projects.

I-70 Affected Stakeholders	Key Concerns	Approach/Mitigation Strategies	Past Experience with Similar Issues on Reference Projects
Swansea and Elyria residents and businesses and the Swansea Elementary School	<ol style="list-style-type: none"> <li>1. Safe vehicle and pedestrian access to corridor businesses, schools, and homes</li> <li>2. Dust and noise caused by construction and demolition in close proximity to residents, Swansea Elementary, the National Western Stock Show, and local businesses</li> </ol>	<ol style="list-style-type: none"> <li>1. Phase construction so that noise walls and other permanent noise mitigation measures are constructed first</li> <li>2. Provide noise and air quality mitigation and conduct noisy construction during daytime hours</li> <li>3. Minimize idling and movement within the project footprint and use clean fuel technologies and quieter equipment</li> <li>4. Use water trucks to mitigate fugitive dust</li> <li>5. Locate staging and maintenance operations in industrial zones</li> </ol>	<ul style="list-style-type: none"> <li>• Denver Eagle P3</li> <li>• I-595 Corridor Improvements</li> <li>• I-4 Ultimate</li> <li>• I-405 Express Toll Lanes</li> <li>• 183A Turnpike</li> <li>• ROC 52</li> <li>• I-15 North</li> <li>• I-71 / I-670 Columbus Crossing</li> <li>• Gold Line Eastside Extension</li> <li>• T-REX</li> </ul>
Denver City Council and their constituents and the general public	<ol style="list-style-type: none"> <li>1. Cost of the Project</li> <li>2. Delivery method that “transfers” public facility to a private and/or foreign company</li> <li>3. Opposition to tolling</li> <li>4. Too much scope or not the “right” scope</li> </ol>	<ol style="list-style-type: none"> <li>1. Work with CDOT and the Procuring Authorities and their communications team to develop a media outreach strategy, with key messages about benefits of availability-based DBFOM projects</li> <li>2. Continue to provide consistent messages to the media and ensure that they have the facts about availability-based DBFOM projects.</li> </ol>	<ul style="list-style-type: none"> <li>• Denver Eagle P3</li> <li>• I-595 Corridor Improvements</li> <li>• I-4 Ultimate</li> <li>• I-405 Express Toll Lanes</li> <li>• Autoroute 30</li> <li>• Golden Ears Bridge Project</li> <li>• T-REX</li> </ul>

## Colorado I-70 East Project

### ***Question 3 Response continued:***

Traveling public, interstate truck traffic, visitors to Colorado	Travel times and traffic along I-70 during construction	<ol style="list-style-type: none"> <li>1. Provide up-to-date traffic information and alternative routes to and from the airport</li> <li>2. Partner with DIA, RTD and local transportation groups (similar to SmartCommute on US 36) to communicate alternative routes and carpooling transportation options</li> <li>3. Utilize social media and other tools to provide live traffic updates</li> <li>4. Utilize existing ITS to communicate incidents and other pertinent construction information</li> </ol>	<ul style="list-style-type: none"> <li>• I-595 Corridor Improvements</li> <li>• I-4 Ultimate</li> <li>• I-405 Express Toll Lanes</li> <li>• 183A Turnpike</li> <li>• ROC 52</li> <li>• I-15 North</li> <li>• I-71 / I-670 Columbus Crossing</li> <li>• Gold Line Eastside Extension</li> <li>• T-REX</li> </ul>
Regional Transportation District (RTD)	Maintaining reliable and regular train and bus service	<ol style="list-style-type: none"> <li>1. Coordinate with RTD to minimize disruptions</li> <li>2. Notify public transit users well in advance of any temporary or permanent closure or change in bus or rail routes, stops, and stations</li> </ol>	<ul style="list-style-type: none"> <li>• Denver Eagle P3</li> <li>• Denver Union Station</li> <li>• I-225 LRT Extension</li> <li>• T-REX</li> </ul>

### ***Communicating Benefits of a DBFOM P3 to Key Stakeholders***

We understand the social, economic, and political concerns that the public and stakeholders may associate with I-70 East Project, because P3 projects are relatively new in the U.S. Having delivered some of the first and largest P3 transportation projects in many states and provinces, like Florida, California, Texas, Alberta, and British Columbia, we bring a strong record of partnering with Owners and local governments to communicate the benefits of this type of contract to key stakeholders. We also bring relevant experience on P3 projects in Colorado through John Laing's work on the Denver Eagle P3 project. We can leverage this experience to help convey some of the important messages about the benefits of this Project and the delivery model. One example is the accelerated delivery of the Project by helping CDOT and the Procuring Authorities raise upfront capital all at once, to construct the Project sooner than traditionally possible.

#### **(b) Coordination of activities with the Owner**

Success during each phase of the Project relies upon a joint pursuit of excellence and innovation between the owner, developer, and contractor. We understand that the owners on our Reference Projects had conducted pre-development work for several years before our teams were selected as the developer. We typically work hand-in-hand with the individual owners to carry forward similar communications and other community engagement strategies that the owner found successful during the early planning phases. This approach is very effective in maintaining seamless and consistent communication with the public from one phase of a project to the next. For the I-70 East Project, our team has already been engaged long before the procurement with stakeholders, the community, and DBEs to strategically align our approach with the goals set out by CDOT and the Procuring Authorities and the community.

FRMG's strategy for engaging the local community on the I-70 East Project will be to collaborate with and channel our communication through CDOT and the Procuring Authorities to ensure a coordinated and streamlined flow of information. Because of this Project's history and extensive stakeholder engagement up to this point, CDOT and the Procuring Authorities are well-positioned to continue these programs through procurement and project delivery. We will support CDOT and the Procuring Authorities' team of internal resources, as well as their communications consulting team.



## Colorado I-70 East Project

### **Question 3 Response continued:**

This approach is similar to our work on several of our Reference Projects discussed in Questions 1 and 2, including P3 projects like the I-595 Corridor Improvements and I-4 Ultimate Project in Florida.

#### **Collaborating with Owners on Some of the Largest P3 Highway Projects in the U.S.**

The ACS, Dragados, and AECOM I-595 Corridor Improvements Project and John Laing's I-4 Ultimate Project each have individual construction values over \$1 billion and required similar communication efforts as anticipated on the I-70 East Project. Both of the project teams channel communications through the Florida Dept. of Transportation (FDOT) and support FDOT's overall, department-wide communication strategies. This approach has proven to be effective in transitioning the I-595 project to full operations in March 2014, and also for ramping up the I-4 construction efforts over the past year.

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*"We delivered it on the same day we said we would, five years earlier. It really shows this model will work. Florida DOT is very proud of this Project"*  
 —Paul Lampley, FDOT Project Manager on the I-595 Project



We realize that CDOT and the Procuring Authorities have developed long-standing relationships with the affected communities and other local stakeholder groups, and that we are entering into a set of pre-existing standards with established practices and policies. We will convene and facilitate discussions with the CDOT Communications Office to ensure adherence to the Community Outreach methods set forth in the SDEIS, channel our united efforts to integrate best practices, and collaborate and leverage resources.

We also recognize the importance of working closely with CDOT and the Procuring Authorities to address local opposition to the Project. We will share proven strategies and lessons learned with CDOT from similar Reference Projects as we develop our plan. Examples include holding regular educational sessions on the benefits of the Project, obtaining community and civic organization groups as supporters, and engaging community members as ambassadors for the Project.

- (4) **Close coordination with affected local governments during all phases of the Project is expected. Describe Proposer's preferred methods of coordination with a closely involved local government partner.**

#### **Response:**

P3 projects have generated substantial interest and attention from state and local elected officials in Colorado over the past few years. Our team is familiar with the efforts to improve communication and ensure transparency with elected officials and Colorado's Governor. FRMG commits to share information and communicate regularly with affected local governments throughout the entire process, as we know this is critical to the success of the I-70 East Project. We are prepared to work with CDOT's communications office to extend their government agency outreach tactics and communicate key messages effectively.

Recognizing the business and reputational risks that come from poor stakeholder relations, we will place emphasis on our responsibility, transparency, and reporting to CDOT and the Procuring Authorities as the Project owner and impacted local governments as stakeholders. Many of the hallmarks of good relationships – trust, mutual respect, and understanding – are intangibles that develop and evolve over time and are based on individual and collective experiences and interactions. For this reason, we are committed to build on the relationships already established with stakeholders and within the community to see the successful delivery of this Project.

## Colorado I-70 East Project

### **Question 4 Response continued:**

On past projects, we have found that monthly or bi-monthly elected official briefings keep high-level government leaders informed, not only about project progress and benefits, but also about their community's expressed concerns with the project. By giving officials a platform to bring their constituents' concerns and/or issues to the table, solutions can be identified in a more expedient and effective manner to allow the community to feel heard and involved. This approach gives individual government representatives an opportunity to collaborate and leverage their resources for the good of their jurisdictions. We have used a similar strategy on the following Reference Projects:

- **Denver Eagle P3 (Colorado)** – The project team conducts quarterly “Briefing Tours” with the elected officials for relevant governmental entities that include a site tour and project update.
- **I-4 Ultimate (Florida)** – The project team has held briefings with several local government officials and has made presentations or hosted informational sessions for homeowner association meetings, MetroPlan Municipal Advisory Committee, Visit Orlando, the City of Orlando’s “One Less Car, One More Park” event, and the Orlando Developers Council.

Similar to our approach on the I-15 North Reference Project discussed previously in Questions 1 and 2 and on Form F, we will create Working Groups to receive input on design and construction from local government staff. This type of working group is intended to be a forum for cooperation and participation. Jurisdictional participants will represent the interests and views of stakeholders from sectors of the community that have a vested interest in the results of the Working Group.

We also plan to hold formal partnering meetings with the Project team and key members of affected local governments. This will be effective in ensuring we work as an organized team and address issues immediately. We will collaborate with all local authorities and leverage their individual resources to better define and mitigate community impacts. We will keep an open mind to inter-jurisdictional consistencies, and use them to best fit the needs of the Project.

- (5) **Describe your achievements in obtaining small and disadvantaged business participation on Reference Projects, including whether you have met or exceeded required goals and/or electively implemented any non-required approaches to outreach, education, communication and/or business development.**

#### Response:

FRMG is committed to delivering a successful Project that is a lasting legacy and improves the region's economy and quality of life in the affected communities. Our approach to delivering the work will maximize the use of local, small, and disadvantaged businesses and labor. We are uniquely positioned to identify opportunities for local expertise, because Flatiron, AECOM Construction, and CH2M are headquartered in Colorado and several other team members have been working here for decades.

FRMG is already leveraging our team members' past successes and achievements on Reference Projects to implement a proactive and ongoing outreach program for the I-70 East Project to provide opportunities to SBs/DBEs in the Denver area and throughout Colorado. We have initiated these efforts by hosting our first SB/DBE outreach meeting on June 18 at the National Western Stock Show Complex in Denver, where we introduced our team and provided information about the Project and potential subcontracting opportunities. We will continue these efforts during the proposal phase and

## Colorado I-70 East Project

### **Question 5 Response continued:**

through project execution. We will provide updated information on our team’s website at [www.frontrangemobilitygroup.com](http://www.frontrangemobilitygroup.com). Other strategies that we anticipate using to actively engage SB/DBEs include the following:

- SB/DBE Contracting Opportunity Center at our Project office as a “one-stop shop” for the firms to receive information on subcontracting opportunities
- Scalable subcontracting work packages to provide maximum opportunities for SB/DBEs to participate in key roles on the Project
- Assistance in obtaining required certifications and training and educational seminars
- A Project-specific mentoring program to help SB/DBEs grow their businesses
- Performance surveys to gauge program success and share these results with CDOT and the Procuring Authorities

In the table below, we have provided a few examples from Reference Projects that demonstrate our team’s achievements in obtaining SB/DBE participation.

Reference Project	Relevant Achievements / Experience in Obtaining SB/DBE Participation
I-595 Corridor Improvements Broward County, FL \$1.2 billion ACS, Dragados, AECOM	Dragados exceeded the 8.1% DBE goal for a final total DBE participation of 13.6%. As a result, each year (2010 through 2014) Dragados received a grade rating of A+ from FDOT regarding DBE participation. FDOT achieved its annual DBE goal each year since inception of the Project. Dragados was awarded the Florida Transportation Business Association’s 2013 DBE Utilization Achievement Award for its efforts. AECOM agreed to a flow-down provision of the 8.1% DBE goal for design to better maximize opportunities for DBE firms to participate on the project. AECOM achieved 8.5% DBE participation for design.
Exposition Light Rail Los Angeles, CA \$691 million Flatiron	Flatiron was successful in exceeding the owner’s DBE goal of 20% by providing support to the SB/DBE participants, such as reduced retention withholding rates, paid bond premiums, waived bonds, issued joint check, reduced payment turnaround times, and bi-monthly payments instead of monthly payments.
Denver Eagle P3 Denver, CO \$1.27 billion (construction cost) John Laing	The team has exceeded its SB/DBE utilization goals. As of March 31 2015, \$255.9 million in design and construction work has been executed by SB/DBE firms, which exceeds the project’s goal of \$248 million. A further \$57 million is committed to SB/DBE firms for the remaining design-build period. The value of the SB/DBE goals has risen throughout the design-build period due to scope changes. These higher goals have nonetheless been met. Of the 49 Letters of Intent the team included in its April 2010 proposal to RTD, 48 have been converted to contracts.
San Diego International Airport Green Build Project San Diego, CA \$230 million AECOM	Although no DBE goals were published, the owner placed a high value on participation of small, disadvantaged, and minority businesses. Showing its commitment to the community, AECOM conducted outreach activities and subcontracted portions of design work to more than 20 firms—most of which were small, disadvantaged, or minority-owned businesses. In recognition of AECOM’s commitment to small business participation, they were awarded the 2010 Public Agency Consortium Consultant of the Year Award.
I-4 Ultimate Orlando, FL \$2.3 billion (construction cost) John Laing	The Aspirational Goals for the Project are 9% of the project costs for DBEs and 3% for non-DBE SBs. These goals apply separately to design, construction, and the O&M phases of the project. Although design and construction activities have only recently commenced, to date design activity is tracking well above these goals with \$20.4 million of design work (15.6%) having been committed to DBE or SBE firms, against a goal of \$15.7 million (12%).
Denver Union Station Denver, CO \$347 million AECOM	As the lead designer, AECOM contracted directly with 16 D/M/W/SBE firms and 5 second-tier D/M/W/SBE firms through two major subconsultants. The project is estimated to have achieved 15.4% participation, which was above the overall goal of 15%. AECOM used D/M/W/SBE firms from the greater Denver area in roles such as project controls, roadway lead and design, historic architectural renovation, lighting lead, and many other positions.

### **Question 5 Response continued:**

## Colorado I-70 East Project

I-225 LRT Extension Aurora, CO \$225 million AECOM	AECOM contracted directly with 11 SBE firms and had major subcontractors contract with another 10 SBE firms as second-tier subconsultants. The I-225 LRT project is currently tracking in excess of 30% participation by SBE firms, which exceeds the 25% project goal for design.
Gold Line Eastside LRT Los Angeles, CA \$629.4 million AECOM	AECOM implemented a rigorous DBE program and exceeded DBE participation goals (goal: 13.7%; actual: 16.3%) as a member of both the design-builder and lead designer. The project received the 2006 Aztec Award from the Mexican American Opportunity Foundation for its jobs program that increased local Latino participation on the project.

- (6) **Describe your achievements in developing the workforce on Reference Projects, including whether you have met program requirements and/or electively implemented any non-required approaches to workforce development such as partnering and/or outreach.**

Response:

FRMG plans to design, build, and maintain this Project maximizing the use of local labor resources and local materials. Our proactive local hiring initiatives include targeted training and apprenticeship programs to develop a large pool of talented craftspeople. Our goal is to work actively in impacted communities to communicate the kinds of jobs that will be available, how to qualify and apply for the jobs, and to provide training and use as much local labor for first-source jobs as possible. One way is to collaborate with the Denver Workforce Development Investment Board and host joint meetings to establish a path towards building up the skillset of the local labor force.

Our team members bring experience working in Colorado with RTD on the Workforce Initiative Now (WIN) Program on Reference Projects such as Denver Eagle P3, Denver Union Station, and I-225 LRT. We can work with CDOT and the Procuring Authorities to implement some of the successful strategies from this local program for use on the I-70 East Project, such as a provision of training to job seekers and career placement with participating employers.

Our team members have implemented several comprehensive programs that taught job readiness skills and safety to unemployed and underemployed individuals. A few examples of past successes from Reference Projects are provided in the table below.

Reference Project	Relevant Experience Developing the Workforce
Denver Eagle P3 Denver, CO \$1.27 billion (construction cost) John Laing	Denver Transit Partners (DTP) is a participant in Workforce Initiative Now (WIN), which is a collaborative partnership between RTD, Community College of Denver, DTP, and the Urban League of Metropolitan Denver. WIN helps job seekers, companies, and local communities through the creation of career opportunities in the transportation and construction industries. This includes provision of training to job seekers and career placement with participating employers, of which DTP is one. DTP engages in bi-weekly coordination meetings with WIN and provides regular support including an annual financial contribution of \$50,000, which is supplemented by John Laing Charitable Trust Foundation support of \$15,000 annually. To date, DTP has hired 51 positions through the WIN program. This is well in excess of the goal of 40 positions established in collaboration with WIN at the start of the project.
I-225 LRT Extension Aurora, CO \$225 million AECOM	AECOM is a participant in the WIN program and working with RTD to help job seekers, companies, and local communities through the creation of career opportunities in the transportation industries. The Project's initial requirement for WIN was 8% of the total design hours. AECOM proposed to achieve 10% and committed to that as the new goal upon selection. This calculated out to be approximately 16,100 hours based on the initial design budget. Even with an increase in the initial design budget, AECOM is significantly exceeding this project goal having achieved 46,677 hours to date.

**Question 6 Response continued:**

## Colorado I-70 East Project

<p>Oakland Airport Connector Oakland, CA \$361 million Flatiron</p>	<p>Flatiron formed partnerships with building and construction trade unions to help develop the workforce and to meet the workforce development program requirements. The team worked closely with Oakland Private Industry Council, the Cypress Mandela Training Center, Men of Valor, Richmond Works, East Bay Small Business Council, and other community-based organizations to implement the program. Through successful partnerships, Flatiron's team provided life skills and technical training in pre-apprentice programs that promoted positive life changes, taught multi-trade expertise, and bridged career changes to empower a diverse socio-economic community.</p>
<p>I-595 Corridor Improvements Project Broward County, FL \$1.2 billion ACS, Dragados, AECOM</p>	<p>Dragados surpassed the OJT goal of 118 trainees with a final graduation of 165 trainees.</p> <ul style="list-style-type: none"> <li>✓ 2009 Trainees: Goal 4 – Graduated 4</li> <li>✓ 2010 Trainees: Goal 21 – Graduated 25; 6 <i>Additional Trainees added to schedule</i></li> <li>✓ 2011 Trainees: Goal 30 – Graduated 44; 28 <i>Additional Trainees added to schedule</i></li> <li>✓ 2012 Trainees: Goal 30 – Graduated 45; 27 <i>Additional Trainees added to schedule (Achieved the goal on 10/17/2012).</i></li> <li>✓ 2013 Trainees: Graduated/banked 47 (<i>enrolled trainees are for banking purposes only</i>)</li> </ul>
<p>Golden Ears Bridge Project British Columbia, Canada \$750 million CH2M</p>	<p>Although there were no stated workforce development goals, the CH2M team implemented an outreach and work-force development program with the Katzie First Nation (KFN). Because the project impacted the KFN, an agreement was signed in 2004 that established responsibilities of KFN and the project owner. The project team met with KFN during extensive consultation both before and during construction, listened to their issues, concerns, and goals; established a job-training program; and made a concerted effort to involve them in the construction of the project. In addition, KFN was involved in all archaeological works and were contracted to support the archaeologist with field work.</p>

<sup>i</sup> CH2M HILL, Inc.; CH2M HILL Constructors, Inc.; and CH2M HILL Canada Ltd. are affiliates of CH2M HILL Engineers, Inc.(CH2M), a Core Proposer Team Member and Lead Engineer for FRMG. All CH2M affiliates are wholly owned subsidiaries of CH2M HILL Companies, Ltd., the Financially Responsible Party to CH2M. CH2M affiliates will share key resources and personnel on the I-70 East Project.

<sup>ii</sup> AECOM performed the I-25 T-REX project work under previous corporate identity as TCB and DMJM.

<sup>iii</sup> ACS Infrastructure Canada Inc. (ACSIC), an Affiliate of ACS Infrastructure Development, Inc. (ACSID), Equity Member and Lead Operator of FRMG. Both ACSIC and ACSID are wholly owned North American subsidiaries of ACS SyC, a Core Proposer Team Member and Financially Responsible Party to ACSID. ACSID and ACSIC will share key resources and personnel on the I-70 East Project.

<sup>iv</sup> Equity Member HOCHTIEF PPP Solutions North America Inc. is a 100 percent subsidiary of its parent HOCHTIEF PPP Solutions GmbH (Equity Member in NEAH) and is the designated business unit to manage all P3 development work and investments for its parent across North America.

<sup>v</sup> Flatiron West, Inc. ("FWI") and Flatiron Constructors Canada Limited ("FCCL") are subsidiaries of Flatiron Constructors Inc. ("Flatiron"). As Member of the Lead Contractor, Flatiron has full access to the experience and resources of its subsidiaries FWI and FCCL.

<sup>vi</sup> Dragados Canada Inc. (DCA), an Affiliate of Dragados USA, Inc. (DUSA). Both DCA and DUSA are wholly owned North American subsidiaries of Dragados, S.A., a Core Proposer Team member and Financially Responsible Party to Lead Contractor member DUSA. DUSA will share key resources and personnel on the I-70 East Project.



