



Caltrans Local Assistance

RESIDENT ENGINEER ACADEMY

Module 1

REA Overview

January 2025

Resident Engineer Academy (REA)

Module 1. REA Overview

- REA Instructors - Construction Oversight Engineers
- REA Participants
- Academy Syllabus & Modules 1-15
- REA Training Objective & Types of Engineers
- Projects Contracts Vary & Balancing Equilateral Triangle
- Division of Local Assistance
 - Construction Oversight Program Contacts
 - Division of Construction
 - Local Assistance Engineers & Contacts
- REA & Construction Manual
- Local Assistance Procedures Manual & Chapters 16 & 17
- 1.1 Handout – Definitions
- Construction Authorities – Federal & State

REA Instructors

Construction Oversight Engineers

Patrick Dussell

Patrick is a Construction Oversight Engineer for Headquarters Local Assistance serving local agencies in Districts 4 and 5.

He has worked for Caltrans for more than 20 years in District 5 as a Design Engineer, Resident Engineer and Construction Senior.

He graduated from Cal Poly San Luis Obispo with a degree in civil engineering and is a licensed Professional Engineer.

Michael Ramos

Mike is a Construction Oversight Engineer for Local Assistance Headquarters serving local agencies in District 6 and District 10 counties of Merced and Mariposa.

He has worked for Caltrans for more than 20 years as a Project Engineer, Cost Estimator, Critical Path and Claims Reviewer, Construction Stormwater and Safety Coordinator and Assistant Resident Engineer.

He graduated from California State University Fresno with a degree in civil engineering and is a licensed Professional Engineer.

REA Instructors

Construction Oversight Engineers

Muhammad Rahman

Muhammad is a Construction Oversight Engineer for Headquarters Local Assistance serving local agencies in District 4 and District 10.

He has worked for Caltrans for more than 15 years as an Assistant Resident Engineer and Resident Engineer.

He graduated from Concordia University, Montreal with a Master degree in civil engineering and is a licensed Professional Engineer.

Peter Mututwa

Peter is a Construction Oversight Engineer for Headquarters Local Assistance serving local agencies in Districts 8 and District 9.

He has worked for Caltrans for more than 21 years in Districts 5 and 7, as a Design Engineer and Construction Resident Engineer.

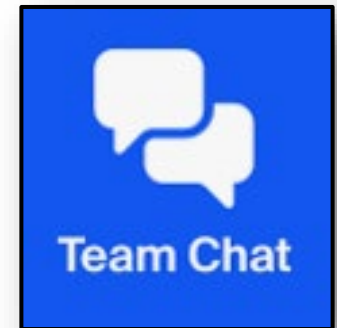
He graduated from the South Dakota School of Mines & Technology with a Master's Degree in Civil Engineering and is a licensed Professional Engineer.

Participant Introductions

Breakout Group

To learn more about you, please add in the Chat field and share with your group:

- Full Name
- Agency or Consulting Firm
- Job Role - RE, Inspector, PM, CM, etc.
- Years of Construction Experience
- Expectations for this course – be specific



REA Modules 1-16

Day 1 – 8:30 am – 4:00 pm

- Module 1. REA Overview
 - 1.1 Handout
- Module 2. Pre-Construction Preparation
 - Lunch Break -
- Module 3. Scope of Work
- Module 4. Control of Work
 - 4.1 Handout
 - 4.2 Exercise

Day 2 – 8:30 am – 4:00 pm

- Module 5. Control of Materials
 - 5.1 Handout
- Module 6. Legal Relations
 - Lunch Break -
- Module 7. Prosecution & Progress
 - 7.1 Handout
 - 7.2 Exercise
- Module 8. Payment
 - 8.1 Handout
 - 8.2 Exercise

Day 3 – 8:30 am – 4:00 pm

- Module 9. Change Order
 - 9.1 Handout
 - 9.2 Exercise
- Module 10. Environmental Stewardship
 - Lunch Break -
- Module 11. State Only Funded Projects

Day 4 – 8:30 am – 4:00 pm

- Module 12. Construction Claims
- Module 13. Oversight Program
- Module 14. Project Completion
 - Lunch Break -
- Module 15. Labor Compliance

Day 5 – 8:30 am – 2:15 pm

- Module 16. Disadvantaged Business Enterprise
 - Lunch Break -
 - 16.1 Handouts A-O
 - 16.2 Exercise

Resident Engineer Academy

Example of Modules & Documents:

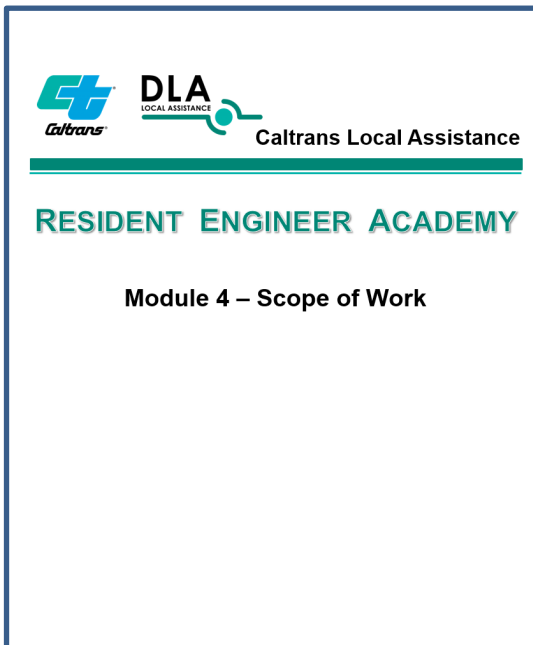
Presentation (.0)



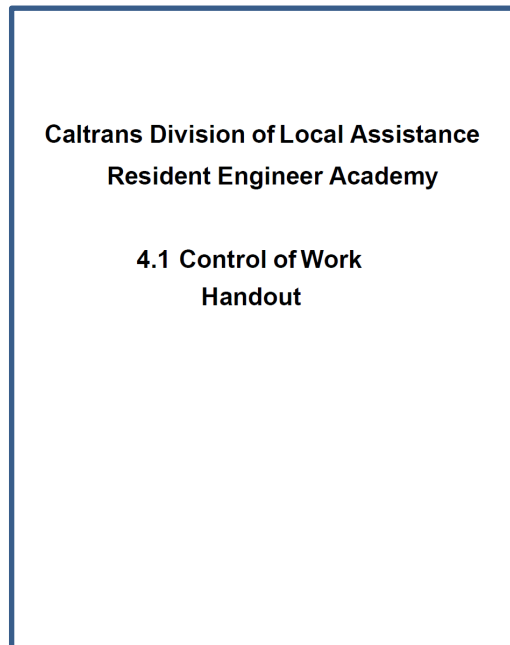
Handout (.1)



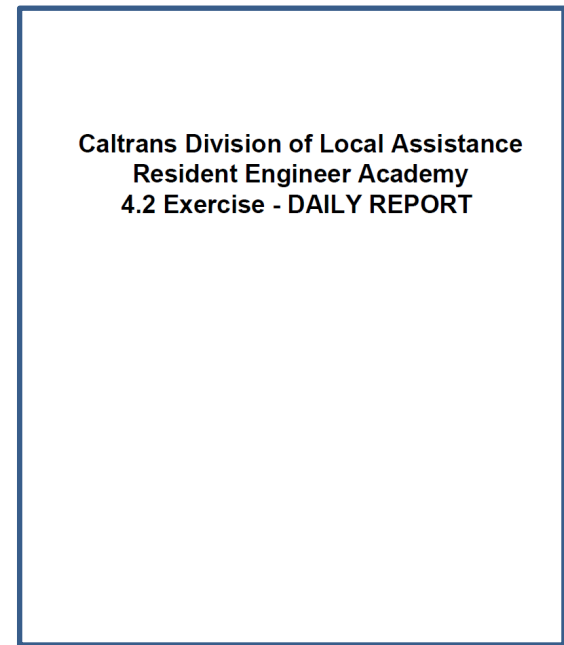
Exercise (.2)



The presentation slide features the Caltrans logo on the left and the DLA Local Assistance logo on the right. Below the logos is a thick green horizontal line. Underneath the line, the text 'RESIDENT ENGINEER ACADEMY' is written in a bold, teal, sans-serif font. At the bottom of the slide, the text 'Module 4 – Scope of Work' is centered in a black, sans-serif font.



The handout content is centered on the page. It begins with the text 'Caltrans Division of Local Assistance' followed by 'Resident Engineer Academy' on the next line. Below this, there is a blank line, followed by '4.1 Control of Work' and 'Handout' on the final line.



The exercise content is centered on the page. It begins with the text 'Caltrans Division of Local Assistance' followed by 'Resident Engineer Academy' on the next line. Below this, there is a blank line, followed by '4.2 Exercise - DAILY REPORT' on the final line.

