NOPC #3
East Tie-In Design Criteria

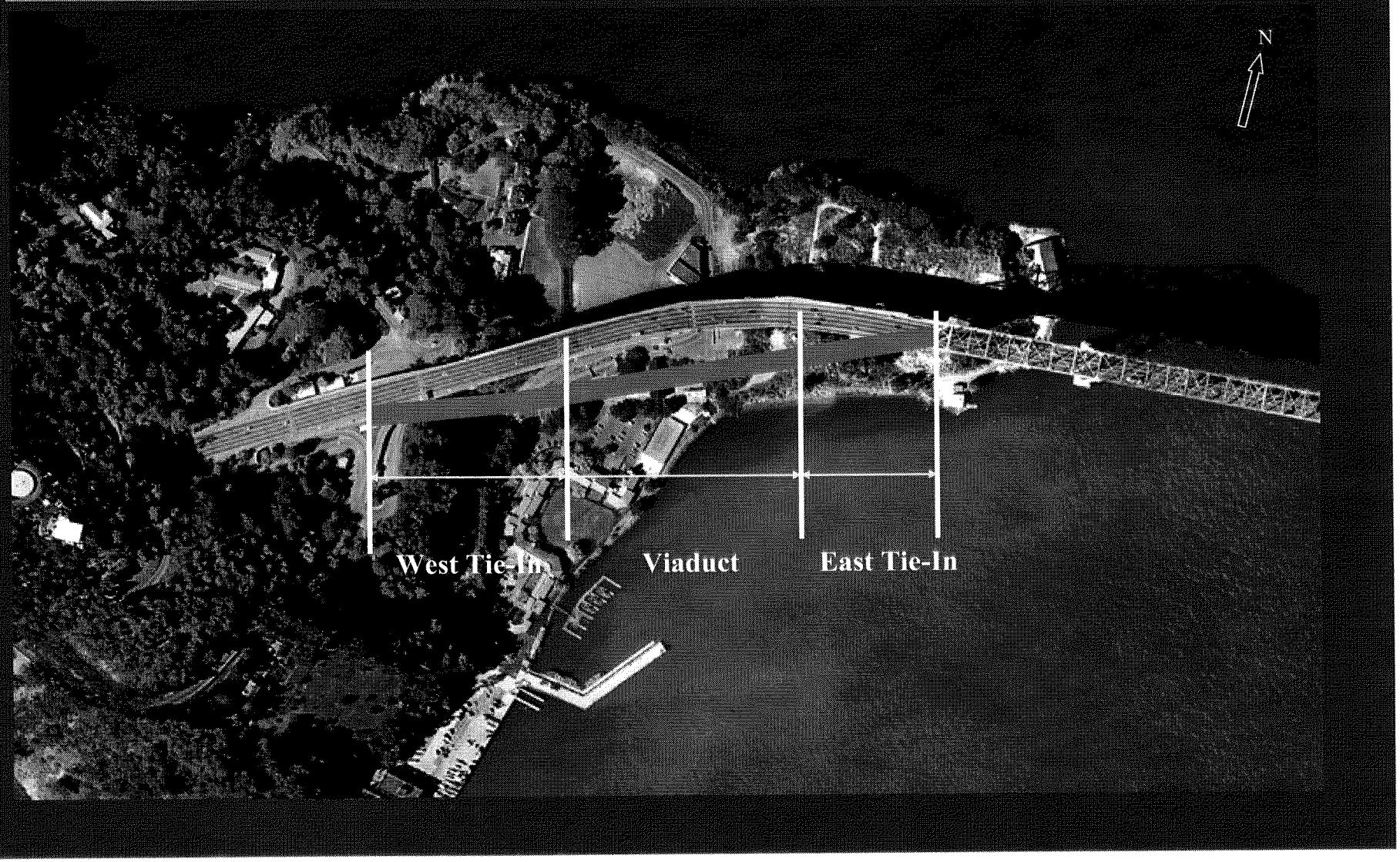
June 16, 2005

Contract 04-0120R4

IAI Team

- **Roy Imbsen**, Project Manager, Engineer of Record, P.E., Ph.D
- **Mehrdad Varzandeh**, Deputy Project Manager, P.E.
- **Majid Sarraf**, Lead Designer, P.E., Ph.D
- **Darryl Matson**, Lead Checker, P.E., M.S
- **Dick Ellison**, CEO, P.E., Ph.D

Temporary Bypass Structure (TBS)



East Tie-In (ETI) Design

- Caltrans ETI design envisioned a "Roll-Out/Roll-In" concept.
- Alternate designs for the ETI are allowed by the contract.
- 3 out of 4 bidders including CCM provided an alternative to the "Roll-Out/Roll-In" concept.
- CCM concept provided considerable cost savings to Caltrans and less risk of traffic disruption.

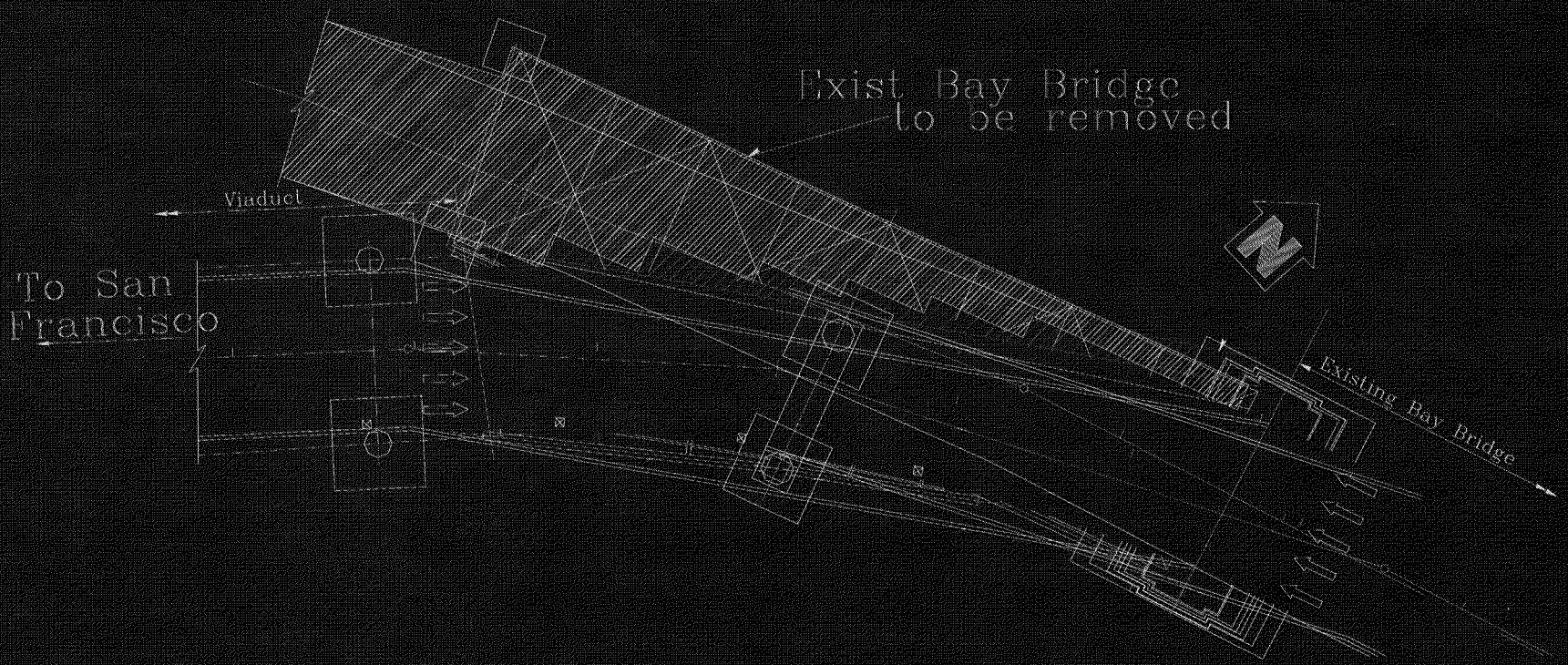
Basis of the Claim

- Initially discussions indicated that any new criteria modification would be done in conjunction with design activities.
- **3 months After contract award**, Caltrans required a new separate design criteria document to be submitted and accepted in order for the final design of the ETI to be **approved**.
- Caltrans was not consistent regarding the required content of the criteria. (1 page to 40+ pages back to 4 pages)
- Caltrans dictated Pier E-1 boundary condition behavior for the ETI alternative.

Relevant Issues

- Caltrans agrees that more than one design can be developed using the original design criteria.
- Caltrans has stated that "the state has the sole responsibility for the criteria and for any changes that may be made to its content."
- The technical portion of the original design criteria in the contract documents is adequate for the ETI alternative as evidenced by the final design criteria iteration.
- Changes to the criteria should have been simple.

