

**ACEC/Caltrans DES
Structures Liaison Committee
Meeting Minutes
August 20, 2021**

The meeting of the ACES/Caltrans DES Structures Liaison Committee was held by Virtual WebEx Meeting on August 20, 2021 from 10:00 AM to 12:00 PM.

I. Call to Order

A. Changes to the Agenda (0:00:00)

Sudhakar Vatti informed the group that Tom Ostrom would be joining the meeting at 1030 AM and would provide the DES General Updates at that time.

B. Committee Charter Discussion (0:02:40)

Garrett Dekker stated the Committee Charter was finalized, converted to an ADA format, will be posted on the ACES/Caltrans DES website and attached to the meeting minutes. Sudhakar added that the charter needed Tom's approval before being posted. Subsequently Tom noted the Charter will need a place for signatures and may need Local Assistance Division Chief's approval. ACEC to look into HQ ACEC Charter format.

C. Review Previous Meeting Minutes (0:04:03)

No changes or comments were made to the 05/14/2021 meeting minutes. The meeting minutes were finalized and approved.

II. DES/ACEC Updates (0:05:03)

A. General: Tom Ostrom/Shira Rajendra (0:30:37)

Tom Ostrom provided staffing updates covering the time that had passed since he was last able to address the group. First, Mike Keever was appointed Acting Chief Deputy Director, while Janice Benton who had been Acting Chief Engineer since Memorial Day will step away after Labor Day and return to her permanent job as Division Chief of Design. Nabeela Abi-Rached from District 6 will be Acting Chief Engineer and is anticipated to be in this position through the end of the calendar year. Sudhakar will be Acting Deputy Division Chief in DES for Structure Policy and Innovation. Caltrans is considering a name change from Structure Policy and Innovation to Structure Engineering Services. Erol Kaslan about six months ago was appointed to the position Deputy Division Chief Structure Maintenance and Investigations.

Tom noted other changes including the Central Region de-regionalizing, that is districts 5, 6, and 10 will return to being independent districts. Districts 1, 2, and 3 will continue to operate as the north region.

Tom stated that with SB1 dollars, the pipeline is full with the current construction program at approximately \$13 billion in state funded projects. This year Caltrans expects to deliver \$5 billion to construction as part of the capital program.

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Tom informed the group that Caltrans is working with the Department of Technology and the Public Utilities Commission on the Broadband Middle Mile Network which consists of building out the middle mile of the broadband network throughout the state primarily within Caltrans right-of-way.

Tom stated that the infrastructure bill moving through congress contains approximately \$110 billion for roads and bridges and about half of this amount is considered new money. At this time \$40 billion is targeted for bridges.

Tom noted that a reorganization of DES has also occurred as of August 1, 2021. The goal was to streamline the division and better define and balance the functional responsibility of the deputy division chiefs. Tom will provide updated org charts to the group as soon as they are finalized.

Tom reminded the group Caltrans is hosting the Western Bridge Seminar September 13th through the 16th. He noted there were over 120 speakers this year including Mike Jones from HNTB talking about the 6th Street Bridge as well as Matt Chenoweth and Steve Stroh from AECOM who will be presenting on the Gordie Howe Bridge between Ontario and Detroit, Michigan. He encouraged all to attend and get the word out to those in the bridge community.

Sudhakar introduced Andy Gill to the group who will be acting for him in Caltrans Office of Special Funded Projects and Structures Local Assistance while Sudhakar is Acting Deputy Division Chief in DES for Structure Policy and Innovation. Andy spent the last 23 years in Caltrans Office of Construction primarily on the central coast.

Shira Rajendra informed the group that he will remain Caltrans co-chair along with Garrett through 2021. However, a new co-chair from Caltrans will more than likely take over the role next year. He also stated that Rich Foley, Deputy for Structure Construction, is back from his assignment at District 4.

Shira stated that the Office of Civil Rights is having public hearings on DBE goals over the next month on federally funded projects. DBE goals will likely be going from 17.6% to 22.2%.

Shira notified the group that Caltrans Office of Structures Maintenance and Investigations will be adding the Asset Management Caltrans Bridge Deck Rehabilitation into the existing Bridge Preservation Program (SHOPP). The goal is to improve the quality of existing bridges on the state highway system.

Shira encouraged all those in the consultant community to pursue the upcoming A&E contracts. Caltrans would like to make sure there is healthy competition on their advertised projects.

B. Technical: Structures Technical Policies, Technical Research: Kevin Keady (0:05:13)

Gudmund Setberg introduced Don Nguyen-Tan who had previously given an update on the Structure Technical Policies (STP) and Bridge Design Memo (BDM) efforts to the Seismic Advisory Board to the group and asked him to provide an abridged summary to the group.

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Don started by defining the differences between *technical policies* and *technical guidance*. *Technical policies* were defined as the authoritative requirements in which the DES has developed to ensure the structures designed or modified meet our expectations for safety, economy, maintainability, and functional life. The terms “must” and “shall” are often used. *Technical guidance* was defined as general recommendations that although are not mandatory or required are considered good practice and possess sound engineering judgment. Guidance may include commentary on technical policies; design or evaluation procedures; design aids; tables or charts. The terms “should” and recommended are often used.

Don explained that the STP’s will provide the policies while the BDM’s will provide the guidance. Both are currently under development. The existing Memo to Designers (MTD) and Bridge Design Aids, which provide a mix of policy and guidance, will be sunset following the release of the STP’s and BDM’s. Bridge Design Practice (BDP) and Bridge Design Details (BDD) will be retained. The STP’s will be the overarching technical document in terms of bridge design. In case of conflicts between the STP’s and MTD’s, the STP’s will govern. The following is the hierarchy of the bridge design documents:

1. Structure Technical Policies (STP)
2. Memo to Designers (policy component) (MTD)
3. CA Amendments to the AASHTO LRFD Bridge Design Specifications
4. Seismic Design Criteria (SDC)
5. Caltrans Guide Specifications for Seismic Design of Steel Bridges
6. AASHTO LRFD Bridge Design Specifications
7. Bridge Design Memos (BDM)
8. Memo to Designers (guidance component) (MTD)
9. Bridge Design Practice Manual (BDP)
10. Bridge Design Aids (BDA)
11. Bridge Design Details Manual (BDD)

In terms of bridge evaluation documents, the SM&I Bridge Load Ratings Manual is considered to be in the same level as the CA Amendments to the AASHTO LRFD Bridge Design Specifications while the AASHTO Manual for Bridge Evaluation is considered to be in the same level as the Seismic Design Criteria in terms of hierarchy. The AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals is in the same level as the AASHTO LRFD Bridge Design Specifications.

STP’s are intended to set design standards and methods of analysis in addition to those specified in the design specification. They will do this by establishing exceptions and additions to the design specifications, limitations of design specifications, required method or process for using the design specifications, and design criteria for an area not addressed in design specifications. Deviation from the policies requires approval by the State Bridge Engineer. The currently posted STP’s can be found at the following web address:

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<https://dot.ca.gov/programs/engineering-services/manuals/structure-technical-policies>

BDM's are developed as memos to Caltrans bridge design engineers and contain commentary on technical policies; design or evaluation procedures; and design aids. They will be made available externally and their adoption is at the discretion of each organization.