Colorado I-70 East Project

**FORM I: KEY PERSONNEL**

**Proposer Name:** Front Range Mobility Group

**Form I: List of Key Personnel**

By submitting this completed form, Proposer is deemed to confirm that each of the below named individuals is, and is reasonably expected to remain, available to serve in the position indicated by their name in connection with the Project for the period for which such position will be required to be filled as specified below.<sup>1</sup>

**Design-Build Manager**

**Position Description:** The Design-Build Manager is responsible for overseeing all aspects of the design and construction work.

**Minimum Period of Availability:** From commercial close to total construction completion.

**Name:** **Kent Peyton**

**Title:** **Senior Project Manager**

**Current Employer:** **Flatiron**

**To be seconded to/employed by:** Lead Contractor<sup>2</sup>

**Design Manager**

**Position Description:** The Design Manager is responsible for the management of the design team, including ensuring all design requirements are met.

**Minimum Period of Availability:** From commercial close to total construction completion.

**Name:** **Chris Bisio**

**Title:** **Vice President / Senior Project Manager**

**Current Employer:** **CH2M**

**To be seconded to/employed by:** Lead Engineer<sup>3</sup>

**O&M Manager**

**Position Description:** The O&M Manager is responsible for all operations, maintenance and/or (at Proposer's election) rehabilitation work.

**Minimum Period of Availability:** From commercial close to end of Project Agreement term.

**Name:** **Michael Smith**

**Title:** **O&M Manager, North America**

**Current Employer:** **ACS**

**To be seconded to/employed by:** Lead Operator<sup>4</sup>

**Quality Manager**

**Position Description:** The Quality Manager is responsible for ensuring that Developer (and all sub-contractors) satisfy all quality requirements on the Project, including, as a minimum, oversight of the establishment and maintenance of a quality maintenance system.

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<sup>1</sup> For purposes of this confirmation, a Proposer may reasonably expect an individual will remain available to serve in a particular position while also anticipating that the Project Agreement will provide a mechanism to allow the Developer to identify suitable replacements under customary circumstances for a project of this kind.

<sup>2</sup> The Design-Build Manager must be employed by or seconded to Lead Contractor.

<sup>3</sup> The Design Manager must be employed by or seconded to Lead Engineer.

<sup>4</sup> The O&M Manager must be employed by or seconded to Lead Operator.

## Colorado I-70 East Project

**Minimum Period of Availability:** From commercial close to total construction completion; and separately through to the end of Project Agreement term.

Name: **Mariola Mata Zapico**  
 Title: **Quality Manager**  
 Current Employer: **Dragados**  
 To be seconded to/employed by: Developer<sup>5</sup>

### Environmental Manager

**Position Description:** The Environmental Manager is responsible for ensuring compliance with all environmental obligations.

**Minimum Period of Availability:** From commercial close to the second anniversary of total construction completion.

Name: **Daniel Lowery**  
 Title: **Environmental Compliance Manager**  
 Current Employer: **AECOM**  
 To be seconded to/employed by: Developer<sup>6</sup>

### Utilities Manager

**Position Description:** The Utilities Manager is a management role with a minimum of five years of relevant experience on major infrastructure projects. This role is responsible for managing all required utility works and coordination with utility companies.

**Minimum Period of Availability:** From commercial close to total construction completion.

Name: **Laura Baxter**  
 Title: **Project Utility Manager**  
 Current Employer: **CH2M**  
 To be seconded to/employed by: Lead Contractor

### Community and Public Relations Manager

**Position Description:** The Community and Public Relations Manager is responsible for media relations, crisis management and community engagement activities in coordination with HPTE and BE.

**Minimum Period of Availability:** From commercial close to the second anniversary of total construction completion.

Name: **Kathy Berumen**  
 Title: **Owner / Public Information Professional**  
 Current Employer: **Communication Connections**  
 To be seconded to/employed by: Developer<sup>7</sup>

<sup>5</sup> The Quality Manager must be employed by or seconded to Developer.

<sup>6</sup> The Environmental Manager must be employed by or seconded to Developer.

<sup>7</sup> The Community and Public Relations Manager must be employed by or seconded to Developer.





## KENT PEYTON, *Design-Build Manager*

*"The success of mega projects like I-70 East is the result of not just a few key individuals, but of an entire team working in the same direction. I look forward to working with our NEAH team members again to deliver on time and budget the I-70 East project."*

### RELEVANT EXPERIENCE TO I-70 PROJECT

#### (a) Relevant Qualifications

Kent Peyton brings over 30 years of experience in heavy civil construction, and has worked under a wide range of contracts including bid-build, design-build and P3s, most recently serving as project manager on the \$1.1-billion Northeast Anthony Henday project. Prior to that, Kent was the project manager on the \$997-million Northwest Anthony Henday P3 Project, offering the I-70 East Project extensive knowledge and lessons learned on major capital delivery. He has served in numerous roles including engineering, project management, senior management, and executive leadership. His expertise managing two major P3 transportation projects makes Kent a valuable asset to the I-70 East Project.

(b) Years Experience Performing Similar Work:	Twenty-seven years of experience as project manager for transportation projects
(c) Last 10 Years of Employment Experience:	Kent has been employed at Flatiron since 2008 and has a total of over 30 years experience. DeSilva Gates Construction, LP 2004-2008. Peter Kiewit Sons', Inc. 1980-2004

#### (d) Form F Projects (i)



Project Manager; Flatiron; Northeast Anthony Henday; Edmonton, Alberta. Team members HOCHTIEF, ACS, Flatiron, Dragados, and lead designer AECOM Design are delivering this \$1.1-billion design-build-finance-operate-maintain (DBFOM) project, which includes 17 miles of new six- and eight-lane divided freeway. This P3 is the largest single transaction ever undertaken by Alberta Transportation. The project includes design, construction, finance, operations and maintenance of 6 miles of new freeway, upgrading 11 miles of existing freeway, adding auxiliary lanes, 47 bridges (including major structures over a river) 9 interchanges, 8 flyovers, and 2 bridges over active railways. The contract also includes 30 years of operations and maintenance. As project manager for the lead contractor, Kent is responsible for the overall management, budget, design and construction schedule for this project. Kent oversees a team of contractors and design firms and is responsible for all construction operations, including planning and coordinating complex traffic staging, extensive excavation work, highway and bridge construction and coordination with numerous utility owners.

- ✓ Project manager on two similar large P3 projects in which Kent managed 30 miles of roadway expansion and reconstructions to include 17 interchanges.
- ✓ Kent managed a team of designers and contractors on projects that requires extensive excavation, highway and bridge, complex interchanges, extensive utility relocation, and railroad coordination, similar to I-70 East.
- ✓ On the \$997-million NWAH P3 project Kent oversaw the traffic management program to keep motorists informed while constructing multiple interchanges and existing road crossings, as well as complex traffic staging in order to work in and around heavy existing traffic flows on the NEAH project.



**Project Manager; Flatiron; Northwest Anthony Henday; Edmonton, Alberta.** Kent was the Project Manager for this \$995-million project that included 13 miles of road construction with 8 interchanges, 4 flyovers, and 2 railroad crossings. Some of these crossings had multiple structures. Earthwork excavations totaled more than 15 million cubic yards of primarily dirt. This project also included clearing and grubbing, demolition, utility relocations, drainage, site restoration and environmental mitigation.

Kent oversaw a team of 20 subcontractors, 10 design firms, and 60 on-site personnel. Kent oversaw the traffic management program to minimize disruption and keep motorist informed while constructing multiple interchanges and existing road crossings. Under Kent's management the project was completed two months ahead of schedule and on budget. The project won numerous awards, including the Alberta Ministry of Transportation's Technical Transportation Innovation Award and Project Financial International's P3 Deal of the Year.

#### **(d) Other Reference Projects (ii)**

**Project Manager; Flatiron; Calaveras Dam; Freemont, CA.** This \$259-million design-build project included construction of a 1,549-foot-long spillway utilizing 1,765 cubic feet of concrete, construction of a new intake/outlet tower consisting of a 20-foot-diameter by 164-foot-deep vertical shaft, and three new tunnels to convey water to and from the reservoir.

As project manager, Kent was responsible for design, schedule, and budget management. He oversaw all construction operations, including extensive earthwork excavation which included addressing and mitigating the presence of Naturally Occurring Asbestos throughout the site as well as blasting methodology and seismic concerns regarding performance of excavations adjacent to and in vicinity of existing earthfill dam.

Kent's experience managing major earthwork and excavation operations, drainage and groundwater provisions, and safely addressing hazardous materials during excavation will be valuable to the I-70 East Project.

**Project/Segment Manager; Kiewit Sons Inc.; SR-73 San Joaquin Toll Road; South Orange County, CA.** Kent served as a project managers for this \$802-million design-build joint venture project in Southern California. He was responsible for all construction and design coordination on one of four segments of the project, which included 24.5 million m3 of soil excavation, 10 interchanges encompassing 68 bridges, and 67,000 square meters of retaining walls. Kent had overall responsibility of cost performance, schedule, safety, owner relations, and project specific training for his segment. The roadway was opened to traffic 3.5 months early despite an 18-month environmental delay. The San Joaquin Project received multiple awards including the Project of the Year Award from the American Society of Civil Engineers, the Project of the Year Award from the Design Build Institute of America, and the Project of the Year Award from the Orange County Consulting Engineers Council.

#### **(e) Licenses, Registrations, Organizations**

- (i) Licenses and/or Registrations:** BSc, Construction Engineering Management, OSHA 10 Hour Training, Fall Protection/Prevention Training, Competent Person Training, Trench Safety, CPR and First Aid Certificates
- (ii) Community or Professional Organizations** Loss Prevention and Control for Executives, Alberta Construction Safety Association
- (iii) Professional Disciplinary Actions:** None

**Annex A to Form I  
Form for Key Personnel References**

**Proposer Name:** Front Range Mobility Group (FRMG)  
**Position:** Design-Build Manager  
**Individual:** Kent Peyton

**References**

<b>Required Information</b>	<b>Reference No. 1</b>	<b>Reference No. 2</b>	<b>Reference No. 3</b>
Project(s)/Transaction(s) (name and cross-reference in SOQ to relevant <u>Form F</u> (if applicable)):	Northeast Anthony Henday (Form F), Northwest Anthony Henday (Form F)	Northeast Anthony Henday (Form F), Northwest Anthony Henday (Form F)	DeSilva Gates Construction, LP
Reference's Name:	Tom Loo	Bill Vandermeer	Jim Summers*
Reference's Title (current):	Executive Director	Urban Construction Manager	President
Reference's Employer (current):	Alberta Transportation	Alberta Transportation	DeSilva Gates Construction, LP
Reference's Title (at time of project/transaction):	Executive Director	Urban Construction Manager	President
Reference's Employer (at time of project/transaction):	Alberta Transportation	Alberta Transportation	DeSilva Gates Construction, LP
Reference's Phone and Email:	(780) 415-7846, tom.loo@gov.ab.ca	(780) 422-3918 Bill.vandermeer@gov.ab.ca	(925) 828-7999 jsummers@desilvagroup.com
Reference's Location and Time Zone:	Alberta, Canada Mountain Time Zone	Alberta, Canada Mountain Time Zone	Sacramento, CA Pacific Time Zone
Other: <sup>42</sup>	N/A	N/A	N/A

\*Reference outside 5 year criteria

<sup>42</sup> Include any other notes that may be useful when speaking to this individual e.g. that they are a non-English speaker, etc.



**CHRIS BISIO**, *Design Manager*

*"As a long-time resident of Denver and Colorado native, it will be extremely gratifying to work with CDOT to improve the I-70 East corridor as the gateway to our great City and beautiful State. Together let's help protect and enhance the quality of life for metro Denver!"*

**RELEVANT EXPERIENCE TO I-70 PROJECT**

**(a) Relevant Qualifications**

Chris has worked closely with CDOT and the City and County of Denver on transportation programs for 30 years and has worked on dozens of CDOT projects. As one of CH2M's most experienced design managers, she routinely provides the senior level design management and oversight needed on the largest and most complex projects. Chris is responsible for meeting owner expectations and coordinating with construction and design to produce high quality constructible plans. Additionally, she understands the complex stakeholder environment in Denver that will influence the I-70 East Project.

<b>(b) Years Experience Performing Similar Work:</b>	Twenty-five years of experience as design manager and/or project manager for transportation projects
<b>(c) Last 10 Years of Employment Experience:</b>	Chris has been employed at CH2M in positions of increasing responsibility since 1980

**(d) Form F Projects (i)**



**Design Management Director; CH2M; Golden Ears Bridge Project; Vancouver, British Columbia.** Chris served as CH2M's Design Management Director on the \$754-million design-build phase of the Golden Ears Bridge Design, Build Finance, and Operate (DBFO) Project consisting of a new 3,175 foot crossing of the Fraser River, with spans up to 790 feet, +8 miles of highway, 7.5 miles of local streets, and 17 additional structures. Similar to the I-70 East Project, the Golden Ears Bridge Project had a complex stakeholder environment driven by impacts to four separate municipalities. The project provided a vital link in the Vancouver area transportation network and connected the four municipalities of Langley, Surrey, Pitt Meadows and Maple Ridge. In this role, Chris oversaw the quality of design deliverables for the CH2M design team and eight different design subconsultants. Chris established a comprehensive and fully ISO 9001 compliant design quality management system and plan and managed its application by the numerous design consultants. Chris served as the primary design interface with CH2M's constructor JV partner during the design-build phase of the project and addressed community needs and local regulations from all four municipalities, and coordinating with multiple transportation departments for design review.

- Design Director on similar large design-build and alternative delivery transportation projects, primarily urban freeways and interchanges, including hands-on senior management on CDOT's \$144-million COSMIX Design-Build, Colorado Springs' largest ever highway infrastructure project.
- Experience managing design on privately financed transportation projects.
- Served as the Program Manager for CCD's \$550-million Better Denver Program to build, improve, and renovate roads, libraries, parks, public safety, recreation and cultural facilities. Public involvement and stakeholder concerns on this program were paramount, just as they will be on I-70 East.



### Design Management Director; CH2M; I-71/I-670 Interchange Reconstruction

**Design-Build Project; Columbus, OH.** Chris was responsible for ensuring the required design was completed and that resources were dedicated to the project to meet the construction project and the Ohio Department of Transportation's needs. She was responsible for enforcing the quality of design by CH2M and subcontractors and adhering to budget, schedule, and quality commitments. She identified design enhancements to accelerate schedule and save costs, including the implementation of the I-670 Eastbound detour and shifting the Long Street Cap (at the south side) to the north side of the street to eliminate the need to relocate a sanitary sewer siphon; saving as much as \$2 million by avoiding the relocation.

The \$241-million I-71/I 670 Interchange project, the first phase of the Columbus Crossroads program, has successfully improved safety, reduced congestion and connected neighborhoods through a unique structure that accommodates both auto and pedestrian traffic. Pedestrians can now cross easily from the Lincoln-King neighborhood to central downtown on this landscaped cap.

Chris' experience with this cap structure and with the many community meetings that helped shape the design will benefit the I-70 East Project as the team designs the Partial Cover Lowered alternative near the Swansea Elementary School.

#### (d) Other Reference Projects (ii)

**Deputy Project Director; CH2M; Port Mann/ Highway 1 Project, Gateway Program; Greater Vancouver, British Columbia.** Chris assisted the Ministry's Director in managing the interfaces between the many design components required to prepare and issue an RFP for this major P3 procurement (which later evolved into a design-build project) and move it into the subsequent phases of award. For this project, Chris coordinated a multi-disciplined engineering team to:

- » develop conceptual level technical work to support future design and construction phases
- » prepare a reference concept that met the established design and construction specifications
- » negotiate with railroads, utility companies, and municipalities
- » deliver specific procurement activities (e.g. preparation of a Business Case, financial modeling, drafting of the RFQ and RFP documents, and legal preparation of the Concession Agreement)
- » model traffic and revenue for design and tolling
- » help identify potential properties to be acquired
- » work with TransLink for incorporation of Bus Rapid Transit and Light Rail Transit components

The \$2.5-billion Port Mann/Highway 1 project includes widening Highway 1 over a distance of 23 miles, twinning the existing Port Mann Bridge across the Fraser River, upgrading 17 interchanges, and improving municipal streets that cross the corridor.

#### (e) Licenses, Registrations, Organizations

(i) **Licenses and/or Registrations:** Professional Engineer: Colorado, Texas

(ii) **Community or Professional Organizations**

American Society of Civil Engineers	American Council of Engineering Companies Colorado Section
Institute of Transportation Engineers	Women's Transportation Seminar
Women's Vision Institute	

(iii) **Professional Disciplinary Actions:** None

**Annex A to Form I  
Form for Key Personnel References**

**Proposer Name:** Front Range Mobility Group (FRMG)  
**Position:** Design Manager  
**Individual:** Christine Bisio

**References**

<b>Required Information</b>	<b><u>Reference No. 1</u></b>	<b><u>Reference No. 2</u></b>	<b><u>Reference No. 3</u></b>
Project(s)/Transaction(s) (name and cross-reference in SOQ to relevant <u>Form F</u> (if applicable)):	I/71-670, Columbus Crossroads (Form F Project)	Port Mann/Highway 1 Project, Gateway Program	Dallas Horseshoe Design-Build Project
Reference's Name:	John Householder	Gary Dawson	Greg Cangelosi
Reference's Title (current):	Assistant Vice-President	Vice President, Technical Services	Area Manager
Reference's Employer (current):	Kokosing Constructors	Transportation Investment Corporation	Traylor Bros
Reference's Title (at time of project/transaction):	Design Build Team Project Manager	Vice President, Technical Services	Area Manager
Reference's Employer (at time of project/transaction):	Kokosing Constructors	BC Ministry of Transportation	Traylor Bros
Reference's Phone and Email:	(614) 679-8371 jdh@kokosing.biz	(604) 839-6037 gdawson@ticorp.ca	(225) 768-8811 gcangelosi@traylor.com
Reference's Location and Time Zone:	Columbus, OH Eastern Time zone	Province of British Columbia Pacific Time Zone	Baton Rouge, LA Central Time Zone
Other: <sup>42</sup>	N/A	N/A	N/A

<sup>42</sup> Include any other notes that may be useful when speaking to this individual e.g. that they are a non-English speaker, etc.



## MICHAEL SMITH, O&M Manager

*“I look forward to contributing my experience and skills to the Project and helping to ensure that operating and life cycle maintenance costs are optimized and the resulting improvements to I-70 East provide a safe, durable, high-quality corridor for the Denver community.”*

### RELEVANT EXPERIENCE TO I-70 PROJECT

#### (a) Relevant Qualifications

Michael Smith has more than 27 years of senior program management experience in infrastructure maintenance, operations and rehabilitation. Michael has gained significant experience through numerous complex highway projects in both public and private sector roles, including high-traffic urban highways, toll roads, bridges, and cut and cover tunnels. He is an expert in the critical maintenance and rehabilitation procedures required for large infrastructure including pavement, tolling assets, and bridge structures. His private sector experience includes recruiting personnel, mobilizing equipment, acquiring resources, establishing maintenance facilities, and overseeing the ramp-up of operations. He has managed maintenance activities for P3 projects with similar scope and environments, to include heavy winter maintenance environments. Michael also brings invaluable experience collaborating with public entities gained from his background work with the FDOT and Florida’s Turnpike and the Miami-Dade Expressway Authority. Michael has diverse the proven experience in understanding the anticipated needs of the Procuring Authorities for the O&M work, and he will use this experience and understanding to work with CDOT on the I-70 East Project.

- ✓ O&M Manager on similar large Design Build / P3 / Alternative Delivery projects for high-traffic urban highways.
- ✓ Mike has extensive experience managing the operations and maintenance in urban and extreme winter environments.
- ✓ He has experience with associated inspection and record keeping of maintenance activities.

<b>(b) Years Experience Performing Similar Work:</b>	Twenty-three years of operation and maintenance program development and management for highway and transportation assets, including P3s.
<b>(c) Last 10 Years of Employment Experience:</b>	Employed at ACS since 2010. He has 7 years of experience with the Miami-Dade Expressway Authority and 11 years with Florida’s Turnpike Enterprise.

#### (d) Form F Projects (i)



O&M Manager; North America, ACS Infrastructure Development, Inc. and ACS Infrastructure Canada Inc. In his role as ACS’ O&M Manager, North America, Michael is responsible for the initial development and implementation of all O&M components (including optimizing operating and life cycle maintenance costs) for ACS’ North American portfolio, which includes 10 on-going P3 concessions. Four of these projects are included as Form F Reference Projects:

- » I-595 Corridor Improvements
- » Northeast Anthony Henday Drive
- » Autoroute 30
- » South Frasier Perimeter Road



Michael's role also includes providing operational management oversight and full execution of the following programs and activities on all of ACS' P3 projects:

- » Maintenance and Operations
- » Rehabilitation and handback programs
- » O&M activity development and costing
- » Operational procedures and manuals
- » Integration with the design process on all O&M, life cycle and maintainability issues

#### **(d) Other Reference Projects (ii)**

O&M Manager; ACS; Miami Dade Expressway Authority (MDX); Miami, FL. MDX is responsible for five high volume commuter toll roads in Miami Dade County. Assets include 270 lane miles, 240 structures and bridges, 10 toll facilities and ROW acquisition properties

As O&M Manager, Michael was responsible for the comprehensive Operational Programs for five high volume urban toll roads. Michael developed, implemented and managed successful programs for this newly created agency in all aspects regarding the O&M program, including:

- » O&M and R&R budget determination and management
- » Development and administration of all OM&R contract work
- » Interagency coordination
- » Permitting program
- » Natural disaster recovery, including successful FHWA Emergency and Permanent Repair reimbursements for Hurricanes Rita, Wilma, and Katrina
- » Implementation of: RISC (Rapid Incident Scene Clearance); State-of-the-Art Traffic Management Center; MDX's roving service patrol; and Systematic traffic safety/traffic operations improvements

Contracts Manager for Operations and Maintenance; ACS, Rehabilitation/Reconstruction; Florida's Turnpike Enterprise (FTE); FL. Florida's Turnpike system includes 460 centerline miles of toll highway including the Florida Turnpike and nine other tolled expressways throughout the state of Florida.