CCM/IAI
ETI Design Alternative



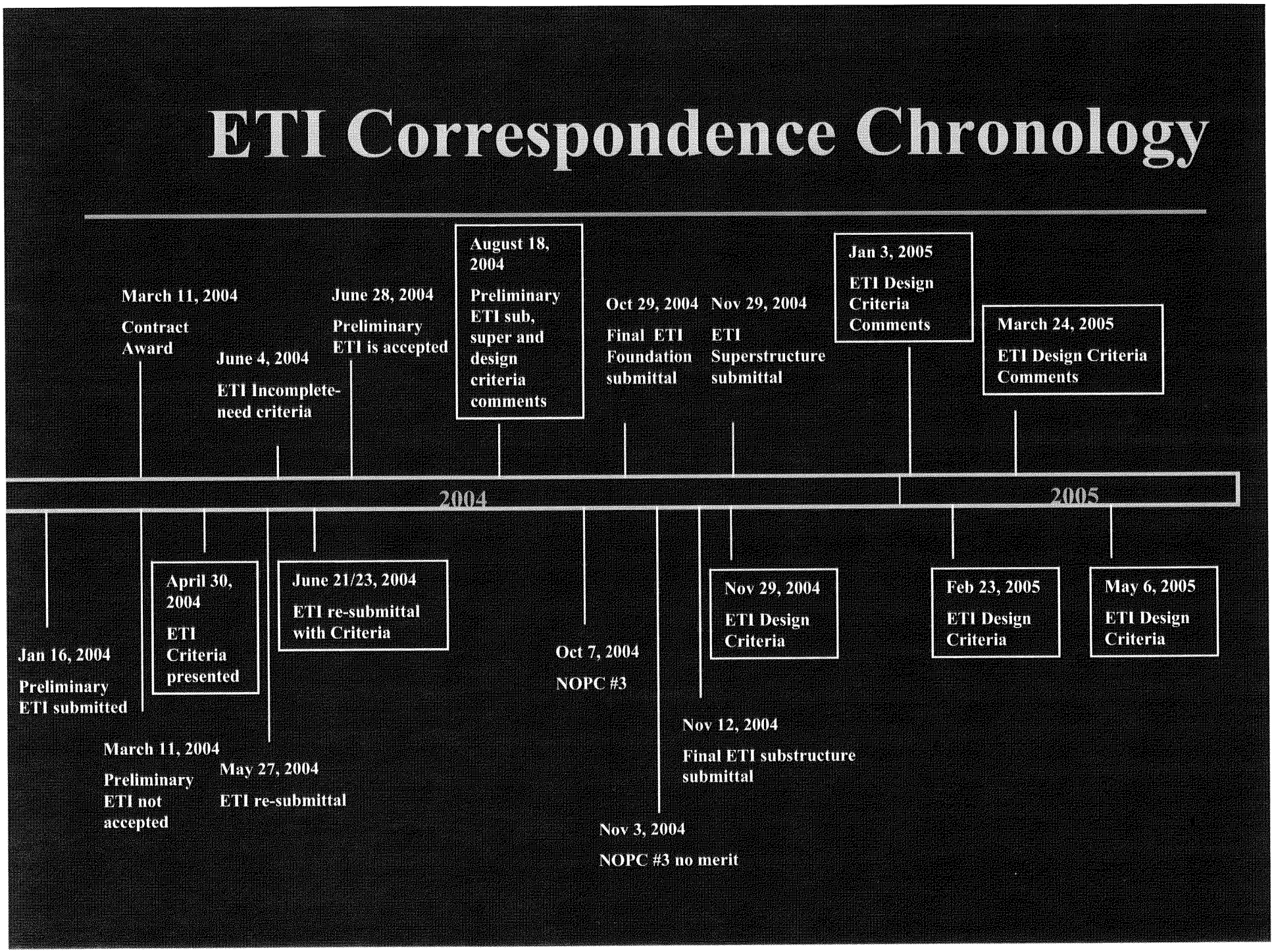
Plan View

ETI Design Alternative presented at Pre Award Meeting

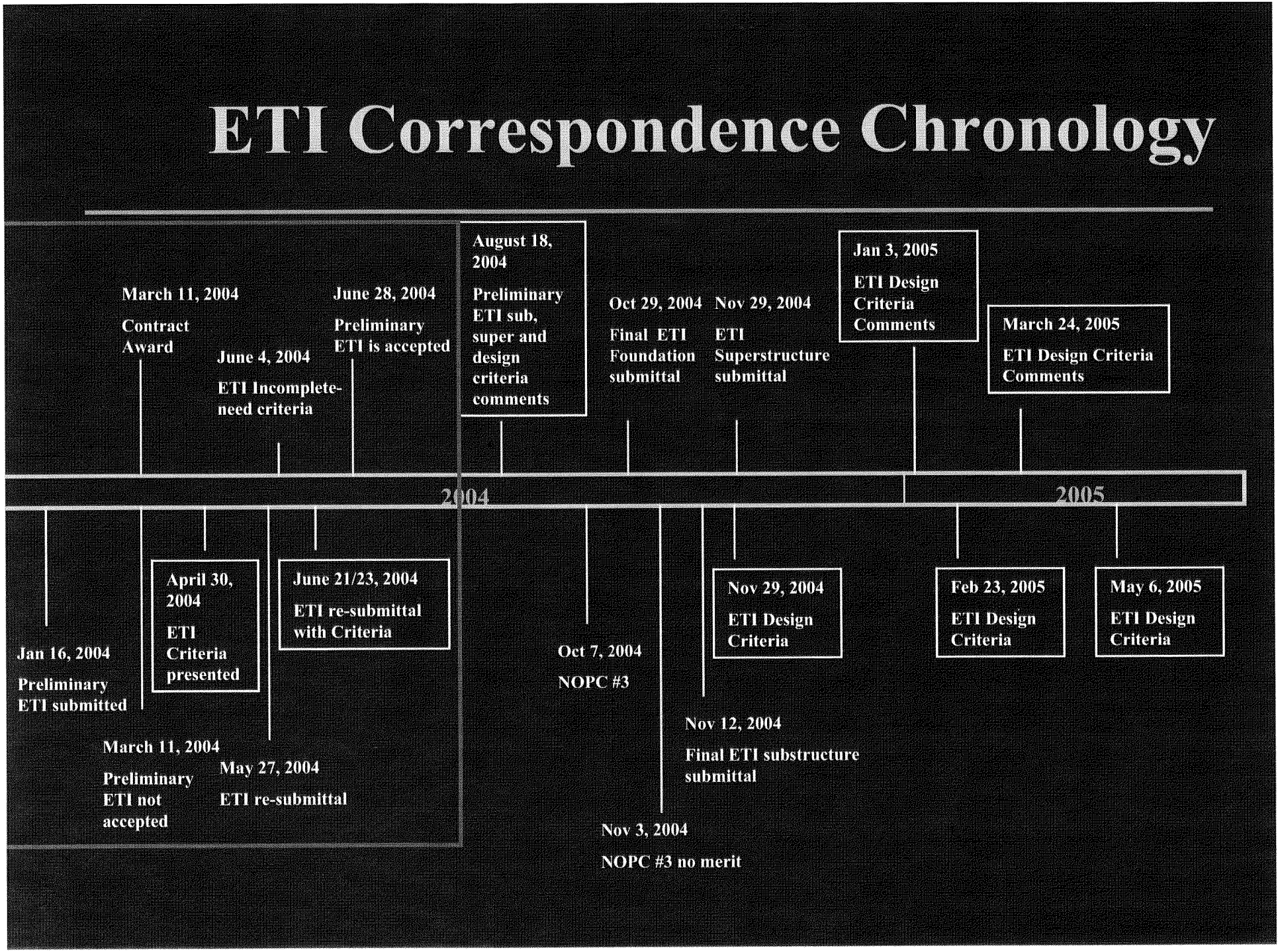
"***Based on the bidder's experience and safety history, conceptual approach to the design, construction,*** *and removal work, logistics, and schedule as presented in the PAIQ, the Proposal Drawings, and on any information provided at the Pre-Award Meeting,* ***the Department will make a determination on the bidder's qualifications for performing the work in a manner that is safe for the workers and the public."***

Section 3-1.01-A PRE-AWARD MEETING of the Special Provisions

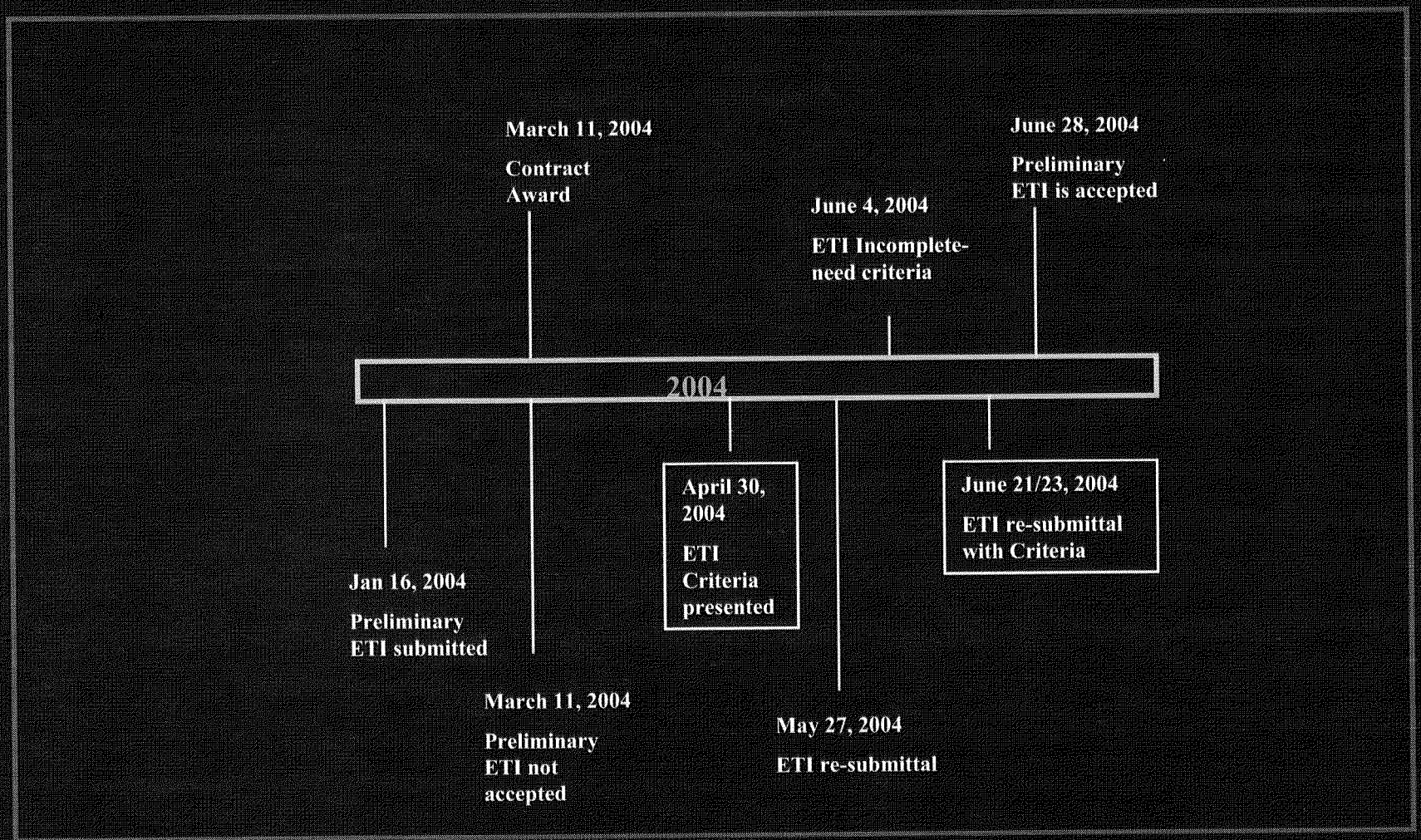
ETI Correspondence Chronology



ETI Correspondence Chronology



ETI Correspondence Chronology



ETI Correspondence Chronology

CONSTRUCTION STAGING AND DESIGN LOADING CRITERIA

The construction staging of ETI includes: a) Erection of South ETI, b) load transfers from existing YB4 to South ETI, and c) Demolitions of North YB4 into 9 unique different construction stages as described below and as shown on the East Tie-In plan sheets 5 through10 (Staging Plans No. 1 through No. 6):

1- Erection of Bent #53 and South ETI Structural Framing
2- Jacking on the South YB4 Truss
3- South YB4 Truss, Member Removal
4- Erection of Box Girder E
5- Closure Pours
6- Shifting Traffic
7- Erection of Steel Posts and Stringers
8- Demolition of North YB4 Truss and Load Transfer to Box Girder E
9- Elevation Adjustment of North ETI

The schematics for the typical section of existing YB4 and new ETI structures along with design loading conditions, and sequence of most important operations, instrumentations, and monitoring process are described in the following pages.