Don to make his presentation slides on STP's and BDM's available to the group through Lance Schrey.

Sudhakar updated the group on Caltrans Research Program utilizing a presentation previously given to the Seismic Advisory Board. The Office of Earthquake Engineering is responsible for prioritizing ongoing research. The list of Fiscal Year 21/22 RDAC Approved Research was previously provided to Garrett. Garrett to share the approved list with ACEC along with the STP/BDM presentation slides.

C. Contracting Opportunities: Shira Rajendra/Sid Pedaballi (0:52:20)

Sid Pedaballi reported that separate contracts for design services in District 4 and the Central Region will be coming out while a contract for the North Region serving Districts 1, 2, and 3 should be advertised sometime soon. On the structures construction side Caltrans is looking for more consultant SOQ's. The North Region contract will be readvertised due to a lack of bidders. There are two additional structures construction and inspection contracts to be released, both in the Central Region. One is for District 5 and the other is for District 6 and District 10 south. On the METS side there is a statewide contract coming out shortly, probably advertised in November. There is also a source inspection contract to be advertised shortly. There is a water and wastewater contract that has been advertised as well as a transportation architecture contract that will be advertised in about one month. A total of 13 Caltrans contracts are expected to be released before the end of the year.

D. Local Assistance: Robert Peterson/Andy Chou (0:56:31)

Robert Peterson began his report by providing staffing updates to the group. He reported that Roberta Jensen has joined his team as of August. She is replacing Jeremy Wright as the Seismic Bridge Coordinator and will be working with Linda Newton and Andy Chou. She did many years in Caltrans Load Ratings. Eileen Crawford has also come back as a retired annuitant as of August 16th. She will be working half time.

Garrett asked Robert how much the infrastructure package will bolster the Highway Bridge Program. Robert stated that it is yet to be determined, but he is cautiously hopeful that they will be receiving more funding but at this time it's still too early to tell.

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E. Statewide ACEC Committee: Gary Antonucci (0:59:28)

Garrett provided the statewide ACEC report for Gary Antonucci. He confirmed the DBE for the next period will in fact be increased from 17.6% to 22.2%. Through June 2021 the DBE commitment for award on state contracts was approximately 17.4%.

Garrett also noted that funds will be allocated by the end of 2024 to facilitate the Broadband Middle Mile. Caltrans will be hiring 3rd party firms to install and maintain the network. Caltrans has been authorized to utilize multiple delivery methods as part of this effort.

Finally, Garrett notified the group the oversight process is ongoing for full service construction services making sure the Department is fully setup by the end of 2021, meaning that by the end of the year consultants can serve as the RE on Caltrans projects.

F. Construction Management and Inspection Updates: Mike Francis / Hank Doll /Jon Rohrer (01:01:18)

Rich Foley announced that we have Winter Training coming up and that it will more than likely be virtual based on current COVID considerations. The topic this year will be trenching and shoring. Jeff Abercrombie, Caltrans Area Construction Manager from the Central Region, will be the sponsor.

Jon Rohrer mentioned the new requirement in the recent Caltrans contracts requiring first aid certifications and the requirement to have concrete sampling and testing prior to submittal of the SOQ. The primary concern was insufficient notice compounded by COVID which has resulted in a backlog making it difficult to obtain certification. The backlog is anticipated to be cleared out by the next round of procurements, but it has affected a contract in District 4 and one in the northern region as well. Rich indicated that he was made aware of the issue previously.

III. Sub-committees

A. ABC (Accelerated Bridge Construction): Gary Antonucci/Dorie Mellon (1:04:17)

Dorie Mellon announced we have an FHWA Peer Exchange scheduled for November that is currently making its way through final approvals. It will likely be held in person in Irvine, CA. The Caltrans ABC Manual was also completed and posted externally for download at the following web address:

https://dot.ca.gov/-/media/dot-media/programs/engineering/documents/abc/ctabc-2021-06-30_a11y.pdf

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B. CMGC/Design-Build (Lessons Learned): Mark Reno/Sudhakar Vatti (1:06:37)

Mark Reno informed the group that while we had previously targeted having a CMGC/Design Build Workshop in the fourth quarter of this year, it was decided to move the workshop to the first quarter of 2022.

C. BIM (Building Information Model): Doug Dunrud/Bobby Zermeno (1:08:30)

Bobby Zermeno informed the group that there were no updates at this time.

D. Technical Subcommittee: Jack Abcarius/Sudhakar Vatti (1:08:45)

1. Review of H&H DRAFT STP (to replace MTD 16-1) (1:09:01)

Tony Nedwick explained that STP 2.6 – Hydraulic Design for Structures over Waterways remains primarily unchanged from what was included in the previous MTD 16-1. While STP is largely ironed out, Caltrans has a meeting scheduled for the following week to verify and update to ensure consistency with some of the other policy documents including STP 20.13. Caltrans hopes to have this effort completed within the coming weeks/months. Caltrans is also considering adding policy related to temporary structures and RSP used in conjunction with shallow abutments. These items have not yet been finalized and therefore will not be included in the initial document. They will be added as part of later revisions.

Lance Schrey asked Tony whether there were any significant changes going from MTD 16-1 to STP 2.6. Tony responded stating no, right now there are not any significant changes. Tony reiterated Caltrans is currently looking at adding new policies on items such as temporary structures and sea level rise.

Garrett mentioned that there were lingering questions on the consultant side related to MTD 16-1. He asked whether consultants would have the opportunity to review and comment on STP 2.6 prior to its release. Tony responded stating that Caltrans position would be the DRAFT should not be shared. Joel Magana, Caltrans Structures Hydraulics and Hydrology Branch, added that he recalled some of the lingering questions were related to shallow abutments and that these will be addressed later down the line. Tony stated that he has been tasked with writing a white paper related to this topic, but Caltrans did not want to delay the release of the STP.

Gudmund added that Caltrans DES has committed itself to the quality management system under ISO 9001 and through this process interested parties should have the opportunity to provide input on what Caltrans produces. He considers ACEC to be an interested party and believes that it should be afforded an avenue to play some part in the technical policies that are put out.

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Jack Abcarius reminded Joel and Tony that last year a technical subcommittee was created to begin discussions on the DRAFT STP 2.6 that is under consideration right now. He stressed that the subcommittee, which includes Cathy Avila from Avila & Associates, would really like to have the opportunity to review and comment on STP 2.6 prior to its release. Joel responded that the DRAFT STP will be shared the subcommittee. Tony added that he believes he will be able to submit a DRAFT of STP 2.6 to the subcommittee the first week of September. Lance directed Tony to submit the document to him and he will make sure it's distributed to the group.

E. Education Training/Seminar/Webinar: Y. Nien Wang/ Lance Schrey (1:18:12)

1. CMGC Lessons Learned (1:18:25)

Nien Wang echoed Mark in stating that the CMGC/Design Build Workshop will be moved to the first quarter of 2021. Nien will work with Mark to setup the workshop.

2. Office of Geotechnical Design Policy & Practice Workshop – August 24th (1:18:50)

Nien asked all interested individuals in attending the Geotechnical Design Policy & Practice Workshop on August 24th reach out to their ACEC regional representative who will forward the invite and accompanying technical materials including the Geotechnical Specification Style Guide and Geotechnical Notes. He encouraged all participants to read through the provided materials ahead of the event.