REA Training Objectives

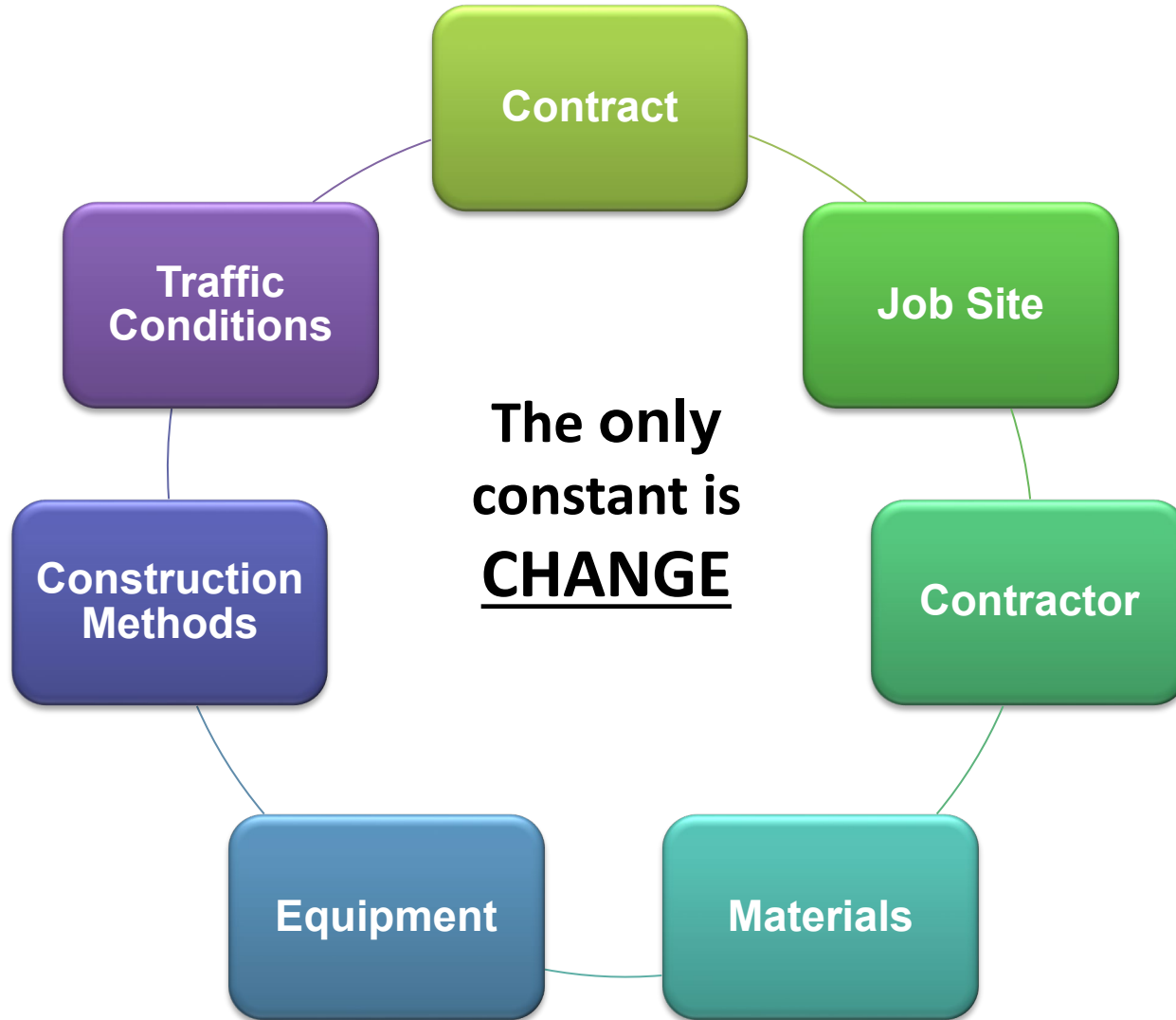
- Prepares participants to be a Resident Engineer on a federal-aid construction project.
- Provides overview of federal and state requirements.
- Teach how to administer and document the process.
- Prevents participant's agency from losing federal funds.

Types of Resident Engineers

Are you a Resident Engineer who. . .

