



State of California  
Department of Transportation  
Administration  
Division of Procurement and Contracts  
1727 30th Street  
Sacramento, CA 95816-7006  
Attention: Denetia Floyd-Smith, Contract Analyst  
Telephone: (916) 227-6068

Original

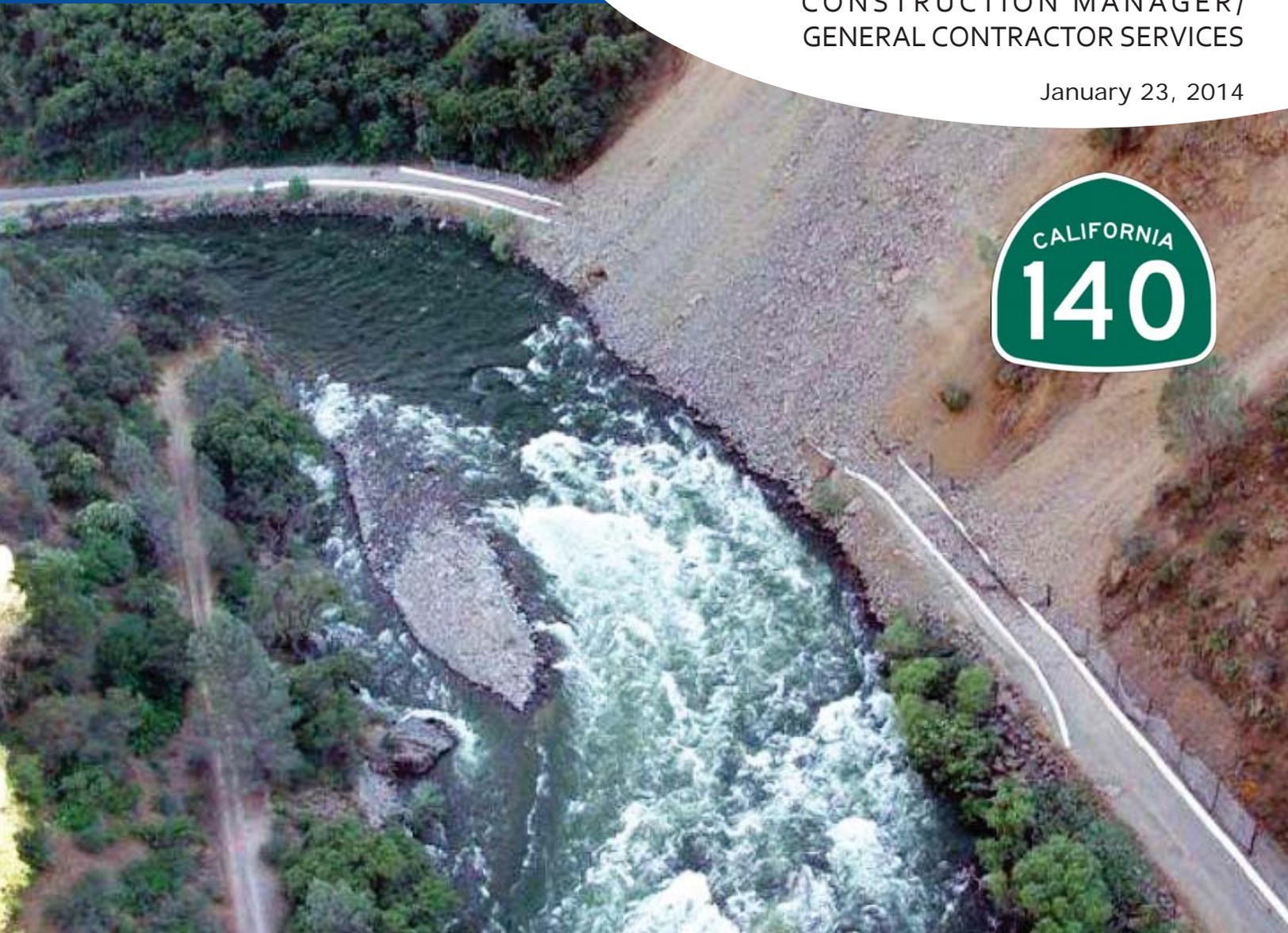
STATEMENT OF QUALIFICATIONS

**STATE ROUTE 140  
FERGUSON SLIDE REPAIR  
Permanent Restoration Project**

**10-OP9201**

CONSTRUCTION MANAGER/  
GENERAL CONTRACTOR SERVICES

January 23, 2014



A JOINT VENTURE

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**Form A**  
**TRANSMITTAL LETTER**

***SOQ Date: January 23, 2014***

***California Department of Transportation***

***Division of Procurement and Contracts***

***1727 30<sup>th</sup> Street***

***Sacramento, CA 95816-7006***

***Attn: Denitia Floyd-Smith, Contract Analyst***

The undersigned (“Proposer”) submits this proposal and statement of qualification submittal (this “SOQ”) in response to that certain Request for Qualifications dated as of ***December 5<sup>th</sup>, 2013*** (as amended, the “RFQ”), issued by California Department of Transportation (“Department”) to provide preconstruction services and construct the related facilities within the ***State Route 140 Ferguson Slide Permanent Restoration Project, Construction Manager/General Contractor Services*** as described in the RFQ.

Enclosed, and by this reference incorporated herein and made a part of this SOQ, are the following:

- Transmittal Letter (this Form A)
- Form G, Proposer’s SOQ Certification
- Section 1: Legal Structure
- Section 2: Financial Capacity
- Section 3: Safety Program
- Section 4: Firm Experience and Past Performance
- Section 5: Proposer Organization and Key Personnel
- Section 6: Project Understanding and Approach
- Appendices A & B (Resumes and Legal Documents)

Proposer acknowledges receipt, understanding, and full consideration of all materials posted on the BidSync website (<http://www.BidSync.com>) as set forth in Section 1.3, and the following addenda and sets of questions and answers to the RFQ:

- **Addendum 1 – Dated December 30, 2013 and posted to Bidsync.**
  - **Final Questions and Answers posted to Bidsync.**
    - **Bidders List posted to Bidsync.**
    - **All other documents posted to Bidsync.**

Proposer represents and warrants that it has read the RFQ and agrees to abide by the contents and terms of the RFQ and the SOQ. If the Proposer consists of more than one entity, all members of the Proposer entity agree to accept joint and several liability for performance under the Contract. Proposer understands that Department is not bound to award a contract and may reject each SOQ Department may receive. 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 the Proposer.

Proposer agrees that Department will not be responsible for any errors, omissions, inaccuracies, or incomplete statements in this SOQ. This SOQ shall be governed by and construed in all respects according to the laws of the State of California.

Proposer's business address:

**2100 Goodyear Rd**

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(No.)	(Street)	(Floor or Suite)
<b>Benicia,</b>	<b>CA</b>	<b>94510</b>
<b>United States</b>		

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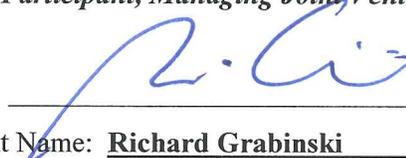
(City)	(State or Province)	(ZIP or Postal Code)	(Country)
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State or Country of Incorporation/Formation/Organization: **California**

1. Sample signature block for partnership or joint venture: *Flatiron/Drill Tech, a Joint Venture*

***Flatiron West Inc.***

By: *Major Participant, Managing Joint Venture Partner*

By: 

Print Name: **Richard Grabinski**

Title: **Vice President of Flatiron West Inc.**

***Drill Tech Drilling and Shoring***

By: *Major Participant, Joint Venture Partner*

By: 

Print Name: **Shannon Creson**

Title: **President of Drill Tech Drilling & Shoring, Inc.**

CALIFORNIA ALL PURPOSE ACKNOWLEDGMENT

State of California

County of Solano

On January 21, 2014 before me, Lillian M. Simon, Notary Public, personally appeared Richard Grabinski and Shannon Creson who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) ~~is~~/are subscribed to within the instrument and acknowledged to me that ~~he~~/~~she~~/they executed the same in ~~his~~/~~her~~/their authorized capacity(ies), and that by ~~his~~/~~her~~/their signature(s) on the instrument the person(s) or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.



Notary Public Signature

Notary Public Seal

Lillian M. Simon

ADA Notice: For individuals with sensory disabilities, this document may be available in alternate formats. For information call (916) 654-6410 or TDD (916) 654-3880 or write Records and Forms Management, 1120 N Street, MS-89, Sacramento, CA 95814.

**Form G**  
**PROPOSER SOQ CERTIFICATION**

A COPY OF THIS CERTIFICATION MUST BE COMPLETED AND SIGNED BY PROPOSER AND, IF A PROPOSER IS A PARTNERSHIP, LIMITED PARTNERSHIP, JOINT VENTURE OR OTHER ASSOCIATION, THEN A SEPARATE CERTIFICATION MUST BE SIGNED BY AN AUTHORIZED REPRESENTATIVE OF EACH MEMBER AND SUBMITTED WITH THE STATEMENT OF QUALIFICATIONS.

**DECLARATION**

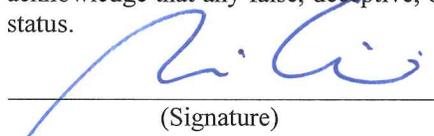
STATE OF California )

)SS:

COUNTY OF Solano )

I, (printed name) Richard Grabinski being first duly sworn, state that I am the (title) Vice President of Flatiron West Inc., and Managing Joint Venture Partner of the Proposer.

I certify that I have read and understood the information contained in the Request for Qualifications issued by the California Department of Transportation for the *State Route 140 Ferguson Slide Permanent Restoration Project, Construction Manager/General Contractor Services* Project and the attached Statement of Qualifications (SOQ), and that to the best of my knowledge and belief all information contained herein and submitted concurrently or in supplemental documents with this SOQ is complete, current, and true. I further acknowledge that any false, deceptive, or fraudulent statements in the SOQ will result in denial of pre-qualification status.

  
\_\_\_\_\_  
(Signature)

Richard Grabinski  
\_\_\_\_\_  
(Name Printed)

**ACKNOWLEDGMENT**

State of California

County of Solano

On January 21, 2014 before me, Lillian M. Simon, Notary Public personally appeared, Richard Grabinski, who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/~~she~~/they executed the same in his/~~her~~/~~their~~ authorized capacity(ies), and that by his/~~her~~/~~their~~ signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Notary Public Signature

  
\_\_\_\_\_  
NOTICE TO APPLICANTS:

Notary Public Seal



A material false statement, omission, or fraudulent inducement made in connection with this Statement of Qualifications is sufficient cause for denial of the application. In addition, such false submission may subject the person or entity making the false statement to criminal charges. (Title 18 USC 1001, false statements; California Penal Code section 132, offering altered or antedated or forged documents or records; and section 134, preparing false documentary evidence).

Form G
PROPOSER SOQ CERTIFICATION

A COPY OF THIS CERTIFICATION MUST BE COMPLETED AND SIGNED BY PROPOSER AND, IF A PROPOSER IS A PARTNERSHIP, LIMITED PARTNERSHIP, JOINT VENTURE OR OTHER ASSOCIATION, THEN A SEPARATE CERTIFICATION MUST BE SIGNED BY AN AUTHORIZED REPRESENTATIVE OF EACH MEMBER AND SUBMITTED WITH THE STATEMENT OF QUALIFICATIONS.

DECLARATION

STATE OF California )

)SS:

COUNTY OF Solano )

I, (printed name) Shannon Creson being first duly sworn, state that I am the (title) President of Drill Tech Drilling & Shoring, Inc. and a Joint Venture Partner of the Proposer.

I certify that I have read and understood the information contained in the Request for Qualifications issued by the California Department of Transportation for the State Route 140 Ferguson Slide Permanent Restoration Project, Construction Manager/General Contractor Services Project and the attached Statement of Qualifications (SOQ), and that to the best of my knowledge and belief all information contained herein and submitted concurrently or in supplemental documents with this SOQ is complete, current, and true. I further acknowledge that any false, deceptive, or fraudulent statements in the SOQ will result in denial of pre-qualification status.

[Handwritten Signature]

(Signature)

Shannon Creson

(Name Printed)

ACKNOWLEDGMENT

State of California

County of Solano

On January 21, 2014 before me, Lillian M. Simon, Notary Public personally appeared, Shannon Creson, who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Notary Public Signature

[Handwritten Signature: Lillian M. Simon]

Notary Public Seal



NOTICE TO APPLICANTS:

A material false statement, omission, or fraudulent inducement made in connection with this Statement of Qualifications is sufficient cause for denial of the application. In addition, such false submission may subject the person or entity making the false statement to criminal charges. (Title 18 USC 1001, false statements; California Penal Code section 132, offering altered or antedated or forged documents or records; and section 134, preparing false documentary evidence).

# Section 1

## Legal Structure



A JOINT VENTURE



Jenner Shotgun Slide Repair for Caltrans [2002-2003].  
Soil nail wall is 95' tall with a 100' deep soldier pile and tieback wall.

## Legal Structure of Proposer Team

Flatiron West, Inc. (“Flatiron”), and Drill Tech Drilling & Shoring, Inc. (“Drill Tech”), are the Major Participant firms that form the Proposers Joint Venture Team of Flatiron/Drill Tech, a Joint Venture for the State Route 140 Ferguson Slide Permanent Restoration Project.

Flatiron/Drill Tech, a Joint Venture would be the contracting entity with Caltrans for this CMGC project. We are currently bound by a fully executed Joint Venture Teaming Agreement. A copy is included in this section for your review. The Flatiron/Drill Tech Team is 100% fully committed to becoming a part of this historical project for Caltrans. Our commitment to this project includes the surrounding community and residents in the Yosemite Valley. Safe passage on the state highways is our core responsibility as contractors working for the traveling public and Caltrans. It is our intent to execute all necessary organizational documents to legally form a Joint Venture and procure a JV Contractor’s License for the Flatiron/Drill Tech, a Joint Venture team prior to execution of a Preconstruction Contract.

Flatiron West Inc., formerly known as FCI Constructors, Inc., is a wholly-owned subsidiary of Flatiron Constructors, Inc. as our parent company. Flatiron West, Inc. is licensed and operates in California due to California’s union labor laws. However, Flatiron Constructors, Inc. and Flatiron West, Inc. share human and financial resources, equipment, experience, and all necessary assets across company divisions and subsidiaries in order to ensure successful on-time and within budget completion of all projects. Flatiron has been licensed in California since 1999 and has completed over \$3.7 Billion of projects in just the last 10 years. The majority of these completed projects have been for Caltrans.

Drill Tech was founded in California in 1994 as a drilling company specializing in soil nails and tiebacks. Over the years, Drill Tech has grown into a national leader in specialty geotechnical contracting with offices in Antioch, CA, Corona, CA and Dallas, TX. While the majority of Drill Tech’s work has been in California, recent and ongoing projects also include work in Nevada, Oregon, Washington, Idaho, Montana, Colorado, Wyoming, Virginia, West Virginia, Texas, Oklahoma and New York. Drill Tech’s company’s core competency remains soil nails, tiebacks and drilled shafts, especially in high reach applications and in rock. Drill Tech has installed soil nails, tiebacks and drilled shafts on over 1000 projects. Included in this work are 128 completed projects for Caltrans in the last 15 years.

Neither Flatiron, nor Drill Tech, is a participant of any other proposer teams or organizations for this project.

Incorporation documents for each major Participant are included in Appendix B, Legal Documents. These include Secretary of State Incorporation Documents, Articles of Incorporation and By Laws that allow our firms to currently conduct business in the State of California.

*State Route 140 Ferguson Slide Permanent Restoration Project  
Caltrans Contract No. 10-0P9201*

**Construction Joint Venture Teaming Agreement**

This Teaming Agreement is effective as of December 16, 2013, by and between Flatiron West, Inc. ("Flatiron") and Drill Tech Drilling & Shoring, Inc. ("Drill Tech").

This Agreement is made in connection with the preparation and submittal of the proposal to the California Department of Transportation ("Owner") for the State Route 140 Ferguson Slide Permanent Restoration Project (the "Project"). Owner has issued its Request for Qualifications for Proposers to engage in a construction manager/general contractor (CMGC) project delivery method for the Project. The CMGC delivery method consists of a pre-construction phase and a construction phase.

After the pre-construction phase, but prior to the execution of the construction contract, the Parties will further define each Party's participation of the Joint Venture. In either case, the Project will be executed as a Line Item Joint Venture where each party is responsible for its portion of work. Each Party's participation will be based on the value of the work each participant will perform (i.e. Line Item). As a division of responsibilities between the Parties, it is anticipated that Drill Tech will perform soil nail, rock bolts, shotcrete, rockfall containment, shoring, drilled shafts, ground improvements, slope stabilization, drill, blasting, and all work associated with similar scope, while Flatiron would perform all other work on the project. Each Party may subcontract portions of its scope to qualified contractors.

The Parties agree to work exclusively with each other as a Team to furnish a proposal for the project. Flatiron and Drill Tech intend to form a line item share Joint Venture known as "Flatiron/Drill Tech, A Joint Venture" (or the "Joint Venture") and will execute a Joint Venture Agreement. Flatiron will lead the Team and the Joint Venture as the managing party.

All Parties agree that this Teaming Agreement for pursuing the Project is valid only if the Project is procured by the Owner as a single Construction Manager/General Contractor contract. The parties currently estimate the Project at \$55 million.

As it relates to the RFQ proposal, all Parties will be responsible for their own internal and out-of-pocket expenses as it relates to the preparation and submittal of this document. Flatiron will take the overall lead in organizing these activities and communications with the Owner.

Flatiron and Drill Tech will provide all post-award preconstruction services at rates and markups as allowed for by the Contract.

Flatiron and Drill Tech will work as a Team to coordinate, schedule, and interface work with each other (and other subcontractors) to assure the most competitive Team and superior proposal.

Each Party shall be responsible for its own specific proposal and bid preparation costs. Each party agrees to prepare written submissions required for the proposal and bid documents, as mutually agreed.

The standard Flatiron Joint Venture Agreement will serve as the model for the Line Item Joint Venture Agreement. In any case, the chosen form of the Joint Venture Agreement will be mutually agreed upon and executed prior to submittal of the fixed-price Construction Contract. Flatiron and Drill Tech agree to be jointly and severally liable to the Owner for the Construction Contract under the Joint Venture Agreement.

Liability of the Parties to each other shall be as specified in the Joint Venture Agreement. Any Party that is a subsidiary of or wholly owned by another entity will furnish a performance guarantee from its parent or owner entity acceptable to other parties and, if required by the Owner, to the Owner. Flatiron shall not be required to provide a guarantee above the Flatiron Construction Corporate level.

Provisions herein regarding the contents of the Joint Venture Agreement and the post-award relationship of the parties will be superseded by the executed Joint Venture Agreement.

Flatiron will provide a major portion of the salary personnel and Drill Tech will provide the remaining salary personnel. Other personnel commitments may be detailed in the Joint Venture Agreement or Team Proposal.

Each Party agrees to keep confidential, and not furnish to any third party without the other Party's consents, any information or documents obtained from each other in connection with any proposals or work product associated with this Project or the pursuit of this Project and in association with this Agreement. This agreement of confidentiality shall survive the termination of this Agreement.

Nothing in this agreement shall be construed as creating a permanent partnership between the parties, or giving to any party any of the rights of, or subjecting any party to any of the liabilities of, a partner, nor shall any party be authorized to represent or make any commitments binding on any other party or the Parties. This agreement is limited to the Project described above, and has no effect on any other project including projects related to the Project, or any other business of any party.

This agreement is subject to each Party's right to withdraw from the Team and terminate its interest in the Project upon its review of the Owner's Request for Qualifications (RFQ) within three weeks of receipt of those documents from the Owner. The Party electing to terminate under the foregoing provision agrees that it shall not pursue participation in the Project via any other means. The remaining Party or Parties shall be permitted to continue pursuit of the Project together, with or without additional entities.

This Teaming Agreement will terminate upon the earlier of: (1) termination by any Party under the above provisions; (2) if the Joint Venture's Proposal(s) are not accepted by the Owner; (3) by mutual agreement of the Parties, (4) award of the Project to the Joint Venture, (5) Cancellation or indefinite suspension of Project or Project procurement activities by the Owner. (6) Change in project delivery method by the Owner, or (7) Substantial change in scope to the Project by the Owner.

**AGREED:**

**FLATIRON WEST, INC.**

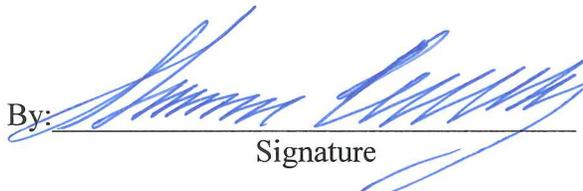
By:  \_\_\_\_\_  
Signature

Name: Richard Grabinski

Title: Vice President – District Manager

Date: 1/21/2014

**DRILL TECH DRILLING & SHORING, INC.**

By:  \_\_\_\_\_  
Signature

Name: Shannon Creson

Title: President

Date: 1/21/2014

## POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS:

That, the undersigned represents and warrants that he is authorized to execute this Power of Attorney on behalf of the entity described; and

That, Flatiron West, Inc. (the "Corporation") and Drill Tech Drilling & Shoring, Inc. are members of a Joint Venture known as Flatiron/Drill Tech, a Joint Venture (the "Joint Venture"), and desire to submit a Statement of Qualifications Proposal and associated documents and, if selected by the client, enter into a contract with the California Department of Transportation ("Caltrans") for the Rte 140 Ferguson Slide Permanent Restoration CMGC Project, as described in the Request for Qualifications dated December 5, 2013 ("the "Project").

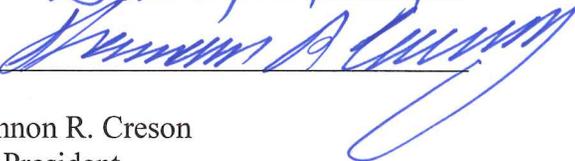
The Joint Venture, does hereby designate, constitute, and appoint Richard Grabinski as its true and lawful Attorney-in-Fact for the Joint Venture. The Corporation hereby ratifies and confirms such appointment. The Attorney-in-Fact shall have the power to do and perform all acts on behalf of the Joint Venture necessary in connection with the preparation and submittal of the Proposal for the above described Project, to wit; to execute the Proposal documents, and all required documentation to be submitted with the Proposal and, if selected to enter into a contract (the "Contract") for the Project, the Joint Venture further authorizes Richard Grabinski as its true and lawful Attorney-in-Fact, in the Joint Venture's place and stead, to sign, initial, execute, and deliver on behalf of the Joint Venture all agreements and documents and perform any and all acts necessary or desirable in the submission of Proposal for said Contract; ratifying and confirming all that Richard Grabinski as said attorney, shall lawfully do or cause to be done by virtue hereof.

The foregoing appointment of Richard Grabinski as above specified, is hereby specifically made subject to revocation or amendment thereof as may hereafter be made by the Joint Venture; further, this Power of Attorney shall remain in effect for a period of Five (5) years from its effective date, unless earlier revoked in writing.

IN WITNESS WHEREOF, the undersigned have caused this instrument to be duly executed by the Corporation on behalf of the Joint Venture by its duly authorized partner this 21<sup>st</sup> day of January 2014.

DRILL TECH DRILLING & SHORING, INC.

Dated: January 21, 2014

By: 

Shannon R. Creson  
Its: President

[Add a CA notary form]

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

CIVIL CODE § 1189

State of California

County of Contra Costa

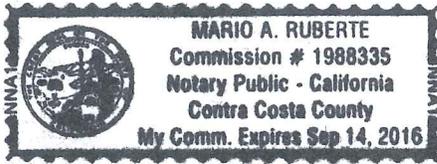
On Jan. 21, 2014 before me, Mario Ruberte, Notary Public

personally appeared Shannon R. Crejan

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.



Place Notary Seal Above

Signature: [Handwritten Signature] Signature of Notary Public

OPTIONAL

Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.

Description of Attached Document

Title or Type of Document: POWER OF ATTORNEY

Document Date: January 21, 2014 Number of Pages: one (1)

Signer(s) Other Than Named Above:

Capacity(ies) Claimed by Signer(s)

Signer's Name: Shannon R. Crejan Signer's Name:

Corporate Officer - Title(s): President Corporate Officer - Title(s):

Individual Individual

Partner - Limited General Partner - Limited General

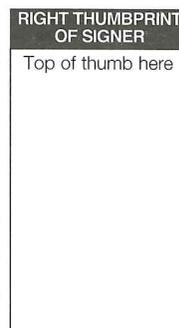
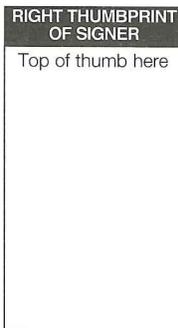
Attorney in Fact Attorney in Fact

Trustee Trustee

Guardian or Conservator Guardian or Conservator

Other: Other:

Signer Is Representing: Signer Is Representing:



Form E

**PROPOSER'S ORGANIZATION INFORMATION**

**Name of Proposer:** Flatiron/Drill Tech, a Joint Venture

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**Instructions for Form completion:** Responses to each subject area shall be addressed within the table below. Should additional space be needed, Proposers are advised to increase space following question as appropriate. Form E shall have no SOQ page limitation.

<b>Proposer (Individual Firm <u>Joint Venture</u> Partnership / LLC)</b>
<b>Name of Entity:</b> <u>Flatiron/Drill Tech, a Joint Venture (Proposer)</u>
<b>Address:</b> <u>2100 Goodyear Rd</u> <u>Benicia, CA 94510</u>
<b>Contact Name:</b> <u>Richard Grabinski</u> <b>Title:</b> <u>Managing JV Partner, Attorney in Fact</u>
<b>Telephone No.:</b> <u>707-742-6014</u> <b>Fax No.:</b> <u>707-746-0849</u> <b>E-mail:</b> <u>RGrabinski@flatironcorp.com</u>
<b>Local / Regional Contact</b>
<b>Name:</b> <u>Blaine Austin, Estimating Manager</u>
<b>Address:</b> <u>2100 Goodyear Rd</u> <u>Benicia, CA 94510</u>
<b>Telephone No.:</b> <u>707-742-6017</u> <b>Fax No.:</b> <u>707-746-0849</u> <b>E-mail:</b> <u>BLAustin@flatironcorp.com</u>

Form E

**PROPOSER'S ORGANIZATION INFORMATION**

**Name of Proposer:** *Flatiron/Drill Tech, a Joint Venture*

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**Instructions for Form completion:** Responses to each subject area shall be addressed within the table below. Should additional space be needed, Proposers are advised to increase space following question as appropriate. Form E shall have no SOQ page limitation.

<b>Proposer (Individual Firm <u>Joint Venture</u> Partnership / LLC)</b>
<b>Name of Entity:</b> <u>Flatiron West Inc. (Managing JV Partner)</u>
<b>Address:</b> <u>2100 Goodyear Rd</u> <u>Benicia, CA 94510</u>
<b>Contact Name:</b> <u>Richard Grabinski</u> <b>Title:</b> <u>Vice President</u>
<b>Telephone No.:</b> <u>707-742-6014</u> <b>Fax No.:</b> <u>707-746-0849</u> <b>E-mail:</b> <u>RGrabinski@flatironcorp.com</u>
<b>Local / Regional Contact</b>
<b>Name:</b> <u>Blaine Austin</u>
<b>Address:</b> <u>2100 Goodyear Rd</u> <u>Benicia, Ca 94510</u>
<b>Telephone No.:</b> <u>707-742-6017</u> <b>Fax No.:</b> <u>707-746-0849</u> <b>E-mail:</b> <u>BLAustin@flatironcorp.com</u>

Form E

**PROPOSER'S ORGANIZATION INFORMATION**

**Name of Proposer:** *Flatiron/Drill Tech, a Joint Venture*

---

**Instructions for Form completion:** Responses to each subject area shall be addressed within the table below. Should additional space be needed, Proposers are advised to increase space following question as appropriate. Form E shall have no SOQ page limitation.

<b>Proposer (Individual Firm <u>Joint Venture</u> Partnership / LLC)</b>
<b>Name of Entity:</b> <u>Drill Tech Drilling &amp; Shoring, Inc. (JV Partner)</u>
<b>Address:</b> <u>2200 Wymore Way</u> <u>Antioch, CA 94509</u>
<b>Contact Name:</b> <u>Shannon Creson</u> <b>Title:</b> <u>President</u>
<b>Telephone No.:</b> <u>925-978-2060</u> <b>Fax No.:</b> <u>925-706-5544</u> <b>E-mail:</b> <u>Shannon@drilltechdrilling.com</u>
<b>Local / Regional Contact</b>
<b>Name:</b> <u>Brett Manier</u>
<b>Address:</b> <u>2200 Wymore Way</u> <u>Antioch, CA 94509</u>
<b>Telephone No.:</b> <u>925-978-2060</u> <b>Fax No.:</b> <u>925-706-5544</u> <b>E-mail:</b> <u>Brett.Mainer@drilltechdrilling.com</u>

Form F

PROPOSER'S DISADVANTAGED BUSINESS ENTERPRISE PROJECT
GOAL DECLARATION AFFIDAVIT

Name of Proposer: Flatiron/Drill Tech, a Joint Venture

It is understood and agreed by the Proposer that it has carefully examined all documents that form this Request for Qualifications (RFQ) and acknowledges that California Department of Transportation (Department) will establish a Disadvantaged Business Enterprise goal based on the total project value for this CMGC Project. This affidavit further serves to confirm that Flatiron/Drill Tech, a Joint Venture will aggressively exercise good faith efforts to the satisfaction of Department to meet the proposed Disadvantaged Business Enterprise goal and requirements defined in the Construction Contract documents, when issued.

STATE OF California)

COUNTY OF Solano)

Each of the undersigned, being first duly sworn, deposes and says that Richard Grabinski (Contact Name)

is the Vice President of Flatiron West Inc. and Shannon Creson is the President (Title) (Company) (Contact Name) (Title)

of Drill Tech Drilling & Shoring, Inc., which entity(ies) are the Joint Venture (Company) (Joint Venture/Partnership, Other)

of Flatiron/Drill Tech, a Joint Venture, the entity making the foregoing Statement of Qualification. (Joint Venture Company)

The Proposer hereby affirms that it will either meet the DBE goals described in this solicitation or exercise and provide demonstrable evidence to the satisfaction of the California Department of Transportation (Department) that it has aggressively exercised Good Faith Efforts to do so in accordance with defined program requirements, including contractual and regulatory provisions set forth under Title 49, Code of Federal Regulations (CFR), Part 26 and subsequently published DBE Federal Regulations.

[Handwritten signature of Richard Grabinski]
(Signature)

Richard Grabinski
(Name Printed)

[Handwritten signature of Shannon Creson]
(Signature)

Shannon Creson
(Name Printed)

Vice President of Flatiron West Inc., Managing JV Partner
(Title)

President of Drill Tech Drilling & Shoring, Inc., JV Partner
(Title)

State of **California**

County of **Solano**

Subscribed and sworn to (or affirmed) before me on this 21<sup>st</sup> day of January, 2014,  
by **Richard Grabinski and Shannon Creson**, who proved to me on the basis of satisfactory evidence to be the  
person(s) who appeared before me.

Notary Public Signature



Notary Public Seal



*[Duplicate or modify this form as necessary so that it accurately describes the entity making the proposal and so that it is signed on behalf of all partners/members of the proposing firm.]*

# Section 2

## Financial Capacity



A JOINT VENTURE



Highway 1 Slide Repair for Caltrans [2003].  
Two rows of 150' tiebacks and a shotcrete waler.

**Flatiron/Drill Tech,  
a Joint Venture  
Notarized Bonding  
Capability Statement**

January 17, 2014

State of California Department of Transportation  
Administration  
Division of Procurement and Contracts  
1727 30<sup>th</sup> Street  
Sacramento, CA 95816-7006

Attention: Denetia Floyd-Smith  
Contract Analyst

Re: Flatiron/Drill Tech, A Joint Venture - Request For Qualifications  
State Route 140 Ferguson Slide Permanent Restoration Project  
Construction Manager/General Contractor Services  
For Design and Construction on State Highway in Mariposa County  
Estimated Contract Value: \$55,000,000

This letter confirms that Flatiron/Drill Tech, A Joint Venture comprised on Flatiron West, Inc. and Drill Tech Drilling and Shoring, Inc. is supported by the following co-sureties, Liberty Mutual Insurance Company, Travelers Casualty and Surety Company of America, Zurich American Insurance Company, Federal Insurance Company, The Continental Insurance Company and XL Specialty Insurance Company. All Sureties are listed in the U.S. Treasury listing dated July 1, 2013 and licensed to do business in all states.

The undersigned sureties agree that, Flatiron/Drill Tech, A Joint Venture is well qualified to perform the above captioned project. Furthermore, the undersigned sureties confirm the joint venture has current bonding capacity sufficient to meet the bond requirements as stated in Section 1.15.1 of the RFQ. It is our intention to provide Performance and Payment Bonds if the Joint Venture is awarded and signs the captioned contract. After reviewing each participant's backlog and work-in-progress, in addition to current financial strength, we offer the following information on each participant of the Flatiron/Drill Tech Joint Venture.

With respect to Flatiron West, Inc., this entity is included as part of an overall surety work program commitment totaling \$6.5 Billion and available bonding capacity of \$1.7 Billion.

With respect to Drill Tech Drilling and Shoring, Inc., this entity is included as part of an overall surety work program commitment totaling \$150 Million and available bonding capacity of \$100 Million.

The standard underwriting procedures in the surety industry would be performed prior to any final approvals and would be contingent on the satisfactory review of contract documents, confirmation of financing, acceptable payment provisions, acceptable bond forms, etc. As this letter is provided to document the abilities of Flatiron/Drill Tech, A Joint Venture, we assume no liability to third parties or to you by issuance of this letter.

We are pleased to share with you our favorable experience and high regard for Flatiron/Drill Tech, A Joint Venture.

Sincerely,

Liberty Mutual Insurance Company – A.M. Best Rating A XV  
175 Berkeley Street, Boston, MA 02116 (Massachusetts Corporation)

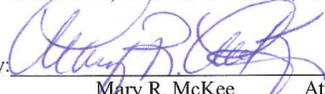
Travelers Casualty and Surety Company of America – A.M. Best Rating A+ XV  
Construction Services, One Tower Square, Hartford, CT 06183 (Connecticut Corporation)

Zurich American Insurance Company – A.M. Best A+ XV  
1400 American Lane, Schaumburg, IL 60196 (New York Corporation)

Federal Insurance Company – A.M. Best rating – A++ XV  
15 Mountain View Road, Warren, NJ 07061 (Indiana Corporation)

The Continental Insurance Company – A.M. Best Rating – A XV  
333 Wabash Avenue, Chicago, IL 60604 (Pennsylvania Corporation)

XL Specialty Insurance Company – A.M. Best A XV  
Seaview House, 70 Seaview Avenue, Stamford, CT 06902 (Delaware Corporation)

By:   
Mary R. McKee Attorney-In-Fact

**CORPORATE ACKNOWLEDGMENT**

Form 152

STATE OF NEW JERSEY

COUNTY OF BERGEN

On this 17th day of January, 2014, before me personally came  
Mary R. McKee to me known, who, being by me duly sworn, did depose and  
say that **she**/he resides in Saddle Brook, NJ that **she**/he is the Attorney In Fact of  
Liberty Mutual Insurance Company the corporation described in and which executed  
the above instrument that **she**/he knows the seal of said corporation; that the seal affixed  
to said instrument is such corporate seal; that it was so affixed by order of the Board of  
Directors of said corporation, and that **she**/he signed her/his name thereto by like order.

(SEAL)



Esther Caban  
Notary Public of New Jersey  
My Commission Expires  
February 18, 2014



LIBERTY MUTUAL INSURANCE COMPANY  
FINANCIAL STATEMENT — DECEMBER 31, 2012

<b>Assets</b>	<b>Liabilities</b>
Cash and Bank Deposits ..... \$ 903,711,694	Unearned Premiums ..... \$4,205,141,671
*Bonds — U.S Government ..... 1,166,929,471	Reserve for Claims and Claims Expense ..... 17,056,420,207
*Other Bonds ..... 11,415,194,219	Funds Held Under Reinsurance Treaties ..... 1,315,062,091
*Stocks ..... 8,104,853,899	Reserve for Dividends to Policyholders ..... 2,455,411
Real Estate ..... 255,967,320	Additional Statutory Reserve ..... 49,768,998
Agents' Balances or Uncollected Premiums ..... 3,482,069,753	Reserve for Commissions, Taxes and
Accrued Interest and Rents ..... 144,016,763	Other Liabilities ..... <u>3,066,051,537</u>
Other Admitted Assets ..... <u>14,732,623,458</u>	<b>Total ..... \$25,694,899,915</b>
<b>Total Admitted Assets ..... <u>\$40,205,366,577</u></b>	Special Surplus Funds ..... \$604,621,497
	Capital Stock ..... 10,000,000
	Paid in Surplus ..... 7,899,471,886
	Unassigned Surplus ..... 5,996,373,279
	<b>Surplus to Policyholders ..... <u>14,510,466,662</u></b>
	<b>Total Liabilities and Surplus ..... <u>\$40,205,366,577</u></b>



\* Bonds are stated at amortized or investment value; Stocks at Association Market Values.  
The foregoing financial information is taken from Liberty Mutual Insurance Company's financial statement filed with the state of Massachusetts Department of Insurance.

I, TIM MIKOLAJEWSKI, Assistant Secretary of Liberty Mutual Insurance Company, do hereby certify that the foregoing is a true, and correct statement of the Assets and Liabilities of said Corporation, as of December 31, 2012, to the best of my knowledge and belief.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of said Corporation at Seattle, Washington, this 25th day of March, 2013.

*T Mikolajewski*

\_\_\_\_\_  
Assistant Secretary

**THIS POWER OF ATTORNEY IS NOT VALID UNLESS IT IS PRINTED ON RED BACKGROUND.**

This Power of Attorney limits the acts of those named herein, and they have no authority to bind the Company except in the manner and to the extent herein stated.

Certificate No. 6320293

American Fire and Casualty Company  
The Ohio Casualty Insurance Company

Liberty Mutual Insurance Company  
West American Insurance Company

**POWER OF ATTORNEY**

KNOWN ALL PERSONS BY THESE PRESENTS: That American Fire & Casualty Company and The Ohio Casualty Insurance Company are corporations duly organized under the laws of the State of New Hampshire, that Liberty Mutual Insurance Company is a corporation duly organized under the laws of the State of Massachusetts, and West American Insurance Company is a corporation duly organized under the laws of the State of Indiana (herein collectively called the "Companies"), pursuant to and by authority herein set forth, does hereby name, constitute and appoint, Alice McLaughlin; Maria L. Spadaccini; Mary R. McKee; Nicholas F. Walsh; Sherryanne M. DePirro

all of the city of Woodcliff Lake, state of NJ each individually if there be more than one named, its true and lawful attorney-in-fact to make, execute, seal, acknowledge and deliver, for and on its behalf as surety and as its act and deed, any and all undertakings, bonds, recognizances and other surety obligations, in pursuance of these presents and shall be as binding upon the Companies as if they have been duly signed by the president and attested by the secretary of the Companies in their own proper persons.

IN WITNESS WHEREOF, this Power of Attorney has been subscribed by an authorized officer or official of the Companies and the corporate seals of the Companies have been affixed thereto this 17th day of October, 2013.



American Fire and Casualty Company  
The Ohio Casualty Insurance Company  
Liberty Mutual Insurance Company  
West American Insurance Company

By: Gregory W. Davenport  
Gregory W. Davenport, Assistant Secretary

STATE OF WASHINGTON ss  
COUNTY OF KING

On this 17th day of October, 2013, before me personally appeared Gregory W. Davenport, who acknowledged himself to be the Assistant Secretary of American Fire and Casualty Company, Liberty Mutual Insurance Company, The Ohio Casualty Company, and West American Insurance Company, and that he, as such, being authorized so to do, execute the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed my notarial seal at Seattle, Washington, on the day and year first above written.



By: KD Riley  
KD Riley, Notary Public

This Power of Attorney is made and executed pursuant to and by authority of the following By-laws and Authorizations of American Fire and Casualty Company, The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company which resolutions are now in full force and effect reading as follows:

**ARTICLE IV – OFFICERS** – Section 12. Power of Attorney. Any officer or other official of the Corporation authorized for that purpose in writing by the Chairman or the President, and subject to such limitation as the Chairman or the President may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Corporation to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact, subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Corporation by their signature and execution of any such instruments and to attach thereto the seal of the Corporation. When so executed, such instruments shall be as binding as if signed by the President and attested to by the Secretary. Any power or authority granted to any representative or attorney-in-fact under the provisions of this article may be revoked at any time by the Board, the Chairman, the President or by the officer or officers granting such power or authority.

**ARTICLE XIII – Execution of Contracts – SECTION 5. Surety Bonds and Undertakings.** Any officer of the Company authorized for that purpose in writing by the chairman or the president, and subject to such limitations as the chairman or the president may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Company by their signature and execution of any such instruments and to attach thereto the seal of the Company. When so executed such instruments shall be as binding as if signed by the president and attested by the secretary.

**Certificate of Designation** – The President of the Company, acting pursuant to the Bylaws of the Company, authorizes Gregory W. Davenport, Assistant Secretary to appoint such attorneys-in-fact as may be necessary to act on behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations.

**Authorization** – By unanimous consent of the Company's Board of Directors, the Company consents that facsimile or mechanically reproduced signature of any assistant secretary of the Company, wherever appearing upon a certified copy of any power of attorney issued by the Company in connection with surety bonds, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

I, David M. Carey, the undersigned, Assistant Secretary, of American Fire and Casualty Company, The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company do hereby certify that the original power of attorney of which the foregoing is a full, true and correct copy of the Power of Attorney executed by said Companies, is in full force and effect and has not been revoked.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seals of said Companies this 17th day of January, 2014.



By: David M. Carey  
David M. Carey, Assistant Secretary

Not valid for mortgage, note, loan, letter of credit, currency rate, interest rate or residual value guarantees.

To confirm the validity of this Power of Attorney call 1-610-832-8240 between 9:00 am and 4:30 pm EST on any business day.

**CORPORATE ACKNOWLEDGMENT**

Form 152

STATE OF NEW JERSEY

COUNTY OF BERGEN

On this 17th day of January, 2014, before me personally came Mary R. McKee to me known, who, being by me duly sworn, did depose and say that **she**/he resides in Saddle Brook, NJ that **she**/he is the Attorney In Fact of Travelers Casualty and Surety Company of America the corporation described in and which executed the above instrument that **she**/he knows the seal of said corporation; that the seal affixed to said instrument is such corporate seal; that it was so affixed by order of the Board of Directors of said corporation, and that **she**/he signed her/his name thereto by like order.

(SEAL)



Esther Caban  
Notary Public of New Jersey  
My Commission Expires  
February 16, 2014

TRAVELERS CASUALTY AND SURETY COMPANY OF AMERICA

HARTFORD, CONNECTICUT 06183

FINANCIAL STATEMENT AS OF DECEMBER 31, 2012

CAPITAL STOCK \$ 6,480,000

ASSETS		LIABILITIES & SURPLUS	
CASH AND INVESTED CASH	\$ 15,936,791	UNEARNED PREMIUMS	\$ 783,409,692
BONDS	3,713,171,015	LOSSES	901,058,710
INVESTMENT INCOME DUE AND ACCRUED	50,798,732	REINSURANCE PAYABLE ON PAID LOSSES & LOSS ADJ. EXPENSES	1,446,021
OTHER INVESTED ASSETS	280,730,697	LOSS ADJUSTMENT EXPENSES	534,370,680
PREMIUM BALANCES	184,842,508	COMMISSIONS	29,281,779
NET DEFERRED TAX ASSET	63,274,378	TAXES, LICENSES AND FEES	66,762,894
REINSURANCE RECOVERABLE	12,410,524	OTHER EXPENSES	35,588,967
SECURITIES LENDING REINVESTED COLLATERAL ASSETS	7,769,165	FUNDS HELD UNDER REINSURANCE TREATIES	94,449,544
RECEIVABLES FROM PARENT, SUBSIDIARIES AND AFFILIATES	11,080,470	CURRENT FEDERAL AND FOREIGN INCOME TAXES	60,675,573
UNDISTRIBUTED PAYMENTS	(1,439,585)	REMITTANCES AND ITEMS NOT ALLOCATED	19,270,931
OTHER ASSETS	884,093	AMOUNTS WITHHELD / RETAINED BY COMPANY FOR OTHERS	79,084,806
		RETROACTIVE REINSURANCE RESERVE ASSUMED	3,163,164
		POLICYHOLDER DIVIDENDS	6,730,121
		PROVISION FOR REINSURANCE	5,314,325
		ADVANCE PREMIUM	726,898
		PAYABLE FOR SECURITIES LENDING	7,769,165
		CEDED REINSURANCE NET PREMIUMS PAYABLE	(70,803,744)
		ESCHEAT LIABILITY	525,399
		OTHER ACCRUED EXPENSES AND LIABILITIES	282,062
		TOTAL LIABILITIES	\$ 2,559,106,957
		CAPITAL STOCK	\$ 6,480,000
		PAID IN SURPLUS	433,803,760
		OTHER SURPLUS	1,340,188,061
		TOTAL SURPLUS TO POLICYHOLDERS	\$ 1,780,451,821
TOTAL ASSETS	\$ 4,339,558,778	TOTAL LIABILITIES & SURPLUS	\$ 4,339,558,778

STATE OF CONNECTICUT )  
 COUNTY OF HARTFORD ) SS.  
 CITY OF HARTFORD )

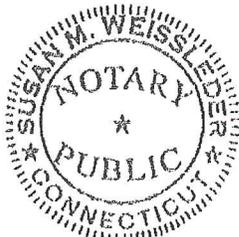
MICHAEL J. DOODY, BEING DULY SWORN, SAYS THAT HE IS SECOND VICE PRESIDENT, OF TRAVELERS CASUALTY AND SURETY COMPANY OF AMERICA, AND THAT TO THE BEST OF HIS KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT STATEMENT OF THE FINANCIAL CONDITION OF SAID COMPANY AS OF THE 31ST DAY OF DECEMBER, 2012.

*Michael J. Doody*  
 SECOND VICE PRESIDENT

SUBSCRIBED AND SWORN TO BEFORE ME THIS  
 20TH DAY OF MARCH, 2013

*Susan M. Weissleder*  
 NOTARY PUBLIC

SUSAN M. WEISSLEDER  
 Notary Public  
 My Commission Expires November 30, 2017





POWER OF ATTORNEY

Farmington Casualty Company
Fidelity and Guaranty Insurance Company
Fidelity and Guaranty Insurance Underwriters, Inc.
St. Paul Fire and Marine Insurance Company
St. Paul Guardian Insurance Company

St. Paul Mercury Insurance Company
Travelers Casualty and Surety Company
Travelers Casualty and Surety Company of America
United States Fidelity and Guaranty Company

Attorney-In Fact No. 227173

Certificate No. 005646650

KNOW ALL MEN BY THESE PRESENTS: That Farmington Casualty Company, St. Paul Fire and Marine Insurance Company, St. Paul Guardian Insurance Company, St. Paul Mercury Insurance Company, Travelers Casualty and Surety Company, Travelers Casualty and Surety Company of America, and United States Fidelity and Guaranty Company are corporations duly organized under the laws of the State of Connecticut, that Fidelity and Guaranty Insurance Company is a corporation duly organized under the laws of the State of Iowa, and that Fidelity and Guaranty Insurance Underwriters, Inc., is a corporation duly organized under the laws of the State of Wisconsin (herein collectively called the "Companies"), and that the Companies do hereby make, constitute and appoint

Alice McLaughlin, Mary R. McKee, Sherryanne M. DePirro, Maria L. Spadaccini, and Nicholas F. Walsh

of the City of Woodcliff Lake, State of New Jersey, their true and lawful Attorney(s)-in-Fact, each in their separate capacity if more than one is named above, to sign, execute, seal and acknowledge any and all bonds, recognizances, conditional undertakings and other writings obligatory in the nature thereof on behalf of the Companies in their business of guaranteeing the fidelity of persons, guaranteeing the performance of contracts and executing or guaranteeing bonds and undertakings required or permitted in any actions or proceedings allowed by law.

IN WITNESS WHEREOF, the Companies have caused this instrument to be signed and their corporate seals to be hereto affixed, this 19th day of September, 2013.

Farmington Casualty Company
Fidelity and Guaranty Insurance Company
Fidelity and Guaranty Insurance Underwriters, Inc.
St. Paul Fire and Marine Insurance Company
St. Paul Guardian Insurance Company

St. Paul Mercury Insurance Company
Travelers Casualty and Surety Company
Travelers Casualty and Surety Company of America
United States Fidelity and Guaranty Company



State of Connecticut
City of Hartford ss.

By: [Signature]
Robert L. Raney, Senior Vice President

On this the 19th day of September, 2013, before me personally appeared Robert L. Raney, who acknowledged himself to be the Senior Vice President of Farmington Casualty Company, Fidelity and Guaranty Insurance Company, Fidelity and Guaranty Insurance Underwriters, Inc., St. Paul Fire and Marine Insurance Company, St. Paul Guardian Insurance Company, St. Paul Mercury Insurance Company, Travelers Casualty and Surety Company, Travelers Casualty and Surety Company of America, and United States Fidelity and Guaranty Company, and that he, as such, being authorized so to do, executed the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

In Witness Whereof, I hereunto set my hand and official seal. My Commission expires the 30th day of June, 2016.



[Signature]
Marie C. Tetreault, Notary Public

This Power of Attorney is granted under and by the authority of the following resolutions adopted by the Boards of Directors of Farmington Casualty Company, Fidelity and Guaranty Insurance Company, Fidelity and Guaranty Insurance Underwriters, Inc., St. Paul Fire and Marine Insurance Company, St. Paul Guardian Insurance Company, St. Paul Mercury Insurance Company, Travelers Casualty and Surety Company, Travelers Casualty and Surety Company of America, and United States Fidelity and Guaranty Company, which resolutions are now in full force and effect, reading as follows:

**RESOLVED**, that the Chairman, the President, any Vice Chairman, any Executive Vice President, any Senior Vice President, any Vice President, any Second Vice President, the Treasurer, any Assistant Treasurer, the Corporate Secretary or any Assistant Secretary may appoint Attorneys-in-Fact and Agents to act for and on behalf of the Company and may give such appointee such authority as his or her certificate of authority may prescribe to sign with the Company's name and seal with the Company's seal bonds, recognizances, contracts of indemnity, and other writings obligatory in the nature of a bond, recognizance, or conditional undertaking, and any of said officers or the Board of Directors at any time may remove any such appointee and revoke the power given him or her; and it is

**FURTHER RESOLVED**, that the Chairman, the President, any Vice Chairman, any Executive Vice President, any Senior Vice President or any Vice President may delegate all or any part of the foregoing authority to one or more officers or employees of this Company, provided that each such delegation is in writing and a copy thereof is filed in the office of the Secretary; and it is

**FURTHER RESOLVED**, that any bond, recognizance, contract of indemnity, or writing obligatory in the nature of a bond, recognizance, or conditional undertaking shall be valid and binding upon the Company when (a) signed by the President, any Vice Chairman, any Executive Vice President, any Senior Vice President or any Vice President, any Second Vice President, the Treasurer, any Assistant Treasurer, the Corporate Secretary or any Assistant Secretary and duly attested and sealed with the Company's seal by a Secretary or Assistant Secretary; or (b) duly executed (under seal, if required) by one or more Attorneys-in-Fact and Agents pursuant to the power prescribed in his or her certificate or their certificates of authority or by one or more Company officers pursuant to a written delegation of authority; and it is

**FURTHER RESOLVED**, that the signature of each of the following officers: President, any Executive Vice President, any Senior Vice President, any Vice President, any Assistant Vice President, any Secretary, any Assistant Secretary, and the seal of the Company may be affixed by facsimile to any Power of Attorney or to any certificate relating thereto appointing Resident Vice Presidents, Resident Assistant Secretaries or Attorneys-in-Fact for purposes only of executing and attesting bonds and undertakings and other writings obligatory in the nature thereof, and any such Power of Attorney or certificate bearing such facsimile signature or facsimile seal shall be valid and binding upon the Company and any such power so executed and certified by such facsimile signature and facsimile seal shall be valid and binding on the Company in the future with respect to any bond or understanding to which it is attached.

I, Kevin E. Hughes, the undersigned, Assistant Secretary, of Farmington Casualty Company, Fidelity and Guaranty Insurance Company, Fidelity and Guaranty Insurance Underwriters, Inc., St. Paul Fire and Marine Insurance Company, St. Paul Guardian Insurance Company, St. Paul Mercury Insurance Company, Travelers Casualty and Surety Company, Travelers Casualty and Surety Company of America, and United States Fidelity and Guaranty Company do hereby certify that the above and foregoing is a true and correct copy of the Power of Attorney executed by said Companies, which is in full force and effect and has not been revoked.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seals of said Companies this 17th day of January, 20 14.

WARNING: THIS POWER OF ATTORNEY IS INVALID WITHOUT THE RED BORDER

  
Kevin E. Hughes, Assistant Secretary



To verify the authenticity of this Power of Attorney, call 1-800-421-3880 or contact us at [www.travelersbond.com](http://www.travelersbond.com). Please refer to the Attorney-In-Fact number, the above-named individuals and the details of the bond to which the power is attached.

**CORPORATE ACKNOWLEDGMENT**

Form 152

STATE OF NEW JERSEY

COUNTY OF BERGEN

On this 17th day of January, 2014, before me personally came Mary R. McKee to me known, who, being by me duly sworn, did depose and say that **she**/he resides in Saddle Brook, NJ that **she**/he is the Attorney In Fact of Zurich American Insurance Company the corporation described in and which executed the above instrument that **she**/he knows the seal of said corporation; that the seal affixed to said instrument is such corporate seal; that it was so affixed by order of the Board of Directors of said corporation, and that **she**/he signed her/his name thereto by like order.

(SEAL)

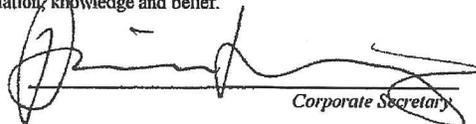


Esther Caban  
Notary Public of New Jersey  
My Commission Expires  
February 18, 2014

**ZURICH AMERICAN INSURANCE COMPANY**  
**COMPARATIVE BALANCE SHEET**  
**ONE LIBERTY PLAZA, 165 BROADWAY, 32nd FLOOR, NEW YORK, NY 10006**  
**As of December 31, 2012 and December 31, 2011**

	12/31/2012	12/31/2011
<b><u>Assets</u></b>		
Bonds	\$ 18,907,466,866	\$ 18,985,096,131
Preferred Stock	-	259,036
Common Stock	2,123,025,432	2,068,881,919
Other Invested Assets	2,035,077,824	2,065,634,039
Short-term Investments	126,053,209	107,298,374
Receivable for securities	134,410,839	18,523,294
Cash and cash equivalents	728,298,115	(128,716,627)
Securities lending reinvested collateral assets	225,335,750	120,821,061
Employee Trust for Deferred Compensation Plan	130,493,778	124,809,033
Total Cash and Invested Assets	\$ 24,410,161,814	\$ 23,362,606,260
Premiums Receivable	\$ 3,649,247,239	\$ 3,611,868,304
Funds Held with Reinsurers	3,681,443	28,073,922
Reinsurance Recoverable	215,451,507	233,357,918
Accrued Investment Income	121,729,727	149,372,442
Federal Income Tax Recoverable	930,267,731	788,664,462
Due from Affiliates	187,274,289	95,583,016
Other Assets	493,265,075	459,639,011
Total Assets	\$ 30,011,078,824	\$ 28,729,165,335
<b><u>Liabilities and Policyholders' Surplus</u></b>		
<b>Liabilities:</b>		
Loss and LAE Reserves	\$ 14,244,436,264	\$ 14,401,632,170
Unearned Premium Reserve	4,159,670,241	4,066,273,586
Funds Held with Reinsurers	212,412,675	218,214,563
Loss In Course of Payment	408,170,112	353,274,509
Commission Reserve	64,038,359	63,749,920
Federal Income Tax Payable	16,190,044	47,352,138
Remittances and Items Unallocated	196,410,982	69,677,903
Payable to parent, subs and affiliates	57,540,814	92,111,683
Provision for Reinsurance	66,649,220	60,498,188
Ceded Reinsurance Premiums Payable	551,510,878	278,235,370
Securities Lending Collateral Liability	225,335,750	120,821,061
Other Liabilities	2,166,453,164	1,938,544,837
Total Liabilities	\$ 22,368,818,502	\$ 21,710,385,928
<b>Policyholders' Surplus:</b>		
Common Capital Stock	\$ 5,000,000	\$ 5,000,000
Paid-In and Contributed Surplus	4,394,131,321	4,394,131,320
Surplus Notes	430,000,000	883,000,000
Special Surplus Funds	43,259,000	396,438,437
Cumulative Unrealized Gain	331,857,594	209,454,958
Unassigned Surplus	2,438,012,408	1,130,754,692
Total Policyholders' Surplus	\$ 7,642,260,323	\$ 7,018,779,407
Total Liabilities and Policyholders' Surplus	\$ 30,011,078,824	\$ 28,729,165,335

I, Dennis F. Kerrigan, Corporate Secretary of ZURICH AMERICAN INSURANCE COMPANY do hereby certify that the foregoing statement is a correct exhibit of the assets and liabilities of the said Company, on the 31st day of December, 2012, according to the best of my information, knowledge and belief.