Sudhakar requested the consultant group continue to reach out to practicing geotechnical engineers and encourage them to attend the event so they are made aware of the various changes being implements by Caltrans. Nien added that there was not a limit on the number of attendees from each firm. Lance stated that Caltrans will make the presentation slides available to the attendees following the event.

IV. Discussion Items

1. JTCP/ASTM Certifications: Jon Rohrer/Hank Doll/Tim Greutert (1:25:55)

Jon Rohrer asked Caltrans personnel responsible for putting together and reviewing RFQ's to consider whether enough time has been provided when instituting new requirements. He explained that a District 4 procurement was recently affected by the JTCP/ASTM Certifications requirement. He recommended that this committee be used as a forum to discuss potential new changes or requirements that may prevent firms from being able to put their best foot forward when pursuing new contracts.

Tim Greutert with Caltrans Materials Engineering and Testing Services (METS) stated that the independent assurance certifications are a federal requirement that have been in place for 30 or so years. Tim also referred interested attendees to Caltrans website where they can

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find Joint Training or IA Program certification requirements so they can responsibly respond to future Caltrans procurements.

2. Western Bridge Engineer's Seminar, 9/13-9/16: Sudhakar Vatti (1:30:20)

Garrett again encouraged all to register and attend the seminar while reminding the group that registration is open until the day before the event.

Sudhakar encouraged all to attendees to visit the virtual exhibit booths. He noted that registration was still lagging with only 43 attendees not including speakers, but they expect more people to register as the event becomes closer.

Nien added that any interested sponsors still have time to sponsor the event.

3. Open Discussion (1:33:43)

Gudmund wanted to add to the discussion that Don covered earlier this morning regarding STP and BDM. He noted that the whole process of separating what is considered policy and guidance is challenging. He encouraged all interested parties to review and comment on the documents while keeping in mind Caltrans is aiming to keep the door open for allowing for engineering judgement, accelerated bridge construction, and new materials in our designs. At the same time Caltrans is attempting to maintain safe, efficient, maintainable and constructible bridges.

Dorie added that she wanted to thank Jack and all consultants that participated in reviewing and providing comments in developing these technical documents.

Sudhakar informed the group that December 31st, 2026 is the drop-dead date to switch to MASH compliant barriers including temporary barriers. These changes may affect falsework openings which may require longer span lengths and deeper superstructures. Rich Foley added the Division of Construction has been working with industry to figure out how to get a MASH compliant barrier specification out now so contractors can begin procuring those materials. Within the next couple months, a new specification will be released allowing for two different proprietary MASH compliant barriers. He stressed that consultants will need to consider the wider required offsets for the new MASH compliant temporary barriers when considering falsework openings.

Rob Stott asked whether the wider offset requirements for MASH compliant temporary barriers will apply to pinned barriers to bridge decks. Joel replied stating simply that each system will have its own required offset which are based on crash tests results. Rob recommended sharing the details of these different configurations with the group at a future meeting. Rich stated that the specification will likely be able to be shared in time for the next meeting.

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Jack inquired whether the K-rail detail had been modified other than the required offset and pinning. Joel responded stating that K-rail is not a MASH compliant barrier. Details for the proprietary MASH compliant barriers are not yet available, but may be available prior to the next meeting.

Meeting adjourned 1:44:29

V. 2021 Meeting Schedule

~~February 5, 2021 (1st Friday)~~
~~May 14, 2021 (2nd Friday)~~

~~August 20, 2021 (1st Friday)~~
November 19, 2021 (3rd Friday)

VI. Distribution:

A. Caltrans:

Tom Ostrom	Caltrans DES	Michael B. Johnson	Caltrans SMI
Kevin Keady	Caltrans SPI	Shira Rajendra	Caltrans PPM & OE
Rich Foley	Caltrans SC	Sudhakar Vatti	Caltrans OSFP/SLA
Roberto Lacalle	Caltrans GS	Sid Pedaballi	Caltrans OPD & SCM
Tim Greutert	Caltrans METS	Robert Peterson	Caltrans HQ/LA
Gudmund Setberg	Caltrans SD	John Lammers	Caltrans SC

B. ACEC Regular Committee Members:

Member 1: Districts 1,2,3,9,10:	Mark Reno	Quincy Engineering
Member 2: District 11:	Jack Abcarius	NV5
Member 3: District 4:	Garrett Dekker	Moffatt & Nichol
Member 4: Districts 7,8,12:	Y. Nien Wang	HNTB
Member 5: Districts 5,6:	Bobby Zermeno	Cornerstone Structural Engineering
Member 6 (CM&I): Districts 1-6 and 9-10	Hank Doll, TRC	
Member 7 (CM&I): Districts 7-8 and 11-12	Jon Rohrer, HDR	

VII. Virtual Attendees

Rajendra, Shira	Caltrans - PPM & OE
Keady, Kevin	Caltrans - SP&I
Vatti, Sudhakar	Caltrans - OSFP/SLA
Schrey, Lance	Caltrans - OSFP/SLA
Pedaballi, Siddareddy	Caltrans - PPM
Francis, Mike	Caltrans - SC
Setberg, Gudmund	Caltrans - SD
Kaslan, Erol	Caltrans - SM
Chou, Andy	Caltrans - HQ/LA
Greuter, Timothy	Caltrans - METS
Seifert, Steven	Caltrans - METS

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Han, Seungwoon	Caltrans
Burlaza, Chris	Caltrans – Transportation
Wang, Y. Nien	HNTB
Amini, Moe	HNTB
Van Duyn, Michael	HNTB
Zermeno, Bobby	Cornerstone Engineering
Dekker, Garrett	Moffatt & Nichol
Chu, Wellington	HDR
Rohrer, Jon	HDR
Wang, Jackie	HDR
Antonucci, Gary	Moffatt & Nichol
Rende, Gregory	Rende Consulting Group, Inc.
Thurairajah, Alaheswaran	Earth Mechanics, Inc.
Reno, Mark	Quincy Engineering
Cambell, Richard	Stantec
Ashley, Mark	T.Y. Lin International
Fish, Bob	T.Y. Lin International
Avila, Cathy	Avila & Associates
Consolacion, Benjamin	WSP
Dunrud, Doug	WSP
Newton, Barton	WSP
Syedmadani, Ali	WSP
Griggs, Rosa	Dokken Engineering
Hickey, Jason	Mark Thomas & Co.
Kitzmann, David	WRECO
Koo, Wei	WKE, Inc.
Moran, Eric	Biggs Cardosa
Osterkamp, Tim	Dokken Engineering
Stott, Robert	Caltrop- a TRC Company
Thakare, Jay	Prescience USA
Thomure, Jeff	Jacobs
Yu, Ming-Chen (M.C.)	AMC Consulting Engineers
Guerra, Santiago	
Greg, Lyn	



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Caltrans Research Program Update

Sudhakar Vatti
Deputy Division Chief(Acting)
DES-Structures & Engineering Services
California Department of Transportation
Date

Research Program Update

- **Fiscal Year 21/22 Approved Research Tasks**
- Research Program Overview
- Future Research Program Plans