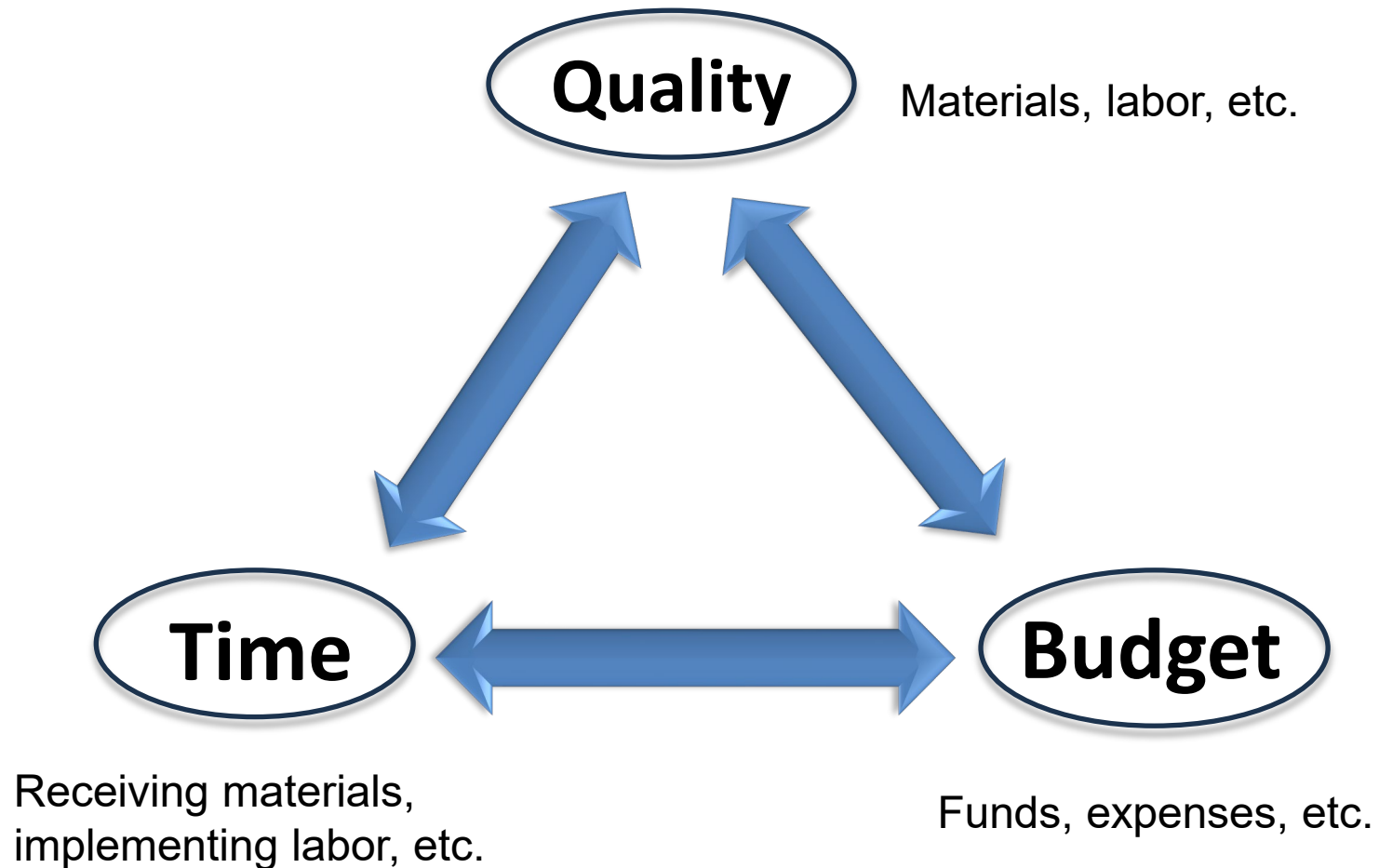
- A. Makes Things Happen!
- B. Watches Things Happen!
- C. Wonders What Happened?!

Each project differs in...