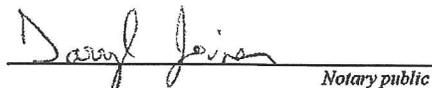
  
 \_\_\_\_\_  
 Corporate Secretary

State of Illinois  
 County of Cook

} SS:

Subscribed and sworn to, before me, a Notary Public of the State of Illinois, in the City of Schaumburg, this 15th day of March, 2013.



  
 \_\_\_\_\_  
 Notary public

**ZURICH AMERICAN INSURANCE COMPANY  
COLONIAL AMERICAN CASUALTY AND SURETY COMPANY  
FIDELITY AND DEPOSIT COMPANY OF MARYLAND  
POWER OF ATTORNEY**

KNOW ALL MEN BY THESE PRESENTS: That the ZURICH AMERICAN INSURANCE COMPANY, a corporation of the State of New York, the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, a corporation of the State of Maryland, and the FIDELITY AND DEPOSIT COMPANY OF MARYLAND a corporation of the State of Maryland (herein collectively called the "Companies"), by **JAMES M. CARROLL, Vice President**, in pursuance of authority granted by Article V, Section 8, of the By-Laws of said Companies, which are set forth on the reverse side hereof and are hereby certified to be in full force and effect on the date hereof, do hereby nominate, constitute, and appoint **Sandra K. WOLF, Alice MCLAUGHLIN, Mary R. MCKEE, Maria L. SPADACCINI and Sherryanne M. DEPIRRO, all of Woodcliff Lake, New Jersey, EACH** its true and lawful agent and Attorney-in-Fact, to make, execute, seal and deliver, for, and on its behalf as surety, and as its act and deed: **any and all bonds and undertakings**, and the execution of such bonds or undertakings in pursuance of these presents, shall be as binding upon said Companies, as fully and amply, to all intents and purposes, as if they had been duly executed and acknowledged by the regularly elected officers of the ZURICH AMERICAN INSURANCE COMPANY at its office in New York, New York., the regularly elected officers of the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY at its office in Owings Mills, Maryland., and the regularly elected officers of the FIDELITY AND DEPOSIT COMPANY OF MARYLAND at its office in Owings Mills, Maryland., in their own proper persons.

The said Vice President does hereby certify that the extract set forth on the reverse side hereof is a true copy of Article V, Section 8, of the By-Laws of said Companies, and is now in force.

IN WITNESS WHEREOF, the said Vice-President has hereunto subscribed his/her names and affixed the Corporate Seals of the said **ZURICH AMERICAN INSURANCE COMPANY, COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, and FIDELITY AND DEPOSIT COMPANY OF MARYLAND**, this 21st day of June, A.D. 2012.

**ATTEST:**

**ZURICH AMERICAN INSURANCE COMPANY  
COLONIAL AMERICAN CASUALTY AND SURETY COMPANY  
FIDELITY AND DEPOSIT COMPANY OF MARYLAND**



*Eric D. Barnes*

By: \_\_\_\_\_  
Assistant Secretary  
Eric D. Barnes

*James M. Carroll*

\_\_\_\_\_  
Vice President  
James M. Carroll

State of Maryland  
City of Baltimore

On this 21st day of June, A.D. 2012, before the subscriber, a Notary Public of the State of Maryland, duly commissioned and qualified, **JAMES M. CARROLL, Vice President, and ERIC D. BARNES, Assistant Secretary**, of the Companies, to me personally known to be the individuals and officers described in and who executed the preceding instrument, and acknowledged the execution of same, and being by me duly sworn, deposed and saith, that he/she is the said officer of the Company aforesaid, and that the seals affixed to the preceding instrument are the Corporate Seals of said Companies, and that the said Corporate Seals and the signature as such officer were duly affixed and subscribed to the said instrument by the authority and direction of the said Corporations.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my Official Seal the day and year first above written.

*Maria D. Adamski*

\_\_\_\_\_  
Maria D. Adamski, Notary Public  
My Commission Expires: July 8, 2015



**EXTRACT FROM BY-LAWS OF THE COMPANIES**

"Article V, Section 8, Attorneys-in-Fact. The Chief Executive Officer, the President, or any Executive Vice President or Vice President may, by written instrument under the attested corporate seal, appoint attorneys-in-fact with authority to execute bonds, policies, recognizances, stipulations, undertakings, or other like instruments on behalf of the Company, and may authorize any officer or any such attorney-in-fact to affix the corporate seal thereto; and may with or without cause modify or revoke any such appointment or authority at any time."

**CERTIFICATE**

I, the undersigned, Vice President of the ZURICH AMERICAN INSURANCE COMPANY, the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, and the FIDELITY AND DEPOSIT COMPANY OF MARYLAND, do hereby certify that the foregoing Power of Attorney is still in full force and effect on the date of this certificate; and I do further certify that Article V, Section 8, of the By-Laws of the Companies is still in force.

This Power of Attorney and Certificate may be signed by facsimile under and by authority of the following resolution of the Board of Directors of the ZURICH AMERICAN INSURANCE COMPANY at a meeting duly called and held on the 15th day of December 1998.

RESOLVED: "That the signature of the President or a Vice President and the attesting signature of a Secretary or an Assistant Secretary and the Seal of the Company may be affixed by facsimile on any Power of Attorney...Any such Power or any certificate thereof bearing such facsimile signature and seal shall be valid and binding on the Company."

This Power of Attorney and Certificate may be signed by facsimile under and by authority of the following resolution of the Board of Directors of the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY at a meeting duly called and held on the 5th day of May, 1994, and the following resolution of the Board of Directors of the FIDELITY AND DEPOSIT COMPANY OF MARYLAND at a meeting duly called and held on the 10th day of May, 1990.

RESOLVED: "That the facsimile or mechanically reproduced seal of the company and facsimile or mechanically reproduced signature of any Vice-President, Secretary, or Assistant Secretary of the Company, whether made heretofore or hereafter, wherever appearing upon a certified copy of any power of attorney issued by the Company, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

IN TESTIMONY WHEREOF, I have hereunto subscribed my name and affixed the corporate seals of the said Companies, this 17th day of January, 2014.



*Geoffrey Delisio*

Geoffrey Delisio, Vice President

**CORPORATE ACKNOWLEDGMENT**

Form 152

STATE OF NEW JERSEY

COUNTY OF BERGEN

On this 17th day of January, 2014, before me personally came  
Mary R. McKee to me known, who, being by me duly sworn, did depose and  
say that **she**/he resides in Saddle Brook, NJ that **she**/he is the Attorney In Fact of  
Federal Insurance Company the corporation described in and which executed the  
above instrument that **she**/he knows the seal of said corporation; that the seal affixed to  
said instrument is such corporate seal; that it was so affixed by order of the Board of  
Directors of said corporation, and that **she**/he signed her/his name thereto by like order.

(SEAL)



Esther Caban  
Notary Public of New Jersey  
My Commission Expires  
February 18, 2014

# FEDERAL INSURANCE COMPANY

## STATEMENT OF ASSETS, LIABILITIES AND SURPLUS TO POLICYHOLDERS

Statutory Basis

**DECEMBER 31, 2012**

(in thousands of dollars)

ASSETS	LIABILITIES AND SURPLUS TO POLICYHOLDERS
Cash and Short Term Investments..... \$ 402,323	Outstanding Losses and Loss Expenses..... \$ 12,627,388
United States Government, State and Municipal Bonds..... 9,901,519	Unearned Premiums..... 3,416,163
Other Bonds..... 4,595,536	Ceded Reinsurance Premiums Payable..... 364,197
Stocks..... 811,166	Provision for Reinsurance..... 62,250
Other Invested Assets..... 1,681,828	Other Liabilities..... 935,654
<b>TOTAL INVESTMENTS..... 17,392,372</b>	<b>TOTAL LIABILITIES..... 17,405,652</b>
Investments in Affiliates:	
Chubb Investment Holdings, Inc. .... 3,352,969	Capital Stock..... 20,980
Pacific Indemnity Company..... 2,496,198	Paid-In Surplus..... 3,106,809
Chubb Insurance Investment Holdings Ltd... 1,228,075	Unassigned Funds..... 10,713,227
Executive Risk Indemnity Inc..... 1,100,637	
CC Canada Holdings Ltd..... 758,892	
Chubb Insurance Company of Australia Limited 517,597	<b>SURPLUS TO POLICYHOLDERS..... 13,841,016</b>
Great Northern Insurance Company..... 438,592	
Chubb European Investment Holdings SLP .. 265,490	
Vigilant Insurance Company..... 246,766	
Other Affiliates..... 429,458	
Premiums Receivable..... 1,494,693	
Other Assets..... 1,524,929	
<b>TOTAL ADMITTED ASSETS..... \$ 31,246,668</b>	<b>TOTAL LIABILITIES AND SURPLUS TO POLICYHOLDERS..... \$ 31,246,668</b>

Investments are valued in accordance with requirements of the National Association of Insurance Commissioners.  
Investments with a carrying value of \$430,688,714 are deposited with government authorities as required by law.

State, County & City of New York, — ss:

Yvonne Baker, Assistant Secretary \_\_\_\_\_ of the Federal Insurance Company

being duly sworn, deposes and says that the foregoing Statement of Assets, Liabilities and Surplus to Policyholders of said Federal Insurance Company on December 31, 2012 is true and correct and is a true abstract of the Annual Statement of said Company as filed with the Secretary of the Treasury of the United States for the 12 months ending December 31, 2012.

Subscribed and sworn to before me  
this March 31, 2013.

  
\_\_\_\_\_  
Notary Public

DOROTHY M. BAKER  
Notary Public, State of New York  
No. 31-4904994  
Qualified in New York County  
Commission Expires Sept. 14, 2013

  
\_\_\_\_\_  
Assistant Secretary



**Chubb  
Surety**

**POWER  
OF  
ATTORNEY**

**Federal Insurance Company  
Vigilant Insurance Company  
Pacific Indemnity Company**

**Attn: Surety Department  
15 Mountain View Road  
Warren, NJ 07059**

**Know All by These Presents, That FEDERAL INSURANCE COMPANY, an Indiana corporation, VIGILANT INSURANCE COMPANY, a New York corporation, and PACIFIC INDEMNITY COMPANY, a Wisconsin corporation, do each hereby constitute and appoint Sherryanne M. DePirro, Mary R. McKee, Alice McLaughlin, Maria L. Spadaccini and Sandra K. Wolf of Woodcliff Lake, New Jersey**

each as their true and lawful Attorney- in- Fact to execute under such designation in their names and to affix their corporate seals to and deliver for and on their behalf as surety thereon or otherwise, bonds and undertakings and other writings obligatory in the nature thereof (other than bail bonds) given or executed in the course of business, and any instruments amending or altering the same, and consents to the modification or alteration of any instrument referred to in said bonds or obligations.

In Witness Whereof, said FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, and PACIFIC INDEMNITY COMPANY have each executed and attested these presents and affixed their corporate seals on this **25th** day of **January, 2013**.

Dawn M. Chloros, Assistant Secretary

David B. Norris, Jr., Vice President

STATE OF NEW JERSEY  
County of Somerset ss.

On this **25th** day of **January 25, 2013** before me, a Notary Public of New Jersey, personally came Dawn M. Chloros, to me known to be Assistant Secretary of FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, and PACIFIC INDEMNITY COMPANY, the companies which executed the foregoing Power of Attorney, and the said Dawn M. Chloros, being by me duly sworn, did depose and say that he is Assistant Secretary of FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, and PACIFIC INDEMNITY COMPANY and knows the corporate seals thereof, that the seals affixed to the foregoing Power of Attorney are such corporate seals and were thereto affixed by authority of the By- Laws of said Companies; and that he signed said Power of Attorney as Assistant Secretary of said Companies by like authority; and that he is acquainted with David B. Norris, Jr., and knows him to be Vice President of said Companies; and that the signature of David B. Norris, Jr., subscribed to said Power of Attorney is in the genuine handwriting of David B. Norris, Jr., and was thereto subscribed by authority of said By- Laws and in deponent's presence.

Notarial Seal



**KATHERINE J. ADELAAR  
NOTARY PUBLIC OF NEW JERSEY  
No. 2316685  
Commission Expires July 14, 2014**

Notary Public

**CERTIFICATION**

Extract from the By- Laws of FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, and PACIFIC INDEMNITY COMPANY:

"All powers of attorney for and on behalf of the Company may and shall be executed in the name and on behalf of the Company, either by the Chairman or the President or a Vice President or an Assistant Vice President, jointly with the Secretary or an Assistant Secretary, under their respective designations. The signature of such officers may be engraved, printed or lithographed. The signature of each of the following officers: Chairman, President, any Vice President, any Assistant Vice President, any Secretary, any Assistant Secretary and the seal of the Company may be affixed by facsimile to any power of attorney or to any certificate relating thereto appointing Assistant Secretaries or Attorneys- in- Fact for purposes only of executing and attesting bonds and undertakings and other writings obligatory in the nature thereof, and any such power of attorney or certificate bearing such facsimile signature or facsimile seal shall be valid and binding upon the Company and any such power so executed and certified by such facsimile signature and facsimile seal shall be valid and binding upon the Company with respect to any bond or undertaking to which it is attached."

I, Dawn M. Chloros, Assistant Secretary of FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, and PACIFIC INDEMNITY COMPANY (the "Companies") do hereby certify that

- (i) the foregoing extract of the By- Laws of the Companies is true and correct,
- (ii) the Companies are duly licensed and authorized to transact surety business in all 50 of the United States of America and the District of Columbia and are authorized by the U.S. Treasury Department; further, Federal and Vigilant are licensed in Puerto Rico and the U.S. Virgin Islands, and Federal is licensed in American Samoa, Guam, and each of the Provinces of Canada except Prince Edward Island; and
- (iii) the foregoing Power of Attorney is true, correct and in full force and effect.

Given under my hand and seals of said Companies at Warren, NJ this **17th** day of **January 2014**.



Dawn M. Chloros, Assistant Secretary

IN THE EVENT YOU WISH TO NOTIFY US OF A CLAIM, VERIFY THE AUTHENTICITY OF THIS BOND OR NOTIFY US OF ANY OTHER MATTER, PLEASE CONTACT US AT ADDRESS LISTED ABOVE, OR BY Telephone (908) 903- 3493 Fax (908) 903- 3656 e-mail: surety@chubb.com

**CORPORATE ACKNOWLEDGMENT**

Form 152

STATE OF NEW JERSEY

COUNTY OF BERGEN

On this 17th day of January, 2014, before me personally came Mary R. McKee to me known, who, being by me duly sworn, did depose and say that **she**/he resides in Saddle Brook, NJ that **she**/he is the Attorney In Fact of The Continental Insurance Company the corporation described in and which executed the above instrument that **she**/he knows the seal of said corporation; that the seal affixed to said instrument is such corporate seal; that it was so affixed by order of the Board of Directors of said corporation, and that **she**/he signed her/his name thereto by like order.

(SEAL)



Esther Caban  
Notary Public of New Jersey  
My Commission Expires  
February 18, 2014

**THE CONTINENTAL INSURANCE COMPANY**  
**Radnor, Pennsylvania**  
**Statement of Net Admitted Assets and Liabilities**  
**December 31, 2012**

ASSETS

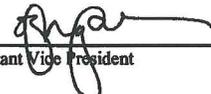
Bonds	\$ 1,918,305,261
Stocks	152,148,209
Cash and short-term investments	382,477,651
Uncollected premiums and agents' balances	52,728,223
Amounts recoverable from reinsurers	23,547,316
Funds held by or deposited with reinsured companies	2,365,261
Net deferred tax asset	81,173,005
Investment income due and accrued	23,894,634
Other assets	71,841,445
<b>Total Assets</b>	<b><u>\$ 2,708,481,005</u></b>

LIABILITIES AND SURPLUS

Losses	\$ 763,621,953
Loss adjustment expense	34,421,591
Contingent and other commissions payable	15,556,713
Other expense	7,514,186
Taxes, licenses and fees	44,994,884
Other liabilities	519,410,554
<b>Total Liabilities</b>	<b><u>1,385,519,881</u></b>
 Surplus Account:	
Capital paid up	53,566,360
Gross paid in and contributed surplus	1,423,436,994
Special Surplus	5,058,970
Unassigned funds	<u>(159,101,200)</u>
Surplus as regards policyholders	<u>\$ 1,322,961,124</u>
<b>Total Liabilities and Capital</b>	<b><u>\$ 2,708,481,005</u></b>

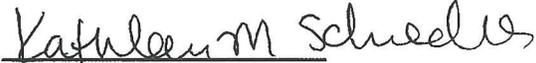
I, OJ B. Magana, Assistant Vice President of The Continental Insurance Company hereby certify that the above is an accurate representation of the financial statement of the Company dated December 31, 2012, as filed with the various Insurance Departments and is a true and correct statement of the condition of The Continental Insurance Company as of that date.

The Continental Insurance Company

By   
Assistant Vice President

Subscribed and sworn to me this 25th day of March, 2013.

My commission expires:

  
Notary Public



**POWER OF ATTORNEY APPOINTING INDIVIDUAL ATTORNEY-IN-FACT**

**Know All Men By These Presents**, That The Continental Insurance Company, a Pennsylvania insurance company, is a duly organized and existing insurance company having its principal office in the City of Chicago, and State of Illinois, and that it does by virtue of the signature and seal herein affixed hereby make, constitute and appoint

**Alice Mc Laughlin, Mary R Mc Kee, Maria L Spadaccini, Sherryanne M De Pirro, Nicholas F Walsh, Individually**

of Woodcliff Lake, NJ, its true and lawful Attorney(s)-in-Fact with full power and authority hereby conferred to sign, seal and execute for and on its behalf bonds, undertakings and other obligatory instruments of similar nature

**- In Unlimited Amounts -**

and to bind them thereby as fully and to the same extent as if such instruments were signed by a duly authorized officer of the insurance company and all the acts of said Attorney, pursuant to the authority hereby given is hereby ratified and confirmed.

This Power of Attorney is made and executed pursuant to and by authority of the By-Law and Resolutions, printed on the reverse hereof, duly adopted, as indicated, by the Board of Directors of the insurance company.

**In Witness Whereof**, The Continental Insurance Company has caused these presents to be signed by its Vice President and its corporate seal to be hereto affixed on this 28th day of October, 2013.

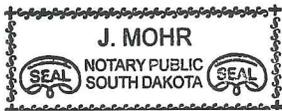


The Continental Insurance Company

Paul T. Bruflat  
Paul T. Bruflat Vice President

State of South Dakota, County of Minnehaha, ss:

On this 28th day of October, 2013, before me personally came Paul T. Bruflat to me known, who, being by me duly sworn, did depose and say: that he resides in the City of Sioux Falls, State of South Dakota; that he is a Vice President of The Continental Insurance Company, a Pennsylvania insurance company, described in and which executed the above instrument; that he knows the seal of said insurance company; that the seal affixed to the said instrument is such corporate seal; that it was so affixed pursuant to authority given by the Board of Directors of said insurance company and that he signed his name thereto pursuant to like authority, and acknowledges same to be the act and deed of said insurance company.



My Commission Expires June 23, 2015

J. Mohr  
J. Mohr Notary Public

**CERTIFICATE**

I, D. Bult, Assistant Secretary of The Continental Insurance Company, a Pennsylvania insurance company, do hereby certify that the Power of Attorney herein above set forth is still in force, and further certify that the By-Law and Resolution of the Board of Directors of the insurance company printed on the reverse hereof is still in force. In testimony whereof I have hereunto subscribed my name and affixed the seal of the said insurance company this 17th day of January, 2014.



The Continental Insurance Company

D. Bult  
D. Bult Assistant Secretary

## Authorizing Resolutions

ADOPTED BY THE BOARD OF DIRECTORS OF THE CONTINENTAL INSURANCE COMPANY:

This Power of Attorney is made and executed pursuant to and by authority of the following By-Law duly adopted by the Board of Directors of the Company at a meeting held on May 10, 1995.

“RESOLVED: That any Group Vice President may authorize an officer to sign specific documents, agreements and instruments on behalf of the Company provided that the name of such authorized officer and a description of the documents, agreements or instruments that such officer may sign will be provided in writing by the Group Vice President to the Secretary of the Company prior to such execution becoming effective.”

This Power of Attorney is signed by Paul T. Bruflat, Vice President, who has been authorized pursuant to the above resolution to execution power of attorneys on behalf of The Continental Insurance Company.

This Power of Attorney is signed and sealed by facsimile under and by the authority of the following Resolution adopted by the Board of Directors of the Company by unanimous written consent dated the 25<sup>th</sup> day of April, 2012:

“Whereas, the bylaws of the Company or specific resolution of the Board of Directors has authorized various officers (the “Authorized Officers”) to execute various policies, bonds, undertakings and other obligatory instruments of like nature; and

Whereas, from time to time, the signature of the Authorized Officers in addition to being provided in original, hard copy format, may be provided via facsimile or otherwise in an electronic format (collectively, “Electronic Signatures”); Now therefore be it resolved: that the Electronic Signature of any Authorized Officer shall be valid and binding on the Company.”

**CORPORATE ACKNOWLEDGMENT**

Form 152

STATE OF NEW JERSEY

COUNTY OF BERGEN

On this 17th day of January, 2014, before me personally came Mary R. McKee to me known, who, being by me duly sworn, did depose and say that **she**/he resides in Saddle Brook, NJ that **she**/he is the Attorney In Fact of XL Specialty Insurance Company the corporation described in and which executed the above instrument that **she**/he knows the seal of said corporation; that the seal affixed to said instrument is such corporate seal; that it was so affixed by order of the Board of Directors of said corporation, and that **she**/he signed her/his name thereto by like order.

(SEAL)



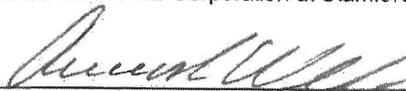
Esther Caban  
Notary Public of New Jersey  
My Commission Expires  
February 18, 2014

XL SPECIALTY INSURANCE COMPANY  
 STATUTORY STATEMENT OF ADMITTED ASSETS,  
 LIABILITIES, CAPITAL AND SURPLUS  
 December 31, 2012  
 (U.S. Dollars)

<b>Assets:</b>		<b>Liabilities:</b>	
Bonds	223,420,324	Loss & loss adjustment expenses	204,536,880
Stocks	68,982,279	Reinsurance payable on paid loss and loss adjustment expenses	1,627,985
Cash and short-term investments	62,647,461	Unearned premiums	37,359,450
Receivable for securities		Ceded reinsurance premium payable	
<b>Total Invested Assets</b>	<b>355,050,064</b>	Funds held by company under reinsurance treaties	
		Payable for Securities	
		Other Liabilities	28,511,133
		<b>Total Liabilities</b>	<b>272,035,448</b>
Agents Balances	29,008,573	<b>Capital and Surplus:</b>	
Funds held by or deposited with reinsured companies	39,015,242	Aggregate write-ins for special surplus funds	
Reinsurance recoverable on loss and loss adjustment expense payments		Common capital Stock	5,812,500
Accrued interest and dividends	1,331,044	Gross paid in and contributed surplus	127,387,019
Other admitted assets	16,298,134	Unassigned surplus	35,468,090
		<b>Total Capital and Surplus</b>	<b>168,667,609</b>
<b>Total Admitted Assets</b>	<b>440,703,057</b>	<b>Total Liabilities, Capital and Surplus</b>	<b>440,703,057</b>

I, Andrew Robert Will, Vice President and Controller of XL Specialty Insurance Company (the "Corporation") do hereby certify that to the best of my knowledge and belief, the foregoing is a full and true Statutory Statement of Admitted Assets, Liabilities, Capital and Surplus of the Corporation, as of December 31, 2012, prepared in conformity with the accounting practices prescribed or permitted by the Insurance Department of the State of Delaware. The foregoing statement should not be taken as a complete statement of financial condition of the Corporation. Such a statement is available upon request at the Corporation's principal office located at Seaview House, 70 Seaview Avenue, Stamford, CT 06902-06040.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of the Corporation at Stamford, Connecticut.

  
 \_\_\_\_\_  
 Vice President and Controller

State of Connecticut

County of Fairfield

The foregoing financial information was acknowledged before me this 11th of March, 2013 by Andrew Robert Will of XL Specialty Insurance Company on behalf of the corporation.



*Barbara Ann Lutz*

Notary Public



Power of Attorney  
 XL Specialty Insurance Company  
 Greenwich Insurance Company  
 XL Reinsurance America Inc.

THIS IS NOT A BOND NUMBER  
 UNLIMITED POWER OF ATTORNEY  
 XL1509545

KNOW ALL MEN BY THESE PRESENTS: That XL Specialty Insurance Company, Greenwich Insurance Company, Delaware insurance companies with offices located at 505 Eagleview Blvd., Exton, PA 19341, and XL Reinsurance America Inc., a New York insurance company with offices located at 70 Seaview Avenue, Stamford, CT 06902, do hereby nominate, constitute, and appoint:  
**Nicholas F. Walsh, Sherryanne M. DePirro, Maria L. Spadaccini, Alice McLaughlin, Mary R. McKee**

each its true and lawful Attorney(s)-in-fact to make, execute, attest, seal and deliver for and on its behalf, as surety, and as its act and deed, where required, any and all bonds and undertakings in the nature thereof, for the penal sum of no one of which is in any event to exceed UNLIMITED.

Such bonds and undertakings, when duly executed by the aforesaid Attorney (s) - in - Fact shall be binding upon each said Company as fully and to the same extent as if such bonds and undertakings were signed by the President and Secretary of the Company and sealed with its corporate seal.

The Power of Attorney is granted and is signed by facsimile under and by the authority of the following Resolutions adopted by the Board of Directors of each of the Companies on the 30th day of October 2013.

RESOLVED, that Gary Kaplan, David Hewett, William Mills, Gregory Boal and Kevin Mirsch are hereby appointed by the Board as authorized to make, execute, seal and deliver for and on behalf of the Company, any and all bonds, undertakings, contracts or obligations in surety or co-surety with others and that the Secretary or any Assistant Secretary of the Company be and that each of them hereby is authorized to attest the execution of any such bonds, undertakings, contracts or obligations in surety or co-surety and attach thereto the corporate seal of the Company.

RESOLVED, FURTHER, that Gary Kaplan, David Hewett, William Mills, Gregory Boal and Kevin Mirsch each is hereby authorized to execute powers of attorney qualifying the attorney named in the given power of attorney to execute, on behalf of the Company, bonds and undertakings in surety or co-surety with others, and that the Secretary or any Assistant Secretary of the Company be, and that each of them is hereby authorized to attest the execution of any such power of attorney, and to attach thereto the corporate seal of the Company.

RESOLVED, FURTHER, that the signature of such officers named in the preceding resolutions and the corporate seal of the Company may be affixed to such powers of attorney or to any certificate relating thereto by facsimile, and any such power of attorney or certificate bearing such facsimile signatures or facsimile seal shall be thereafter valid and binding upon the Company with respect to any bond, undertaking, contract or obligation in surety or co-surety with others to which it is attached.

IN WITNESS WHEREOF, the XL SPECIALTY INSURANCE COMPANY and GREENWICH INSURANCE COMPANY has caused its corporate seal to be hereunto affixed, and these presents to be signed by its duly authorized officers this October 30th, 2013.



**XL SPECIALTY INSURANCE COMPANY  
 GREENWICH INSURANCE COMPANY**

By: *David S. Hewett*  
 SENIOR VICE PRESIDENT

Attest: *Toni Ann Perkins*  
 SECRETARY

STATE OF CONNECTICUT  
 COUNTY OF FAIRFIELD

On this 30th day of October, 2013, before me personally came David S. Hewett to me known, who, being duly sworn, did depose and say: that he is Senior Vice President of XL SPECIALTY INSURANCE COMPANY and GREENWICH INSURANCE COMPANY, described in and which executed the above instrument; that he knows the seals of said Companies; that the seals affixed to the aforesaid instrument is such corporate seals and were affixed thereto by order and authority of the Boards of Directors of said Companies; and that he executed the said instrument by like order.



*Kim D. Sliva*  
 NOTARY PUBLIC

COUNTY OF FAIRFIELD

I, Toni Ann Perkins, Secretary of the XL SPECIALTY INSURANCE COMPANY and GREENWICH INSURANCE COMPANY a corporation of the State of Delaware, do hereby certify that the above and forgoing is a full, true and correct copy of Power of Attorney issued by said Company, and that I have compared same with the original and that it is a correct transcript there from and of the whole of the original and that the said Power of Attorney is still in full force

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of said Corporation, at the City of Hartford, this 17th day of January 2014.



*Toni Ann Perkins*

SECRETARY

IN WITNESS WHEREOF, XL REINSURANCE AMERICA INC. has caused its corporate seal to be hereunto affixed, and these presents to be signed by its duly authorized officers this 30th day of October, 2013.

**XL REINSURANCE AMERICA INC.**



by: *John P. Welch*  
SENIOR VICE PRESIDENT

Attest *Toni Ann Perkins*

SECRETARY

STATE OF CONNECTICUT  
COUNTY OF FAIRFIELD

On this 30th day of October, 2013, before me personally came John P. Welch to me known, who, being duly sworn, did depose and say: that he is President & CEO of XL REINSURANCE AMERICA INC., described in which executed the above instrument; that he knows the seal of said Corporation; that the seal affixed to the aforesaid instrument is such corporate seal and was affixed thereto by order and authority of the Board of Directors of said Corporation, and that he executed the said instrument by like order.



*Kim D. Sliva*

NOTARY PUBLIC

STATE OF CONNECTICUT  
COUNTY OF FAIRFIELD

I, Toni Ann Perkins, Assistant Secretary of the XL REINSURANCE AMERICA INC. a corporation of the State of New York, do hereby certify that the person who executed this Power of Attorney, with the rights, respectively of XL REINSURANCE AMERICA INC., the above and forgoing is a full, true and correct copy of a Power of Attorney issued by said Corporation, and that I have compared same with the original

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of said Corporation, at the City of Hartford, this \_\_\_ day of \_\_\_\_\_.



*Toni Ann Perkins*

SECRETARY

This Power of Attorney may not be used to execute any bond with an inception date after October 30, 2018  
SB0041

THIS DOCUMENT IS PRINTED ON A BLUE BACKGROUND

# Flatiron

# Insurability Letter



January 21, 2014

Ms. Denetia Floyd-Smith  
California Department of Transportation  
Division of Procurement and Contracts  
1727 30<sup>th</sup> St  
Sacramento, CA 95816-7006

Subject: Flatiron West, Inc.  
Statement of Insurability  
Request for Qualifications – State Route 140 Ferguson Slide Permanent  
Restoration project  
Contract Number: 10-0P9201

Dear Ms. Floyd-Smith:

As the insurance broker of record for Flatiron West, Inc., we have read the insurance requirements that have been set forth in the State Route 140 Ferguson Slide Permanent Restoration Request for Qualifications.

Please accept this letter as formal confirmation that Flatiron West, Inc. or any Prime Professional Subcontractor working on their behalf has the capacity to meet or exceed all of the owner's insurance requirements, including but not limited to Commercial General Liability, Errors and Omissions, Auto Liability, Workers' Compensation/Employers' Liability, Pollution Liability, and Professional Liability and defined in the RFQ **Financial Capacity Section 3.3.B**, with major insurance markets rated by AM Best Rating Service as A VIII or better and limited only by commercial availability.

Very truly yours,

A handwritten signature in black ink, appearing to read 'William C. Daniel', is written over a horizontal line.

William C. Daniel, P.E.  
Director  
Turner Surety and Insurance Broker, Inc.

# Drill Tech

## Insurability Letter



**INTERWEST**  
INSURANCE SERVICES, INC.

*Offices throughout California*

January 13, 2014

CalTrans  
c/o Drill Tech Drilling and Shoring Inc.

RE: State Route 140 Ferguson Slide Permanent Restoration Project  
Contract No 10-0P9201  
Project ID 1000000198  
MPA-140 PM 38.0-43.0

To Whom it May Concern:

Drill Tech Drilling and Shoring Inc. is capable of obtaining the following types of insurance per the limits required by the Pre-Construction Services Contract:

- Commercial General Liability
- Auto Liability
- Workers Compensation/Employers Liability
- Pollution Liability
- Excess Liability

If you have any questions or concerns feel free to contact me directly at [dtuck@iwins.com](mailto:dtuck@iwins.com) or 916-609-8376.

Sincerely,

Denise Tuck  
Account Manager

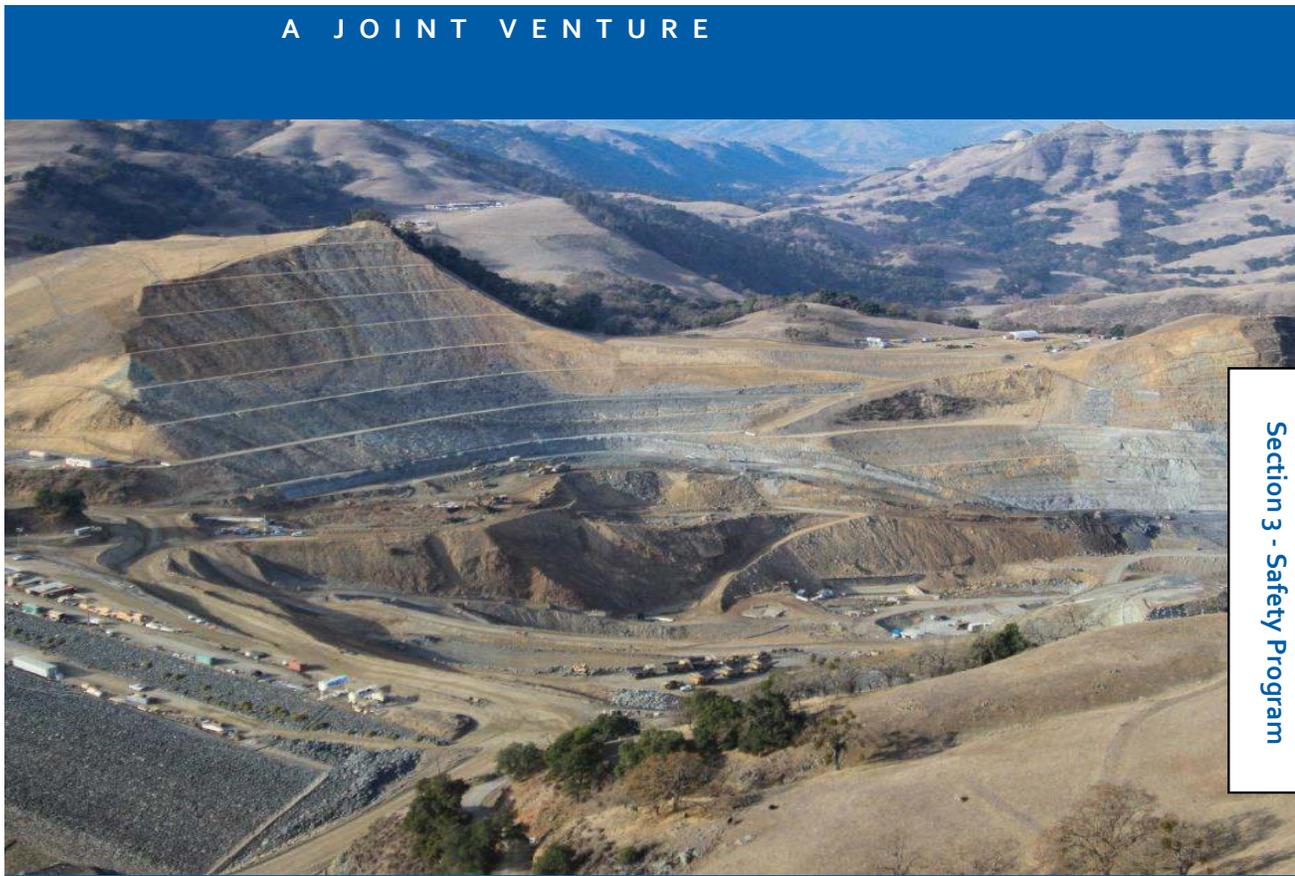
*Let Our experience guide you.*

*www.iwins.com  
P.O. Box 255188  
Sacramento, CA 95865-5188  
Phone: 916-488-3100  
Fax:  
California License #0B01094*

# Section 3 Safety Program



A JOINT VENTURE



Section 3 - Safety Program

Calaveras Dam Replacement Project.  
Overview of extensive slope cuts.

## Achievements in Project Safety

Safety is Flatiron/Drill Tech Joint Venture’s top priority on all of its projects and the number one company core value. We promote safe work practices daily and include safety as a topic in all meeting agendas. Our commitment to safety is demonstrated in Flatiron’s numerous safety awards and **Flatiron’s recent achievement** of over **three million man-hours without a lost-time incident** on our Exposition Light Rail Transit Design-Build Project in downtown Los Angeles, California. In 2012, Flatiron completed almost two million man-hours without a lost-time incident. For this project, the Flatiron/Drill Tech JV Team will implement and comply with Flatiron’s Safety and Health Program to extend and promote our safety culture to our partners and subcontractors.

## Flatiron Safety Record for the Most Recent Three-Year Period

	2010	2011	2012
Man-Hours	2,375,364	2,492,495	1,967,333
Experience Modification Rate (EMR)	0.86	0.69	0.61
Total Recordable Injury/Illness Rate	2.10	1.44	1.42
Lost Work Incident Rate	0.17	0.08	0.00

Neither Flatiron nor Drill Tech is party to Alternative Dispute Resolution, Labor Code §3201.5, as it is not part of our contract with the unions. However, Flatiron seeks to resolve any dispute at the lowest level, using all information and formal options available prior to pursuing legal recourse.

## Drill Tech Safety Record for the Most Recent Three-Year Period

	2011	2012	2013
Man-Hours	397,041	424,616	503,000
Experience Modification Rate (EMR)	0.86	0.80	0.64
Total Recordable Injury/Illness Rate	2.01	1.88	1.59
Lost Work Incident Rate	0.00	1.41	1.19

## Flatiron Worker’s Compensation History (Most Recent 5 Years)

	2008	2009	2010	2011	2012
Man Hours	1,910,753	2,168,728	2,375,364	2,492,495	1,967,333
Recordable Incidents	22	30	21	18	14
Recordable Incident Rate	2.30	2.77	1.90	1.44	1.42
Lost Time Incidents	7	0	1	1	0
Lost Time Incident Rate	0.73	0	0.09	0.08	0
Fatalities	0	0	0	0	0
EMR (CA)	0.67	0.77	0.86	0.69	0.61

## Drill Tech's Worker's Compensation History (Most Recent 5 Years)

	2009	2010	2011	2012	2013
Man Hours	364,683	377,502	397,041	424,616	503,000
Recordable Incidents	6	2	4	4	4
Recordable Incident Rate	3.29	1.06	2.01	1.88	1.59
Lost Time Incidents	2	1	0	3	3
Lost Time Incident Rate	1.10	0.52	0.00	1.41	1.19
Fatalities	0	0	0	0	0
EMR (CA)	0.81	0.85	0.86	0.80	0.64

## Cal-OSHA/FOSHA Citations & Assessed Penalties – Past Five Years/Flatiron

**8/12/2010: Taxilane S at LAX in Los Angeles, CA.** An operator on a backhoe was directed by a third party to dig over an electrical line that was identified. The line was struck with no injury. The citation was disputed and is currently open due to legal proceedings.

**12/29/2010: Lincoln Bypass Project and Old Yankee Bridge, Lincoln, CA.** Lincoln Bypass Bridge Project was performing demolition and vertical slab was pushed in one direction by a forklift. The tip of the slab landed on employee's toes which were partially amputated. Serious citation was paid for insufficient toe protection in the amount of \$3,375.

**4/23/2013: Route 60 in the City of Industry.** Employee received burns from hot water being used at a concrete batch plant. Serious citation. Inspection #316346758. Penalty of \$18,000.

In 2012, Flatiron  
accrued almost two  
million  
man-hours worked  
without lost time.

## Cal-OSHA Citations & Assessed Penalties – Past Five Years/Drill Tech

**6/25/2013: DTDS Yard.** EE fell from equipment. Citation #31445335/1 Serious and 1 Regulatory Violation in the amount of \$23,000. Case is on appeal.

**12/06/2012: Sari Main Line.** Falling casing on EE who did not follow established work procedures. Citation #316589654/1 Serious and 1 General violation in the amount of \$18,185. Case is on appeal.

**6/26/2012: Jim Dobbas Feather River Canyon/UPRR.** Molly Hogan splice of winch cable. Citation #314449992/1 General violation in the amount of \$225. Final decision was one notice in lieu of citation (\$0).

**7/19/2011: PCL, UCLA.** Flybelt guard on scooptrain. Citation #315166363/1 Serious violation in the amount of \$3,375. Final Decision was one general violation in the amount of \$560.

**5/3/2011: CC Myers at Spanish Creek Bridge.** Guard on skyjack manlift. Citation #119918522/1 Serious and 2 General violations in the amount of \$23,905. Final decision was 3 General in the amount of \$4,950.

**3/29/2011: Terminal Hill, Los Angeles DPW.** Skip loader back-up alarm not working. Citation #314909235/1 General violation in the amount of \$135.00. Final decision was citation was withdrawn (\$0.00).

**7/15/2010: Tutor Saliba Caldecott Tunnel at Highway 24.** Nylon sling left in sun. Citation #314443490/1 General violation in the amount of \$900.

**5/13/2010: Tutor Saliba Caldecott Tunnel at Highway 24.** Rebar pile in work area – trip hazard. Citation #311730022/1 Repeat General and 2 General violations in the amount of \$6,695. Final decision was 1 Repeat violation (\$450) with 2 General violations withdrawn.

**12/01/2009: Cal Park Tunnel.** EE not secured to boom basket or tub while in aerial device. Citation #311728752/1 Other violation in the amount of \$365. Final decision was 1 Other violation in the amount of \$225.

**4/09/2009: Cal Park Tunnel.** Scaffold of stacked pallets supported by rocks. No safe access to scaffold platform. Two installed grouted rock bolts did not have protective caps, covers or equivalent. Citation #311726400/2 Other violations in the amount of \$610. Final decision was 2 Other violations at \$245.

### Summary of Worker Safety Program

The Flatiron/Drill Tech JV Team is committed to the preservation and quality of life for all employees, clients, stakeholders, and the general public. Worker safety is a priority throughout all phases of any project. Flatiron brings one of the industry's best records for safety and a reputation for conscientious compliance with OSHA, Federal, State and Local Codes and regulations. Flatiron has over 400 employees that are OSHA-qualified competent person trained. The competent person qualifications include asbestos training, trench and excavation, scaffolding, crane rigging, and confined space, to name a few.

### Safety Program Overview

The elements that set us apart from the competition when it comes to safety are the same forces that drive our reputation to the top in quality, production, and innovation. We hire world-class people, train and empower the workforce, develop genuine leaders, set high expectations, then measure and duplicate positive results.

In March of 2010, Flatiron's safety program was awarded second place for "Excellence in Heavy Highway Construction" a prestigious award granted by the Associated General Contractors (AGC) of America and Willis Insurance Company. The program includes the implementation of daily stretching, 100% personal protective equipment (PPE) including glove use, and many other preventative-minded policies.



### Orientation

Flatiron/Drill Tech JV will implement the three-part orientation in which superintendents work jointly with safety representatives to conduct Level II training (30-to-60 days after the first orientation), formal rigging qualification responsibilities, and other competent trainings as applicable to the specific job duties will be implemented from the Flatiron Safety Program to the entire Flatiron/Drill Tech JV Team.

The project managers or senior superintendents conduct the Level III sessions (60-to-90 days after Level II). Included in the final orientation session are standard open-ended questions and open dialog with the recent hires that are designed to capture safety culture perception data for the project manager's use. Information is captured in a written report and used to improve or monitor culture efforts of change in guiding future safety program efforts.

### Safety Training

Flatiron's current safety training standards exceed OSHA in every category. In addition to training mandated by regulatory agencies, safety leadership and informational safety meetings are a mandatory part of every employee's work experience. Flatiron's training will extend to the Flatiron/Drill Tech JV Team members and employees.

One hundred percent of the region's company executives, department managers, project managers and superintendents have demonstrated safety competence and commitment by studying for and passing the national Safety Trained Supervisor (STS) exam for supervisors in construction (accredited by CCHES). Requiring the STS certification for all employees, superintendent level and above, has had a major impact on the confidence of the field management.

## Section 3. Safety Program



Every project conducts a “mass meeting” the first Monday of the month before shift to discuss the week ahead. It is mandatory for ALL employees and managers to attend, and subcontractors are strongly encouraged to attend. All employees are encouraged to participate and help prepare the meetings (see *Safety Rewards* incentive program that follows). Recent topics included: crane safety; trench and excavations; ladder safety and working surfaces; HazComm; PPE; heat stress; traffic safety; fall protection; rigging; material handling and lifting; and small tool and electrical safety.

In addition to “as needed” project specific training, foremen are trained to meet company “core training” competency standards.

Flatiron/Drill Tech JV will hold monthly foremen meetings to cover the “theme topics” in greater detail each month to ensure refresher information is provided on a regular basis. On-line safety courses are also offered to all craft and salaried workers and participation is rewarded.

### Safety Rewards

Safety rewards that are available to be earned by everyone in the region, from apprentice to Regional President, for activities that go beyond the safety responsibilities are outlined in the Flatiron Safety Manual.

Processes have been put in place to track safety performance and data for individuals and rewards can be obtained via the company website for the following behaviors:

**LEARN.** Complete an online safety course (access paid for and provided by corporate office) – Pass the STS for additional incentives.

**LEADERSHIP.** Lead the Monday mass meeting or elaborate on a “Flash Alert” set out by the corporate office. Foreman receives additional incentives that vary depending on crew size and job risk/hazards.

**INNOVATE.** Come up with a new safety idea, process, or participate in a safety committee meeting.

**BE PROACTIVE.** Report a near hit incident (not a safety violation) that can be shared throughout the company in a “Flash Alert”.

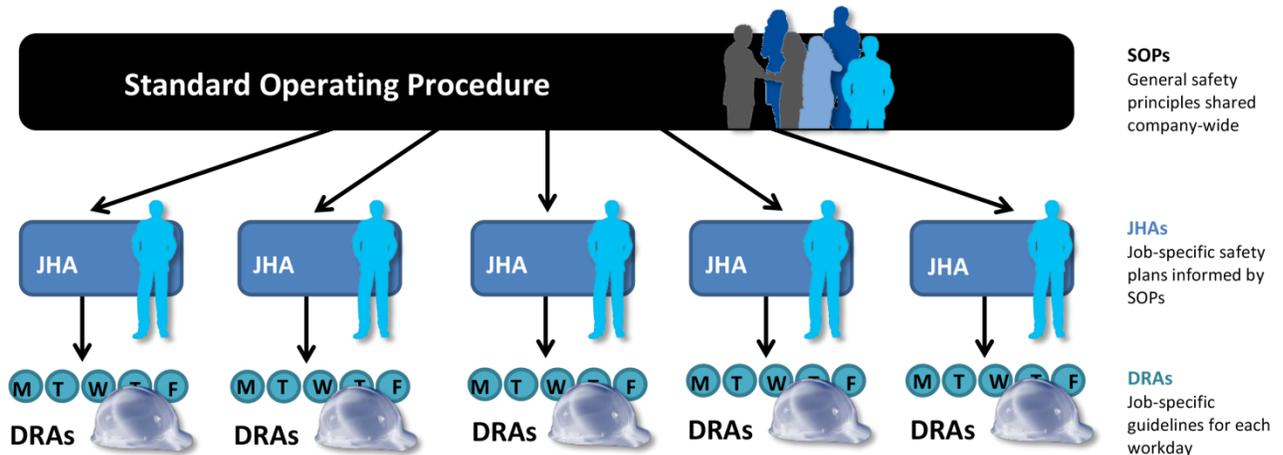
**TEAM PLAYERS.** Everyone on the western region team gets a safety award after being part of the team for 200 hours and completing the orientation process.

### Inspections & Communications

**Monthly & Weekly Project Audits.** The CEO, regional presidents, district managers, operations/area managers, project managers, safety representatives, superintendents, foremen, and engineers each have project audit requirements on a monthly and/or a weekly basis. Formal reports of corrective action are kept at the job site and district office and accountability is tracked and reviewed by the firm’s Presidents and District Managers.

**Job Hazard Analysis (JHA).** Superintendents are responsible for creating Job Hazard Analysis (JHA) work sheets specific to the project during the planning phase of work. The JHA outlines common operations, breaks down the tasks associated with the operation, hazards of each task, and describes safety controls that to be implemented. The JHA’s are reviewed with foremen performing the operation and updated as conditions change.

**Daily Risk Assessment (DRA).** Each foreman shares the project specific JHA information with his crew and expands on the analysis by discussing and documenting additional risks present in the environment specific to the day’s work.



### Standard Operating Procedures

**Written by:**  
A committee through the corporate Safety Department.

**What are they?**  
A shared and continually updated database of general best practices for operations Flatiron does regularly.

**Who uses them?**  
Project Managers and Superintendents on jobsites use these to guide their jobsite-specific JHAs.

### Job Hazard Analyses

**Written by:**  
Managers and Superintendents.

**What are they?**  
Job-specific safety plans based on the SOPs and customized for the specific jobsite, including changes based on equipment availability, jobsite conditions, etc.

**Who uses them?**  
Superintendents, Project Managers, and Foremen use these for their project-specific safety plan.

### Daily Risk Assessments

**Written by:**  
Foremen.

**What are they?**  
Specific safety guidelines for a specific job on a specific day, based on the job-specific hazard analyses. These are “drilled-down” safety protocols that are time- and site-specific and take into consideration elements on a job that can change quickly, like weather or subcontractors working in the area for the day.

**Who uses them?**  
Each craft worker on the job.

For example, building or digging for a footing would require review of a “footing JHA” in addition to addressing facts such as working next to ironworkers or working in frost or heat. The foreman’s ability to communicate the hazards is closely monitored by the superintendents by attending foremen’s tailgates, checking DRAs while work is being performed, and spending time “coaching” to ensure the safety message is being followed through by every front-line worker.

**“Don’t Walk By” Program.** Employees are encouraged to take responsibility for their own safety and the safety of their fellow workers, the public, and all elements of the worksite by not walking past any unsafe practices, instead bringing them to the attention of their supervisor. This program will also be implemented on the SR 140 project by the Flatiron/Drill Tech JV to establish and promote a safe work area and environment for our new team members and their employees.

Every worker is committed to the daily stretch and flex program, which has virtually eliminated the numerous soft tissue injuries many in the industry accept as being part of doing business. Enforcement of the program is no longer needed as the workforce started to pressure subcontractors to participate during the morning meetings.

### Reporting

All incidents, including “near hits,” are to be reported through the district within 24 hours. Timely reporting of all incidents is valued and, in the case of near hits, rewarded.

### Field Input & Communications Loop

Safety culture perception surveys continue to guide safety activities and open communication at the field level. The momentum of collaborative effort and input continues through monthly safety committees.

Joint field safety committees include specific project field management and a variety of crafts. The group sends their field observations and notes to district-level senior safety committee meetings that are attended by decision makers for consideration, action or discussion. Notes are then shared throughout the region. Issues that cannot be solved at the regional level are brought to the Executive Safety Committee (ESC).

The top level meeting is attended by permanent and rotating members from the field and district levels. Permanent members include: Regional Presidents and the Corporate Safety Director. A variety of employees, such as superintendents, safety managers, and project managers will rotate through the group every six months. The notes from the ESC are distributed throughout the company.

### Safety Reviews During Design

On all of our design-build and CMGC projects, Flatiron Safety and Construction staff address critical safety issues with the Designer during the Design Phase, prior to start of construction activities. The designs undergo a rigorous safety review that involves anything from a complete risk and availability analysis of a complex system to a simple check for adequate handholds or convenient access.

### Safety of General Public

Flatiron/Drill Tech is committed to minimizing the impact to the traveling public and the commuter/pedestrian traffic near the work zone, and maintaining a secure work area. Features of our approach include:

- Utilizing traffic control crews trained/certified in the *Manual on Uniform Traffic Control Devices* (MUTCD).
- Restricting unauthorized personnel from entering into a construction area.
- Using concrete barriers and fencing to separate the work zones from the public.

### Flatiron’s Safety Awards

- **2013 AGC of California First Place for Heavy/Civil/Highway Division over 1 Million Worker Hours**
- **2012 AGC of California First Place for Safety on a High Hazard Project** for the Point Bonita Lighthouse project
- **2011 First Place Safety Award from United Contractors**
- **2011 AGC of California Individual Safety Effort of a Superintendent/First Place** for Flatiron Superintendent Dan Sherlock
- **2010 Liberty Mutual Gold Award for the SR65/Lincoln Bypass Project [Caltrans]**
- **2010 AGC of America & Willis Insurance Company, Second Place for the Prestigious “Excellence in Heavy Highway Construction”** for Flatiron’s Safety Program
- **AGC of America National Construction Safety Excellence Award - Highway Category (700,001 to 1 million man-hours)**
- **Colorado Contractors Association Safety Award - 160,000 to 480,000 hours worked with zero incidents for all Colorado Projects during 2006**
- **AGC National Safety Award - Highway Division over 1 million hours worked, 2005**
- **AGC Safety Excellence on a High Hazard Job** for the Carquinez Suspension Bridge project, 2003
- **AGC Safety Excellence on a High Hazard Job** for the Carquinez Suspension Bridge project, 2000
- **AGC Certificate of Commendation for Safety** on the Eastern Transportation Corridor project, 1998

## Section 3. Safety Program



- Maintaining clearly identified access ways through the work area.
- Displaying signage (including variable message signs) to warn the traveling public and pedestrians of the work zones and hazards.
- Controlling points of access to the jobsite through barricades, signs, and delineations.
- Establishing designated travel routes for the vendors.
- Maintaining site security for all work areas.
- Enforcing visitor check-in points and orientations.

### Subcontractors

All subcontractors/vendors with personnel on-site will be required to comply with Flatiron's Safety and Health Program. Prior to starting any work, each subcontractor will meet with Flatiron/Drill Tech JV's staff for a safety briefing. Subcontractors will also participate in toolbox and general project safety meetings. All subcontracted work will be audited by our management as part of the regular safety site inspections.