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Fiscal Year 21/22 RDAC Approved Research

3673	In Service Structural Evaluation Of Box Beam Overhead Sign Structures	ODTS	Stan Johnson	TBD	TBD
3796	Geotechnical Resistance Capacity and Stress Distribution of Soil/Grout Interface of Ground Anchors Utilizing Continuous Fiber Optics Strain Technology and Strain Compatibility Methodology	GEOTECHNICAL SERVICES BRIDGE DESIGN	David Jang	TBD	TBD
3800	Implementation of advanced technology and materials recycling techniques for use of alternative materials in concrete as plain or reinforced material	METS	Joe Harline	TBD	TBD
3982	Evaluation of Soil Plug Geotechnical Resistance in the Design of CISS Piles	GEOTECHNICAL SERVICES BRIDGE DESIGN	David Liao	TBD	TBD
3984	Seismic Design of Bridge Pier Walls	OEEAR	Foued Zayati	UC Berkeley	Jack Moehle



Fiscal Year 21/22 RDAC Approved Research

TASK ID	TASK TITLE	Contract Manager	FISCAL YEAR				
3673	In Service Structural Evaluation Of Box Beam Overhead Sign Structures	Stan Johnson	\$50,000	\$200,000	\$100,000	\$0	\$350,000
			\$40,000	\$40,000	\$40,000	\$0	\$120,000
3796	Geotechnical Resistance Capacity and Stress Distribution of Soil/Grout Interface of Ground Anchors Utilizing Continuous Fiber Optics Strain Technology and Strain Compatibility Methodology	David Jang	\$100,000	\$250,000	\$250,000	\$0	\$600,000
			\$35,000	\$100,000	\$65,000	\$0	\$200,000
3800	Implementation of advanced technology and materials recycling techniques for use of alternative materials in concrete as plain or reinforced material	Joe Harline	\$50,000	\$150,000	\$150,000	\$0	\$350,000
			\$30,000	\$30,000	\$0	\$0	\$60,000
3982	Evaluation of Soil Plug Geotechnical Resistance in the Design of CISS Piles	David Liao	\$50,000	\$80,000	\$500,000	\$100,000	\$730,000
3984	Seismic Design of Bridge Pier Walls	Foued Zayati	\$50,000	\$150,000	\$150,000	\$100,000	\$450,000
			\$15,000	\$50,000	\$0	\$0	\$65,000
		Geotechnical-Structures Total	\$420,000	\$1,050,000	\$1,255,000	\$200,000	\$2,925,000



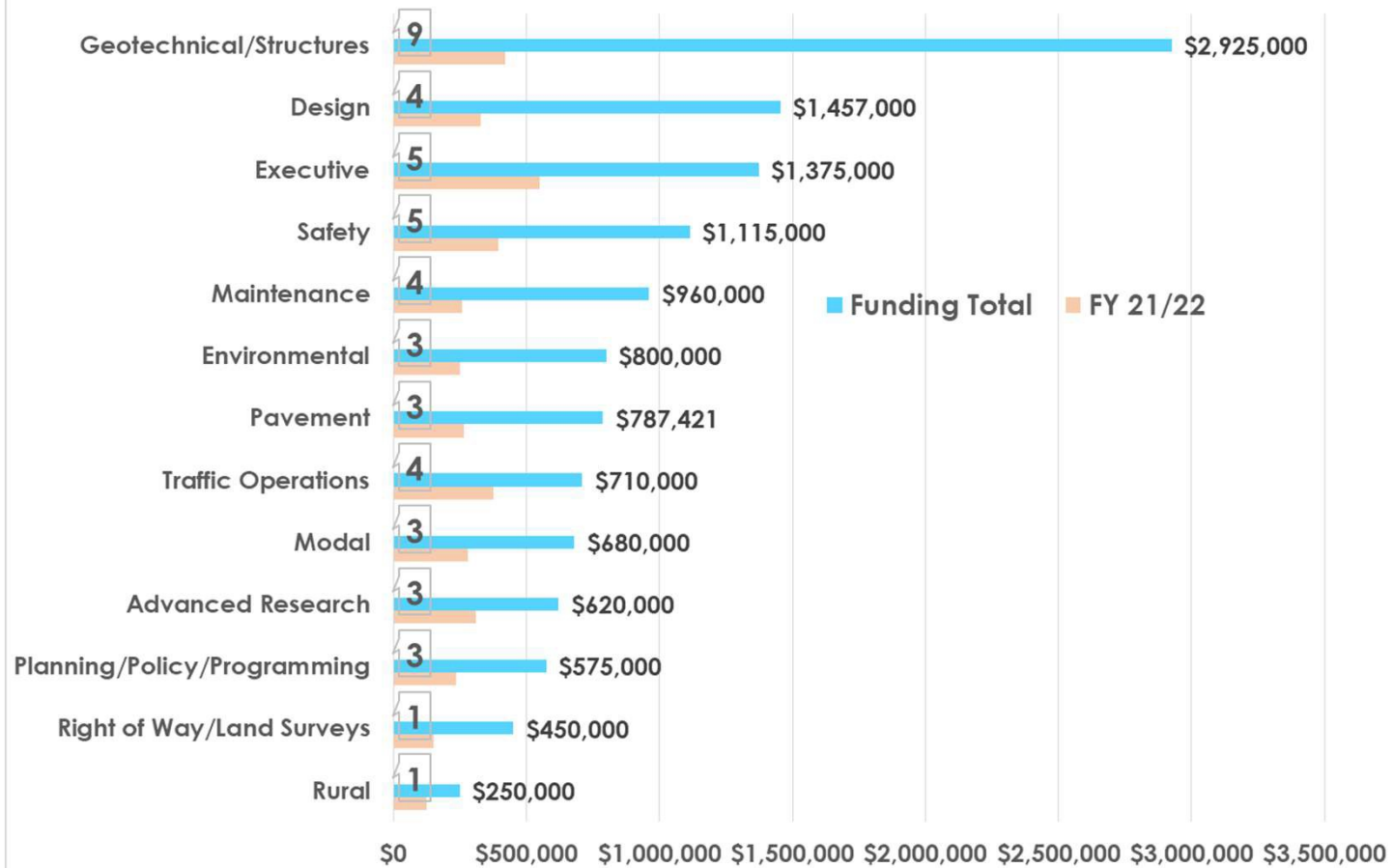
Caltrans Research Program Functional Areas

- Geotechnical/Structures
- Design
- Executive
- Safety
- Maintenance
- Environmental
- Pavement
- Traffic Operations
- Modal
- Advanced Research
- Planning/Policy/Programming
- Right of Way/Land Surveys
- Rural