As Florida's Turnpike Maintenance and Engineering Management Consultant, Michael contributed to establishing operational procedures for a new agency charged with substantial assets. He developed work needs and administered maintenance and site specific contracts throughout Florida for rehabilitation contracts for approximately 500 structures and bridges, roadway lighting, signing and pavement markings, barriers, vegetation and aesthetics, as well as conducted asset and safety inspections.

Operations Manager; United Rentals Highway Technology. Managed Plant and Field operations for URHT's largest and most profitable branch in the southeastern U.S. providing construction services in Highway Signing, Pavement Markings, and Traffic Control as well as signing and barricade fabrication.

#### **(e) Licenses, Registrations, Organizations**

- (i) Licenses and/or Registrations:** Florida Certified General Contractor (inactive); ACI Concrete Inspection; FHWA Inspection of In Service Bridges; ATTSA Advanced Traffic Control; IMSA Roadway Lighting Inspection; SSPC Lead Paint abatement (QP-2); FDEP Storm Water and Erosion Control
- (ii) Community or Professional Organizations**  
International Bridge Tunnel and Turnpike Association (IBTTA)  
American Road Transportation Builders Association (ARTBA)
- (iii) Professional Disciplinary Actions:** None



**Annex A to Form I  
Form for Key Personnel References**

**Proposer Name:** Front Range Mobility Group (FRMG)  
**Position:** O&M Manager  
**Individual:** Michael Smith

**References**

<b>Required Information</b>	<b><u>Reference No. 1</u></b>	<b><u>Reference No. 2</u></b>	<b><u>Reference No. 3</u></b>
Project(s)/Transaction(s) (name and cross-reference in SOQ to relevant <u>Form F</u> (if applicable)):	I-595, Portsmouth Bypass, Northeast Anthony Henday, A-30, and South Frasier	Miami Dade Expressway Authority*	Florida's Turnpike Authority*
Reference's Name:	Ramon Villaamil	Juan Toledo	Paul Wai
Reference's Title (current):	Chief Operating Officer	Director of Engineering	Director of Operations
Reference's Employer (current):	ACS	Miami Dade Expressway Authority	Florida's Turnpike Authority
Reference's Title (at time of project/transaction):	Chief Operating Officer	Production/Construction Manger	Maintenance Engineer
Reference's Employer (at time of project/transaction):	ACS	Miami Dade Expressway Authority	Florida's Turnpike Authority
Reference's Phone and Email:	(786) 478-3666 rvillaamil@acsinfra.com	(305) 637-3277 (ext. 2115) jtoledo@mdxway.com	(954) 934-1247 paul.wai@dot.state.fl.us
Reference's Location and Time Zone:	Miami, FL Eastern Time Zone	Miami, FL Eastern Time Zone	Ft Lauderdale, FL Eastern Time Zone
Other: <sup>42</sup>	N/A	N/A	N/A

<sup>42</sup> Include any other notes that may be useful when speaking to this individual e.g. that they are a non-English speaker, etc.



## MARIOLA MATA ZAPICO, *Quality Manager*

*"Having worked as Quality Manager on three major P3 transportation projects, I understand that quality is designed, built, and maintained on a daily basis, not just checked when required. I look forward to leading FRMG's quality program on the I-70 Project and helping to instill a culture of high quality into the entire team from Day 1."*

### (a) Relevant Qualifications

Mariola has over 12 years of experience managing quality of design and construction on several major P3/Design-Build transportation projects. This includes her work as Quality Manager on two major P3 transportation projects in North America, each with contract values in excess of \$1 billion. Her experience includes the development, implementation, oversight, and execution of Quality Management Systems (QMS) per ISO 9001:2008 principles, as well as management of quality control (QC) and quality assurance (QA) procedures for bridges, highways, tunnels, and other civil infrastructure built in fast-paced design-build environments.

(b) Years Experience Performing Similar Work:	Twelve years of experience as quality manager for transportation projects
(c) Last 10 Years of Employment Experience:	Mariola has been employed at Dragados for twelve years

### (d) Form F Projects (i)



Quality Manager; Dragados; Autoroute 30; Montreal, Canada. The \$1.266-billion P3 highway project included a newly-constructed 26 -mile, four-lane western section of Autoroute 30 (A-30), which provides a southern bypass route around the island of Montreal. Key features, similar to the I-70 East project, included major bridges (including 6,072 foot bridge over the St. Lawrence River and a 7,920 foot bridge spanning the Beauharnois Canal), 69 total structures, 10 major intersections, a tunnel, complex drainage solutions requiring two pump stations, and 24 walls (including noise walls).

Mariola was Quality Manager for the design-build joint venture (DBJV) and was responsible for compiling, implementing, and operating the ISO 9001:2008 QMS and Site Quality Management Plan (QMP). She reviewed the quality plans and inspection and test plans of subcontractors/suppliers to confirm compliance, managed the QC technicians and independent laboratories, and managed the coordination of the inspection and test plans on site and their compliance with the project requirements. She managed the certificates, testing, and traceability of materials and performed audits of subcontractors as well as internal audits. She was responsible for the document control

### RELEVANT EXPERIENCE TO I-70 PROJECT

- ☑ Quality Manager on three P3 Transportation Projects with construction costs totaling over \$3 billion, including two in North America each over \$1 billion.
- ☑ Managed ISO-Compliant quality programs for design and construction of complex projects similar to the I-70 East Project.
- ☑ Quality management of highway interchanges, bridges, tunnels (including fire-life safety elements), coordination with railroads, extensive utility work, major excavations, complex drainage, and traffic management in urban areas.



department and reviewed the submission of hand-over packages (Achievement of Payable Items) to the Client.

#### (d) Other Reference Projects (ii)

**Quality Manager; Dragados; Confederation Line, Ottawa Light Rail Transit (P3); Ottawa, Canada.** The \$1.4 billion P3 project is the largest and most significant infrastructure investment in the City of Ottawa's history and will provide the first network of light rail transit (LRT) line15. Work includes eight highway overpasses to be widened and/or rehabilitated and tunnels, stations, and major bridges and other associated works for the LRT system. This includes performing the underground work per stringent ventilation and fire life safety requirements that are in line with international best practices based on key safety objectives.

As Quality Manager for the DBJV, Mariola is responsible for developing, implementing, and operating the ISO 9001:2008 QMS and the Construction Quality Management Plan (QMP), including planning, preparing, and managing the training of all DBJV staff in relation to the QMS. She reviews the subcontractors' and suppliers' quality plans and inspection and test plans to confirm compliance. Mariola manages the QC coordinators/engineers and the independent laboratory activities and performs external audits on subcontractors/suppliers and internal audits as Lead Auditor. She is also responsible for implementing and managing the inspection and test plans on site and their compliance with the project requirements, as well as managing and coordinating any non-conformities, corrective actions, or preventive actions on-site.

**Quality Manager; Dragados; N-25 Waterford Bypass (P3); Waterford, Ireland.** This \$363 million P3 highway project's main feature is a 1,452-foot cable-stayed bridge over the Suir River—the longest span and tallest bridge in Ireland, serving as a landmark for the City of Waterford. Other elements of work included 14.3 miles of new, four-lane limited access highway; 8.7 miles of single roadways; new construction of 6.8 miles of side roads and tie-ins; and 1.2 miles of railway realignment. In addition to the cable-stayed main span, the project included a number of major viaduct and grade separated interchange structures totaling over 50 bridges.

Mariola was Quality Manager for Dragados' DBJV and was responsible for implementing and overseeing the ISO 9001 QMS. She oversaw the overall document control department, managed the QC technicians and laboratories, managed/coordinated the inspections and test plans on site, and managed the certificates, testing, and traceability of materials. Other responsibilities included planning and performing audits on subcontractor work, managing non conformities on site, and reviewing the hand-over packages.

#### (e) Licenses, Registrations, Organizations

(i) **Licenses and/or Registrations:** B.S., Environmental Science/Management, Universidad Autonoma de Madrid (U.A.M), Madrid, Spain. Quality Management Systems – RABQSA-QM/AU/TL: ISO 9001:2008 Lead Auditor, BSI Management Systems (Ottawa, Ontario, Canada). CDE-QUA-IQSA: ISO 9001:2008 Internal Quality Systems Auditor, BSI Management Systems (Montreal, Quebec, Canada)

(ii) **Community or Professional Organizations** None

(iii) **Professional Disciplinary Actions:** None

**Annex A to Form I  
Form for Key Personnel References**

**Proposer Name:** Front Range Mobility Group (FRMG)  
**Position:** Quality Manager  
**Individual:** Mariola Mata Zapico

**References**

<b>Required Information</b>	<b>Reference No. 1</b>	<b>Reference No. 2</b>	<b>Reference No. 3</b>
Project(s)/Transaction(s) (name and cross-reference in SOQ to relevant <u>Form F</u> (if applicable)):	Confederation Line, Ottawa Light Rail Transit P3	Autoroute 30 P3 (Form F)	N-25 Waterford Bypass P3
Reference's Name:	Kevin Lindsey	Sandra Sultana	Lorcan Wood
Reference's Title (current):	Quality Lead	Director of Strategic Projects and P3	General Manager
Reference's Employer (current):	City of Ottawa (consultant)	Ministère des Transports du Québec	Celtic Roads Group
Reference's Title (at time of project/transaction):	Quality Lead	Director of Strategic Projects and P3	General Manager
Reference's Employer (at time of project/transaction):	City of Ottawa (consultant)	Ministère des Transports du Québec	Celtic Roads Group
Reference's Phone and Email:	(604) 785-4566 kevin.lindsey@ottawa.ca	(514) 873-4377 Ext. 2200 Sandra.sultana@mtq.gouv.qc.qa	00353 87 9085771 lorcan.wood@crgm1.ie
Reference's Location and Time Zone:	Ottawa, Ontario, Canada Eastern Time Zone	Montreal, Quebec, Canada Eastern Time Zone	Ireland (Irish Standard Time – GMT/UTC + 1:00)
Other: <sup>42</sup>	N/A	N/A	N/A

<sup>42</sup> Include any other notes that may be useful when speaking to this individual e.g. that they are a non-English speaker, etc.



**DANIEL LOWERY, Environmental Manager**

*"Successfully navigating a complex project through the environmental compliance process and seeing it through to its completion is rewarding. There's always a balance between building the needed infrastructure and managing environmental resources – I enjoy finding that balance."*

**RELEVANT EXPERIENCE TO I-70 PROJECT**

**(a) Relevant Qualifications**

Daniel has over 25 years of experience managing environmental impact assessments and compliance plans for heavy civil infrastructure and highway construction projects. His management experience includes: pre-design environmental constraints and planning, detailed technical studies, agency interaction required to secure environmental permits and approval and compliance during construction. Daniel has an extensive understanding of the environmental commitments made during the NEPA phase, current environmental laws and permits, their applicability during design and construction, and the close monitoring of all construction activities to ensure full compliance with contract requirements.

<b>(b) Years Experience Performing Similar Work:</b>	Twenty-five years of experience as environmental manager for transportation projects
<b>(c) Last 10 Years of Employment Experience:</b>	Daniel has been employed at AECOM since 2000, and he was employed with Flatiron from 2010-2013 for part of this time.

**(d) Form F Projects (i)**



Environmental Compliance Manager; Flatiron; Northeast Anthony Henday; Edmonton, Alberta. Team members HOCHTIEF, ACS, Flatiron, Dragados and lead designer AECOM are delivering this \$1.1-billion design-build-finance-operate-maintain (DBFOM) project, which includes 17 miles of new six- and eight-lane divided freeway. The project includes design, construction, finance, operations and maintenance of 6 miles of new freeway, upgrading 11 miles of existing freeway, adding auxiliary lanes, 47 bridges (including major structures over a river) 9 interchanges, 8 flyovers, and 2 bridges over active railways. The contract also includes 30 years of operations and maintenance. As environmental compliance manager on this project, Daniel provided guidance to the on-site environmental management team in developing a project specific environmental management plan consistent with ISO-14001:2004.

**(d) Other Reference Projects (ii)**

Environmental Compliance Manager; Flatiron; Presidio Parkway; San Francisco, CA. The Presidio Parkway Project, the first P3 transportation project delivered in California, replaces the aging approach to the Golden Gate Bridge. Comprising highly complex construction of

- ✓ Environmental Manager on similar large design-build and similar alternatively delivered transportation projects, including hands-on senior management on the Presidio Parkway P3 Project and the Oakland Airport Connector.
- ✓ Understanding of Colorado and CDOT environmental compliance requirements.
- ✓ Extensive experience on construction projects in Colorado and with CDOT.



bridges, caps, and interchanges in an environmentally sensitive urban environment, the project will improve seismic, structural, and traffic safety conditions; integrate the roadway into the national park setting; and create additional recreational space. Daniel managed environmental compliance for the design-build team and guided the project's on-site environmental management team in the development and execution of a project specific environmental management and compliance plan. This project has complied with the rigorous requirements necessary to be Greenroads Certified, and is expected to achieve certification upon project completion.

**Environmental Compliance Manager; CEI; US 285 Reconstruction Design-Build Project; Denver, CO.** This project replaced three structurally deficient bridges and reconstructed US 285. Daniel was responsible for overall environmental agency compliance, environmental permitting and agency coordination, environmental field monitoring and management of environmental compliance team for CDOT's \$40 million safety and mobility improvement project. His responsibilities included leading the environmental task-force group during design planning and developing/implementing the QMP.

**Environmental Compliance Manager; Flatiron; Lake Champlain Bridge (NY Route 185/VT Route 17); NY and VT.** This project constructed the new Lake Champlain Bridge in northern New York State and western Vermont. The new two-lane, 2,200-foot-long steel arch-span structure replaced a structurally deficient two-lane bridge and reconnected Essex County, NY and Addison County, VT. Daniel managed environmental field services and permitting and was responsible for environmental agency consultation for both states as well as coordination of CWA 404 permitting.

**Environmental Compliance Manager; Flatiron; Oakland Airport Connector; Oakland, CA** In another highly complex transportation project located in a congested urban environment, Daniel was responsible for the environmental compliance program and construction quality management for a \$360 million fixed, elevated guideway for the automated people mover that provided a connection between the Coliseum BART Station and the Oakland Airport. Daniel was responsible for the overall environmental compliance, agency consultation, documentation of CEQA/NEPA mitigation commitments and management of the environmental compliance team.

**Environmental Compliance Manager; CEI; Fitzsimons (Sand Creek) Parkway; Aurora, CO.** Daniel managed the environmental compliance and agency consultation activities for the Fitzsimons (Sand Creek) Parkway project at the former Fitzsimons Army Base and Hospital, Aurora, CO. His responsibilities also included oversight of construction and remediation activities associated with contaminated soils and groundwater originating from three, historical military landfills that were never properly closed.

**Environmental Compliance Manager; CEI; Florida Road Reconstruction Design-Build Project; CO.** Daniel managed the overall environmental compliance program and participated in the design planning process and construction sequencing for a major roadway reconstruction project in Durango adjacent to the Animas River. His primary responsibilities included overseeing construction to ensure environmental compliance, and conducting environmental field surveys and permitting.

### (e) Licenses, Registrations, Organizations

- (i) **Licenses and/or Registrations:** Hazardous Materials Management Certificate; Certified Water Quality/Erosion Control Supervisor, Colorado; Sound and Vibration Certification
- (ii) **Community or Professional Organizations:** Association of Environmental Professionals  
Colorado Contractors Association (CCA)      Design-Build Institute of America (DBIA)  
Associated General Contractors of America National Steering Committee member  
Rocky Mountain Minority Contractors Association (RMMCA); COMTO Colorado  
Rocky Mountain Association of Environmental Professionals
- (iii) **Professional Disciplinary Actions:** None

**Annex A to Form I  
Form for Key Personnel References**

**Proposer Name:** Front Range Mobility Group  
**Position:** Environmental Manager  
**Individual:** Daniel Lowery

**References**

<b>Required Information</b>	<b><u>Reference No. 1</u></b>	<b><u>Reference No. 2</u></b>	<b><u>Reference No. 3</u></b>
Project(s)/Transaction(s) (name and cross-reference in SOQ to relevant <u>Form F</u> (if applicable)):	US 285 Design-Build Project	US 285 Design-Build Project	BART OCTA Design-Build Project
Reference's Name:	Kevin Sullivan	Jean Cordova	Dan Elshire
Reference's Title (current):	Project Director	CDPHE Liaison, Environmental Project Manager	Vice President
Reference's Employer (current):	CDOT Region 1	CDOT Region 1	Stacey Whitbeck
Reference's Title (at time of project/transaction):	Project Manager	Water Quality Specialist, Environmental Project Manager	Project Manager
Reference's Employer (at time of project/transaction):	CDOT Region 1	CDOT Region 1	Flatiron Construction Corporation
Reference's Phone and Email:	(303) 972-9112 Kevin.r.sullivan@state.co.us	(303) 757-9304 jean.cordova@state.co.us	(510) 708-8824 delshire@stacywitbeck.com
Reference's Location and Time Zone:	Denver, CO Mountain Time Zone	Denver, CO Mountain Time Zone	Santa Clara, CA Pacific Time Zone
Other: <sup>42</sup>	N/A	N/A	N/A

<sup>42</sup> Include any other notes that may be useful when speaking to this individual e.g. that they are a non-English speaker, etc.



## LAURA BAXTER, Utilities Manager

*“Working in the Front Range transportation design-build community since 2001, I’ve gained a great appreciation for innovation and creativity in finding solutions to engineering and construction challenges. It will be a privilege, both personally and professionally, to continue to enhance the infrastructure of the Denver metro area.”*

### RELEVANT EXPERIENCE TO I-70 PROJECT

#### (a) Relevant Qualifications

Laura’s experience in heavy civil and transportation construction projects spans 23 years. She has worked with utility owner design-build specialists in the Denver area since 2001, and has established meaningful relationships based on trust, cooperation, and understanding. She routinely works with public and private utilities to draft and execute scope utility relocation agreements, including master governing agreements, individual conflict relocation documents, and memoranda of understanding. She coordinates utility relocation design and construction with Third Party designers, integrating their requirements into the overall design-build project to ensure constructability.

(b) Years Experience Performing Similar Work:	Twenty-three years of heavy civil and transportation construction experience
(c) Last 10 Years of Employment Experience:	Laura has been employed at CH2M since 2014, Goodbee and Associates, Inc. from 2005 to 2014; Kiewit Corporation from 1992 to 2005.

#### (d) Form F Projects (i)



Utility Manager; CH2M; I-15 North Design-Build Project US 95 to Craig Road Design-Build Project; Las Vegas, NV

Laura managed utility relocation and coordination services for both design and construction of water, sewer, electric, gas, street lighting, ITS and landscape irrigation for this \$252-million project. She developed the project schedule to coordinate all utility design and construction activities, weekly updates, invoicing and impact analysis. She managed and scheduled electrical and ITS subcontractor field efforts, assisted project management with change order impacts and coordinated with NDOT. The project was completed 8 months ahead of schedule and received an early completion bonus.



Project Utility Manager and Project Scheduler; Kiewit Companies; I-25 Transportation Expansion (Trex) Project, South East Corridor Constructors (\$1.28 billion); Denver, CO.

Laura managed more than 300 individual project utility relocations on this \$1.3-billion project. These relocations included design and construction of water, sewer, electric, gas and telecommunications, and the relocation of overhead electric transmission lines into a 42-inch diameter cased bore

✓ Utility coordinator on many local projects including COSMIX, the RTD FastTracks North Corridor, I-225 Corridor, Eagle P3 Project, and the TREX Design-Build Project.

✓ Utility manager on projects ranging from multi-million to multi-billion dollars for clients in Canada and the U.S., offering a perspective based on experience with a broad spectrum of project delivery types in multiple geographies.

✓ Has served in multiple capacities on projects as field engineer, subcontract manager, utility relocation coordinator, scheduler, and project engineer, bringing a broad understanding of potential issues on the I-70 East project.





under the I-25/I-225 interchange. She assisted with the maintenance of project schedule, weekly updates, invoicing and impact analysis. She managed third party utility relocation construction coordination and relocation acceptance, assisted project management with change order impacts and coordinated with RTD. Laura's involvement in TREX directly applies to the I-70 East project because of the large number of utility relocations expected.

#### **(d) Other Reference Projects (ii)**

**Utility Manager; Goodbee and Associates, Inc.; RTD FasTracks North Metro Corridor Design-Build; Denver, CO.** Laura assisted the design-build pursuit teams with utility cost and risk analysis. She led kick-off efforts with the utilities and affected municipalities. Laura's responsibilities on this \$343-million project involved utility owner design coordination, design translation, Utility Relocation Agreement negotiation, production execution and design acceptance. She managed the design staff in the development and production of utility relocation drawings.

**Utility Manager; Goodbee and Associates, Inc.; RTD FasTracks I-225 Corridor Design- Build; Aurora, CO.** Laura managed utility owner design coordination, design translation, Utility Relocation Agreement negotiation, production execution and design acceptance. She managed a team of five design staff in the development and production of utility relocation drawings for this \$350-million project. The City of Aurora, the design-builder, and RTD negotiated an alignment change at the Fitzsimmons Medical Center in spring 2014, which required the relocation of an Excel Energy transmission pole. In just 10 days, Laura and her team were able to establish design concept and reimbursement rights; draft and execute relocation agreements; and get the pole into procurement for fall 2015.

**Utility Manager; Goodbee and Associates, Inc.; RTD FasTracks Eagle P3; Denver, CO.** Laura's responsibilities on this \$2-billion project involved utility owner design coordination, design translation, utility relocation agreement negotiation, production execution and design acceptance. She managed design staff in the development and production of utility relocation drawings; coordinated with utilities that will also be part of the I-70 East Project, including Xcel, Level 3, Comcast, Century Link, Sprint, and Time Warner. Laura assisted the contractor with third party utility relocation construction coordination and relocation acceptance of 29 at-grade crossings that needed to accommodate both commuter rail and Class 1 railroads, requiring relocation and encasement of wet and dry utilities crossings.