*"The people they put on the projects are real professionals. They know what they're doing, both in the office and in the field. They're collaborative. They're quality-oriented. It all comes down to the people."*

~Mike Edwards, San Marcos City Engineer

*"Not only did you protect both your employees and the general public, you accomplished this in adverse conditions, which included a narrow work zone and inclement weather, in a high-volume traffic and pedestrian area."*

Quote from the Utah Transit Authority (UTA) letter recognizing Flatiron's outstanding safety and health efforts on the Medical Center LRT Design-Build project.



# Section 4 Firm Experience & Past Performance



A JOINT VENTURE



I-405 Sepulveda Pass Project for Caltrans [2009-2013]  
\$41 M DTDS contract included 500,000-sf of sculpted soil nail walls; 100,000-sf of permanent soldier pile and tieback walls; 20,000-sf of temporary soldier pile and tieback retaining walls; and 45,000-sf of temporary soil nail shoring.

## Section 4. Firm Experience & Past Performance



### 4. Flatiron & Drill Tech Team

Flatiron and Drill Tech formed this team for this project to combine our complementary skills and assets. This team has extensive experience with all the elements in this project including a great safety record, alternative contract delivery experience, Caltrans project construction, remote project location, hard rock drilling, tie back, soil nail, CIDH, special shoring, talus removal, slide mass stabilization, hard rock excavation, reinforced concrete box structures and roadway construction, and recognition and adherence to environmental conditions.

**Flatiron and Drill Tech have a long resume of delivering projects with these elements, having worked together on 24 previous projects.** Our proposed team of key personnel has a combined total of over 163 years of construction experience in California and has worked on projects which have similar attributes to the **State Route 140 Ferguson Slide Project.**

#### Flatiron's Capability & Capacity

Flatiron West, Inc. is a subsidiary of Flatiron Construction Corporation -- a leading transportation and civil infrastructure contractor performing in excess of \$1 billion of work in North America. Flatiron develops innovative solutions for building roads, bridges, tunnels, and rail transit projects for both public and private clients. Flatiron employs more than 1,100 people in California and 2,500 in North America.

Flatiron has constructed projects for Caltrans and other agencies throughout California since 1994. We are fully supported by our parent company in all aspects of our work.

In addition to constructing projects under the Bid-Build contracting method, Flatiron also performs as a Design-Build contractor in Design-Build and public-private partnership projects. Flatiron and its parent have completed 19 Design-Build projects with nine currently under construction, a CM/GC contract, and a Construction Management at Risk (CMAR) contract, some of which are highlighted in the *Firm Experience and Past Performance* portion of this section.

Our extensive experience with owners, designers, and third party stakeholders will assist us in quickly integrating with Caltrans on this CM/GC project. We will utilize lessons learned on these projects for both the pre-construction and construction phases of work on the State Route 140 Ferguson Slide Project.

The safety of our clients, employees, subcontractors and the public is our number one core value. Our award-winning safety program is consistently recognized as one of the best construction safety programs in the industry. Flatiron is OHSAS 18001-certified, the international gold standard for best-practice safety management systems. This kind of safety excellence means lower risk for our clients, with the added assurance that comes from knowing we are protecting the safety of everyone involved. **The Associated General Contractors of America has recognized Flatiron numerous times with their top safety excellence awards, most recently with a 2012 First Place AGC Safety Excellence Award. Flatiron worked more than four million man-hours throughout the US and Canada in 2012 without a lost-time safety incident.**

Project Name, Location	Contract Size	Alternative Contract Delivery*	Innovative structure and wall design	Worked together	Remote Locations; limited staging areas	Extreme Heat, Humidity Stale Weather	Integrated Construction Traffic Handling Plans	Strict Environmental & Permit Compliance	Hard Rock Drilling or Excavation	Slide/Slope Stabilization	Talus Excavation	Reinforced Concrete Box Structures	On Site Batch Plant
Big Bear Bridge, Big Bear, CA	\$34M	BB	X	X	X	X	X	X	X	X	X	X	
Lenihan Dam, Los Gatos, CA	\$38 M	BB	X	X	X	X	X	X	X	X	X	X	X
I-80 Carquinez Bridge, Crockett, CA	\$241M	BB	X	X			X	X	X	X		X	
Eastern Transportation Corridor, Orange County	\$803M	DB	X		X		X	X	X	X		X	
I-15 Managed Lanes, San Diego, CA	\$80M	DS	X	X			X	X	X			X	X
Point Bonita Lighthouse CMGC, Marin, CA	\$1.8M	CMGC	X		X			X	X	X	X		
Calaveras Dam, Alameda County, CA	\$417M	BB	X	X	X	X		X	X	X	X	X	X
Presidio Parkway Project [P3], San Francisco	\$ 272M	P3	X	X			X	X	X	X	X	X	X
I-880-Coleman Avenue, San Jose, CA	\$29M	BB	X	X	X	X	X	X	X			X	
SR-1 Devil's Slide, Pacifica, CA	\$8M	BB	X		X			X	X	X	X		
SR-140 El Portal Road, Yosemite National Park	\$2M	BB			X	X		X	X	X	X		
BNSF Cajon Pass, Devore, CA	\$12M	BB	X		X	X		X	X	X	X		
Terminal Hill Tunnel, Sylmar, CA	\$15M	BB	X	X	X	X		X	X	X		X	X
I-405 Sepulveda Pass, Los Angeles, CA	\$41M	DB	X				X	X	X	X	X		X
Oakland Airport Connector, Oakland, CA	\$380M	DB	X			X	X	X				X	
Smith River, Humboldt County, CA	\$10M	CMGC	X		X		X	X	X				
I-70 Eagle Interchange, Eagle, CO	\$12M	CMGC						X	X				

\* BB = Bid-Build; DB = Design Build; DS = Design Sequencing; P3 = Public Private Partnership

Flatiron's core strength is our ability to price and self-perform a large portion of work, which provides optimal control of safety, cost, schedule, and quality. Additionally, our in-house engineers work closely with clients and field teams to create safe, cost effective solutions with minimal environmental impact.

Flatiron has completed \$3.7 billion worth of projects in California and is currently working on the Presidio Parkway P3 Project and Calaveras Dam Replacement Project in Northern California both of which include reinforced concrete box structures and major slope excavation within environmentally sensitive areas. The Calaveras Dam project has 2 million cy of fractured rock slope excavation with 30,000-lf rock bolts, 47,000-sf of rock fall netting and anchors and 9,000-sf of shoring wall support system, all while working around one of the major sources of drinking water for San Francisco. The Presidio Parkway Project has three reinforced concrete "cut and cover" tunnels within the Presidio National Park. Teamed with Drill Tech's slope stabilization and shoring expertise, these projects show our team's current ability to perform the major elements of this project. Flatiron's team of qualified experts has a thorough understanding of the requirements involved when working to safely excavate talus slopes and construct concrete structures in environmentally sensitive areas and to provide high quality, safe solutions. We are familiar with both Caltrans' project specifications and the project area in general.



Ed Hammontree, P.E., Project Management Branch Chief, Federal Highway Administration (FHWA) Central Federal Lands Highway Division, acknowledges that:

"...through the process of CM/GC contracting, Flatiron, Golden Gate National Recreation Area and the Central Federal Land Highway Division of the FHWA were able to collaborate and craft technical and contractual strategies to meet the unique and challenging aspects of this award-winning project at an iconic location."

Flatiron commits the proposed team for this project from the date of selection notice through completion of the Construction Phase. Our organizational chart in *Section 5* shows lines of direct reporting with listed key roles for Pre-construction and Construction. The involvement of the same personnel for both design and construction phases provides continuity for the project and a seamless transition from design into construction.

Flatiron self-performs much of the essential work required for this project. These operations include talus slope excavation, reinforced concrete box structures and other roadway construction. We have experience soliciting and managing subcontractors throughout the construction of projects.

The reference projects provided in this proposal illustrate our capability to perform the scope of work for this project to the satisfaction of Caltrans.

### Drill Tech Drilling & Shoring, Inc.'s Capability & Capacity

The work anticipated at the SR140 Ferguson Slide includes a large quantity of Caltrans designed drilled shafts and tiebacks to which Drill Tech can bring unsurpassed experience and equipment. The key to the project will be the approach and engineering for the grading, rock fall protection, and temporary shoring required to install the rock shed.

Drill Tech was founded in California in 1994 as a drilling company specializing in soil nails and tiebacks. Over the years, Drill Tech has grown into a national leader in specialty geotechnical contracting with offices in Antioch, CA, Corona, CA and Dallas, TX. Work capabilities have expanded to include all manner of ground improvement (soil mixing, stone columns, jet grouting, etc.), drilled shafts, tunneling, shaft sinking and blasting. While the majority of Drill Tech's work has been in California, recent and ongoing projects also include work in Nevada, Oregon, Washington, Idaho, Montana, Colorado, Wyoming, Virginia, West Virginia, Texas, Oklahoma and New York. In 2013, Drill Tech's total volume of construction work was \$85M.

Drill Tech's company's core competency remains soil nails, tiebacks and drilled shafts, especially in high reach applications and in rock. The two things that really differentiate Drill Tech from other drilling companies are our custom built (by Drill Tech) high reach soil nail/tieback drill rigs and our staff of registered professional engineers who perform the vast majority of all of our shoring designs. Drill Tech engineers have designed thousands of soil nail and tieback walls, including many dozens required for landslide and rockslide retention. This insight will be available to Caltrans during the CM/GC process as well as the actual construction.

Drill Tech has installed soil nails, tiebacks and drilled shafts on over 1000 projects. Included in this work are 128 completed projects for Caltrans in the last 15 years. Notable steep hillside work includes the Highway 17 and Devil's Slide retaining walls as well as the Highway 92 retaining walls that, more than a dozen years after their construction, remain on the cover of the Caltrans soil nail design program.

Drill Tech has a history of providing Caltrans outstanding projects in difficult terrain. Two examples:

- In the spring of 2000, Highway 18 to the town of Big Bear was closed by a rock slide. At the emergency request of Caltrans, Drill Tech developed, submitted and had approved a soil nail landslide retention retaining wall within two days. The next day, a custom built high reach drill rig was onsite. Working 24-hours a day and two months later, the highway was open before the Memorial Day weekend.
- During the extremely wet spring of 2006, landslides closed Hwy 80 in Richmond and Hwy 1 at Devil's Slide. In both cases, Caltrans contacted Drill Tech. Equipment and engineering support was onsite within a day, working around the clock to re-open these highways with drilled shaft or tieback support.

Drill Tech has also become the preferred contractor for many other agencies that require innovative solutions to difficult projects in difficult environments and conditions. Drill Tech specializes in projects with difficult access, hard rock or high reach work. Examples include the following:

- Drill Tech has performed rock drilling work suspended by cranes over the edges of cliffs on the Pacific Ocean and over multiple dams.
- Drill Tech has performed rock drilling and slide repair work for the Union Pacific Railroad all over the west coast, from northern Idaho to the Sierras to the Moffat Tunnel in Colorado.
- Drill Tech has performed a significant amount of work in the Sierras, working for the FHWA on Highway 140 in Yosemite, the SFPUC at the Hetch Hechy Reservoir in Yosemite and the Helms Powerhouse for PG&E.



- Drill Tech has successfully drilled shafts up to 9 feet in diameter through solid granite using our large Bauer drills.
- Drill Tech has drilled and installed tiebacks over 250 feet in length in variable rock. Tiebacks up to 58 strands have been installed in difficult locations such as the Golden Gate Bridge and the Gilboa Dam in New York.
- Drill Tech has drilled horizontal drains over 800 feet in length for Caltrans from within a mined shaft in a landslide for the Red Top Project.
- Drill Tech has successfully worked in extreme cold weather, including sinking a 1000' deep shaft in a Wyoming mine where drilling, blasting and concrete work were performed 24 hours per day, even when temperatures dipped far below zero degrees.
- Drill Tech also constructed an emergency tunnel repair with rock drilling and concrete placement at 11,400 feet in Colorado in November and December when temperatures were as low as 30 degrees below zero.



Drill Tech has the resources and capabilities to excel at the difficult challenges of the SR-140 Ferguson Slide Project and to become an integral member of the CMGC/Caltrans project development team. Drill Tech's capabilities and resources include the following:

- Engineering: 10 registered professional engineers specializing in earth retention, foundation, shaft and tunnel design.
- Field Personnel: Over 300 employees including highly skilled project managers, operators, ironworkers, laborers and mechanics.
- Fabrication Shop: Over 20 machinists specializing in the construction and repair of custom drilling and tunneling equipment.
- Drill Rigs – Over 60 drill rigs including the following:
  - 12 vertical drill pile rigs with capabilities of drilling up to 12 foot diameter holes up to 200 feet deep in rock.
  - 3 custom built crane suspended platform drill rigs for drilling soil nails or tiebacks anywhere that can be reached by a crane hook.
  - 8 Klemm tieback drill rigs.
  - Over 30 excavator mounted soil nail and tieback drills capable of high reach, long stroke, or reach over work.
  - 4 limited access micropile drills.
  - 4 ABI type vibratory installation rigs



**Form B**

**PROJECT DESCRIPTION**

Name of Proposer: **Flatiron/Drill Tech, a Joint Venture**

Instructions for Form completion: Form B is limited to a maximum of 3 pages for each completed project.

Name of Firm: **Flatiron West, Inc**

Project Role: Prime Contractor

Principal Participant: Flatiron West, Inc. Designer: Caltrans

Other (Describe): Subcontractor: Drill Tech Drilling & Shoring, Inc.

Years of Experience (provide length of activity as it relates to the following three elements):

Roads/Streets: 3 Bridges/Structures: 3 Utility Relocations: 3

**Project Name, Location, and Nature of Work for Which Company Was Responsible:**

**Big Bear Bridge | Big Bear, CA [\$38.4 Million]**

The Big Bear Bridge replacement project along California State Route 18 is located in the San Bernardino Mountains, nestled in a valley surrounded by steep terrain and an environmentally sensitive wilderness. Now a popular year round resort destination, the community of Big Bear wanted a signature bridge to complement its history and location. For almost 20 years, local and state officials debated how to fix the bridge that provided access to the Big Bear community. Several times annually during severe snowfall events, the nearly 100-year-old bridge iced over and was closed, devastating local businesses.

**Provide Project Description and Describe Site Conditions:**

In 2008 Flatiron was selected to construct a \$38 million bridge near the Big Bear Dam on California State Route 18, about 100 miles northeast of Los Angeles. The new bridge connects Highway 18 over Big Bear Creek canyon on the south side of the dam to Big Bear valley, replacing an older structure built in 1925 that spanned the Big Bear Valley Dam.

The new 475-foot-long concrete arch bridge has three 12-foot travel lanes (one westbound lane has a right-turn option), 10-foot shoulders and a five-foot Americans with Disabilities Act-compliant sidewalk. Construction included the realignment of

State Routes 18 and 38 and signal installation at the intersection of the two highways. Flatiron also demolished the existing bridge over the dam and installed a new façade on the dam buttresses. As a subcontractor to Flatiron, **Drill Tech** constructed the following features:

- Four drill and blast mined excavations for the arch foundations
- CIDH shafts to 9’ diameter in granite for the abutment foundations
- Soldier pile and tieback wall along lake’s edge on east approach
- Rock bolt and soil nail walls
- Sculpted and stained shotcrete retaining walls

The new bridge was constructed downstream from the existing bridge and dam, allowing crews to make seismic and operational improvements to the road, and alleviating stress that the original road placed on the aging dam structure. The new bridge ensures year-round access to communities in the



Big Bear area by providing much needed standard lanes and shoulders, and it preserves and highlights the natural and cultural resources around the dam. Construction on the project began in early 2009 and was completed in October 2011.

**Relevance to Scoring Criteria Identified in RFQ Section 3.5.1:**

**3.5.1.A** – The project was a technically challenging concrete structure with numerous stakeholders and in a environmentally sensitive area. Both Caltrans and the Contractor’s budget were maintained for the base contract work. Flatiron, with **Drill Tech**, performed the project in a remote location. Elements of construction similar to SR 140 Ferguson Slide included:

- 23,000 yards of rock excavation
- Relocated boulders up to 6 feet in diameter for later re-use
- Soil nails and tiebacks
- Extensive temporary shoring and slope stabilization
- 720 lineal feet of 36”, 60”, and 72” CIDH piling
- 1,200 lineal feet of steel soldier pile
- 9,180 cubic yards of reinforced structural concrete
- 2,750 lineal feet of rock bolts
- Remote location with severe weather

**3.5.1.B** – The original contract work was completed on time and within the Caltrans project contingency. Additional remedial work to the existing dam abutment required by a third party regulatory agency and the short environmental working season required a time extension and additional funding.

**3.5.1.C** – The project was completed with no arbitration or litigation. The team worked closely to resolve all issues at the lowest level and prior to final contract acceptance.

**3.5.1.D** – A unique construction methodology was devised to minimize the impacts to the National Forest that was not contemplated in the contract plans and significantly reduced the footprint of the disturbed area. Use of a tower crane significantly reduced impacts to the traveling public. Restaging of two stages significantly reduced long term closures of two mountain routes. Flatiron assigned senior level project management and construction personnel to manage the project. Due to the limited work area, transportation logistics and severe weather constraints pre-planning of all operations was essential to meet the schedule.

**3.5.1.E** – The project was built to exceed the contract requirements for quality through the daily interaction between the structures and district resident engineers and Flatiron staff. We worked extensively designing concrete mixes to provide pumpability required for the difficult access conditions. Flatiron attended monthly community meetings with Caltrans staff to provide up to date traffic and closure information. Issues were resolved in a timely manner at the lowest level to ensure the project schedule was met.



**3.5.1.F** – Highways 18 and 38 are heavily traveled access roads to this major mountain resort. Flatiron worked with the resident engineer to restage two long term planned closures to minimize the closures and ensure all year and weather access. The use of a tower crane greatly increased the available work and staging area and minimized impacts to traffic for crane lifts and deliveries.

**Dispute Review Board (DRB) History/Partnering Evaluation Summary:**

There were 6 issues that were heard by the DRB. Issues that were presented to the DRB included the following:

- NOPC #1: Sales Tax Increase
- NOPC #2: Pier Column Excavation DSC
- NOPC #3: Rock Pocket Removal Method Objection
- NOPC #4: Continuous Arch Rebar
- NOPC #5: Joint Seal Assembly Conflict
- NOPC #6: AC Repairs

All issues were successfully resolved using the DRB process prior to the end of the contract, without any claims or litigation. Project was formally partnered and earned several partnering awards.

**List Any Awards, Citations, and/or Commendations Received for the Project:**

- California Construction, #10, Top 25 Highway Projects, 2010
- AGC of California - Excellence in Partnering Award (FINALIST), Projects Under \$50 Million Category, 2012
- AGC of California - Constructor Award (FINALIST) Meeting the Challenge of the Difficult Job, Engineering Classification, 2012
- Caltrans Excellence in Partnering Award - Silver, 2013
- Associated General Contractors (AGC) - Alliant Build America Merit Award, Best New Highway and Transportation Project, 2012
- Caltrans Partnering Success in Motion – Gold, 2012
- California transportation Foundation - Structure Project of the Year, 2012

Name of Client (Owner/Agency, Contractor, etc.):

California Department of Transportation

Address: 1120 N Street, Sacramento, CA 95814

Contact Name: Ray Stokes

Telephone: (951) 232-6051

Owner's Project or Contract No.: C0528

Fax No: (909) 829-3348

Contract Value (US\$): \$32,893,779

Final Value (US\$): \$38,401,546\*

\* *The increase in contract value was a result of executed Change Order by both parties. Some of the more significant and larger Change Orders included:*

- CCO#1 Flagging \$138,284
- CCO#8 Stage 4 Traffic \$459,663
- CCO#14 P/C Changes \$304,588
- CCO#23 New SWPP Permit \$126,460
- CCO#24 Flagging for Staging \$422,288
- CCO#32 DSOD App Fee \$301,996
- CCO#35 DSOD Fee \$781,313
- CCO#45 Security Services \$259,713

Percent of Total Work Performed by Company: 60%

Commencement Date: 1/2009

Planned Completion Date: 11/2012

Actual Completion Date: 11/2012

Amount of Claims: \$0

Any Litigation? Yes      No X

**Form B**

**PROJECT DESCRIPTION**

Name of Proposer: **Flatiron/Drill Tech, a Joint Venture**

Instructions for Form completion: Form B is limited to a maximum of 3 pages for each completed project.

Name of Firm: **Flatiron West, Inc**

Project Role: Prime Contractor

Principal Participant: Flatiron West, Inc. Designer: Jacobs & Associates, HatchMott McDonald

Other (Describe): Subcontractor: Drill Tech Drilling & Shoring, Inc.

Years of Experience (provide length of activity as it relates to the following three elements):

Roads/Streets: 3 Bridges/Structures: 3 Utility Relocations: 3

**Project Name, Location, and Nature of Work for Which Company Was Responsible:**

**Lenihan Dam Outlet Modifications | Los Gatos, CA [\$37.8 Million]**

At the foot of the Santa Cruz Mountains, within the Lexington Reservoir and Los Gatos Creek near Los Gatos, CA, **Flatiron**, working closely with **Drill Tech**, completely replaced Lenihan Dam’s intake and outlet facilities for the Santa Clara Valley Water District (SCVWD). Requiring extensive drilling, blasting, rock excavation, soil nail walls, secant pile walls, shoring, tunneling, slope stabilization, grouting, cast in place and precast structural concrete structures, dewatering, concrete and steel pipe, and utility appurtenances within the SCVWD’s pristine water storage reservoir facility without incident was accomplished under budget, and ahead of schedule. The result was an award winning project that finished with a perfect incident free safety record.

**Provide Project Description and Describe Site Conditions:**

**Flatiron** and **Drill Tech** constructed a new 2,000-foot-long 14-feet wide by 13-feet tall horseshoe shaped concrete lined tunnel required to house a 54-inch welded steel outlet pipe. Tunnel excavation was advanced through the varying Franciscan Melange geology that contained naturally occurring asbestos (NOA) through a combination of roadheader, drill and blast, and excavator working 24-hours a day 7-days a week. At locations of hard rock **Drill Tech** drilled and blasted using convention explosives, however this was accomplished in the confined space of the tunnel. Excavation in NOA presented extreme environmental and personal risks that were managed by both **Flatiron** and **Drill Tech** in accordance with permits obtain from the Bay Area Air Management Quality District (BAAMQD), CalOSHA, CARB, and Division of Safety of Dams (DSOD). Materials handling, testing and classification, and disposal was accomplished at the extremely congested and remote site without incident. After excavation, **Flatiron** utilized a custom fabricated arched traveling steel form system to pour 60-foot-long sections of the tunnel. Concrete mixes were designed by **Flatiron** to meet the challenges of long delivery times, pumpability up to 2,000-feet, and strength parameters in order to facilitate striping forms within 12-hours. During construction, ventilation, electricity, lighting, service water, and compressed air, were hung from the tunnel ceiling. Upon



completion of the tunnel liner and cast in place invert slab, **Flatiron** installed a 54-inch diameter welded steel outtake pipe which was installed on permanent cast-in-place saddle supports. In order to install the 2,000-long 54-inch diameter steel pipe, **Flatiron** designed and fabricated a unique pipe delivery cart that was capable of carrying 40-foot segments of pipe in the confined tunnel.

Because the nearest municipal fire rescue unit was not able to respond to the remote location within the required 30-minute requirement, **Flatiron** and **Drill Tech**, in close consultation with CalOsha Mining and Tunneling, developed and trained a 9-man tunnel/mine rescue crew that would be available for the duration of the 16-months. The **Flatiron** safety program was fully implemented on this remote project and resulted in an incident free project.

At the downstream portal **Drill Tech** constructed a 30-foot tall tie-back retaining wall system after which **Flatiron** modified and incorporated into the permanent outlet structure. This was accomplished by integrating both the soil nail wall system, cast in place structural retaining walls, and mechanically stabilized earth retaining wall system. The outlet structure was constructed to house all the SCVWD's permanent outlet valves and control systems for the operation of the system and discharge into the Los Gatos Creek.



A unique aspect of the project was **Flatiron's** first **Value Engineering**

proposal which was developed exclusively for the safety of the public. This no cost change resulted in the construction of a permanent detour for the travelling public around the construction site rather than through it as originally designed. This created a detour for the highly used Los Gatos trail to ensure safe public recreation.

A second **Value Engineering** proposal developed by both **Flatiron** and **Drill Tech** at the intake shaft, located within the reservoir, resulted in project savings over \$1M, resulted in reduced risk for both the Owner and Contractor, and provided a time savings to the Contract of over 2-months. The intake shaft was initially designed by the Owners representative to include an extensive grouting and monitoring program to reduce the infiltration of groundwater into the proposed 50-foot deep x 24-foot diameter intake shaft located within the existing reservoir. After grouting, a sequential excavation method utilizing steel plates was to be installed to the 50-foot depth required. **Flatiron** and **Drill Tech** engineered, designed, and later constructed a fully watertight pile secant wall from above ground and excavated material within the shaft utilizing excavator and crane to remove the soils. The use of the pile secant wall resulted in the elimination of costly and unpredictable grouting operation. This eliminated the potential risk of grout infiltration into the reservoir's drinking water and thus protected the District's resources.

Under the leadership of Richard Grabinski, the Lenihan Dam Project fully implemented all aspects of **Partnering**. A formal Partnering Charter was developed and executed by the Owner (SCVWD), Contractors (**Flatiron** and **Drill Tech**), Owner's Design Engineer (Jacobs and Associates), and Owner's Construction Manager (Hatch Mott MacDonald). Quarterly partnering meetings were held at both the project level and the executive level. Monthly surveys were utilized to keep the pulse on the project and discussed during quarterly meetings. This highly complex, multiple stakeholder project, through the use of Partnering garnered multiple Partnering and Construction awards including a

**Marvin M. Black Award** (the Nation’s pre-eminent Partnering Award) as well a perfect incident free safety record with over 100,000 man-hours worked.

**Relevance to Scoring Criteria Identified in RFQ Section 3.5.1:**

**3.5.1.A** – This was a remote, highly technical project located in uniquely challenging environmental and geological conditions by which **Flatiron** and **Drill Tech** managed successfully and resulted in National recognition

**3.5.1.B** – This project was completed two-months early and \$1.4 million under original bid price as a result of **Flatiron/Drill Tech** initiated Value Engineering Proposals

**3.5.1.C** – There were no disputes, claims, arbitration, litigation or any DRB hearings required for this project. All issues were resolved at the Project level through Partnering efforts.

**3.5.1.D** – With over 100,000 man-hours worked, this project resulted in a perfect ZERO/ZERO. There were no Recordable Incidents and there were no Lost Time Incidents. Quality Control was performed by **Flatiron** and Quality Assurance was performed by Santa Clara Valley Water District.

**3.5.1.E** – **Flatiron** and **Drill Tech** integrated into a cohesive Team along with the Owner and its representatives to win National Partnering Awards including a Marvin M. Black Award (the Nation’s pre-eminent Partnering Award).

**3.5.1.F** – Both Value Engineering proposals initiated by **Flatiron** and **Drill Tech** were developed to maximize the public’s safety, lower the overall project cost below the bid day price, accelerate the project schedule, and reduce the Owner’s and Contractor’s risk.

**Dispute Review Board (DRB) History/Partnering Evaluation Summary:**

There were no issues brought to formal hearing by the DRB. Quarterly update meetings with the DRB were conducted. Formal partnering along with quarterly meetings were conducted through the life of the project.

**List Any Awards, Citations, and/or Commendations Received for the Project:**

- Associated General Contractors of America - Marvin M. Black Excellence in Partnering Award, 2010
- Associated General Contractors of California - Excellence in Partnering Awards - Projects Under \$50 Million, 2010
- International Partnering Institute - Partnered Project of the Year - Ruby Level, 2010
- American Society of Civil Engineers - Outstanding Project Award, 2009
- American Public Works Association - Project of the Year, 2009

Name of Client (Owner/Agency, Contractor, etc.):

Santa Clara Valley Water District

Address: 5750 Almaden Expressway, San Jose, CA 95118

Contact Name: Ron Jacobs Telephone: (408) 265-2607

Owner’s Project or Contract No.: C0528 Fax No: N/A (rjacobs@valleywater.org)

Contract Value (US\$): \$38,178,160

Final Value (US\$): \$37,850,644

Percent of Total Work Performed by Company: 65%

Commencement Date: 09/2007

Planned Completion Date: 11/2009

Actual Completion Date: 09/2009

Amount of Claims: \$0

Any Litigation? Yes      No X

**Form B**

**PROJECT DESCRIPTION**

**Name of Proposer: Flatiron/Drill Tech, a Joint Venture**

Instructions for Form completion: Form B is limited to a maximum of 3 pages for each completed project.

**Name of Firm: Flatiron West, Inc**

Project Role: Prime Contractor/ Joint Venture Lead

Principal Participant: FCI Constructors/Balfour Beatty, A Joint Venture Designer: Caltrans

Other (Describe): Subcontractor: Drill Tech Drilling & Shoring, Inc.

Years of Experience (provide length of activity as it relates to the following three elements):

Roads/Streets: 4 Bridges/Structures: 4 Utility Relocations: 4

**Project Name, Location, and Nature of Work for Which Company Was Responsible:**

**Caltrans I-15 Managed Lanes – Middle Segment, Unit 2 | San Diego, CA [\$80.3 Million]**

The I-15 Managed Lanes Project consists of a new 20-mile stretch of high-occupancy toll (HOT) lanes along I-15 in San Diego. Under the oversight of **Dale Nelson**, proposed PM for SR140, Flatiron was responsible for seven of the 10 Managed Lanes contracts for Caltrans, totaling approximately \$430 million. When the entire \$1.3 billion project was completed, in 2012, it featured a four-lane expressway within a freeway, three new transit stations with direct access ramps (DARs), an enhanced bus rapid transit (BRT) service, and a toll collection system that automatically charges solo drivers according to the distance they travel.



The Middle Segment is eight miles long and was further divided into five units. Flatiron was responsible for four adjacent contracts (Units 2-5) with a total construction value of approximately \$260 million. For this Unit 2, Flatiron was the managing partner (70%) of the joint venture. Similar to Flatiron’s other Managed Lanes Contracts, Unit 2 was delivered in an alternative delivery environment through the “**design-sequencing**” delivery method. Here, Flatiron, along with **Drill Tech**, worked with Caltrans during the design phase to review plans and address constructability or cost issues, which expedited the project’s schedule and allowed Flatiron and Caltrans to overcome challenges to lead the project to success. Flatiron worked through the design-sequencing process to deliver the project significantly earlier than it would have been if it had followed conventional design-bid-build delivery methods.

**Provide Project Description and Describe Site Conditions:**

Unit 2 of the Middle Segment was an \$80 million contract that constructed managed lanes on I-15 from Camino del Norte to Rancho Bernardo. As part of the work, Flatiron built 20 retaining walls, five new bridges, and five DARs. Flatiron and Drill Tech worked closely with Caltrans to refine design elements to allow our team to build the project as quickly and efficiently as possible—all the while minimizing traffic and community impacts. Flatiron maintained the project schedule by staying ahead on day-to-day issues. Through extensive Partnering efforts, and by constantly communicating the

critical path to Caltrans, the team prioritized changes and issues resolution so as to minimize any delay impacts.

Flatiron minimized the project’s environmental impacts by recycling and reusing many of the existing highway materials during the project. By exporting excess dirt from this project to Flatiron’s nearby San Marcos Landfill Project, the team was able to minimize trucking, which reduced traffic and air pollution, as well as cost. In addition, through effective management of materials throughout the I-15 Managed Lanes projects, Flatiron was able to minimize both import and export of materials from/to the projects. Flatiron also recycled concrete, asphalt, and base material from the existing highway facilities and incorporated them into the onsite roadway base after screening and crushing materials utilizing Flatiron’s own equipment. Furthermore, Flatiron worked carefully with Caltrans to design and develop concrete mix designs that met or exceeded the project quality requirements in regards. Flatiron then batched over 40,000cy of concrete on this project utilizing either of its three portable concrete batch plants permitted within California. These efforts reduced landfill usage, traffic/pollution impacts, and taxpayers’ cost.

Because this project was delivered using the “**Design Sequencing**” method, Flatiron gained valuable experience working with Caltrans during the design phase to review plans and address constructability or cost issues, similar to a CMGC environment. By participating with Caltrans in this process, the project was delivered to the public significantly earlier than would have been possible using conventional Design-Bid-Build delivery methods. Upon receipt of a new “Design Deliverable,” Flatiron would conduct a thorough review of the plans. Constructability and cost issues were brought to the State’s attention immediately so that they could be dealt with promptly.

**Relevance to Scoring Criteria Identified in RFQ Section 3.5.1:**

**3.5.1.A** – Reconstructed a major urban freeway corridor in San Diego which included many of the same elements of construction as SR140 including:

- 434,400 cy roadway excavation
- 44,160 cy of structural excavation including bridge, retaining walls, tie-back walls, and soil nail walls
- 87,840 cy Class2 roadway base produced through onsite screening and crushing
- 80,600 tons of asphalt concrete
- 48,440 cy of concrete batched on site by Flatiron using its three portable concrete batch plants
- 7,385 lf or 198 each driven steel pile
- 10,498 lf of cast-in-drilled-hole piling from 16-inch to 24-inch diameter
- 16,298 cy of cast in place reinforced concrete structures
- 44 each precast concrete girders
- 8,864 cy of reinforced concrete retaining walls
- 61,730 sf of mechanically stabilized earthen retaining wall
- 64,252 lf of soil nail assemblies
- 319 ea tie-back anchors
- 21,263 lf of underground utilities

**3.5.1.B** – Completed on time and within budget. Several changes orders were incorporated into the work (a description of the more significant changes orders are described later).

**3.5.1.C** – Flatiron overcame significant challenges and minimized delays, claims, dispute proceedings, litigation, and arbitration by partnering and effectively utilizing the dispute resolution process, including the DRB.

**3.5.1.D** – Through the leadership of Dale Nelson, along with extensive collaboration with Drill Tech, the project team was able to successfully deliver the I-15 managed lanes project safely and with quality requirements exceeded.

**3.5.1.E** – Effectively managed all aspects of the Contract in a quality, timely, and effective manner by implementing extensive partnering.

**3.5.1.F** – The project had extensive and complicated staging of traffic and construction. By self-

performing most contract work, our seasoned staff was able to reduce stages and minimize impacts to the traveling public. One such example was Flatiron’s introduction of CCO#61 a value engineering proposal submitted which simplified gore paving between ramps and mainline which resulted in a \$497,000 savings to the Owner.

**Dispute Review Board (DRB) History/Partnering Evaluation Summary:**

A formal Project Partnering Charter was established between Flatiron’s JV and Caltrans. The team of the Flatiron-led JV were committed at all levels, from craft foremen to project management team, and executive management, to working with Caltrans to openly discuss issues and reach resolution. Team members from both Caltrans and Flatiron's JV maintained an open and collaborative communication and issue escalation and resolution system throughout the duration of the project. In addition, project staff from Flatiron's JV team actively participated in Caltrans’ 2009 statewide training in partnering concepts where Flatiron teamed with Caltrans leadership to co-trainer this statewide program. I-15 Managed Lanes was a project that had numerous issues to resolve, as it was an early project in the **Design Sequencing** program in District 11.

Issues that were presented to the DRB included the following:

- Redesign of a drainage system by Caltrans resulted in delay to schedule. DRB recommended that the State grant additional working days based on an agreed-upon TIA analysis.
- Deduction for asphalt compaction and grinding. Caltrans required contractor to grind asphalt on detour areas in order to meet profile tolerances. DRB recommended that deductions be released.
- Request for additional compensation due to changed soil conditions at two retaining wall locations. One request was approved and one was denied by DRB.

**List Any Awards, Citations, and/or Commendations Received for the Project:**

- American Public Works Association, San Diego Imperial Valley Chapter – Project of the Year Award, in recognition of the partnership between Flatiron, Caltrans, and SANDAG, May 2011
- California Transportation Foundation – Tranny Award, Freeway Project of the Year, 2009
- Roads and Bridges – Top 10 Roads, Ranked #4, 2009

Name of Client (Owner/Agency, Contractor, etc.):

California Department of Transportation (District 11)

Address: 4050 Taylor Street, San Diego, CA 92110

Contact Name: Gustavo Dallarda, I-15 Corridor Director

Telephone: (858) 748-4233

Owner’s Project or Contract No.: Unit 2 – 11-080914

Fax No: (858) 688-2587

Contract Value (US\$): \$67.8 million

Final Value (US\$): \$80.3 million\*

*\*Difference in contract values is due to Owner initiated changes, some of the more significant Change Orders are described below:*

- CCO#1 – 4 Traffic Safety, DRB, electrical maintenance, AC Index \$795k
- CCO#9 OH signs and associated utility changes \$2.12M
- CCO# various Drainage design modifications at various locations \$3.066M
- CCO# various Retaining wall structural design changes \$3.057M

Percent of Total Work Performed by Company: 70%

Commencement Date: 08/2004

Planned Completion Date: 03/2009

Actual Completion Date: 03/2009

Amount of Claims: \$0

Any Litigation? Yes  No

**Form B**

**PROJECT DESCRIPTION**

Name of Proposer: **Flatiron/Drill Tech, a Joint Venture**

Instructions for Form completion: Form B is limited to a maximum of 3 pages for each completed project.

Name of Firm: **Flatiron West, Inc**

Project Role: Prime Contractor/ Joint Venture Lead

Principal Participant: FCI/Cleveland Building, a Joint Venture Designer: Caltrans

Other (Describe): Subcontractor: Drill Tech Drilling & Shoring, Inc.

Years of Experience (provide length of activity as it relates to the following three elements):

Roads/Streets: 4 Bridges/Structures: 4 Utility Relocations: 4

**Project Name, Location, and Nature of Work for Which Company Was Responsible:**

**Carquinez Suspension Bridge | Crockett, CA [\$240.7 Million]**

The Carquinez Suspension Bridge carries traffic westbound on I-80 over the Carquinez Straights just north of San Francisco. Flatiron constructed a three-span 3,465-foot-long structure that became North America’s first suspension bridge of its kind to be built in 35 years. At bid time, it was the largest project ever awarded by the California Department of Transportation. Through extensive Partnering efforts the project completed with no claims and garnered multiple national awards. Construction in the water required extensive coordination with environmental permits and restrictions.

**Provide Project Description and Describe Site Conditions:**

The technical difficulty of the project required extensive planning and engineering by Flatiron. Considering the safety hazards associated with working over water and working up in the air, the project was executed to the upmost quality standards. Some of the major project elements included:

- 66,322-cy of hazardous material, contaminated material, and clean roadway excavation
- 20,010-cy of rock excavation
- 29,360-cy of structural excavation requiring temporary structural support retaining walls systems which were all designed and constructed by **Drill Tech**. Support systems included a combination of soil nails, rock bolting, shotcrete, and beam and lagging.
- 8,202-lf of structural cast-in-drilled-holes varying in diameter from 2-foot to 10-foot
- 532-each cast-in-steel-sheer driven piling with a total length of 59,931-feet
- 160-each driven pile with a total length of 22,759-feet
- 1,975-cy of seal course concrete required to seal water in deep and wet excavations
- 24,065-cy of structural concrete footing concrete
- 35,940-cy of structural bridge concrete
- 2,275-cy of structural concrete retaining walls, soldier pile walls, and soil nail walls



- 11,789,600-pounds of reinforcing steel (rebar)

This highly complex project required extraordinary efforts by Flatiron to collaborate with all team members in order to successfully complete the project.

- Flatiron coordinated with IHI (from Japan) for the temporary engineering, shop drawings, fabrication, production, delivery, unloading/final erection of over 28,034,000 pounds of structural steel elements. The suspended superstructure utilizes a unique steel orthotropic deck section 3,464-feet in length. The 24 deck sections were transported on three ocean-going vessels from Japan and jacked into place directly from the ship using the bridge's main suspension cables.
- Construction of two 407-foot-tall towers each supported by 12 rock-socketed drilled shaft piles in the Bay, each 10-foot diameter by 300-foot long
- At 400-feet above the Bay, reinforced concrete strut tying each tower column together required to transfer vertical and lateral loads between the towers.
- Coordination between Caltrans material testing lab and Caltrans inspection team for travel out of country to witness and inspect components and processes that were being implemented in Japan. Quality Control was performed by IHI and the FCI/CB Joint Venture, and Quality Assurance was performed by Caltrans.

### Relevance to Scoring Criteria Identified in RFQ Section 3.5.1:

**3.5.1.A** – Reference the above description regarding the high complexity of this \$240.7M award winning project

**3.5.1.B** – Although Carquinez was a traditional bid-build project that was entirely designed by Caltrans, Flatiron was able to minimize cost and schedule overruns by playing a significant role in providing multiple technical construction solutions and schedule options. A brief summary of the more significant Change Orders are described more fully below. The project was completed within its planned duration, which is a testament to Flatiron's proactive and solution focus efforts.

**3.5.1.C** – The Carquinez project used the three member DRB panel to consider several disputes throughout the life of the 4-year project. Both the Owner and the Contractor followed the Partnered dispute resolution process and they each used the DRB process provided for in the contract. By doing this, all issues were successfully resolved without any claims or litigation.

**3.5.1.D** – Some of the technical components of the project are described above. Flatiron was able to successfully deliver this highly complex and technically challenging project while exceeding the required quality standards in a safe manner.

**3.5.1.E** – Not only were the Caltrans construction team highly engaged in this collaborative project, but so was the Caltrans Bridge Engineering group, and Materials Testing Lab. Full integration was required, considering over 28-million pounds of structural steel was furnished and fabricated in Japan. Furthermore, the **Flatiron/Drill Tech** team was instrumental as **Drill Tech** constructed the Caltrans designed permanent soldier pile wall and soil nail wall at the north abutment that to retain a PG&E tower (*pictured right*). **Drill Tech** also designed and constructed the 100' deep temporary soil nail and tieback wall that formed the excavation for the northern anchor block. During the contract to retrofit the 1950s span, **Drill**



Tech installed 16ea 28 strand epoxy coated tiedowns through the north abutment.

**3.5.1.F** – Flatiron and Caltrans were highly successful in closing the entire and existing bridge Route 80 for an entire weekend for the monumental traffic switch that opened traffic on the new bridge. This tremendous effort was planned, communicated, and executed, which resulted in an early opening of the bridge to travelling public. One important innovation used on this project was the use of special drilling equipment from Germany called an “Under-Reamer” to mitigate the Rock Socket Caving Problem. Partnering efforts between FCI/CB and Caltrans allowed the original design to be preserved and led to the timely completion of the project.

**Dispute Review Board (DRB) History/Partnering Evaluation Summary:**

The Carquinez Suspension Bridge project used the three member DRB panel to consider several disputes throughout the life of the 4-year project. Both the Owner and the Contractor followed the Partnered dispute resolution process and the each used the DRB process provided for in the contract. By doing this, all issues were successfully resolved without any claims or litigation.

**List Any Awards, Citations, and/or Commendations Received for the Project:**

- AGC California/Gallagher Construction Services Constructor Award – Meeting the Challenge of the Difficult Job Heavy Engineering, 2004
- Associated General Contractors of America (AGC) – AON Build America Award in the New Highway Category, 2003
- Associated General Contractors of America (AGC) – Safety Excellence on a High Hazard Job, 2000 & 2003
- Consulting Engineering & Land Surveyors – Engineering Excellence Award, 2004
- Engineering News Record – Image of the Year, 2003
- George S. Richardson Medal, 2004
- McGraw Hill Construction – Best of California, 2003

**Name of Client (Owner/Agency, Contractor, etc.):**

California Department of Transportation

Address: 1120 N Street, Sacramento, CA 95814

Contact Name: Bill Bornman Telephone: (925) 260-5516

Owner’s Project or Contract No.: 04-013014 Fax No: (925) 602-9091

**Contract Value (US\$): \$187,800,000 Final Value (US\$): \$238,000,000\***

*\*The increase in contract value was a result of executed Change Order by both parties. Some of the more significant and larger Change Orders included:*

- |                                                                             |                                                                   |
|-----------------------------------------------------------------------------|-------------------------------------------------------------------|
| - CCO#12 Removal of existing piles in conflict with new foundations \$3.61M | - CCO#35 Addition of rock socket under-reaming at Tower2 \$17.23M |
| - CCO#28 Tower 3 revised pile tip elevation \$3.138M                        | - CCO#54 Bent 2 pile tip elevation changes \$1.00M                |
| - CCO#34 Anchorage over excavation required due to poor soils \$1.53M       | - CCO#98 Maintenance of existing bridge traveler \$1.592M         |
|                                                                             | - CCO#99 Barrier rail design changes \$1.509M                     |

Percent of Total Work Performed by Company: 75% Commencement Date: 3/2000

Planned Completion Date: 10/2004 Actual Completion Date: 10/2004

Amount of Claims: \$0 Any Litigation? Yes      No X

**Form B**

**PROJECT DESCRIPTION**

**Name of Proposer: Flatiron/Drill Tech, a Joint Venture**

Instructions for Form completion: Form B is limited to a maximum of 3 pages for each completed project.

**Name of Firm: Flatiron West, Inc**

Project Role: Prime Contractor/ Joint Venture Lead

Principal Participant: Silverado Constructors Designer: Transportation Corridor Agencies (TCA)

Other (Describe): \_\_\_\_\_

Years of Experience (provide length of activity as it relates to the following three elements):

Roads/Streets: 4.5 Bridges/Structures: 4.5 Utility Relocations: 4.5

**Project Name, Location, and Nature of Work for Which Company Was Responsible:**

**Eastern Transportation Corridor | Orange County, CA [\$803.4 Million]**

Flatiron was managing partner of the joint venture (Silverado Constructors) that completed this \$803.4 million, 27-mile, limited-access toll road below budget and ahead of schedule. Flatiron’s team oversaw all design work, self-performed the majority of the construction work, administered all construction subcontracts, ensured all environmental commitments were met, provided all scheduling activities, coordinated with utility companies and other stakeholders, and provided all QA/QC activities under the owner’s and Caltrans’ oversight.

**Provide Project Description and Describe Site Conditions:**

The toll road includes four freeway-to-freeway interchanges, five interchanges for access to local streets, 69 bridges, three cut and cover tunnels, and 10 toll plazas. Flatiron’s team moved 67 million cubic yards of earthwork, placed 450,000 cubic yards of structural concrete, paved 140 lane miles, relocated 148 major utility connections, placed 1.5 million tons of asphalt concrete, and built 1.7 million square feet of structures. The design-build method resulted in early completion of the toll road’s major segment, which opened to traffic 14 months ahead of schedule. This project was approved under the Federal Highway Administration’s (FHWA) Special Experimental Project (SEP-14) as a design-build project. The team’s commitment to safety can be seen in that the Occupational Safety and Health Administration (OSHA) recordable incidents recorded a 20 percent reduction below the national average on this project. Liberty Mutual recognized the Project with the completion of 1,000,000 Safe Work Hours and the completion of 500 consecutive work days without a lost time incident. Flatiron gained valuable experience on this complex design-build project that lends itself to a CMGC role.



The \$80 million environmental mitigation program included the development of a 214-acre site to create coastal sage scrub and a 50-acre wetland habitat. Flatiron also constructed five wildlife bridges for large animal crossings and 26 culverts for small animal crossings.

The four-to-six-lane road winds through mountainous, environmentally sensitive terrain as well as

urban areas where structures span 12 active highway lanes. In urban areas Flatiron developed and implemented construction traffic handling plans necessary to minimize impacts to the travelling public. Over 2,500 people worked on this project at one time or another, and all key design and construction personnel worked in a co-located project office.

**The main 19-mile segment of the toll road was completed and opened to the public 14 months ahead of schedule, completing the entire project 10 months early.**

**Relevance to Scoring Criteria Identified in RFQ Section 3.5.1:**

**3.5.1.A** – Major design-build transportation project designed and built in California. Alternative Delivery contract in an environmentally sensitive area through undeveloped Orange County.

**3.5.1.B** – Completed nearly one year ahead of schedule, within budget.

**3.5.1.C** – Significantly minimized delays, claims, dispute proceedings, litigation, and arbitration due to proactive partnering effort. There were only 3 issues taken to the DRB and all 3 were settled at that level through partnering.

**3.5.1.D** – Managed the job with high quality in a safe manner. ETC’s safety record was nearly 295% improvement over the average national figures. Due to the project’s exemplary safety record, over \$185,000 was paid out by the Owner in safety incentive money for continuous days without a lost time accident.

**3.5.1.E** – Effectively managed all aspects of the Contract in a quality, timely, and effective manner by implementing extensive partnering. Flatiron led joint venture self-performed the quality management for this project.

**3.5.1.F** – The biggest success in value engineering resulted in approximately \$20 million saving that was split between the owner and contractor with the bridges by reducing the length of some bridges and adding smaller separator bridges. Additional bridge innovations included the addition of 19 MSE walls, lengthening some abutments and shifted alignments. 1700 feet was removed from one structure just by taking it under one of the connectors instead of over it. We also changed a 9000 feet long closed box drainage system to a double 10x10 concrete box. The 67 million cubic yards of earthwork was also improved through innovative solutions with the alignment and different approaches to the grading.

**Dispute Review Board (DRB) History/Partnering Evaluation Summary:**

Flatiron’s joint venture team set national standards for partnering on this project. One of the most successful aspects of partnering was the weekly issues meetings. Almost 200 issues were discussed in these meetings and as a result of the team’s commitment to partnering, only three issues were brought to the DRB involving earthwork and engineering design. These issues were settled to the satisfaction of all parties.

**List Any Awards, Citations, and/or Commendations Received for the Project:**

- American Concrete Institute Southern California Chapter – Engineering Design Award, 1999
- American Consulting Engineers Council (ACEC) – National Honor Award, 1999
- American Public Works Association – Environmental Enhancement Program Award, 1999
- American Road and Transportation Builders Association (ARTBA) – Globe Environmental Award, 2000
- American Society of Civil Engineers – Project of the Year, 2000
- Associated General Contractors (AGC) – AON Build America Award, 1999
- California Transportation Foundation – Tranny Award, 1999

- Consulting Engineers and Land Surveyors of California (CELSOC) – Kenward S. Oliphant Memorial Award for Excellence in Engineering, 1999
- Consulting Engineers and Land Surveyors of California (CELSOC) – Project of the Year, 1999
- Design-Build Institute of America (DBIA) – National Design-Build Award for Major Civil Project, 1999
- McGraw Hill’s California Construction Link Magazine – Design-Build Project of the Year, 1998
- Orange County Engineering Council Engineering – Project Achievement Award, 1999



Name of Client (Owner/Agency, Contractor, etc.):

Transportation Corridor Agencies (TCA)

Address: 125 Pacifica Street, Irvine, CA 92618

Contact Name: Mike Endres, Corridor Manager (retired)

Telephone: (772) 257-5216 / (312) 350-4612

Owner’s Project or Contract No.: E94-01

Fax No: N/A (Michael.endres4@gmail.com)



Contract Value (US\$): \$687 million

Final Value (US\$): \$803.4 million\*

*\*Flatiron’s design-build bid was \$114 million less than the next lowest bid, \$175 million less than the engineer’s estimate of \$862 million, and below the maximum amount that could be financed. This allowed the owner to add 3.5 miles of additional lanes and two major freeway connectors to the contract without exceeding its budget. The variance in the original and final values is due to this additional scope added by the owner.*

Percent of Total Work Performed by Company: 60%

Commencement Date: 10/1994

Planned Completion Date: 12/1999

Actual Completion Date: 02/1999\*\*

*\*\*Opened with substantial completion on 10/1998; Acceptance Agreement with a 10-year warranty on Loma Ridge 6/14/1999*

Amount of Claims: \$0

Any Litigation? Yes  No



**Form B**

**PROJECT DESCRIPTION**

**Name of Proposer: Flatiron-Drill Tech, a Joint Venture**

Instructions for Form completion: Form B is limited to a maximum of 3 pages for each completed project.

**Name of Firm: Drill Tech Drilling & Shoring, Inc.**

Project Role: Retaining Wall and Ground Improvement Subcontractor

Principal Participant: \_\_\_\_\_ Designer: US Department of Transportation (FHWA)

Other (Describe): Major Subcontractor: Drill Tech Drilling & Shoring, Inc.

Years of Experience (provide length of activity as it relates to the following three elements):

Roads/Streets: 1 Bridges/Structures: 1 Utility Relocations: \_\_\_\_\_

**Project Name, Location, and Nature of Work for Which Company Was Responsible:**

**Highway 140/El Portal Road – Yosemite National Park, CA (\$1.6M)**

Drill Tech constructed soil nail walls and performed compaction grouting as a subcontractor to GC Emmett’s Construction on this FHWA contract.

**Provide Project Description and Describe Site Conditions:**

This work, not far up Hwy 140 from the Ferguson Slide, involved drilling permanent and temporary soil nail walls to facilitate the widening of El Portal Road (Hwy 140). Drilling conditions consisting of talus deposits and hard rock are anticipated to be similar at the Ferguson Slide. The total footage of rock drilling was approximately 20,000 LF. Drill Tech’s scope of work also included compaction grouting to stabilize the existing roadway. The majority of the work was performed in the winter months.



**Drilling upslope of the road**

**Relevance to Scoring Criteria Identified in RFQ Section 3.5.1:**

**3.5.1.A** – This project illustrates Drill Tech’s experience working on the very same highway over the same river, just a few miles up the road, installing soil nail walls in the same manner and with the same equipment as will be used at the Ferguson Slide.

**3.5.1.B** – Drill Tech completed this project on time and under budget.

**3.5.1.C** – There was no Drill Tech issue that was submitted to a DRB, nor was there arbitration or litigation.

**3.5.1.D** – All of Drill Tech’s work at the site was overseen by highly experienced foreman and a project manager (Dave Chishom) who is a registered professional engineer. There were no quality disputes and the contract was completed without a lost time injury.

**3.5.1.E** – Drill Tech worked well with the general contractor and FHWA to complete the work in accordance with the FHWA specifications, in the winter.

**3.5.1.F** – Drill Tech’s used an innovative method of compaction grouting and specialized zero slump grout mixes with specialized additives to minimize the possibility of grout migration into the river and minimize grout quantities and therefore cost and schedule. Unlike the Ferguson rock shed, which will be build where the road is closed and therefore not immediately adjacent to traffic, this project was built in immediate proximity to the travel way, with walls both up and down slope





**Dispute Review Board (DRB) History/Partnering Evaluation Summary:**

There were no Drill Tech related disputes brought to the DRB for this project. Drill Tech's scope for this project completed with zero claims.

**List Any Awards, Citations, and/or Commendations Received for the Project:**

None Received

Name of Client (Owner/Agency, Contractor, etc.):

Emmett's Excavation, Inc.

Address: 1477 Menlo Ave

Clovis, CA 93611

Contact Name: John Emmett

Telephone: (559) 299-1256

Owner's Project or Contract No.: 07-107

Fax No: (559) 299-0281

Contract Value (US\$): \$1,865,383.26

Final Value (US\$): \$1,606,287.15

Percent of Total Work Performed by Company: 100%\*

Commencement Date: 1/2008

Planned Completion Date: 5/2008

Actual Completion Date: 5/2008

Amount of Claims: \$0

Any Litigation? Yes  No

\*Subcontracted Total Work

**Form B**

**PROJECT DESCRIPTION**

**Name of Proposer: Flatiron-Drill Tech Joint Venture**

Instructions for Form completion: Form B is limited to a maximum of 3 pages for each completed project.

**Name of Firm: Drill Tech Drilling & Shoring, Inc.**

Project Role: Subcontractor building soil nail and tieback walls and CIDH Foundations

Principal Participant: \_\_\_\_\_ Designer: Caltrans

Other (Describe): Major Subcontractor: Drill Tech Drilling & Shoring, Inc.