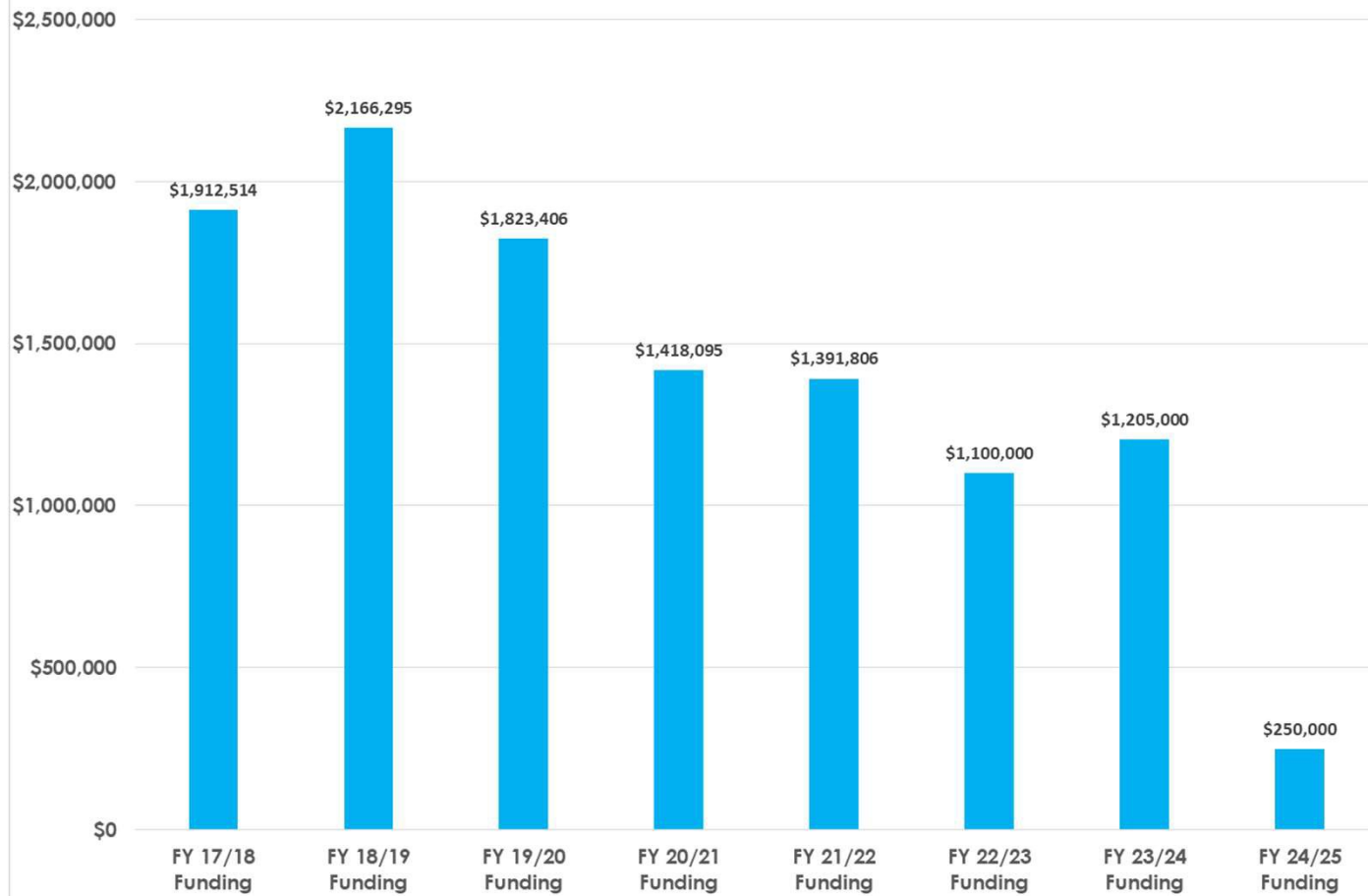
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**DRISI FUNDED PROJECTS BY FUNCTIONAL UNIT
FY 21/22 APPROVED RESEARCH**