June 28, 2004

Preliminary ETI is accepted

June 4, 2004

ETI Incomplete-need criteria

June 21/23, 2004

ETI re-submittal with Criteria

March 11, 2004

Preliminary ETI not accepted

May 27, 2004

ETI re-submittal

ETI Correspondence Chronology

March 11, 2004

Contract Award

June 4, 2004

ETI Incomplete-need criteria

June 28, 2004

Preliminary ETI is accepted

- Sequence of operations **(IAI Supporting Document, Item 16)**
- Jacking operations
- Method for controlling and monitoring deflections
- Stabilization of structure during construction
- Monitoring of all critical members
- Contingency plans for any unanticipated events during operations, such as a jack failing, etc.
- Evaluation of all existing members and connections that will be incorporated into the TBS.

March 11, 2004

Preliminary ETI not accepted

May 27, 2004

ETI re-submittal

ETI Correspondence Chronology

STATE OF CALIFORNIA—BUSINESS, TRANSPORTATION AND HOUSING AGENCY ARNOLD SCHWARZENEGGER, Governor

DEPARTMENT OF TRANSPORTATION
333 BURMA ROAD
OAKLAND, CA 94607-1015
PHONE (510) 622-5660
FAX (510) 286-0550

Flex your power!
Be energy efficient!

RECEIVED
JUL 0 1 2004
CC MYERS, INC.
JOB 215 TEMP BYPASS STRUCTURE

June 28, 2004
Contract No. 04-0120R4
04-SF-80-12.6/13.2
Temporary Bypass Structure
SL# 37

Mr. Robert W. Coupe
C. C. MYERS, INC.
3286 Fitzgerald Road
Rancho Cordova, CA 95742

RE: 215-SUB.00003-2
Subject: Preliminary Design Submittal for East Tie-In

Dear Mr. Coupe:

The Department has accepted the above referenced submittal. However, the Final Design Submittal for the East Tie-In will not be accepted until the design criteria is mutually agreed upon.

If you have any questions, please contact me at (510) 622-5660.

Sincerely,

Kenneth Loncharich
Resident Engineer

cc: File 5.03, 58.03

"Caltrans improves mobility across California"

(IAI Supporting Document, Item 25)

June 28, 2004
Preliminary ETI is accepted

June 21/23, 2004
ETI re-submittal with Criteria

ETI Correspondence Chronology

STATE OF CALIFORNIA—BUSINESS, TRANSPORTATION AND HOUSING AGENCY ARNOLD SCHWARZENEGGER, Governor

DEPARTMENT OF TRANSPORTATION
333 BURMA ROAD
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Contract No. 04-0120R4
04-SF-80-12.6/13.2
Temporary Bypass Structure
SL# 37

Mr. Robert W. Coupe
C. C. MYERS, INC.
3286 Fitzgerald Road

EC-00310
215-103
FAXED COPY SENT TO IMBSEN

June 28, 2004

Preliminary ETI is accepted

The Department has accepted the above referenced submittal. However, the Final Design Submittal for the East Tie-In will not be accepted until the design criteria is mutually agreed upon.

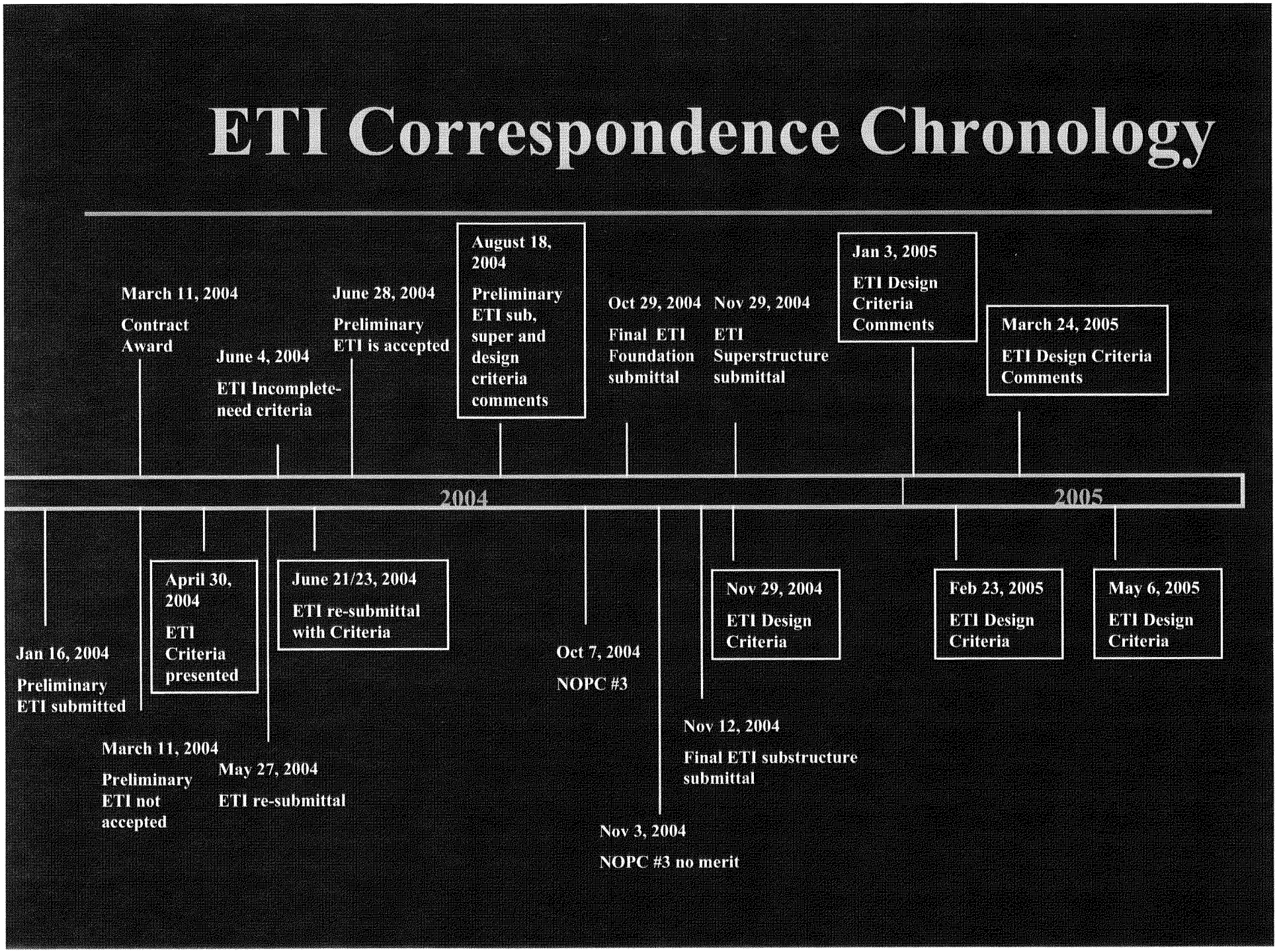
ETI re-submittal with Criteria

cc: File 5.03, 58.03

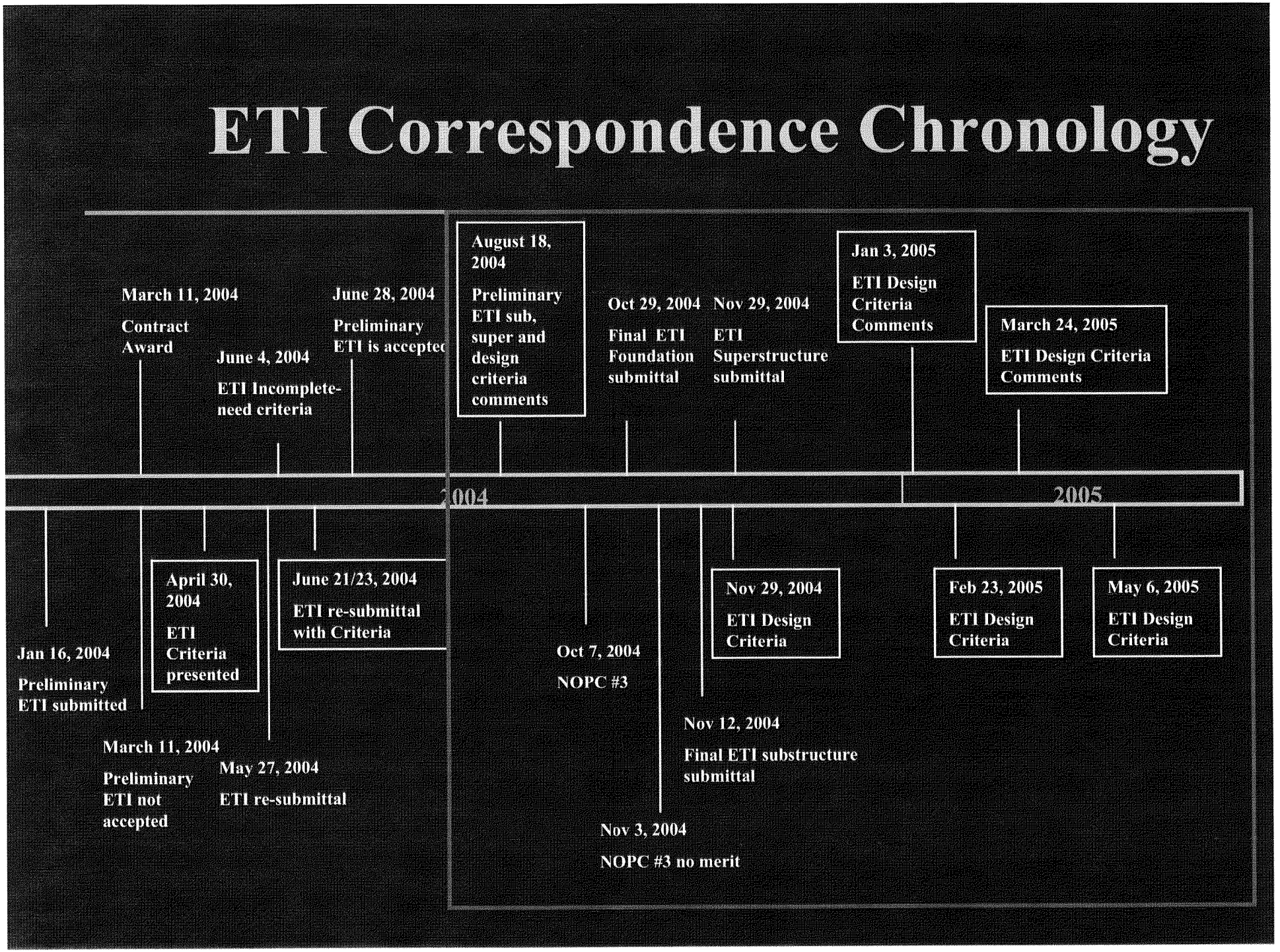
"Caltrans improves mobility across California"