**Grading and Walls Design Engineer; Kiewit Companies; I-15 Corridor Reconstruction Design-Build; Salt Lake City, UT.** During design, Laura performed on-going quantity takeoffs and evaluation for MSE walls, lightweight fill and geo-foam fill and wall options. Because major utility corridors cross I-15 east-west, during construction she explored and developed lightweight and no net fill (added weight) options in order to avoid relocation of major utilities. Laura's responsibilities included: assisting with the overhaul of the project's white paving management, schedule and implementation, developing and maintaining cost tracking tools and paving schedule.

#### **(e) Licenses, Registrations, Organizations**

**(i) Licenses and/or Registrations:** None

**(ii) Community or Professional Organizations:** Member of United States Combined Training Association and its local affiliate, Mountain States Eventing Association, Central Colorado Chapter. Member of Colorado's Bijou Springs Hunt, Both of these equine organizations are actively involved in land use planning, preservation of open space, and animal welfare in Colorado.

**(iii) Professional Disciplinary Actions:** None

**Annex A to Form I  
Form for Key Personnel References**

**Proposer Name:** Front Range Mobility Group (FRMG)  
**Position:** Utilities Manager  
**Individual:** Laura Baxter

**References**

<b>Required Information</b>	<b>Reference No. 1</b>	<b>Reference No. 2</b>	<b>Reference No. 3</b>
Project(s)/Transaction(s) (name and cross-reference in SOQ to relevant <u>Form F</u> (if applicable)):	(1) T-REX Design Build (Form F) (2) COSMIX Design Build (3) EAGLE P3 Project (4) I-225 Design Build	COSMIX Design-Build	(1) NW Corridor and Gold Line Project (2) RTD North Metro Project
Reference's Name:	Guido Aguillard	Richard Sembrat	Dave Trent
Reference's Title (current):	Senior Outside Plant (OSP) Engineer	System Performance and Support Manager	Project Director
Reference's Employer (current):	Level (3) (recently acquired tw telecom)	CDOT	Regional Rail Partners (Balfour Beatty)
Reference's Title (at time of project/transaction):	Senior OSP Engineer	Intelligent Transportation Systems Engineer and Fiber Optic Manager/Relocation Manager	Project Director
Reference's Employer (at time of project/transaction):	International Communications Group, Inc: (T-REX); tw telecom (COSMIX, Eagle P3, and I-225)	CDOT	Regional Rail Partners (Balfour Beatty)
Reference's Phone and Email:	(303) 566-6045 Guido.Aguillard@Level3.com	(303) 512-5804 richard.sembrat@state.com.us	(512) 677-8600 dtrent@rrpjv.com
Reference's Location and Time Zone:	Denver, CO Mountain Time Zone	Golden, CO Mountain Time Zone	Austin, TX Central Time Zone
Other: <sup>42</sup>	N/A	N/A	N/A

<sup>42</sup> Include any other notes that may be useful when speaking to this individual e.g. that they are a non-English speaker, etc.



**KATHY BERUMEN, Community & PR Manager**

*“The strength of our community lies in the collaborative success of enhancing the transportation infrastructure that weaves our neighborhoods together. I would be privileged to join forces with CDOT on the I-70 East Project.”*

**RELEVANT EXPERIENCE TO I-70 PROJECT**

**(a) Relevant Qualifications**

Kathy Berumen brings more than a decade of relevant community and public relations experience to the I-70 East Project. She is currently serving as the Public Information Manager for the North Metro Rail Line in Denver, a complex, urban design-build project that is part of the RTD FasTracks program. Prior to that, she served in the same role on the West Rail Line that connects downtown Denver to Golden. Having served on a number of community and professional organizations, including as Transportation Committee Chair and past board member for the Hispanic Contractors of Colorado, she is intimately familiar with the Metro Denver area, its neighborhoods, residents, and community leaders. Her strategies include developing and implementing comprehensive campaigns that connect the project with stakeholder groups, media outlets and impacted residents and businesses. Kathy will work seamlessly with CDOT’s communications team to continue and expand upon the communication and community engagement efforts already ongoing.

- Public Information Manager on the RTD FasTracks West Rail Line and North Metro Rail Line
- Bi-lingual (Spanish/English), ensuring effective communication with Spanish speakers.
- Provides on-going relationships with local media outlets; creating a pathway to greater community involvement.

<b>(b) Years Experience Performing Similar Work:</b>	10 years of experience as Public Relations/Public Information Manager and Community Affairs
<b>(c) Last 10 Years of Employment Experience:</b>	Kathy has owned Communication Connections Consulting since 2007 to Present, prior to that she was with Univision Colorado from 2002 to 2007

**(d) Form F Projects (i)**  
N/A

**(d) Other Reference Projects (ii)**  
Public Information Manager; Regional Rail Partners; North Metro Rail Line; Denver, CO. The North Metro Rail Line is a design-build project, currently under construction. This project includes 12 miles of commuter rail from Denver Union Station to 124th Avenue Station. It features 11 new bridges, 6 stations and 12 at-grade crossings.. As the Lead Contractor’s Public Information Manager, Kathy identified key target audiences for this project and engaged them in communications. She plans and hosts community outreach meetings, facilitates one-on-one discussions relative to the Project and writes and distributes e-newsletters, construction information fliers and milestone collateral materials.



Similar to what will be required for CDOT's I-70 East project, she wrote and implemented a Public Information Plan, a Crisis Communications Plan, an Internal Communications Plan and developed Business and School Outreach campaigns. She maintains a high level of communication with Project partners and stakeholders and mitigates construction impacts by providing up-to-date information including areas of construction, detours, road closures, etc.

**Public Information Manager; Denver Transit Construction Group; West Rail Line; Denver, CO.** The West Rail Line was the first FasTracks corridor completed and includes 12.1 miles of light rail running between DUS and the Jefferson County Government Golden Station. The Project included 11 new stations, 6 Park-n-Rides and 3 Call-n-Rides. The line traverses through downtown Denver, into an industrial area, parallels open space, and finally winds through an urban community where some homes are within 20 feet of the line.

As Public Information Manager, Kathy worked intimately with the RTD FasTracks PI Team to meet the goals and objectives of the overall FasTracks Public Information Program, while dealing with impacts to an overly engaged community. Her Public Information Plan was essential to the successful build-out of the Project and the strategies she used within the plan laid the groundwork for RTD's current PI goals and objectives.

*"Kathy...has proven to be invaluable. Her ability to work with enineers, stakeholders, and the public are unsurpassed. She has a positive can-do attitude and unparalleled patience and experience dealing with diverse personalities and issues under pressure...She is the best Public Information Manager I've ever worked with."*

-Brenda Tierney, Public Information Manager, RTD

Kathy worked closely with the Spanish speaking community throughout the build-out, trans-creating Project collateral. She administered the construction portion of the RTD West Rail Line website, wrote and distributed the West Rail Line monthly e-newsletter and kept stakeholders and media outlets involved in the Project. She met regularly with Emergency Response Agencies, elected officials and community leaders empowering them with knowledge about the Project and encouraging them to take the West Rail Line message out to their own constituents.

The West Rail Line PI team was recognized as Colorado's outstanding PR/PI/Media Relations program on a large infrastructure project in 2011 by the American Public Works Association.

**(e) Licenses, Registrations, Organizations**

- (i) Licenses and/or Registrations: DBE/SBE/MWBE Certified
- (ii) Community or Professional Organizations
  - Member – HCC Transportation Committee      Chair - HCC 25th Anniversary Committee
  - Board Vice President – Hispanic Annual Salute      Board Vice President – The Wishbone Foundation
  - Past Board President – The Rape Assistance and Awareness Program
  - Past Board Member – Latin American Educational Foundation
- (iii) Professional Disciplinary Actions: None

**Annex A to Form I  
Form for Key Personnel References**

**Proposer Name:** Front Range Mobility Group (FRMG)  
**Position:** Community & Public Relations Manager  
**Individual:** Kathy Berumen

**References**

<b>Required Information</b>	<b>Reference No. 1</b>	<b>Reference No. 2</b>	<b>Reference No. 3</b>
Project(s)/Transaction(s) (name and cross-reference in SOQ to relevant <u>Form F</u> (if applicable)):	RTD FasTracks North Metro Rail Line	RTD FasTracks West Rail Line	Entravision Communications
Reference's Name:	Brenda Herney	John West	Mario M. Carrera*
Reference's Title (current):	RDT PI Manager	Project Director	Chief Revenue Officer
Reference's Employer (current):	Regional Transportation District (RTD)	Herzog	Entravision Communications
Reference's Title (at time of project/transaction):	RTD PI Manager	Project Director	VP/Denver Area Manger
Reference's Employer (at time of project/transaction):	RTD	Denver Transit Construction Group	Entravision Communications
Reference's Phone and Email:	(303) 299-2401 Brenda.tierney@rtd.denver.com	(720) 244-9661 jwest@herzog.com	(303) 318-6204 mcarrera@entravision.com
Reference's Location and Time Zone:	Denver, CO Mountain Time Zone	San Diego, CA Pacific Time Zone	Denver, CO Mountain Time Zone
Other: <sup>42</sup>	N/A	N/A	N/A

\*Reference outside 5 year criteria.

<sup>42</sup> Include any other notes that may be useful when speaking to this individual e.g. that they are a non-English speaker, etc.

# STATEMENT OF TECHNICAL APPROACH

# 5



## CONNECTING COMMUNITIES



ALONG I-70 EAST

I-595 P3  
Miami, Florida



# 5. Statement of Technical Approach

## a. Summary

Front Range Mobility Group is an experienced team that has managed similar technical challenges as the I-70 East Project in other complex, urban environments. We deliver key benefits in our approach that address the critical Project challenges of minimizing disruptions to the affected residents, businesses, stakeholders, and traffic on local streets and I-70.

FRMG Benefits	
Minimize impacts	» FRMG's phased approach will allow for over half of the Project to be constructed with little or no impact on the I-70 East alignment.
Optimize scope	» FRMG will use innovative means and methods such as top-down construction, phased construction and early utilities relocation to minimize throw-away work and maximize scope.
Optimize life-cycle performance	» FRMG's design, construction, and O&M teams are fully-integrated throughout the delivery of the Project, assuring a holistic approach to solving challenges and delivering a quality facility that is built to last.
Long-term partner	» FRMG's Core Proposer Team is fully-integrated, making us an ideal partner to deliver the full scope of the Project. Additionally, our design-build firms are based locally and are part of this community.

### *Minimize impacts: construction phasing to keep traffic moving and minimize construction impacts*

We have prepared a high-level schedule of major work activities and a phasing plan that reflects our goal of maintaining multi-modal connectivity and traffic flow on both local streets and along I-70. Early on, our integrated team of designers, constructors, and O&M personnel will work in multi-disciplinary task forces to identify and incorporate interface, maintenance of traffic, constructability and operational, maintenance and life-cycle needs.

### *Optimize scope: FRMG will use proven, innovative techniques to solve the most complex technical challenges – demolition of viaduct, construction of depressed section and railroad bridges*

To address the greatest challenges of the Project, we included a preliminary plan for the removal of the viaduct and replacement with the cut-and-cover or depressed section. We recognize the challenges presented during this phase of work and we have proposed solutions and benefits for major work items associated with this work. We plan to maintain connectivity of neighborhood bridges using top-down construction methods. Separately, we have also included two alternative concepts for the

construction of the Union Pacific Railroad bridge that serves the 36<sup>th</sup> street yard.

### *Optimize life-cycle performance: delivering quality work through a comprehensive understanding of requirements*

We have provided a project matrix illustrating our vast experience in dealing with challenges on past projects that are similar in nature to the I-70 East Project. This broad-ranging spectrum of information is provided to underscore our familiarity with total project requirements. Our integrated delivery approach and quality management systems are centered on safety, quality, and long-term benefits.

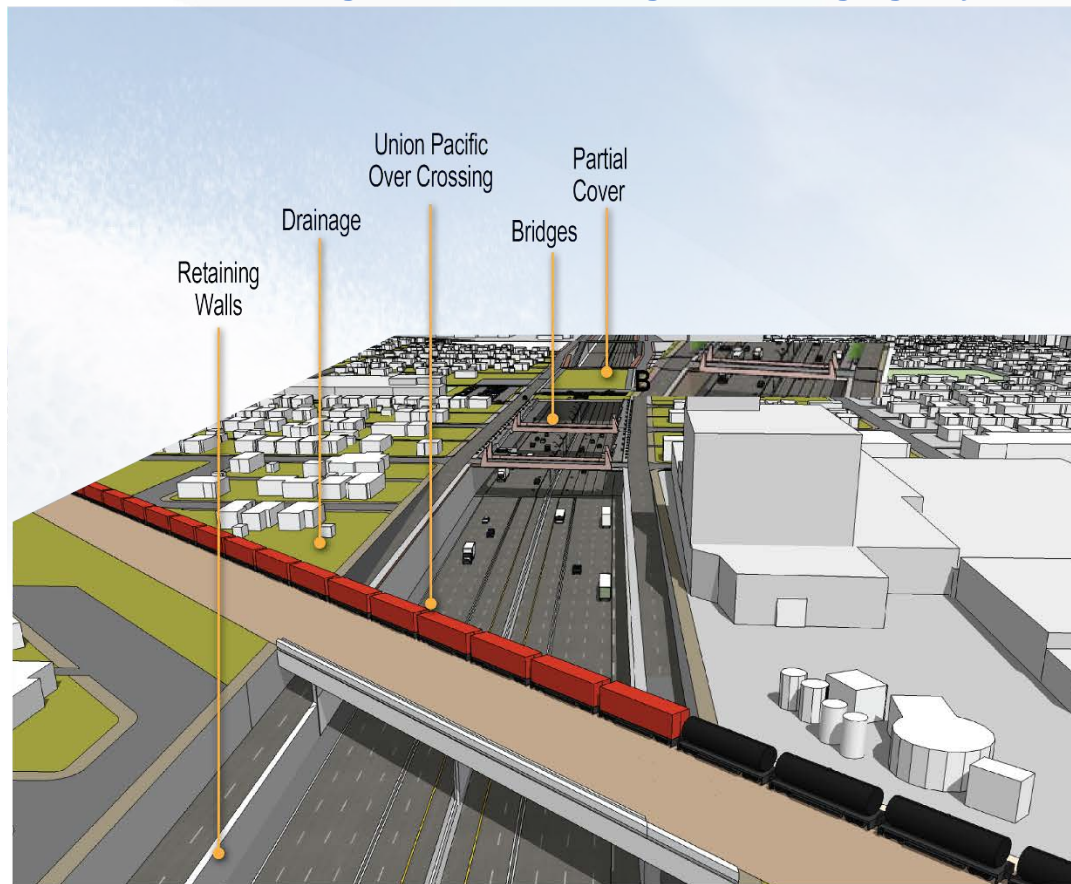
### *FRMG is your long-term partner: Collaboration with CDOT and the community*

We have followed the development of the I-70 East Project for more than a decade. As a locally-based design-build team, we understand the significance of this corridor to CDOT, the Procuring Authorities, and the Region, and we understand the history and future needs of the affected community. Our community and public relations team will work with CDOT and the community to mitigate construction impacts to the community and address health and safety concerns. Our goal is to help CDOT and the community achieve an enhanced gateway through our neighborhoods, city, and state.

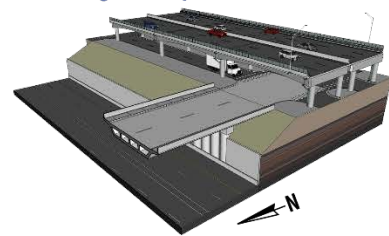




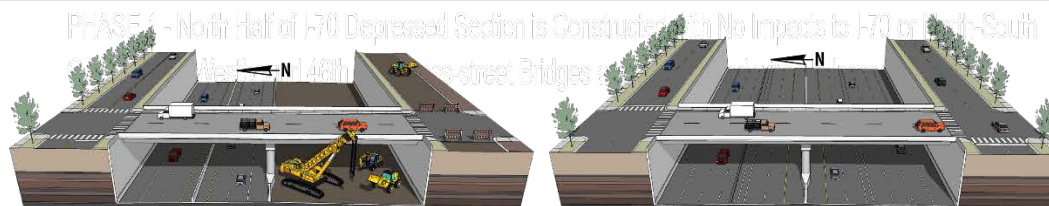
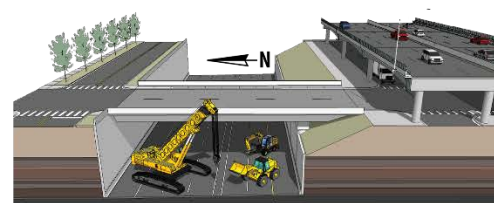
## b. Technical Challenges: Understanding and Managing Key Challenges is Essential to Delivering a Successful Project



### Addressing the Depressed Section Challenges



PHASE 0 - Construct north half of depressed section. Phase 1 - Construct north-south connection bridges.



PHASE 2 - Switch traffic and construct other half of depressed section

PHASE 3 - Construction complete, begin long-term O&M

Key Challenges and Risks	Solutions/Benefits	Relevant Local Projects
--------------------------	--------------------	-------------------------

Risks: Safety Cost Time  
 Environment (Includes EIS Commitments)

Bridges	<ul style="list-style-type: none"> <li>Minimize impacts to existing I-70 viaduct </li> <li>Maintain north/south connectivity during construction </li> <li>Minimize structure depth to optimize profiles </li> <li>Utility relocations </li> </ul>	<ul style="list-style-type: none"> <li>Utilize temporary shoring or slope protection to facilitate single phase demolition</li> <li>Top-down construction to reduce construction footprint</li> <li>Build bridges in advance of depressed section to minimize traffic impacts</li> <li>CIP concrete w/ post tensioning to reduce depth and raise I-70 profile</li> <li>Utilize structures as utility chase to accommodate early private relocations</li> </ul>
Walls	<ul style="list-style-type: none"> <li>Deep excavation and limited ROW </li> </ul>	<ul style="list-style-type: none"> <li>Top-down construction to minimize excavation limits</li> <li>Secant and soil nail wall types, commonly used for deep excavation</li> <li>Minimize temp or throwaway walls to reduce construction activities and cost</li> </ul>
Drainage	<ul style="list-style-type: none"> <li>On-site Drainage </li> </ul>	<ul style="list-style-type: none"> <li>Protect groundwater by capturing onsite flows prior to entering depressed section</li> <li>Isolate groundwater from storm water to reduce the amount requiring treatment</li> <li>Reduce long term maintenance by building redundancy at the low point</li> </ul>
Deep Excavation	<ul style="list-style-type: none"> <li>Construction Access </li> <li>Materials Management </li> <li>Roadway Base Slab </li> <li>Groundwater </li> </ul>	<ul style="list-style-type: none"> <li>Minimize impacts to local roads by establishing specific access points and haul routes</li> <li>Reduce hauling and disposal costs by treating &amp; utilizing in-situ soils</li> <li>Design floating base slab to eliminate deep foundations, withstand uplift and allow for rigid wall connections, and prevent groundwater penetration</li> <li>Install dewatering system to control groundwater and facilitate construction</li> </ul>
Viaduct Demo	<ul style="list-style-type: none"> <li>Mitigate Noise </li> <li>Maintain N/S Connectivity </li> <li>Air Quality / Dust Control </li> <li>Safety </li> </ul>	<ul style="list-style-type: none"> <li>Demolition during daytime hours to reduce noise impacts to adjacent communities</li> <li>Demolish sections over roads at night to reduce impacts to traveling public</li> <li>Improve air quality by utilizing BMP's as described in SDEIS and cover, wet, or compact materials to control dust</li> <li>Ensure worker and public safety by developing a robust demolition plan</li> </ul>
Partial Cover	<ul style="list-style-type: none"> <li>Structure Type Optimization </li> <li>Stakeholder Coordination </li> <li>Landscaping &amp; Public Realm </li> <li>Covered Section Drainage </li> <li>Fire/Life/Safety </li> </ul>	<ul style="list-style-type: none"> <li>Reduce section depth to optimize profile - thinner structures = higher RW profile = less excavation</li> <li>Incorporate regular meetings with CDOT and CCD to promote coordination and collaboration</li> <li>Reduce cost and long term maintenance by providing positive drainage off structure</li> <li>Ensure local agency coordination related to NFPA130</li> </ul>
Haz. Materials	<ul style="list-style-type: none"> <li>Heavy metal in soils </li> <li>Dewatering </li> </ul>	<ul style="list-style-type: none"> <li>An integrated materials management plan and health and safety plan, ensures work and environmental exposure</li> <li>Consolidate treatment facilities and discharge locations</li> <li>Early sampling and coordination with CDPHE to obtain remediation permit</li> </ul>
MOT	<ul style="list-style-type: none"> <li>Minimize disruption to travelling public </li> <li>Maintain travel speeds along the alignment </li> </ul>	<ul style="list-style-type: none"> <li>Redundancy in the roadway system maintains capacity during construction</li> <li>A majority of construction is phased to happen off the alignment to minimize exposure to the travelling public</li> <li>Construction of I-70 in halves will help alignment considerations and maintain travel speeds</li> </ul>

### Denver Union Station (DUS)



- Floating slab/Dewatering/Fire-Life-Safety Requirements

### I-25 20th St. To Speer Blvd.



- 35' tall top down soil nail and tangent caisson walls to protect adjacent development

### Broadway Demo



- Demolition of Broadway adjacent to I-25 traffic and railroad

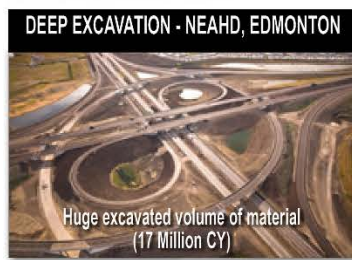
### Golden Lid



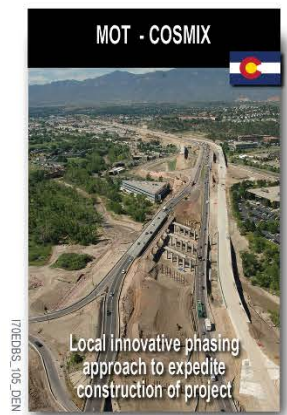
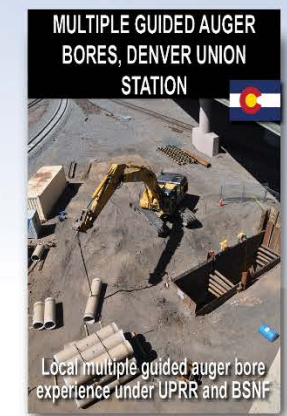
- Cut-and-cover work with landscape lid