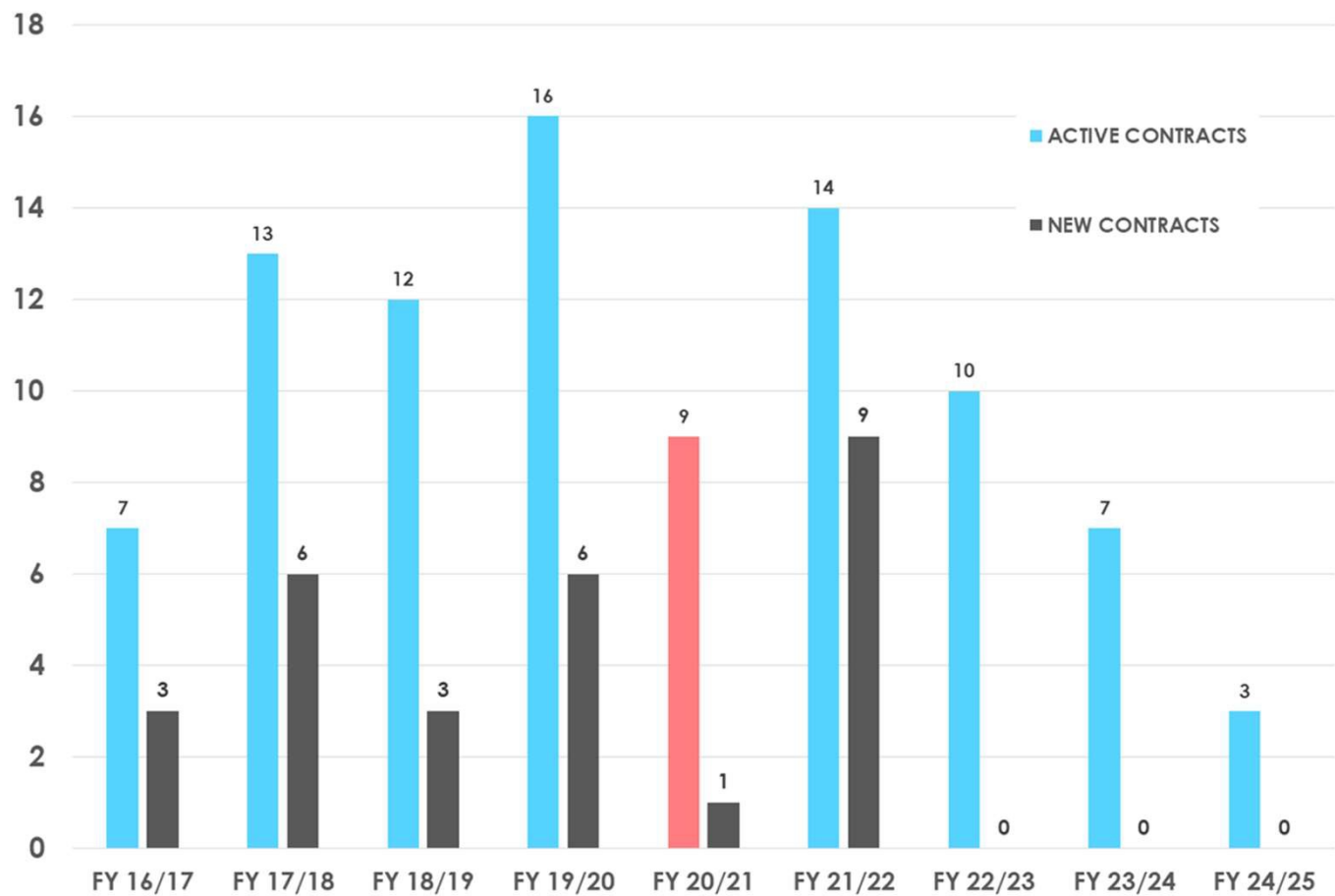
Seismic Advisory Board

GEOTECHNICAL/STRUCTURES FUNDING FY 16/17 TO FY 24/25



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GEOTECHNICAL/STRUCTURES ACTIVE PROJECTS PER FISCAL YEAR



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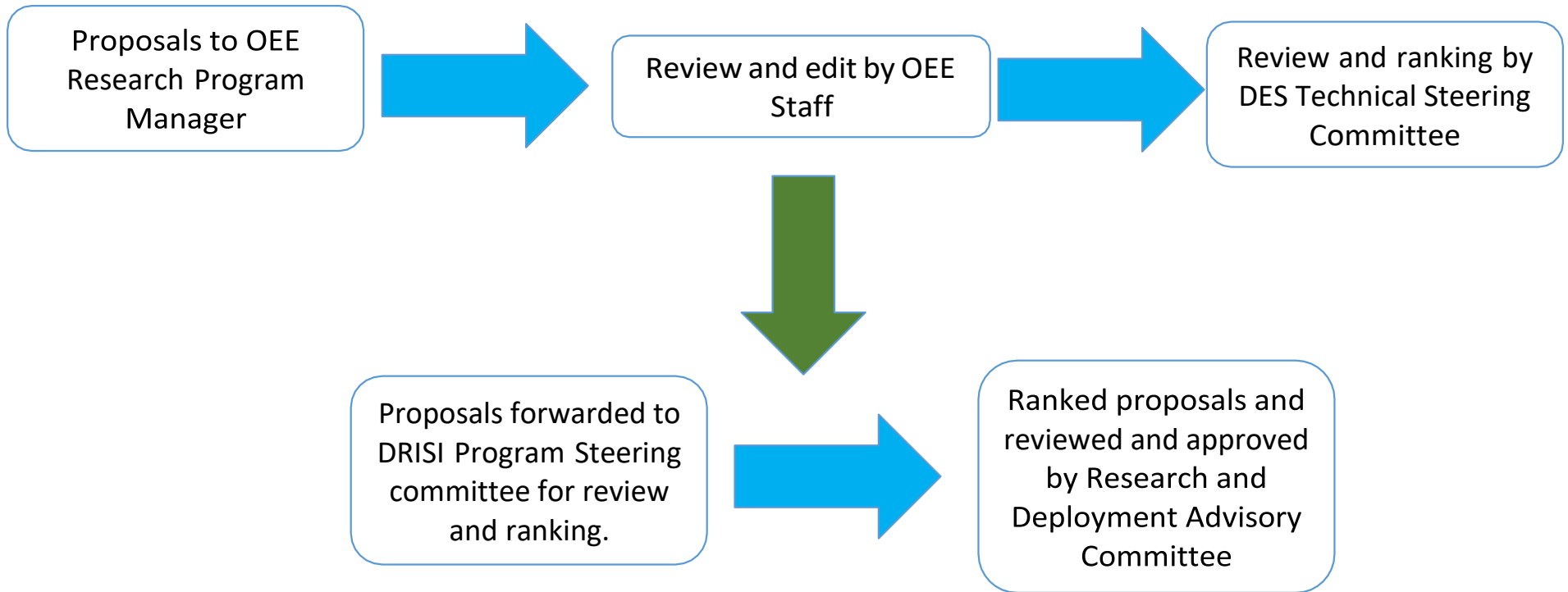
Research Program Update

- Fiscal Year 21/22 Approved Research Tasks
- **Research Program Overview**
 - ❖ **Research Timeline**
 - ❖ **Program Advisors/Stakeholders**
 - ❖ **Key Personnel**
- Research Program Future Plans?



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Research Proposal Flowchart



Division of Research, Innovation, and System Information (DRISI) Fiscal Year 22-23 Research Selection Timeline

Geotechnical
Structures
Schedule
Missing

DATE	ACTIVITY
September 1, 2021	Initiate Research Cycle
October 1-29, 2021	Program Steering Committee Meetings
January 15, 2021	Due Date for New Research Requests for discussion in Program Steering Committee (PSC) meetings
February 1, 2022	Deadline for submittal of revised Research Requests (RPM Input and Research Request Forms)
February 4, 2022	DRISI Sends PSCs New Requests to Prioritize
February 6 to March 7, 2022	PSC Priority Ranking and Scoring of Research Requests
March 16, 2021	Meeting with DRISI Management to discuss Requests and Budget
February 6 to March 7, 2022	Budget Consultation with PSC's
April 7, 2022	Finalize Research Development Advisory Committee (RDAC) recommendations
April 15, 2022	RDAC Meeting
April 22, 2022	Approved Research Proposals Distributed to PSC Members
August 31, 2022	Contract Packages Due
December 2022 to May 2023	Contract is Approved and Executed at DPAC



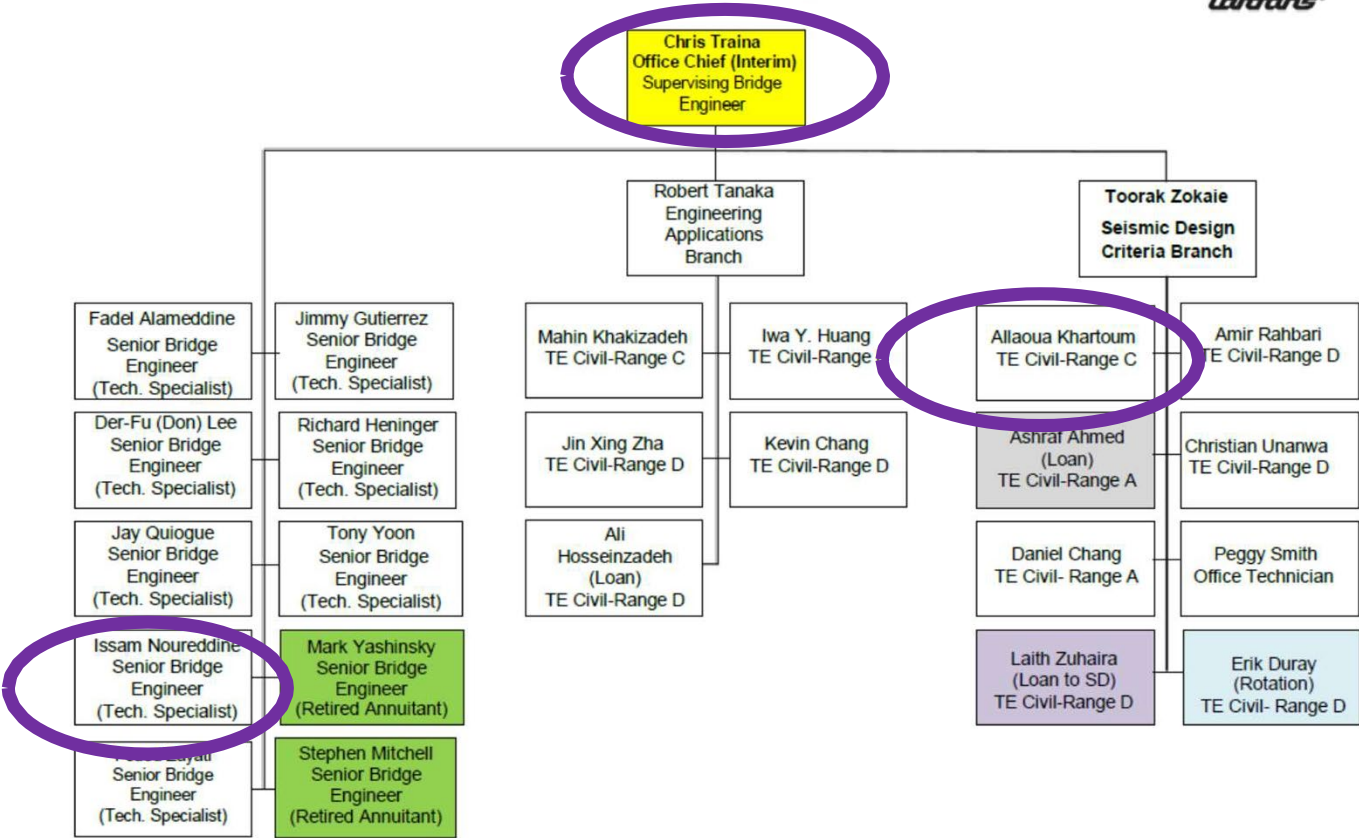
**Division of Engineering Services-Geotechnical/Structures
Fiscal Year 22-23 Research Proposal Timeline**