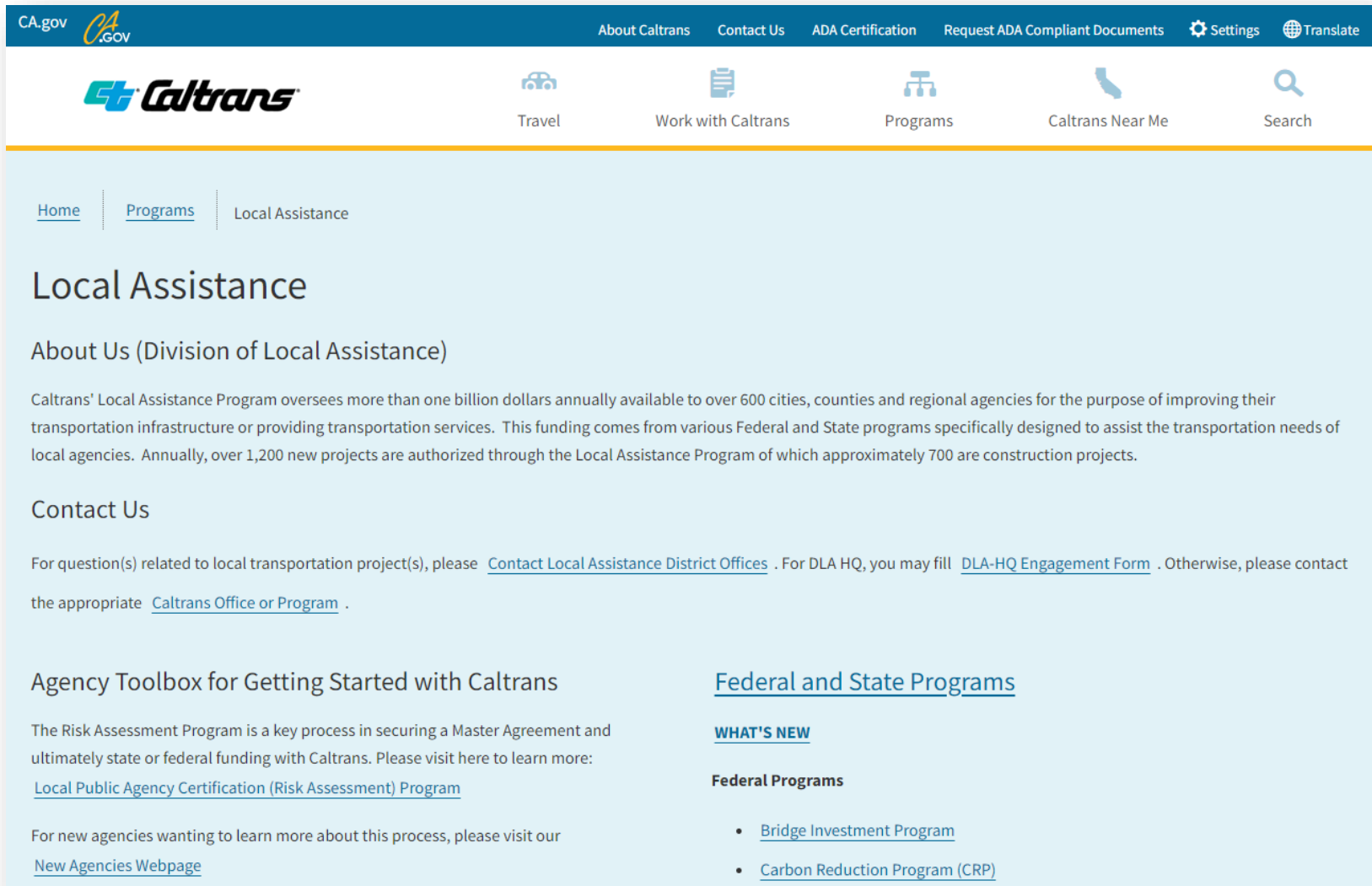



Resident Engineer Equilateral Triangle







REA strives to achieve standards of...



Caltrans Division of Local Assistance



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Local Assistance

About Us (Division of Local Assistance)

Caltrans' Local Assistance Program oversees more than one billion dollars annually available to over 600 cities, counties and regional agencies for the purpose of improving their transportation infrastructure or providing transportation services. This funding comes from various Federal and State programs specifically designed to assist the transportation needs of local agencies. Annually, over 1,200 new projects are authorized through the Local Assistance Program of which approximately 700 are construction projects.

Contact Us

For question(s) related to local transportation project(s), please [Contact Local Assistance District Offices](#) . For DLA HQ, you may fill [DLA-HQ Engagement Form](#) . Otherwise, please contact the appropriate [Caltrans Office or Program](#) .

Agency Toolbox for Getting Started with Caltrans

The Risk Assessment Program is a key process in securing a Master Agreement and ultimately state or federal funding with Caltrans. Please visit here to learn more:
[Local Public Agency Certification \(Risk Assessment\) Program](#)

For new agencies wanting to learn more about this process, please visit our [New Agencies Webpage](#)

Federal and State Programs

WHAT'S NEW

Federal Programs

- [Bridge Investment Program](#)
- [Carbon Reduction Program \(CRP\)](#)

<https://dot.ca.gov/programs/local-assistance>

Construction Oversight Program Contacts



Visit the [COP webpage](https://dot.ca.gov/programs/local-assistance/guidance-and-oversight/construction-oversight-program)
to access the
Construction Oversight
Engineer Team contacts.