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**b. Technical Challenges: FRMG's Experience in Addressing Technical Considerations Similar to I-70 East Project**



**PROJECTS**

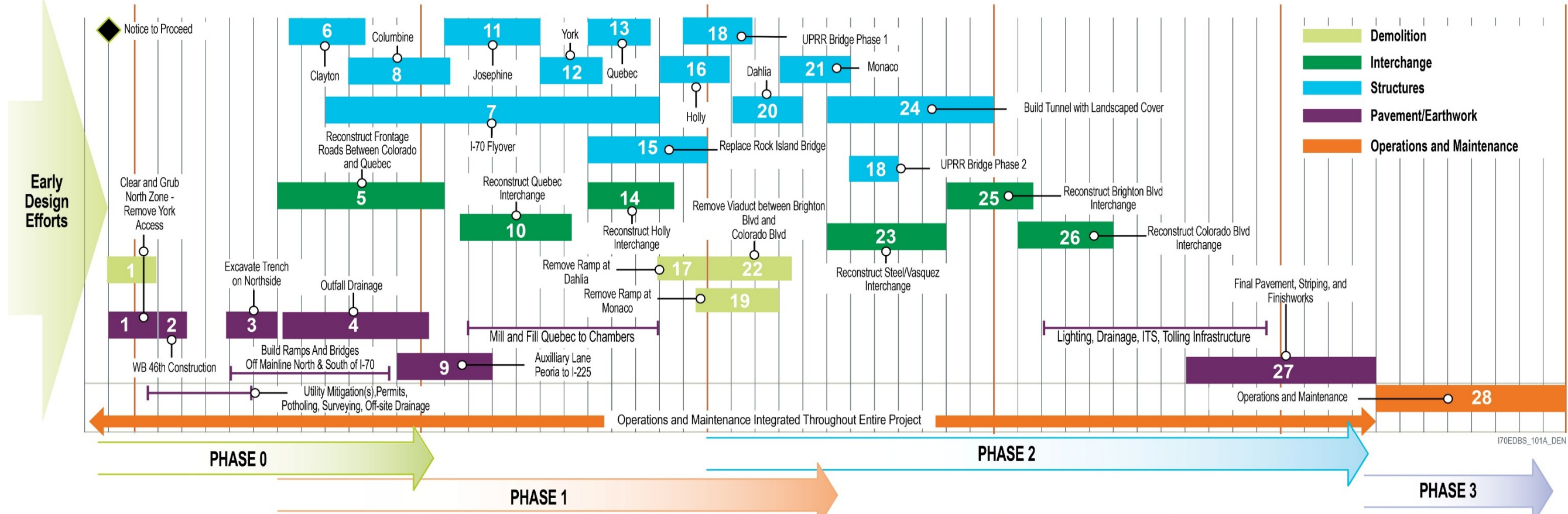


Technical Considerations	SELECT REFERENCE PROJECTS										OTHER RELEVANT PROJECTS									
Colorado Projects																				
Railroads	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Drainage System(s)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Geotechnical Considerations	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Hazardous Material Management	✓		✓	✓	✓	✓		✓		✓	✓	✓	✓	✓	✓		✓	✓	✓	✓
Construction Phasing and Maintenance of Traffic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Utility Investigation and Relocations	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Retaining Walls		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Deep Excavation		✓	✓	✓	✓	✓	✓	✓			✓		✓	✓	✓	✓	✓	✓	✓	✓
Ground Water Considerations	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Cut-and-Cover Work				✓	✓	✓					✓		✓	✓	✓	✓				
Covered/Below Grade Section, Ventilation and FLS				✓	✓	✓		✓					✓			✓		✓		
Tolling Infrastructure Operations	✓						✓	✓				✓		✓	✓		✓			
Intelligent Transportation Systems (ITS)	✓				✓	✓	✓	✓		✓		✓	✓	✓	✓		✓			
Permitting	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓
Right-of-Way Acquisition or Coordination	✓			✓	✓	✓	✓		✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓
Project Coordination	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Public Relations	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Neighborhood Impacts	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Stakeholders/Agencies Coordination	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Changing conditions		✓	✓	✓	✓	✓			✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Alternative Delivery	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Innovative/Alternative Financing	✓	✓	✓	✓				✓	✓	✓							✓			
Operations and Maintenance	✓	✓	✓	✓					✓	✓										

**b. Technical Challenges: FRMG's Phased Approach to Delivering the Project**



**Optimized Phasing allows for over half of the project to be constructed with little or no impact to the I-70 East alignment**



**Phase 0: Activities while maintaining local streets and I-70 traffic**  
 The following activities will be completed while maintaining traffic both on the local streets as well as the I-70 corridor:

- Utility Mitigation(s), Permits, Potholing, Surveying, Off-site Drainage
- Clear and Grub area north of I-70 between Brighton and Colorado
- Construct westbound 46th frontage road
- Build ramps and bridges north and south of I-70 off of the mainline
- Construct northern half of depressed section

**Phase 1: Activities while maintaining I-70 traffic**  
 Completion of the tasks in this phase will allow the team to accomplish over 50% of the scope of work prior to construction including:

- North/South connector bridges
- Auxiliary lane from Peoria to I-225
- Holly and Quebec Interchanges
- Phase 1 of Union Pacific Railroad Bridge

**Phase 2: Activities during interim I-70 configurations**  
 One of the goals of the Phase 1 was to provide capacity east of Quebec to provide an alternate route along the frontage roads or bypass the corridor altogether (via I-270) in order to construct the following:

- Remove viaduct and build remaining portion of cut-and-cover
- Phase 2 of Union Pacific Railroad Bridge
- Brighton and Colorado Interchanges
- Enable early tolling (as feasible)

**Phase 3: Operations and Maintenance:**  
 The interface of the operations and maintenance (O&M) will occur well before the maintenance period, incorporating O&M considerations into the design. Once the project enters the maintenance period the team's tasks will include:

- Preventative maintenance to optimize performance
- Seasonal activities to address the dynamic climate in Colorado
- Maintenance during off-hours to minimize impacts



## b. Technical Challenges: Examples of FRMG's Systematic Approach to Managing Key Challenges

### Challenge: Building Redundancy into Road Network without Impacts to I-70 and Local Traffic

#### Solutions

- 1 Construct majority of WB 46th to temporarily operate as a 2-way facility
- 2 Construct majority of off-site drainage with interceptors before it enters depressed area
- 3 Construct majority of the north side of I-70 Depressed section
- 4 Construct majority of the north side of the UPRR Structure using ABC techniques
- 5 Construct majority of Steele/Vasquez ramps and significant portion of Quebec Interchange
- 6 Construct I-270 new structure over I-70 using the ultimate alignment location
- 7 Construct widening from Quebec to Chambers while maintaining existing I-70 traffic

#### Benefits

- 1 No disruption of local east-west multi-modal circulation during construction
- 2 Pipe sizes required in the depressed section to drain the onsite drainage will be reduced
- 3 Eliminates impacts to the traveling motorists on existing local streets and I-70
- 4 Minimizes disruption time to railroad operations
- 5 Early ramp construction provides additional capacity on arterial network without disrupting traffic on I-70
- 6 Minimizes impacts SB I-270 to EB I-70 and eliminates throw-away bridge construction
- 7 Adds capacity early on the Project for MOT considerations

### Challenge: Maintaining Connectivity without Impact to I-70 Traffic

#### Solutions

- 8 Relocate majority of major utilities during the top-down construction period
- 9 Maintain neighborhood connectivity at proposed bridges using top-down construction with CIP/At-grade/ABC methods to avoid impacts to existing viaduct
- 10 Perform as many construction activities as possible outside of existing I-70 footprint

#### Benefits

- 8 Minimizes traffic disruption during the deep excavation
- 9 Eliminates the need for street closures over the depressed section while maintaining the vehicle and pedestrian movements and allowing of early relocation of utilities
- 10 Eliminates length of time that traffic flow is interrupted on I-70

### Challenge: Minimizing Impacts to Railroads

The I-70 / UPRR Bridge presents an ideal opportunity to develop innovative solutions as shown below to achieve the following goals:

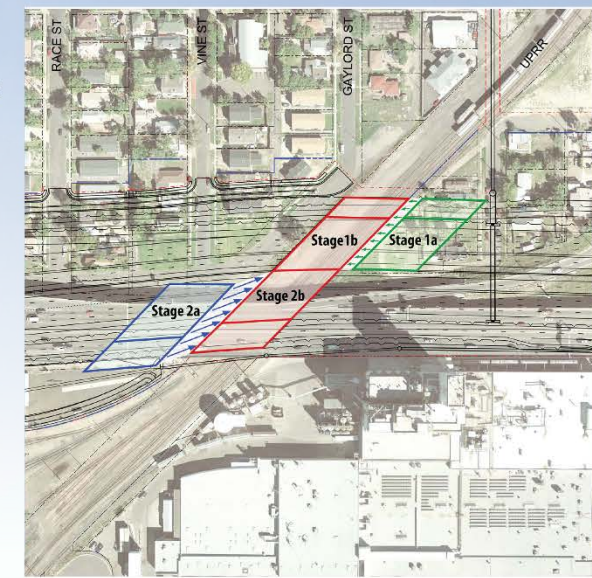
- Reduce structure depth - raises profile cost benefit
- Allow 46th Avenue to be connected below RR prior to Stage 2
- Minimize RR impacts as specified below - reduces schedule and cost risks

#### Scenario 1: In-Place Construction

- Stage 1: Build WB (north half) in place, shifting trains as needed
  - Use temporary post-tensioning to minimize structure depth
- Stage 2: Phased removal and in-place construction of southern half of bridge
- Advantage = Allows no interruption in service to yard

#### Scenario 2: Site Construction (ABC)

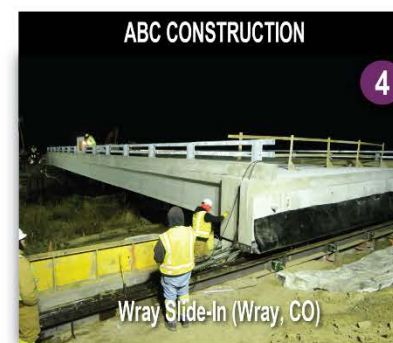
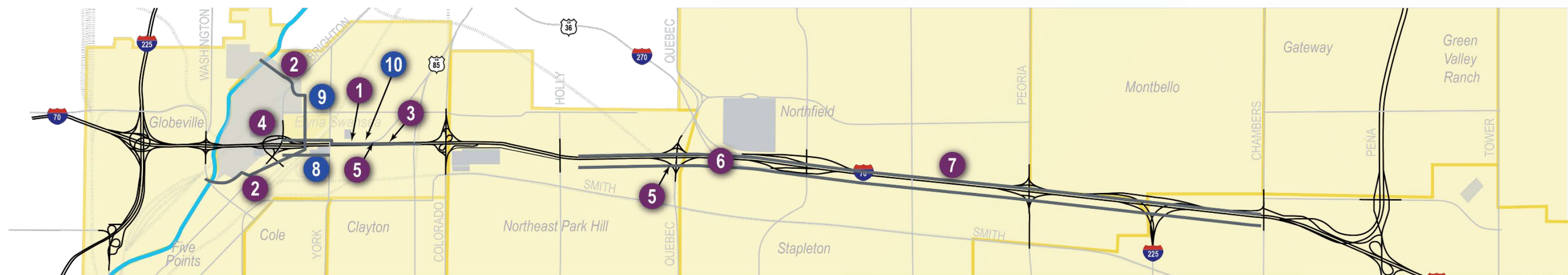
- Stage 1a: Build WB to east of final location
- Stage 1b: Lateral slide WB into position (short duration-planned closure)
  - Use temporary post-tensioning to minimize structure depth
- Stage 2a: Build EB to west of final (minimizes disruption to Purina)
- Stage 2b: Lateral slide EB into position (short duration-planned closure)
- Advantage = Minimizes track disruptions duration-planned closure
- Advantage = Minimizes track disruptions



Scenario 2 Union Pacific Railroad Phasing Concept

#### LEGEND

- Phase 0
- Phase 1





## b. Technical Challenges: Effective Operations & Maintenance of a High Traffic Corridor

Challenge	Specific Project Considerations	Proposed Mitigations	I-70 East Corridor Rendering	FRMG Demonstrated Performance
<b>1</b> Traffic Management and Roadway Safety in a High Traffic Urban Environment	<ul style="list-style-type: none"> <li>▶ High average daily traffic volumes of over 200,000 vehicles</li> <li>▶ Significant traffic movements during O&amp;M</li> <li>▶ Ensuring an open and safe corridor</li> <li>▶ Maintaining safety between managed lanes and general purpose lanes, particularly during peak hours</li> </ul>	<ul style="list-style-type: none"> <li>▶ Develop specific traffic management and roadway safety plans for high traffic corridors</li> <li>▶ Develop comprehensive O&amp;M plan with:                             <ul style="list-style-type: none"> <li>✓ Quick response times to incidents</li> <li>✓ Availability of the Project during routine and major maintenance work</li> </ul> </li> </ul>		<ul style="list-style-type: none"> <li>▶ <b>I-595 Corridor Improvements</b> <ul style="list-style-type: none"> <li>✓ AADT of approximately 180,000</li> <li>✓ One of the most traveled corridors in South Florida</li> <li>✓ Most maintenance and rehabilitation activities are planned during low peak season and low peak times</li> <li>✓ Reduced impact on the traveling public</li> </ul> </li> </ul>
<b>2</b> Maintenance of Existing and New Assets	<ul style="list-style-type: none"> <li>▶ Mix of new and existing structures</li> <li>▶ Active monitoring of structures to minimize impacts of maintenance and rehabilitation to users</li> <li>▶ Optimizing tradeoff between upfront construction or rehabilitation and long-term maintenance needs</li> </ul>	<ul style="list-style-type: none"> <li>▶ Conduct in-depth analysis of existing structures to determine useful life</li> <li>▶ Proactively maintain structures in a state of good repair to mitigate unplanned closures and emergency work</li> </ul>		<ul style="list-style-type: none"> <li>▶ <b>AUTOROUTE 30</b> <ul style="list-style-type: none"> <li>✓ Maintenance of 46 miles of new and existing structures</li> <li>✓ Structure Management System stores</li> <li>✓ Specific condition information and monitors structural elements to meet project performance requirements</li> </ul> </li> </ul>
<b>3</b> Maintenance of Depressed Highway Section and Cut and Cover Tunnel Section	<ul style="list-style-type: none"> <li>▶ Specialized O&amp;M considerations for proposed cover structure and depressed highway sections</li> <li>▶ Interface with stakeholders in operating and maintaining the covered section (based on scope)</li> </ul>	<ul style="list-style-type: none"> <li>▶ Develop comprehensive tunnel maintenance program with:                             <ul style="list-style-type: none"> <li>✓ lighting maintenance</li> <li>✓ ventilation systems</li> <li>✓ fire life safety and monitoring systems</li> </ul> </li> <li>▶ Work with CDOT to establish efficient scope for Developer along cover, including landscaped areas</li> </ul>		<ul style="list-style-type: none"> <li>▶ <b>Presidio Parkway</b> <ul style="list-style-type: none"> <li>✓ 1800 foot tunnel and a cut-and-cover section required comprehensive O&amp;M plan for critical safety systems</li> </ul> </li> <li>▶ <b>Rt. Honourable Herb Gray Parkway</b> <ul style="list-style-type: none"> <li>✓ 11 landscaped tunnel covers (over 300 acres of green space that the developer will maintain)</li> </ul> </li> </ul>
<b>4</b> Pavement Maintenance	<ul style="list-style-type: none"> <li>▶ Spans approximately 9.4 miles</li> <li>▶ Composition of newly constructed pavement, widened pavement and existing pavement</li> <li>▶ High traffic corridor and winter conditions</li> </ul>	<ul style="list-style-type: none"> <li>▶ Perform comprehensive analysis of the existing pavement along the corridor</li> <li>▶ Coordinate with design and construction for the best lifecycle maintenance rehabilitation of pavement</li> <li>▶ Develop O&amp;M approaches to maximize life of new existing pavement in winter climate</li> </ul>		<ul style="list-style-type: none"> <li>▶ <b>Fredericton-Moncton Highway</b> <ul style="list-style-type: none"> <li>✓ Operating and maintaining since 2001</li> <li>✓ Unique example of proven long term maintenance of pavement under a P3 in North America</li> </ul> </li> </ul>
<b>5</b> Snow and Ice Removal	<ul style="list-style-type: none"> <li>▶ Winter weather maintenance along critical high traffic corridor</li> <li>▶ Possibly ranging from a support level to more complete scope of all winter maintenance services</li> </ul>	<ul style="list-style-type: none"> <li>▶ Leverage extensive prior experience to develop a comprehensive winter maintenance plan</li> <li>▶ Local knowledge and support from lead designer CH2M:                             <ul style="list-style-type: none"> <li>✓ Current O&amp;M contractor for entire roadway network for the City of Centennial, Colorado</li> <li>✓ 573 lane miles of primary and secondary roadways</li> </ul> </li> </ul>		<ul style="list-style-type: none"> <li>▶ <b>Highway A8</b> <ul style="list-style-type: none"> <li>✓ Winter weather systems in place</li> </ul> </li> <li>▶ <b>Extensive Experience Performing O&amp;M in Winter Conditions</b> <ul style="list-style-type: none"> <li>✓ South Fraser Perimeter Road</li> <li>✓ A-30</li> <li>✓ Fredericton-Moncton Highway (New Brunswick, Canada) - over 100 inches of snowfall each year</li> </ul> </li> </ul>





## c. Project Plan

### i. Quality management and efficient and effective oversight in each phase of the Project.

The FRMG quality management program is based on the implementation of processes and defined responsibilities that promote a comprehensive approach in the delivery of the Project. Our integrated team understands the importance of continuity through design, procurement, construction, testing, inspection, and operations and maintenance (O&M) phases.

Our Quality Manager will develop the Quality Management Plan (QMP), in collaboration with the Lead Operator in order to incorporate operational, maintenance and life-cycle criteria and performance requirements. We are committed to performing work “right the first time” and to providing independent quality assurance that meets contract requirements.

Quality records, including audits, inspection, and testing reports, will be retained in the CDOT web-based Quality Records Database (QRD) to facilitate real-time review of information. Our Quality team will promptly address any findings from CDOT process and oversight audits until full resolution is reached.

The Design Quality Management Plan (DQMP) will be prepared by our Design Quality Manager, with guidance from the Quality Manager, and will include procedures outlining the checking processes, design review processes, QA/QC checkpoints, audits, continuous improvement measures, corrective action, deliverables, design change notices, requests for revision procedures, documentation and O&M criteria.

Our Construction Quality Management Plan (CQMP), prepared by the Construction Quality Manager, will contain requirements for testing and inspection, audits, continuous improvement, control of documents and records, and it will outline the processes for review and disposition of documents prior to use to ensure that only current versions are used and obsolete documents are

removed. The quality control process is based on work plans, hold points, and follow-up inspections. While the QMP emphasizes preventive action, our three-tier plan for managing non-conforming work involves:

- (1) identification and tracking of deficiencies for minor issues,
- (2) non-conforming reports and root-cause analyses, and
- (3) follow-up corrective action reports.

The O&M QMP describes quality functions related to O&M, repairs, engineering, safety, and incident response that are necessary for consistency and adherence to CDOT standards. Because the I-70 East Project is an integral part of the surrounding roadway and highway network, we will work with CDOT to develop a comprehensive plan for a host of scenarios, including fire life safety considerations for the covered sections. The plan will define measures to be taken to limit potential impacts, and similar plans will be developed for the City and County of Denver and other stakeholders.

### ii. Resource management: allocation of responsibilities

The FRMG team has been assembled and organized at the design-build level to utilize our local knowledge, experience, resources, and working history, as evidenced by the majority of key firms such as Flatiron, AECOM, CH2M, TSH, Kraemer, IHC, and BT Construction having their headquarters in Denver or operating major regional offices in the Front Range.

The approved project schedule will be utilized as the fundamental tool to analyze, allocate, and manage resources. The steering committees are ultimately responsible to supply the Project with the necessary resources that will be managed by the various managers and supervisors on the Project. The availability of local and national resources, combined with the added capacity as represented by the number of qualified firms at every level of our team, provides the necessary assurance of a well-balanced and capable team.

Our team is expertly qualified to address design and construction challenges/risks described in the Technical Challenges section 5.b. As an early action item, third-party coordination, performed by BT Construction, is essential to the success of the subsequent phase, with utilities and railroads representing a significant portion of the efforts on the Project. As a local contractor, BT Construction has completed over 1,000 projects in Colorado, specifically dealing with utilities. As a former director at BNSF, team member Craig Morgan will be instrumental in facilitating communication and assisting with any necessary project agreements with the railroads, as well as helping the team with railroad coordination. Completion of these early tasks will allow the team to begin on several of the structures needed for our phased approach. Flatiron, Dragados, AECOM, and Kraemer all possess local and national knowledge in the construction of complex technical structures. Additionally, our team is strengthened with the inclusion of IHC, a firm widely considered as the premier concrete paver in Colorado, and who has also provided concrete ready-mix and white paving services on numerous CDOT projects. Our design team of CH2M, AECOM, and TSH has the experience to optimize the design in a way that is sensitive to traffic and community impacts.

### **iii. Proposed measures to ensure continuity of personnel**

FRMG recognizes that success on a project of the magnitude and complexity as I-70 East is best achieved through a management approach that ensures continuity and commitment of personnel for the duration of the Project. This philosophy flows from our Steering Committees, which are comprised of highly visible, local executives who have a personal interest in the success of the Project, thereby assuring continuity of staff. They encourage a culture that is based on teamwork, communication, ownership, goal setting, and achievement measures, which provides the Project team the framework to motivate, incentivize, and reward dedication at all levels of the organization. Our team also offers an unmatched depth in local

manpower that allows us to perform the majority of design and construction work with local staff/craft.