(IAI Supporting Document, Item 25)

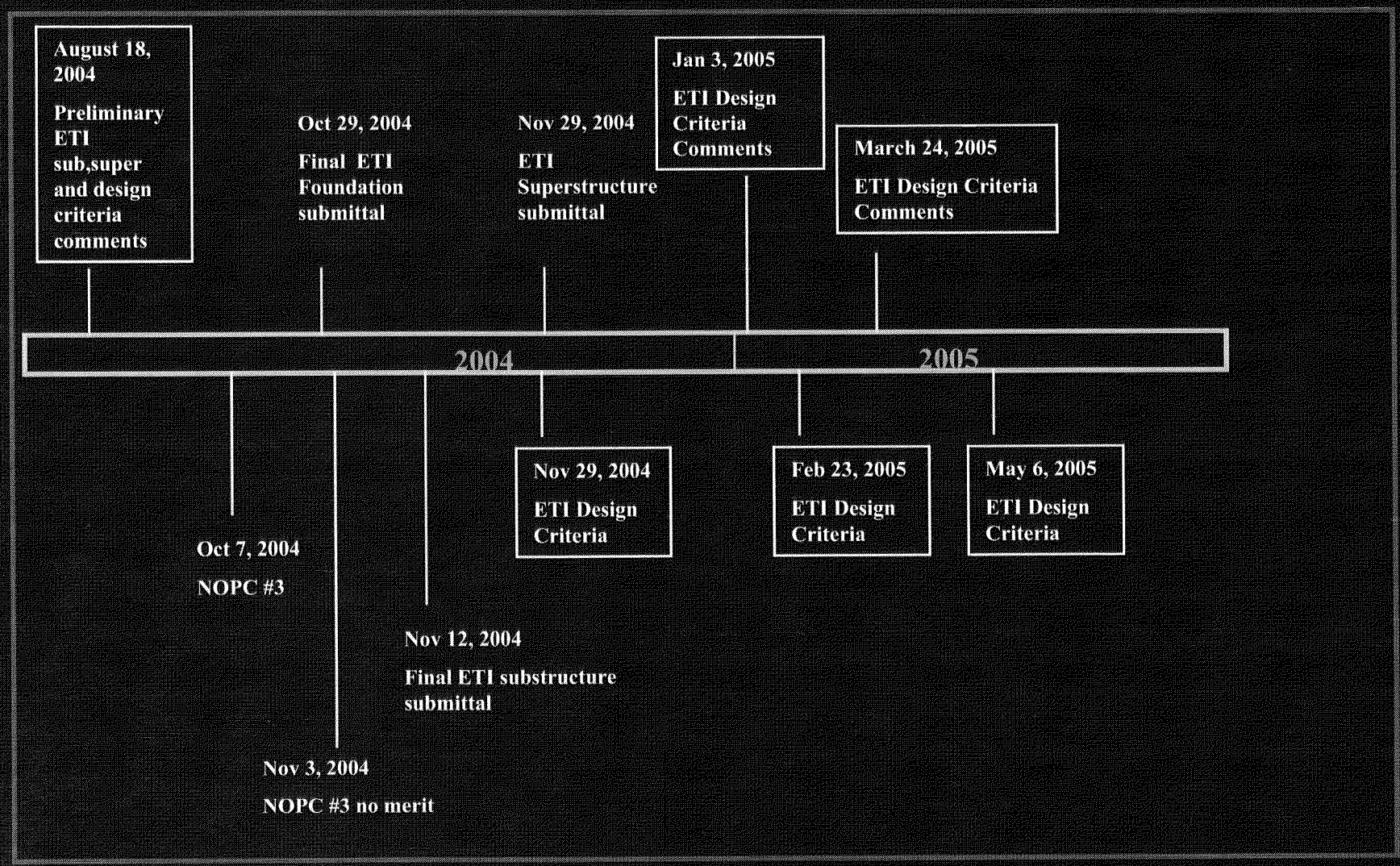
ETI Correspondence Chronology



ETI Correspondence Chronology



ETI Correspondence Chronology



ETI Correspondence Chronology

August 18, 2004
Preliminary ETI sub super...

Oct 29, 2004
Final ETI...

Nov 29, 2004
ETI...

Jan 3, 2005
ETI Design Criteria Comments

March 24, 2005

As stated in Special Provisions Section 10-1.15 "Temporary Bypass Structure", the contract plans contain sufficient design criteria for the Contractor to develop a TBS design. The envisioned roll-in roll-out concept is but one design that could have been generated using the criteria provided by the contract.

Oct 7, 2004
NOPC #3

Nov 3, 2004
NOPC #3 no merit

Nov 12, 2004
Final ETI substructure submittal

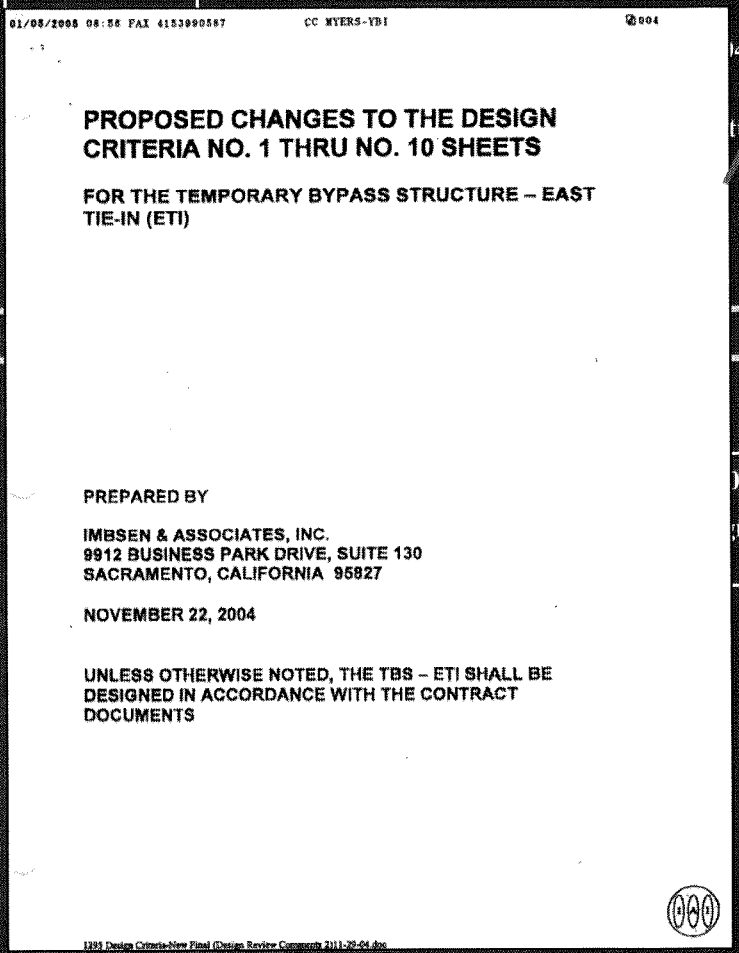
Nov 29, 2004
ETI Design Criteria

Feb 23, 2005
ETI Design Criteria

May 6, 2005
ETI Design Criteria

ETI Correspondence Chronology

August 18, 2004



01/03/2005 08:56 FAX 4153990587 CC MYERS-YBI 004

PROPOSED CHANGES TO THE DESIGN CRITERIA NO. 1 THRU NO. 10 SHEETS

FOR THE TEMPORARY BYPASS STRUCTURE – EAST TIE-IN (ETI)

PREPARED BY

IMBSEN & ASSOCIATES, INC.
9912 BUSINESS PARK DRIVE, SUITE 130
SACRAMENTO, CALIFORNIA 95827

NOVEMBER 22, 2004

UNLESS OTHERWISE NOTED, THE TBS – ETI SHALL BE DESIGNED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS

1395 Design Criteria-New Final (Design Review Comments) 2011-09-04.doc

Jan 3, 2005
ETI Design Criteria Comments

March 24, 2005
ETI Design Criteria Comments

2005

Feb 23, 2005
ETI Design Criteria

May 6, 2005
ETI Design Criteria

ETI Correspondence Chronology

August 18, 2004

01/05/2005 08:58 FAX 4153990567 CC MYERS-YBI 004

PRO
CRI

FOR
TIE-I

PREP

IMBS
9912
SACR

NOVEMBER 22, 2004

UNLESS OTHERWISE NOTED, THE TBS – ETI SHALL BE DESIGNED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS

1395 Design Criteria-New Final (Design Review Comments 2011-20-04.doc

Jan 3, 2005

ETI Design Criteria Comments

March 24, 2005

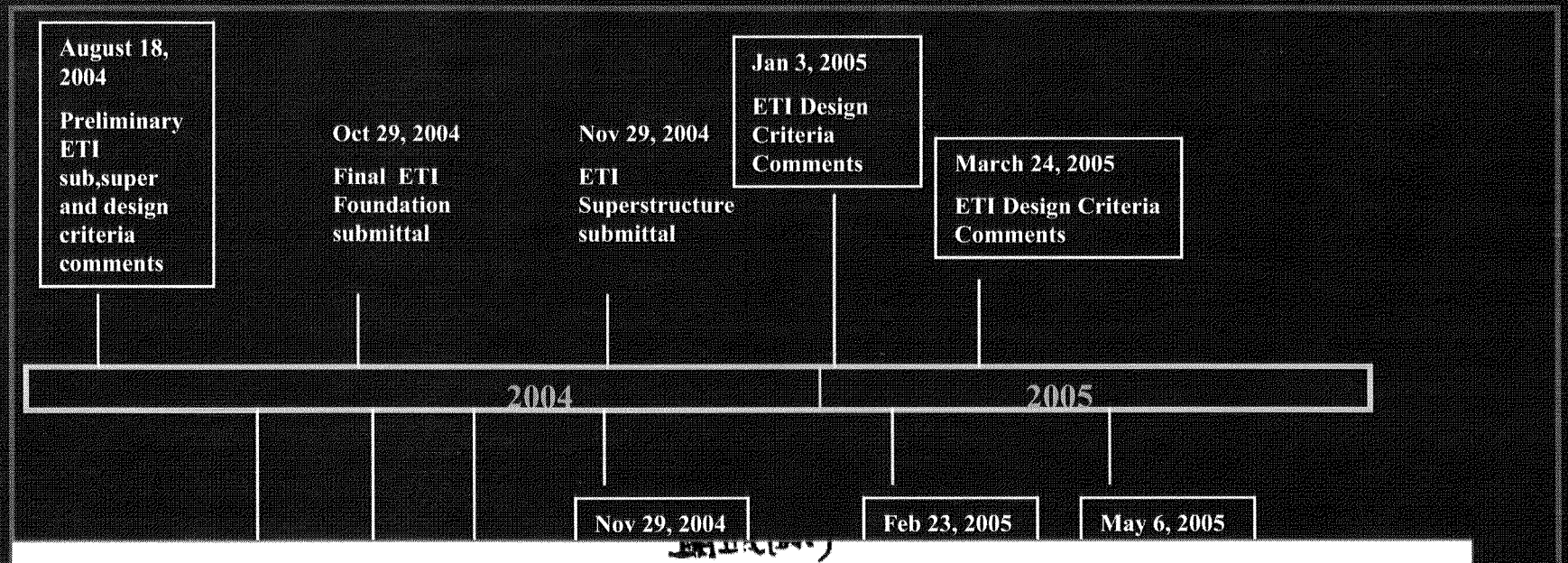
11.2 Construction Staging

Construction Staging shall be modified to incorporate the following:

1) **South and North truss shall be jacked simultaneously to prevent any racking of the truss system. Both trusses shall jacked from directly below the chord members.**

2) **Support system on north and south side shall be similar. (ie. Provide box girder support beam and C-Bent configuration on north side to match south side.)**

ETI Correspondence Chronology



Subject: East Tie-In Final Foundation Submittal

January 24, 2005

IAI supporting document Item 57

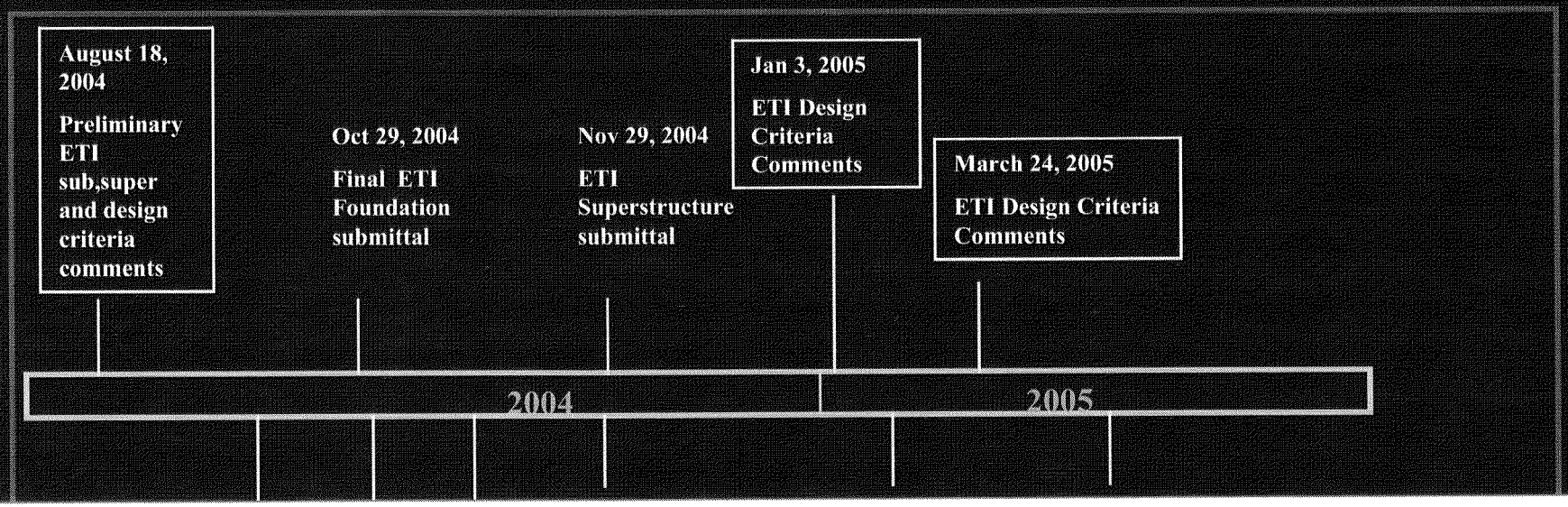
Dear Mr. Coupe,

This Office cannot accept the above referenced submittal at this time. Until outstanding issues are more substantially resolved with the East Tie-In Design Criteria submittal (215-SUB.00061), this Office will not begin the process for review.

Nov 3, 2004

NOPC #3 no merit

ETI Correspondence Chronology



Subject: Revised East Tie-In Design Criteria dated 11-22-2004

January 24, 2005

IAI supporting document Item 56

Dear Mr. Coupe:

The above referenced submittal regarding the revised East Tie-In Design Criteria has been received by the Department. Verbal discussions and meetings have taken place between the Department and CCM/IAI in regards to matters pertaining to the submittal's acceptance. Please be informed, however, that the submittal cannot be accepted by this Office at this time. There is a substantial amount of outstanding issues that need to be resolved with the East Tie-In Design Criteria before the Office can begin its process of review.

ETI Correspondence Chronology

August 18, 2004
Preliminary ETI sub,super

Oct 29, 2004
Final ETI

Nov 29, 2004
ETI

Jan 3, 2005
ETI Design Criteria Comments

March 24, 2005
I Design Criteria mments

10. INCORPORATING THE EXISTING YB4 SPANS INTO EAST TIE-IN DESIGN

10.1 Existing YB4 As-Built Material Properties

The properties of the materials of existing YB4 shall be those shown on the as-built drawings as summarized in the sections below. Use of these values shall be substantiated by test data resulted from field or laboratory testing of the material of the existing YB4.

10.1.2 Structural Steel Original 1934:

$f_y = 37,000 psi$, $f_u' = 62,000 psi$ (carbon steel)

$f_y = 45,000 psi$, $f_u' = 80,000 psi$ (silicon steel)

10.1.3 Lightweight Concrete 1964 Modifications:

$f_c' = 4500 psi$, $f_c = 1800 psi$, $n = 15$

Reinforcement – Intermediate Grads:

$f_y = 40 ksi$ per CRSI

10.1.4 Structural Steel 1964 Modifications:

A440: $f_y = 45,000$ psi, $fu = 55,000$ psi

T1: $f_y = 100,000$ psi, $fu = 115,000$ psi

2005

)05
gn

May 6, 2005
ETI Design Criteria

One year into the project and ETI criteria status continues to be uncertain

STATE OF CALIFORNIA-BUSINESS, TRANSPORTATION AND HOUSING AGENCY ARNOLD SCHWARZENEGGER, Governor

DEPARTMENT OF TRANSPORTATION - District 4 Toll Bridge Program
333 Burma Rd.
Oakland, CA 94607
(510) 622-5660, (510) 286-0550 fax

CC Myers
51 Macalla Road
San Francisco, CA 94130

Attn: Mr. Bob Coupe

Ref: 215-SUB.00061-02, 215-SUB.00061-01, 215-SUB.00061-00

May 17, 2005

Contract No. 04-0120R4
04-SF-80-12.6, 13.2
South – South Detour

Letter No. 05.03.01-000415

Subject: East Tie-In - Design Criteria

Dear Mr. Coupe,

This Office has received and reviewed the East Tie-In Design Criteria as submitted on May 11, 2005. At this time, this Office only has the following comment:

- Title of the document shall be revised to read "Amended Design Criteria" and not "Supplemental Design Criteria"

With this minor change, there will be no further comments regarding this document. C.C. Myers, Inc. and Imbsen and Associates, Inc. are reminded that a Contractor requested change order must be requested, processed, and approved before final acceptance of the East Tie-In scheme can be provided. As previously stated, this Office will only consider this change at no cost to the State.

It is this Office's understanding that the previous East Tie-In Final Foundation and Final Substructure design submittals (215-SUB.00060-00 & 215-SUB.00071-00) are no longer considered to be correct. Based upon this fact, this Office will not be accepting nor making reviews of these packages. Please indicate in writing otherwise if this is not the correct interpretation of discussions from past design coordination meetings.

Sincerely,

Gary Lai
Structure Representative
for
Resident Engineer
Lourdes David

cc: E. Rufino
D. Quintana
D. Adams
A. Bata
S. Morrison

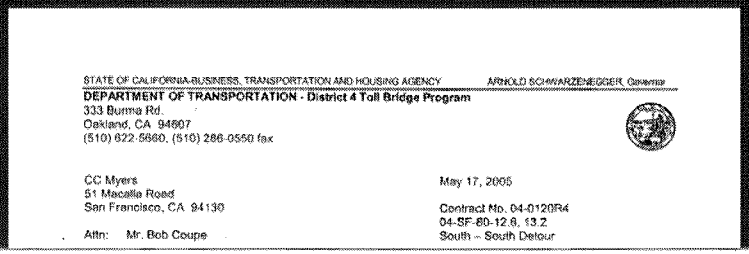
file: 05.03.01, 98.45

"Caltrans improves mobility across California"

State Letter 05.03.01-000415, May 17, 2005

(IAI supporting Document Volume II, Item 69)

One year into the project and ETI criteria status continues to be uncertain



STATE OF CALIFORNIA-BUSINESS, TRANSPORTATION AND HOUSING AGENCY ARNOLD SCHWARZENEGGER, Governor

DEPARTMENT OF TRANSPORTATION - District 4 Toll Bridge Program
333 Burma Rd.
Oakland, CA 94607
(510) 622-5660, (510) 286-0550 fax

CC Myers
51 Macalla Road
San Francisco, CA 94130

Attn: Mr. Bob Coupe

May 17, 2005

Contract No. 04-0120R4
04-SF-80-12.8, 13.2
South – South Detour

This Office has received and reviewed the East Tie-In Design Criteria as submitted on May 11, 2005. At this time, this Office only has the following comment:

- Title of the document shall be revised to read "Amended Design Criteria" and not "Supplemental Design Criteria"

With this minor change, there will be no further comments regarding this document. C.C. Myers, Inc. and Imbsen and Associates, Inc. are reminded that a Contractor requested change order must be requested, processed, and approved before final acceptance of the East Tie-In scheme can be provided. As previously stated, this Office will only consider this change at no cost to the State.

Structure Representative
for
Resident Engineer
Lourdes David

cc: E. Rufino
D. Quintana
D. Adams
A. Bata
S. Morrison

file: 05.03.01, 55.45

"Caltrans improves mobility across California"

State Letter 05.03.01-000415, May 17, 2005

(IAI supporting Document Volume II, Item 69)

"Amended" Design Criteria

1.01

This amended design criteria has
shown in the project plans as it re
Bypass Structure. The sections co
the project plan criteria shall supe
the East Tie-In only. Sections tha
remain as written in the project p
project plan criteria are omitted i
contained in this supplemental de

1.1 Definition of Terms:

Temporary Bypass Structure - Ea
The Temporary Bypass Structure
TBS spanning between existing P
cantilever truss support near new
includes new structural framing a
Truss Span.

- Temporary Structures
- Temporary Structures are
of existing bridge structu
Structures are classified

Ordinary Construction

- Falsework
- Shoring

Important Construction (for oper

- Load Transfer from t
steel frame and remo
- Placement of the Nor
Truss and portions of
- Stabilization and rem

MATERIALS

3.3 Structural Steel for ETI

3.3.1.1 Existing YB4 Truss

See Section 10.1.2

3.3.5 Fatigue

The existing YB4 shall be ch
state after being incorporated
determine the appropriate ne
previous design stress range,
anticipated stress ranges dur

New components shall be ch
500,000 cycles of loading.