Years of Experience (provide length of activity as it relates to the following three elements):

Roads/Streets: 3 Bridges/Structures: 3 Utility Relocations: \_\_\_\_\_

**Project Name, Location, and Nature of Work for Which Company Was Responsible:**

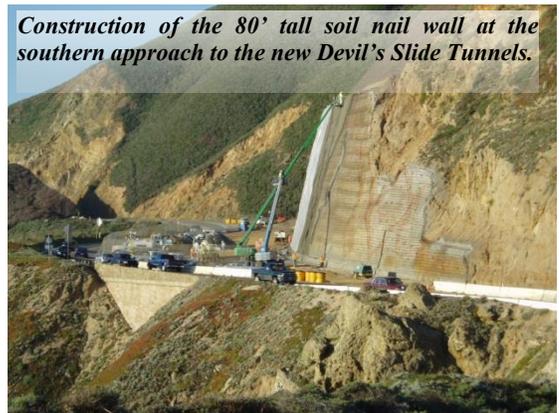
**Devil’s Slide, Highway 1 | Pacifica, CA [\$439 Million]**

Drill Tech worked on four separate contracts at the Devil’s Slide project constructing permanent and temporary soil nail walls, tieback walls, micropile walls, and drilled shaft foundations.

**Provide Project Description and Describe Site Conditions:**

The Devil’s Slide is a notorious slide area located on Highway 1 near Pacifica, California. Recent work has been completed on new bridges and twin tunnels that now bypass this geological road hazard. During construction of this bypass, Drill Tech constructed the following features:

- 80’ tall soil nail wall just south of the tunnels
- High reach tiebacks 200’ above roadway
- Southern tunnel portal soil nail walls
- CIDH bridge foundations and associated temporary shoring at north end of tunnels



*Construction of the 80’ tall soil nail wall at the southern approach to the new Devil’s Slide Tunnels.*

In the Spring of 2006, during the initial phases of construction of the bypass, the slide shifted, completely closing Highway 1. At Caltrans request, Drill Tech mobilized an additional three drill rigs to the actual slide and installed emergency tieback walls above and below the roadway to re-open the road. This stabilized the road for the next 5 years until the bypass tunnels were opened.

**Relevance to Scoring Criteria Identified in RFQ Section 3.5.1:**

**3.5.1.A** – Similar to the Ferguson Landslide, the Devil’s Slide completely closed the highway and presented very difficult technical challenges to safely and successfully mitigate the slide and re-open the highway. These challenges were met by installing soil nails, tiebacks and drilled shafts using state of the art equipment and experienced crews. The total size of the Devil’s Slide contract work was much larger than is anticipated for the Ferguson Slide, however the total quantity and value of the drilling work is expected to be quite similar.

**3.5.1.B** – Drill Tech completed all four of its contracts at the Devil’s Slide project, working for three different prime contractors, on time and within budget.

**3.5.1.C** – Drill Tech completed all four of its contracts at the Devil’s Slide project, working for three different prime contractors, without any disputes with Caltrans. There was no Drill Tech issue that was even submitted to a DRB, let alone arbitration or litigation.

**3.5.1.D** – Drill Tech designed the temporary shoring for the bridge foundations and provided technical assistance to Caltrans for the emergency slide repair. All of Drill Tech’s work at the site was overseen by highly experienced foreman and a project manager (Steve McCullough) who is a registered professional engineer. There were no quality disputes and all four of the contracts were completed without a lost time injury.

**3.5.1.E** – The Devil’s Slide work illustrated Drill Tech’s ability to work with Caltrans with multiple accounting formats (lump sum items, unit price items, and Force Account work). It also illustrated a true teamwork approach on the engineering front where both Caltrans and Drill Tech performed design work and reviewed the design work of the other in order to come up with the safest and most cost efficient plan.

**3.5.1.F** – Drill Tech’s has long been Caltrans’ preferred contractor when it comes to emergency landslide repair work to re-open closed highways. Drill Tech proposed multiple innovative solutions, including dewatering around CIDH piles rather than pouring them in the wet, to accelerate the project. Drill Tech was able to stage the emergency work in such a way that 5 drill rigs were able to work on a 300’ stretch of highway simultaneously in an all-out, 7 day per week effort to re-open the closed highway.



**Temporary Shoring and CIDH pile placement for foundation of the Devil’s Slide Bridge.**



**Installing tiebacks 200’ above the roadbed using crane basket drill above the southern portal to the new Devil’s Slide Tunnels.**

**Dispute Review Board (DRB) History/Partnering Evaluation Summary:**

There were no Drill Tech related disputes brought to the DRB for this project. Drill Tech’s scope for this project completed with zero claims.

**List Any Awards, Citations, and/or Commendations Received for the Project:**

None Received

Name of Client (Owner/Agency, Contractor, etc.):

California Department of Transportation

Address: 1120 N Street, Sacramento, CA 91814

Contact Name: Ann Meyers

Telephone: (831) 998-1546

Owner's Project or Contract No.: 04-112304, 04-351504, 04-1123K4  
and 04-1123U4

Fax No: (650) 259-9673

Subcontract Value (US\$): 04-112304: \$1,803,885

Final Value (US\$): \$7,553,004

04-351504 \$3,198,237

04-1123k4 \$1,751,667

04-1123U4 \$799,215

Percent of Total Work Performed by Company: 100%\*

Commencement Date: 6/2005

Planned Completion Date: 9/2008

Actual Completion Date: 9/2008

Amount of Claims: \$0

Any Litigation? Yes      No   X  

\*Subcontracted Total Work



**Form B**

**PROJECT DESCRIPTION**

**Name of Proposer: Flatiron-Drill Tech, a Joint Venture**

Instructions for Form completion: Form B is limited to a maximum of 3 pages for each completed project.

**Name of Firm: Drill Tech Drilling & Shoring, Inc.**

Project Role: Subcontractor to Ames Construction to Design and Construct Retaining Walls and Drilled Foundations

Principal Participant: \_\_\_\_\_ Designer: Drill Tech Drilling & Shoring, Inc.

Other (Describe): Major Subcontractor: Drill Tech Drilling & Shoring, Inc.

Years of Experience (provide length of activity as it relates to the following three elements):

Roads/Streets: \_\_\_\_\_ Bridges/Structures: 2 Utility Relocations: \_\_\_\_\_

**Project Name, Location, and Nature of Work for Which Company Was Responsible:**

**BNSF Cajon Pass, 3<sup>rd</sup> Main Track – Devore, CA (\$11.7M)**

Drill Tech was the design build subcontractor who designed and built the retaining walls on the project and who drilled and installed the CIDH bridge foundations designed by the owner. The retaining walls designed and constructed by Drill Tech on the project were up to 135 feet tall.

**Provide Project Description and Describe Site Conditions:**

Cajon Pass is located between the San Gabriel and San Bernardino mountain ranges, just north of the City of San Bernardino off the I-15 Freeway. This \$90 million project added almost 16 miles of third main track to BNSF's route into the Los Angeles Basin. The construction of this track represents the first additional BNSF main track through Cajon Pass since the second line was constructed in 1913.

Drill Tech Drilling & Shoring, Inc. constructed approximately 88,500 SF of permanent conventional soil nail wall up to 135' in height which enabled the demolition and removal of 2 existing tunnels that impeded the addition of a third main line.

An additional 96,615 SF of permanent injection anchor soil nail wall was installed along various project locations in alluvial wash type soils consisting of sands and gravels.



**Soil nail wall drilling**

Two, Three, four, five and six foot diameter

CIDH foundation piles were installed on the project by DTDS for bridge structures supporting the new track at various river and roadway overpass crossing. Piles were installed in both bedrock type

soils and in riverbed sand and gravel wash deposits with a very shallow groundwater table.

Total Quantities:

Soil Nail Walls	185,115-sf
Soil Nails Installed	Approximately 300,000 feet
2' Dia. CIDH Piles	869-lf
3' Dia. CIDH Piles	157-lf
4' Dia. CIDH Piles	105-lf
5' Dia. CIDH Piles	395-lf
6' Dia. CIDH Piles	152-lf

**Relevance to Scoring Criteria Identified in RFQ Section 3.5.1:**

**3.5.1.A** – Similar to the Ferguson Landslide, the Cajon Pass Project involved installing very large soil nail retaining walls on steep slopes in mountain terrain. It also involved hard rock CIDH pile drilling similar to what will be required for the rock shed foundation.

**3.5.1.B** – Drill Tech completed the El Cajon Pass project on time and well under budget due to innovative wall designs.

**3.5.1.C** – Drill Tech completed the El Cajon Pass project without any disputes with the owner or GC. There was no Drill Tech issue that was even submitted to a DRB, let alone arbitration or litigation.

**3.5.1.D** – Drill Tech designed 185,000SF of retaining walls at the site, including the tallest soil nail walls of which we are aware in North America, and constructed the two year project without a safety incident and without any wall performance issues. Drill Tech’s work at the site was overseen by highly experienced foreman and a project manager (Shawn McNamara) who is a registered professional engineer.

**3.5.1.E** – Drill Tech integrated our work seamlessly with that of the general contractor, BNSF railroad, and the railroad’s consultants and review teams.

**3.5.1.F** – Drill Tech’s retaining wall designs, some of which were used to remove double track tunnels that did not have enough room for the third line, saved a year on the project schedule compared to the original railroad designs. All work was safely performed next to the active double main lines without



**CIDH pile drilling**

interruptions to the existing train traffic.

**Dispute Review Board (DRB) History/Partnering Evaluation Summary:**

There were no Drill Tech related disputes brought to the DRB for this project. Drill Tech's scope for this project completed with zero claims.

**List Any Awards, Citations, and/or Commendations Received for the Project:**

None Received

Name of Client (Owner/Agency, Contractor, etc.):

Owner: BNSF Railroad

General Contractor: Ames Construction

Address: 391 N Main Street  
Sacramento, CA 95838

Contact Name: Jeff Geist

Telephone: (951) 356-1275

Owner's Project or Contract No.: BF44368

Fax No: (951) 549-9003

Contract Value (US\$): \$10,756,423.06

Final Value (US\$): \$11,782,421.91\*

*\*The added scope for was for the construction of two additional walls added by BNSF after contract award.*

Percent of Total Work Performed by Company: 100%

Commencement Date: 6/2007

Planned Completion Date: 7/2008

Actual Completion Date: 7/2008

Amount of Claims: \$0

Any Litigation? Yes  No

**Form B**

**PROJECT DESCRIPTION**

**Name of Proposer: Flatiron-Drill Tech, a Joint Venture**

Instructions for Form completion: Form B is limited to a maximum of 3 pages for each completed project.

**Name of Firm: Drill Tech Drilling & Shoring, Inc.**

Project Role: Retaining wall designer and constructor under subcontract to Kiewit

Principal Participant: \_\_\_\_\_ Designer: Drill Tech Drilling & Shoring, Inc.

Other (Describe): Major Subcontractor: Drill Tech Drilling & Shoring, Inc.

Years of Experience (provide length of activity as it relates to the following three elements):

Roads/Streets: 4 Bridges/Structures: 4 Utility Relocations: \_\_\_\_\_

**Project Name, Location, and Nature of Work for Which Company Was Responsible:**

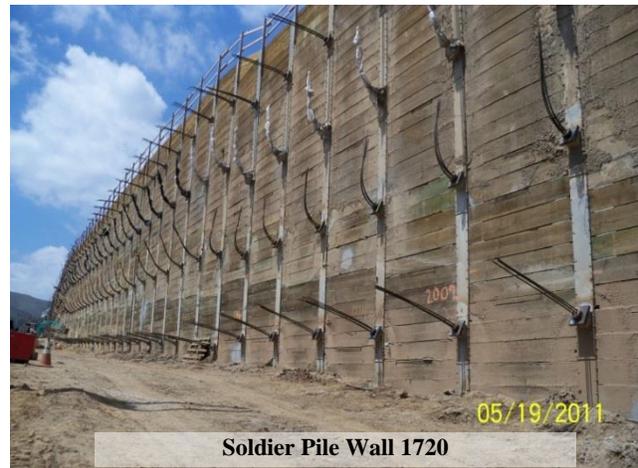
**I-405 Sepulveda Pass Widening – Los Angeles, CA (\$41M)**

Drill Tech designed and constructed 500,000 SF of sculpted soil nail walls, 100,000 SF of permanent soldier pile and tieback walls, 20,000 SF of temporary soldier pile and tieback retaining walls and 45,000 SF of temporary soil nail shoring.

**Provide Project Description and Describe Site Conditions:**

The 405 Sepulveda Pass Project, is considered one of the largest anchored retaining wall projects ever constructed in California, with well over 1,000,000 feet of drilling, mostly in rock.

The overall project is part of a \$1B design build highway widening project led by prime contractor Kiewit, who initially subcontracted with Drill Tech to design and build 800,000-sf of soil nail walls. During the course of the design, it was discovered that several of the walls were situated in landslides, which led to a dramatic increase in the scope of the soil nail and tieback drilling. During the design phase, the owner (the Metropolitan Transportation Commission with Caltrans oversight) and Kiewit also decided to change two massive counterfort walls to soldier pile and tieback walls, which were then designed and built by Drill Tech.



Total Quantities:

Soil Nail Walls	500,000-sf
Soldier Pile & Tieback Walls	100,000-sf
Tiebacks installed	2,500 ea
Soil Nails Installed	1,000,000 feet

**Relevance to Scoring Criteria Identified in RFQ Section 3.5.1:**

**3.5.1.A** – Similar to the Hwy 140 project, the initial phases of excavation and construction at the top of several of the walls involved high reach drilling off of very narrow benches. Soil nails up to 100 feet long were drilled and installed 20 feet above a 12 foot wide working bench. Other drilling in even more precarious areas was accomplished with crane basket drills. During peak construction in 2010 and 2011, Drill Tech had 11 drill rigs working on the project. The retaining wall heights on the project ranged up to 95 feet tall. The overall scope, size and complexity of the retaining wall work on the 405 project is significantly greater than the Ferguson Landslide.

**3.5.1.B** – Drill Tech managed to stay ahead of the general contractor (Kiewit) for the entirety of the 5 years spent working on the project, such that Drill Tech never impacted the critical path schedule despite working in over a dozen locations on critical path items.

Drill Tech worked tirelessly for years to develop wall concepts and designs to minimize the cost of the project. While Drill Tech’s contract more than doubled during the project, all of the growth was attributable to added scope such as new walls and deeper drilling to handle unforeseen landslides.



**Soldier Pile Wall 1730**



**Soil Nail Wall**

**3.5.1.C** – There was no Drill Tech issue that was submitted to a DRB, and there was no arbitration or litigation.

**3.5.1.D** – Drill Tech designed the soil nail and soldier pile and tieback walls on the project, all of which have performed flawlessly, and coordinated the efforts of up to 11 different drill rigs working in up to 6 different locations at the same time over 8 miles of highway. Drill Tech worked over 200,000 man hours on the project with only one lost time injury (and that injury did not require hospitalization).

**3.5.1.E** – On the 405 project, Drill Tech integrated our design work with Kiewit, Kiewit’s consultants HNTB and Kleinfelder, Caltrans, the MTA and the City of Los Angeles. The number of stakeholders and layers of review for the designs and construction processes exceeded any other project that Drill Tech has ever participated in.

**3.5.1.F** – Drill Tech developed multiple innovative designs, both on the soldier pile walls and the soil nail walls, to accelerate and protect the traveling public. The traffic on the 405 is legendarily bad (hence the need for the \$1B project), so the work had to be completed without restricting the existing travel lanes.

Using specialized equipment, Drill Tech was able to start the top down walls up to 100’ above the freeway, with only minimal benches without having to take a lane. **The soldier pile walls designed and built by Drill Tech in lieu of the original counterfort walls saved over \$10M and months on the schedule, as well as saving a lane reduction on Sepulveda Blvd that would have lasted over a year.**

**Dispute Review Board (DRB) History/Partnering Evaluation Summary:**

There were no Drill Tech related disputes brought to the DRB for this project. The project completed with zero claims.

**List Any Awards, Citations, and/or Commendations Received for the Project:**

None Received

Name of Client (Owner/Agency, Contractor, etc.):

Kiewit Pacific Company

Address: 2501 North Sepulveda

Los Angeles, CA 90049

Contact Name: Kyle Nakamura

Telephone: (310) 846-2400

Owner’s Project or Contract No.: C0882

Fax No: (310) 846-2405

Contract Value (US\$): \$17,581,873.00

Final Value (US\$): Approx. \$41,000,000\*

*\*All change orders were for additional scope of work requested by the design-build general contractor (Kiewit). There were no claims against the owner. Major additional items included the two permanent soldier pile walls requested in lieu of counterfort walls (\$10M), temporary soldier pile and tieback shoring at bridge widening (\$2M), additional drilling due to discovered landslide conditions (\$5M) and additional high reach walls (\$2M).*

Percent of Total Work Performed by Company: 100%\*\*

Commencement Date: 8/2009

Planned Completion Date: 6/2014

Actual Completion Date: 1/2014

Amount of Claims: \$0

Any Litigation? Yes  No

\*\*Subcontracted Total Work

**Form B**

**PROJECT DESCRIPTION**

**Name of Proposer: Flatiron-Drill Tech, a Joint Venture**

Instructions for Form completion: Form B is limited to a maximum of 3 pages for each completed project.

**Name of Firm: Drill Tech Drilling & Shoring, Inc.**

Project Role: Prime Contractor with Design Responsibility for Shaft and Tunnel Lining

Principal Participant: Drill Tech Drilling & Shoring, Inc. Designer: LADWP with soil nail wall, shaft ground support, and tunnel initial lining design by Drill Tech

Other (Describe): \_\_\_\_\_

Years of Experience (provide length of activity as it relates to the following three elements):

Roads/Streets: \_\_\_\_\_ Bridges/Structures: 2 Utility Relocations: 2

**Project Name, Location, and Nature of Work for Which Company Was Responsible:**

**Terminal Hill Shaft and Tunnel – Sylmar, CA (\$15.1M)**

Drill Tech was the prime contractor for this contract, awarded in October 2009 and completed in July 2011. The project consisted of excavation into a steep hillside with support by a design-build soil nail wall creating a portal for a 590’ long, 16’ diameter horseshoe tunnel, and a connecting 14’ diameter, 300’ deep shaft. Both the tunnel and shaft were classified “Gassy” by Cal Osha.

**Provide Project Description and Describe Site Conditions:**

Initial tunnel support was W6x25 steel ribs and shotcrete over wood lagging. The shaft was supported with liner plates. Tunnel mining was performed with a roadheader and shaft excavation was completed with a traverse cutting unit mounted in a custom built three deck shaft sinking Galloway. A final concrete lining was installed in the tunnel, followed by a 7-foot diameter welded steel pipe in the tunnel and shaft. The pipe in the shaft was concreted in place, and extensive pipeline work and concrete structures, including associated electrical and mechanical work, completed the project. The owner also issued change order to remove the existing, now bypassed, pipe that ran up the side of Terminal Hill. DTDS accomplished work with a combination of a crane and Erickson Sky Crane helicopter. The pipe placement work at the site was performed by Flatiron, working as a subcontractor to Drill Tech.



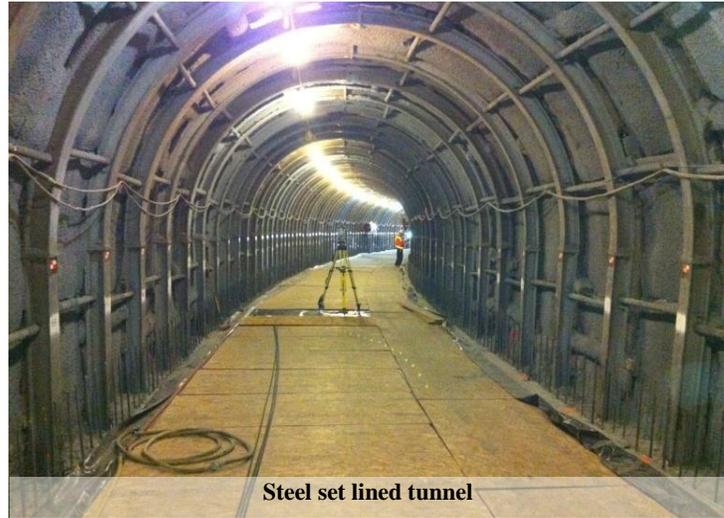
**Soil nail wall portal**

**Relevance to Scoring Criteria Identified in RFQ Section 3.5.1:**

**3.5.1.A** – The Terminal Hill project involved designing and installing a tunnel and shaft through a steep hillside in Gassy ground for LADWP, and then performing 24hr per day 7’ diameter pipe placements and tie ins, including heavy concrete work, during a short shutdown of the City of Los Angeles water supply.

**3.5.1.B** – Drill Tech completed the Terminal Hill project on time and far enough under budget that LADWP added the removal of the old pipe from the hillside to the scope to take advantage of the extra money available in the budget.

**3.5.1.C** – Drill Tech worked tirelessly to avoid delays, even when unanticipated conditions, such as rock that was more than twice as hard as anticipated, was encountered. All disputes over unanticipated conditions were resolved by partnering and did not rise to the DRB, let alone arbitration or litigation level.



**Steel set lined tunnel**

**3.5.1.D** – Drill Tech designed the portal walls, falsework, deep vault shoring, tunnel ground support and shaft ground support. Drill Tech also designed the tunneling equipment and ventilation system construction project in the gassy conditions. The tunnel was driven directly above the tunnel where the infamous Sylmar Tunnel disaster occurred in 1971, killing 21 men. While significant gas was encountered during tunneling, all safety systems worked as they were designed and the tunnel was completed without incident. Drill Tech had four registered civil engineers working on the project as well as numerous other highly experienced superintendents and craftsmen.



**Shaft Collar and installation of custom build shaft sinking platform**

**3.5.1.E** – Drill Tech integrated the work seamlessly with that of subcontractor Flatiron, owner LADWP, and Cal Osha, who was onsite almost constantly as the tunnel was advanced through the gassy ground that caused the 1971 methane explosion that was responsible for the creation of Cal Osha.

**3.5.1.F** – Numerous innovative solutions were used to accelerate the project, from the custom-built shaft sinking deck to the experimental expansive foam used to advance through hard rock. Drill Tech developed a plan in conjunction with Erickson Skycrane to remove the existing pipeline using helicopters for less than half the time and money of conventional means. While the project was not adjacent to the traveling public, traffic was immediately adjacent and then tied into the pipeline that supplies drinking water to the City of Los Angeles. All work, including drilling, tunneling, crane lifts, shoring and helicopter lifts were planned so as not to compromise the existing pipeline.



**Roadheader Tunneling**

**Dispute Review Board (DRB) History/Partnering Evaluation Summary:**

There were no disputes brought to the DRB for this project. The project completed with zero claims.

**List Any Awards, Citations, and/or Commendations Received for the Project:**

None Received

Name of Client (Owner/Agency, Contractor, etc.):

Los Angeles Department of Water and Power

Address: City of Los Angeles, 111 North Hope St., RM 1315, Los Angeles, CA 90012

Contact Name: Russell Pierson

Telephone: (213) 367-0878

Owner's Project or Contract No.: 7112

Fax No: N/A (russell.pierson@ladwp.com)

Contract Value (US\$): \$14,120,560

Final Value (US\$): \$15,140,700\*

*\* Major change orders for additional scope included \$600K for removing existing pipeline from the hill after the new pipeline was operational, and \$200K in resolving conflict with unforeseen utilities owned by MWD.*

Percent of Total Work Performed by Company: 90%

Commencement Date: 12/2009

Planned Completion Date: 7/2011

Actual Completion Date: 7/2011

Amount of Claims: \$0

Any Litigation? Yes  No

## Section 4. Firm Experience and Past Performance



### Summary of Claims

Project Name	Claims
Big Bear	0
Lenihan Dam	0
I-15 Managed Lanes	0
Carquinez Suspension Bridge	0
Eastern Transportation Corridor	0
Highway 140 – El Portal Road	0
Devil's Slide, Highway 1	0
BNSF Cajon Pass, 3 <sup>rd</sup> Main Track	0
I-405 Sepulveda Pass Widening	0
Terminal Hill Shaft and Tunnel	0

There were no claims on the above referenced projects.

# Section 5 Proposer Key Personnel



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Calaveras Dam Replacement Project for SFPUC.  
Aerial view of extensive excavation process.

**Form D**

**PROPOSED KEY PERSONNEL INFORMATION**

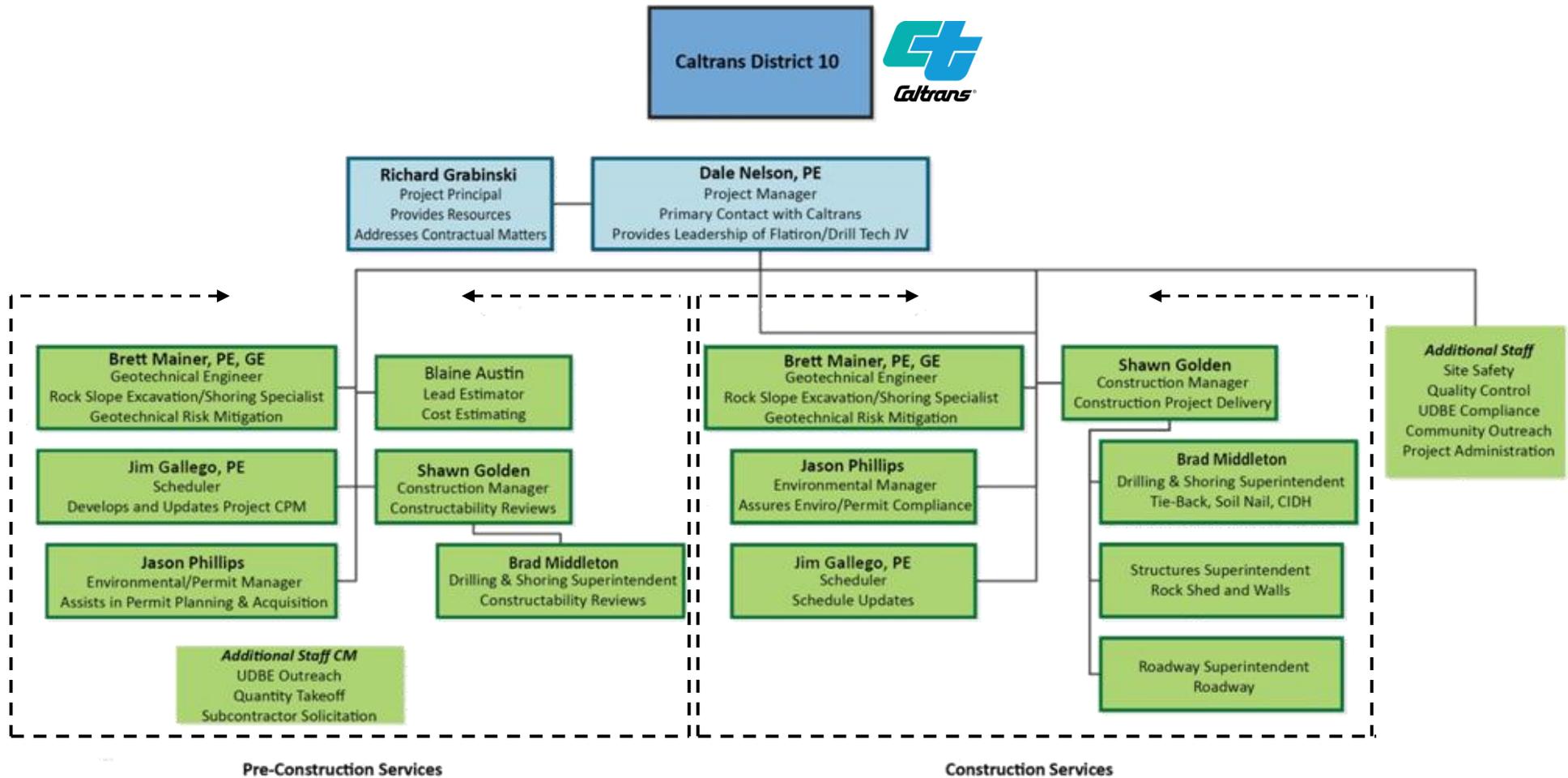
Name of Proposer Flatiron/Drill Tech, a Joint Venture

Instructions for Form completion: Responses shall be addressed within the table below. Should additional space be needed to adequately respond, Proposer is advised to increase the number of lines within the table as appropriate. Form D has no SOQ page limitation. [Note to Drafter: Edit positions for Project, refer to Section 3.6.1.]

<b>Position</b>	<b>Name</b>	<b>Years of Experience</b>	<b>Education and Registrations</b>	<b>Parent Firm Name</b>
Project Principal	Richard Grabinski	22	B.S. Civil Engineering, Santa Clara University, Santa Clara, CA. 1991	Flatiron West, Inc.
Project Manager	Dale Nelson, P.E.	20	B.S., Civil Engineering, California Polytechnic University, Pomona, CA, 1994 Professional Engineer #59133	Flatiron West, Inc.
Project Construction Manager	Shawn Golden	20	B.S. Civil Engineering, Rose-Hulman Institute of Technology, Terre-Haute, Indiana, 1998	Flatiron West, Inc.
Lead Estimator	Blaine Austin	25	B.S. Construction Management, Fresno State University, Fresno, CA. 1988	Flatiron West, Inc.
Scheduler	James Gallego, P.E.	27	B.S., Civil Engineering, Texas A&M University. 1987 Professional Engineer #55575	Gallego Consulting Services, Inc.
Environmental Manager	Jason Phillips	10	B.S., Biology (Ecology), San Francisco State University, San Francisco, CA. 2002 M.S., Environmental Management (Wetland and Watershed Management), University of San Francisco at San Francisco, CA. 2006	Flatiron West, Inc.

<b>Position</b>	<b>Name</b>	<b>Years of Experience</b>	<b>Education and Registrations</b>	<b>Parent Firm Name</b>
Drilling and Shoring Designer & Methods Specialist	Brett K. Mainer, P.E.	20	B.S. Civil Engineering UC Davis 1994 M.S. Geotechnical Engineering UC Davis 1998 Professional Engineer #58095 Geotechnical Engineer #2682	Drill Tech Drilling Shoring, Inc.
Drilling and Shoring Superintendent	Brad Middleton	19	<ul style="list-style-type: none"> <li>• Fall Protection Train the Trainer Certification</li> <li>• OSHA Certified Gas Tester</li> <li>• OSHA Certified Safety Representative</li> <li>• Certified Competent Persons, Confined Space Entry Procedure and Down Hole Entry</li> <li>• Qualified Trainer in Rigging and Signals</li> <li>• Certified CPR &amp; First Aid Trained</li> <li>• Certified Confined Spaces and Dangerous Places Trainer</li> </ul>	Drill Tech Drilling Shoring, Inc.

# Section 5. Proposed Key Personnel



# Section 5 Proposer Key Personnel



## Evidence of Ability to Meet License Requirement

There have been no revocations or suspensions of any licenses, credentials, or registrations required to design and construct the Project. All licenses will be renewed prior to their expiration dates.

### Flatiron West, Inc.

**Date Obtained:** 12/13/1999  
**Type:** California Contractor's License  
**CA License No.:** 772589  
**Classifications:** Class A, General Engineering  
**Issuing Agency:** Department of Consumer Affairs,  
Contractors State License Board  
**Expiration Date:** 12/31/2015



### Drill Tech Drilling & Shoring, Inc.

**Date Obtained:** 1/30/1999  
**Type:** California Contractor's License  
**CA License No.:** 745354  
**Classifications:** Class C61/D30, Limited Specialty Classification/Pile Driving and Pressure Foundation Jacking  
Class A, General Engineering  
Class C57, Water Well Drilling  
Class HAZ, Hazardous Substance Removal Certification  
**Issuing Agency:** Department of Consumer Affairs,  
Contractors State License Board  
**Expiration Date:** 1/31/2014



## Professional Engineers

### Dale Nelson, PE

**Date Obtained:** 1999  
**Type:** California Professional Engineer  
**CA License No.:** 59133  
**Classifications:** Civil Engineer  
**Issuing Agency:** Board for Professional Engineers and Land Surveyors  
**Expiration Date:** 6/30/2015

### James Gallego, PE

**Date Obtained:** 2006  
**Type:** California Professional Engineer  
**CA License No.:** 55575  
**Classifications:** Civil Engineer  
**Issuing Agency:** Board for Professional Engineers and Land Surveyors  
**Expiration Date:** 12/31/2014

### Brett K. Mainer, PE

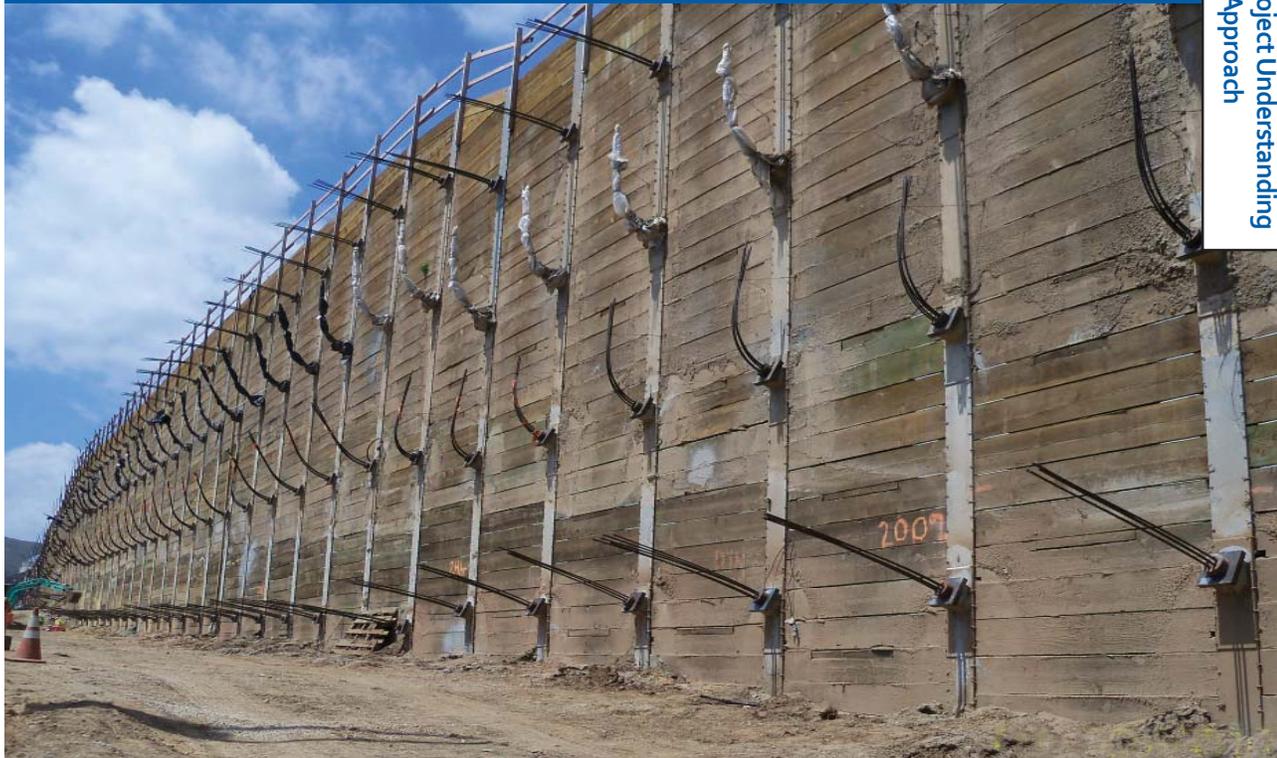
**Date Obtained:** P.E.: 1998  
G.E.: 2005  
**Type:** California Professional Engineer  
California Geotechnical Engineer  
**CA License No.:** P.E.: 58095  
G.E.: 2682  
**Classifications:** Civil Engineer, Geotechnical Engineer  
**Issuing Agency:** Board for Professional Engineers and Land Surveyors  
**Expiration Date:** 6/30/2014

# Section 6

## Project Understanding & Approach



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Section 6 - Project Understanding & Approach

I-405 Sepulveda Pass Project for Caltrans [2009-2013]  
\$41 M DTDS contract included 500,000-sf of sculpted soil nail walls; 100,000-sf of permanent soldier pile and tieback walls; 20,000-sf of temporary soldier pile and tieback retaining walls; and 45,000-sf of temporary soil nail shoring.

### PART A – Project Scope

#### A.1. Background

The project is located on SR 140 in the Merced River Canyon between Mariposa and Yosemite National Park, west of the South Fork Merced River Bridge. It is located within the limits of an active, complex rockslide known as the Ferguson Rock Slide. In 2006, the Ferguson Rock Slide completely covered the highway with over 20 feet of debris.

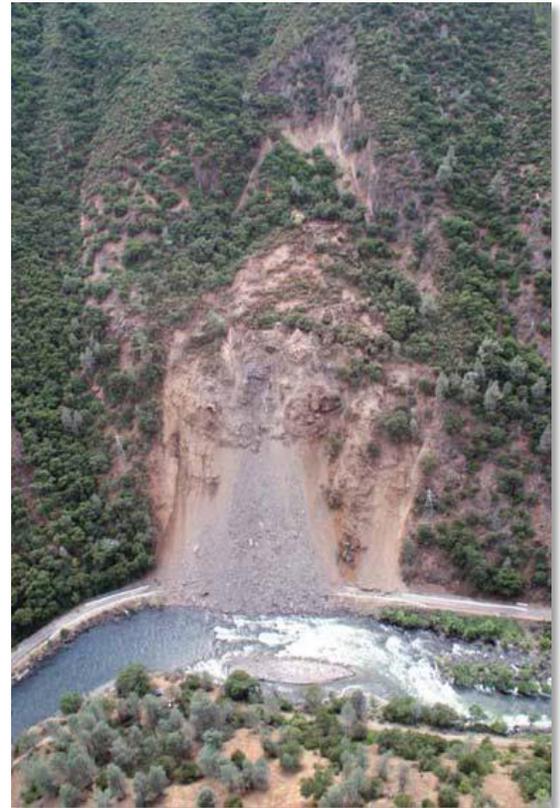
Within the limits of the proposed project, State Route 140 was a two-lane, undivided highway. Currently, a temporary one-lane by-pass with a maximum vehicle length of 45 ft. is in service to route traffic around the rock slide.

#### A.2. Project Local and Regional Significance

SR 140 is an east/west corridor that begins at Interstate 5, west of the city of Gustine in Merced County and terminates at Yosemite National Park near El Portal in Mariposa County. It is a two-lane, year-round, conventional highway. Its primary uses are interregional travel with an emphasis on recreational and commute traffic.

SR 140 is an important part of the state highway system with both regional and national significance for the following reasons:

- SR 140 is the preferred route into Yosemite National Park. It is the most accessible route with gentler curves and grades than the alternate routes, and remains open year round. The alternate routes, SR 120 and 41, are often blocked by heavier snowfalls during the winter months
- Within the project limits, the highway traverses mountainous terrain within the Merced River Canyon, paralleling the Merced River. SR 140 is a designated State Scenic Highway, and the Merced River is a nationally designated Wild and Scenic river.
- Yosemite National Park and communities in Mariposa County rely heavily on SR 140 for many types of transportation that serve tourism and residents of the area.
- SR 140 is a critical component to the economy of Mariposa County. A significant portion of the local businesses community is dependent on tourist and recreational traffic that use SR 140.



#### A.3. Project Purpose & Need

The purpose of the project is to reopen and restore SR 140 to a full two-lane highway throughout the project limits, and to remove the temporary detour constructed in 2008. The need for the project is obvious and is driven by a variety of factors. These include the following:

- The existing bypass is a one-way detour with restricted vehicle lengths, resulting in extended commute times and increased response times for emergency vehicles.
- Restoration of the highway will improve access to Yosemite National Park, by reducing the commute time through the temporary by-pass and eliminating the need to use longer, alternate routes.
- The existing bypass was constructed during a declared emergency and was designed as a temporary solution to the closure of State Route 140.
- The existing bypass is vulnerable to future slide activity and flooding of the Merced River. Either event could result in a full closure of SR 140 and the consequent detrimental impacts to the area.

### **A.4. Project Elements**

The project proposes to restore SR 140 to a two-lane highway through the project limits by construction of a rock shed on the existing alignment currently under slide debris. The project will use a construction manager/general contractor (CMGC) project delivery method. This method involves the participation of a CMGC as a member of the Project Development Team during the planning and design phases of a project.

The major elements of the project to be discussed in this section are as follows:

- CMGC Project Delivery Method, with full participation by the CMGC in the design development
- Construction of New Rock Shed and Restoration of full service on SR 140
- Project Schedule and Constraints

### **CMGC Project Delivery Method**

The project requires the participation of the CMGC in the design development of the project, known as the Plans, Specifications, and Estimate (PS&E) component of the Caltrans project life cycle. The CMGC will participate in the PS&E component through a series of defined tasks and deliverables. The culmination of the PS&E process will result in a final negotiated construction contract

This project is well suited to the CMGC project delivery method. The project entails many risks and challenges. Acting in the CMGC capacity, the Flatiron/Drill Tech JV is well suited to help address these challenges through our experience and unique capabilities. Some specific challenges and concerns include the following:

- Schedule - State Assembly Bill 1973 allows the incidental take on the Limestone Salamander, a state protected species. This Bill requires that construction begin no later than January, 2016. In order to achieve this requirement, an accelerated project delivery schedule is required. The CMGC delivery method, coupled with the JV's experience, will help ensure the project begins and completes on time.
- Project Stakeholders – There are many federal, state, local agencies, private groups, and other stakeholders with a vested interest in the delivery of this project. They all have a high expectation for detail in regards to construction means and methods, access, and sequencing. The Flatiron/Drill Tech JV will be a critical member of the project team in developing these details and coordinating with all project stakeholders.
- Constructability Reviews and Safety Plans – The excavation of the slide talus and construction of the rock shed will be a difficult and complex process. The expertise and capabilities of the JV will prove invaluable in the design process to ensure the project will be constructed and maintained safely, economically, and to the desired level of quality.

### **Construction of New Rock Shed & Restoration of Full-Service on SR 140**

The major construction phases of the project include the following:

- Excavation and Removal of the Slide Talus and Temporary Shoring
- Construction of Rock Shed
- Cut-Over to restored alignment and removal of temporary detour

### **Excavation and Removal of Slide Talus and Temporary Shoring**

This phase of the project is the most important, and the most challenging. Protecting the work area from the rock slide above the project site is the highest priority and first order of major construction work on the project. It will require careful attention during the design phase, with significant input from the CMGC on the means and methods of construction. The Flatiron/Drill Tech JV's general approach is described below.

- After establishing the appropriate environmental controls to protect the Merced River from the work, the stability of the precarious rocks above the project site will be checked and scaled as needed with high scalers and controlled blasting if needed. If not currently in place, slide monitoring equipment will be installed.
- A road will then be pioneered up the slide to approximately the mid-point of the slide with a small



A JOINT VENTURE

dozer. A rock fall protection system consisting of anchored soldier piles and cable netting will be installed as the road is built.

- After the initial rock fall protection system is installed, slide talus removal will proceed down the slope. A similar bench and rock fall protection system would be constructed approximately 10 feet behind the catch point of the back wall of the rock shed.
- After these safety measures are in place, the temporary soil nail wall supporting the main excavation will begin. Another rock fall protection system will be installed in the top of the temporary soil nail wall. It will consist of steel members embedded into a shotcrete parapet and netting. Drill Tech has successfully used variations of this system on several other similar sites.
- The soil nail and shotcrete shoring wall would then be constructed from the top down, with an emphasis on getting one half of the wall down first so the rock shed foundation work could begin and be performed concurrently with the remainder of the shoring wall.

### Construction of Rock Shed

The three major elements of the rock shed construction are the CIDH foundations, tiebacks, and the large concrete rock shed structure. The Flatiron/Drill Tech JV excels at all three.

The foundation for the rock shed is anticipated to be CIDH piles. The concept sketch also shows tiebacks anchoring the walls adjacent to the existing slope. Difficult drilling is anticipated for both. Drill Tech is one of the leading drilling and shoring contractors in the country, and specializes in providing innovative and unique solutions to difficult foundation problems. Drill Tech has successfully completed many very difficult projects of a similar nature, and will bring a unique understanding of this type of work to the project. Drill Tech has the personnel, equipment, and expertise to complete all of the foundation work.

The rock shed is anticipated to be a cast-in-place, reinforced concrete structure. The Flatiron/Drill Tech JV excels at this type of work. Flatiron is one of the leading contractors in California in the construction of large concrete structures and bridges. The rock shed is similar to a cut-and-cover tunnel. Flatiron has successfully constructed several large cut-and-cover tunnels in recent years on several projects.

A significant opportunity to mitigate both costs and several project risks as outlined in the project risk register is to crush the existing slide talus for use as fill, roadway aggregate, and concrete aggregate. Another opportunity that should be explored is to locate a portable concrete batch plant on or near the project. Both opportunities would have the following benefits:

- Reduce travel time for heavily loaded commercial trucks exporting and importing materials, thus reducing potential pavement damage, reducing traffic congestion, and improving air quality.
- Overall reduction in project material costs.
- Improved quality of aggregates and batched concrete.

### Cut-Over to Restored Alignment and Removal of Temporary Detour

Traffic staging to cut-over traffic to the restored alignment of SR 140 is simple, as the existing by-pass starts and ends on existing pavement on either side of the project limits. Once the rock shed is complete, traffic can be switched onto the restored alignment in a matter of hours.

Removal of the temporary detour involves removal of the temporary bridges and pavement sections on Incline road and both banks of the Merced River. This work will be completed after the existing alignment is re-opened. Coordination and staging of adjacent traffic during removal of the bridges, and working within the Merced River within allowable in-water work periods will be required.

# Section 6. Project Understanding & Approach



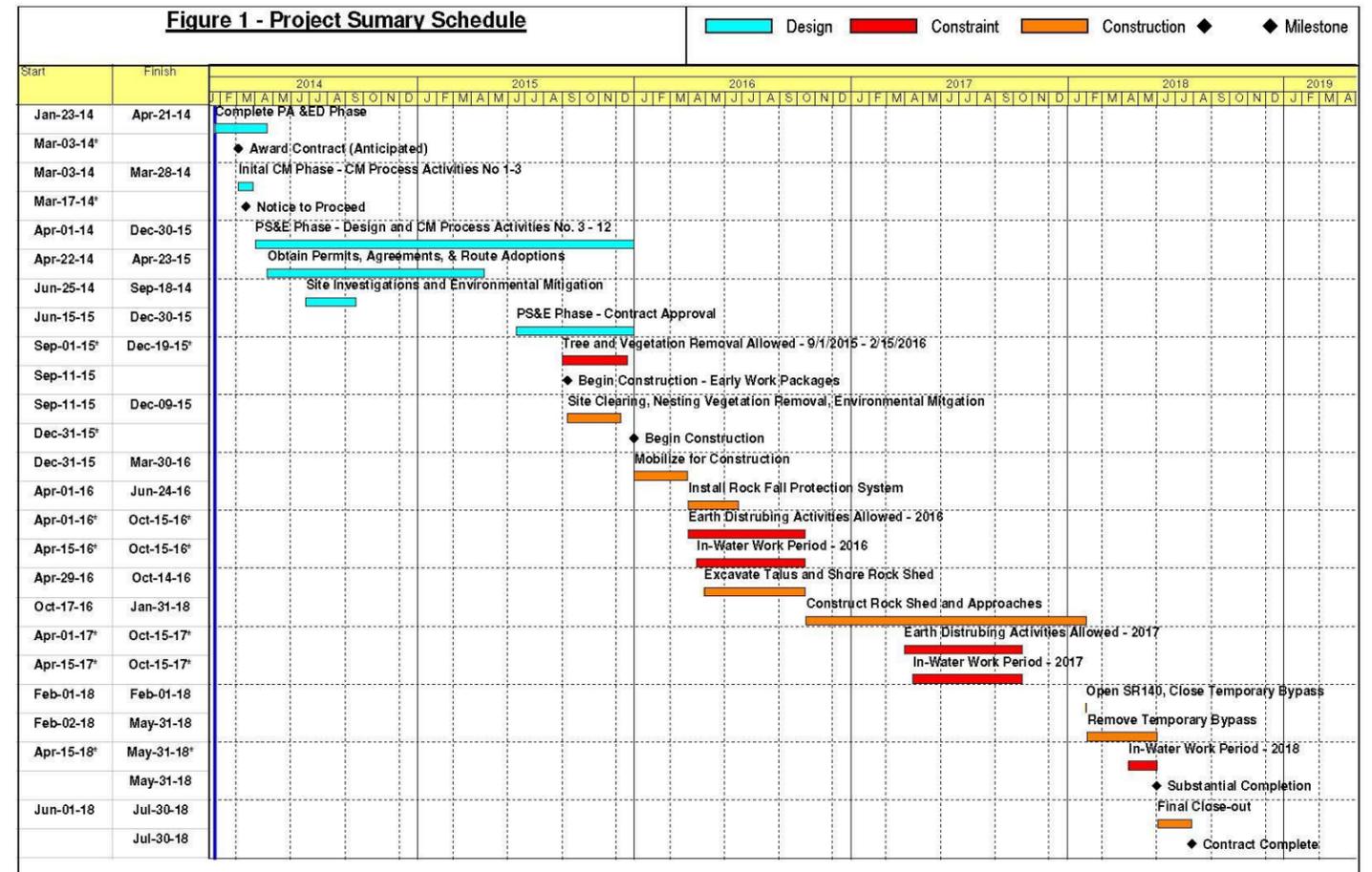
## Schedule

A summary schedule for the project is shown in Figure 1 to the right. This schedule includes activities for all of the major project elements. Known constraints are included as activities to illustrate the duration of the constraint. A significant advantage of the CMGC project delivery method is the opportunity to finalize a construction contract, and begin early phases of construction, prior to completion of design work. This is critical to meet the legislative requirements of State Assembly Bill 1973 to begin construction by January 2016. The JV's proposed project schedule begins site clearing and other early construction work by September, 2015.

Table 1A below summarizes the major project elements and their schedule effects.

## Project Constraints

Table 1B below summarizes the constraints on the project and their schedule effects. The potential schedule effects of several constraints are unknown and will need to be determined early in the design process



**Table 1A – Project Elements and Schedule Effects**

Project Element		Schedule Effect
CMGC Project Delivery		Accelerates project delivery, allows early construction work prior to completion of the design phase.
Construction	Excavation and Shoring of Slide	Difficult Access, Slow Production increases schedule durations
	Construction of Rock shed	Limited Access restricts production, increasing schedule durations
	Cut-Over to New Alignment	Normal durations expected
	Removal of Temporary Detour	Limited by in-water work window for removal of bridge abutments
Project Constraints		See Table Below

**Table 1B - Project Constraints and Schedule Effects**

Constraint	Description	Schedule Effect
Merced River - Designated Wild and Scenic River	The Merced River is immediately adjacent to the project site.	In-water work will be restricted to April 15th through October 15th. Additional restrictions for coordination of recreational use are unknown at this time.
Rare and Endangered Plant Species	There are several rare plant species within the project limits.	None
Sensitive & Protected Animal Species	Limestone Salamander	The project is in an area of active habitat for the endangered Limestone Salamander.
	Hardhead Fish	Hardhead fish could be present in the Merced River within the project area
	Foothill Yellow Legged Frog	Surveys were not conducted. Pre-construction field surveys will be required
	California Ringtail Cat	
	Pallid Bat & Western Red Bat	Compensatory mitigation for oak woodland would benefit these species and no other constraints are identified. Pre-construction field investigation may be required.
Migratory Birds	The project contains nesting habitat for birds protected by the Migratory Bird Act. Pre-construction surveys will be required. Removal of nesting habitat allowed from Sept 1 to Feb 15.	If nesting habit is removed prior to start of construction - none. If active nests are discovered during construction, schedule impact could be significant
Remote Location	The project is located in a remote region. Equipment, materials, and experienced labor crews will have to be mobilized from the surrounding areas.	None
Limited Access & Difficult Terrain	The project site consists of steep, in-accessible rock slopes on one side, and the Merced River on the other. Access is only available from each end of the slide.	Productivity rates will be lower. The construction schedule will reflect this fact.
Active Rock Slide	The existing rock slide is active. Means and methods must be developed to construct the rock shed while protecting construction personnel from the potential of falling rock debris	Additional design and construction activities for rock fall protection and slide monitoring. Increased construction durations for installation of same.

## Part B – CMGC Approach

### B.1. Joint Venture’s CMGC Philosophy & Approach

#### CMGC Project Delivery Method

The Flatiron/Drill Tech JV has extensive experience in traditional bid-build, design-build, and CMGC projects. This varied project experience allows us to develop and implement an effective approach to the project. The benefits accrued to Caltrans from the JV’s experience and CMGC Approach will include the following:

- Caltrans will maintain control of the project delivery and design process. The CMGC method allows the use of Caltrans’ normal, well-structured project delivery system and its design and project management resources. Only minor modifications to the Caltrans project delivery system are necessary, as outlined in **Section B.2**
- The scope and quality of the project will be maximized within the limits of its budget.
- The project can be fast-tracked, with project design and construction activities sequenced to meet the project schedule goals.
- It allows for the early identification and mitigation of project risks, and a fair allocation of these risks.
- It allows the use of a negotiated construction contract with the potential for both formal contingencies to address project risks and equitable means for the sharing of any cost savings.
- It brings the experience and perspective of an experienced and innovative construction team into the design phase, resulting in a more cost effective design, shorter delivery schedule, and higher quality.
- It encourages a collaborative and team-oriented approach between the project owner and contractor.

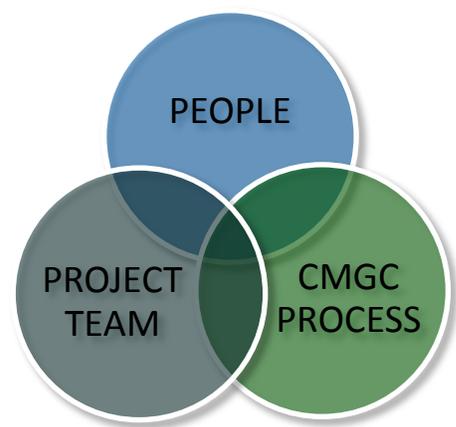
#### CMGC Approach & Philosophy

The Flatiron/Drill Tech JV’s philosophy for all types of projects is based on a few simple premises:

- People perform the work and determine the success or failure of a project.
- People implement the policies, procedures, and processes involved in any project delivery system, and perform all of the tasks required by them.
- Complicated projects require integrated and effective teams. People function best in a collaborative and integrated team environment with clear and effective communication among team members.
- People either celebrate the success of a project, or suffer its failure.

Our CMGC approach is based on providing the resources and environment for people to succeed. It consists of three main elements:

- **People** - Assemble the most experienced, knowledgeable, and suitable CMGC team from both internal and external sources
- **Project Team** - Integrate the CMGC team fully with the Caltrans project delivery team and ensure continuity of the team through the preconstruction and construction phases
- **CMGC Process** - Utilize a proven and effective preconstruction process that incorporates state-of-the-art tools and techniques, and integrate them into the Caltrans project delivery system.



#### **People**

The Flatiron/Drill Tech JV has assembled a strong and experienced team that will provide the knowledge and leadership necessary to ensure the success of this project. **Section 5** includes the information for the key personnel to be assigned to this project.

## Project Team

The success of the CMGC approach is dependent on building an integrated project team of experienced professionals that collaborates frequently and communicates clearly and effectively. The formal Caltrans partnering process is an excellent tool to ensure this outcome. It provides the means and processes necessary to build and maintain strong project teams.