### **iv. Safety management**

The unique mix of residential, urban, and high-traffic nature of the I-70 East corridor demands a special safety commitment to protect our staff, craft, CDOT personnel, and the public that comes in contact with our work areas. The FRMG construction joint venture is comprised of industry-leading firms with zero-tolerance corporate safety standards, policies, and procedures that will guide our safety plan, which will be tailored to meet specific project needs through risk assessment and mitigation.

To assure independence of the safety staff, our Safety Manager will report directly to the Design-Build Steering Committee. Our safety and health risk approach on the I-70 East Project will address all items that affect not only our field personnel, but the traveling public and nearby neighborhoods as well. These items include the use of personal protective equipment; worker, traffic, and work zone safety; maintenance of traffic; air and noise pollution; materials handling/storage; movement of heavy equipment; bridge demolition/construction; and night time work. Examples of our anticipated safety practices for various operations on the Project are described in response to question 10 of Form G; additionally, our Environmental, Health and Safety Plan is described in the Public Interest and Engagement Plan section d.

### **v. Schedule management**

Effective execution of a project of this magnitude requires the division of work into manageable elements, as we have shown on the high-level schedule in the Technical Challenges section. We will use Primavera scheduling software to develop and maintain the CPM baseline and progress schedules in a Work Breakdown Structure (WBS) hierarchy structure that is representative of the sequence of work and Project-critical activities, including milestones. The schedule will be the key tool used for reviewing work progress with CDOT, and for planning and coordinating the needs of CDOT, stakeholders, and third parties.



### d. Public Interest and Engagement Plan

We comprehend the history and the extensive CDOT community outreach work that has preceded the RFQ, and the tremendous responsibility to honor commitments in making the Project successful. We understand the relevance of I-70 East in the comprehensive North Denver Cornerstone Collaborative, and we are well positioned to partner with CDOT to deliver the Project as envisioned, with the focus on community and neighborhoods.

We realize that the I-70 East corridor is diverse, with over 1,200 businesses and more than 225,000 households that make up various neighborhoods. We also understand that Globeville’s population is more than 90% Hispanic or Latino, and that Swansea’s Hispanic population exceeds 80%. We will work with CDOT to implement an effective communications strategy that is sensitive to and addresses the community and stakeholder needs.

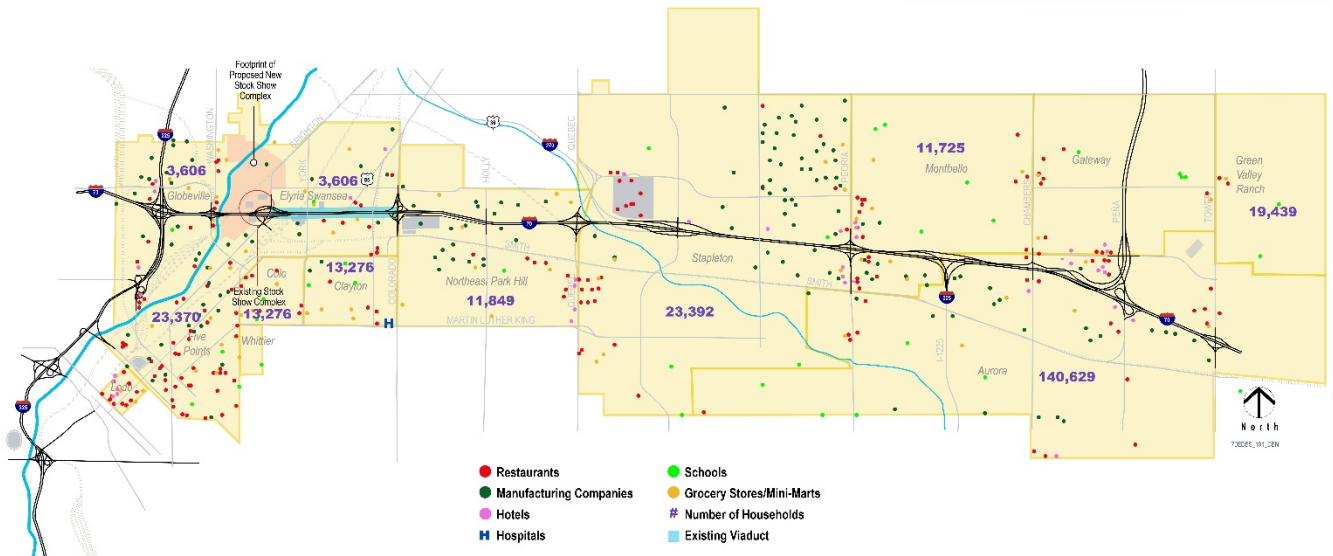
It is important to understand how Swansea Elementary School, Swansea Park, Globeville Community Center, the Growhaus, Focus Points Family Resource Center, Globeville, Elyria and Swansea LiveWell, and local historic landmarks will

be impacted. Relationship building with these specific stakeholders will focus on coordinating our efforts and maintaining cohesive partnerships.

Our Community and Public Relations Manager Kathy Berumen brings extensive experience from RTD West Rail and North Metro Rail lines, where she served in a similar role as the Public Information Manager, and has worked with some of the same neighborhoods and stakeholders. Having served on a number of community and professional organizations, she is intimately familiar with the Metro Denver area, its neighborhoods, residents, and community leaders. She has worked with CDOT’s project communication consulting team, and this will help ensure a smooth and collaborative partnership during project execution.

“Kathy...has proven to be invaluable. Her ability to work with engineers, stakeholders, and the public are unsurpassed. She has a positive can-do attitude and unparalleled patience and experience dealing with diverse personalities and issues under pressure...She is the best Public Information Manager I’ve ever worked with.”

—Brenda Tierney, RTD Public Information Manager



A SAMPLING OF CORRIDOR COMMUNITY AND STAKEHOLDERS





### **i. Approach to management of construction activities and operations**

We have investigated construction methods and staging that will effectively minimize disruption to local streets, neighborhoods, and I-70 traffic. Based on this, we developed a phased approach in the Technical Challenges section that maintains multi-modal connectivity and facilitates construction of over half of the Project with little or no disruptions to the I-70 alignment. Our plan for the depressed section not only maintains traffic along I-70, but also addresses north-south access for residents; controls the viaduct demolition and excavation to minimize disturbance; and provides safety to the Swansea Elementary School, residents, and businesses. Prior to construction, we will survey residents, businesses, and neighborhoods that include historic sites to determine appropriate mitigation methods to impacts from vibration, noise, and access/egress. We will implement corridor-wide measures such as erecting noise walls early in the Project to mitigate impacts.

### **ii. Environmental, health and safety programs**

Our team has well established Environmental, Health and Safety (EHS) management processes in place for interstate projects similar to I-70 East. Our EHS plan will specifically address hazards associated with demolishing the existing I-70 viaduct and construction of the Partial Cover Lowered section adjacent to Colonial Manor Motel, El Tepetate Market, MSP Auto Repair, Swansea Elementary School, and neighborhood residents. We will focus on providing safe and efficient connections through the neighborhoods and the highway, and maintain safe passage for vehicles, bicycles, and pedestrians including access to Swansea Elementary School. Examples of our proposed safety measures include visual screening in key areas for safe passage of adjacent traffic lanes; barriers, temporary walls, signage, and flaggers to provide safe passageway for pedestrians.

### **iii. Community and stakeholder engagement**

We will continue CDOT's strategy of combining corridor-wide communications with tailored communication tools, assigning adequate staff to critical areas. Our communications team will develop and participate in tailored communication with schools, neighborhoods, residents, churches, non-profits, and local businesses. We will work with affected residents and businesses on mitigating construction impacts, participate in community engagement initiatives, and maintain traffic flow and access to residents and businesses in the I-70 East Corridor. Our community engagement experience on reference projects is described in Form H.

#### *Coordination with Local Authorities*

Communication and coordination with the EPA, U.S. Department of the Interior, State of Colorado, CCD, Adams County, Mayor's office, City Council, Denver Public Schools, Commerce City, City of Aurora, and other Authorities will be tailored according to their needs. We have found that formal partnering meetings, monthly for the first year and bi-monthly thereafter, are effective in ensuring that we work as an organized team to address issues immediately. We will collaborate with the Authorities and leverage their individual resources to better define and mitigate community impacts.

### **iv. Promoting the community's public interest**

We understand the rich and impacted history of the affected neighborhoods along the corridor. Our approach to promoting the community's public interest includes developing solutions based on local needs, monitoring progress, and making adjustments as needed. We will use CDOT's existing communications apps and develop new ones to provide time sensitive updates. We will participate in CDOT's Community Leader meetings, local community meetings, and customize our neighborhood efforts. Our outreach will include participation in community functions (i.e. festivals, school fairs, church carnivals), and we will provide construction updates through CDOT and neighborhood communication avenues such as newsletters and websites.



**Public Disclosure SOQ**  
**ORIGINAL | Volume 2**



**I-70 EAST  
PROJECT SOQ:**

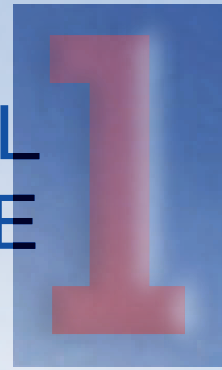


June 2015



**CONNECTING COMMUNITIES ALONG I-70 EAST**

# FINANCIAL EXPERIENCE



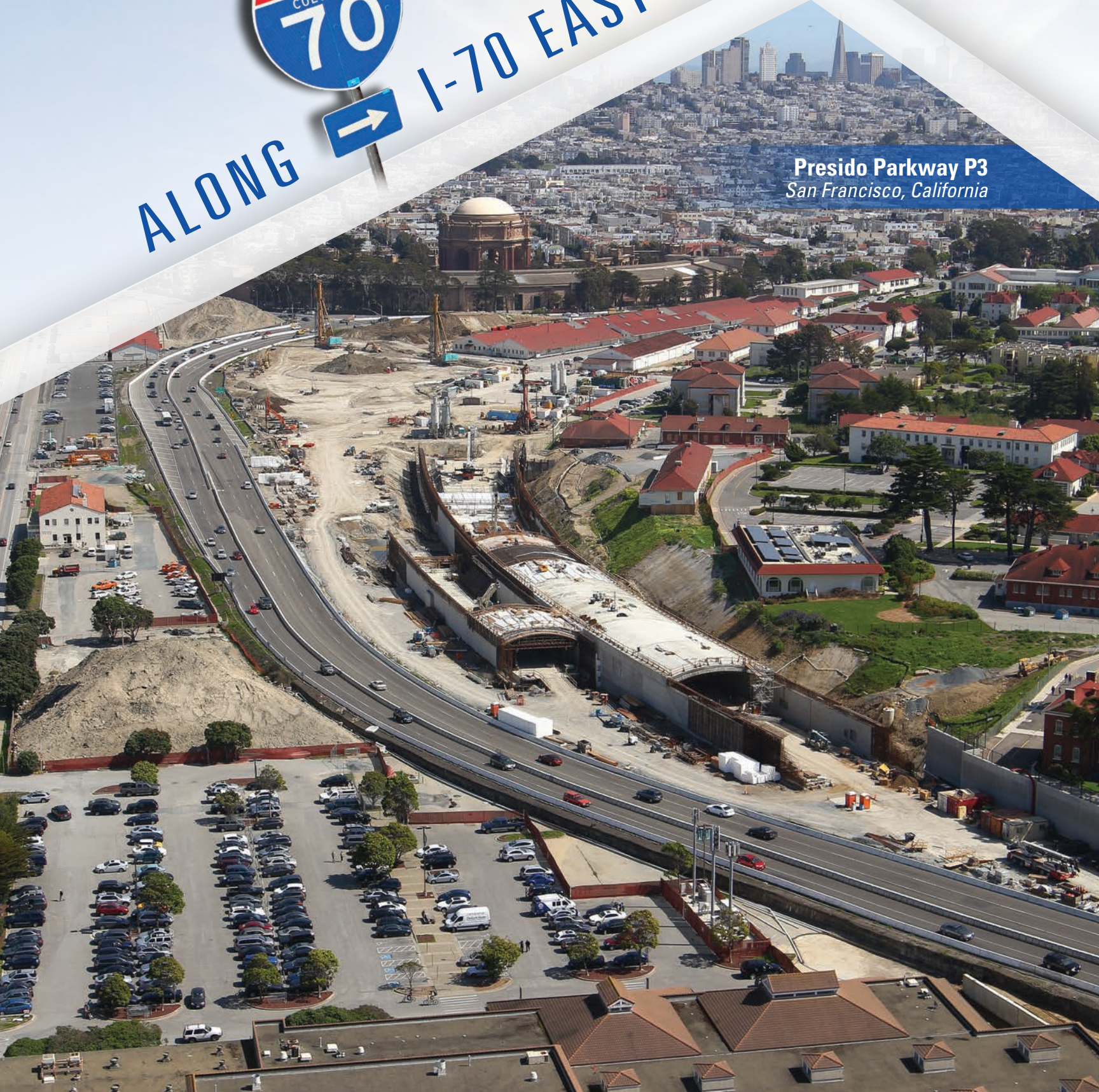
1. FINANCIAL EXPERIENCE

## CONNECTING COMMUNITIES



ALONG I-70 EAST

Presido Parkway P3  
San Francisco, California





## 1.1 ORGANIZATIONAL AND MANAGEMENT STRUCTURE AND EXPERTISE

Front Range Mobility Group is formed by ACS Infrastructure Development, Inc. (ACS), AECOM Capital, Inc. (AECOM Capital), HOCHTIEF PPP Solutions North America, Inc. (HOCHTIEF), and John Laing Investments Limited (John Laing) as developers and equity investors (the Equity Members). The Equity Members form a highly integrated and uniquely experienced team with demonstrated success in developing and investing in P3 projects in North America and globally. Our proven and successful approach to securing financing and managing the ongoing operations of our P3 projects, driven by an effectively structured management team and guided by key success factors developed over decades of delivering P3 projects, will ensure that FRMG will deliver a competitive and robust financing structure that will deliver best value for money solution for I-70 East.

### Unparalleled Execution Experience and Management Expertise

Equity Members will structure the Finance Management Team during the procurement phase as outlined in the RFQ and RFP phase organization chart in Volume 1, Section 2.1.3. FRMG will be led by the same experienced professionals involved in our members' recent successful transactions. In the past year alone, FRMG Equity Members have secured over \$3.9 billion in financing and have closed projects representing over \$5 billion combined in total investment. FRMG has teamed with CIBC's Global Infrastructure Finance team (CIBC), a leading advisory group in the North American P3 market with extensive and recent experience in financial advisory for infrastructure and project finance transactions in North America, having worked on over 60 such transactions.

CIBC's team members have advised members of FRMG, on innovative and competitive financial plans incorporating bank financing, bond financing, and hybrid capital structures.

A key component of our organization and management structure is FRMG's Equity Steering Committee, which will set the strategic direction for the Equity Members, and in coordination with the Design-Build Steering Committee, will determine the overall strategy for FRMG's approach to the Project's development. The Steering Committees are comprised of senior managers and directors who will remain involved through each critical phase of the Project, ensuring continuity among our team's most important leaders.

Significant and early coordination amongst team members including the Lead Contractor and Lead Operator will ensure FRMG is focused on developing optimal lifecycle solutions for the Project. Importantly, our technical solution will factor in key input from lenders, the lenders' advisors and rating agencies to ensure that the Project's risks, team members and our overall approach is well structured for the risk allocation of the Project and we will tailor a competitive financing solution that aligns with the risk transfer.

### Transitioning through Closing and Ensuring Timely Execution

During the transition from award to close, the same FRMG team members and executives will lead the commercial and financial closing process, leveraging the momentum and key relationships developed during the bid phase to ensure continuity in the decision making process and a smooth and expedient financial close. Our team brings recent and necessary experience needed to successfully manage the financial close process between multiple stakeholders including banks, the bond markets and TIFIA Joint Program Office.



**FINANCIAL MANAGEMENT STRUCTURE THROUGHOUT ALL PHASES**

	Core Management Team	Senior Leadership
Procurement	<p><b><u>Finance Management Team and Advisors</u></b></p> <ul style="list-style-type: none"> <li>» The Finance Management Team, led by the <b>dedicated project finance experts of the Equity Members</b>, will lead the financing approach in coordination with the Bid Management Team, our financial advisor (CIBC) and legal advisor (Mayer Brown), as well as the Lead Contractor and Lead Operator</li> <li>» FRMG will engage lenders and various lenders’ advisors, directing the process including with rating agencies, lenders’ legal advisor and the lenders’ technical advisor to ensure that the committed finance structure, which may include TIFIA, PABs, bank debt, and other potential instruments, is both <b>competitive and certain</b></li> </ul>	<p><b><u>Equity Steering Committee</u></b></p> <ul style="list-style-type: none"> <li>» Comprised of <b>senior level management of the Equity Members</b> with significant experience in guiding the development of P3 projects in North America</li> <li>» Coordinates closely with the Lead Contractor Steering Committee to make executive level decisions that ensure the <b>best overall financing solution</b></li> </ul>
Award through Financial Close	<p><b><u>Procurement Team and Handover to Developer Management Team</u></b></p> <ul style="list-style-type: none"> <li>» The <b>same Finance Management Team</b> will bring the Project through financial close, working with lenders, including TIFIA and underwriters, and their advisors to ensure an <b>expedient and successful financial close</b></li> <li>» FRMG’s Project Executive (CEO) will come onboard to set up internal processes and the overall business plan and approach, in coordination with the CFO and board of directors</li> <li>» The overall FRMG management team will <b>facilitate transfer of knowledge from the procurement and closing process to the Developer Management Team</b> to ensure continuity of communication with stakeholders, including the Procuring Authorities, rating agencies, TIFIA and the lenders’ advisors, as well as the LTA</li> </ul>	<p><b><u>Formation of Board of Directors</u></b></p> <ul style="list-style-type: none"> <li>» The <b>Equity Steering Committee will remain active</b> and continue to provide financial and commercial oversight through the closing process</li> <li>» Many of the <b>Equity Steering Committee members will transition into board member positions</b>, providing key knowledge transfer and continuity of leadership</li> </ul>
Post Financial Close	<p><b><u>Developer Management Team</u></b></p> <ul style="list-style-type: none"> <li>» The developer management team, led by the CEO, will manage the day-to-day operations of the Project, aided by the momentum of the <b>knowledge transfer through close and supported by teams of dedicated asset management professionals</b> from the Equity Members who have extensive experience in providing technical and financial oversight of project level companies</li> <li>» Many of the same members of the <b>Finance, Legal and Operations and Maintenance Management Teams</b> involved from procurement through financial close will <b>provide support to the developer</b>, as they do on existing P3 projects under construction and operations, including projects financed with TIFIA</li> </ul>	<p><b><u>Board of Directors</u></b></p> <ul style="list-style-type: none"> <li>» The board of directors will provide <b>long term oversight and strategic guidance</b> to the developer through construction and operations</li> <li>» Vertical alignment of FRMG will ensure the board of directors <b>resolves any issues with the best interest of the Project in mind</b>, both from a financial and a technical view</li> </ul>

**Financial Management for the Long Term Success of the Project**

The team of qualified individuals set in place to manage the Developer entity (the Developer Management Team) is critical to the success of the Project. The Chief Executive Officer / Project Director, Chief Financial Officer, Technical Director and their respective teams of staff members will be drawn from the Equity Members’ providing for the best resources to effectively manage the Project, including ongoing coordination with the Lead Operator, the lenders and the lenders’ technical advisor providing monitoring of the Project. We will ensure that the lenders, contractors, and most importantly, key stakeholders including the Procuring Authorities, have access to our knowledgeable team who will manage FRMG through the design, construction and ultimately the long term operations of the Project, through a single

point of contact. Additionally, as noted above, our Equity Steering Committee members are often appointed as board members, bringing continuity to the team at the most senior level of our team members’ leadership. Combined, the Equity Members are managing 16 concessions in North America, seven of which have reached substantial completion and entered into full operations. With over four decades of managing P3 concessions across the globe, FRMG Equity Members have proven ability to successfully partner with owners and manage the long term operational and financial obligations of projects.





## 1.2 AVAILABLE FINANCIAL CAPACITY

The success of the Project requires a team with financial strength and proven ability to manage the design, construction, operations, maintenance and financing obligations on P3 projects. FRMG's Equity Members, Lead Contractor members, Lead Engineer members and Lead Operator members are successful companies with an ability to undertake large infrastructure projects in North America, and also benefit from the financial support and capacity of their respective Financially Responsible Parties.

This support ensures our team has the robust financial capacity that will be essential to lowering the cost of debt by favorably impacting the overall credit evaluation of the team, protect CDOT and the Project from perceived or actual risk of financial capacity impacting our ability to manage the Project efficiently and absorb unforeseen challenges from a cost and schedule perspective. For the Equity Members, the financial capacity of its Financially Responsible Parties ensures access to a significant pool of equity to invest in the Project. Lead Operator members will similarly be supported in their long term obligations on the Project by parent companies with the ability to adequately meet the security requirements often required to provide a competitive financing structure. Our team members

have the necessary financial capacity to undertake the Project within the timeframe set forth in the RFQ procurement schedule based on our evaluation of existing capacity and commitments and anticipated commitments through end of 2016, the currently anticipated date of financial close.

### 1.2.1 Equity Members

ACS, HOCHTIEF, AECOM and John Laing are active investors in the North American and global P3 markets with a proven track record of developing more than 220 P3 projects globally. Collectively, the Equity Members have a successful recent track record of winning and bringing to financial close transportation P3 projects in North America and collectively have access to deep pools of liquid capital to fully-fund the equity investment required for the Project.