4. SEISMIC DESIGN

4.2a ETI Segment and Articulations

Tie-In

The East Tie-In may be a tw
side, the ETI may be support
segment (Fig. 4.2 need not ap
superstructure and Pier El m
service load combinations.

Any attachments to Pier El t
ETI shall be designed with a
designed to resist the total de

4.2.4 Dynamic Characteristics - East

The alternative articulation of the ET

9. TEMPORARY STABILIZA

9.2 Delete this section from t

9.3 Delete this section from t

10. INCORPORATING THE EXISTING YB4 SPANS IN
DESIGN

10.1 Existing YB4 As-Built Material Properties

The properties of the materials of existing YB4 sh
built drawings as summarized in the sections below
shall verify the section size and properties of the co
incorporated into the ETI.

10.1.2 Structural Steel Original 1934:
f = 37, 000 *psi*, = 62, 000 *psi* (carbo
= 45, 000 *psi*, *f*, = 80, 000 *psi* (silico

10.1.3 Lightweight Concrete 1964 Modifications: *f* = 4
Reinforcement - Intermediate Grade: =
40ksi per CRSI

10.1.4 Structural Steel 1964 Modifications:
A440: f = 45,000 *psi*, *fu* = 55,00 *psi* T1
f = 100, 000 *psi*, *fu* = 115, 000 psi

10.2 Monitoring and Contingency Plan

10.2.1 Jacking System Operation

Plans and a written procedure shall be prepared for the load transfer operations from the existing YB4 span to the new ETI structural steel frame. Plans shall show and describe the jacking system, equipment, all load carrying components and anticipated construction load to be applied to span. The system shall have provisions for adjustment of the position of the jacked span at final location. The procedures shall include: proposed jacking control, manifold arrangements and hydraulic pressures; calibration procedures and certification; description of fail-safe control system; rehearsal of the operation; and description of the required monitoring system. Rehearsal shall involve all equipment and personnel planned for use in the load transfer operation. The plans and written procedures shall be submitted for review and approval prior to the commencement of load transfer operations.

10.2.2 The contractor shall submit a monitoring plan for monitoring and documenting the operations for all load transfer activities from the existing YB4 span to the new ETI structural steel frame. The Contractor shall identify the major risks associated with these operations and develop a contingency plan to mitigate these risks. Contingency actions such as requirements for reliable power sources, and adequate staffing shall be included in the plans. Back up equipment and alternative plans for safety and time-critical operations shall be provided. The monitoring plan and contingency plan submittals shall be reviewed and approved prior to the commencement of load transfer operations.

10.2.3 At a minimum, the monitoring plan for the load transfer processes shall include detailed analysis to establish safe tolerances for applied forces and displacements.

State Letter 05.03.01-000415, May 17, 2005

(IAI supporting Document Volume II, Item 69)

"Amended Design Criteria"

1.01

This amended design criteria has been developed to augment the design criteria shown in the project plans as it relates to the East Tie-In segment of the Temporary Bypass Structure. The sections contained herein that have the same number as in the project plan criteria shall supercede the project plan criteria as they pertain to the East Tie-In only. Sections that are omitted from this amended design criteria remain as written in the project plan criteria, except that sections 10 and 11 in the project plan criteria are omitted in their entirety and replaced with the criteria contained in this supplemental design criteria document.

1.1 Definition of Terms:

Temporary Bypass Structure - East Tie-In (TBS- ETI)
The Temporary Bypass Structure - East Tie-In includes in the East segment of TBS spanning between existing Piers E1, to the new Bent #53, continued to the cantilever truss support near new Bent 52 of Viaduct Structure. The ETI structure includes new structural framing as well as the southern portion of existing YB4 Truss Span.

- Temporary Structures
- Temporary Structures are those used to build the TBS, or remove portions of existing bridge structure to facilitate TBS construction. Temporary Structures are classified as Ordinary or Important.

Ordinary Construction

- Falsework
- Shoring

Important Construction (for operations of High Consequence)

- Load Transfer from the existing YB4 truss to the new E TI structural steel frame and removal of the South Truss of Span YB4.
- Placement of the North Support System and Removal of the North Truss and portions of Existing Floor Beams.
- Stabilization and removal of spans YB3 and YB4

MATERIALS

3.3 Structural Steel for ETI

1

Allows for Bent 53

Load Transfer classified as "Important Construction"

State Letter 05.03.01-000415, May 17, 2005

(IAI supporting Document Volume II, Item 69)

"Amended Design Criteria"

3.3.1.1 Existing YB4 Tower

See Section 10.1.2

3.3.5 Fatigue

The existing YB4 shall be checked for 2,000,000 cycles of loading in its final state after being incorporated into the ETI. Contractor's Engineer shall determine the appropriate number of loading cycles based on the components previous design stress range, duration of temporary condition, and the anticipated stress ranges during the load transfer stages.

New components shall be checked per BDS to withstand fatigue induced by 500,000 cycles of loading.

4. SEISMIC DESIGN

4.2a ETI Segment and Articulations East

Tie-In

The East Tie-In may be a two-span continuous double-deck structure. On the West side, the ETI may be supported by a superstructure hinge at the end of the Viaduct segment (Fig. 4.2 need not apply to the ETI). The connection between the ETI superstructure and Pier E1 may fuse after the forces associated with the DEE and all service load combinations.

Any attachments to Pier E1 that are necessary to support the superstructure of the ETI shall be designed with a safety factor not less than 3.0. The anchorage shall be designed to resist the total design seismic force of the ETI span only.

4.2.4 Dynamic Characteristics - East Tie-In

The alternative articulation of the ETI is defined in Section 4.2a

9. TEMPORARY STABILIZATION FOR SPANS YB4 &YB3

9.2 Delete this section from the design criteria in the project plans.

9.3 Delete this section from the design criteria in the project plans.

2

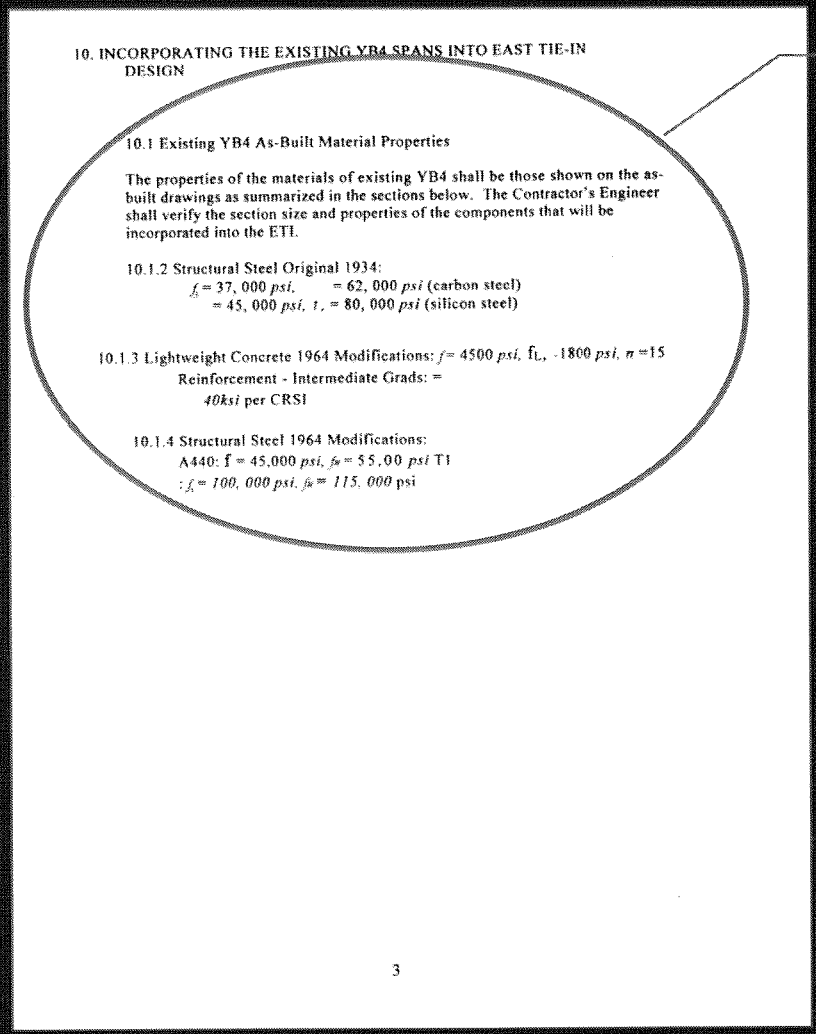
Fatigue Requirement

Structure Description

State Letter 05.03.01-000415, May 17, 2005

(IAI supporting Document Volume II, Item 69)

"Amended Design Criteria"



10. INCORPORATING THE EXISTING YB4 SPANS INTO EAST TIE-IN DESIGN

10.1 Existing YB4 As-Built Material Properties

The properties of the materials of existing YB4 shall be those shown on the as-built drawings as summarized in the sections below. The Contractor's Engineer shall verify the section size and properties of the components that will be incorporated into the ETI.

10.1.2 Structural Steel Original 1934:
f_s = 37, 000 *psi*, = 62, 000 *psi* (carbon steel)
= 45, 000 *psi*, t_s = 80, 000 *psi* (silicon steel)

10.1.3 Lightweight Concrete 1964 Modifications: f'= 4500 *psi*, f_L, -1800 *psi*, n =15
Reinforcement - Intermediate Grads: =
40ksi per CRSI

10.1.4 Structural Steel 1964 Modifications:
A440: f_s = 45,000 *psi*, f_w = 55,00 *psi* T1
: f_s = *100, 000 psi*, f_w = *115, 000* psi

3

Use of Existing

State Letter 05.03.01-000415, May 17, 2005

(IAI supporting Document Volume II, Item 69)

"Amended Design Criteria"

10.2 Monitoring and Contingency Plan

10.2.1 Jacking System Operation

Plans and a written procedure shall be prepared for the load transfer operations from the existing YB4 span to the new ETI structural steel frame. Plans shall show and describe the jacking system, equipment, all load carrying components and anticipated construction load to be applied to span. The system shall have provisions for adjustment of the position of the jacked span at final location. The procedures shall include: proposed jacking control, manifold arrangements and hydraulic pressures; calibration procedures and certification; description of fail-safe control system; rehearsal of the operation; and description of the required monitoring system. Rehearsal shall involve all equipment and personnel planned for use in the load transfer operation. The plans and written procedures shall be submitted for review and approval prior to the commencement of load transfer operations.