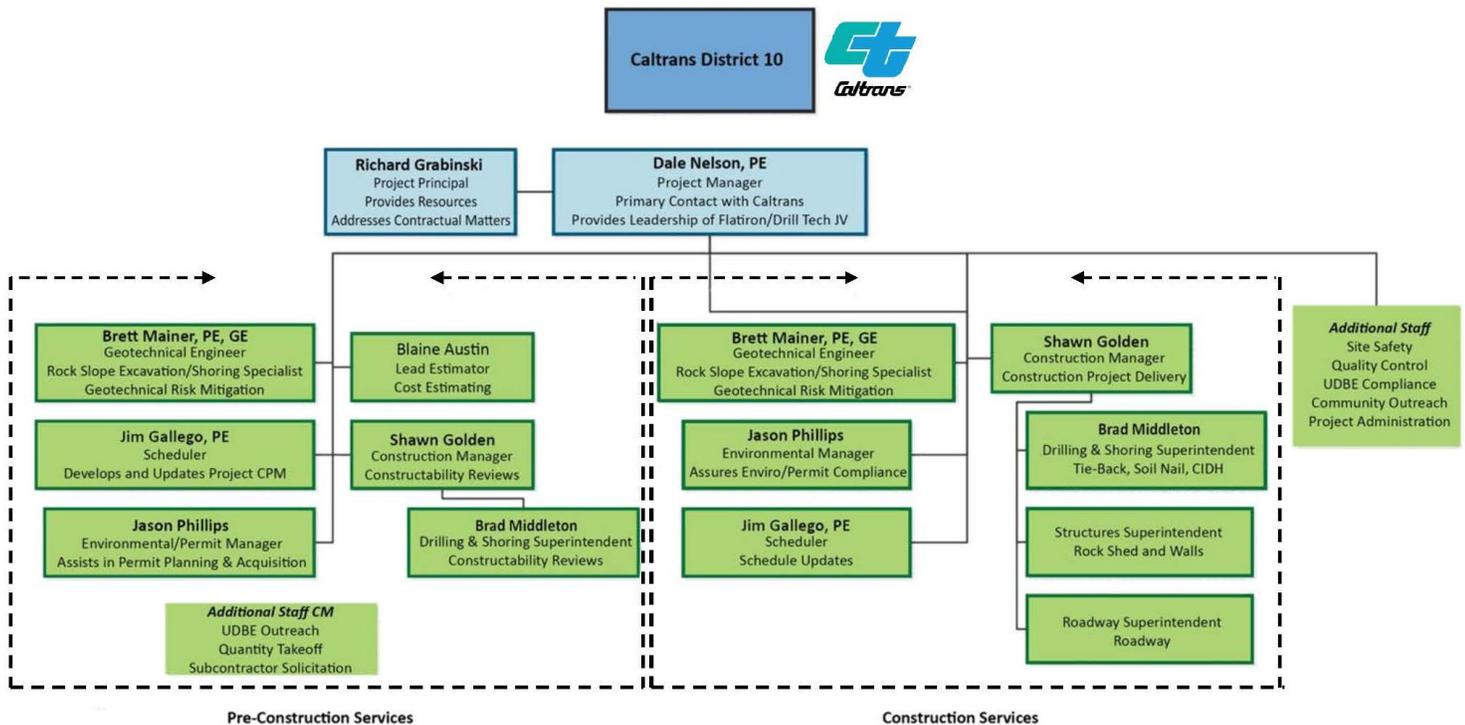
### Partnering

The Flatiron/Drill Tech JV is highly experienced, and greatly successful in the Caltrans partnering process. We are excited and fully committed to implementing and participating in partnering for this project.

**Project Executive Richard Grabinski is a member of the Caltrans Construction Partnering Steering Committee. He is also on the Board of Advisors for the International Partnering Institute.** Flatiron is committed to an active and productive Partnering environment. Partnering requires a commitment by all stakeholders to work together to achieve common goals. Flatiron recommends partnering workshops be held each quarter. During the first partnering workshop all key personnel, executives, and project stakeholders should attend. The Partnering Agreement will include processes for integrating the team during the preconstruction phase and resolving disputes during construction of the Project. Follow-up partnering sessions will be held at regular intervals throughout the Project, and anonymous questionnaires will be distributed to rate the effectiveness of the program and continuously improve the process.

### Team Integration

Integration of the Caltrans project delivery team and the CMGC organization will be accomplished through the partnering process and the development of a complete project organizational chart and communication plan. The Flatiron/Drill Tech JV CMGC Organizational Chart is shown below. This Organizational Chart and a formal communication plan will be fully detailed and developed during Task 1 and the partnering process.



## CMGC Process

The Flatiron/Drill Tech JV's CMGC Process consists of a set of proven, effective, and inter-related activities performed in conjunction with, and integrated into, a project's design and construction phases. These activities are designed to maximize the potential for project success. They are outlined in detail in the following section.

### B.2 CMGC Process Activities

The Flatiron/Drill Tech JV will use a number of CMGC activities throughout the duration of the project. These activities are inter-active and inter-dependent. Many span the entire lifecycle of the project. These activities will be integrated with the Caltrans project delivery system through the partnering process, the CMGC preconstruction plan, and an integrated project delivery schedule. **Table 2** on page 6-11 is a summary of the CMGC activities to be used on the project and the required deliverables for each activity, referenced to the Task Listing in the pre-construction services contract. Our proposed methodology for integrating the Flatiron/Drill Tech JV Team and our Key Personnel into the CMGC process is as follows:

#### **CMGC Process Activities:**

- |                                             |                                                     |
|---------------------------------------------|-----------------------------------------------------|
| 1 - Formal Partnering                       | 7 - Development of Subcontracting Plan              |
| 2 - CMGC Preconstruction Plan               | 8 - Development & execution of early work packages. |
| 3 - Project Evaluation and Delivery Plan    | 9 - Risk Management                                 |
| 4 - Integrated Project Delivery Schedule    | 10 - Develop Project Construction Management Plan   |
| 5 - Design Phase (PS&E) reviews and updates | 11 - Establish Final Construction Contract          |
| 6 - Project improvements and enhancements   | 12 - Transition to Construction Phase               |

#### **1) Formal Partnering**

Partnering is one the most important CMGC processes. Project Principal Richard Grabinski will bring his extensive Partnering experience and leadership to the project to ensure the entire CMGC Team is fully integrated and taking advantage of all the benefits formal Partnering has to offer. It is critical to the success of the CMGC project delivery method. The Flatiron/Drill Tech JV's partnering commitment and success will be invaluable to this project.

#### **2) CMGC Preconstruction Plan**

In collaboration with the current Caltrans Project Development Team (PDT), Project Manager Dale Nelson will create a comprehensive plan for all preconstruction activities to be utilized, including specific activities and tasks to be performed by the CMGC. The plan will be memorialized in the Preconstruction Services Contract, an updated project work plan and an integrated project delivery schedule. Sufficient flexibility will be included in the plan to explore critical and potentially beneficial elements as they are developed in other CMGC activities.

#### **3) Project Evaluation and Delivery Plan**

The maximum benefit from the CMGC project delivery method is incurred by early involvement of the CMGC. The greatest opportunity to minimize costs, improve schedules, and reduce risks is in the initial design stage of a project. The following tasks are included in the Project

#### **Recent Project Partnering Awards**

- AGC California – Marvin M Black Excellence in Partnering Award, 2010
- AGC California – Excellence in Partnering, Projects under \$50 Million, 2010
- International Partnering Institute, Partnered Project of the Year, Ruby Level, 2010
- AGC California, Excellence in Partnering, Projects over \$50 Million, 2010
- 2011 John L Martin Partnered Project of the Year, Diamond Award, 2011
- Caltrans Partnering in Motion, Gold, 2011
- AGC California, Excellence in Partnering Finalist, Projects Over \$50 Million, 2012
- AGC California, Marvin M Black Excellence in Partnering Award, Special Recognition, 2012
- International Partnering Institute, Partnered Project of the Year, Diamond Level, 2012

Evaluation and Delivery Plan and should be completed by the integrated Caltrans PDT/CMGC team prior to launching the PS&E phase of the project:

- Review initial design in the Final Project Report
- Perform a formal Value Engineering study to develop improvements and alternatives that are consistent with the approved initial design.
- Using the recommendations of the Value Engineering study, develop an Innovation management plan and develop an Innovation register for use in subsequent CM/GC processes.
- Develop an initial integrated project delivery schedule
- Develop overall design strategy, sequence, and integrated schedule milestones. Develop strategies to allow preconstruction field work, as well as early construction and procurements packages.
- Develop an initial project cost estimate and cost model
- Develop and/or update the current project risk register

CMGC Project Manager Dale Nelson, in collaboration with the Department, will utilize all the members of his Preconstruction Service Team for this activity including Key Personnel: Blaine Austin - Lead Estimator, Shawn Golden – Construction Manager, Jim Gallego – Scheduler, Jason Phillips – Environmental Manager, Brett Mainer – Geotechnical Engineer and Rock Slope Excavation/Shoring Specialist.

#### 4) Integrated Project Delivery Schedule

A key element in a successful CMGC project is a fully integrated project delivery schedule. This schedule will incorporate all important elements of the Caltrans project delivery system, the pre-construction activities, tasks, and deliverables outlined in the CMGC Preconstruction Plan, as well as a proposed construction schedule. This schedule should include any site investigation work and the early construction packages and procurements identified as beneficial to the project. It will be updated regularly at predetermined intervals.

The initial integrated project delivery schedule developed as part of the Project Evaluation and Delivery Plan will be fully developed and finalized by the project team in a separate series of workshops and meetings. This schedule will serve as an integral part of the project delivery process for its' entire duration. An initial summary schedule for this project is included in **Section A** on page 6-4.

Scheduler Jim Gallego will lead the Flatiron/Drill Tech JV in the collaborative development, approval, and regular updating of the integrated project delivery schedule. The schedule will be developed and updated using our cloud based Enterprise version of P6 with multi-user capabilities. We have the expertise and capability to structure the schedule for multi-user access from anywhere with internet access, with controlled security and software privileges. This allows members of the PDT/CMGC team access to the schedule for a variety of functions, including view-only, activity updates, and full editing.

#### 5) Design Phase (PS&E) Reviews & Updates

Led by Dale Nelson and with input by all the members of the Preconstruction Service Team including Key Personnel: Blaine Austin - Lead Estimator, Shawn Golden – Construction Manager, Jim Gallego – Scheduler, Jason Phillips – Environmental Manager, Brett Mainer – Geotechnical Engineer and Rock Slope Excavation/Shoring Specialist, and Brad Middleton – Drilling and Shoring Superintendent, the JV will perform several reviews and updates during the PS&E phase of the project. These reviews will be performed at pre-determined milestones. These reviews and updates include:

- Design, Constructability, and Safety reviews
- Project cost estimate update
- Integrated project delivery schedule update
- Innovation plan and register update
- Project risk register update
- Quantity Reconciliations

Currently, the Caltrans project delivery process requires various reviews, including constructability, at the 30%, 60%, and 95% design levels. In order to take full advantage of the CMGC preconstruction process, the

Flatiron/Drill Tech JV proposes additional informal and collaborative reviews at the 75% and 90% design levels.

### **6) Project Improvements & Enhancements**

As an integral part of the PS&E Review and Update process, the Flatiron/Drill Tech JV will continue to develop cost saving strategies, schedule enhancements, value engineering ideas, risk reduction and mitigation strategies, construction staging plans, and other improvements to the project design and schedule. The project improvements and enhancements that result in the greatest benefit to the project should be finalized prior to the 90% design documents to allow for the negotiation of a final construction contract. All members of the JV's Preconstruction Services Team will continually work with the Department to ensure project improvements and enhancements are fully recognized and incorporated.

### **7) Development of Subcontracting and DBE Plan**

Concurrent with scope advancement will be the development of a subcontracting plan, including provisions for DBE participation. The Flatiron/Drill Tech JV will lead the effort in developing clear and biddable scopes of work for all subcontractors, informational workshops, and development of a DBE performance plans. Flatiron has developed and implemented successful DBE performance plans on a number of projects and Project Manager Dale Nelson will ensure SR140 results in similar success. Dale will ensure the Department's Office of Business & Economic Opportunity is consulted during this phase of the CMGC process.

### **8) Development & Execution of Early Work Packages**

The development and execution of early work packages is a key feature and benefit of the CMGC delivery method. It allows critical work items to begin prior to completion of all design work. Examples of these critical work items may include the following:

- Preconstruction field work - Potholing, geotechnical studies, control surveys, and installation of BMPS
- Construction Work - Site Clearing, demolition, and environmental controls and mitigation work
- Long Lead-time Procurement items

Currently, the JV has identified two critical early work packages that should be implemented for this project. These include site clearing/nesting vegetation removal, and environmental surveys/mitigation for rare and protected species. These activities are shown in the summary schedule on page 6-4.

Project Manager Dale Nelson will ensure that both the Pre Construction Service Team and the Construction Service Team are fully integrated and functioning during this critical stage in the project to capitalize on this key benefit to CMGC contracting. Construction Manager Shawn Golden will be able to efficiently organize and mobilize necessary resources to execute early work packages.

Additional early work packages will be identified in the Project Evaluation and Delivery Plan. Design, review, and procurement strategies and activities will be developed and implemented to allow release of these packages as soon as possible to shorten the overall project schedule.

### **9) Risk Management**

Risk Management is a key component of the preconstruction phase of a CMGC contract. It is necessary to realize the full benefits of the CMGC project delivery system. Led by Project Manager Dale Nelson, and drawing from the experience of his Preconstruction Services Team and later the Construction Services Team, risk management requires continually dialogue and communication with the Department. Every Team Member's concerns and input is essential to successful risk management and should be considered and evaluated. The Flatiron/Drill Tech JV's Risk Management Process is described in detail in **Section E**.

### **10) Develop Final Project Construction Management Plan**

The final Project Construction Management Plan will be substantially developed prior to the negotiation of the final construction contract. It will outline the management procedures to be used by both parties during

construction. It will be developed in collaboration with Caltrans to provide the maximum benefit to the project. The management plan will address the following areas:

- Project Safety
- Quality Control
- Public Relations and Outreach
- Environmental Management and Monitoring
- Work Planning
- DBE Utilization
- Transition to Construction Phases
- Scheduling

There are several reasons for developing the construction management plan in collaboration with Caltrans prior to the establishment of a final construction contract. These include the following:

- The necessary requirements for managing the construction of the project to meet all stakeholder needs and the project goals are clearly identified, scopes determined, and costs properly allocated.
- Management tasks and resources can be allocated among the project team members to maximize value and minimize costs.
- The potential to extend the collaborative nature and successes of the CM preconstruction phase will be increased.

Dale Nelson will ensure all required Key Personnel, as well as other JV Team members and their Caltrans counterparts and are fully coordinated in developing an approved Construction Management Plan.

### 11) Establish Final Construction Contract

One of the key benefits of the CMGC project delivery method is the ability to negotiate and finalize a construction contract while the design process is being completed. This contract negotiation process will supplement and/or replace the Contract Approval portion of the PS&E phase within the Caltrans project delivery system. Negotiations for the final construction contract will be finalized upon the following:

- 95% Design, Constructability, and Safety Review are complete
- The project risk register is substantially complete. This requires that risk mitigation and avoidance measures are incorporated into the 95% design and schedule, or risks are properly analyzed in accordance with the Risk Management plan.
- The Subcontracting Plan is complete, and the Small Business Performance plan is approved.
- The Project Construction Management Plan is substantially complete.

The negotiation of the construction contract will be an open book negotiation that entails sharing information provided by both the contractor and the Department, including all supporting background information, unit prices, quantities, scope and detailed pricing data. The Flatiron/Drill Tech JV, led primarily by Lead Estimator Blaine Austin, will work closely with the Department's Independent Cost Estimator (ICE) throughout this phase. Any divergence in opinions will quickly be resolved by Project Manager Dale Nelson and Project Principal Richard Grabinski.

### 12) Transition to Construction Phase

The transition to the construction phase will begin early in the design process with the early work packages, and will complete upon finalization of the final construction contract. In order to provide a smooth transition, Project Principal Richard Grabinski will ensure the Flatiron/Drill Tech JV will maintain the project team outlined in **Section 5** to maintain continuity of project knowledge and relationships built through the preconstruction process.

"During the CMGC process, Flatiron developed complex phasing plans to construct roundabouts in traffic without closing any traffic lanes down. Flatiron presented several value engineering ideas to the design team to assist CDOT in trimming costs to bring the project under budget. Their ideas on project phasing enabled CDOT to split the project into two GMPs and start project one's construction earlier than a typical low-bid project. I firmly believe that Flatiron's work, commitment, and effort in the CMGC design process enabled the successful delivery of the project."

~ Matt Figgs Project Manager I-70 Eagle Interchange Project– Colorado DOT

**Table 2 – CMGC Activity Deliverables and Contract Task No.**

No	Activity	Task No	Deliverable/CMGC Responsibility
1	Formal Partnering	3	1A. Partnering Charter/PP & ALL 1B. Communication Plan and Matrix/PM 1C. Dispute Resolution Ladder/PM 1D. Partnering Plan and Schedule/PM
2	CM/GC Preconstruction Plan	1	2A. Final Preconstruction Service Agreement/PM 2B. Project Management Plan with CMGC Activities/PM,CM 2C. Preconstruction Plan including tasks and deliverables/PM
3	Project Evaluation and Delivery Plan	1-8	3A. Review report on Final Project Report design/PM,CM,GE 3B. Value Engineering Study/PM,CM,LE,GE 3C. Innovation Management Plan and Register/PM 3D. Initial Integrated Project Schedule/SC 3F. Proposed design sequence and strategy/PM,SC 3G. Initial Project Cost and Cost Model/LE 3H. Project Risk Management Plan and Risk Register/PM 3I. Construction Management Plan for Early work packages/PM,CM
4	Integrated Project Delivery Schedule	7	4A. Final Integrated Project Delivery Schedule/SC 4B. Updates at milestones to be specified/SC
5	Design Phase (PS&E) reviews and updates	4,5,6,8	At design milestones to be specified: 5A. Design, Constructability, and Safety Reviews/All 5B. Project Cost Update/LE 5C. Updated Innovation Plan Report and Register/PM 5D. Scope Advancement and Quantity Reconciliation/LE (i) Quantity takeoffs (ii) Measurement and payment provisions for bid items (iii) Scope of work for subcontracting plan
6	Project Improvements and Enhancements	4,6,7	As determined by other CM processes.
7	Development of Subcontracting Plan	9	8A. Initial subcontracting plan/PM 8B. Final subcontracting plan/PM
8	Development and execution of early work packages	4,9,11	At design milestones to be specified/PM: 9A. Early Work Packages: scope of work, costs, schedule 9B. Early Work Package documents as required
9	Risk Management	5	10A. Updated project risk register at specified milestones/PM 10B. Others as determined by Risk Management Team/PM
10	Develop Project Construction Management Plan	n/a	11A. Project Construction Management Plan/PM,CM
11	Establish Final Construction Contract	12	12A. Final Construction Contract/PM,LE
12	Transition to Construction Phase	n/a	13A. Update to Partnering Plan/All

**CMGC Organizational Roles**

PP: Project Principal  
PM: Project Manager  
CM: Construction Manager

GE: Geotechnical Engineer  
EM: Environmental Manager  
LE: Lead Estimator

SC: Scheduler  
DS: Drilling & Shoring Supt.



Part C – CMGC Goals

CMGC Organization & Process Alignment with Project Goals

A project deemed successful is one that has achieved all of its primary goals. The CMGC project delivery system has many advantages and benefits, including the increased likelihood of achieving this outcome. There are two main reasons:

- The collaborative nature of the preconstruction process, and the active participation of the CMGC in the design phase, ensures that ownership and responsibility for achieving the project’s goals is shared.
- Strategies for achieving the project’s goals are built into the project delivery system at the beginning of the project, where they will have the greatest impact on the final product.

The Flatiron/Drill Tech JV’s CMGC processes are designed to maximize the benefits of the CMGC model. Table 3 outlines how our organization and our CMGC Process Activities align with the projects goals, maximizing the potential to achieve them.

Table 3 – Project Goals and CMGC Process Activities	
RFO Section 1.4.2 – Project Goals	Project Organization & CMGC Activity Contribution
<p><b>Safety:</b> Maintain safety of the traveling public and employees during construction of the project</p>	<ul style="list-style-type: none"> <li>• Initial Value Engineering/Value Analysis Study: Identify means and methods to safely construct the project and incorporate into the design</li> <li>• Design Phase reviews and updates: Perform joint safety reviews with Caltrans. Include JV safety managers in the review process</li> <li>• Risk Management: Include hazardous work items into risk management program to ensure the maximum level of attention is devoted to developing safe work plans. Include Flatiron/Drill Tech JV safety managers in risk management team</li> <li>• Project Construction Management Plan: Develop a project safety plan as part of the construction management plan. Include a full time project safety representative.</li> <li>• Continue the Flatiron/Drill Tech JV’s award winning safety program through the construction phase</li> </ul>
<p><b>Mobility:</b> Minimize impacts to the motoring public, businesses, and emergency services during construction of the project</p>	<ul style="list-style-type: none"> <li>• Project Evaluation and Delivery Plan: As part of the Initial Value Engineering study, identify traffic handling and staging improvements and include them in the design process</li> <li>• Design Phase reviews and updates: Ensure that traffic handling and staging plans minimize impacts</li> <li>• Project Improvements and Enhancements: Develop and implement any innovative ideas from the initial Value Engineering study</li> </ul>
<p><b>Quality:</b> Construct a high quality, functional roadway that meets current design standards</p>	<ul style="list-style-type: none"> <li>• Project Evaluation and Delivery Plan: Include provisions to propose and review quality enhancements in the Innovation Register</li> <li>• Design Phase reviews and updates: Ensure that the required quality standards are included in the contract documents, and costs are properly allocated to achieve them</li> <li>• Project Improvements and Enhancements: Use identified savings to incorporate value-added higher quality elements to the project</li> <li>• Project Construction Management Plan: Develop a project QC/QA plan jointly with Caltrans. Include a full time QC Manager if necessary.</li> </ul>
<p><b>Environmental Compliance:</b> Comply with all environmental commitments and permits</p>	<ul style="list-style-type: none"> <li>• Project Evaluation and Delivery Plan: As part of the Initial Value Engineering study, identify environmental constraints and innovative methods to eliminate or mitigate them. Include Flatiron/Drill Tech JV’s Environmental Manager in study.</li> <li>• Design Phase reviews and updates: Ensure that the project design elements and schedule comply with all environmental commitments and permit requirements. Include JV’s Environmental Manager in reviews.</li> <li>• Development of Early Work Packages: Include early work packages that will eliminate or mitigate environment impacts to the project</li> <li>• Project Construction Management Plan: Develop a project Environmental Management plan jointly with Caltrans. Include a full time Site Environmental Manager if necessary.</li> </ul>
<p><b>Project Delivery:</b> Complete final design and begin project construction by January, 2016</p> <p><b>Project Schedule</b> Section 2.1: Obtain substantial completion by September, 2018</p>	<ul style="list-style-type: none"> <li>• Project Evaluation and Delivery Plan: Develop an initial strategy and integrated project delivery schedule</li> <li>• Integrated Project Delivery Schedule: Monitor and update the schedule frequently to make sure the project is on track.</li> <li>• Integrated Project Delivery Schedule: Develop schedule and implement a schedule that finalizes a construction contract by 12/15 with substantial completion of construction by 9/18.</li> <li>• Development and Execution of Early Work Packages: Completing site work and environmental mitigation work early in the project lifecycle helps minimize the overall project duration.</li> <li>• Project Construction Management Plan: Develop a schedule management plan that ensures the project schedule is monitored, maintained, and updated frequently</li> </ul>
Other Project Goals	
<p><b>Project Budget</b></p>	<ul style="list-style-type: none"> <li>• Project Evaluation and Delivery Plan: Develop initial project cost</li> <li>• Integrated Project Delivery Schedule: Maintain schedule milestones, develop alternate sequences, staging, and methods to reduce project duration and overhead costs</li> <li>• Design Phase reviews and updates: Update project cost through design advancement.</li> <li>• Project Improvements and Enhancements: Develop and implement innovation ideas from the initial Value Engineering study</li> <li>• Scope Advancement and Quantity Reconciliation: Develop accurate quantities to reduce cost variations</li> <li>• Development and Execution of Early Work Packages: Starting critical work while design is progressing results in decreased project duration and overhead costs</li> <li>• Risk Management: Implement and effective risk management program will help ensure that the project costs stay within budget</li> </ul>

Part D – Project Risks

All construction projects have risks. One of the benefits of the CMGC project delivery system is the ability to take an integrated multi-disciplinary team approach to the identification and management of risks. The Flatiron/Drill Tech JV’s approach to Risk Management for this project is fully detailed in Section E.

The Flatiron/Drill Tech JV has identified a number of significant risks to the project. These are detailed in Table 4 below. This table includes the identified risk and proposed mitigation measures.

Table 4 – Project Risks and Mitigation Measures						
Risk		Prb	CI	SI	Mitigation Measures	
Design	Design conflicts from differing site conditions	M	H	H	<ul style="list-style-type: none"> <li>Release of early site investigation and construction packages</li> </ul>	<ul style="list-style-type: none"> <li>Develop design contingency plans for elements that could be impacted</li> </ul>
	Design conflicts from conflicting stakeholder goals	M	L	M	<ul style="list-style-type: none"> <li>Early and extensive involvement of all project stakeholders in initial design</li> </ul>	<ul style="list-style-type: none"> <li>Include all stakeholders in formal partnering process</li> </ul>
	Timely Design Reviews	L	L	M	<ul style="list-style-type: none"> <li>Develop and implement design review processes with third party stakeholders</li> <li>Incorporate adequate design review periods into the project delivery schedule</li> </ul>	<ul style="list-style-type: none"> <li>Update and communicate schedule to all project stakeholders regularly</li> </ul>
	Complex and Uncertain Geotechnical Conditions	H	H	H	<ul style="list-style-type: none"> <li>Develop requirements and perform thorough geotechnical site investigation program early in design process for both rock slide and existing cut slope</li> </ul>	<ul style="list-style-type: none"> <li>Provide extensive review geotechnical report and recommendations.</li> </ul>
Environmental	Limestone Salamander	H	H	H	<ul style="list-style-type: none"> <li>Prohibit earth disturbing activities from December through March</li> </ul>	<ul style="list-style-type: none"> <li>Install exclusionary fencing, use active biological monitoring during construction</li> </ul>
	Hardhead Fish	M	H	H	<ul style="list-style-type: none"> <li>Surveys not conducted for Draft EIS/EIR. Conduct survey during design phase</li> </ul>	<ul style="list-style-type: none"> <li>Develop mitigation strategies and contingency plans with resource agencies</li> </ul>
	Foothill Yellow Tail Frog, Ringtail Cat	H	H	H	<ul style="list-style-type: none"> <li>Surveys not conducted for Draft EIS/EIR. Conduct survey during design phase</li> </ul>	<ul style="list-style-type: none"> <li>Develop mitigation strategies and contingency plans with resource agencies</li> </ul>
	Pallid Bat and Western Red Bat	M	H	H	<ul style="list-style-type: none"> <li>Conduct a survey during design phase, and again 30 days in advance of construction</li> </ul>	<ul style="list-style-type: none"> <li>Develop mitigation strategies and contingency plans with resource agencies</li> </ul>
	Migratory Birds	H	H	H	<ul style="list-style-type: none"> <li>Incorporate nesting vegetation clearing restrictions into project delivery schedule.</li> </ul>	<ul style="list-style-type: none"> <li>Develop early construction package for clearing nesting vegetation</li> </ul>
	Water Quality, SWPPP Compliance	H	H	H	<ul style="list-style-type: none"> <li>Develop project SWPPP plan collaboratively during the design phase</li> </ul>	<ul style="list-style-type: none"> <li>Include Water Quality Management Plan in the Construction Management Plan</li> </ul>
	Air Quality Compliance	L	M	L	<ul style="list-style-type: none"> <li>Investigate crushing existing slide material on site for fill material, as well as roadway and concrete aggregates to minimize import/export hauling of this material</li> </ul>	<ul style="list-style-type: none"> <li>Include an Air Quality Management Plan in the Construction Management Plan</li> </ul>
Schedule	Environmental Permit Acquisition Delays	M	H	H	<ul style="list-style-type: none"> <li>CMGC to assist Caltrans with developing information needed for permit acquisition</li> </ul>	<ul style="list-style-type: none"> <li>Include all permitting activities in the integrated project delivery schedule</li> </ul>
	Rare and Protected Species Delays	H	H	H	<ul style="list-style-type: none"> <li>Develop strategies to prevent these delays during the design phase</li> </ul>	<ul style="list-style-type: none"> <li>Develop contingency plans to address potential delays</li> </ul>
	Constraints impede construction start	L	H	H	<ul style="list-style-type: none"> <li>Identify all constraints during Task 1 and Task 3. Develop strategy and implement tasks to address these constraints and include in the project delivery schedule</li> </ul>	
	Differing Site Condition Delays	M	H	H	<ul style="list-style-type: none"> <li>Develop list of potential issues during risk management process</li> </ul>	<ul style="list-style-type: none"> <li>Develop contingency plans and schedules in advance as part of design phase</li> </ul>
Stakeholders	Merced River – Recreational Impacts	M	L	H	<ul style="list-style-type: none"> <li>Include all stakeholders in partnering to determine needs and requirements</li> </ul>	<ul style="list-style-type: none"> <li>Develop construction plans and sequences to minimize impacts to recreational use</li> </ul>
	Traffic Impacts from material hauling, both export and material	M	L	L	<ul style="list-style-type: none"> <li>Investigate crushing existing talus for use as roadway and concrete aggregate</li> <li>Investigate use of crushed talus to raise roadway grade within project limit</li> </ul>	<ul style="list-style-type: none"> <li>Investigate stockpiling crushed material locally for future use by others</li> </ul>
	Traffic Impacts during construction	M	L	L	<ul style="list-style-type: none"> <li>Develop traffic staging plan during design phase to minimize impacts</li> </ul>	
Construction	Lack of Material Disposal Site	H	H	L	<ul style="list-style-type: none"> <li>Minimize off-haul of talus material by maximizing use on site</li> </ul>	<ul style="list-style-type: none"> <li>Consult with stakeholders to determine ability to develop a local disposal site</li> </ul>
	Pavement damage from heavy traffic	M	M	L	<ul style="list-style-type: none"> <li>Minimize off-haul of talus material by maximizing use on site</li> </ul>	
	Stability of Existing Cut Slope and Rock Slide	H	H	H	<ul style="list-style-type: none"> <li>Use the VE process to develop effective temporary rock fall protection systems</li> <li>Develop early site investigation and construction packages to fully investigate rock slide and install temporary rock fall protection system</li> </ul>	<ul style="list-style-type: none"> <li>Investigate partial removal of portions of slide material</li> <li>Implement a slide monitoring system to monitor and notify construction personnel of a pending slide in real time</li> </ul>
	Difficult Drilling for Piles, Anchors, and Tiebacks	H	H	H	<ul style="list-style-type: none"> <li>Perform necessary geotechnical study to determine nature of drilling conditions</li> <li>Develop contingency plans during design phase to address potential issues</li> </ul>	<ul style="list-style-type: none"> <li>Mobilize the proper equipment for difficult drilling conditions</li> </ul>
	Hazardous Material	H	M	L	<ul style="list-style-type: none"> <li>Develop Hazardous Material Handling Plan</li> </ul>	

Risk Assessments:

Prb = Probability CI = Cost Impact SI = Schedule Impact L = Low M = Moderate H = High

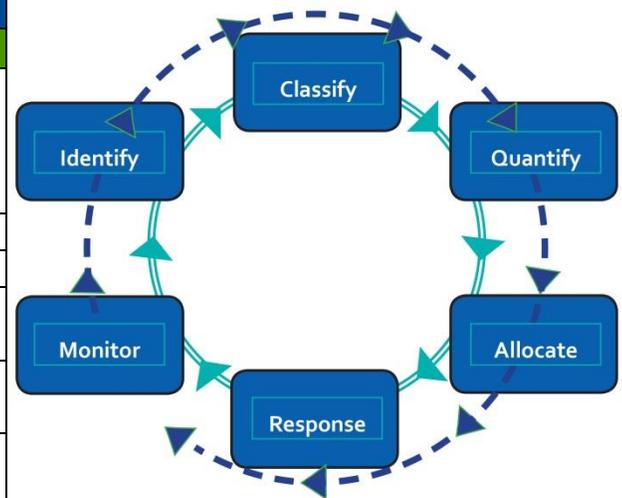
## Part E – Risk Management

### E.1. Risk Management Process

The Flatiron/Drill Tech JV’s CMGC approach provides an excellent platform for an effective project risk management program. It provides the opportunity to identify and effectively manage project risks collaboratively. Risks are eliminated or mitigated through design features and contingency plans. Risks that cannot be eliminated or mitigated are addressed through contract allowances and contingency items.

The risk management process and establishment of allowances and contingency items is a key benefit of the CMGC process. The Flatiron/Drill Tech JV’s CMGC risk management process is shown below.

Activity	Description
Identify	Risks are identified collaboratively during the design stage. A comprehensive project risk register is created to track and manage risks through the entire project.
Classify	Risks are prioritized for further analysis or action
Quantify	Risks are priced and/or analyzed in detail.
Allocate	The response and mitigation of risks is assigned to the party who can best manage them.
Response	Strategies and tasks are developed to eliminate, mitigate, or respond to project risks.
Monitor	Risks are monitored, response plans are executed and evaluated, and new risks are identified.



### E.2. Project Risk Management Plan

Caltrans has adopted a formal risk management program as part of its project delivery process, and mandated it through Project Delivery Directive No. PD-09, effective July 2012. The program is described in the *Project Risk Management Handbook: A Scalable Approach, Version 1 (June 2012)*.

The Flatiron/Drill Tech JV’s risk management process will be integrated with, and complement, the Caltrans program to create a risk management plan for the project. The CMGC activities to achieve this outcome include the following:

- CMGC Preconstruction Plan: Deliverables for the project risk management plan will be included
- Project Evaluation and Delivery Plan: The project risk management plan will be finalized, and the initial risk register similar to Table 4 will be completed
- Integrated Project Delivery Schedule: Risk management activities, including workshops and critical milestones, will be included in the schedule.
- Design Phase reviews and updates: The project risk register will be updated with each design review.
- Risk Management: Risk management will proceed concurrently and interactively with the other components of the CMGC process. The following will be utilized:
  - Risk Management Workshops
  - Development and maintenance of a comprehensive risk register. The Flatiron/Drill Tech JV will lead in the development and maintenance of the project risk register. The final register will follow the format adopted by Caltrans, tailored to the specific needs of the project
  - Risk monitoring through the project delivery schedule, cost reports, and a project status report.
- Contingency Development: Contingencies and allowances are developed for risks that cannot be eliminated or mitigated through the design process.

### Part F – Project Safety

The Flatiron/Drill Tech JV's overall safety management program is described in detail in **Section 3**. This award winning safety program will be used to ensure that safety is built into the project from the beginning, for both the public and construction personnel. Critical safety issues specific to this project include the following:

- Working on the cut slopes under the active Ferguson Rock Slide
- Working on steep cut slopes with poor footing
- Limited, difficult access resulting in a congested work site.
- Extensive construction traffic for import and export of materials
- Poor electronic communications
- Working in close proximity to heavy drilling equipment used to install rock fall protection piles, tiebacks, and CIDH Piles
- Long distances to emergency services due to remote location
- Working near live traffic on SR 140 during removal of the temporary detour paving
- Potential for high heat and humidity during construction activities

Safety of the construction work force and the traveling public, both during and after construction, will be a critical component of the design process. This project presents a unique set of challenges that must be addressed by the project team early in the design process. The Flatiron/Drill Tech JV's CMGC approach will help ensure that the maximum amount of effort and attention is devoted to project safety. Specific activities for this project will include the following:

- The Flatiron/Drill Tech JV will include one of its experienced safety managers into the project development team. This individual will participate in all design, constructability, safety, and risk management reviews to help maintain a critical focus on project safety.
- The initial Value Engineering study to be conducted as part of the Project Evaluation and Delivery Plan will include project safety as a study topic.
- A project safety task force will be convened as part of the initial Value Engineering study to focus specifically on addressing the most critical safety issue on the project – the active Ferguson Rock Slide
- All critical safety issues will be included in the project risk management plan
- A complete project safety plan will be developed and included in the project construction management Plan. This plan will include a full time project safety representative as part of the construction management team.

Safety is a core value of the Flatiron/Drill Tech JV. Our commitment to safety, experience, and proven results will ensure the SR-140 Ferguson Slide project is delivered safely.

#### Flatiron's Safety Achievements - Past three Years

- 2013 AGC of California First Place for Heavy/Civil/Highway Division over 1 Million Worker Hours
- 2012 AGC of California First Place for Safety on a High Hazard Project for the Point Bonita Lighthouse project
- 2011 First Place Safety Award from United Contractors
- 2011 AGC of California Individual Safety Effort of a Superintendent/First Place-Flatiron Superintendent Dan Sherlock
- 2010 Liberty Mutual Gold Award for the SR65/Lincoln Bypass Project [Caltrans]
- AGC of America & Willis Insurance Company, Second Place for the Prestigious "Excellence in Heavy Highway Construction" for Flatiron's Safety Program
- AGC of America National Construction Safety Excellence Award - Highway Category (700,001 to 1 million man-hours)

# Appendix A Resumes



A JOINT VENTURE



Devil's Slide Emergency Repair for Caltrans [2006]  
\$3.2M DTDS contract included four rows of tiebacks with walers.

## Key Personnel Commitments

Project Role	Name & Time Commitment	Qualifications
<b>Project Principal</b>	<p><b>Richard Grabinski</b> <u>% Available</u> Design/Pre-Construction 25%   Construction 25%</p> <p><b>Other Current Projects [75%]:</b> Presidio Parkway Design-Build BART OAC Design Build Calaveras Dam Replacement</p>	<p>Mr. Grabinski, as President of Flatiron’s Northern California Business unit, is responsible for all aspects of the firm regarding safety, business, operations, estimating, equipment, and engineering. His management includes overseeing over \$180 million in annual sales, 100 salaried employees, and 300 craft workers.</p> <p><b>22 Years Experience</b></p> <p><b>Credentials:</b> International Partnering Institute (IPI) – Committee Member Caltrans District 4 Mentor-Protégé Program Caltrans Construction Partnering Steering Committee (CCPSC) Member</p>
<b>Project Manager</b>	<p><b>Dale Nelson, PE</b> <u>% Available</u> Design/Pre-Construction 100% as needed   Construction 100% as needed</p> <p><b>Other Current Projects: [80%]</b> North Torrey Pines Bridge Route 76 Widening Replacement Bridge Approach Slabs (Various Locations)</p>	<p>Mr. Nelson currently serves as Operations Manager for Flatiron where he supervises operations including safety, quality, schedule, and budget. He has managed numerous bridge/roadway projects on heavily traveled freeways in Southern California.</p> <p><b>20 Years Experience</b></p> <p><b>Credentials:</b> Professional Engineer/#59133 CA</p>
<b>Project Construction Manager</b>	<p><b>Shawn Golden</b> <u>% Available</u> Design/Pre-Construction 50% as needed   Construction 100%</p> <p><b>Other Current Projects: [100%]</b> Calaveras Dam Replacement</p>	<p>Mr. Golden has experience managing major excavation operations on multiple Flatiron projects, most notably his work as Project Manager on the Yolo Bypass Sediment Removal Project, which required removal of over one million cubic yards of sediment within a 2-month period.</p> <p><b>20 Years Experience</b></p> <p><b>Credentials:</b> Excavation Competent Person • USACE Construction Quality Management for Contractors • AGC Leadership in Construction Workshop • Safety Trained Supervisor (STS) • 3 Hr Water Pollution Control on Construction Sites Compliance and Inspection</p>

# Appendix A. Resumes



Project Role	Name & Time Commitment	Qualifications
<b>Lead Estimator</b>	<p><b>Blaine Austin</b>  <u>% Available</u>                      Design/Pre-Construction 50% as needed   Construction 25% as needed</p> <p><b>Other Current Projects: [80%]</b>                      California High Speed Rail                      Northern California Division                      Estimating Lead</p>	<p>Mr. Austin has more than 20 years of Construction Project Management and Field Supervision experience on large highway and transit projects. He has more than 5 years of estimating experience on projects exceeding over \$1 Billion in value for similar Bid-Build, Design-Build, P3, and CMGC projects.</p> <p><b>Credentials:</b>                      25 Years Experience</p>
<b>Scheduler</b>	<p><b>James Gallego, PE</b>  <u>% Available</u>                      Design/Pre-Construction 100% as needed   Construction 50%</p> <p><b>Other Current Projects: [20%]</b>                      California High Speed Rail                      Various Water District Projects</p>	<p>Mr. Gallego is expertly proficient in the execution and training of <b>Oracle P6, Primavera Project Planner (P3), and SureTrak 3.0</b> scheduling software. In addition to his construction experience, he has managed <b>over 300 Caltrans Office of Structure Construction (OSC)</b> field computers.</p> <p><b>27 Years Experience</b>  <b>Credentials:</b>                      Professional Engineer/CA 55575</p>
<b>Environmental Manager</b>	<p><b>Jason Phillips, QSP/QSD</b>  <u>% Available</u>                      Design/Pre-Construction 50%   Construction 50%</p> <p><b>Other Current Projects: [60%]</b>                      Calaveras Dam Replacement                      Presidio Parkway P3</p>	<p>Mr. Phillips is trained and proficient in California Department of Fish and Game, U.S. Fish and Wildlife Service, U.S. Army Corps of Engineers, Regional Water Quality Control Board, Bay Conservation and Development District, and National Marine Fisheries Service collection and reporting protocols.</p> <p><b>12 Years Experience</b>  <b>Credentials:</b>                      USACE Bioengineering in Stream &amp; River Restoration Projects • Surface Water Ambient Monitoring Program [SWAMP] • QSP/QSD Certified</p>
<b>Drilling and Shoring Designer &amp; Methods Specialist [Other Key Staff ]</b>	<p><b>Brett Mainer, PE, GE</b>  <u>% Available</u>                      Design/Pre-Construction 50%   Construction 50%</p> <p><b>Other Current Projects: [80%]</b>                      Central Subway Project                      Transbay Terminal                      San Ramon Canyon Tunnel Project</p>	<p>Mr. Mainer has designed and supervised the construction of hundreds of projects, primarily consisting of soil nail and tieback walls, drilled shaft and micropile foundation systems, mined tunnels and shafts. Mr. Mainer has designed over 200 soil nail and tieback walls, and has served on several industry committees on ground anchors and drilled shafts.</p> <p><b>20 Years Experience</b>  <b>Credentials:</b>                      Professional Engineer/#58095 CA                      Geotechnical Engineer/#2682 CA</p>

**Drilling and Shoring Superintendent [Other Key Staff ]**

**Brad Middleton**  
% Available  
 Design/Pre-Construction 25%  
 | Construction 100%

Mr. Middleton has completed many difficult projects for Caltrans including work on the San Francisco-Oakland Bay Bridge, Alfred Zamp Bridge (new Carquinez), Benicia Bridge, and the Richmond San Rafael Bridge, as well as over two dozen other Caltrans projects incorporating soil nail walls, tieback walls, and drilled shaft components.

**19 Years Experience**

**Credentials:** OSHA Certified Safety Representative  
 • Certified Competent Persons, Confined Space Entry Procedure and Down Hole Entry  
 • Qualified Trainer in Rigging and Signals  
 • Certified CPR & First Aid Trained  
 • Certified Confined Spaces and Dangerous Places Trainer

# Appendix A. Resumes



Richard Grabinski is the Northern California District Manager for Flatiron, performing the Project Principal duties as outlined in the RFQ. Richard is responsible for all aspects of Flatiron's Northern California Business Unit including safety, business, operations, estimating, equipment, and engineering. He is responsible for \$200M annual sales, over 100 salaried employees, and 300 craft workers. Richard is also responsible for the preparation and execution of Flatiron's Business Plan.

Richard is a member of the following industry groups that support partnering and small businesses within the construction industry:

- International Partnering Institute (IPI) Board of Advisors
- Caltrans District 4 Mentor-Protégé Program Mentor since 2009
- Caltrans Construction Partnering Steering Committee (CCPSC) Member

Richard is responsible for ensuring that each Flatiron project is constructed to the safety and quality standards required. Richard also ensures that each Flatiron project is a Partnered project and attends each project's executive Partnering meetings and workshops. By being involved at this level Richard is able to make sure each Project Team is fully integrated and operating with full collaboration with each and every Client.

**As the Project Principal, Richard will ensure that:**

- **Adequate personnel and other resources are made available for this project**
- **Advocate Partnering through CMGC process**
- **Safety and Quality is monitored and promoted through industry standards and Caltrans specifications**

## RICHARD GRABINSKI PROJECT PRINCIPAL

### Education/Training:

BS, Civil Engineering, Santa Clara University, Santa Clara, CA 1991

### Licensing & Registration:

California State License No. 772589  
General Engineering Contractor  
E.I.T., 1992

### Years of Industry Experience:

23

### Years of Similar Experience:

7

Additional Training and Certifications for Mr. Grabinski include:

*AGC Advanced Management Training, Dallas, TX [2006]*  
*Leadership in Safety Excellence Training (LSF)*  
*Trench & Excavation-Competent Person Certification*  
*Crisis Management Training*  
*S.T.A.R.T. Training*  
*EIT, 1992*

*California State License No. 772589 General Engineering Contractor*  
*OSHA 10-Hour Certification*  
*Safety Trained Supervisor (STS) Certification*  
*First Aid & CPR (USA) Certification*  
*Incident Investigation Training*

## FLATIRON EXECUTIVE DBJV BOARD LEADER • Presidio PARKWAY P3 Project, San Francisco, CA [\$270 Million]

Reference: Bijan Sartipi, Caltrans D4 Director/510.286.5904  
D4DirectorAssistant@dot.ca.gov

20% on Job [2011-Present]

Presidio Parkway replaces Doyle Drive, the aging approach from San Francisco to the Golden Gate Bridge used by more than 120,000 vehicles each day. As a Public-Private-Partnership (P3), the Presidio Parkway project will improve seismic, structural and traffic safety, as well as integrate the roadway into the national park setting and create additional recreation space. Construction includes the northbound High Level Presidio Viaduct, NB Battery Tunnel, NB and SB Main Post Tunnels, and the new Girard Road Interchange with a direct connection to the Presidio.

As the Executive DBJV Board Leader Richard is responsible for ensuring the project is resourced and staffed appropriately to ensure the project's success. The DBJV's Quality Manager and Safety Manager report directly

to Richard and the Executive Board. Richard is in continuous contact with all the Project's executives including Caltrans Director, Caltrans D4 Director, Presidio Trust Executive Director, SFTA Executive Director, and all other Team member executives. Richard has legal binding authority on behalf of the Design-Build Team to execute all contracts and contract amendments. Richard's other focus areas include: dispute avoidance, dispute resolution, litigation prevention, and claims avoidance through pro-active risk assessments and Owner negotiations.

## **DISTRICT MANAGER • Calaveras Dam Replacement Project, Fremont, CA [\$420 Million]**

Reference: Daniel L. Wade, RE/415.554.1853/dwade@sfwater.org

10% on Job [2011-Present]

This project will replace the original dam, built in 1925, with a new 210-foot-high earth and rock fill dam designed to accommodate earthquakes on the Calaveras Fault. The project also includes construction of a new 1,550-foot-long spillway utilizing 40,000-cubic-yards of concrete, construction of a new intake/outlet tower consisting of a 20-foot-diameter by 163-foot-deep vertical shaft and three new tunnels to convey water to and from the reservoir. The new dam will be constructed next to the existing dam, which will be left in place and submerged underwater when the project is complete. Approximately seven million cubic yards of material will be excavated to construct the new dam in a SWPP Risk Level site situated in a Naturally Occurring Asbestos (NOA) geological formation.



As the Executive DBJV Board Leader Richard is responsible for ensuring the project is resourced and staffed with the specialized resources needed to ensure the project's unparalleled environmental challenges. The DBJV's Quality Manager and Safety Manager report directly to Richard and the Executive Board. Mr. Grabinski is particularly focused on the Project's Partnering Commitments by actively participating in the Project's Executive partnering steering committee. Richard's other focus areas include: dispute avoidance, dispute resolution, litigation prevention, and claims avoidance through pro-active risk assessments and Owner negotiations.

## **FLATIRON EXECUTIVE DBJV BOARD LEADER • BART Oakland Airport Connector Design-Build, Oakland, CA [\$361 Million]**

Reference: Chris Quinn/510.464.7539/cquinn@bart.gov

10% on Job [2010-Present]

Flatiron is designing and constructing the San Francisco Bay Area Rapid Transit District's Oakland Airport Connector. Flatiron is constructing a fixed, elevated guideway for the automated people mover, which will be a swift, reliable service running above the congestion on Hegenberger Avenue. The new automated people mover will provide a 3.2-mile connection between the Coliseum BART Station and the Oakland Airport, replacing the Air BART busses that are often delayed by traffic. The project includes 2 stations and a maintenance facility. This complex design-build project also includes utility relocations, shoring, complex staging and traffic control, cut and cover tunnel, and building over UPRR and I-880, adjacent to live track. Flatiron has 25 subcontractors working on this project.

As the Executive DBJV Board Leader Richard is responsible for ensuring the project is resourced and staffed appropriately to ensure the project's success. Richard has legal binding authority on behalf of the Design-Build Team to execute all contracts and contract amendments. The DBJV's Quality Manager and Safety Manager report directly to Richard and the Executive Board. Mr. Grabinski is particularly focused on the Project's Partnering Commitments by actively participating in the Project's Executive partnering steering committee. Richard's other focus areas include: dispute avoidance, dispute resolution, litigation prevention, and claims avoidance through pro-active risk assessments and Owner negotiations.

## **DISTRICT MANAGER • Various Other Projects, Northern California [\$220 Million]**

25% on Job [2013-Present]

Mr. Grabinski is responsible for all aspects of Flatiron’s operations in Northern California. This includes safety, quality, training, business, operations, estimating, equipment, and engineering. He is responsible for 200M annual sales, over 100 salaried employees, and 300 craft workers. Richard is responsible for ensuring all projects are staffed with adequate personnel and resources. He reviews and executes all contracts and legal matters for Flatiron. Some projects that Richard has led Flatiron to successfully tender and execute include:

- Caltrans D4 – Presidio Parkway (P3), \$270,000,000 (ongoing)
- SFPUC – Calaveras Dam Replacement, \$420,000,000 (ongoing)
- BART – Oakland Airport Connector (Design-Build), \$361,000,000 (ongoing)
- Caltrans D1 - Hwy 101 Willits Bypass, \$107,968,215 (ongoing)
- Caltrans D10 - Hwy 99 Merced (structures), \$66,568,275 (ongoing)
- Caltrans D4 - Hwy 80 Oakland Touchdown, \$29,991,639 (ongoing)
- City of Modesto - Carpenter Road Bridge Seismic Upgrades, \$8,195,135
- Caltrans D6 - Hwy 41 Cold in Place Recycle and Overlay, \$1,253,988
- CFLHD Point Bonita Light House Pedestrian Bridge Replacement at Marin Headlands (CMGC), \$1,863,442
- CFLHD South Fork Smith River Bridge Replacement (CMGC), \$8,000,000 (ongoing)
- County of Tulare - A/C Overlay on Road 132, \$1,826,740
- US Bureau of Reclamation - Contra Costa Fish Screen, \$14,025,511
- Caltrans D6 - Hwy 198 Lemoore A/C Overlay, \$1,800,000
- Caltrans D6 - Hwy 198 Hanford, \$45,178,321
- Caltrans D4 - I-880 High Street, \$50,648,177
- Caltrans D3 - Widen Hwy 80 Roseville, \$24,000,000
- Caltrans D6 - Route 99/145 Interchange, Overlay and Bridge Widen, \$5,744,140
- Caltrans D6 - Hwy 41 Coarsegold Intersection Improvements, \$1,100,517
- Caltrans D3 - Hwy 80 Emigrant Gap Widen & Concrete Pavement, \$21,141,511
- Caltrans D6 - Hwy 99 at Ave 12 N/B Offramp Widen, \$1,172,437
- San Jose International Airport - TAIP Overcrossings (Design Build), \$11,380,785
- Sacramento Airport Airside Improvement JV w/Turner Construction (Design-Build), \$48,000,000
- SCVWD - Lenihan Dam Outlet Modifications Tunnel Project, \$37,700,000
- Caltrans D6 - RTE 99 – Fairmead, \$47,134,000
- Caltrans D4 - RTE 238 – Hayward Widening, \$90,911,000
- Caltrans D6 - RTE 99 – Tulare, \$2,722,000
- Caltrans D6 - RTE 99 – Selma to Kingsburg Highway Widening, \$57,642,000

*Two unique CMGC Projects Richard lead Flatiron to successful tender and completion include:*

**FEDERAL HIGHWAY ADMINISTRATION (FHWA), CENTRAL FEDERAL LANDS HIGHWAY DIVISION (CFLHD) POINT BONITA LIGHTHOUSE – LOCATED IN THE GOLDEN GATE NATIONAL RECREATION AREA, SAN FRANCISCO, CA**

This was the first transportation project CFLHD completed using the CM/GC contracting method. As part of the proposal process Flatiron provided a GMP proposal based on 30% design drawings valued at \$1.8M and was selected based on its’ technical proposal. The project was completed at \$1.8M with **no claims and no change orders and resulted in** the 2012 Engineering News-Record California, Best Projects, Projects Under \$10 Million.

**FEDERAL HIGHWAY ADMINISTRATION (FHWA), CENTRAL FEDERAL LANDS HIGHWAY DIVISION (CFLHD) SOUTH FORK SMITH RIVER BRIDGE REPLACEMENT OVER THE WILD AND SCENIC SMITH RIVER – LOCATED IN THE SIX RIVERS NATIONAL FOREST, DEL NORTE COUNTY, CA**

This is the second transportation project CFLHD has procured using the CM/GC contracting method. As the selected proposer Flatiron has executed a Construction Management Contract for pre-construction services and is currently working with CFLHD and their Project Team in design development.

**VP OPERATIONS MANAGER, VARIOUS PROJECTS, NORTHERN CALIFORNIA, (100% ON JOBS, 2005 – 2009)**

As an Officer for Flatiron, Mr. Grabinski was responsible for all aspects of Flatiron’s project operations in Northern California from 2005 through 2009. This included operational oversight of every project in the District.

# Appendix A. Resumes



A JOINT VENTURE

## DALE NELSON, PE PROJECT MANAGER

Mr. Nelson has over 16 years of experience overseeing construction on several bridge and roadway projects. He currently serves as Operations Manager for Flatiron, where he supervises Flatiron's Southern California operations, including safety, quality, schedule, and budget. Prior to this role, he worked as Construction Manager on Flatiron's award-winning, high profile I-35W (St. Anthony Falls) Bridge Replacement Design-Build Project in Minneapolis, Minnesota. He was responsible for the day-to-day construction operations of all of the pier work and abutments, an overcrossing, approach structures, cast-in-place box girder spans over land, pre-cast segmental work over water, and roadway construction.

He has managed numerous bridge/roadway projects on heavily traveled freeways in Southern California, including several recent contracts for Caltrans on I-15 in San Diego. As Area Manager, he oversaw the work on four adjacent contracts in the Middle Segment of the I-15 Managed Lanes project, which had a total construction value of approximately \$260 million. With these projects, Dale has extensive experience working with Drill Tech Shoring & Drilling in constructing significant retaining walls (both permanent and temporary) through the use of tiebacks and soil nails.

These contracts were four of Flatiron's seven contracts that total approximately \$430 million and comprise a new section of high occupancy toll (HOT) lanes along I-15. The work included complex highway reconstruction and traffic handling, environmental compliance due to restrictive permits, roadway excavation, rock excavation, shoring, multiple bridge structures (both cast in place and precast girder), extensive retaining walls, CIDH piling, concrete batch plant setup and mix designs, as well as complex traffic staging and coordinating with Caltrans' public relations staff.