DATE	ACTIVITY	PARTICIPANTS
September 1, 2021	Initiate Research Cycle-Call For Proposals	OEE Research Program Staff
October 1 to November 15, 2021	Development of Research Proposals by Task Managers (Research Proposals and Research Request Forms)	DES Task Managers/DRISI PEER Staff
November 15 to December 3, 2021	Initial Research Proposal Reviews by DES Technical Steering Committee(TSC)	OEE Research Program Staff/ TSC
December 6 to December 10, 2021	Deadline for submittal of revised Research Requests (RPMD Input and Research Request Forms)	DES Task Managers/DRISI PEER Staff
December 13, 2021 to January 14, 2022	TSC Review and Ranking of Proposals	OEE Research Program Staff/ TSC
January 17 to January 28, 2022	Finalize Research Request Forms	OEE Research Program Manager DES Task Managers/DRISI PEER Staff
February 1, 2022	Due Date for New Research Requests to DRISI for Program Steering Committee (PSC) reviews	OEE Research Program Manager
February 4, 2022	PSC Review Process Begins	OEE Research Program Manager

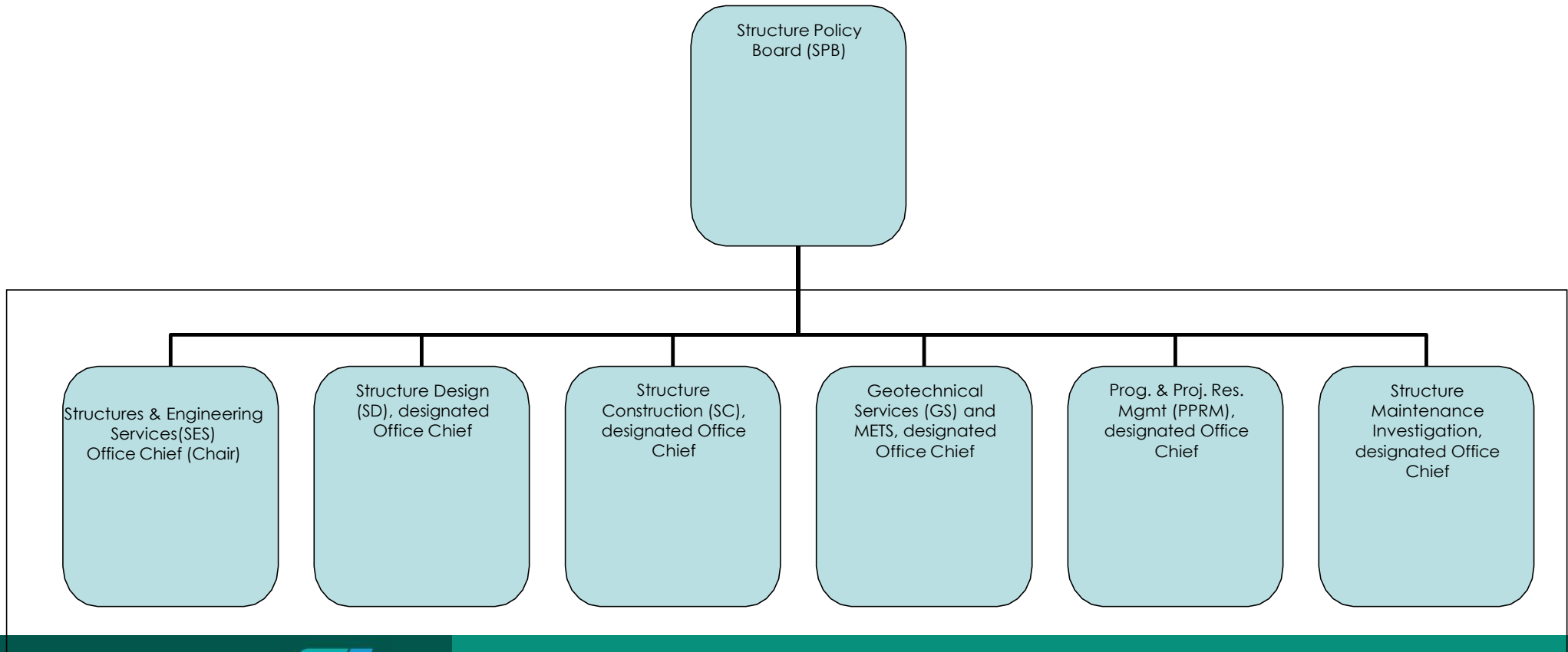


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STRUCTURE POLICY AND INNOVATION
OFFICE OF EARTHQUAKE ENGINEERING, ANALYSIS, AND RESEARCH



Technical Steering Committee Organization



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Technical Steering Committee Functions

- Assist the Structures Policy Board in meeting strategic objectives and goals.
- Recommend improvements in Caltrans seismic design practices.
- Implements SPB technical policy in support of strategic objectives and goals.
 - ❖ Review and prioritization of technical standards, policy, and guidance.
 - ❖ Prioritizes research funding and work on contract special provisions.
 - ❖ Monitors and reports on the delivery of approved work on technical standards, policy, and guidance.



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Program Steering Committee Functions

- The Program Steering Committees (PSCs) have a vital role in establishing new research projects.
- The membership consists of Division or Office Chiefs from contributing Divisions, District representatives, and relevant external partners.
- The following phases are central to establishing a research project:
 - ✓ 1) Preliminary Investigation
 - ✓ 2) Project / Task Development
 - ✓ 3) Project Selection Phase
 - ✓ 4) Research and Deployment Phase



Research and Deployment Advisory Committee (RDAC)

- The Research and Deployment Advisory Committee (RDAC), consisting of 8 Deputy District Directors, 18 Division Chiefs and 2 DRISI Staff.
- Advises the Executive Board (EB) on research objectives, research priorities, and funding allocations.
- Actively sponsors deployment of research products.
- Reviews research proposals and approves proposals to develop the annual Caltrans research program.