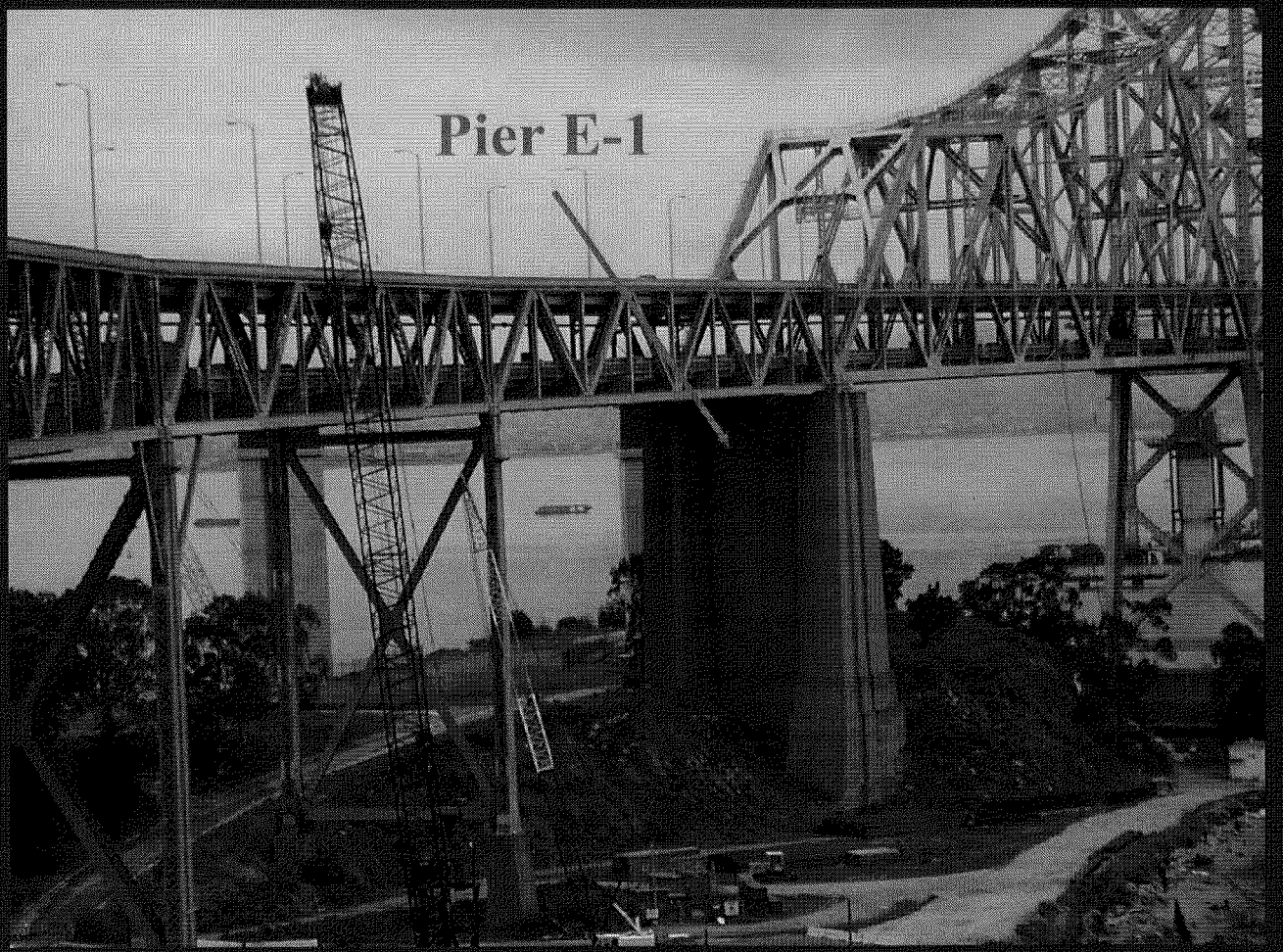
10.2.2 The contractor shall submit a monitoring plan for monitoring and documenting the operations for all load transfer activities from the existing YB4 span to the new ETI structural steel frame. The Contractor shall identify the major risks associated with these operations and develop a contingency plan to mitigate these risks. Contingency actions such as requirements for reliable power sources, and adequate staffing shall be included in the plans. Back up equipment and alternative plans for safety and time-critical operations shall be provided. The monitoring plan and contingency plan submittals shall be reviewed and approved prior to the commencement of load transfer operations.

10.2.3 At a minimum, the monitoring plan for the load transfer processes shall include detailed analysis to establish safe tolerances for applied forces and displacements.

State Letter 05.03.01-000415, May 17, 2005

(IAI supporting Document Volume II, Item 69)

Pier E-1

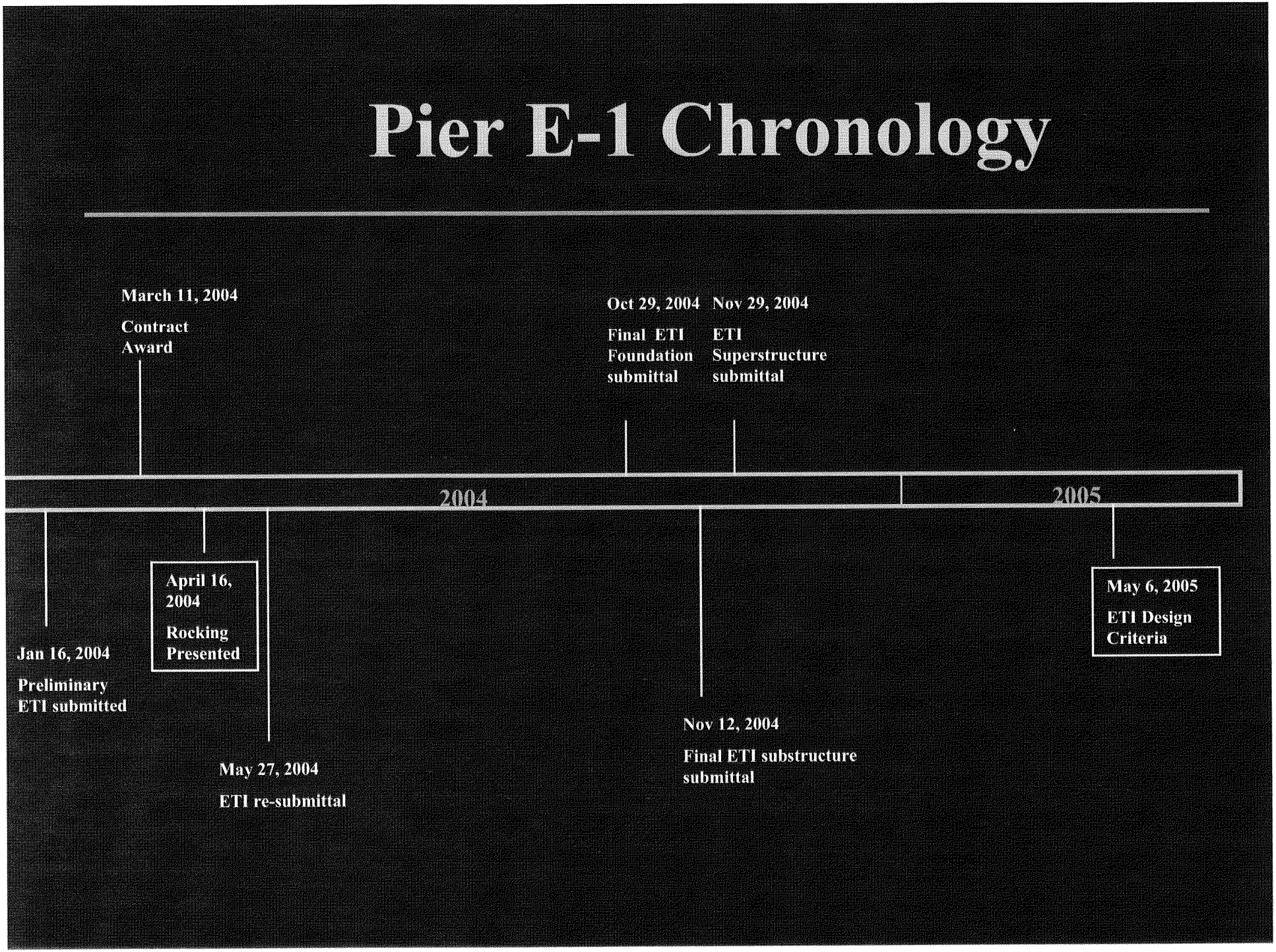


Contract

- "The analysis techniques implemented in the design should be appropriate and boundary condition assumptions, mass distribution, and member representation shall be clearly documented."

4.4. Seismic Analysis-sub section 4.4.1 General

Pier E-1 Chronology



Request to Meet with Seismic Peer Review Committee (SPRC) is denied

(53)

STATE OF CALIFORNIA-BUSINESS, TRANSPORTATION AND HOUSING AGENCY ARNOLD SCHWARZENEGGER, Governor

DEPARTMENT OF TRANSPORTATION - District 4 Toll Bridge Program
333 Burma Rd.
Oakland, CA 94607
(510) 622-5660, (510) 286-5[illegible]

RECEIVED
JAN 11 2005

CC Myers
51 Macalla Road
San Francisco, CA 94130

CC MYERS, INC.
JOB 215 TEMP. BYPASS STRUCTURE
IC-1333
215-103
RC
JG
JV

January 10, 2005

Contract No. 04-0120R4
04-SF-80-12.6, 13.2
Temporary Bypass Structure

Attn: Mr. Bob Coupe

Ref: 215-STL.00072

Letter No. 05.03.01-000272

Subject: Seismic Peer Review Committee Presentation

Dear Mr. Coupe,

This Office has received and reviewed the request by CC Myers to make a presentation to the Seismic Peer Review Committee (SPRC) regarding the Viaduct and East Tie-In Seismic Design strategies. As the original developer of the Temporary Bypass Structure Design Criteria, the State has the sole responsibility for the criteria and for any changes that may be made to its content. Any meetings with the SPRC are then solely between the State and the SPRC. At this time, there are no plans to extend an invitation to CC Myers / Imbsen and Associates Inc. to make a presentation with the State to the SPRC.