**As the Project Manager, Dale will ensure:**

- **Seamless continuity between preconstruction and construction phases**
- **Main point of contact between the project team**
- **Project's success**

### Education/Training:

BS, Civil Engineering,  
California Polytechnic University,  
Pomona, CA 1994

### Licensing & Registration:

Professional Civil  
Engineer/California/C59133

### Years of Similar Experience:

20

Additional Training and Certifications  
for Mr. Nelson include:

*OSHA 10-Hour Certification  
(2005/2009)*

*Safety Trained Supervisor (STS)  
Certification (certified by CCHES)*

*Trenching/Excavation – Competent  
Person Certification*

Additional Training and Certifications for Mr. Nelson include:

*OSHA 10-Hour Certification (2005/2009)*

*Safety Trained Supervisor (STS) Certification (certified by CCHES)*

*Trenching/Excavation – Competent Person Certification*

## **OPERATIONS MANAGER, SOUTHERN CALIFORNIA AREA • Multiple Projects Totaling \$150 Million Annually**

**References:**

Cory Binns / 858.688.1460 / cory\_binns@dot.ca.gov

Mike McManus / 619.688.6980 / mike.mcmanus@dot.ca.gov

William Prey / 619.699.1941 / bpr@sandag.org

Iraj Ghaemi / 619.400.2597 / ighaemi@san.org

100% on Job [2008-2011,  
2013-Present]

Duties include the supervision of Flatiron’s Southern California operations, including safety, quality, schedule, and production. He ensures project safety, coordinates labor, equipment and material resources across the region, supervises and develops project staff, sets and monitors quality standards, and maintains and reports financial results. Current projects include heavy highway, bridge, rail, and airport facilities. Dale has been extensively involved and a proponent of Partnering on all projects within the Area. He has recently been responsible for the following projects:

- Caltrans, I-15 Managed Lanes – South Segment Units #1 and #3, North Segment Unit #1 (\$147 million) [Cory Binns]
- Caltrans, SR-76 Reconstruction (\$62 million) [Mike McManus]
- Caltrans, SR-905 Extension (\$57 million) [Mike McManus]
- Caltrans, SR-52 Extension (\$28 million) [Mike McManus]
- SANDAG, I-15 Bus Rapid Transit Stations (\$18 million) [William Prey]
- San Diego International Airport, Taxiway C Reconstruction (\$23 million) [Ira Ghaemi]
- San Diego International Airport, Terminal 2 Development Project – Airside Construction (\$25 million) [Ira Ghaemi]

## PROJECT MANAGER • SR 92 Highway (Utah) Reconstruction Design-Build

Salt Lake City, UT [\$100 Million]

Reference: Brian Adams / 801.360.4551 / brianadams@utah.gov

100% on Job [2011-2013]

The project consisted of 6-miles of conventional 4-lane highway in both a rural and urban setting. Flatiron constructed 4-cut and cover tunnels, 2-precast girder bridges supported on 3 to 4 foot diameter CIDH piling, multiple retaining walls including MSE walls and cast in place retaining walls requiring tie-backs and soil nails, PCCP paving (including the setup of a portable concrete batch plant and production required concrete). Areas of difficult rock excavation required the use of drill and shoot using conventional explosives. Restrictive environmental regulations within the two creeks through the project required permit compliance and seasonal construction. In order to maintain traffic during construction extensive traffic handling plans were developed and implemented by the Contractor.

Dale was responsible for operational control for the SR92 highway reconstruction project in Utah. He worked with designers along with the quality team and took part in all constructability reviews. He was involved in reviewing plans for any value engineering that would provide a benefit to the Owner. Dale led and coordinated communication between all team members including design, quality, construction and owner personnel.

## CONSTRUCTION MANAGER • I-35W (St. Anthony Falls) Bridge Design-Build

Minneapolis, MN [\$263 Million]

Reference: Jon Chiglo / 651.234.7880 / jon.chiglo@dot.state.mn.us

100% on Job [2007-2008]

The new bridge is a 1,216-foot-long, 10-lane concrete bridge with a 504-foot-long precast segmental main span. Abutments were excavated using rock bolts, soil nails, and tiebacks for the support of excavation. The bridge is supported by three land-based piers (four columns at each pier) standing 70 feet tall on 8-foot diameter cidh shafts. Flatiron cast its own segments on the south bank of the river on an existing closed section of I-35 during the harsh winter months of Minnesota which required the use of heating shelters. Two 450-ton capacity derricks lifted the precast segments into place. There were 120 precast segments ranging in weight from 170 to 210 tons each. The project was completed three months ahead of schedule and has received over 30 of the industry’s top awards. Dale was responsible for the successful construction of this design-build project, including pier work, abutments, a major overcrossing, approach structures, cast-in-place box girder spans over land, pre-cast segmental work over water, and roadway construction including developing and implementing the complex traffic staging plans required to minimize impacts to the public. Restrictive USACE permit restrictions within

the waterway required Dale to implement extensive planning, teamwork, and scheduling techniques to ensure compliance.

Dale oversaw the project's safety, quality, schedule and production. In addition, he was also heavily involved with design and constructability reviews with the designers, and coordinated extensively with QA/QC personnel and MnDOT officials. Dale managed a workforce in excess of 600 people working around the clock, 7 days a week, through adverse weather conditions. He managed construction of foundations and substructure throughout harsh, sub-zero temperature winter. The project was completed 3 months ahead of schedule.

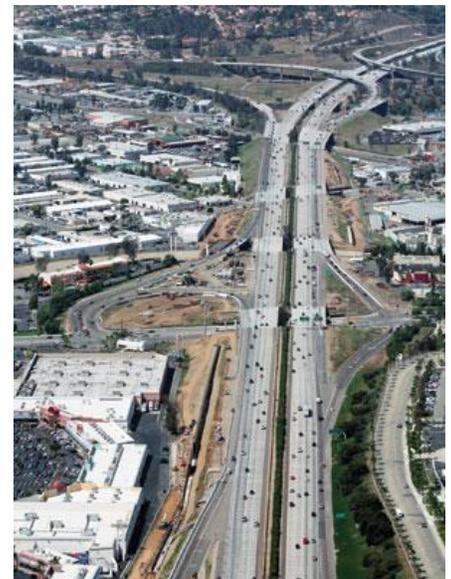
## PROJECT/AREA MANAGER • I-15 Managed Lanes Middle Segment Design-Sequencing Project

San Diego, CA [\$260 Million]

Reference: Cory Binns / 858.688.1460 / cory\_binns@dot.ca.gov

100% on Job [2006-2007]

The Middle Segment includes four of Flatiron's seven I-15 Managed Lanes contracts, totaling approximately \$260 million and comprising a new section of HOT lanes along I-15 in San Diego, California. The Middle Segment consists of eight miles of highway reconstruction and appurtenant construction of numerous bridges and retaining walls, direct access ramps, extensive Portland cement concrete (PCC) paving, which was batched in Flatiron's portable batch plant, as well as complex traffic staging and coordination with Caltrans' public relations staff. Flatiron relied heavily on Drilltech for soil nails, tiebacks, and CIDH piling required for both temporary ground support and in the construction of permanent retaining walls. Extensive environmental monitoring and compliance was necessary to comply with USACE permits at both San Dieguito River Park and Lake Hodges.



By participating with Caltrans in the "design-sequencing" process, the project was delivered significantly earlier than it would have been had it followed conventional design-bid-build delivery methods. Design-Sequencing is similar to the Design-Build construction method in that the contractor is involved in the design process to address constructability and cost issues.

Dale met with Caltrans' senior project staff regularly, and in formal Partnering meetings, to stay on top of the project challenges. Many of these issues were design related, including RFIs, submittals, and design changes. He supervised Flatiron's operations along the corridor, including safety, quality, schedule, and production. Specific responsibilities included coordinating labor, equipment and material resources across the region; supervising and developing project staff; setting and monitoring quality standards; and maintaining and reporting financial results.

## PROJECT MANAGER • SR 56 Carmel Mountain Road to Carmel Country Road Overcrossing Bid-Build, San Diego, CA [\$44 Million]

Reference: Ed Fitzgibbons / 619.995.7334 / ed.fitzgibbon@dot.ca.gov

100% on Job [2002-2004]

The project included grading, PCC paving, and construction of new cast-in-place box girder bridges for five miles of new freeway alignment in environmentally sensitive areas. Flatiron constructed two large cast-in-place box girder bridges, including drilled shaft foundations in the environmentally-sensitive McGonigal Creek. Over 2 million cubic yards of earthwork was performed on this project. In excess of 31,163 cubic yards of concrete was batched in Flatiron's portable batch plant and used for concrete paving. The project finished 3 months ahead of schedule.

Dale was responsible for the successful completion of this new four-lane freeway alignment in central San

Diego County. He was directly in charge of safety, quality, production, and schedule. Dale led and coordinated communication between all team members including quality, construction and owner personnel.

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## **CONSTRUCTION MANAGER • Route 30/Indian Hill Boulevard, Pomona, CA [\$44 Million]**

Reference: Ali El-Zaynab / 951.232.3732 / ali\_el-zaynab@dot.ca.gov

100% on Job [2000-2002]

This project built a new eight-lane freeway in eastern Los Angeles County. The project included grading, PCC paving, retaining walls, and multiple new cast-in-place concrete bridges. Flatiron set up a crushing plant and crushed and processed needed material to make in excess of 500,000 tons of concrete sand, aggregate and class II aggregate base. Flatiron also had a concrete batch plant, from which more than 50,000 cubic yards of concrete pavement was batched. The project involved new freeway alignment in an environmentally sensitive area. Flatiron constructed approximately one mile of new box culvert, 24 feet wide by 4 feet tall, in the environmentally sensitive San Antonio Wash.

Dale was responsible for the successful completion of this project, including safety, quality, and production. Dale led and coordinated communication between all team members including quality, construction and owner personnel.

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## **PROJECT ENGINEER • Route 5 Widen Freeway at Anaheim Boulevard, Anaheim, CA [\$54 Million]**

Reference: Chris Mockus / 310.431.8070 / cmockus@caltrop.com  
(formerly with Caltrans)

100% on Job [1998-2000]

This project reconstructed the existing six-lane highway by widening the freeway and adding high occupancy vehicle (HOV) lanes. The project included grading, PCC paving, retaining walls, 2 cut/cover tunnel, and multiple bridge replacements. The project involved full replacement of the freeway, which required extensive traffic control throughout the construction of the new lanes. A 3,500 foot long viaduct was also constructed at the Katella off-ramp.

Responsibilities included critical path method (CPM) scheduling, cost accounting, subcontractor pay estimates, correspondence to the Owner, subcontractors, and suppliers, field layout, estimating changes, engineering design, schedule coordination with field crews and subcontractors, and the supervision of office and field engineers. Dale was responsible for coordinating all structure construction, from structure excavation through pile driving and concrete construction.

# Appendix A. Resumes



## SHAWN GOLDEN PROJECT CONSTRUCTION MANAGER

Mr. Golden has 20 years of industry experience and has worked as Project Manager, Construction Manager, Lead Estimator, Superintendent and Project Engineer. Currently he is serving as Construction Manager on the Calaveras Dam Replacement project. His other recent experience includes managing major excavation operations on multiple Flatiron projects, most notably his work as Project Manager on the Yolo Bypass Sediment Removal Project, which required removal of over one million cubic yards of sediment within a two-month period.

Previous project experience includes similar roles overseeing operations on a variety of heavy civil construction projects, including Caltrans Design-Sequenced I-680 Widening from Main Street to Marina Vista Parkway \$45M, and the Caltrans Route 84 Widening Project from the west approach of the Dumbarton Bridge to Route 101 in Menlo Park \$25M.

**As the Construction Manager for this project, Mr. Golden will ensure that:**

- **Project is constructed in accordance with design and construction requirements**
- **He is present at site at all times during construction**
- **He has authority to stop work**

**Education/Training:**  
BS, Civil Engineering, Rose-Hulman  
Institute of Technology  
Terre Haute, IN 1998

**Years of Similar Experience:**

19

Additional Training and Certifications for Mr. Golden include:

*Confined Space Entry Certification*

*Trench & Excavation-Competent Person Certification*

*USACE Construction Quality Management for Contractors*

*3-Hour Water Pollution Control on Construction Sites*

*Compliance & Inspection*

*OSHA 10-Hour Certification*

*Safety Trained Supervisor (STS) Certification*

*First Aid & CPR (USA) Certification*

*24-hour Storm Water Pollution Training*

*AGC Leadership in Construction Workshop*

### CONSTRUCTION MANAGER • Calaveras Dam Replacement, Fremont, CA [\$420 Million]

Reference: Terry King / 925-493-4516 / Tking@sflower.org

100% on Job [2011-Present]

This project (*pictured right*) will replace the original dam, built in 1925, with a new 210-foot-high earth and rock fill dam designed to accommodate earthquakes on the Calaveras Fault. The project includes construction of a new 1,550-foot-long spillway utilizing 45,000-cubic-yards of concrete batched in Flatiron's onsite plant, construction of a new intake/outlet tower consisting of a 20-foot-diameter by 163-foot-deep vertical shaft and three new tunnels to convey water from the reservoir. The new dam will be constructed immediately downstream of the existing dam, which will ultimately be partially removed to provide the approach channel to the new Dam when the project is complete. Over 9 million cubic yards of material will be excavated for the foundation and borrow sites in order to construct the new dam in a SWPP Risk Level 3 site situated with many species of endangered wildlife, and within a Naturally Occurring Asbestos (NOA) geological formation, which requires the entire project site to be designated and controlled as an "NOA Managed Site".



Mr. Golden is responsible for ensuring the work completed conforms to the project requirement through extensive pre-planning, monitoring through the Contractor quality control program, participation in the Project's Executive and Team partnering sessions, overseeing the CPM project schedule, overseeing the projects complex environmental monitoring requirements, actively participating the SFPUC's quarterly risk management workshops, and oversight of all aspects of the projects operations, as well as being the project's main liaison with the Client for all matters of construction and contract coordination

As a result of significant unforeseen geological conditions, this project has been through several different redesign processes, which have resulted in considerable additional work and time being added to the contract through proposed and negotiated Contract Change Orders and several Revised Baseline Schedules. As a part of this process, Shawn has provided support, guidance and many alternative design concepts to the Client to aid in ensuring that the Designers are providing the most constructible and cost efficient design to overcome the extreme geological conditions. **Ultimately this support and ingenuity has led to the ability to**



**mitigate 45 months of contract extension down to a 27 month contract extension and at a lesser overall cost to the Client, than would have otherwise occurred.** Through the successful implementation of Partnering on the project, Shawn has led the successful negotiation of over \$160 million in changes without having any issues taken the DRB.

Shawn was directly responsible for all elements of the construction work completed to date, which includes:

- Over 130 ACRES site clearing and grubbing and site preparation in challenging terrain and conditions
- Over 4 million CY excavation and placement into disposal sites
- Design/Installation of over 11,000 LF of Turbidity Curtain to allow for in-water disposal without Water Quality Issues related to the SWPPP Risk Level 3 Assessment
- Over 250,000 CY hard rock drilling, blasting, and excavation in coordination with Neil's Controlled Blasting
- 150 LF x 24-foot diameter vertical shaft excavation and shoring in coordination with Drill Tech
- 300 LF of 10-foot diameter tunnel excavation and shoring in coordination with Drill Tech
- 1,600 CY structural concrete shaft rebar and liner for the shaft and tower
- 500 LF 3-foot diameter CIDH installed below reservoir water surface and from a Trestle for Fish Screen Installations
- Over 30,000 LF of rock bolts slope stabilization and support in coordination with Drill Tech
- Over 500 LF mechanical pipe, valves, adits, fish screens in coordination with Drill Tech excavation
- **Over 2 million CY of rockslide excavation and removal**
- Over 9,000 SF shoring wall support system to hold upper limits of rockslide in place using beam/lagging/tiebacks to allow bottom portion of rockslide to be removed for Dam Foundation
- Over 50 ACRES Permanent and Temporary BMP installation and maintenance
- Over 28 MGD treated through 2,400 GPM Active Treatment System (ATS) for water filtration

- Over 35,000 LF grouting for dam foundation including 1,350 EA drill setups and 9,170 CF grout injection
- 47,000 SF rock fall netting and anchors in coordination with DrillTech
- 145,000SF shotcrete slope stabilization in coordination with DrillTech
- Over 5 miles of temporary haul road construction in steep and challenging terrain
- Over 10 miles of HDPE Pipe installation for Construction and Storm water transport
- Over 5 miles of Temporary 12 KV Overhead Electric and equipment for Construction Power
- **Setup of Flatiron’s Erie Strayer 350 cy/hr batch plant including completing all test trial concrete mix designs required for the 40,000 CY concrete spillway work which includes nitrogen injection in order to meet DSOD standards for mass concrete temperature controls**
- Coordination with AT&T and SFPUC for the installation of microwave remote repeaters necessary to obtain IT and cellular coverage for the project site
- Successfully coordinated with SFPUC Operations on two separate occasions (April – November 2012 and 2013) for a system wide shutdown of reservoir operations necessary to install new intake and outlet mechanical work. Work was performed ahead of allowable schedule without being subject to penalties.
- **Shawn, along with Drill Tech, solved a major differing site condition by introducing CDSM soil mixing to create a stabilizing buttress within the reservoir. The buttress was needed at the toe of a 2,000,000 CY disposal site within the project limits.**
- **Installation and continual monitoring of the major cut slopes and installation of early signal warning system to determine slide movement and slope stability**
- Shawn regularly leads Monday Mass Safety meetings. The project has worked since May 2013 without a recordable or lost time incident.
- Shawn is responsible to ensure that the Contractor implemented Quality Control Program is followed and to-date all work has been constructed to meet or exceed all contractual requirements

## ESTIMATOR • Presidio Parkway P3 Project, San Francisco, CA [\$270 Million]

Reference: Richard Grabinski / 707.742.6014 / rgrabinski@flatironcorp.com | 75% on Job [2010]

Shawn was a discipline estimator for the \$270 million Presidio Parkway P3 project. Presidio Parkway replaces Doyle Drive, the aging approach from San Francisco to the Golden Gate Bridge used by more than 120,000 vehicles each day. As a Public-Private-Partnership (P3), the Presidio Parkway project will improve seismic, structural and traffic safety, as well as integrate the roadway into the national park setting and create additional recreation space. Construction includes the northbound High Level Presidio Viaduct, NB Battery Tunnel, NB and SB Main Post Tunnels, and the new Girard Road Interchange with a direct connection to the Presidio.

## ESTIMATOR • BART Oakland Airport Connector Design-Build Project Oakland, CA [\$361 Million]

Reference: Richard Grabinski / 707.742.6014 / rgrabinski@flatironcorp.com | 100% on Job [2009]

Shawn was a discipline estimator for the \$361 million BART Oakland Airport Connector Design-Build Project. Flatiron is designing and constructing the San Francisco Bay Area Rapid Transit District's long-awaited Oakland Airport Connector, which has been more than 25 years in planning. Originally designed to serve between seven and eight million passengers annually, the airport's two terminals served nearly 14.6 million passengers in 2007. Flatiron is constructing a fixed, elevated guideway for the automated people mover, which will be a swift, reliable service running above the congestion on Hegenberger Avenue. The new automated people mover will provide a 3.2-mile connection between the Coliseum BART Station and the Oakland Airport, replacing the Air BART busses that are often delayed by traffic. Trains arrive at the front door to the airport, across from the main circulation road, providing Oakland International Airport with a state-of-the-art train-to-plane connection.

## CONSTRUCTION MANAGER • Mayhew Levee Raise/Drain Closure, Sacramento, CA [\$15 Million)

Reference: Kim Woolf / 916.353.3255 / Kim.woolf@usace.army.mil

75% on Job [2008-2009]

The project included the degrade of the existing levee, installation of 55 foot deep soil-cement-bentonite wall along the American River utilizing excavator and pug-mill mixing methods, the rebuilding and raising of the levee cap, and the construction of the new Mayhew Drain Closure Structure. In coordination with Drill Tech, proposed and installed alternative CSM Soil Mixing methods which were ultimately utilized under change order to complete the slurry wall to the requirements of the USACE.

## CONSTRUCTION MANAGER • Yolo Bypass Sediment Removal, Woodland, CA [\$8 Million)

Reference: Will Hicks / 916.802.3441 / Whicks@water.ca.gov

50% on Job [2006]

The project included the removal of approximately 1 million cubic yards of excavation within a two-month time period due to tight environmental restrictions within the Yolo Bypass Floodway. The project included construction of haul roads and equipment crossings to provide protection to the historic Fremont Weir.

Shawn was responsible for all aspects of the project including the procurement through public hard bid procedures, contract setup as required for completing construction, maintaining client/owner relationship, and Flatiron internal financial and scheduling management of the contract

## CONSTRUCTION MANAGER • Northbound & Southbound Widening of I-680 from Main Street to Marina Vista Parkway | Reconstruction of SR 680/4 Interchange, Design Sequencing, Concord, CA [\$42 Million)

Reference: Bob Finney / 510.286.5896 / bobfinney@dot.ca.gov

100% on Job [2002-2005]

As a General Superintendent, Mr. Golden was responsible for all elements of field activity on the project, including the scheduling and coordination of up to 12 crews working day and night shifts and the scheduling of subcontractors. This project was bid as a pilot program for Design-Sequencing for Caltrans, and resulted in considerable field design and change order coordination between Contractor/Caltrans to maintain crew progress and schedule. Shawn partnered closely with Caltrans and its Design Consultants to adapt design changes with the actual project conditions to complete the project without unnecessary project delays.

## PROJECT ENGINEER • Lane Widening of Eastbound & Westbound SR 84 from Dumbarton Bridge to SR 101, Menlo Park, CA [\$25 Million)

Reference: Bob Finney / 510.286.5896 / bobfinney@dot.ca.gov

100% on Job [2001-2002]

As a Project Engineer, Mr. Golden was responsible for the daily pre/post plan, the scheduling/coordination of both the self-performing crews and subcontractor's forces, and was involved in the client/owner relationship at a project field level. This project was Caltrans A+B Contract, and was completed 14-months ahead of the estimated schedule, and under budget without any significant claims being elevated to the DRB.

# Appendix A. Resumes



Blaine Austin is currently the Estimating Manager for Flatiron's Northern California division. He has nearly 20 years of project management and field supervision experience on large highway and heavy civil projects and over 5 years of estimating experience on similar bid-build, design-build, P3, and CMGC projects with values exceeding \$1 Billion.

**As the Lead Estimator for this project, Mr. Austin will manage:**

- Overall Pricing of the Project
- Assessment of Risk & Identification of Assumptions
- Price Determination

## BLAINE AUSTIN LEAD ESTIMATOR

**Education/Training:**  
BS, Construction Management, 1988  
Fresno State University, Fresno, CA

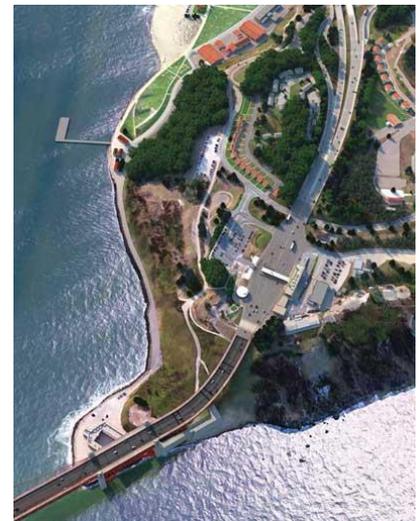
**Years of Similar Experience:**  
25

### LEAD ESTIMATOR • Presidio Parkway P3 Project, San Francisco, CA [\$270 Million]

Reference: Richard Grabinski / 707.742.6014 / rgrabinski@flatironcorp.com

100% on Job [2010]

Presidio Parkway is the first public-private partnership transportation project delivered in the state under the recently enacted PPP statute. The project is a collaborative effort by the California Department of Transportation, the San Francisco County Transportation Authority, and the Federal Highway Administration, who reached financial close with developer Golden Link Concessionaire, LLP on Phase II of the project on June 14, 2012. Presidio Parkway will replace Doyle Drive, the aging approach to the Golden Gate Bridge used by more than 120,000 vehicles each day. Originally built in 1936, the roadway is structurally and seismically deficient. The Presidio Parkway project will improve seismic, structural and traffic safety, as well as integrate the roadway into the national park setting and create additional recreation space. Major construction began in 2012 and will continue through 2015. Construction includes the northbound Presidio Viaduct and Battery Tunnel, the Main Post Tunnels and the new Girard Road Interchange with a direct connection to the Presidio. This phase will also include final landscaping.



As Lead Estimator, Mr. Austin managed the overall effort of the pricing and schedule portion of the proposal, assessing price and risk as well as discussion of assumptions. He managed individual discipline estimators and scheduling personnel to prepare a concise bid proposal.

### LEAD ESTIMATOR • BART Oakland Airport Connector Design-Build Project Oakland, CA [\$361 Million]

Reference: Richard Grabinski / 707.742.6014 / rgrabinski@flatironcorp.com

100% on Job [2009]

Flatiron is designing and constructing the San Francisco Bay Area Rapid Transit District's long-awaited Oakland Airport Connector, which has been more than 25 years in planning. Originally designed to serve between seven and eight million passengers annually, the airport's two terminals served nearly 14.6 million passengers in 2007. Flatiron is constructing a fixed, elevated guideway for the automated people mover, which will be a swift, reliable service running above the congestion on Hegenberger Avenue. The new automated people mover will provide a 3.2-mile connection between the Coliseum BART Station and the Oakland Airport, replacing the Air BART busses that are often delayed by traffic. Trains arrive at the front door to the airport, across from the main circulation road, providing Oakland International Airport with a state-of-the-art train-to-plane connection.

As Lead Estimator, Mr. Austin managed the overall effort of the pricing and schedule portion of the proposal, assessing price and risk as well as discussion of assumptions. He managed individual discipline estimators and scheduling personnel to prepare a concise bid proposal.

## ESTIMATING MANAGER • South Fork Smith River Road CMGC Project

Crescent City, CA [\$6.1 Million]

Reference: Jason Longshore / 720.963.3090 / Jason.Longshore@dot.gov

25% on Job [2013]

Removal and replacement of an existing steel arch bridge over the Wild and Scenic Smith River with a new cast in place concrete arch bridge. Scope of work also includes constructing and installing a temporary bridge to detour traffic around the permanent bridge location. Jobsite location is within an extremely environmentally sensitive area. Job also includes removal and replacement of 1,000 feet of existing roadway on either side of the bridge.

As Lead Estimator, Mr. Austin managed the overall effort of the pricing and schedule portion of the proposal, assessing price and risk as well as discussion of assumptions. He managed individual discipline estimators and scheduling personnel to prepare a concise bid proposal. Mr. Austin was responsible for overseeing the technical proposal submittal as well as the pricing submittal.

## LEAD ESTIMATOR • SR 92/Lehi Design-Build Project, Utah [\$90 Million]

Reference: Richard Grabinski / 707.742.6014 / rgrabinski@flatironcorp.com

100% on Job [2009]

State Route 92 is the main east-west corridor for the communities of Alpine, Highland, Cedar Hills and northeast Lehi, Utah, as well as the primary access road for American Fork Canyon. This area in northern Utah County is growing at a rapid pace, and thousands of vehicles travel this corridor every day for access to and from Interstate 15. To improve mobility and accessibility, Flatiron is expanding state Route 92 from Interstate 15 to state Route 74 in Highland. This design-build project includes widening state Route 92 to five lanes, constructing segments of multi-use trails to expand the existing trail system, replacing the open Murdock Canal with large diameter welded steel pipe siphon, and building commuter lanes from I-15 to Highland Boulevard for a direct connection to and from I-15 without traffic signals.

As Lead Estimator, Mr. Austin managed the overall effort of the pricing and schedule portion of the proposal, assessing price and risk as well as discussion of assumptions. He managed individual discipline estimators and scheduling personnel to prepare a concise bid proposal.

## LEAD ESTIMATOR • Highway 65 Lincoln Bypass Bid-Build, Lincoln, CA [\$137 Million]

Reference: Richard Grabinski / 707.742.6014 / rgrabinski@flatironcorp.com

100% on Job [2008]

Flatiron, with joint venture partner DeSilva Gates Construction, is in the final stages of completing the \$137 million Route 65 Lincoln Bypass project, a two-lane highway between Sheridan and Lincoln, Calif., about 30 miles north of Sacramento. The project includes construction of 12 miles of new four-lane freeway with asphalt concrete, 19 bridges and 3,720 meters of soundwalls. Flatiron is responsible for all bridge structures, retaining walls, box culverts, slope paving and masonry soundwalls while DeSilva's scope covers earthwork and underground. The project will help alleviate heavy traffic on Route 65, which is major north-south connector between Sacramento and several other cities in Placer County. Route 65 currently goes through downtown Lincoln, where traffic slows significantly. The new highway section will bypass downtown Lincoln and move traffic around the city. Creative planning solutions were required to accommodate the sensitive environmental areas near the construction site. Much of the work that crosses the canals is in a protected salmon habitat and fishery.

As Lead Estimator, Mr. Austin managed the overall effort of the pricing and schedule portion of the proposal, assessing price and risk as well as discussion of assumptions. He managed individual discipline estimators and scheduling personnel to prepare a concise bid proposal.

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## **LEAD ESTIMATOR • I-880/SR 92 Interchange Reconstruction Bid-Build, Hayward, CA [\$138 Million]**

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**Reference: Richard Grabinski / 707.742.6014 / rgrabinski@flatironcorp.com | 100% on Job [2007]**

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Flatiron was the managing partner of a joint venture team reconstructing the Interstate 880/State Route 92 interchange approximately 15 miles south of Oakland in Hayward, Calif. I-880 runs north/south along the east side of the San Francisco Bay and crosses State Route 92 in Hayward. This is the main interchange for traffic coming off of northbound or southbound I-880 and onto the San Mateo-Hayward Bridge. Flatiron was replacing the existing at-grade cloverleaf interchange with fully directional flyover ramps. Flatiron was replacing two bridges, constructing three new bridges, and widening two existing bridges and a portion on SR 92 west of the interchange. The contract also included two pedestrian overcrossing bridge replacements and a new pump station. The new interchange opened on October 7, 2011.

As Lead Estimator, Mr. Austin managed the overall effort of the pricing and schedule portion of the proposal, assessing price and risk as well as discussion of assumptions. He managed individual discipline estimators and scheduling personnel to prepare a concise bid proposal.

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## **LEAD ESTIMATOR • Highway 198 Widening Bid-Build, Hanford, CA [\$45 Million]**

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**Reference: Richard Grabinski / 707.742.6014 / rgrabinski@flatironcorp.com | 100% on Job [2009]**

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Flatiron reconstructed State Route 198 in Hanford, Calif. The project involved removing 10 miles of the existing two-lane asphalt highway, elevating and reconstructing it. State Route 198 is now a four-lane divided concrete expressway. The job also included setting up Flatiron's portable concrete batch plant to batch over 150,000 cubic yards of concrete, and construction of several bridges and irrigation structures. Flatiron crews also reclaimed approximately 130,000 tons of the existing roadway, about 6,500 tons of which is asphalt oil. At a present value of approximately \$500 per ton, recycling this oil could save the owner, Caltrans, up to \$3 million on paving jobs in the distant future, after the road has completed its usable lifespan. Flatiron completed this project with zero lost time incidents.

As Lead Estimator, Mr. Austin managed the overall effort of the pricing and schedule portion of the proposal, assessing price and risk as well as discussion of assumptions. He managed individual discipline estimators and scheduling personnel to prepare a concise bid proposal.

## JIM GALLEGO, PE SCHEDULER

Mr. Gallego has been a construction engineer on transportation projects throughout California, Oregon, Washington, Utah and Nevada. He has worked on the conventional Design-Bid-Build, and Design-Build projects. Mr. Gallego has reviewed and developed schedules for construction of new sound walls, retaining walls, bridges, highway roadwork, and water distribution projects.

Over the course of his career, the value of the projects worked on has exceeded over a billion dollars. In addition, Mr. Gallego has developed manuals and has trained engineers to use multiple computer scheduling programs. He has tracked and reviewed contractor submittals for bridge falsework, temporary earth retaining structures, Portland cement and asphalt concrete mix designs, and bridge demolition plans.

Mr. Gallego specializes in the analysis and implementation of Critical Path Method (CPM) project schedules. In addition, he has also developed project scheduling training seminars. One training seminar was designed to show Resident Engineers and Structure Representatives how to review, accept and update construction baseline project schedules. Other training seminars include educating users on Oracle P6, and Primavera Project Planner (P3) and SureTrak 3.0 scheduling software.

In addition to his construction experience, he has managed over 300 Caltrans Office of Structure Construction (OSC) field computers located throughout California. In this role, Mr. Gallego developed computerized forms and spreadsheets for Caltrans, including travel expense claims, Portland cement concrete mix designs, Boussinesq Strip Loading, rebar weight calculations, asphalt concrete mix designs and various interoffice documents.

As the Scheduler for this project, Mr. Gallego will:

- **Create and update Project preconstruction and construction schedules including each Project phase and key milestones, deliverables, and dependencies, along with durations for design, preconstruction, procurement, construction management, and construction work**

Education/Training:  
BS, Civil Engineering, Texas A&M University, 1987

Licensing & Registration:  
Professional Civil Engineer/California/C55575

Years of Similar Experience:  
27

### SENIOR PROJECT SCHEDULER • Gallego Consulting Services, Inc., Various Water Projects – Northern California, [\$200 Million]

Reference: Jim Pelletier / 916.343.1542 / jpelletier@radoscompanies.com | 100% on Job [2005-Present]

As the senior project scheduler, Mr. Gallego was responsible for the development and maintenance of baseline and update schedules for various water projects in the Sacramento Region. These projects include the flume replacement, sanitary sewer system replacement, new force main, and pump replacements. The value of this work was well over \$200 million. Mr. Gallego was responsible for creating baseline, updates and Time Impact Analysis schedules. Mr. Gallego has used Oracle P6, Primavera Project Planner (P3), and Microsoft Project to develop Baseline schedules for these projects. Mr. Gallego has created multiple project schedules that were also revenue and resource loaded.

## SENIOR PROJECT SCHEDULER • Gallego Consulting Services, Inc., Caltrans District 03 Sacramento, CA [\$58 Million]

Reference: Meschack Okpala / 916.718.8051 / meschack\_okpala@dot.ca.gov | 100% on Job [2010-2012]

As the senior project scheduler, Mr. Gallego was responsible for reviewing Update and Time Impact Analysis schedules for the \$58-million HOV widening project on Highway 50 from Watt to Sunrise in Sacramento Ca. Mr. Gallego also was tasked with developing TIA schedules based on Caltrans' understanding of the impacting events and comparing the overall impact compared to the Contractor developed TIA schedules. Mr. Gallego worked closely with Caltrans personnel to assist in the negotiations to resolve time impacts to the Project. Oracle P6 was used on this project.

## SENIOR PROJECT SCHEDULER • Gallego Consulting Services, Inc., Caltrans District 04 Oakland, CA [\$180 Million]

Reference: Ben Ghafghazi / 510.867.6181 / ben.ghafghazi@dot.ca.gov | 100% on Job [2007-2010]

As the senior project scheduler, Mr. Gallego was responsible for the review and acceptance of the Baseline, Updates and Time Impact Analysis schedules for the \$180 million Oakland Touchdown Phase 1 bridge replacement project. This project involved the construction of three bridge frames as part of the San Francisco – Oakland Bay Bridge Replacement project. The schedules on this project were created using Primavera Project Planner (P3) scheduling software and were resource and revenue loaded.

## SENIOR PROJECT SCHEDULER • Gallego Consulting Services, Inc., Caltrans District 03 Sacramento, CA [\$171 Million]

Reference: Jess Avila / 916.919.1452 / jess\_avila@dot.ca.gov (Design)  
Carl Berexa / 916.952.6800 / carl\_berexa@dot.ca.gov (Construction) | 100% on Job [2007-2010]

As the senior project scheduler, Mr. Gallego was responsible for developing a Risk Analysis Baseline schedule for the Lincoln Bypass Project. Mr. Gallego was responsible for developing all aspects of the Baseline schedule, including determining scope of work, developing Work Breakdown Structure, Activity Coding, Project Calendars, and Activity Logic. Working closely with the client, Mr. Gallego was able to expedite the schedule development to create a Baseline schedule with 1182 activities so that the Designers could perform an analysis of the project's potential risks. The Engineer's Estimate of the Lincoln Bypass was \$171-million. Mr. Gallego used Primavera P5 to develop this Baseline schedule.

During the Construction phase, Mr. Gallego assisted the Resident Engineer with Baseline, Update and Time Impact Analysis reviews. Mr. Gallego worked closely with Caltrans personnel to assist in the negotiations to resolve time impacts to the Project. All of this schedule work required the use of Primavera P6.

## SENIOR PROJECT SCHEDULER • Peninsula Corridor Joint Powers Board (CALTRAIN) Centralized Equipment Maintenance & Operations Facility (CEMOF) Design Schedule San Jose, CA

Reference: John Litzinger / 408.718.0343 / jlitzinger@hntb.com | 100% on Job [2003-2005]

As the senior project schedule analyzer, Mr. Gallego was responsible for implementing HNTB's design project schedule for design activities. Mr. Gallego used Primavera Project Planner (P3) to develop and maintain the project schedule. During the schedule development process, Mr. Gallego developed project coding, layouts and reports as required by the client (Caltrain).

## SENIOR PROJECT SCHEDULER ANALYZER • Caltrans District 59 On-Call (HNTB) Rocklin, CA

Reference: Thomas Fitzgerald / 707.496.6614 / tom\_fitzgerald@dot.ca.com | 100% on Job [2001-2003]



As the senior project schedule analyzer, Mr. Gallego was responsible for the project schedules of multiple transportation construction projects located throughout the Caltrans – North Region (Districts 1, 2 and 3). Mr. Gallego’s responsibilities included analyzing project documents to ensure that contractor submitted project schedules (baseline and updated schedules) adhered to contract requirements.

In addition, Mr. Gallego implemented a training program advising Caltrans Resident Engineers and Structure Representatives on the proper processes and procedures for the implementation of the Critical Path Method (CPM) progress schedule specification. Mr. Gallego developed Microsoft PowerPoint presentations, practice project schedules, Microsoft Excel schedule workbooks, and Microsoft Word training manuals. The training presentation and course materials allowed project engineers to calculate the forward and backward passes of a project schedule and to review all of the requirements of the Caltrans CPM specification.

## JASON PHILLIPS ENVIRONMENTAL MANAGER

Mr. Phillips combines a strong academic background in ecology and watershed management with over 10 years working in construction and more than 14 years of experience working in biological science. As a biologist in a regulatory environment, he has extensive experience permitting and consulting with federal, state, and local agencies. Mr. Phillips regularly manages environmental compliance on large scale construction projects, with associated air quality, cultural, paleontological, hazardous material, noise, jurisdictional waters and special-status species issues. One of Mr. Phillips' strengths is that he has been and is involved in all phases of projects; pre-project studies and permitting, construction phase compliance and documentation, and post construction reporting. Mr Phillips regularly works with owners and regulatory agencies to manage compliance with environmental permits and to ensure mitigation and avoidance measures are implemented effectively.

Mr. Phillips utilizes methods that conform to California Department of Fish and Wildlife, US Fish and Wildlife Service, US Army Corps of Engineers, Regional Water Quality Control Board, and National Marine Fisheries Service collection and reporting protocols.

Mr. Phillips will lead the review of the Environmental Commitments/Permits for Flatiron's Project Management Team. He will assist the Project by identifying best approaches to achieve environmental commitments and environmental permit compliance. Mr. Phillips' experience and understanding of all environmental aspects that are anticipated for this project will facilitate his ability to provide sound guidance for avoiding impacts and find effective solutions to complex environmental challenges.

**As the Environmental Manager for this project, Mr. Phillips will:**

- **Ensure that the project is constructed in accordance with the environmental commitments and permits as required**
- **Have authority to stop work**
- **Have good understanding of both State and Federal environmental regulations**

### Education/Training:

BS, Biology (Ecology), San Francisco State University, 2002

MS, Environmental Management (Wetland & Watershed Management), University of San Francisco, 2006

CEQA & ESA Course, U.C. Davis Extension

Wetland Plants - College of Extended Learning, San Francisco State University, Wetland Science Series

### Years of Similar Experience:

10

Additional Training and Certifications for Mr. Phillips include:

*Qualified Stormwater Practitioner (QSP) & Developer (QSD)*  
*USACE Wetland Delineation Certification*  
*California Rapid Assessment Methods (CRAM) Certification*  
*Surface Water Ambient Monitoring Program (SWAMP) Training/Workshops*  
*USACE Bioengineering in Stream and River Restoration Projects*

*Hazwopper 40 Training*  
*Electrofishing Certificate (Smith-Root)*  
*Dive Master (PADI) & Scientific Diver (AAUS)*  
*Certified Caulerpa Surveyor (NOAA/CDFG)*  
*Rare pond species survey techniques workshop: California red-legged frog, California tiger salamander & western pond turtle. Laguna de Santa Rosa Foundation*

**ENVIRONMENTAL COMPLIANCE MANAGER • BART Oakland Airport Connector  
Design-Build, Oakland, CA [\$361 Million]**

Reference: Scott VanDussen / 510.394.6172 / scott.vandussen@bartoac.com | 50% on Job [2011-2013]

Mr. Phillips was the Environmental Compliance Manager, Lead Biologist, and Lead Environmental Monitor for this 3.2-mile long transit project. In this capacity he worked with BART staff to ensure compliance to all project environmental mitigation measures and BMPs. Additionally, Mr. Phillips consulted with BCDC and drafted permit applications for SAA, 404, and 401 permits. He also led a formal wetland delineation approved by the USACE, using protocol level surveys for western burrowing owl, coordinated the tree inventory work, and co-drafted the BRA for the project.

Mr. Phillips managed oversight of the environmental permit requirements and coordinated with BART to address non-compliance issues and project changes that conflict with regulatory requirements. He worked proactively with BART and the Flatiron staff to minimize delays and non-conformance issues. Mr. Phillips also worked with BART in representing project issues to regulatory agencies.

## ENVIRONMENTAL MANAGER • Presidio Parkway P3 Project, San Francisco, CA [\$270 Million]

Reference: Ron Richardson / 510.715.8840 / ron.richardson@glc-presidioparkway.com | 75% on Job [2013-Present]

Presidio Parkway is the first public-private partnership transportation project delivered in the state. The Flatiron led joint venture is working with Golden Link Concessionaire to deliver this elaborate project to State and Federal Agencies (The project is a collaborative effort by the California Department of Transportation, the San Francisco County Transportation Authority, and the Federal Highway Administration).

Mr. Phillips is responsible for ensuring appropriate environmental clearances are in place and the project is compliant with environmental permits and regulations during construction. He attends meetings with owner representatives and environmental regulatory agencies. He also reviews environmental subcontractor's reports and plans (Water Quality, Air Quality, Biological, Cultural, Historic Architectural, and Hazardous Materials). Mr. Phillips is a valuable resource for the construction team, advising how to avoid and minimize adverse environmental effects. He also manages the certification process to qualify for the "Green Roads" Certification.

## ENVIRONMENTAL MANAGER • Calaveras Dam Replacement, Fremont, CA [\$420 Million]

Reference: Terry King / 925.493.4539 / TKing@sflower.org | 50% on Job [2011-2013]  
10% on Job [2013-Present]

This project will replace the original dam, built in 1925, with a new 210-foot-high earth and rock fill dam designed to accommodate earthquakes on the Calaveras Fault. The project also includes construction of a new 1,550-foot-long spillway utilizing 40,000-cubic-yards of concrete, construction of a new intake/outlet tower consisting of a 20-foot-diameter by 163-foot-deep vertical shaft and three new tunnels to convey water to and from the reservoir.

As the **Environmental Manager** for this flagship San Francisco Public Utilities Commission project, Mr. Phillips is responsible for overseeing the environmental performance of the joint venture by developing, implementing and monitoring environmental strategies, policies and programs on the Calaveras Dam Replacement Project. His primary responsibilities are:

- Coordinating with the Construction Management Team to ensure appropriate environmental clearances are in place, to resolve unanticipated environmental issues (design changes and unanticipated discoveries), and to ensure compliance with environmental regulations;
- Promoting and raising awareness, at all levels of the organization, of the impact of emerging environmental issues, whether legislative or best practice;
- Auditing, analyzing and reporting environmental performance to internally/externally, including regulatory bodies;
- Working with design and construction teams and advising how to avoid and minimize adverse environmental effects;

- Carrying out impact assessments to identify, assess and reduce the organization's environmental risks and financial costs;
- Training staff at all levels in environmental issues and responsibilities;
- Negotiating environmental service agreements and managing associated costs and revenues;
- Writing environmental reports, assuming the lead responsibility with the Management Team; and
- Supporting published policies and permit compliance.

Prior to joining Flatiron, Mr. Phillips held the position of Scientist IV (Environmental Compliance Manager, Environmental Coordinator, and Biologist) at AECOM (formerly EDAW). In this capacity he worked on numerous projects in multiple roles conducting, fish and wildlife Population studies and habitat assessments, Impact studies (EIR/EIS), wetland delineations, environmental permit applications and agency consultations, and managing compliance on mid-large scale construction projects. Below are examples of the projects in which Mr. Phillips played a key role (2006-2011).

- Bay Area Rapid Transit- Oakland Airport Connector, Oakland, CA (Environmental Compliance Manager)
- Lenihan Dam, Los Gatos, CA (Lead Biologist/Project Manager for fisheries)
- San Ramon Creek Bridge Alamo, CA (Environmental Coordinator),
- Grizzly Island Bridge, Solano County, CA (Lead Biological Monitor)
- Contra Costa Water District (CCWD) Contra Costa Canal Fish Screen Project, Contra Costa County, CA (Project Biologist and Biological Monitor)
- Public Works and Government Services Canada (PWGSC) Alaskan Highway (Fisheries Biologist)
- Santa Clara Valley Water District Steelhead and Burrowing Owl Surveys Population Surveys, Santa Clara, CA (Environmental Coordinator, Fish and wildlife Biologist)
- Termino Avenue Drain Replacement Project, Los Angeles County Department of Public Works (Eelgrass and *Caulerpa taxifolia* surveyor, SCUBA)
- Solar Millennium, Mojave and Sonoran Deserts, CA (Wetland Scientist and wildlife Biologist)
- Concord Naval Weapons Station Biological Surveys, Concord United States Navy (Biologist)
- Camp Pendleton (Wetland Scientist)
- Encinas Creek Bridge, Carlsbad, CA (Wetland Scientist and Biologist)
- Department of Veterans Affairs, Alameda, CA (Wetland Scientist and Biologist)

#### **Additional Relevant Projects Experience with A.A Rich and Associates (2003-2006)**

- Town of Fairfax Steelhead Population and Habitat Assessment, Fairfax, CA
- Codornices Creek Steelhead Habitat Assessment, Alameda County, CA
- Donor Creek Pipeline Repair Project, Nevada County, CA
- San Anselmo Creek Bank Stabilization and Restoration Project(s), Marin County, CA
- River Island Development Project Lathrop, CA

#### **Contract Work for Regulatory Agencies**

- United States Army Corps of Engineers Long Term Management Strategies: Salmon Tracking Study, San Francisco Bay/Delta
- National Oceanic and Atmospheric Administration, National Marine Fisheries Service Santa Cruz Laboratory

# Appendix A. Resumes



Brett Mainer has 20 years of experience in the heavy civil construction industry, with the last 15 years serving as engineering manager then general manager at Drill Tech Drilling & Shoring, Inc. During this time, he has designed and supervised the construction of hundreds of projects, primarily consisting of soil nail and tieback walls, drilled shaft and micropile foundation systems, mined tunnels and shafts. Mr. Mainer has designed over 200 soil nail and tieback walls, and has served on several industry committees on ground anchors and drilled shafts.

Mr. Mainer has also designed the ground support and excavation methods for over a dozen tunnels and deep shafts and performed designs, including mix designs, for over a dozen deep soil mixing projects

**As the Drilling and Shoring Designer & Methods Specialist, Brett will be responsible for:**

- Rock Slope Stabilization Plan
- Slope Excavation Plan
- Geotechnical Risk Mitigation

**BRETT MAINER, PE, GE**  
Drilling and Shoring  
Designer & Methods  
Specialist

**Education/Training:**

BS, Civil Engineering, University of California, Davis 1994

MS, Geotechnical Engineering, University of California, Davis 1998

**Licensing & Registration:**

Professional Civil Engineer/California/C58095

Geotechnical Engineer/California/2682

**Years of Similar Experience:**

20

## **DESIGN ENGINEER OF RECORD • 201 Folsom Project, San Francisco, CA [\$6 Million]**

Reference: Chuck Wright / 415.536.1850 / cwright@tishmanspeyer.com

25% on Job [2013]

201 Folsom Street in San Francisco consists of a 275,000-sf lot developed into two 38-story towers and two 12-story podiums over a three-level underground parking garage extending 54 feet below grade with 40 feet of water pressure. The project, which was located partially within the historic (pre-1850) San Francisco Bay, had variable soil conditions consisting of earthquake fill, sand, marsh clay, and Franciscan bedrock. Drill Tech was subcontracted by the Prime Contractor, Lend Lease, to design and construct the perimeter shoring/cut-off wall, perform internal dewatering, and provide design engineering for the soil mix ground improvement to the foundation. Mr. Mainer designed a tied back Cutter Soil Mix (CSM) soldier pile and tieback shoring wall extending 80-feet deep, as well as the soil mix ground improvement.

## **PROJECT MANAGER • West Warm Springs Underground, Thermopolis, WY [\$11 Million]**

Reference: Willie Ralston / 307.673-4812 / wralston@nepetroleum.com

25% ON JOB [2012-2013]

New Era Petroleum's West Warm Springs project consists of a 910-ft deep shaft, shaft station, underground tunnels and drill stations for the purposes of extracting oil. Drill Tech was contracted to design and construct the shaft and shaft station, the headframe and hoist foundations, as well as starter tunnels. Drill Tech successfully completed the construction of the intricate and up to 10' thick concrete foundations in the Wyoming winter. Shaft excavation was carried out using conventional drill and blast sinking techniques staged from a five level sinking platform that housed the drill jumbo and Cryderman mucker. The concrete liner was installed in 20 foot lifts from the work deck during sinking, using concrete from a Drill Tech onsite batch plant. The starter tunnels were completed using jack leg drills and a mini excavator and were supported with rock bolts and shotcrete. Mr. Mainer managed the project from the initial estimate, shaft design, foundation design, headframe design and design of the work platforms and equipment.

## **PROJECT MANAGER • Calaveras Dam Replacement, Fremont, CA [\$11 Million]**

Reference: Shawn Golden / 707.742.6000 / sgolden@flatironcorp.com

25% on Job [2011-2014]

The Calaveras Dam Replacement project is a replacement of the existing earthen dam undertaken by the San Francisco Public Utilities Commission. Drill Tech was subcontracted to perform deep soil mixing to stabilize the disposal site, to excavate a 154-ft deep shaft and five tunnels from within the shaft, and multiple soil nail,

rock bolt and tieback walls to stabilize the abutment excavations and spillway. The ground improvement was performed using 238ea CSM panels up to 78 feet deep that were all keyed five feet into rock. The shaft was excavated with drill and blast techniques, and the tunnels were driven with an Alpine AN50 road header. The total quantity of soil nails, rock bolts and tiebacks on the project exceeded 100,000 lineal feet. Mr. Mainer performed the mix designs for the soil mixing and managed the shaft and tunneling work.

## **PROJECT MANAGER • Terminal Hill Shaft & Tunnel, Sylmar, CA [\$15 Million]**

Reference: Russell Pierson / 213.367.0878 / russell.pierson@LADWP.com | 25% ON JOB [2009-2011]

The Terminal Hill Shaft and Tunnel project was a replacement pipeline for the Los Angeles Department of Water and Power requiring a 16' horseshoe shaped 600' long curved tunnel connecting to a 14' diameter 300' deep shaft and the installation of a 84" pipeline in the shaft and tunnel. The project required heavy reinforced concrete thrust blocks and vaults and 24hour per day connection work during a scheduled shut down. The existing pipeline running up the side of Terminal Hill was removed using a Skycrane helicopter. The tunnel was mined with a roadheader and supported with steel sets and shotcrete. The liner plate supported shaft was mined with a roadheader attachment on a 3 deck work platform designed and built by Drill Tech. Mr. Mainer performed initial estimate, and the design of the portal soil nail walls, tunnel and shaft ground support, and the shaft sinking deck. He also acted as the project sponsor in charge of all high level discussions with the LADWP.

## **PROJECT MANAGER • Donner Tunnel Clearance Project, Sacramento to Truckee Sacramento/El Dorado Counties, CA [\$10 Million]**

Reference: Ken Bobert (UPRR) / 503.708.6973 / kabobert@up.com | 100% ON JOB [2009]

The \$10M Donner Clearance project consisted of retrofitting and enlarging 22 tunnels for the Union Pacific Railroad between Sacramento and Truckee to accommodate double stack rail traffic. Primary work activities included approximately 5,000CY of backfill grout, 30,000LF of rock bolts, removal of hundreds of timber sets and replacement with shotcrete, and roadheader and drill and blast enlargement of 20,000 lineal feet of tunnel. Working with up to five separate work trains spread over 100 miles of track, Drill Tech accomplished this project in one April to November construction season. Mr. Mainer was the onsite Project Manager for this project in charge of all aspects of estimating, scheduling, engineering, equipment selection and job management.

## **ENGINEER OF RECORD • Valero Refinery Flue Gas Scrubber Expansion Benicia, CA [\$20 Million]**

Reference: Keith Washington / 707.745.7771 / keith.washington@valero.com | 25% ON JOB [2008-2009]

The expansion of the Valero Refinery necessitated construction of multiple retaining walls and foundations for which Drill Tech was selected to design and construct under a \$20M contract. Items of work included two large permanent soldier pile and tieback walls, multiple permanent soil nail walls up to 35 feet in height, micropile and CIDH foundations, CSM ground improvement and over 100,000CY of excavation. Mr. Mainer was the design engineer of record for all of the above structures.

## **PROJECT MANAGER & DESIGN ENGINEER • Lenihan Dam Outlet Tunnel & Shaft Los Gatos, CA [\$14 Million]**

Reference: Donna Collins / 408.265.2600 / dcollins@valleywater.org | 25% ON JOB [2007-2008]

Under subcontract to Flatiron, Drill Tech constructed a 2035' long tunnel and a 50' secant pile shaft adjacent to the active reservoir. The tunnel was excavated with a combination of roadheader and drill and blast, with steel set and shotcrete ground support through mixed ground ranging from very hard rock to squeezing clay. Extensive probe drilling and cut off grouting was required to control the groundwater as the tunnel was advanced under the reservoir. The project was completed ahead of schedule and under budget, winning multiple national awards. Mr. Mainer was the overall project tunnel manager and design engineer for the tunnel and shaft ground support.

## ENGINEER OF RECORD • Diemer WTP Expansion Shoring, Yorba Linda, CA [\$10 Million]

Reference: Trevor Jordan / 714.986.8805 / tjordan@mwdh2o.com

25% ON JOB [2006-2007]

The expansion of the Diemer Water Treatment Plant necessitated construction of an 88' tall shoring wall, extending over 1000' in length, to support the largest water treatment plant in Southern California. Drill Tech performed this work under a subcontract to Kiewit for the Metropolitan Water District. MWD's design criteria limited wall deflection to 3/4-inch. Mr. Mainer designed and supervised the construction of the soldier pile and tieback shoring wall that accomplished this challenging project that was delivered on time and within budget.