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Seismic Advisory Board

In 1990, Caltrans established the Seismic Advisory Board, whose role is to:

- Review earthquake engineering practices.
- Recommend improvements in Caltrans seismic design practices.
- [Review Caltrans' seismic research and priorities.](#)
- Provide the public with explanations regarding Caltrans' seismic safety policies and procedures.



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Desired Goals

- Review earthquake engineering and seismic design as practiced by Caltrans and the CHSRA
- Recommend improvements to Caltrans and CHSRA earthquake engineering and seismic design practices
- Review seismic policy, hazard definition and mitigation directives
- Technical review of seismic design guidelines and standards
- [Review and comment on seismic research priorities.](#)



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Research Program Future Plans

At its core, the research process is about collaborating, connecting, learning, and communicating. Over the next year, you can expect a focused effort toward a better understanding of the cross-functional benefits of individual research tasks to leverage their contribution toward Caltrans strategic goals and objectives.

-Dara Wheeler, DRISI Chief



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Research Program Future Plans

- Collaborate to develop new Strategic Research Plan
 - ❖ Alignment with 2020-2024 Caltrans Strategic Plan.
 - ❖ Seek input and guidance from SAB and TSC.
- Seek early engagement and involvement of TSC members to guide and develop research proposal-Provides an integral Connection to functional units and stakeholders.
- Communicate research program needs to stakeholders through TSC members.
- Ensure effective contract management development and management.
 - ❖ Recruit and train more contract managers. Utilize existing contract managers in succession planning.
 - ❖ Hold quarterly collaboration meetings with Contract Managers and DRISI staff.
- Collaboration with DRISI staff and PSC Members.
- Learn from past and make continuous improvements in program.



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QUESTIONS?

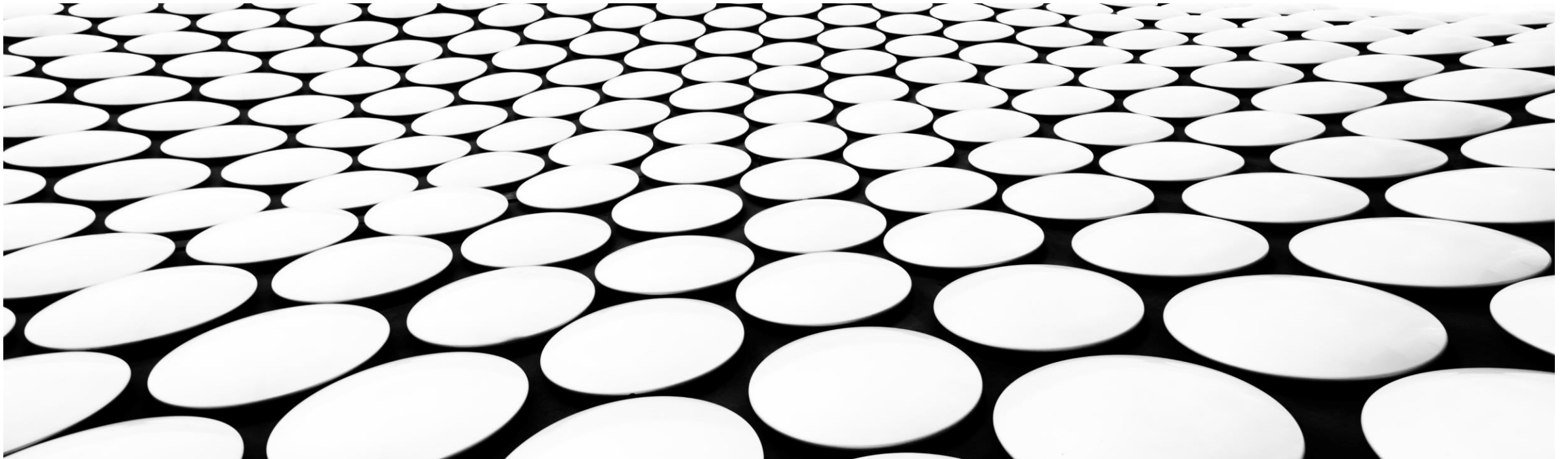


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CALTRANS

TECHNICAL POLICIES AND GUIDANCE

8/21/2021 ACEC MEETING



TECHNICAL POLICY VS TECHNICAL GUIDELINES

Technical Policies – The authoritative requirements in which the DES has developed to ensure the structures designed or modified meet our expectations for safety, economy, maintainability, and functional life.

The terms “must” and “shall” are used for mandatory requirements.

Technical Guidance – General recommendations that although are not mandatory or required are considered good engineering practice and possess sound engineering judgement. Guidance may include commentary on technical policies; design or evaluation procedures; design aids, tables, or charts.

The terms “should” and “recommended” are often used.

GENERAL ROADMAP

- Develop:
 - Structure Technical Policies (STP) – Policies
 - Bridge Design Memos (BDM) - Guidance

- Sunset:
 - MTD – Mix of policy and guidance
 - BDA – Guidance

- Retain:
 - Bridge Design Practice – Design examples that comply with policies and follow guidance
 - Bridge Design Details – Detailing policies

HOW DOES IT ALL FIT TOGETHER?

Hierarchy of bridge design documents:

1. Structure Technical Policies (STP)
2. Memo to Designers (policy component) (MTD)
3. CA Amendments to the AASHTO LRFD Bridge Design Specifications
4. Seismic Design Criteria (SDC)
4. Caltrans Guide Specifications for Seismic Design of Steel Bridges
5. *AASHTO LRFD Bridge Design Specifications*
6. *Bridge Design Memos (BDM)*
7. Memo to Designers (guidance component) (MTD)
8. Bridge Design Practice Manual (BDP)
8. Bridge Design Aids (BDA)
9. Bridge Design Details Manual (no bridge design component)

HOW DOES IT ALL FIT TOGETHER?

Bridge Evaluation:

3. SM&I Bridge Load Ratings Manual
4. AASHTO The Manual for Bridge Evaluation

Other:

5. AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals

CHARACTERISTICS OF STPs

- Development should be mindful to not stifle innovation
- STPs set design standards and methods of analysis in addition to those specified in the design specification by establishing:
 - Exceptions and additions to the design specifications
 - Limitations of design specifications
 - Required method or process for using the design specifications
 - Design criteria for an area not addressed in design specifications
- Implementation
 - Approved by the California State Bridge Engineer
 - Adoption is mandatory for all projects in which Type Selection has not taken place
 - Deviation from policies must be approved by State Bridge Engineer

CHARACTERISTICS OF STPs

- Organized to closely align with the organization of the AASHTO LFRD BDS
[Structure Technical Policies \(STPs\) | Caltrans](https://dot.ca.gov/programs/engineering-services/manuals/structure-technical-policies)
(<https://dot.ca.gov/programs/engineering-services/manuals/structure-technical-policies>)

CHARACTERISTICS OF BDMs

- BDMs are developed as memos to Caltrans bridge design engineers
 - Contain commentary on technical policies; design or evaluation procedures; and design aids
 - May contain some business practices and procedures
- BDMs will be available externally
- Adoption and implementation is at the discretion of each organization
- Organized to closely align with the organization of the AASHTO LFRD BDS

[END]