Sincerely,

Gary Lai
Structure Representative
for
Resident Engineer
Lourdes David

cc: E. Rufino
D. Quintana
A. Bui
D. Adams
A. Bata

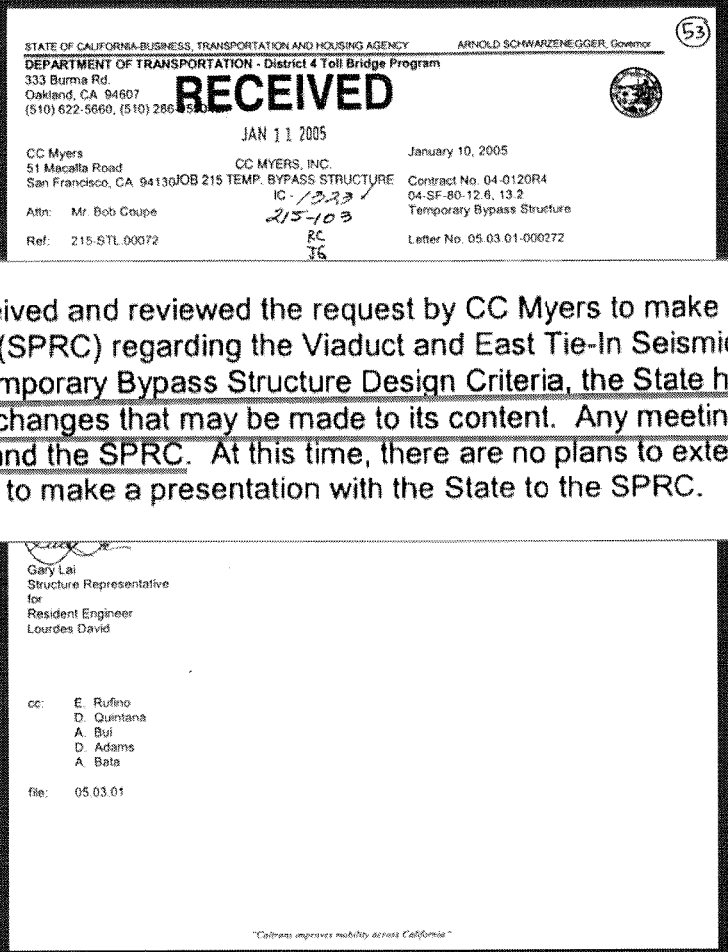
file: 05.03.01

"Caltrans improves mobility across California"

State Letter #272, Jan 10, 2005

(IAI supporting Document Volume II, Item 53)

Request to Meet with Seismic Peer Review Committee (SPRC) is denied



STATE OF CALIFORNIA-BUSINESS, TRANSPORTATION AND HOUSING AGENCY ARNOLD SCHWARZENEGGER, Governor

53

DEPARTMENT OF TRANSPORTATION - District 4 Toll Bridge Program
333 Burma Rd.
Oakland, CA 94607
(510) 622-5660, (510) 286-5505

RECEIVED
JAN 11 2005
CC MYERS, INC.

CC Myers
51 Macalla Road
San Francisco, CA 94130

Attn: Mr. Bob Coupe

Ref: 215-STL.00072

JOB 215 TEMP. BYPASS STRUCTURE
IC - 12223
215-103
RC
JG

January 10, 2005

Contract No. 04-0120R4
04-SF-80-12.6, 13.2
Temporary Bypass Structure

Letter No. 05.03.01-000272

This Office has received and reviewed the request by CC Myers to make a presentation to the Seismic Peer Review Committee (SPRC) regarding the Viaduct and East Tie-In Seismic Design strategies. As the original developer of the Temporary Bypass Structure Design Criteria, the State has the sole responsibility for the criteria and for any changes that may be made to its content. Any meetings with the SPRC are then solely between the State and the SPRC. At this time, there are no plans to extend an invitation to CC Myers / Imbsen and Associates Inc. to make a presentation with the State to the SPRC.

Gary Lai
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D. Adams
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file: 05.03.01

"Caltrans improves mobility across California"

State Letter #272, Jan 10, 2005

(IAI supporting Document Volume II, Item 53)

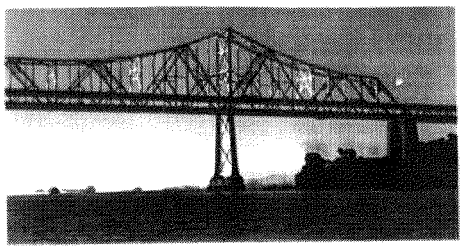
Pier E-1 will "Rock"

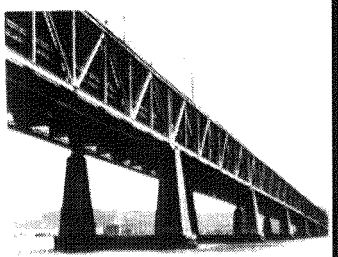
SEISMIC RETROFIT CONCEPTS FOR THE BAY BRIDGE

FILE COPY

by

Abolhassan Astaneh-Asl, Ph.D., P.E.
Associate Professor





Department of Civil Engineering and
Earthquake Engineering Research Center
University of California at Berkeley

August 24, 1992

(IAI supporting Document Volume I, Section A)

Pier E-1 will "Rock"

SEISMIC RETROFIT CONCEPTS FOR THE BAY BRIDGE FILE COPY

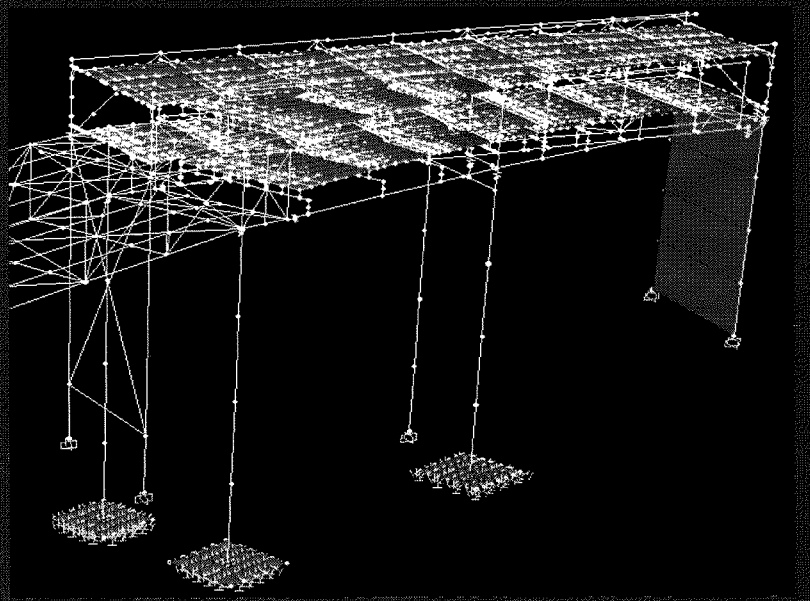
Figure 3.5 shows estimated forces at the top of Pier E1 for the most serious case of DRAIN-2D studies. The capacity analysis of Pier E1 indicated that the existing Pier E1 cannot tolerate the applied seismic loads and will rock. Since this pier is one of the most important piers of the entire bridge and the stability and integrity of the cantilever truss depend on this pier, it is desirable to ensure that Pier E1 remains almost elastic during the maximum credible earthquake, or sustains very minor structural damage. Since Pier E1 is located on the rock of Yerba Buena Island, strengthening of the pier and using it as the restraining pier in longitudinal direction of the cantilever truss appears to be an efficient retrofit solution.

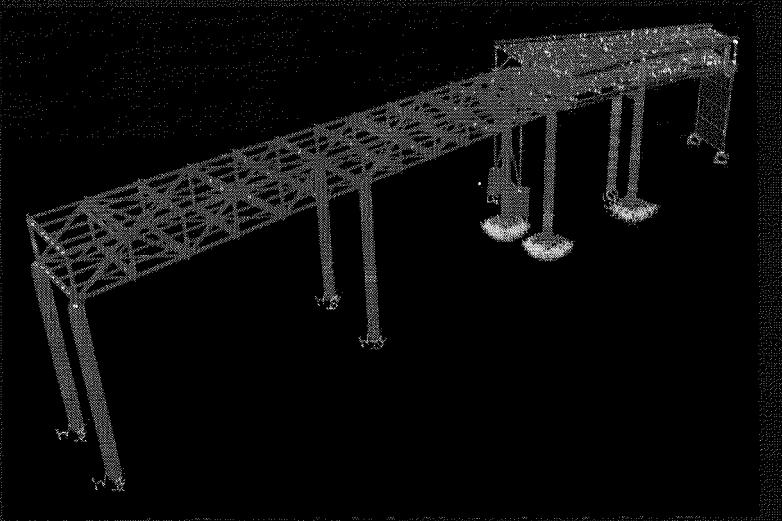
University of California at Berkeley

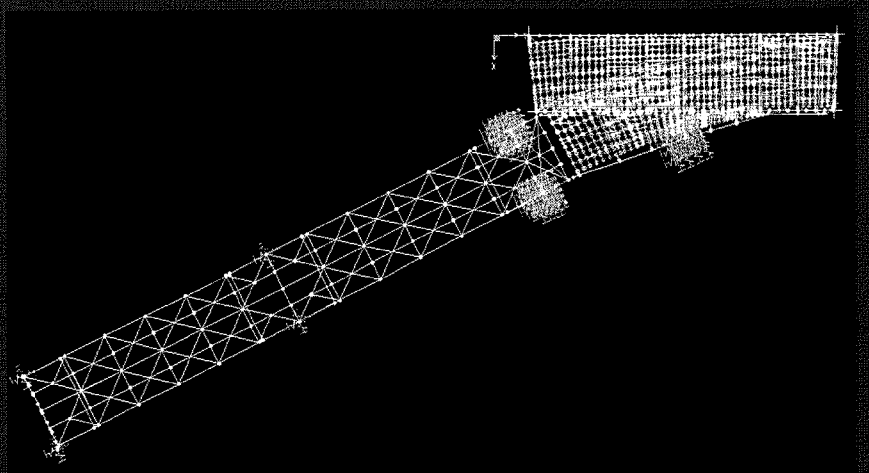
August 2[illegible], 1992

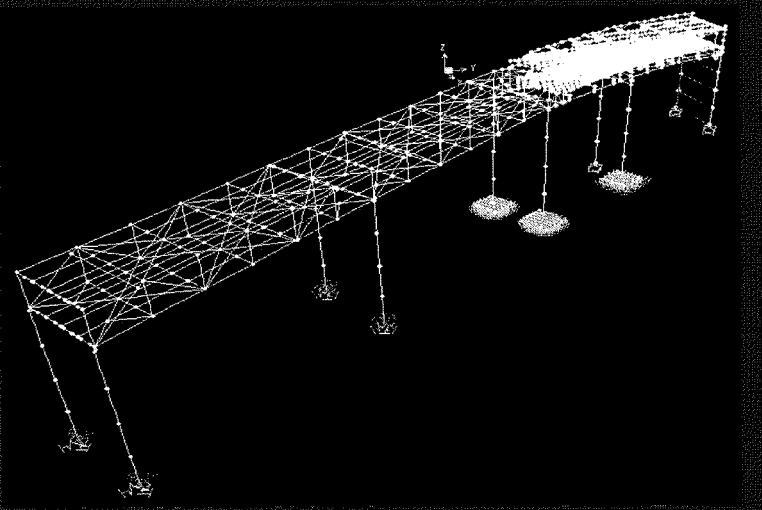
(IAI supporting Document Volume I, Section A)

East Tie-In Models









Conclusion

- The technical portion of the original design criteria in the contract documents is adequate for the ETI alternative as evidenced by the final design criteria iteration.
- IAI's design process and project schedule were substantially impacted by Caltrans actions.
- Respectfully request a merit recommendation