## PROJECT MANAGER & ENGINEER OF RECORD • Clos de la Tech Tunnels La Honda, CA [\$9 Million]

Reference: Valeta Massey / 650.722.3038 / valeta.massey@cypress.com

40% ON JOB [2002-2004]

Drill Tech was contracted by a private owner to design and construct an underground complex to house not just barrel storage but an entire winery underground in a steep hillside location south of San Francisco. This work required soldier pile walls, soil nail walls up to 50 feet tall at the portals, three main tunnels 300' long up to 34' in diameter, nine smaller tunnels, a 30' diameter shaft, and multiple drilled vent shafts to 4' in diameter, 120' deep. The tunnels were driven through very difficult mixed ground under shallow cover, requiring a mix of excavator, roadheader and drill and blast excavation with extensive spiling. The tunnels were supported, in various locations, with steel sets, rock bolts and shotcrete, and lattice girders and shotcrete. The majority of the shotcrete surfaces were carved and stained to resemble the natural rock. Mr. Mainer was the design engineer of record for all of the above structures and supervised the construction of the walls and tunnels.

## PROJECT MANAGER & ENGINEER OF RECORD • O'Shaughnessy Dam (Hetch Hechy Reservoir) Outlet Modifications, Yosemite, CA [\$2 Million]

Reference: Tracy Cael / 415.551.4629 / tcael@sfgwater.org

100% ON JOB [2003]

For the San Francisco Public Utilities Commission, Drill Tech created a space on a sheer granite cliff for a portal, sank a 110' deep, 10' diameter shaft and enlarged the existing outlet tunnel below in order to facilitate the SFPUC's contract to shift the dam outlet from the bottom of the arch dam (which was beginning to silt up after 80 years) to the middle of the reservoir 250' above river level. The Hetch Hechy reservoir supplies over 90% of San Francisco's drinking water. Because of post-bid environmental constraints, the SFPUC asked if it was possible to build the works in less than 3 months between 9/1/03 and 11/15/03. Drill Tech developed a plan to work 24 hours per day, 7 days per week, using the "drop raise" method shaft sinking. This would require all of the shaft muck to be dropped during each blast on top of the 9' diameter pipeline that supplies San Francisco's water. Drill Tech performed the initial drilling and blasting with sinking hammers with men suspended by ropes, created a drilling template to accurately drill 110' deep blast holes, designed the braced steel set and double hardwood lagging pipe protection, and finished the project 1 day early without impacting the 500' tall arch dam immediately adjacent or the City's drinking water. Mr. Mainer was the design engineer for the above works, including all ground support and blast designs, and was the onsite supervisor for the 80 straight days required to accomplish the work.

## PROJECT MANAGER • Golden Gate Bridge South Anchorage Seismic Retrofit San Francisco, CA [\$5 Million]

Reference: Bob Smith with GGBD / tcael@sfgwater.org

25% on Job [2001-2003]

Drill Tech, under subcontract to the Shimmick/Obayashi JV, installed 152ea epoxy coated tiedowns up to 1970kips capacity and 120' deep around Pylons S1 and S2 and within the anchor house. All drill spoils had to be contained with a closed venturi system and drilling and installation conditions included low overhead and working from platforms suspended over the Bay. Mr. Mainer designed and installed the strain gauge monitoring system for the testing program and supervised the drilling and testing during the initial phases of the project.

# Appendix A. Resumes



Mr. Middleton has worked for over 19 years in the drilling and construction industry. He has completed many difficult projects for Caltrans including work on the San Francisco-Oakland Bay Bridge, Alfred Zamp Bridge (new Carquinez), Benicia Bridge, and the Richmond San Rafael Bridge, as well as over two dozen other Caltrans projects incorporating soil nail walls, tieback walls, and drilled shaft components.

Mr. Middleton has also completed many projects for railroads such as CSX, Union Pacific, BSNF, Caltrain, and Metrolink.

He has extensive experience in the installation and testing on dozens of soil nail and tieback walls including ground anchors up to 2,100 kips. Mr. Middleton has extensive drilled shaft experience for shafts measuring up to 13' in diameter.

**As the Drilling & Shoring Superintendent for this project, Mr. Middleton will be responsible for:**

- Constructability, safety, and schedule reviews during preconstruction phase
- Preconstruction value engineering concepts
- Construction superintendents specializing in drilling, shoring, slope, stabilization, tiebacks, and CIDH piles

## BRAD MIDDLETON DRILLING & SHORING SUPERINTENDENT

### Work History:

Roseburg Forest Product – Various Roles up to Safety Manager 1983-1996  
Drill Tech Drilling & Shoring, Inc. – Foreman 1997 – 2001  
Flatiron Construction – Tiedown Testing Foreman 2001 – 2002  
AGRA Foundations Limited – Foreman 2002-2004  
Drill Tech Drilling & Shoring, Inc. – Superintendent 2004 - Present

### Years of Similar Experience:

19

### **SUPERINTENDENT • Retaining Wall Project, Dunsmuir, CA [\$330,000]**

Reference: Jeff Lasher / 531.320.9752 100% on Job [2013]

Mr. Middleton was the superintendent for the installation of three soldier pile and tieback retaining walls drilled from rail in a mountainous area above the upper Sacramento River in 2013.

### **SUPERINTENDENT • North Torrey Pines Road Seismic Retrofit, San Diego, CA [\$485,596]**

Reference: Wade Durant / 858.755.9313 / cityhall@delmar.ca.us 50% on Job [2013]

Drilled 8ea 6' diameter, 90' deep CIDH piles through sands and cobbles to below sea level within 300' from the shoreline. Spliced cases above open hole, poured piles under wet conditions. All piles passed gamma testing.

### **SUPERINTENDENT • CSX Stuart Tunnel, Paw Paw, WV [\$5.3 Million]**

Reference: Ben Mathews / 270.991.2500 90% on Job [2013]

Mr. Middleton was the superintendent for the rehabilitation and enlargement of a 3700' long double track train tunnel for CSX railroad. The project consisted of drilling and grouting behind the existing liner and using a roadheader to notch the existing liner for double stack clearance. All work was done under live track conditions.

### **SUPERINTENDENT • Calaveras Dam Replacement Project, Fremont, CA [\$11 Million]**

Reference: Terry King / 415.554.3155 / tking@sfgwater.org 100% on Job [2012]

This DTDS subcontract, constructed in 2011-2012, consisted of a 23 foot diameter, 151 feet deep shaft with five adits approximately 60 feet long radiating from the shaft at different levels. The shaft was excavated with conventional drill and blast methods with ring steel and shotcrete support in the overburden and rock bolt and shotcrete support in the rock. All blasting was performed in close proximity to the dam and the existing intake tower and had to meet strict vibration criteria. The upper three tunnels were excavated with an AN50 roadheader and the lower two tunnels were excavated with drill and blast. Tunnel ground support consisted of steel sets with timbering and shotcrete. Permanent water conveyance pipes up to 72-inches in diameter were

then placed in the shaft and adits. Other work in this project include foundation grouting, deep soil mixing, and extensive rock bolting and rock anchors. Mr. Middleton was the shaft Superintendent.

## **SUPERINTENDENT • Union Pacific Moffat Tunnel, Winter Park, CO [\$1 Million]**

### **SUPERINTENDENT • Railroad Slide Repair, Bonner’s Ferry, ID [\$495,000]**

Reference: Tim Smith / 719.251.9254 / trsmith@up.com

100% on Job [2012]  
100% on Job [2011]

Mr. Middleton was the superintendent for the rehabilitation of the Moffat Tunnel in Colorado in 2012. Work included extensive permeation grouting, rock bolting and standing steel set. Drill Tech successfully constructed and ice shield consisting of steel beam arches with steel lagging, sprayed on waterproofing and shotcrete in a 6-mile long tunnel.

Superintendent on a slide repair for Union Pacific Railroad 4-miles south of the Canadian border. The work consisted of installing environmental protections for the river below and then installing a driven soldier pile and tieback retaining wall to retain the railbed from the head scarp of the landslide. Soil nail and shotcrete slope protection was also installed using a crane basket drill.

## **SUPERINTENDENT • Lower Monumental Lock & Dam, Walla Walla, WA [\$270,000]**

Reference: Kevin Shanley / 509.535.0651 / kevins@maxkuney.com

100% on Job [2010-2011]

This project was a Lock Structure repair for the Lower Monumental Lock owned and operated by the Army Corps of Engineers (USACE). DTDS scopes included drill, furnish and install approximately 40 “spin-lock” anchors ranging in length from 13 feet to 26 feet. Additionally, DTDS backfilled and smooth trowel finished approximately 40 “anchor head” block out locations using dry-mix shotcrete. Access for this project was particularly challenging. DTDS installed anchors as high as 35 feet overhead and access to the work area was by crane and scaffolding only. Working in a U.S. waterway and a federally protected site caused strictly enforced rules regarding environmental protection and quality control.

## **SUPERINTENDENT • Caldecott Tunnel, Orinda, CA [\$6 Million]**

Reference: Peter Strykers / 510.714.7076 / peter.strykers@dot.ca.gov

50% on Job [2010-2011]

Supervised the construction of secant piles at both portals of this tunnel project with tiebacks and walers. Supervised construction of 60’ tall soldier beam and tieback walls at west portal. Supervised construction of soil nail walls at east portal.

## **SUPERINTENDENT • Union Pacific Rail Tunnel 9, Tehachapi, CA [\$456,035]**

Reference: Ken Bobert / 503.708.6973 / kabobert@up.com

100% on Job [2010]

On a Saturday afternoon, a BNSF train derailed inside Union Pacific Tunnel #9 in the Tehachapi mountains and several ethanol cars exploded inside the tunnel. The resulting fire and heat severely damaged the existing concrete liner and the fire got into the old timber lining behind the concrete and continued to burn. DTDS was contacted at 4:00 A.M. on Sunday morning and had men and equipment onsite by Sunday afternoon. The fire behind the lining was smothered by pumping grout behind the concrete and the worst of the spalled concrete was scaled with an excavator mounted roadheader. After several days of letting the backed up trains run, DTDS worked in short work windows to finish scaling the tunnel and apply steel fiber reinforced shotcrete to replace the removed concrete. Mr. Middleton was the Superintendent for this emergency project.

## **SUPERINTENDENT • Union Pacific Rail Donner Clearance Project-Penryn to Truckee Placer & El Dorado Counties, CA [\$10.8 Million]**

Reference: Ken Bobert / 503.708.6973 / kabobert@up.com

100% on Job [2009]

This DTDS contract, awarded in March 2009 and completed in November 2009, consisted of rehabilitating 15 existing railroad tunnels on the Union Pacific mainline between Sacramento and Truckee, CA. Primary work items consisted of enlarging the tunnels with a roadheader, contact grouting existing concrete linings, removing existing timber linings and replacing with shotcrete, and installing over 30,000 feet of rock bolts (both grouted and resin bolts). All equipment was mounted on work trains or high rail equipment that relocated to nearby (up to 9 miles away) sidings by the end of the work window each day. Mr. Middleton was the Superintendent of the rock bolting operation.

## **SUPERINTENDENT • SR 92/35, San Mateo County, CA [\$7 Million]**

Reference: Randy Smith / 925.687.9160

90% on Job [1997-1999]

Superintendent on this project that involved 120,000-sf of sculpted soil nail walls up to 60' tall constructed for Caltrans in steep terrain. Much of the work required the use of high reach excavator mounted drills and basket drills.

Additional project Mr. Middleton worked on include:

**SUPERINTENDENT, DEVIL'S SLIDE BRIDGE, PACIFICA, CALIFORNIA [2006]** Superintendent for the construction of CIDH for new bridge foundations. Designed and constructed temporary soil nail and soldier pile shoring, 30,000-sf temporary soil nail shoring, 1,600-ft of 5' diameter and 1,900-ft of 2' diameter CIDH piles.

**SUPERINTENDENT, ROUTE 80, HERCULES, CALIFORNIA [2010]** Supervised construction of 120,000 square feet of sculpted soil nail walls above a very busy Hwy 80 for Caltrans.

**SUPERINTENDENT, RED TOP WEST DEWATERING SHAFT, VALLEJO, CALIFORNIA [2008]** This project, begun in 2006 and completed in early 2008, consisted of excavating a 20-foot inside diameter shaft 154 feet deep into the toe of a massive landslide underneath I-80 between Vallejo and Fairfield, CA. Extensive probe drilling, dewatering and grouting was required to control the running ground. From inside the shaft, 131,000 lineal feet of horizontal drains were drilled into the landslide to drain the groundwater into the shaft where it is be pumped up and discharged away from the slide. The shaft was classified as "Gassy" by Cal Osha due to the presence of methane and was excavated with a permissible electric excavator, manufactured by DTDS and equipped with a bucket, a breaker, and a drill attachment. The shaft was lined with lattice girders, rock bolts and shotcrete.

**SUPERINTENDENT, CALTRAIN TUNNEL REHABILITATION, SAN FRANCISCO, CALIFORNIA (2004-2005)** This project, that was performed in 2004-2005, consisted of extensive rehabilitation of four 100 year old double track rail tunnels under live track conditions. The main items of work included 10,000 cubic yards of shotcrete, pressure grouting (over 150,000 sacks of cement) and the installation of hundreds of rock bolts. This tunnel was deemed potentially gassy.

**FOREMAN & DRILLER FOR AGRA FOUNDATIONS, RICHMOND SAN RAFAEL BRIDGE RETROFIT, RICHMOND, CALIFORNIA (2002-2004)** Project included 454ea deep Micropiles, 170ea 5' diameter CIDH, 3ea 13'diameter CIDH, all in the San Francisco Bay. All work was performed off of floating platforms and barges.

**SUPERINTENDENT, HIGHWAY 18 EMERGENCY SLIDE REPAIR, LAKE ARROWHEAD, CALIFORNIA (2000)** Foreman for emergency soil nail wall designed and constructed for Caltrans to re-open highway closed by a rock slide. The work included high reach soil nailing, rockfall protection, and sculpted and stained shotcrete.

# Appendix B

## Legal Documents



A JOINT VENTURE



Underground winery structure in a steep hillside located south of San Francisco. Work required soldier pile walls, soil nail walls up to 50' tall at the portals, three main tunnels 300' long up to 34' in diameter, nine smaller tunnels, a 30' diameter shaft, and multiple drilled vent shafts to up 4' in diameter and 120' deep.

## **Legal Documents:**

- **JV Teaming Agreement  
For Flatiron/Drill Tech**
- **Flatiron Legal Entity Docs**
- **Drill Tech Legal Entity Docs**

*State Route 140 Ferguson Slide Permanent Restoration Project  
Caltrans Contract No. 10-0P9201*

**Construction Joint Venture Teaming Agreement**

This Teaming Agreement is effective as of December 16, 2013, by and between Flatiron West, Inc. ("Flatiron") and Drill Tech Drilling & Shoring, Inc. ("Drill Tech").

This Agreement is made in connection with the preparation and submittal of the proposal to the California Department of Transportation ("Owner") for the State Route 140 Ferguson Slide Permanent Restoration Project (the "Project"). Owner has issued its Request for Qualifications for Proposers to engage in a construction manager/general contractor (CMGC) project delivery method for the Project. The CMGC delivery method consists of a pre-construction phase and a construction phase.

After the pre-construction phase, but prior to the execution of the construction contract, the Parties will further define each Party's participation of the Joint Venture. In either case, the Project will be executed as a Line Item Joint Venture where each party is responsible for its portion of work. Each Party's participation will be based on the value of the work each participant will perform (i.e. Line Item). As a division of responsibilities between the Parties, it is anticipated that Drill Tech will perform soil nail, rock bolts, shotcrete, rockfall containment, shoring, drilled shafts, ground improvements, slope stabilization, drill, blasting, and all work associated with similar scope, while Flatiron would perform all other work on the project. Each Party may subcontract portions of its scope to qualified contractors.

The Parties agree to work exclusively with each other as a Team to furnish a proposal for the project. Flatiron and Drill Tech intend to form a line item share Joint Venture known as "Flatiron/Drill Tech, A Joint Venture" (or the "Joint Venture") and will execute a Joint Venture Agreement. Flatiron will lead the Team and the Joint Venture as the managing party.

All Parties agree that this Teaming Agreement for pursuing the Project is valid only if the Project is procured by the Owner as a single Construction Manager/General Contractor contract. The parties currently estimate the Project at \$55 million.

As it relates to the RFQ proposal, all Parties will be responsible for their own internal and out-of-pocket expenses as it relates to the preparation and submittal of this document. Flatiron will take the overall lead in organizing these activities and communications with the Owner.

Flatiron and Drill Tech will provide all post-award preconstruction services at rates and markups as allowed for by the Contract.

Flatiron and Drill Tech will work as a Team to coordinate, schedule, and interface work with each other (and other subcontractors) to assure the most competitive Team and superior proposal.

Each Party shall be responsible for its own specific proposal and bid preparation costs. Each party agrees to prepare written submissions required for the proposal and bid documents, as mutually agreed.

The standard Flatiron Joint Venture Agreement will serve as the model for the Line Item Joint Venture Agreement. In any case, the chosen form of the Joint Venture Agreement will be mutually agreed upon and executed prior to submittal of the fixed-price Construction Contract. Flatiron and Drill Tech agree to be jointly and severally liable to the Owner for the Construction Contract under the Joint Venture Agreement.

Liability of the Parties to each other shall be as specified in the Joint Venture Agreement. Any Party that is a subsidiary of or wholly owned by another entity will furnish a performance guarantee from its parent or owner entity acceptable to other parties and, if required by the Owner, to the Owner. Flatiron shall not be required to provide a guarantee above the Flatiron Construction Corporate level.

Provisions herein regarding the contents of the Joint Venture Agreement and the post-award relationship of the parties will be superseded by the executed Joint Venture Agreement.

Flatiron will provide a major portion of the salary personnel and Drill Tech will provide the remaining salary personnel. Other personnel commitments may be detailed in the Joint Venture Agreement or Team Proposal.

Each Party agrees to keep confidential, and not furnish to any third party without the other Party's consents, any information or documents obtained from each other in connection with any proposals or work product associated with this Project or the pursuit of this Project and in association with this Agreement. This agreement of confidentiality shall survive the termination of this Agreement.

Nothing in this agreement shall be construed as creating a permanent partnership between the parties, or giving to any party any of the rights of, or subjecting any party to any of the liabilities of, a partner, nor shall any party be authorized to represent or make any commitments binding on any other party or the Parties. This agreement is limited to the Project described above, and has no effect on any other project including projects related to the Project, or any other business of any party.

This agreement is subject to each Party's right to withdraw from the Team and terminate its interest in the Project upon its review of the Owner's Request for Qualifications (RFQ) within three weeks of receipt of those documents from the Owner. The Party electing to terminate under the foregoing provision agrees that it shall not pursue participation in the Project via any other means. The remaining Party or Parties shall be permitted to continue pursuit of the Project together, with or without additional entities.

This Teaming Agreement will terminate upon the earlier of: (1) termination by any Party under the above provisions; (2) if the Joint Venture's Proposal(s) are not accepted by the Owner; (3) by mutual agreement of the Parties, (4) award of the Project to the Joint Venture, (5) Cancellation or indefinite suspension of Project or Project procurement activities by the Owner. (6) Change in project delivery method by the Owner, or (7) Substantial change in scope to the Project by the Owner.

**AGREED:**

**FLATIRON WEST, INC.**

By:  \_\_\_\_\_  
Signature

Name: Richard Grabinski

Title: Vice President – District Manager

Date: 1/21/2014

**DRILL TECH DRILLING & SHORING, INC.**

By:  \_\_\_\_\_  
Signature

Name: Shannon Creson

Title: President

Date: 1/21/2014

**POWER OF ATTORNEY**

KNOW ALL MEN BY THESE PRESENTS:

That, the undersigned represents and warrants that he is authorized to execute this Power of Attorney on behalf of the entity described; and

That, Flatiron West, Inc. (the "Corporation") and Drill Tech Drilling & Shoring, Inc. are members of a Joint Venture known as Flatiron/Drill Tech, a Joint Venture (the "Joint Venture"), and desire to submit a Statement of Qualifications Proposal and associated documents and, if selected by the client, enter into a contract with the California Department of Transportation ("Caltrans") for the Rte 140 Ferguson Slide Permanent Restoration CMGC Project, as described in the Request for Qualifications dated December 5, 2013 ("the "Project").

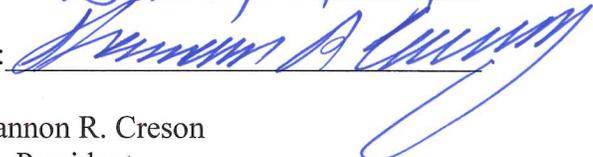
The Joint Venture, does hereby designate, constitute, and appoint Richard Grabinski as its true and lawful Attorney-in-Fact for the Joint Venture. The Corporation hereby ratifies and confirms such appointment. The Attorney-in-Fact shall have the power to do and perform all acts on behalf of the Joint Venture necessary in connection with the preparation and submittal of the Proposal for the above described Project, to wit; to execute the Proposal documents, and all required documentation to be submitted with the Proposal and, if selected to enter into a contract (the "Contract") for the Project, the Joint Venture further authorizes Richard Grabinski as its true and lawful Attorney-in-Fact, in the Joint Venture's place and stead, to sign, initial, execute, and deliver on behalf of the Joint Venture all agreements and documents and perform any and all acts necessary or desirable in the submission of Proposal for said Contract; ratifying and confirming all that Richard Grabinski as said attorney, shall lawfully do or cause to be done by virtue hereof.

The foregoing appointment of Richard Grabinski as above specified, is hereby specifically made subject to revocation or amendment thereof as may hereafter be made by the Joint Venture; further, this Power of Attorney shall remain in effect for a period of Five (5) years from its effective date, unless earlier revoked in writing.

IN WITNESS WHEREOF, the undersigned have caused this instrument to be duly executed by the Corporation on behalf of the Joint Venture by its duly authorized partner this 21<sup>st</sup> day of January 2014.

DRILL TECH DRILLING & SHORING, INC.

Dated: January 21, 2014

By: 

Shannon R. Creson  
Its: President

[Add a CA notary form]

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

CIVIL CODE § 1189

State of California

County of Contra Costa

On Jan. 21, 2014 before me, Mario Ruberte, Notary Public

personally appeared Shannon R. Crejan

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.



Place Notary Seal Above

Signature: [Handwritten Signature] Signature of Notary Public

OPTIONAL

Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.

Description of Attached Document

Title or Type of Document: POWER OF ATTORNEY

Document Date: January 21, 2014 Number of Pages: one (1)

Signer(s) Other Than Named Above:

Capacity(ies) Claimed by Signer(s)

Signer's Name: Shannon R. Crejan Signer's Name:

Corporate Officer - Title(s): President Corporate Officer - Title(s):

Individual Individual

Partner - Limited General Partner - Limited General

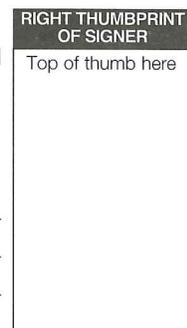
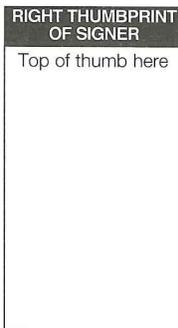
Attorney in Fact Attorney in Fact

Trustee Trustee

Guardian or Conservator Guardian or Conservator

Other: Other:

Signer Is Representing: Signer Is Representing:



# Delaware

PAGE 1

*The First State*

I, JEFFREY W. BULLOCK, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY "FLATIRON WEST, INC." IS DULY INCORPORATED UNDER THE LAWS OF THE STATE OF DELAWARE AND IS IN GOOD STANDING AND HAS A LEGAL CORPORATE EXISTENCE SO FAR AS THE RECORDS OF THIS OFFICE SHOW, AS OF THE TWENTY-THIRD DAY OF OCTOBER, A.D. 2013.

AND I DO HEREBY FURTHER CERTIFY THAT THE ANNUAL REPORTS HAVE BEEN FILED TO DATE.

AND I DO HEREBY FURTHER CERTIFY THAT THE FRANCHISE TAXES HAVE BEEN PAID TO DATE.

3086619 8300

131225924



  
Jeffrey W. Bullock, Secretary of State  
AUTHENTICATION: 0835371

DATE: 10-23-13

**State of California**  
**Secretary of State**

CERTIFICATE OF STATUS

ENTITY NAME:

FLATIRON WEST, INC.

FILE NUMBER: C2180786  
REGISTRATION DATE: 10/29/1999  
TYPE: FOREIGN CORPORATION  
JURISDICTION: DELAWARE  
STATUS: ACTIVE (GOOD STANDING)

I, DEBRA BOWEN, Secretary of State of the State of California,  
hereby certify:

The records of this office indicate the entity is qualified to  
transact intrastate business in the State of California.

No information is available from this office regarding the financial  
condition, business activities or practices of the entity.



IN WITNESS WHEREOF, I execute this certificate  
and affix the Great Seal of the State of  
California this day of October 24, 2013.

*Debra Bowen*

**DEBRA BOWEN**  
Secretary of State

**CERTIFICATE OF INCORPORATION  
OF  
FCI CONSTRUCTORS, INC.**

**ARTICLE 1**

The name of the corporation is FCI Constructors, Inc.

**ARTICLE 2**

The address of the corporation's registered office in the State of Delaware is 1209 Orange Street, Corporation Trust Center, Wilmington, Delaware 19801. The name of its registered agent at such address is The Corporation Trust Company.

**ARTICLE 3**

The purposes for which the corporation is organized are to engage in any business and in any lawful act or activity for which corporations may be organized under the Delaware General Corporation Law and to possess and employ all powers and privileges now or hereafter granted or available under the laws of the State of Delaware to such corporations.

**ARTICLE 4**

(a) **Authorized Shares.** The aggregate number of shares which the corporation has authority to issue is 1,000. The authorized shares consist of 1,000 shares of common stock, no par value per share, such class being designated "common stock."

(b) **Common Stock.** The common stock shall have unlimited voting rights. The common stock shall be entitled to receive the net assets of the corporation upon dissolution. The affirmative vote of a majority of all outstanding shares of the corporation's common stock shall be required for the stockholders to act.

## ARTICLE 5

The name and mailing address of the incorporator are:

Joan Blaik, Esq.  
633 17th Street, Suite 3000  
Denver, Colorado 80202

## ARTICLE 6

The powers of the incorporator shall terminate upon the filing of this certificate of incorporation in the office of the Secretary of State of the State of Delaware. The names and mailing addresses of the persons who are to serve as the directors of the corporation until their successors are elected and qualified or their earlier resignation or removal is:

<u>Name</u>	<u>Mailing Address</u>
Scott S. Lynn	P.O. Box 2239, Longmont, CO 80502-2239
Paul R. Driscoll	P.O. Box 2239, Longmont, CO 80502-2239

The number of directors of the corporation shall be fixed from time to time in the manner provided in the bylaws and may be increased or decreased from time to time in the manner provided in the bylaws. Election of directors need not be by written ballot except and to the extent provided in the bylaws of the corporation.

The affirmative vote of a majority of all directors constituting the board of directors shall be required for the board of directors to act.

## ARTICLE 7

The board of directors of the corporation is expressly authorized to make, alter or repeal the bylaws of the corporation, but such authorization shall not divest the stockholders of the power, nor limit their power, to adopt, amend or repeal bylaws.

## ARTICLE 8

No director of the corporation shall be personally liable to the corporation or its stockholders for monetary damages for breach of fiduciary duty as a director, except as to liability (i) for any breach of the director's duty of loyalty to the corporation or its stockholders, (ii) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (iii) for violations of Section 174 of the Delaware General Corporation Law or (iv) for any transaction from which the director derived any improper personal benefit. If the Delaware General Corporation Law hereafter is amended to eliminate or limit further the liability of a director, then, in addition to the elimination and limitation of liability provided by the preceding sentence, the liability of each director shall be eliminated or limited to the fullest extent provided

or permitted by the amended Delaware General Corporation Law. Any repeal or modification of this Article 8 shall not adversely affect any right or protection of a director under this Article 8 as in effect immediately prior to such repeal or modification with respect to any liability that would have accrued, but for this Article 8, prior to such repeal or modification.

#### ARTICLE 9

The corporation shall have authority, to the fullest extent now or hereafter permitted by the Delaware General Corporation Law, or by any other applicable law, to enter into any contract or transaction with one or more of its directors or officers, or with any corporation, partnership, joint venture, trust, association or other entity in which one or more of its directors or officers are directors or officers or have a financial interest, notwithstanding such relationships and notwithstanding the fact that the director or officer is present at or participates in the meeting of the board of directors or committee thereof which authorizes the contract or transaction.

Executed August 2, 1999.

A handwritten signature in black ink, appearing to read "Joe Blak", written over a horizontal line.

State of Delaware  
Secretary of State  
Division of Corporations  
Delivered 04:24 PM 11/12/2008  
FILED 04:24 PM 11/12/2008  
SRV 081112345 - 3086619 FILE

CERTIFICATE OF AMENDMENT  
TO THE  
CERTIFICATE OF INCORPORATION  
OF  
FCI CONSTRUCTORS, INC.

FCI CONSTRUCTORS, INC., a corporation incorporated under the laws of the State of Delaware (the "Corporation"), hereby files with the Secretary of State of the State of Delaware this Certificate of Amendment (the "Certificate of Amendment") to its certificate of incorporation (the "Certificate of Incorporation"), and, in connection therewith, hereby certifies as follows:

1. The Corporation was originally incorporated in Delaware and the original date of filing of the Certificate of Incorporation with the Secretary of State of the State of Delaware was August 24, 1999.

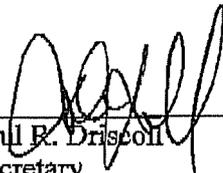
2. The Certificate of Incorporation is hereby amended by striking out Article 1 thereof and by substituting in lieu of said Article the following new Article:

"The name of the Corporation is Flatiron West, Inc."

3. The Certificate of Amendment was duly recommended by the Board of Directors and approved by the stockholders of the Corporation in accordance with Sections 141, 242 and 228 of the General Corporation Law of the State of Delaware.

IN WITNESS WHEREOF, the Corporation has caused the Certificate of Amendment to be signed by Paul R. Driscoll, its Secretary, on November 10, 2008.

FCI CONSTRUCTORS, INC.

BY:   
Name: Paul R. Driscoll  
Title: Secretary

# FCI CONSTRUCTORS, INC.

## BYLAWS

### Article I

#### STOCKHOLDERS

##### **Section 1.1 Annual Meetings.**

The annual meeting of the stockholders for the election of directors and for the transaction of such other business as may properly come before the meeting shall be held on such date as the board of directors shall fix each year. Each such annual meeting shall be held at such date, time, and place, within or without the State of Delaware, as shall be determined by the board of directors. Any annual meeting of stockholders may be adjourned from time to time and place to place until its business is completed.

##### **Section 1.2 Special Meetings.**

Except as otherwise required by law or by the certificate of incorporation and subject to the rights of the holders of any class or series of stock having a preference over the common stock as to dividends or on liquidation, special meetings of the stockholders may be called only by the chairman of the board or the president, or by the board of directors pursuant to a resolution approved by a majority of the entire board of directors. The term "entire board of directors," as used in these bylaws, means the total number of directors which the Corporation would have if there were no vacancies. A special meeting of stockholders shall be called by the president upon the written request, stating date, time, place and purpose(s) of the meeting, of stockholders who together own of record not less than 5% of the voting power of the outstanding stock of all classes entitled to vote at such meeting.

##### **Section 1.3 Stockholder Action; How Taken.**

Unless otherwise restricted by the certificate of incorporation, any action required or permitted to be taken at any annual meeting or special meeting of the stockholders may be taken without a meeting, without prior notice and without a vote, if a consent in writing setting forth the action so taken shall be signed by the holders of outstanding stock having not less than the minimum number of votes that would be necessary to authorize or take such action at a meeting at which all shares entitled to vote thereon were present and voted. Any such consent may be in counterparts and shall be effective on the date of the last signature thereon unless otherwise provided therein. Prompt

notice of the taking of the corporate action without a meeting by less than unanimous written consent shall be given to those stockholders who have not consented in writing.

**Section 1.4 Notice of Meeting.**

Written notice stating the place, date and hour of the meeting and, in case of a special meeting, the purpose or purposes for which the meeting is called, shall be given not less than 10 nor more than 60 days before the date of the meeting, either personally or by mail, prepaid telegram, telex, or facsimile transmission to each stockholder of record entitled to vote at such meeting. If mailed, such notice shall be deemed to be given when deposited in the United States mail, postage prepaid, addressed to the stockholder at his address as it appears on the stock records of the Corporation. If given personally or otherwise than by mail, such notice shall be deemed to be given when either handed to the stockholder or delivered to the stockholder's address as it appears on the stock records of the Corporation or confirmed as received at the stockholders known facsimile number.

**Section 1.5 Waiver.**

Attendance of a stockholder of the Corporation, either in person or by proxy, at any meeting, whether annual or special, shall constitute a waiver of notice of such meeting, except where a stockholder attends a meeting for the express purpose of objecting, at the beginning of the meeting, to the transaction of any business because the meeting is not lawfully called or convened. A written waiver of notice of any such meeting signed by a stockholder or stockholders entitled to such notice, whether before, at or after the time for notice or the time of the meeting, shall be equivalent to notice. Neither the business to be transacted at, nor the purposes of, any meeting need be specified in any written waiver of notice.

**Section 1.6 Voting List.**

The secretary shall make available, at least 10 days before every meeting of stockholders, a complete list of the stockholders entitled to vote at the meeting, arranged in alphabetical order and showing the address and the number of shares registered in the name of each stockholder. Such list shall be open to the examination of any stockholder for any purpose germane to the meeting, during ordinary business hours, for a period of at least 10 days prior to the meeting, either at a place within the city where the meeting is to be held, which place shall be specified in the notice of the meeting, or at the Corporation's principal administrative office.

**Section 1.7 Quorum; Adjournment.**

The holders of not less than a majority of the shares entitled to vote at any meeting of the stockholders, present in person or by proxy, shall constitute a quorum, and the act of the majority of the shares entitled to vote at such meeting shall be deemed the act of the stockholders. If a quorum shall fail to attend any meeting, the chairman of the meeting may adjourn the meeting

from time to time, without further notice if the time and place of the adjourned meeting are announced at the meeting, until a quorum shall be present. At such adjourned meeting at which a quorum is present, any business may be transacted which might have been transacted at the original meeting. If the adjournment is for more than 30 days or if after the adjournment a new record date is fixed for the adjourned meeting, a notice of the adjourned meeting shall be given to each stockholder of record entitled to vote at the meeting.

#### **Section 1.8 Record Date.**

In order that the Corporation may determine the stockholders entitled to notice of or to vote at any meeting, or at any adjournment of a meeting, of stockholders or entitled to express consent to corporate action in writing without a meeting or entitled to receive payment of any dividend or other distribution or allotment of any rights or entitled to exercise any rights in respect of any change, conversion or exchange of stock or for the purpose of any other lawful action, the board of directors may fix a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted by the board of directors. The record date for determining the stockholders entitled to notice of or to vote at any meeting of the stockholders or any adjournments thereof shall not be more than 60 nor less than 10 days before the date of such meeting. The record date for determining the stockholders entitled to consent to corporate action in writing without a meeting shall not be more than 10 days after the date upon which the resolution fixing the record date is adopted by the board of directors. The record date for any other action shall not be more than 60 days prior to such action. If no record date is fixed, (i) the record date for determining stockholders entitled to notice of or to vote at any meeting shall be at the close of business on the day next preceding the day on which notice is given or, if notice is waived by all stockholders, at the close of business on the day next preceding the day on which the meeting is held; (ii) the record date for determining stockholders entitled to express consent to corporate action in writing without a meeting, when no prior action by the board of directors is required, shall be the first date on which a signed written consent setting forth the action taken or to be taken is delivered to the Corporation and, when prior action by the board of directors is required, shall be at the close of business on the day on which the board of directors adopts the resolution taking such prior action; and (iii) the record date for determining stockholders for any other purpose shall be at the close of business on the day on which the board of directors adopts the resolution relating to such other purpose. A determination of stockholders of record entitled to notice of or to vote at a meeting of stockholders shall apply to any adjournment of the meeting; provided, however, that the board of directors may fix a new record date for the adjourned meeting.

#### **Section 1.9 Procedure.**

The order of business and all other matters of procedure at every meeting of the stockholders may be determined by the presiding officer.

## Article II

### DIRECTORS

#### **Section 2.1 Number, Election and Terms.**

(a) The number of directors of the corporation shall be fixed from time to time by the board of directors. A director shall be a natural person who is eighteen years of age or older. A director need not be a resident of Delaware or a shareholder of the corporation.

(b) Directors shall be elected at each annual meeting of shareholders. Each director shall hold office until the next annual meeting of shareholders following his election and thereafter until his successor shall have been elected and qualified. Directors may be removed in the manner provided by the Delaware General Corporation Law.

#### **Section 2.2 Newly Created Directorships and Vacancies.**

Except as otherwise fixed pursuant to the provisions of the certificate of incorporation, newly created directorships resulting from any increase in the number of directors and any vacancies on the board of directors resulting from death, resignation, disqualification, removal or other cause shall be filled by the remaining members of the board of directors.

#### **Section 2.3 Regular Meetings.**

The first meeting of the new board of directors elected at the annual meeting of stockholders shall be held immediately after, and at the same place as, the annual meeting of the stockholders, provided a quorum is present, and no notice of such meeting shall be necessary in order to legally constitute the meeting. Regular meetings of the board of directors shall be held at such times and places as the board of directors may from time to time determine.

#### **Section 2.4 Special Meetings.**

Special meetings of the board of directors may be called at any time, at any place and for any purpose by the chairman of the board, any member of the board, the chief executive officer, or the president.

#### **Section 2.5 Notice of Meetings.**

Notice of regular meetings of the board of directors need not be given. Notice of every special meeting of the board of directors shall be given to each director at his usual place of business or at such other address as shall have been furnished by him for such purpose. Such notice shall be properly and timely given if it is (a) deposited in the United States mail not later than 7 calendar days preceding the date of the meeting, or (b) personally delivered, telegraphed, sent by

facsimile transmission or communicated by telephone at least 24 hours before the time of the meeting. Unless required by law, such notice need not include a statement of the business to be transacted at, or the purpose of, any such meeting.

**Section 2.6 Waiver.**

Attendance of a director at a meeting of the board of directors shall constitute a waiver of notice of such meeting, except where a director attends a meeting for the express purpose of objecting, at the beginning of the meeting, to the transaction of any business because the meeting is not lawfully called or convened. A written waiver of notice signed by a director or directors entitled to such notice, whether before, at or after the time for notice or the time of the meeting, shall be equivalent to the giving of such notice.

**Section 2.7 Quorum.**

The presence of a majority of the entire board of directors shall be necessary and sufficient to constitute a quorum for the transaction of business at any meeting of the board of directors, and the act of a majority of the directors present at a meeting at which a quorum is present shall be deemed the act of the board of directors.

**Section 2.8 Chairman of the Board.**

A chairman of the board may be appointed by the board of directors and, if appointed, he shall preside at all meetings of the stockholders and directors at which he may be present. The board of directors may delegate such other authority and assign such additional duties to the chairman of the board as it may from time to time determine. The chairman of the board shall hold his position at the pleasure of the board of directors and may be removed at any time by the board of directors with or without cause.

**Section 2.9 Participation in Meetings By Telephone.**

Members of the board of directors, or of any committee thereof, may participate in a meeting of such board or committee by means of conference telephone or similar communications equipment by means of which all persons participating in the meeting can hear each other and such participation shall constitute presence in person at such meeting.

**Section 2.10 Powers.**

The business, property and affairs of the Corporation shall be managed by or under the direction of its board of directors, which shall have and may exercise all the powers of the Corporation to do all such lawful acts.

**Section 2.11 Compensation of Directors.**

Directors shall receive such compensation for their services as shall be determined by a majority of the entire board of directors.

**Section 2.12 Action Without a Meeting.**

Unless otherwise restricted by the certificate of incorporation or these bylaws, any action required or permitted to be taken at any meeting of the board of directors or any committee thereof may be taken without a meeting if written consent thereto is signed by all members of the board of directors or of such committee, as the case may be, and such written consent is filed with the minutes of proceedings of the board or committee. Any such consent may be in counterparts and shall be effective on the date of the last signature thereon unless otherwise provided therein.

**Article III**

**COMMITTEES**

**Section 3.1 Designation of Committees.**

The board of directors may establish committees for the performance of delegated or designated functions, each committee to consist of one or more directors of the Corporation. In the absence or disqualification of a member of a committee, the member or members thereof present at any meeting and not disqualified from voting, whether or not he or they constitute a quorum, may unanimously appoint another member of the board of directors to act at the meeting in the place of such absent or disqualified member.

**Section 3.2 Committee Powers and Authority.**

The board of directors may provide, by resolution or by amendment to these bylaws, that a committee may exercise all the power and authority of the board of directors in the management of the business and affairs of the Corporation; provided, however, that a committee may not exercise the power or authority of the board of directors in reference to amending the certificate of incorporation (except that a committee may, to the extent authorized in the resolution or resolutions providing for the issuance of shares of stock adopted by the board of directors, pursuant to the certificate of incorporation, fix the designations and any of the preferences or rights of shares of preferred stock relating to dividends, redemption, dissolution, any distribution of property or assets of the Corporation, or the conversion into, or the exchange of shares for, shares of any other class or classes or any other series of the same or any other class or classes of stock of the Corporation or fix the number of shares of any series of stock or authorize the increase or decrease of the shares of any series), adopting an agreement of merger or consolidation, recommending to the stockholders the sale, lease or exchange of all or substantially all of the Corporation's property and

assets, recommending to the stockholders the dissolution of the Corporation or a revocation of a dissolution, declaring a dividend, redeeming or acquiring any of the Corporation's stock or amending these bylaws; and, unless the resolution expressly so provides, no such committee shall have the power or authority to declare a dividend or to authorize the issuance of stock.

**Section 3.3 Committee Procedures.**

To the extent the board of directors or the committee does not establish other procedures for the committee, each committee shall be governed by the procedures established in Article II (except that a committee need not have annual meetings).

**Article IV**

**OFFICERS**

**Section 4.1 Number.**

The officers of the Corporation shall be appointed or elected by vote of the board of directors. The officers shall be a president and chief operating officer, such number of vice presidents as the board of directors may from time to time determine, a secretary, and a treasurer. Any person may hold two or more offices at the same time.

**Section 4.2 Additional Officers.**

The board of directors may appoint such other officers, including, without limitation, a chief executive officer, a chief financial officer, officers of divisions of the Corporation, assistant secretaries and assistant treasurers, and officers with such other titles as it shall deem appropriate. Such other officers shall have such power and authority as determined by the board.

**Section 4.3 Term of Office, Resignation.**

All officers, agents and employees of the Corporation shall hold their respective offices or positions at the pleasure of the board of directors and may be removed at any time by the board of directors with or without cause. Except as otherwise provided in any officer's or employee's employment contract, any officer may resign at any time by giving written notice of his resignation to the chief executive officer, president or to the secretary, and acceptance of such resignation shall not be necessary to make it effective unless the notice so provides. Any vacancy occurring in any office shall be filled by vote of the board of directors.

**Section 4.4 Duties.**

The officers of the Corporation shall perform the duties and exercise the powers assigned to them from time to time by the board of directors, the chief executive officer, or the president. In the absence of such assignment, the officers shall have the duties and powers described in this Article IV.

**Section 4.5 Chief Executive Officer.**

The chief executive officer, if any, shall, subject to the direction and control of the board of directors, manage the business of the Corporation. The chief executive officer may execute contracts, deeds and other instruments on behalf of the Corporation. In the absence of the chairman of the board or in the event of his disability, inability or refusal to act, the chief executive officer shall perform the duties and exercise the power of the chairman of the board. The chief executive officer may execute contracts, deeds and other instruments on behalf of the Corporation. The chief executive officer shall have full authority on behalf of the Corporation to attend any meeting, give any waiver, cast any vote, grant any discretionary or directed proxy to any person, and exercise any other rights of ownership with respect to any shares of capital stock or other securities held by the Corporation and issued by any other corporation or with respect to any partnership, trust or similar interest held by the Corporation.

**Section 4.6 President.**

The president shall be the chief operating officer of the Corporation subject to the direction and control of the chief executive officer, and the board of directors, and in the absence of the chief executive officer shall manage the business of the Corporation. The president may execute contracts, deeds and other instruments on behalf of the Corporation. In the absence of the chief executive officer or in the event of his disability, inability or refusal to act, the president shall perform the duties and exercise the power of the chief executive officer. In the absence of the chief executive officer, the president shall have full authority on behalf of the Corporation to attend any meeting, give any waiver, cast any vote, grant any discretionary or directed proxy to any person, and exercise any other rights of ownership with respect to any shares of capital stock or other securities held by the Corporation and issued by any other corporation or with respect to any partnership, trust or similar interest held by the Corporation.

**Section 4.7 Chief Financial Officer.**

The chief financial officer, if any, shall be responsible for the control of the financial records and funds of the Corporation and the custody of all securities owned by the Corporation. The chief financial officer shall perform such other duties as the board, the chairman of the board, the chief executive officer or, in the absence of the chief executive officer, the president and chief operating officer may from time to time prescribe or delegate to him.

**Section 4.8 Vice President.**

Each vice president, if any, shall perform such functions as may be prescribed by the board of directors, the chief executive officer or the president. Each vice president may execute contracts, deeds and other instruments on behalf of the Corporation. Upon the death, disability or absence of the chief executive officer and the president and chief operating officer, the vice president (or if more than one holds office, the vice president among those present who has held such office for the longest continuous period, unless another method of selection has been established by resolution of the board of directors) shall perform the duties and exercise the powers of the chief executive officer and the president and chief operating officer. Each vice president shall perform such other duties as the board, the chairman of the board, the chief executive officer, or the president and chief operating officer may from time to time prescribe or delegate to him.

**Section 4.9 Secretary.**

The secretary shall give, or cause to be given, notice of all meetings of the stockholders and, upon the request of a person entitled to call a special meeting of the board of directors, he shall give notice of any such special meeting. He shall keep the minutes of all meetings of the stockholders, the board of directors, or any committee established by the board of directors. The secretary shall be responsible for the maintenance of non-financial all records of the Corporation and may attest documents on behalf of the Corporation. The secretary shall perform such other duties as the board, the chairman of the board, the chief executive officer or the president and chief operating officer may from time to time prescribe or delegate to him. Each assistant secretary shall have all power and authority of the secretary unless otherwise determined by the board.

**Section 4.10 Treasurer.**

In the absence of the chief financial officer, the treasurer shall be responsible for the control of the financial records and the funds of the Corporation and the custody of all securities owned by the Corporation. The treasurer shall perform such other duties as the board, the chairman of the board, the chief executive officer, the president and chief operating officer or the chief financial officer may from time to time prescribe or delegate to him. Each assistant treasurer shall have all power and authority of the treasurer unless otherwise determined by the board.

**Section 4.11 Compensation.**

Officers shall receive such compensation, if any, for their services as may be authorized or ratified by the board of directors. Election or appointment as an officer shall not of itself create a right to compensation for services performed as such officer.

**Article V**

**INDEMNIFICATION OF DIRECTORS, OFFICERS AND EMPLOYEES**

**Section 5.1 Directors and Officers.**

Subject to the other Sections of this Article V, the Corporation shall, to the fullest extent permitted by the laws of the State of Delaware and the Corporation's certificate of incorporation as now or hereafter in effect, (i) indemnify any person who was or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether criminal, civil, administrative or investigative (a "Proceeding"), by reason of the fact that he is or was a director or officer of the Corporation, or, by reason of the fact that such officer or director is or was serving at the request of the Corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust, association, or other enterprise, against all liability and loss suffered and expenses (including attorneys' fees), judgments, fines, ERISA excise taxes or penalties, and amounts paid in settlement reasonably incurred by him in connection with such Proceeding, including any Proceeding by or on behalf of the Corporation; and (ii) advance all reasonable expenses incurred by or on behalf of any such person in connection with any Proceeding, whether prior to or after final disposition of such proceeding.

**Section 5.2 Subrogation.**

In the event of payment under these bylaws, the indemnifying party or parties shall be subrogated to the extent of such payment to all of the rights of recovery of the indemnified person therefor, and such person shall execute all papers required and shall do everything that may be necessary to secure such rights, including the execution of such documents necessary to enable the indemnifying party or parties to effectively bring suit to enforce such rights.

**Section 5.3 Effect of Certain Proceedings.**

The termination of any proceeding or of any claim, issue or matter therein, by judgment, order, settlement or conviction, or upon a plea of nolo contendere or its equivalent, shall not (except as otherwise expressly provided in these bylaws) of itself adversely affect the right of any person to indemnification or create a presumption that such person did not act in good faith and in a manner which he reasonably believed to be in or not opposed to the best interests of the Corporation or, with respect to any criminal proceeding, that such person had reasonable cause to believe that his conduct was unlawful.

**Section 5.4 Exception to Right of Indemnification or Advancement of Expenses.**

Notwithstanding any other provision of these bylaws, no person shall be entitled to indemnification or advancement of expenses under these bylaws with respect to any proceeding brought by such person, unless the bringing of such proceeding or making of such claim shall have been approved by the board of directors.

**Section 5.5 Contract.**

The foregoing provisions of this Article V shall be deemed to be a contract between the Corporation and each director and officer who serves in such capacity at any time while these bylaws are in effect, and any repeal or modification thereof shall not affect any rights or obligations then existing with respect to any state of facts then or theretofore existing or any action, suit or proceeding theretofore or thereafter brought based in whole or in part upon any such state of facts. The foregoing rights of indemnification shall not be deemed exclusive of any other rights to which any director or officer may be entitled apart from the provisions of this Article V.

**Section 5.6 Inclusion of Constituent Corporations.**

The board of directors may provide by resolution that references to "the Corporation" in this Article V shall include, in addition to this Corporation, any constituent corporation absorbed in a merger with this Corporation so that any person who was a director or officer of such constituent corporation or is or was serving at the request of such constituent corporation as a director, employee, or agent of another corporation, partnership, joint venture, trust, association, or other entity shall stand in the same position under the provisions of this Article V with respect to this Corporation as he would if he had served this Corporation in the same capacity or is or was so serving such other entity at the request of this Corporation, as the case may be.

**Section 5.7 Inurement.**

The indemnification and advancement of expenses provided by, or granted pursuant to, this Article V shall continue as to a person who has ceased to be a director or officer and shall inure to the benefit of the heirs, executors, and administrators of such person.

**Section 5.8 Employees and Agents.**

To the same extent as it may do for a director or officer, the Corporation may indemnify and advance expenses to a person who is not and was not a director or officer of the Corporation but who is or was an employee or agent of the Corporation.

**Article VI**

**CAPITAL STOCK**

**Section 6.1 Certificates.**

Each stockholder of the Corporation shall be entitled to a certificate or certificates signed by or in the name of the Corporation by the chief executive officer, president or a vice president and by the treasurer, an assistant treasurer, the secretary or an assistant secretary, all of whom may be the same person, representing the number of shares of stock of the Corporation owned by such stockholder. Any or all the signatures on the certificate may be a facsimile.

**Section 6.2 Facsimile Signatures.**

In case any officer, transfer agent or registrar who has signed or whose facsimile signature has been placed upon a certificate shall have ceased to be such officer, transfer agent or registrar before such certificate is issued, it may be issued by the Corporation with the same effect as if he, she or it was such officer, transfer agent or registrar at the date of issue.

**Section 6.3 Registered Stockholders.**

The Corporation shall be entitled to treat the holder of record of any share or shares of stock of the Corporation as the holder in fact thereof and, accordingly, shall not be bound to recognize any equitable or other claim to or interest in such share or shares on the part of any other person, whether or not it has actual or other notice thereof, except as provided by law.

**Section 6.4 Cancellation of Certificates.**

All stock certificates surrendered to the Corporation shall be canceled and, except in the case of lost, stolen or destroyed certificates, no new certificates shall be issued until the former certificate or certificates for the same number of shares of the same class of stock have been surrendered and canceled.

**Section 6.5 Lost, Stolen or Destroyed Certificates.**

The board of directors may direct a new certificate or certificates to be issued in place of any certificate or certificates theretofore issued by the Corporation alleged to have been lost, stolen or destroyed, upon the making of an affidavit of that fact by the person claiming the certificate or certificates to be lost, stolen or destroyed. In its discretion, and as a condition precedent to the issuance of any such new certificate or certificates, the board of directors may require that the owner of such lost, stolen or destroyed certificate or certificates, or such person's legal representative, give the Corporation and its transfer agent or agents, registrar or registrars an indemnity bond in such form and amount as the board of directors may direct against any claim that may be made against the Corporation and its transfer agent or agents, registrar or registrars on account of the alleged loss, theft or destruction of any such certificate or the issuance of such new certificate.

**Section 6.6 Transfer of Shares.**

Shares of stock shall be transferable on the books of the Corporation by the holder thereof, in person or by duly authorized attorney, upon the surrender of the certificate or certificates representing the shares to be transferred, properly endorsed, with such proof or guarantee of the authenticity of the signature as the Corporation or its agents may reasonably require.

**Article VII**

**SEAL**

The board of directors may adopt a seal which, when adopted, shall constitute the corporate seal of the Corporation.

**Article VIII**

**FISCAL YEAR**

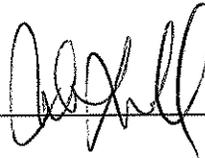
The Corporation's fiscal year shall be established from time to time by the board of directors otherwise determines.

**Article IX**

**AMENDMENTS**

These bylaws may be altered, amended or repealed at any regular meeting of the stockholders (or at any special meeting thereof duly called for that purpose), provided that in the notice of the special meeting, notice of such purpose is given. The board of directors may, by majority vote of the entire board of directors alter, amend or repeal these bylaws, or enact such other bylaws as in their judgment may be advisable for the regulation of the conduct of the affairs of the Corporation.

Secretary



2032025

# State of California

SECRETARY OF STATE



I, *BILL JONES*, Secretary of State of the State of California, hereby certify:

That the attached transcript has been compared with the record on file in this office, of which it purports to be a copy, and that it is full, true and correct.

**IN WITNESS WHEREOF**, I execute this certificate and affix the Great Seal of the State of California this

AUG 04 1997



*Bill Jones*

Secretary of State

2032025

ARTICLES OF INCORPORATION

OF

DRILL TECH DRILLING & SHORING, INC.

ENDORSED - FILED  
In the office of the Secretary of State  
of the State of California

AUG 01 1997

BILL JONES, Secretary of State

ARTICLE I

The name of this corporation is DRILL TECH DRILLING & SHORING, INC.

ARTICLE II

The purpose of this corporation is to engage in any lawful act or activity for which a corporation may be organized under the General Corporation Law of California other than the banking business, the trust company business or the practice of a profession permitted to be incorporated by the California Corporations Code.

ARTICLE III

The name and complete business address in the State of California of this corporation's initial agent for service of process is:

Shannon Creson.  
4219 Machado lane  
Oakley, CA 94561

ARTICLE IV

This corporation is authorized to issue only one class of shares of stock, and the total number of shares which this corporation is authorized to issue is Ten Thousand (10,000).

ARTICLE V

(a) The liability of directors of the corporation for monetary damages shall be eliminated to the fullest extent permissible under California law.

(b) This corporation is authorized to provide indemnification of agents (as defined in Section 317 of the California Corporations Code) through Bylaw provisions, agreements with the agents, vote of

shareholders or disinterested directors, or otherwise, to the fullest extent permissible under California law.

(c) Any amendment, repeal or modification of any provision of this Article V shall not adversely affect any right or protection of an agent of this corporation existing at the time of such amendment, repeal or modification.