Based on a preliminary estimate of the expected capital requirement for the Project, FRMG anticipates the Project will require an equity investment in the range of up to \$150 million. As demonstrated by the table below and the Equity Funding Support Letters in Volume 2, Section 3.3, FRMG Equity Members have sufficient financial capacity to undertake their obligations with respect to investors in the Project and will follow our established and clear processes for obtaining necessary approvals for committing our share of equity for the long term success of the Project.

FRMG Equity Contribution			
Equity Member	Equity Contribution (%)	Expected Equity Contribution	Capital Available
ACS	25%	\$37.5 million	\$5.5 billion*
AECOM	25%	\$37.5 million	\$613 million
HOCHTIEF	25%	\$37.5 million	\$3.15 billion
John Laing	25%	\$37.5 million	\$329 million
	<b>100%</b>	<b>\$150 million</b>	<b>\$9.6 billion</b>

\*Ultimately funded from the balance sheet of ACS SyC



As further outlined below, each Equity Member benefits from significant balance sheets of their respective Financially Responsible Parties, ensuring that the anticipated equity commitment can be invested, particularly considering the equal 25% share of each Equity Members' anticipated commitment.



ACS, as the U.S. subsidiary of ACS Servicios y Concesiones, S.L., (ACS SyC), the

concession arm of the ACS Group and one of the largest P3 developers in the world, has a strong financial capacity that is bolstered as a member of the ACS Group, which has an annual revenue in 2014 of more than \$42 billion. ACS and its Canadian sister company, ACS Infrastructure Canada Inc., (ACSIC) have been awarded ten P3 projects in North America since 2006, with an aggregate total project investment in excess of \$18 billion. ACS and ACSIC have reached financial close on two availability payment P3s in 2015: the Southern Ohio Veterans Memorial Highway and the New Bridge over St. Lawrence (also with HOCHTIEF) valued at more than \$3 billion.

ACS anticipates to have committed approximately \$230 million by the end of 2016. These equity investments are, or will be, backed by letters of credit posted at financial close until equity injections are made at the end of the construction period.

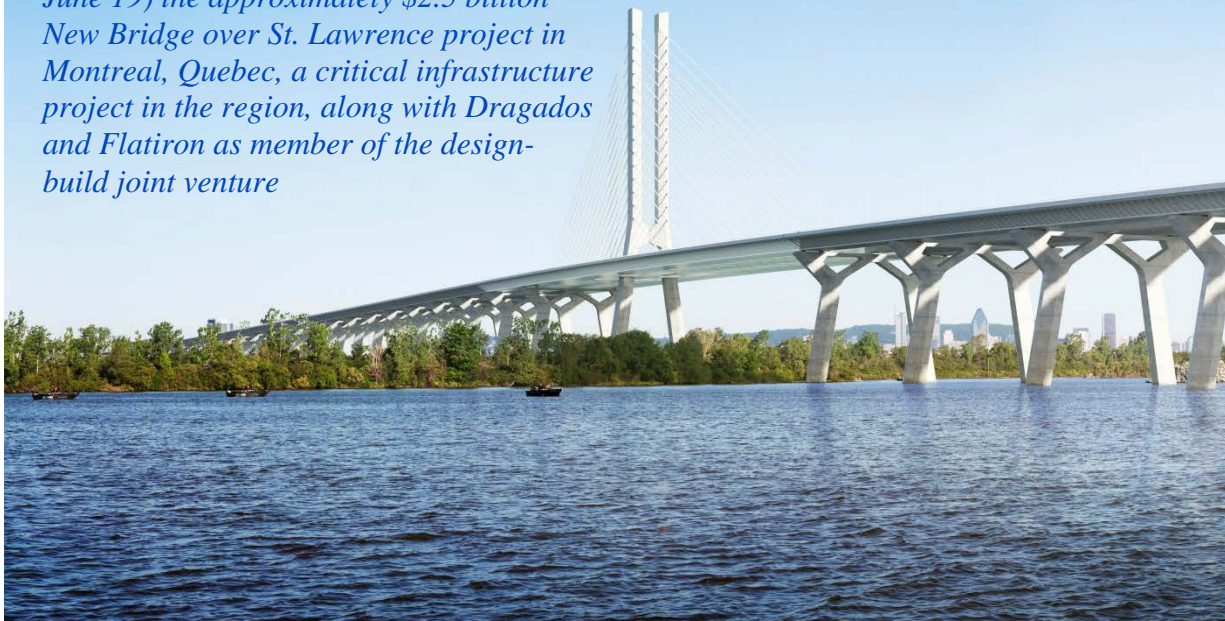


**HOCHTIEF**

HOCHTIEF is part of HOCHTIEF

Aktiengesellschaft (HOCHTIEF AG), which is one of the largest providers of construction-related services worldwide, with around 53,000 employees and revenues of \$26.9 billion in 2014. HOCHTIEF AG has successfully developed more than 55 P3 projects worldwide, including 2,600 lane miles of highways, 55 miles of tunnels, 450 buildings, six airports and 880 miles of railways. In North America, HOCHTIEF has closed six availability P3s in the past five years with equity commitments and injections from HOCHTIEF AG. As of March 2015, HOCHTIEF AG maintained 38 active concession projects worldwide in its P3 portfolio, with approximately \$350 total equity committed. HOCHTIEF's currently anticipated investment commitments between now and the end of 2016 are estimated at \$150 million.

*ACS and HOCHTIEF recently closed (on June 19) the approximately \$2.5 billion New Bridge over St. Lawrence project in Montreal, Quebec, a critical infrastructure project in the region, along with Dragados and Flatiron as member of the design-build joint venture*





**AECOM Capital**, a wholly owned subsidiary of AECOM, provides

equity investment and integrated project development by leveraging AECOM's expansive technical and managerial global services platform. Over the last two years since the formation of AECOM Capital in 2013, it has invested or committed \$150 million in equity on real assets projects.

AECOM Capital's equity investments are funded entirely from AECOM's balance sheet. AECOM Capital draws funds for its infrastructure investments from cash on hand including a corporate banking facility. As of March 2015, AECOM had over \$613 million of cash and cash equivalents. AECOM Capital's currently anticipated investment commitments between now and the end of 2016 are estimated at \$50 million.

**John Laing** **John Laing Investments Limited**, a wholly owned

subsidiary of John Laing Group plc, is an international originator, active investor and manager of infrastructure projects. Since making its first investment in 1969, John Laing has committed to invest in 111 projects worldwide. In 2014, John Laing Group plc enjoyed a record year for new infrastructure investments with \$337 million committed. As of December 2014 John Laing's investment portfolio comprised 40 projects and was valued at \$1.2 billion. Total assets under management were \$1.59 billion.

John Laing's equity investments are funded from its own balance sheet and revenues. As of December 2014 John Laing Group had \$170 million in available capacity under its corporate lending facility. Following an initial public offering of shares which took place in February 2015 and raised net proceeds of \$187 million, John Laing has \$159 million in cash and cash equivalents. As a result, John Laing has approximately \$329 million in liquid assets available to fund its share of the equity investment. This is supplemented by regular

revenues from existing assets, which provided a gross profit of \$321 million in 2014.



*The approximately \$700 million Harbor Bridge Replacement Project, recently awarded to a joint venture between Dragados and Flatiron, illustrates how the Lead Contractor members can undertake significant and complex infrastructure projects in partnership*

### 1.2.2 Lead Contractor

The Lead Contractor is comprised of Flatiron Constructors, Inc. (Flatiron), Dragados USA, Inc. (Dragados), and URS Energy & Construction, an AECOM Company (AECOM Construction). As an integrated joint venture, the Lead Contractor is committed to leveraging its collective expertise and strong financial capacity to ensure the successful delivery the design and construction of the Project.

Each of the Lead Contractor members are supported by their respective parent companies as outlined in the Financially Responsible Party Letters of Support provided in found in Volume 2, Section 3.1. FRMG Lead Contractors parents are among the largest contractors in North America and globally with annual revenues of over \$48 billion in 2014, assets over \$36 billion and cash and cash equivalents of nearly \$4 billion combined.

The financial strength of the Lead Contractor members, each supported by their parent companies acting as Financially Responsible Parties, ensures FRMG will deliver the required performance security package necessary to provide



confidence to the client and the lenders, a critical component to securing the investment grade ratings required for TIFIA financing and achieving the most competitive financing available.

Additionally, the Lead Contractor members have an aggregate bonding capacity and existing credit lines to secure over \$15 billion in bonding payment and performance bonds that will likely be required as part of the Project, well beyond what is reasonably anticipated for the Project.

### 1.2.3 Lead Engineer

The Lead Engineer is comprised of CH2M Hill Engineers, Inc. (CH2M) a wholly owned subsidiary of CH2M Hill Companies, Ltd. (CH2M Ltd.) and AECOM Technical Services, Inc. (AECOM Engineers), a wholly owned subsidiary of AECOM. Individually and combined, the Lead Engineer has sufficient available financial capacity to undertake its role on FRMG's team for the Project, based on current and anticipated commitments.

Both CH2M and AECOM Engineers are supported by their parents as evidence by the Financially Responsible Party Letters of Support provided in Volume 2, Section 3.1. CH2M Ltd.'s and AECOM's strong financial base, with over \$25 billion in annual revenue in fiscal year 2014, ensures the Lead Engineer is fully committed to providing the necessary financial and technical resources to fulfill its obligations including, but not limited to, executing customary security instruments such as letters of credits, performance bonds, and any parental company guarantees required for FRMG to develop the most competitive and sound team to present to lenders and for CDOT.

CH2M Ltd. maintains a high 9-digit combined credit facility and bonding capacity to support its business endeavors and AECOM similarly maintains more than \$1.5 billion in combined credit facility and bonding capacity. Together, CH2M Ltd. and AECOM have a contracted backlog in excess of \$28 billion, generating strong cashflow and ensuring financial strength for the long term, including through the end of 2016. The Lead Engineer's credit capacity will be sufficient to capitalize its future commitments and operational

needs including the services required for the Project.

### 1.2.4 Lead Operator

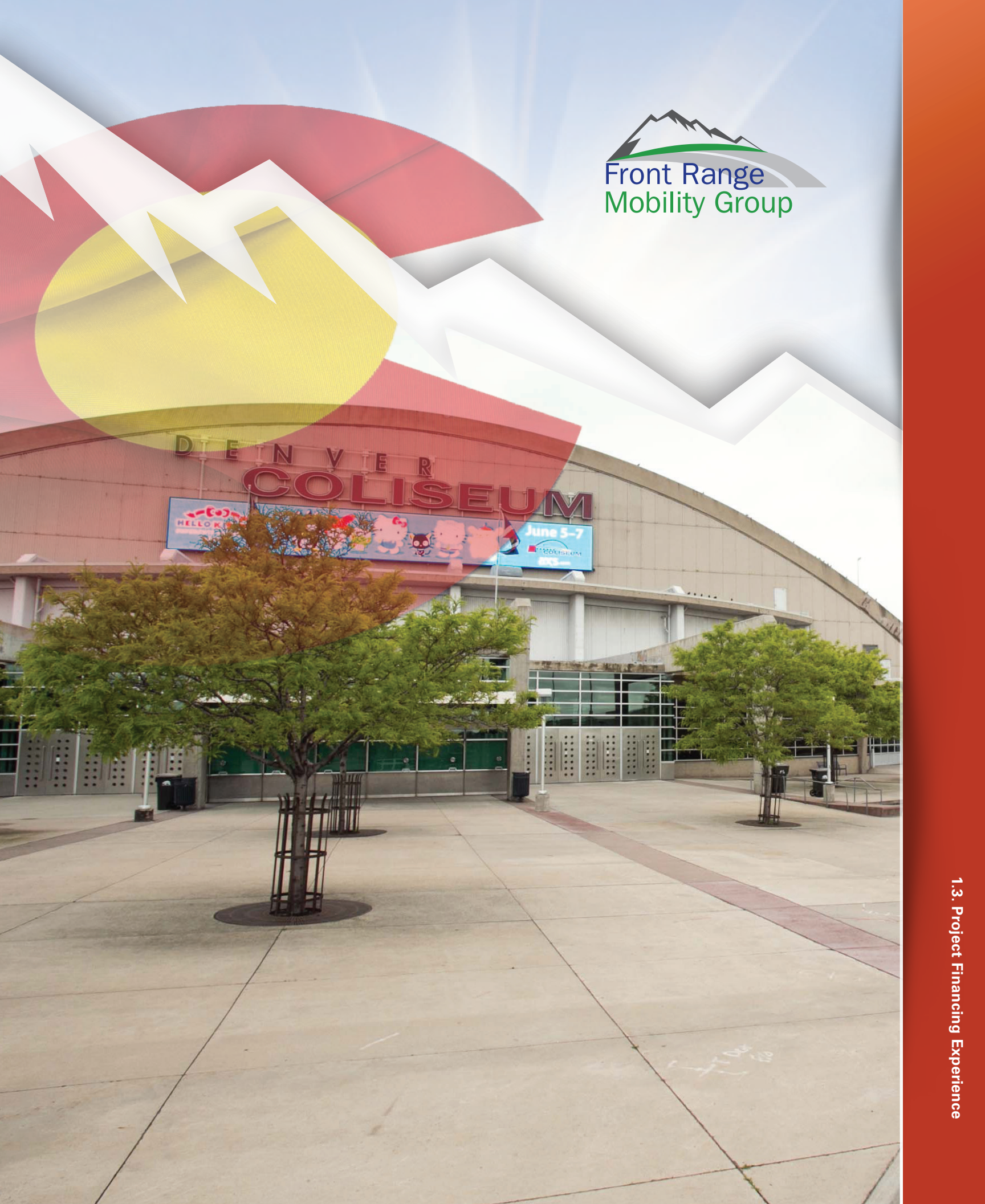
FRMG team members HOCHTIEF, ACS and AECOM Capital will form the Lead Operator. Combined, they bring over 40 years of operations and maintenance experience globally. The Lead Operator members are providing O&M services for over 15,000 lanes miles of highways in North America. The Lead Operator will benefit from significant expertise in managing P3s in North America, as well as the strong financial capacity of their respective parent companies, who combined had approximately \$50 billion in revenues in 2014. The Lead Operator members will coordinate with CDOT, lenders and the Equity Members to ensure that the financial strength and security of the Lead Operator entity is optimal from an overall management and financing perspective.



*ACS is self performing the operations and maintenance work on the \$1.7 billion I-595 Corridor Improvements project in Florida. The average annual O&M value is in excess of \$40 million over the term.*

### 1.2.5 Financially Responsible Parties

The FRMG members are each supported by Financially Responsible Parties. As a result of this approach, each of the FRMG members are confident that their own current and anticipated commitments, as well as those of their Financial Responsible Parties, will support our ability to enter into the Project's agreement and perform their responsibilities throughout the term.





### 1.3 PROJECT FINANCING EXPERIENCE

FRMG’s Equity Members are market leaders in sourcing competitive financing from credit-worthy and experienced project finance lenders, having closed approximately \$10 billion in project financing including debt and equity and invested or closed commitments on over \$325 million in equity to support the development of P3 projects in North America. We have the financial expertise necessary to structure cost-effective debt financing and each benefit from access to sufficient pools of capital. We bring significant and recent experience in structuring financing for P3 projects through PABs and TIFIA Loans. FRMG Equity Members have closed over \$1.9 billion in TIFIA financing and over \$620 million in PABs.

FRMG’s Equity Members are among the most experienced P3 developers in North America with respect to structuring, closing and managing availability payment transactions for transportation P3s. In the time since I-595 Corridor Improvements closed in 2009 (which was the first transportation availability payment P3 to close in the U.S.) the Equity Members have been awarded and reached financial close on 11 transportation availability payment P3s in North America. Each of the five Equity Member Reference Projects demonstrate our ability to evaluate and deliver tailored, competitive and certain financing structures for our projects.

Our expertise is based on years of active

involvement in the P3 market and on the leadership of key in-house personnel in all of North America’s recent complex project financing deals, including, notably, the General Reference Projects included in Volume 1, Section 4.1: I-595 Corridor Improvements, Southern Ohio Veterans Memorial Highway (Portsmouth Bypass), I-4 Ultimate Project, Denver Eagle P3 and the Northeast Anthony Henday Drive as well as SH-288 Toll Lanes in Texas, Presidio Parkway in California, Eglinton Crosstown LRT in Ontario and the recently closed New Bridge for St. Lawrence in Quebec.

We will leverage our collective experience financing projects on a project finance basis, including those detailed in the Equity Member Reference Projects included in Volume 1, Section 4.1. Our approach, as further outlined in Section 2, will draw on four key success factors, highlighted below, that have proven to be crucial elements of a successful project financing.

#### 1. MINIMIZING COST OF CAPITAL FOR THE PROJECT

**(A) Multi-option financing approach:** FRMG Equity Members undertake a competitive multi-option financing process during procurements that ensure redundancy of financing and result in the selection of the most competitive financing structure available for each project, taking into account not only the pure financing costs, but the impact such solution has on the risk profile and associated impact to each member, including the Lead Contractor and Lead Operator. As market

#### KEY FINANCING SUCCESS FACTORS

1	2	3	4
<b>Minimizing Cost of Capital for the Project</b>	<b>Maximizing Certainty of Achieving Financial Close</b>	<b>Delivering Tailored Solutions to meet Current Market Conditions</b>	<b>Maximizing Stability of the Project through Risk Allocation</b>
A. Multi-option financing approach B. Competitively priced equity	C. Proven ability to source committed financing D. Access to deep pools of capital E. Experience securing and closing a variety of competitively sourced financing	F. Well-established lender relationships G. Financial innovations and detailed market knowledge	H. Risk allocation and M

conditions dictate, this approach will provide the Project with a competitively structured and efficient financing package from a cost and overall risk profile perspective.

### *Demonstrated Success – I-595 Corridor Roadway Improvements*

The I-595 Corridor Roadway Improvements project (I-595), the first availability based P3 in the US to reach financial close and enter into operations, achieved financial close in March 2009, just over four months following award and during the height of the global financial crisis. ACS submitted a bid that included a committed PABs and TIFIA solution. However, as a result of the temporary shutdown of the municipal market, ACS took the initiative to shift the financial solution committed at bid to a combination of bank debt and TIFIA loan, leveraging strong relationships with twelve financial institutions to reach close.

**(B) Competitively priced equity:** While deferred equity (supported by letters of credit) is commonly the form of competitively-structured equity injection for FRMG's projects, the Equity Members have significant experience in analyzing and structuring alternative and competitive equity structures that will contribute to enhancing Project value and providing a lower priced capital structure.

### *Demonstrated Success – I-4 Ultimate Project*

In the I-4 Ultimate Project (I-4) John Laing employed an equity bridge loan structure which was an alternative to the traditional approach of securing deferred equity using a letter of credit. This saved costs to FDOT by eliminating the fees associated with a letter of credit. Additionally, the equity bridge loan interest that flowed to John Laing enabled tighter long term equity pricing.

## 2. MAXIMIZING CERTAINTY OF REACHING FINANCIAL CLOSE

**(C) Proven ability to source committed financing:** Our team's bank lending and bond underwriting relationships ensure a high degree of

execution certainty. We have long standing relationships with all of the core financial institutions active in the P3 market, which is illustrated by the successful financial close of the I-595 and I-4 projects, in which both transactions were financed on a club basis with a large number of lenders. FRMG's ability to provide execution certainty stems from our approach to detailed and complete due diligence, advanced documentation, including fully developed and drop down agreements at bid reviewed by lenders' counsel to ensure they are financeable, and fully-negotiated financing arrangements supported by commitment letters and term sheets that incorporate the governing terms of the TIFIA term sheet, as applicable. In addition, indicative rating letters are obtained based on extensive diligence work completed by the ratings analysts prior to bid submission. Additionally, consistent with our recent successful approaches to achieving financial close with TIFIA, we will advance work to facilitate negotiations, including engaging the TIFIA JPO immediately upon award of preferred proposer.

### *Demonstrated Success – I-4 Ultimate Project*

On I-4, John Laing developed fully negotiated drop down contracts and highly detailed bank financing term sheets prior to bid submission. In addition, the rating agency and LTA due diligence process was advanced as far as possible prior to bid submission. This enabled the team to focus on critical path items during the financial close phase, such as negotiations of the TIFIA loan agreement, by devoting the majority of resources to these tasks and ensuring the project reached financial close within the contractual bid validity time frame. Both HOCHTIEF and ACS have similarly achieved financial close with TIFIA within the anticipated timeline at bid.

**(D) Access to deep pools of capital:** Collectively, the Equity Members have invested approximately \$325 million of equity capital to support the development of P3 projects in North America. Each of FRMG's Equity Members has access to



discretionary capital to fund their investments. As supported by the information provided in the financial statements and the Equity Funding Letters found in Volume 2, Section 3.3 and financial statements in Volume 2, Section 4.1, the available pools of capital far exceed the equity amount expected to be required for this Project. Throughout their global investment history, the Equity Members have never failed to fund the equity required on a project for which they have been a member of the successful consortium. Additionally, we will access multiple financial markets, develop tailored financing structures that match the risk profile of the Project, and maintain strong relationships with financial institutions to allow access to the greatest pool of capital. Collectively, FRMG's proven experience in structuring and closing competitive financing in North America (particularly through volatile market conditions) provides CDOT the assurance of that our team will raise the most competitive financing available for the Project.

#### *Demonstrated Success – I-595 Corridor Improvements*

In 2009, ACS was able to secure over \$207 million in equity commitments for I-595. This was possible due to the financial strength and market confidence of its ultimate parent company, ACS Group.

**(E) Experience securing and closing a variety of competitively sourced financing:** As outlined above, FRMG Equity Members source a variety of financing solutions to obtain the most competitive pricing and terms during procurements. We also secure lender commitments on "N+1" basis, meaning that the total credit approved commitments will be oversubscribed to mitigate the risk of a lender falling away. Financing sources that FRMG Equity Members have raised in the past, including on projects described in Section 4.1 of Volume 1, and that will be evaluated for the Project include:

- » **TIFIA:** FRMG understands that the Procuring Authorities are seeking a TIFIA allocation for the Project, which represents an attractive potential funding option for the Project given (among other things) its low-interest rate and flexible repayment

schedule, in each case helping to maximize the use of public funds in the Project.