Dated: July 25, 1997

  
SHANNON CRESON  
Incorporator

drilltec\articles.inc

**AMENDED AND RESTATED  
BYLAWS  
OF  
DRILL TECH DRILLING & SHORING, INC.**

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**AMENDED AND RESTATED  
BYLAWS  
OF  
DRILL TECH DRILLING & SHORING, INC.**

**ARTICLE I**

**OFFICES**

Section 1. Principal Offices. The board of directors shall fix the location of the principal executive office of the corporation at any place within or outside the State of California. If the principal executive office is located outside this state and the corporation has one or more business offices in this state, the board of directors shall fix and designate a principal business office in the State of California.

Section 2. Other Offices. The board of directors may at any time establish branch or subordinate offices at any place.

**ARTICLE II**

**MEETINGS OF SHAREHOLDERS**

Section 1. Place of Meetings. Meetings of shareholders shall be held at any place within or without the State of California designated by the board of directors. In the absence of any such designation, shareholders' meetings shall be held at the principal executive office of the corporation.

Section 2. Annual Meetings. An annual meeting of shareholders shall be held on the 25th day of July in each year at 10 o'clock A.M. If, however, this day falls upon a legal holiday, then such meeting shall be held at the same time and place on the next succeeding business day. At such meetings directors shall be elected and any other proper business may be transacted.

Section 3. Special Meetings. A special meeting of the shareholders, for any purpose or purposes whatsoever, may be called at any time by the board of directors, by the chair of the board, by the president or any vice president, or by one or more shareholders holding shares that in the aggregate are entitled to cast not less than ten percent (10%) of the votes at any such meeting.

If a special meeting is called by anyone other than the board of directors, the request shall be in writing, shall specify the time and date of such meeting (which shall not be less than thirty-five (35) days nor more than sixty (60) days after the receipt of the request) and the general nature of the business proposed to be transacted, and shall be delivered personally or sent by registered mail or by telegraphic or other facsimile transmission to the chair of the board, the president, any vice president or the secretary of the corporation. The officer receiving such request forthwith shall cause notice to be given to the shareholders entitled to vote, in accordance with the provisions of Sections 4 and 5 of this Article II, that a meeting will be held at the time requested by the person or persons calling the meeting. If the notice is not given within twenty (20) days after receipt of the request, the person or persons requesting the meeting may give the notice. Nothing contained in this paragraph shall be construed as limiting, fixing or affecting the time when a meeting of shareholders called by action of the board of directors may be held.

Section 4. Notice of Shareholders' Meetings. All notices of meetings of shareholders shall be sent or otherwise given in accordance with Section 5 of this Article II not fewer than ten (10) nor more than sixty (60) days before the date of the meeting. Shareholders entitled to notice shall be determined in accordance with Section 11 of this Article II. The notice shall specify the place, date and hour of the meeting and (i) in the case of a special meeting the general nature of the business to be transacted, or (ii) in the case of the annual meeting those matters which the board of directors, at the time of giving the notice, intends to present for action by the shareholders. The notice of any meeting at which directors are to be elected shall include the name of any nominee or nominees which, at the time of the notice, the board intends to present for election.

The notice shall also state the general nature of any proposed action to be taken at the meeting to approve any of the following matters:

- (a) A transaction in which a director has a direct or indirect financial interest, pursuant to Section 310 of the California Corporations Code;
- (b) An amendment to the articles of incorporation, pursuant to Section 902 of such Code;
- (c) A reorganization of the corporation, pursuant to Section 1201 of such Code;
- (d) A dissolution of the corporation, pursuant to Section 1900 of such Code; or
- (e) A distribution in dissolution that requires approval of the outstanding shares under Section 2007 of the California Corporations Code.

Section 5. Manner of Giving Notice; Affidavit of Notice. Notice of any meeting of shareholders shall be given either personally or by first-class mail or telegraphic or other written communication, charges prepaid, addressed to the shareholder at the address of such shareholder

appearing on the books of the corporation or given by the shareholder to the corporation for the purpose of notice. If no such address appears on the corporation's books or has been given, notice shall be deemed to have been given if sent by first-class mail or telegram addressed to the shareholder at the corporation's principal executive office, or if published at least once in a newspaper of general circulation in the county where this office is located. Notice shall be deemed to have been given at the time when delivered personally or deposited in the mail or sent by telegram or other means of written communication.

If any notice addressed to a shareholder at the address of such shareholder appearing on the corporation's books is returned to the corporation by the United States Postal Service marked to indicate that the United States Postal Service is unable to deliver the notice to the shareholder at such address, all future notices or reports shall be deemed to have been duly given without further mailing if the same shall be available to the shareholder upon written demand of the shareholder at the principal executive office of the corporation for a period of one year from the date of the giving of such notice to other shareholders.

An affidavit of the mailing of any notice of any shareholders' meeting, report, or other document sent to shareholders, or of any other authorized means of giving notice or delivering a document, shall be executed by the secretary, assistant secretary or any transfer agent of the corporation giving such notice and shall be filed and maintained in the minute book of the corporation.

Section 6. Quorum. The presence in person or by proxy of the holders of a majority of the shares entitled to vote at any meeting of shareholders shall constitute a quorum for the transaction of business. The shareholders present at a duly called or held meeting at which a quorum is present may continue to do business until adjournment, notwithstanding the withdrawal of enough shareholders to leave less than a quorum, if any action taken (other than adjournment) is approved by at least a majority of the shares required to constitute a quorum.

Section 7. Adjourned Meeting; Notice. Any shareholders' meeting, annual or special, whether or not a quorum is present, may be adjourned from time to time by the vote of the majority of the shares represented at such meeting, either in person or by proxy, but in the absence of a quorum, no other business may be transacted at such meeting.

When any meeting of shareholders, either annual or special, is adjourned to another time or place, notice need not be given of the adjourned meeting if the time and place thereof are announced at a meeting at which the adjournment is taken, unless a new record date for the adjourned meeting is fixed, or unless the adjournment is for more than forty-five (45) days from the date set for the original meeting, in which case the board of directors shall set a new record date. Notice of any such adjourned meeting shall be given to each shareholder of record entitled to vote at the adjourned meeting in accordance with the provisions of Sections 4 and 5 of this Article. At any adjourned meeting the corporation may transact any business which might have been transacted at the original meeting.

Section 8. Voting. Unless a record date set for voting purposes is fixed as provided in Section 11 of this Article only persons in whose names shares entitled to vote stand on the stock records of the corporation (subject to the provisions of Section 702 to Section 704, inclusive, of the California Corporations Code relating to voting shares held by a fiduciary) at the close of business on the business day next preceding the day on which notice is given (or, if notice is waived, at the close of business on the business day next preceding the day on which the meeting is held) shall be entitled to vote at such meeting. Any shareholder entitled to vote on any matter other than elections of directors may vote part of the shares in favor of the proposal and refrain from voting the remaining shares or vote them against the proposal. However, if the shareholder fails to specify the number of shares such shareholder is voting affirmatively, it will be conclusively presumed that the shareholder's approving vote is with respect to all shares such shareholder is entitled to vote. Such vote may be by voice vote or by ballot, except that all elections for directors must be by ballot upon demand made before the voting begins by any shareholder at any election.

At a shareholders' meeting involving the election of directors, no shareholder shall be entitled to cumulate votes (that is, to cast for any one or more candidates a number of votes greater than the number of the shareholder's shares) unless such candidate or candidates' names have been placed in nomination prior to the voting and a shareholder has given notice prior to the voting of the shareholder's intention to cumulate votes. If any shareholder has given such notice, then every shareholder entitled to vote may cumulate such shareholder's votes for candidates in nomination and give one candidate a number of votes equal to the number of directors to be elected multiplied by the number of votes to which such shareholder's shares are entitled, or distribute the shareholder's votes on the same principle among any or all of the candidates, as the shareholder thinks fit. The candidates receiving the highest number of votes up to the number of directors to be elected shall be elected.

Section 9. Waiver of Notice or Consent by Absent Shareholders. The transactions at any meeting of shareholders, either annual or special, however called and noticed and wherever held, shall be as valid as though had at a meeting duly held after regular call and notice, if a quorum be present either in person or by proxy, and if, either before or after the meeting, each person entitled to vote who was not present in person or by proxy signs a written waiver of notice, a consent to a holding of the meeting, or an approval of the minutes of the meeting. The waiver of notice or consent need not specify either the business to be transacted or the purpose of any regular or special meeting of shareholders, except that if action is taken or proposed to be taken for approval of any of those matters specified in the second paragraph of Section 4 of this Article. The waiver of notice or consent shall state the general nature of the action or proposed action. All such waivers, consents or approvals shall be filed with the corporate records or made a part of the minutes of the meeting.

A person's attendance at a meeting shall also constitute a waiver of notice of such meeting, unless the person at the beginning of the meeting objects to the transaction of any business because the meeting is not lawfully called or convened. In addition, attendance at a meeting does not waive any right to object to the consideration of matters requested by law to be included in the notice of the meeting which were not so included in the notice if such objection is expressly made at the meeting.

Section 10. Shareholder Action by Written Consent Without a Meeting. Any action which may be taken at any annual or special meeting of shareholders may be taken without a meeting and without prior notice if a consent in writing, setting forth the action so taken, is signed by the holders of outstanding shares having not less than the minimum number of votes that would be necessary to authorize or take such action at a meeting at which all shares entitled to vote thereon were present and voted.

Directors may be elected by written consent of the shareholders without a meeting only if the written consents of all outstanding shares entitled to vote are obtained, except that vacancies on the board (other than vacancies created by removal) not filled by the board may be filled by the written consent of the holders of a majority of the outstanding shares entitled to vote.

All such consents shall be filed with the secretary of the corporation and shall be maintained in the corporate records. Any shareholder or other authorized person who has given a written consent may revoke the consent by a writing received by the secretary of the corporation prior to the time that written consents of the number of shares required to authorize the proposed action have been filed with the secretary.

Unless the consents of all shareholders entitled to vote have been solicited in writing, the secretary shall give prompt notice of the corporate action approved by the shareholders without a meeting by less than unanimous consent to those shareholders entitled to vote who have not consented in writing. In the case of approval of (i) contracts or transactions in which a director has a direct or indirect financial interest pursuant to Section 310 of the California Corporations Code, (ii) indemnification of agents of the corporation pursuant to Section 317 of such Code, (iii) a reorganization of the corporation pursuant to Section 1201 of such Code, or (iv) a distribution to preferred shareholders pursuant to Section 2007 of such Code, such notice shall be given at least ten (10) days before the consummation of any such action authorized by any such approval. Such notice shall be given in the manner specified in Section 5 of this Article.

Section 11. Record Date for Shareholder Notice of Meeting, Voting, and Giving Consent.

(a) For purposes of determining the shareholders entitled to receive notice of and vote at a shareholders' meeting or give written consent to corporate action without a meeting, the board may fix in advance a record date that is not more than eighty (80) nor less than ten (10) days before the date of a shareholders' meeting, or not more than sixty (60) days before any other action.

(b) If no record date is fixed:

(i) The record date for determining shareholders entitled to receive notice of and vote at a shareholders' meeting shall be the business day next preceding the day on which notice is given, or if notice is waived as

provided in Section 9 of this Article, the business day next preceding the day on which the meeting is held.

(ii) The record date for determining shareholders entitled to give consent to corporate action in writing without a meeting, if no prior action has been taken by the board, shall be the day on which the first written consent is given.

(iii) The record date for determining shareholders for any other purpose shall be as set forth in Section 1 of Article VIII of these bylaws.

(c) A determination of shareholders of record entitled to receive notice of and vote at a shareholders' meeting shall apply to any adjournment of the meeting unless the board fixes a new record date for the adjourned meeting. However, the board shall fix a new record date if the adjournment is to a date more than forty-five (45) days after the date set for the original meeting.

(d) Only shareholders of record on the corporation's books at the close of business on the record date shall be entitled to any of the notice and voting rights listed in subsection (a) of this section, notwithstanding any transfer of shares of the corporation's books after the record date, except as otherwise required by law.

Section 12. Proxies. Every person entitled to vote for directors or on any other matter shall have the right to do so either in person or by one or more agents authorized by a written proxy signed by the person and filed with the secretary of the corporation. A proxy shall be deemed signed if the shareholder's name is placed on the proxy (whether by manual signature, typewriting, telegraphic transmission or otherwise) by the shareholder or the shareholder's attorney in fact. A validly executed proxy which does not state that it is irrevocable shall continue in full force and effect unless (i) revoked by the person executing it, prior to the vote pursuant to that proxy, by a writing delivered to the corporation stating that the proxy is revoked, by a subsequent proxy executed by the same person and presented at the meeting, or by attendance at the meeting and voting in person by the person executing the proxy; or (ii) written notice of the death or incapacity of the maker of the proxy is received by the corporation before the vote pursuant to that proxy is counted. However, no such proxy shall be valid after the expiration of eleven (11) months from the date of such proxy, unless otherwise provided in the proxy. The revocability of a proxy that states on its face that it is irrevocable shall be governed by the provisions of Section 705(e) and (f) of the California Corporations Code.

Section 13. Inspectors of Election. Before any meeting of shareholders, the board of directors may appoint any persons other than nominees for office to act as inspectors of election at the meeting or its adjournment. If no inspectors of election are appointed, the Chair of the meeting may, and on the request of any shareholder or his proxy shall, appoint inspectors of election at the meeting. The number of inspectors shall be either one (1) or three (3). If inspectors are appointed at a meeting on the request of one or more shareholders or proxies, the holders of a majority of shares

or their proxies present at the meeting shall determine whether one (1) or three (3) inspectors are to be appointed. If any person appointed as inspector fails to appear or fails or refuses to act, the chair at the meeting may, and upon the request of any shareholder or a shareholder's proxy shall, appoint a person to fill that vacancy.

The duties of these inspectors shall be as follows:

- (a) Determine the number of shares outstanding and the voting power of each, the shares represented at the meeting, the existence of a quorum, and the authenticity, validity, and effect of proxies;
- (b) Receive votes, ballots, or consents;
- (c) Hear and determine all challenges and questions in any way arising in connection with the right to vote;
- (d) Count and tabulate all votes or consents;
- (e) Determine when the voting will end;
- (f) Determine the election result; and
- (g) Do any other acts that may be proper to conduct the election or vote with fairness to all shareholders.

### ARTICLE III

#### DIRECTORS

Section 1. Powers. Subject to the provisions of the California General Corporation Law and any limitations in the articles of incorporation and these bylaws relating to action required to be approved by the shareholders or by the outstanding shares, the business and affairs of the corporation shall be managed and all corporate powers shall be exercised by or under the direction of the board of directors.

Without prejudice to such general powers, but subject to the same limitations, the board of directors shall have the power and authority to:

- (a) Select and remove all officers, agents, and employees of the corporation; prescribe such powers and duties for them as may not be inconsistent with law, with the articles of incorporation or these bylaws; fix their compensation; and require from them security for faithful service.

(b) Change the principal executive office or the principal business office in the State of California ("State") from one location to another; cause the corporation to be qualified to do business in any other state, territory, dependency, or foreign country and conduct business within or without the State; designate any place within or without the State for the holding of any shareholders' meeting including any annual meeting;

(c) Adopt, make and use a corporate seal; prescribe the forms of certificates of stock; and alter the form of such seal and of such certificates.

(d) Authorize the issuance of shares of stock of the corporation on any lawful terms in consideration of money paid, labor done or services actually rendered, debts or securities canceled, tangible or intangible property actually received.

(e) Borrow money and incur indebtedness on behalf of the corporation and cause to be executed and delivered, in the corporate name, promissory notes, bonds, debentures, deeds of trust, mortgages, pledges, hypothecations, or other evidences of debt and securities for such consideration.

Section 2. Number and Qualification of Directors. The authorized number of directors shall be four (4) until changed by a duly adopted amendment to the articles of incorporation or by an amendment to this bylaw adopted by approval of the outstanding shares. However, an amendment that would reduce the authorized number of directors to a number fewer than five (5) cannot be adopted if the votes cast against its adoption at a shareholders' meeting or the shares not consenting to an action by written consent are equal to more than one-sixth (16-2/3 percent) of the outstanding shares entitled to vote.

Section 3. Election and Term of Office of Directors. Directors shall be elected at each annual meeting of the shareholders to hold office until the next annual meeting, but if any such annual meeting is not held or the directors are not elected at any annual meeting, the directors may be elected at any special meeting of shareholders held for that purpose, or at the next annual meeting of shareholders held thereafter. Each director, including a director elected to fill a vacancy, shall hold office until the expiration of the term for which elected and until a successor has been elected and qualified unless he has resigned or been removed or his office has been declared vacant in the manner provided in these bylaws. No reduction of the authorized number of directors shall have the effect of removing any director before that director's term of office expires.

Section 4. Resignation and Removal of Directors. Any director may resign effective upon giving written notice to the Chair of the board, the president, the secretary or the board of directors of the corporation. The notice may specify a later time for the effectiveness of such resignation. Unless such resignation specifies otherwise, its acceptance by the corporation shall not be necessary to make it effective. The board of directors may declare vacant the office of a director who has been declared of unsound mind by an order of court or convicted of a felony. Any or all of

the directors may be removed without cause if such removal is approved by the affirmative vote of a majority of the outstanding shares entitled to vote, except that no director may be removed (unless the entire board is removed) when the votes cast against removal, or not consenting in writing to such removal, would be sufficient to elect such director if voted cumulatively at an election at which the same total number of votes were cast (or, if such action is taken by written consent, all shares entitled to vote were voted) and the entire number of directors authorized at the time of the director's most recent election were then being elected.

Section 5. Vacancies. Except for vacancy caused by the removal of a director, vacancies in the board of directors may be filled by a majority of the directors then in office or, if the number of directors then in office is less than a quorum, by (i) the unanimous written consent of the directors then in office, (ii) the affirmative vote of a majority of the directors then in office at a meeting held pursuant to notice or waivers of notice complying with section 307 of the Corporations Code or (iii) a sole remaining director. A vacancy created by the removal of a director by the vote or written consent of the shareholders or by court order may be filled only by approval of the shareholders. Each director so elected shall hold office until the next annual meeting of the shareholders and until a successor has been elected and qualified. If the resignation of a director is effective at a future time, the board of directors may elect a successor to take office when the resignation becomes effective.

A vacancy in the board of directors exists as to any authorized position of director which is not then filled by a duly elected director, whether caused by death, resignation, removal, increase in the authorized number of directors or otherwise.

The shareholders may elect a director or directors at any time to fill any vacancy or vacancies not filled by the directors, but any such election by written consent shall require the consent of a majority of the outstanding shares entitled to vote.

If after the filling of any vacancy by the directors, the directors then in office who have been elected by the shareholders shall constitute less than a majority of the directors then in office, any holder or holders of an aggregate of five percent or more of the total number of shares at the time outstanding having the right to vote for such directors may call a special meeting of the shareholders to elect the entire board. The term of office of any director not elected by the shareholders shall terminate upon the election of a successor.

Section 6. Place of Meetings. Regular meetings of the board of directors shall be held at any place within or without the State that has been designated from time to time by resolution of the board. In the absence of such designation, regular meetings shall be held at the principal executive office of the corporation. Special meetings of the board shall be held at any place within or without the State that has been designated in the notice of the meeting or, if not stated in the notice or if there is no notice, at the principal executive office of the corporation. Any meeting, regular or special, may be held by conference telephone, electronic video screen communication or similar communication equipment, so long as all directors participating can hear each other.

Section 7. Annual Meetings. Immediately following each annual meeting of shareholders, the board of directors shall hold a regular meeting for the purpose of transaction of other business. Notice of this meeting shall not be required.

Section 8. Other Regular Meetings. Other regular meetings of the board of directors shall be held without call at such time as shall from time to time be fixed by the board of directors. Such regular meetings may be held without notice.

Section 9. Special Meetings. Special meetings of the board of directors for any purpose or purposes may be called at any time by the Chair of the board, the president, any vice president, the secretary, or any two directors.

Notice of the time and place of special meetings shall be delivered personally or by telephone to each director or sent by first-class mail or telegram, charges prepaid, addressed to each director at his or her address as it is shown upon the records of the corporation. Notice delivered by mail shall be deposited in the United States mail at least four (4) days prior to the time of the holding of the meeting. Notice delivered personally or by telephone (including voice messaging system or other system or technologies designed to record and communicate messages), telegram, facsimile, electronic mail, or other electronic means shall be delivered at least forty-eight (48) hours prior to the time of the holding of the meeting. Any oral notice given personally or by telephone, or written notice given by electronic mail or facsimile, may be transmitted to either the director or to a person at the office of the director who the person giving the notice has reason to believe will promptly communicate it to the director. The notice need not specify the purpose of the meeting nor the place if the meeting is to be held at the principal executive office of the corporation.

Section 10. Quorum. A majority of the authorized number of directors shall constitute a quorum for the transaction of business, except to adjourn as provided in Section 12 of this Article. Every act or decision done or made by a majority of the directors present at a meeting duly held at which a quorum is present shall be regarded as the act of the board of directors, subject to the provisions of California Corporations Code Section 310 (approval of contracts or transactions in which a director has a direct or indirect material financial interest), Section 311 (appointment of committees), and Section 317(e) (indemnification of directors). A meeting at which a quorum is initially present may continue to transact business, notwithstanding the withdrawal of directors, if any action taken is approved by at least a majority of the required quorum for such meeting.

Section 11. Waiver of Notice. Notice of a meeting, although otherwise required, need not be given to any director who (i) either before or after the meeting signs a waiver of notice or a consent to holding the meeting without being given notice, (ii) signs an approval of the minutes of the meeting, or (iii) attends the meeting without protesting the lack of notice before or at the beginning of the meeting. The waiver of notice or consent need not specify the purpose of the meeting. All such waivers, consents and approvals shall be filed with the corporate records or made a part of the minutes of the meeting.

Section 12. Adjournment. A majority of the directors present, whether or not constituting a quorum, may adjourn any meeting to another time and place.

Section 13. Notice of Adjournment. Notice of the time and place of holding an adjourned meeting need not be given unless the meeting is adjourned for more than twenty-four (24) hours, in which case notice of such time and place shall be given prior to the time of the adjourned meeting in the manner specified in Section 8 of this Article III to the directors who were not present at the time of the adjournment.

Section 14. Action Without Meeting. Any action required or permitted to be taken by the board of directors may be taken without a meeting if all members of the board shall individually or collectively consent in writing to such action. Such action by written consent shall have the same force and effect as a unanimous vote of the board of directors. Such written consent or consents shall be filed with the minutes of the proceedings of the board.

Section 15. Fees and Compensation of Directors. Directors and members of committees of the board may receive such compensation, if any, for their services, and such reimbursement of expenses, as may be fixed or determined by resolution of the board of directors. Nothing herein contained shall be construed to preclude any director from serving the corporation in any other capacity as an officer, agent, employee, or otherwise, and receiving compensation for such services.

## ARTICLE IV

### COMMITTEES

Section 1. Committees of Directors. The board of directors may, by resolution adopted by a majority of the authorized number of directors, designate one or more committees, each consisting of two or more directors. The board may designate one or more directors as alternate members of any committee who may replace any absent member at any meeting of the committee. The appointment of committee members or alternate members requires the vote of a majority of the authorized number of directors. Any such committee, to the extent provided in the resolution of the board, shall have any or all of the power and authority of the board, except with respect to:

- (a) The approval of any action which, under the California Corporations Code, also requires shareholders' approval or approval of the outstanding shares;
- (b) The filling of vacancies on the board of directors or any committee of the board;
- (c) The fixing of compensation of the directors for serving on the board or on any committee of the board;

- (d) The amendment or repeal of bylaws or the adoption of new bylaws;
- (e) The amendment or repeal of any resolution of the board of directors which by its express terms is not so amendable or repealable;
- (f) The distribution to the shareholders of the corporation, except at a rate or in a periodic amount or within a price range determined by the board of directors; or
- (g) The appointment of any other committees of the board of directors or their members.

Section 2. Meetings and Action of Committees. Meetings and action of committees shall be governed by, and held and taken in accordance with, the provisions of Article III, Section 6 (place of meetings), Section 8 (regular meetings), Section 9 (special meetings and notice), Section 10 (quorum), Section 11 (waiver of notice), Section 12 (adjournment), Section 13 (notice of adjournment) and Section 14 (action without meeting), with such changes in the context of those bylaws as are necessary to substitute the committee and its members for the board of directors and its members. However, the time of regular meetings of committees may be determined by resolution of the board of directors as well as the committee. Furthermore, special meetings of committees may also be called by resolutions of the board of directors and notice of special meetings of committees shall also be given to all alternate members, who shall have the right to attend all meetings of the committee. The board of directors may adopt rules for the governance of any committee not inconsistent with the provisions of these bylaws.

## ARTICLE V

### OFFICERS

Section 1. Officers. The officers of the corporation shall be a president, a vice president, a secretary and a chief financial officer. The corporation may also have, at the discretion of the board of directors, a chair of the board, additional vice presidents, one or more assistant secretaries, one or more assistant chief financial officers, and such other officers as may be appointed in accordance with the provisions of Section 3 of this Article. Any number of offices may be held by the same person.

Section 2. Election of Officers. The officers of the corporation, except such officers as may be appointed in accordance with the provisions of Section 3 or Section 5 of this Article, shall be chosen by the board of directors, and each shall serve at the pleasure of the board, subject to the rights, if any, of an officer under any contract of employment.

Section 3. Subordinate Officers, Etc. The board of directors may appoint, and may empower the president to appoint, such other officers as the business of the corporation may

require, each of whom shall hold office for such period, have such authority and perform such duties as are provided in the bylaws or as the board of directors or president may from time to time determine.

Section 4. Removal and Resignation of Officers. Any officer chosen by the board of directors may be removed at any time, with or without cause or notice, by the board of directors. Subordinate officers appointed by persons other than the board under Section 3 of this Article V may be removed at any time, with or without cause or notice, by the board of directors or by the officer by whom appointed. Officers may be employed for a specified term under a contract of employment if authorized by the board of directors; such officers may be removed from office at any time under this section and shall have no claim against the corporation or individual officers or board members because of the removal except any right to monetary compensation to which the officer may be entitled under the contract of employment.

Any officer may resign at any time by giving written notice to the corporation. Any such resignation shall take effect at the date of the receipt of such notice or at any later time specified in such notice; and, unless otherwise specified in such notice, the acceptance of such resignation shall not be necessary to make it effective. Any such resignation is without prejudice to the rights, if any, of the corporation under any contract to which the officer is a party.

Section 5. Vacancies in Offices. A vacancy in any office because of death, resignation, removal, disqualification or any other cause shall be filled in the manner prescribed in these bylaws for regular election or appointment to such office.

Section 6. Chair of the Board. The chair of the board, if such an officer be elected, shall, if present, preside at all meetings of the board of directors and exercise and perform such other powers and duties as may be from time to time assigned by the board of directors or prescribed by the bylaws. If there is no president, the Chair of the board shall in addition be the chief executive officer of the corporation and shall have the powers and duties prescribed in Section 7 of this Article.

Section 7. President. Except to the extent that the bylaws or the board of directors assign specific powers and duties to the chair of the board (if any), the president shall be the corporation's general manager and chief executive officer and, subject to the control of the board of directors, shall have general supervision, direction, and control over the corporation's business and its officers. The managerial powers and duties of the president shall include, but are not limited to, all the general powers and duties of management usually vested in the office of president of a corporation, and the president shall have other powers and duties as prescribed by the board of directors or the bylaws. The president shall preside at all meetings of the shareholders and, in the absence of the chair of the board or if there is no chair of the board, shall also preside at meetings of the board of directors.

Section 8. Vice Presidents. If desired, one or more vice presidents may be appointed by the board of directors in accordance with Section 2 of this Article. In the absence or

disability of the president, the vice presidents, if any, in order of their rank as fixed by the board of directors or, if not ranked, a vice president designated by the board of directors, shall perform all the duties of the president. When so acting, a vice president shall have all the powers of, and be subject to all the restrictions upon, the president. The vice presidents shall have such other powers and perform such other duties as from time to time may be prescribed for them respectively by the board of directors or the bylaws, the president or the Chair of the board.

Section 9. Secretary.

(a) Minutes. The secretary shall be present at all shareholders' meetings and all board meetings and shall take the minutes of the meeting. If the secretary is unable to be present, the secretary or the presiding officer of the meeting shall designate another person to take the minutes of the meeting. The secretary shall keep or cause to be kept, at the principal executive office or such other place as the board of directors may order, a book of minutes of all meetings and actions of directors, committees of directors and shareholders. The minutes of each meeting shall state the time and place the meeting was held; whether it was regular or special; if special, how it was called or authorized; the names of those present at directors' and committee meetings; the number of shares present or represented at shareholders' meetings; an accurate account of the proceedings; and when it was adjourned.

(b) Record of Shareholders. The secretary shall keep, or cause to be kept, at the principal executive office or at the office of the corporation's transfer agent or registrar, a record, or duplicate record of shareholders. This record shall show the names of all shareholders and their addresses, the number and classes of shares held by each, the number and date of share certificates issued to each shareholder, and the number and date of cancellation of any certificates surrendered for cancellation.

(c) Notice of Meetings. The secretary shall give, or cause to be given, notice of all meetings of the shareholders, directors and committees of the board required by the bylaws or by law to be given. If the secretary or other person authorized by the secretary to give notice fails to act, notice of any meeting may be given by any other officer of the corporation.

(d) Other Duties. The secretary shall keep the seal of the corporation in safe custody and have such other powers and perform such other duties as may be prescribed by the board of directors or by the bylaws.

Section 10. Chief Financial Officer. The chief financial officer shall keep and maintain, or cause to be kept and maintained, adequate and correct books and records of accounts of the properties and business transactions of the corporation, including accounts of its assets, liabilities, receipts, disbursements, gains, losses, capital, retained earnings and shares. The books of account shall at all reasonable times be open to inspection by any director.

The chief financial officer shall (i) deposit all moneys and other valuables in the name and to the credit of the corporation with such depositories as may be designated by the board of directors; (ii) disburse the funds of the corporation as may be ordered by the board of directors; (iii) render to the president and directors, whenever they request it, an account of all of his transactions as chief financial officer and of the financial condition of the corporation; and (iv) have other powers and perform such other duties as may be prescribed by the board of directors or the bylaws.

## ARTICLE VI

### INDEMNIFICATION OF DIRECTORS, OFFICERS, EMPLOYEES, AND OTHER AGENTS

Section 1. Agents, Proceedings, and Expenses. For the purposes of this Article, “agent” means any person who is or was a director, officer, employee, or other agent of this corporation, or is or was serving at the request of this corporation as a director, officer, employee, or agent of another foreign or domestic corporation, partnership, joint venture, trust or other enterprise, or was a director, officer, employee, or agent of a foreign or domestic corporation that was a predecessor corporation of this corporation or of another enterprise at the request of such predecessor corporation; “proceeding” means any threatened, pending or completed action or proceeding, whether civil, criminal, administrative, or investigative; and “expenses” includes, without limitation, attorneys’ fees and any expenses of establishing a right to indemnification under Section 4 or Section 5(c) of this Article.

Section 2. Actions Other than by the Corporation. This corporation shall indemnify any person who was or is a party, or is threatened to be made a party, to any proceeding (other than an action by or in the right of this corporation to procure a judgment in its favor) by reason of the fact that such person is or was an agent of this corporation, against expenses, judgments, fines, settlements, and other amounts actually and reasonably incurred in connection with such proceeding if that person acted in good faith and in a manner that person reasonably believed to be in the best interests of this corporation and, in the case of a criminal proceeding, had no reasonable cause to believe the conduct of that person was unlawful. The termination of any proceeding by judgment, order, settlement, conviction, or upon a plea of nolo contendere or its equivalent shall not, of itself, create a presumption that the person did not act in good faith and in a manner which the person reasonably believed to be in the best interests of this corporation or that the person had reasonable cause to believe that the person’s conduct was unlawful.

Section 3. Actions by the Corporation. This corporation shall indemnify any person who was or is a party, or is threatened to be made a party, to any threatened, pending or completed action by or in the right of this corporation to procure a judgment in its favor by reason of the fact that such person is or was an agent of this corporation, against expenses actually and reasonably incurred by that person in connection with the defense or settlement of that action if that person acted in good faith, in a manner that person believed to be in the best interests of this

corporation and its shareholders. No indemnification shall be made under this section for the following:

(a) With respect to any claim, issue or matter as to which that person shall have been adjudged to be liable to this corporation in the performance of that person's duty to this corporation and its shareholders, unless and only to the extent that the court in which such proceeding is or was pending shall determine on application that, in view of all the circumstances of the case, that person is fairly and reasonably entitled to indemnity for the expenses and then only to the extent that the court shall determine;

(b) For amounts paid in settling or otherwise disposing of a threatened or pending action, with or without court approval; or

(c) For expenses incurred in defending a threatened or pending action that is settled or otherwise disposed of without court approval.

Section 4. Successful Defense by Agent. To the extent that an agent of this corporation has been successful on the merits in defense of any proceeding referred to in Sections 2 or 3 of this Article, or in defense of any claim, issue, or matter therein, the agent shall be indemnified against expenses actually and reasonably incurred by the agent in connection therewith.

Section 5. Required Approval. Except as provided in Section 4 of this Article, any indemnification under this Article shall be made by this corporation only if authorized in the specific case on a determination that indemnification of the agent is proper in the circumstances because the agent has met the applicable standard of conduct set forth in Sections 2 or 3 of this Article by:

(a) A majority vote of a quorum consisting of directors who are not parties to the proceeding;

(b) Independent legal counsel in written opinion if a quorum of directors who are not parties is not available;

(c) Approval by the affirmative vote of a majority of the shares of this corporation entitled to vote represented at a duly held meeting at which a quorum is present; or by the written consent of holders of a majority of the outstanding shares entitled to vote. For this purpose, the shares owned by the person to be indemnified shall not be considered outstanding or entitled to vote thereon; or

(d) The court in which the proceeding is or was pending, on application made by this corporation or the agent or the attorney or other person rendering services in connection with the defense, whether or not such application by the agent, attorney, or other person is opposed by this corporation.

Section 6. Advance of Expenses. Expenses incurred in defending any proceeding may be advanced by this corporation before the final disposition of the proceeding on receipt of an undertaking by or on behalf of the agent to repay the amount of the advance if it shall be determined ultimately that the agent is not entitled to be indemnified as authorized in this Article.

Section 7. Other Contractual Rights. The indemnification provided by this Article shall not be deemed exclusive of any other rights to which those seeking indemnification may be entitled under any bylaw, agreement, vote of shareholders or disinterested directors, or otherwise, both as to action in an official capacity and as to action in another capacity while holding such office, to the extent such additional rights or indemnification are authorized in the articles of the corporation. Nothing contained in this Article shall affect any right to indemnification to which persons other than directors and officers of this corporation or any subsidiary may be entitled by contract or otherwise.

Section 8. Limitations. No indemnification or advance shall be made under this Article, except as provided in Section 4 or Section 5(d), in any circumstance if it appears:

(a) That it would be inconsistent with a provision of the articles, bylaws, a resolution of the shareholders, or an agreement in effect at the time of the accrual of the alleged cause of action asserted in the proceeding in which the expenses were incurred or other amounts were paid, which prohibits or otherwise limits indemnification; or

(b) That it would be inconsistent with any condition expressly imposed by a court in approving a settlement.

Section 9. Insurance. Upon and in the event of a determination by the board of directors of this corporation to purchase such insurance, this corporation shall purchase and maintain insurance on behalf of any agent of the corporation against any liability asserted against or incurred by the agent in such capacity or arising out of the agent's status as such whether or not this corporation would have the power to indemnify the agent against that liability under the provisions of this Article. Notwithstanding the foregoing, if this Corporation owns all or a portion of the shares of the company issuing the policy of insurance, the insuring company and/or the policy shall meet the conditions set forth in Section 317(i) of the Corporations Code.

Section 10. Fiduciaries of Corporate Employee Benefit Plan. This Article does not apply to any proceeding against any trustee, investment manager, or other fiduciary of an employee benefit plan in that person's capacity as such, even though that person may also be an agent of the corporation as defined in Section 1 of this Article. The corporation shall have the power to indemnify and to purchase and maintain insurance on behalf of any such trustee, investment manager, or other fiduciary of any benefit plan for any or all of the directors, officers, and employees of the corporation or any of its subsidiary or affiliated corporations.

Section 11. Survival of Rights. The rights provided by this Article shall continue for a person who has ceased to be an agent, and shall inure to the benefit of the heirs, executors, and administrators of such person.

Section 12. Effect of Amendment. Any amendment, repeal, or modification of this Article shall not adversely affect an agent's right or protection existing at the time of such amendment, repeal, or modification.

Section 13. Settlement of Claims. The corporation shall not be liable to indemnify any agent under this Article for (i) any amounts paid in settlement of any action or claim effected without the corporation's written consent, which consent shall not be unreasonably withheld, or, (ii) any judicial award, if the corporation was not given a reasonable and timely opportunity to participate, at its expense, in the defense of such action.

Section 14. Subrogation. In the event of payment under this Article, the corporation shall be subrogated to the extent of such payment to all of the rights of recovery of the agent, who shall execute all papers required and shall do everything that may be necessary to secure rights, including the execution of such documents as may be necessary to enable the corporation effectively to bring suit to enforce such rights.

Section 15. No Duplication of Payments. The corporation shall not be liable under this Article to make any payment in connection with any claim made against the agent to the extent the agent has otherwise actually received payment, whether under a policy of insurance, agreement, vote, or otherwise, of the amounts otherwise indemnifiable under this Article.

## ARTICLE VII

### RECORDS AND REPORTS

Section 1. Maintenance and Inspection of Share Register. The corporation shall keep at its principal executive office or at the office of its transfer agent or registrar, if either be appointed, as determined by resolution of the board of directors, a record of the names and addresses of all shareholders and the number and class of shares held by each shareholder.

A shareholder or shareholders of the corporation holding at least five percent (5%) in the aggregate of the outstanding voting shares of the corporation have the right to do either or both of the following: (i) inspect and copy the records of shareholders' names and addresses and shareholdings during usual business hours on five (5) days' prior written demand on the corporation, and/or (ii) obtain from the transfer agent of the corporation, upon written demand and upon the tender of such transfer agent's usual charges for such list, a list of the names and addresses of shareholders who are entitled to vote for the election of directors and their shareholdings, as of the most recent record date for which such list has been compiled or as of a date specified by the shareholder subsequent to the date of demand. Such list shall be made available on or before the later of five (5)

days after the demand is received or the date specified therein as the date as of which the list is to be compiled. The record of shareholders shall also be open to inspection upon the written demand of any shareholder or holder of a voting trust certificate, at any time during usual business hours, for a purpose reasonably related to such holder's interests as a shareholder or as the holder of a voting trust certificate. Any inspection and copying under this Section may be made in person or by an agent or attorney of the shareholder or holder of a voting trust certificate making such demand.

Section 2. Maintenance and Inspection of Bylaws. The corporation shall keep at its principal executive office, or if its principal executive office is not in the State of California at its principal business office in this state, the original or a copy of the bylaws as amended to date, which shall be open to inspection by the shareholders at all reasonable times during office hours. If the principal executive office of the corporation is outside the State of California and the corporation has no principal business office in this state, the secretary shall, upon the written request of any shareholder, furnish to such shareholder a copy of the bylaws as amended to date.

Section 3. Maintenance and Inspection of Other Corporate Records. The accounting books and records and minutes of proceedings of the shareholders, the board of directors, and any committees of the board of directors shall be kept at such place or places designated by the board of directors, or, in the absence of such designation, at the principal executive office of the corporation. The minutes shall be kept in written form and the accounting books and records shall be kept either in written form or in any other form capable of being converted into written form. Such minutes and accounting books and records shall be open to inspection upon the written demand of any shareholder or holder of a voting trust certificate, at any reasonable time during usual business hours, for a purpose reasonably related to such holder's interests as a shareholder or as the holder of a voting trust certificate. Such inspection may be made in person or by an agent or attorney, and shall include the right to copy and make extracts. These rights to inspection shall extend to the records of each subsidiary of the corporation.

Section 4. Inspection by Directors. Every director shall have the absolute right at any reasonable time to inspect and copy all books, records and documents of every kind and to inspect the physical properties of this corporation and any subsidiary of this corporation. Such inspection by a director may be made in person or by agent or attorney and the right of inspection includes the right to copy and make extracts.

Section 5. Annual Report to Shareholders. So long as the corporation has fewer than 100 shareholders, the requirement of an annual report to shareholders referred to in Section 1501 of the California Corporations Code is expressly waived. However, this provision shall not be interpreted as prohibiting the board of directors from issuing annual or other periodic reports to the shareholders as the board considers appropriate.

Section 6. Financial Statements. A copy of any annual, quarterly or other periodic financial statements including any accompanying balance sheet of the corporation as of the end of each such period that has been prepared by the corporation shall be kept on file in the principal executive office of the corporation for twelve (12) months; and such statements shall be exhibited at

all reasonable times, or a copy provided, to any shareholder demanding an examination or copy of any such statement.

If no annual report for the last fiscal year has been sent to shareholders, on written request of any shareholder made more than 120 days after the close of the fiscal year the corporation shall delivery or mail to the shareholder, within 30 days after receipt of the request, a balance sheet as of the end of that fiscal year and an income statement and statement of changes in financial position for that fiscal year.

One or more shareholders holding at least five percent (5%) of the outstanding shares of any class of stock of the corporation may make a written request to the corporation for an income statement of the corporation for the three-month, six-month or nine-month period of the then current accounting year ending more than thirty (30) days prior to the date of the request, and a balance sheet of the corporation as of the end of such period. The chief financial officer shall cause such statements to be prepared, if not already prepared, and shall deliver personally or mail such statements to the person making the request within thirty (30) days after the receipt of such request. If the corporation has not sent to the shareholders its annual report for the last accounting year, a balance sheet, income statement, and statement of changes in financial condition for the last accounting year shall be delivered or mailed to such shareholder or shareholders within thirty (30) days after such request.

If the income statements and balance sheets referred to in this section have not been audited, they shall be accompanied by the report of any independent accountants engaged by the corporation or the certificate of an authorized officer of the corporation that such financial statements were prepared without audit from the books and records of the corporation.

#### Section 7. Annual Statement of General Information.

(a) Every other year the corporation shall, during the calendar month in which the original articles of incorporation were filed with the Secretary of State, or during the preceding five (5) calendar months, file with the Secretary of State of the State of California on the prescribed form a statement setting forth the authorized number of directors; the names and complete business or residence addresses of all incumbent directors; the names and complete business or residence addresses of the chief executive officer, secretary and chief financial officer; the street address of its principal executive office or principal business office in this state; the general type of business constituting the principal business activity of the corporation; and a designation of the agent of the corporation for the purpose of service of process, all in compliance with Section 1502 of the California Corporations Code.

(b) Notwithstanding the provisions of paragraph (a) of this section, if there has been no change in the information in the corporation's last biennial statement on file in the Secretary of State's office, the corporation may, in lieu of filing the biennial statement described in paragraph (a) of this section, advise the Secretary of State, on the appropriate form, that no changes in the required information have occurred during the applicable period.

## ARTICLE VIII

### GENERAL CORPORATE MATTERS

Section 1. Record Date for Purposes Other than Notice and Voting. For purposes of determining the shareholders entitled to receive payment of any dividend or other distribution or allotment of any rights, or entitled to exercise any rights in respect of any other lawful action other than voting at and receiving notice of shareholders' meetings and giving written consent of the shareholders without a meeting, the board of directors may fix in advance a record date which shall not be more than sixty (60) days nor less than ten (10) days prior to the date of the dividend payment, distribution, allotment, or other action. Only shareholders of record at the close of business on the date so fixed are entitled to receive the dividend, distribution or allotment of rights, or to exercise the other rights, as the case may be, notwithstanding any transfer of any shares on the books of the corporation after such record date, except as otherwise provided by law.

If the board of directors does not so fix a record date in advance, the record date shall be at the close of business on the later of (i) the day on which the board adopts the resolution relating to such action, or (ii) the sixtieth (60th) day prior to the date of the dividend payment, distribution, allotment of rights, or other action.

Section 2. Checks, Drafts, Evidences of Indebtedness. All checks, drafts or other orders for payment of money, notes or other evidences of indebtedness issued in the name of or payable to the corporation shall be signed or endorsed by such person or persons and in such manner as from time to time shall be determined by resolution of the board of directors.

Section 3. Execution of Corporate Contracts and Instruments. Except as otherwise provided in the articles or in these bylaws, the board of directors, by resolution, may authorize any officer or officers or agent or agents to enter into any contract or execute any instrument in the name of and on behalf of the corporation. Such authority may be general or confined to one or more specific matters. No officer, agent, employee or other person purporting to act on behalf of the corporation shall have any power or authority to bind the corporation in any way, to pledge the corporation's credit, or to render the corporation liable for any purpose or in any amount, unless that person was acting with authority duly granted by the board of directors as provided in these bylaws, or unless an unauthorized act was later ratified by the corporation.

Section 4. Stock Certificates. A certificate or certificates for shares of the capital stock of the corporation shall be issued to each shareholder when any such shares are fully paid, and the board of directors may authorize the issuance of certificates or shares that are partly paid provided that such certificates shall state the amount of the consideration to be paid therefor and the amount actually paid. All certificates shall be signed in the name of the corporation by (i) either the chair of the board, the vice chair of the board, the president or any vice president and (ii) either the chief financial officer, an assistant chief financial officer, the secretary or an assistant secretary. All certificates shall certify the number of shares and the class or series of shares represented by the

certificate. Any or all of the signatures on the certificate may be facsimile. In case any officer, transfer agent or registrar who has signed or whose facsimile signature has been placed upon a certificate shall have ceased to be such officer, transfer agent or registrar before such certificate is issued, it may be issued by the corporation with the same effect as if such person were an officer, transfer agent or registrar at the date of issue.

Section 5. Replacement Certificates. Except as provided in this section, no new certificate for shares shall be issued to replace an old certificate unless the latter is surrendered to the corporation and canceled at the same time. If any share certificate or certificate for any other security is lost, stolen or destroyed, the board of directors may authorize the issuance of a replacement certificate on such terms and conditions as the board may require, which may include a provision for indemnification of the corporation secured by a bond or other adequate security sufficient to protect the corporation against any claim that may be made against it (including any expense or liability) on account of the alleged loss, theft or destruction of such certificate or the issuance of the replacement certificate.

Section 6. Representation of Shares of Other Corporations. The chair of the board, or person designated by the chair of the board, the president or person designated by the president, or any vice president, or any other person authorized by resolution of the board of directors is authorized to vote on behalf of the corporation any and all shares of any other corporation or corporations, foreign or domestic, standing in the name of the corporation. This authority to such person to vote or represent on behalf of the corporation any and all shares held by the corporation in any other corporation or corporations may be exercised by any such person in person or by any person authorized to do so by duly executed proxy.

Section 7. Construction and Definitions. Unless the context requires otherwise, the general provisions, rules of construction, and definitions in the California Corporations Code shall govern the construction of the bylaws. Without limiting the generality of this provision, the singular number includes the plural, the plural number includes the singular, and the term "person" includes both a corporation and a natural person.

## ARTICLE IX

### AMENDMENTS

Section 1. Amendment by Shareholders. New bylaws may be adopted or these bylaws may be amended or repealed by a majority of the outstanding shares entitled to vote, except as otherwise provided by law or by the articles of incorporation.

Section 2. Amendment by Directors. Subject to the rights of the shareholders as provided in Section 1 of this Article, bylaws may be adopted, amended or repealed by the board of directors, so long as the authorized number of directors is not changed.

## CERTIFICATE OF SECRETARY

I, the undersigned, do hereby certify that:

1. I am the duly elected and acting secretary of Drill Tech Drilling & Shoring, Inc., a California corporation.
2. The bylaws to which this certificate is attached, comprising of 22 pages, constitute the bylaws of such corporation as duly adopted by written consent of the board of directors of this corporation on July 20, 2001.

I further declare under penalty of perjury under the laws of the State of California that the matters set forth in this certificate are true and correct of my own knowledge.

Dated: July 26, 2001

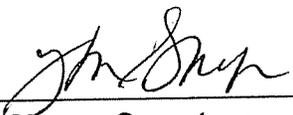
  
\_\_\_\_\_  
Thea B. Shupe, Secretary

**CERTIFICATE OF SECRETARY  
OF  
DRILL TECH DRILLING & SHORING, INC.**

I, Thea Shupe, the duly appointed and acting Secretary of Drill Tech Drilling & Shoring, Inc. ("the corporation"), a corporation duly organized and existing under the laws of The State of California with a principal place of business located at 2200 Wymore Way, Antioch, California, do hereby certify on the date written below that:

1. Attached to this Certificate is a true, complete, and correct copy of the Unanimous Written Consent of Directors to Corporate Action containing one resolution adopted by the corporation's Board of Directors.
2. Such resolution remains in full force and effect as of the date written below.

In Witness whereof, the Secretary of the corporation has executed this certificate under the seal of the corporation on 5.20.13.

  
\_\_\_\_\_  
Thea Shupe, Secretary

(seal)

**UNANIMOUS WRITTEN CONSENT  
OF DIRECTORS  
TO CORPORATE ACTION**

We, the undersigned, are all the members of, and together constitute, the Board of Directors of Drill Tech Drilling & Shoring, Inc. ("the corporation"), and by this writing approve the following resolution and consent to their adoption:

RESOLVED, pursuant to the authority of Section 3 of Article VIII of the corporation's amended and restated bylaws, each of the corporation's officers designated and named below are authorized to enter into any contract or execute any instrument in the name of and on behalf of the corporation and to take such action alone on behalf of the corporation. Such authority is general and is not confined to any specific matter. The corporation's officers are as follows:

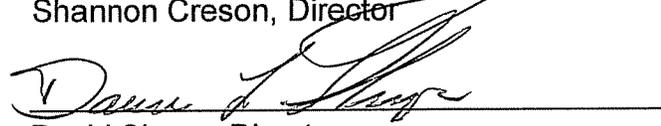
President: Shannon Creson  
Vice President: David Shupe  
Secretary: Thea Shupe  
Treasurer: Ann Creson  
Chief Legal Officer: Scott J. Preble

This consent is executed pursuant to California Corporations Code section 307, subdivision (b) and is to be filed with the minutes of the proceedings of the Board of Directors.

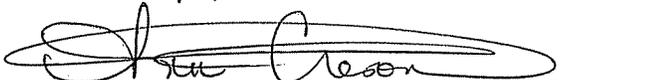
Dated: May 20, 2013

  
Shannon Creson, Director

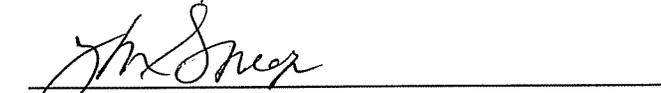
Dated: May 20, 2013

  
David Shupe, Director

Dated: May 20, 2013

  
Ann Creson, Director

Dated: May 20, 2013

  
Thea Shupe, Director



State of California  
Department of Transportation  
Administration  
Division of Procurement and Contracts  
1727 30th Street  
Sacramento, CA 95816-7006  
Attention: Denetia Floyd-Smith, Contract Analyst  
Telephone: (916) 227-6068

## DISCLOSURE OF POTENTIAL CONFLICT OF INTEREST [APPENDIX D]

**STATE ROUTE 140  
FERGUSON SLIDE REPAIR  
Permanent Restoration Project  
10-0P9201**  
CONSTRUCTION MANAGER/  
GENERAL CONTRACTOR SERVICES

January 23, 2014



A JOINT VENTURE

# Appendix D

## Conflict of Interest Forms

- Flatiron
- Drill Tech

### Appendix D

#### DISCLOSURE OF POTENTIAL CONFLICT OF INTEREST CERTIFICATION

Applicant Firm Flatiron West Inc.

Having had the opportunity to review Organizational Conflict of Interest Checklist, the Proposer hereby indicates that it has, to the best of its knowledge and belief:

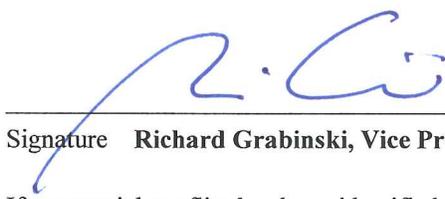
Determined that no potential organizational conflict of interest exists.

Determined a potential organizational conflict of interest as follows:

Attach additional sheets as necessary.

Describe nature of the potential conflict(s): **None.**

Describe measures proposed to mitigate the potential conflict(s): **To avoid any potential conflicts of interest, all team members have been instructed not to discuss this project with anyone in the Department or outside of our firms.**

  
Signature **Richard Grabinski, Vice President of Flatiron West Inc.**

January 21, 2014  
Date

If a potential conflict has been identified, please provide name and phone number for a contact person authorized to discuss this disclosure certification with Department of Transportation contract personnel.

Blaine Austin, Estimating Manager  
Name

(707) 742-6017  
Phone

**Appendix D**

**DISCLOSURE OF POTENTIAL CONFLICT OF INTEREST CERTIFICATION**

Applicant Firm Drill Tech Drilling & Shoring, Inc.

Having had the opportunity to review Organizational Conflict of Interest Checklist, the Proposer hereby indicates that it has, to the best of its knowledge and belief:

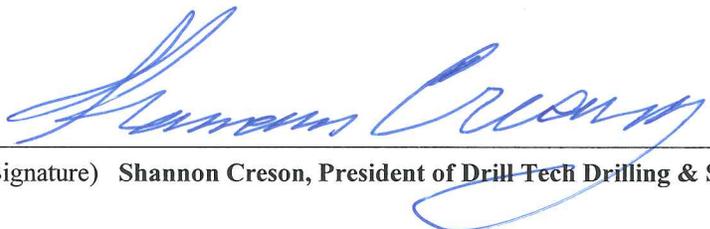
X Determined that no potential organizational conflict of interest exists.

       Determined a potential organizational conflict of interest as follows:

Attach additional sheets as necessary.

Describe nature of the potential conflict(s): **None.**

Describe measures proposed to mitigate the potential conflict(s): **To avoid any potential conflicts of interest, all team members have been instructed not to discuss this project with anyone in the Department or outside of our firms.**

  
(Signature) Shannon Creson, President of Drill Tech Drilling & Shoring, Inc.

January 21, 2014  
Date

If a potential conflict has been identified, please provide name and phone number for a contact person authorized to discuss this disclosure certification with Department of Transportation contract personnel.

Scott J. Preble, Legal Counsel for Drill Tech Drilling & Shoring, Inc.  
Name

925-978-2060  
Phone

STATE OF CALIFORNIA

Contractors State License Board

Pursuant to Chapter 9 of Division 3 of the Business and Professions Code and the Rules and Regulations of the Contractors State License Board, the Registrar of Contractors does hereby issue this license to:

DRILL TECH DRILLING & SHORING INC

to engage in the business or act in the capacity of a contractor in the following classification(s):

D30 - PILE DRIVING/PRESSURE FOUNDATION JACKING  
A - GENERAL ENGINEERING CONTRACTOR  
C57 - WELL DRILLING (WATER)

Witness my hand and seal this day,

August 24, 2007

Issued January 30, 1998

*Stephen P. Sands*  
Stephen P. Sands  
Registrar of Contractors

SIGNATURE OF LICENSEE  
SIGNATURE OF LICENSE QUALIFIER

This license is the property of the Registrar of Contractors, is not transferable, and shall be returned to the Registrar upon demand when suspended, revoked, or invalidated for any reason. It becomes void if not renewed.

745354  
License Number

State of California  
CONTRACTORS STATE LICENSE BOARD  
ACTIVE LICENSE



License Number **745354** Corp

Business Name **DRILL TECH DRILLING & SHORING INC**

Classification(s) **C61/D30 A C57 HAZ**

Expiration Date **01/31/2014**

[www.cslb.ca.gov](http://www.cslb.ca.gov)