#### *Demonstrated Success – Over \$1.9 billion in TIFIA financing closed*

FRMG Equity Members have collectively closed more than \$1.9 billion in TIFIA financing, including the first ever transportation availability payment P3 to use a TIFIA loan (I-595), and the largest TIFIA loan ever for an availability payment P3, and third largest in the history of the program (I-4). ACS recently closed a \$208 million TIFIA loan on the Southern Ohio Veterans Memorial Highway Project, which was granted the rural rate. Under ACS' leadership, the use of this loan, which closed at a rate of 1.27%, helped the Ohio Department of Transportation achieve over \$70 million in savings on the project, by their estimate. John Laing closed nearly a billion in TIFIA financing on the I-4 Ultimate Project in September 2014, structured using a \$127 million short-term loan (7-year tenor) and \$822 million long-term loan (38-year tenor). Additionally, HOCHTIEF closed a \$150 million TIFIA loan on the Presidio Parkway Project, an availability payment transaction and the first short term TIFIA loan to be repaid with milestone payments and based on the short-term Treasury rate, and ACS is scheduled to close approximately \$360 million in TIFIA financing on the SH 288 Toll Lanes Project later in 2015. FRMG's experience in working with TIFIA on a variety of projects across several jurisdictions will be key benefit to CDOT and the Project should a TIFIA allocation become available given our collective understanding of TIFIA's approach to risk, commercial terms and, importantly, the overall diligence and closing processes.

- » **Taxable Bonds / Private Activity Bonds:** The tax-exempt bond market represents a potentially attractive, low-cost source of debt financing that Equity Members have extensive experience in raising. For the Project, it is our expectation that any PABs allocation achieved for would enhance the possibility of structuring a competitively priced funding structure based on the current bond market levels and investor appetite. The Equity

Members have extensive experience in securing PABs financing for P3 projects, having collectively submitted proposals with an aggregate amount of over \$4 billion in PABs financing.

#### *Demonstrated Success – Closing PABs on Availability Payment P3s*

ACS recently closed \$227 million in PABs financing on the Southern Ohio Veterans Memorial Highway, an availability payment project and Ohio's first P3. The unique nature of Ohio's legislative and budgetary process led to implementation of a lease, a new approach for the P3 bond market for which ACS and its underwriters successfully introduced to investors. On the Eagle P3 project, John Laing entered the consortium at the preferred bidder stage and played a critical role in supporting the closing of \$397 million in PABs, the first and only availability based rail project in the United States.

#### *Demonstrated Success – The Northeast Anthony Henday Drive*

On the NEAH project, HOCHTIEF and ACS secured low coupon taxable bonds. The \$428 million long-term fully amortizing senior bonds rated "A-" by S&P and "A(low)" by DBRS were priced at 187 bps over the relevant Government of Canada underlying bonds. At the time, this was the lowest clearing spread for an "A-" P3 since the 2008 credit crisis. The bond financing process was well received by the market and led to a smooth marketing process and tight pricing.

- » **Bank Debt:** The traditional form of bank debt lending for P3 transactions can offer a highly competitive alternative to bond financing, and as such continues to represent an important component of the potential financing plan: both as a source of short-term 'receivables' financing over milestone payment periods and as an alternative solution to longer-tenor bond financing in the event market dynamics make this option less competitive.

#### *Demonstrated Success – I-4 Ultimate Project*

On the I-4 project, John Laing ran a competitive financing process between bond and bank solutions for construction period financing (bridging completion payments payable by FDOT). The length of the construction period impacted the relative competitiveness of the solutions as a bond solution was lower priced but had greater negative carry. However, the length of the construction period impacted construction risk and thus the design-build price. John Laing facilitated regular meetings with the Lead Contractor throughout the development phase in order to workshop a range of financing, schedule and commercial options to fully understand the pricing and risk implications of each. The optimal solution for the bid involved a longer construction period and a bank financing package which minimized negative carry due to delayed draw, and also minimized commercial risks from the perspective of the Lead Contractor.

### **3. DELIVERING TAILORED SOLUTIONS TO MEET CURRENT MARKET CONDITIONS**

#### **(F) Well-established lender relationships:**

FRMG's equity members have secured and closed over \$10 billion in project financing to support the development of P3 projects in North America. Our success is underpinned in part by well-established and deep-rooted relationships with the major project financing institutions. Collectively we have experience in managing large groups of lenders, and structuring financings by accessing multiple markets, and developing competitive and productive funding competitions in order to structure the most deliverable and competitive financial offering. FRMG has obtained Financing Party Letters of Support demonstrating the strong lender relationships our team has with the P3 lending community. These letters can be found behind the Appendix A tab in Volume 2, Section 3

### *Demonstrated Success – I-595 Corridor Roadway Improvements*

ACS leveraged its strong relationships with lenders to switch from a PABs and TIFIA solutions to bank debt and TIFIA solution in the midst of the global financial crisis. Within just four months following award, ACS changed solutions and reached close with 12 banks funding a club bank facility and achieved two investment grade ratings as required by TIFIA.

**(G) Financial innovation and detailed market knowledge:** FRMG Equity Members maintain a strong commitment to sourcing innovative solutions to provide value for money on its P3 pursuits. Our approach, successfully implemented in past projects, includes ascertaining the appetite in the bank community for long-term bank debt, exploring inflation-linked financing instruments, including the use of real return bonds or inflation hedging as applicable, sourcing alternative credit enhancement solutions and derivative structures to provide additional sources of liquidity and continually responding to market changes that see the return of financial instruments or participants, including monoline insurance companies, that may enhance the Project's credit rating and lower financing cost. This will all be done in parallel to the methods outlined above with the goal of minimizing the cost of capital and achieving a timely and certain financial close.

### *Demonstrated Success – Southern Ohio Veterans Memorial Highway*

ACS recently closed over \$227 million in PABs financing for the Southern Ohio Veterans Memorial Highway Project, rated as BBB/Baa2 by Fitch and Moody's, respectively. A significant structural enhancement for the financing plan was the introduction of Assured Guaranty as bond insurer on a portion of the PABs issuance. This innovation created deeper access to investors and pools of capital and ultimately created further value-for-money for the client and the project.

## **4. MAXIMIZING STABILITY OF THE PROJECT THROUGH RISK ALLOCATION**

**(H) Risk allocation and market knowledge:** A fundamental understanding of project risks and the ability to impart this knowledge to rating agencies and lenders that do not have a direct interface with the Developer is critical to our success in sourcing competitive and innovative financing in past projects. The Equity Members' ability to clearly communicate project risks and the mitigation efforts we employ, as well as our ability to negotiate sound and financeable agreements with our Lead Contractor and Lead Operator, is fundamental to sourcing competitive financing that brings the most value to CDOT.

# STATEMENT OF FINANCIAL APPROACH

# 2



## CONNECTING COMMUNITIES

ALONG EAST  
INTERSTATE COLORADO  
70  
I-70 EAST

RTD Eagle P3  
Denver, Colorado



## 2.1 STATEMENT OF FINANCIAL APPROACH

FRMG Equity Members are active developers and financiers in the North American and global P3 markets and have significant experience in developing innovative, competitive financing solutions for P3 transactions in the United States. FRMG's demonstrated success on availability payment P3 projects in North America is based on our ability to successfully adapt our key success factors, outlined in Section 1.3 above, to the specific characteristics, challenges and goals of each new pursuit. FRMG's Finance and Legal Management Teams will work with the Bid Management Team to clearly articulate the technical, legal and financial mechanics of the Project, including technical solutions, to lenders and rating agencies. Our diligent and collaborative

approach that includes significant interaction with our Lead Contractor and Lead Operator provides lenders and rating agencies with a detailed and thorough understanding of the solutions developed by our technical teams, facilitating an efficient and decisive evaluation process.

### 2.1.1 Unparalleled Execution Experience and Management Expertise

Assuming a capital structure that incorporates TIFIA and PABs, indicative key milestones in reaching financial close are set forth in the following timeline. Our preliminary milestone timeline, as outlined below, is based on the Equity Members' extensive experience in managing the financial close process in recent successful transactions in the United States, including the PABs and TIFIA-financed

Notice of Shortlist		Activities from Announcement of Shortlist to Bid Submission
1. Selection of advisors	-1 months	<ul style="list-style-type: none"> <li>• Selection of underwriters and preliminary engagement of lenders and key advisors</li> <li>• Finalization of advisor engagements + 1 months after shortlist</li> </ul>
2. Analysis of RFP related to payments and financing	+2 months (through submission)	<ul style="list-style-type: none"> <li>• Provide analysis and feedback to draft and final RFP as it relates to payments and financing (work with CDOT to optimize use of public funds, TIFIA and PABs, as available)</li> <li>• Provide commentary to baseline TIFIA term sheet</li> </ul>
3. Funding options analysis	+6 months	<ul style="list-style-type: none"> <li>• Analyzing financing options to determine best value structure</li> </ul>
4. Development of technical solutions	+9 months	<ul style="list-style-type: none"> <li>• Lender technical studies provided to lenders and rating agencies</li> </ul>
5. Finalization of due diligence	+11 months	<ul style="list-style-type: none"> <li>• Finalization of the due diligence reports including legal, technical, tax, insurance</li> </ul>
6. Preparation of detailed term sheets reflecting commercial arrangements	+11 months	<ul style="list-style-type: none"> <li>• Negotiate detailed term sheets with the underwriters/lenders, including TIFIA in coordination with CDOT</li> <li>• Negotiate full-form drop downs for design-build agreement and O&amp;M contracts</li> </ul>
7. Indicative investment grade rating	+11 months	<ul style="list-style-type: none"> <li>• Provision of all technical due diligence reports and draft commercial arrangements</li> </ul>
8. Selection and development of most efficient funding structure	+12 months	<ul style="list-style-type: none"> <li>• Optimization of financial structure</li> <li>• Obtain commitments from senior debt providers and approvals for commitment of equity</li> </ul>
Notice of Preferred Proposer		Activities from Announcement of Preferred Proposer to Financial Close
9. Engagement of TIFIA	+0 months	<ul style="list-style-type: none"> <li>• Kick-off meeting with TIFIA, provide diligence package and preparation of loan application</li> <li>• Begin negotiation of key term sheet issues</li> </ul>
10. Initial documentation	+2 months	<ul style="list-style-type: none"> <li>• Initial drafts of key financing documents including TIFIA and PABs documentation</li> </ul>
11. Finalization of documentation	+4-5 months	<ul style="list-style-type: none"> <li>• Finalize financing agreements, including TIFIA credit agreement</li> <li>• Finalize preliminary offering statement and marketing materials</li> <li>• Convert pre-bid due diligence reports to final reports</li> </ul>
12. Finalization of debt approval and marketing	+4-5 months	<ul style="list-style-type: none"> <li>• Final TIFIA credit counsel</li> <li>• Obtain final investment grade rating(s)</li> <li>• Marketing of bonds (roadshow) / bank syndication</li> </ul>
13. Achieve Financial Close*	+5 months	<ul style="list-style-type: none"> <li>• Finalize credit spreads and base rates</li> <li>• Bond pricing and disbursement / issuance of bank debt and close of TIFIA loan</li> </ul>

\* We have developed this preliminary after award schedule factoring in the Equity Members' recent experience in closing transportation P3 projects including TIFIA financing, namely Southern Ohio Veterans Memorial Highway project and I-4 Ultimate (and currently SH 288 Toll Lanes). While a 6 month timeline is realistic based on certain experiences, a 4-5 month timeline is achievable, as demonstrated by John Laing's ability to close I-4 in 4.5 months. We will work closely with TIFIA and CDOT and the Procuring Authorities to establish closing timetable specific to your needs

Southern Ohio Veterans Memorial Highway and the TIFIA and bank-financed I-4 Ultimate. Additionally, ACS and HOCHTIEF closed the New Bridge over St. Lawrence in Montreal, Quebec, the latest P3 project to reach financial close in North America in just six weeks. Our combined recent experience and pipeline of projects reaching financial close later this year positions FRMG as one of the most experienced group of P3 developers in managing and executing closing a variety of structures.

### 2.1.2 Project Considerations, Challenges and Proposed Solutions

FRMG's extensive P3 experience ensures clear identification and understanding of the risks inherent of a typical P3 transaction and key considerations for structuring the Project's financing element. Our ability to effectively articulate this knowledge to and between the Developer, Lead Contractor, lenders and rating agencies is core to tailoring solutions that result in a competitive and robust financing approach, particularly in light of the following Project risks and considerations.

#### Key Project Challenges and Risks

FRMG's Equity Members have identified the following key challenges and risks and offer the proposed solutions based on our current understanding of the Project:

**Design and Construction Risk:** Design and construction risk intrinsic to the obligations of the Developer under the Project Agreement, including schedule and cost risks will be substantially transferred, on a "back-to-back" basis, to the Lead Contractor. All risks passed to the Lead Contractor will be supported by a strong security package, including parent company guarantees, appropriately sized performance bonds and letters of credit. Our design-build contract will be fully negotiated prior to bid submission, including review and commentary by the lenders' counsel, to ensure an expedited path to commercial and financial close and streamlined rating process—each critical to obtaining competitive financing for the Project.

**Operations and Maintenance Risks:** Our team has an in-depth understanding of key long-term operations and maintenance risk factors and

effective methods of mitigating them. Having both subcontracted and self-performed operation and maintenance obligations in previous similar P3 projects, FRMG team members, including those who will form the Lead Operator, will implement effective mitigation measures and clearly communicate to lenders and rating agencies our technical and management approach for operations during the term and through handback.

**Execution Risk:** to ensure the Project reaches financial close smoothly and on schedule, FRMG will require financing commitments at bid submission based on fully negotiated and detailed term sheets and commitment documents. This approach offers execution certainty and has allowed FRMG team members to reach financial close on numerous projects within tight timeframes.

**Interest Rate Risk:** To the extent financial instruments based on floating interest rates (e.g. bank loans) provide the best value to the Project, we will enter into long-term hedging agreements to mitigate the risk of interest rate fluctuations. We are well-versed in negotiating hedging agreements, including dealing with complex inter-creditor issues inherent in these types of instruments.

**Refinancing Risk:** FRMG Equity Members have previously assumed refinancing risk in similar projects in an effort to deliver the best value possible to their clients. While the developer will carry risk with respect to assuming refinancing, CDOT will gain the full benefit with no downside if the refinancing is not ultimately executed. We will carefully evaluate the potential benefits one or multiple refinancings may bring to CDOT.

**Inflation Risk:** A key aspect of the long-term operations, maintenance and rehabilitation is inflation risk and, more specifically, price escalation above the Consumer Price as it relates to our long-term obligations to maintain the Project. FRMG Equity Members are highly experienced in managing inflation risk on availability payment P3 projects similar to the Project and will apply proven measures, as well as new alternatives (e.g. derivative products), to mitigate this risk.



**Appropriations Risk:** Consistent with most P3 projects, certain payments on the Project, including payments during the construction period and operating period, may be subject to some degree of appropriation. The essential nature of the Project will help mitigate concerns rating agencies and lenders may have surrounding any appropriations risk, and FRMG will collaborate with CDOT to convey this key message to the market.

**Obtaining Investment Grade Ratings:** FRMG team members have solid working relationships with the rating agencies in North America and have achieved investment grade ratings for all of their recently-closed bond-financed projects, including those with TIFIA financing. In particular, the BBB/Baa2 ratings achieved for the PABs and TIFIA debt the Southern Ohio Veterans Memorial Highway, the BBB/Baa1 rating achieved by John Laing on the I-4 Ultimate projects demonstrate the recent experience of our team working with rating agencies to achieve investment-grade credit ratings. In each of these projects, close coordination with the Lead Contractor was key in order to develop a security package that achieved the required rating and met lender requirements, while optimizing the overall bid.

### **Project Considerations for Financing**

To fully realize the benefits of a P3 model for the Project, FRMG's Equity Members will leverage our experience in developing availability payment P3s with construction and operational risks similar to the Project and focusing on implementing key success factors, as described in Section 1.3, tailored specifically to the Project. Fundamental to this is our approach to run an extensive multi-option funding competition during the proposal phase that will lead to funding redundancy and allow FRMG to provide the most competitive financing structure. Debt sources that will be analyzed include:

**Bank Debt:** Bank financing continues to represent an important component of P3 financing plans, as a form of short-term financing to bridge the construction milestone payments, anticipated to be an important element of the funding approach for this Project, and as an alternative to long-term bond

financing. Sourcing a competitive bank debt solution requires well-established relationships with the banking community, and continued experience in packaging transactions with well-defined risk allocation, full due diligence, and a collaborative approach to mitigating underwriting risk (e.g., through a pre-financial close documentation and syndication process). FRMG team members' success with the management of large groups of lenders is evident on the I-595 Project, in which ACS reached financial close with 13 banks, and on the A-30 project in Canada on which ACS reached financial close with 12 banks. John Laing managed a club of 6 banks of the I-4 Ultimate project.

### **Tax-exempt Private Activity Bonds (PABs):**

Given CDOT's and the Procuring Authorities' support for getting allocation for PABs for this project, PABs will be considered as a viable and potentially attractive source of financing, subject to prevailing market conditions. The PABs market for P3 projects has been very robust with several recent transportation P3 projects being well received by PABs market participants. ACS recently reached financial close for the Portsmouth Bypass project with a \$227 million PABs facility, and John Laing played a key role in the marketing and sale of \$397 million of PABs on the Denver Eagle P3.

**Taxable Bonds:** The taxable bond market will be compared against a tax-exempt bond alternative. The relationship between the US Treasury Rate (UST) and Municipal Market Data (MMD), which serves as the benchmark for tax-exempt rates, has been inverted in recent years, with MMD levels higher than UST, especially at the long end of the curve. FRMG will evaluate these instruments should current market conditions suggest a benefit to this approach.

**TIFIA Loan:** As CDOT is contemplating sponsorship for a TIFIA loan for the Project, we will evaluate its funding options assuming availability of a TIFIA loan to its maximum available capacity for this project. FRMG can offer CDOT the practical knowledge of successfully negotiating with the TIFIA Joint Program Office to achieve financial





close, including developing the tailored intercreditor arrangements with senior lenders.

**Hybrid solutions:** In adapting and evolving to market challenges, FRMG Equity Members have gained extensive experience structuring hybrid financial solutions that provide the necessary liquidity at the most competitive funding levels. Given the current Project funding plan, including payment during construction, a hybrid solution may offer the most competitive financing solution.

**Bond Insurance:** Monoline insurance providers have begun to re-enter the North American P3 market. ACS recently insured with Assured Guaranty part of the \$227 million PABs for the Southern Ohio Veterans Memorial Highway, expanding the base of investors and reducing the overall cost of capital on the project.

**Financial Innovations:** Optimization of a project's capital structure often involves implementing innovative financing techniques such as ladder financing (combining various debt tenors to create a long-term fixed rate funding solution) and reinvestment of bond proceeds in high quality credit institutions. Considering debt capital for a availability based project typically represents around 90% of the financing raised, minor variations in debt pricing terms can have a material impact on the overall cost of financing for the

Project. Our ability to secure competitive debt capital critical to maximizing the value for money proposition to CDOT.

### 2.1.3 Approach to Lender and Underwriter Selection

Our general approach is based on our experience that the benefits of competing lenders and financial solutions during the procurement process far outweighs the benefits of securing lenders at this early stage of the Project. FRMG Equity Members have arranged financing solutions implementing a variety of sources including, but not limited to, long-term debt solutions (rated tax-exempt PABs, TIFIA loan, rated taxable bond, narrowly marketed and unrated private placements), short-term debt solutions (revolvers, mini-permanent structures, short term bonds); and hybrid approaches of the two. FRMG will use a three-step competitive lender selection process (as illustrated in the table below) to select the debt providers.

FRMG has engaged Citi on a non-exclusive basis (at this stage) as an underwriter. The Equity Members have worked extensively with Citi on recent P3 pursuits in the US. John Laing submitted a fully committed PABs solution on Penn Bridges with Citi, and ACS anticipates closing approximately \$300 million PABs later this year for the SH 288 Toll Road project with Citi acting as lead underwrite

<p><b>1. Solicit Lenders Interest and Obtain Indicative Term Sheets</b></p>	<p>A. Approach prospective lenders and underwriters from:</p> <ul style="list-style-type: none"> <li>» Bank Market</li> <li>» Bonds, including narrowly-marketed bond market (e.g. USPP)</li> <li>» Broadly-marketed rated bond (Taxable Bonds and PABs)</li> </ul> <p>B. Execute non-disclosure agreements prior to providing prospective lenders and underwriters with the required project information.</p> <p>C. Solicit indicative terms to prospective lenders and underwriters</p>
<p><b>2. Financial Modeling Analysis Based on Indicative Terms</b></p>	<p>A. Include indicative terms received from prospective lenders and underwriters together with FRMG's preliminary internal inputs into FRMG's financial model.</p> <p>B. Evaluate various financing scenarios and sensitivity analysis in FRMG's financial model based on indicative terms received.</p>
<p><b>3. Selection of Preferred Financing Institutions and Negotiation Term Sheet and Commitment Letters</b></p>	<p>A. Run a competitive and multi-option financing process which will ensure funding redundancy and the team's ability to be selective as to the ultimate structure chosen. Final selection of the structure will be based on:</p> <ul style="list-style-type: none"> <li>» Terms and conditions received from prospective lenders and underwriter</li> <li>» Credit quality of prospective lenders and underwriters and financing capabilities (i.e. ticket size)</li> <li>» Experience selling Colorado credit to PABs/Tax-exempt buyers; and</li> <li>» Results obtained from evaluation of different financing scenarios and sensitivities from the financial model and collaboration with Lead Contractor on optimal schedule and cost parameters</li> </ul> <p>B. Negotiate extensive credit term sheets with preferred financial institutions and will obtain firm and binding financing commitments at the time of bid submission based on such fully-negotiated and detailed term-sheets. This approach will ensure execution certainty at the time of Financial Close process</p>