The screenshot shows the Caltrans website header with the logo and navigation links for 'About Caltrans' and 'Contact Us'. Below the header are icons for 'Travel' and 'Work with Caltrans'. The main navigation bar includes links for 'Home', 'Programs', 'Local Assistance', 'Guidance and Oversight', and 'Construction Oversight Program'. The page title is 'Construction Oversight Program'. The main content area is titled 'Roles and Responsibilities' and lists several bullet points: 'Perform Project Reviews with Local Agency Staff and their Construction Management Consultants' (with sub-points: 'Not auditors, but measure FHWA compliance' and 'Issue Findings'), 'Resource for Local Agency Questions / Issues' (with sub-point: 'Can review Change Orders (COs) for quality and participation'), 'Issues Guidance on Current Issues as Necessary' (with sub-point: 'Publishes Office Bulletins, COINS on DLA website'), 'Conducts Training' (with sub-point: 'RE Academy, Federal-Aid Series, Individual Agency / Regional Agency Training'), and 'Assists District Local Assistance Engineers'. At the bottom of the page, the text 'COE Team' is visible.

<https://dot.ca.gov/programs/local-assistance/guidance-and-oversight/construction-oversight-program>

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Division of Construction website

Construction

The Division of Construction is a results-driven engineering organization that prides itself on timely project completion. We recognize that time is money for owner, contractor, and the public. Currently Caltrans has 1,016 ongoing construction contracts valued at \$14.4 billion. (Updated 6/3/24)

Construction Safety & Insurance

- [Insurance Pre-Approval](#)
- [Insurance Requirements \(PDF\)](#)
- [Safety/Traffic](#)

Contract Administration

- [California Statewide Crude Oil Price Index](#)
- [California Statewide Fuel Price Index](#)
- [Change Order Information](#)
- [Contract Time](#)
- [DIR Debarred Contractors](#)
- [Equipment Rental Rates and Labor Surcharge](#)

Environmental Compliance

- [Environmental Page](#)
- [Storm Water and Water Pollution Control Information](#)

E-ticketing

How to File a Title VI Complaint

- [Civil Rights Guidance Information](#)

Labor Compliance

- [Business Enterprise Program \(DBE/DVBE\)](#)

<https://dot.ca.gov/programs/construction>

CONSTRUCTION MANUAL

Issued by Division of
Construction



GAVIN NEWSOM
Governor

TONY TAVARES
Director, Department of Transportation

MICHEAL KEEVER
Chief Deputy Director

DONNA BERRY
Chief Engineer

RAMON HOPKINS
Chief, Division of Construction

JEREMY PETERSON-SELF
Assistant Division Chief, Construction

LINDSEY WOOLSEY
Acting Chief, Office of Construction Support

CONSTRUCTION PUBLICATIONS
Editing Team

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2	Safety and Traffic
2-1	Safety
2-2	Traffic
2-3	Major Construction Incidents
3	General Provisions
3-0	Introduction
3-1	General
3-2	Bidding
3-3	Contract Award and Execution
3-4	Scope of Work
3-5	Control of Work
3-6	Control of Materials
3-7	Legal Relations and Responsibility to the Public
3-8	Prosecution and Progress
3-9	Payment
4	Construction Details
4-0	Introduction
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- 4-26 Aggregate Bases
- 4-27 Cement Treated Bases
- 4-28 Concrete Bases
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- 4-53 Shotcrete
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- 4-55 Steel Structures
- 4-56 Overhead Sign Structures, Standards
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- 4-59 Structural Steel Coatings
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 - 6-3 Field Tests
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 - 8-3 Disadvantaged Business Enterprises
 - 8-4 Disabled Veteran Business Enterprises
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 - 9-1 Construction Contract Administration for Projects Sponsored by Others
 - 9-2 Projects Administered by a Local Agency on the State Highway System





Travel



Work with Caltrans



Programs



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Manuals

Caltrans Local Assistance Procedures Manual (LAPM) <https://dot.ca.gov/manuals>

- [Bridge Manuals](#)
- [CADD User's Manual](#)
- [California Manual on Uniform Traffic Control Devices \(MUTCD\)](#)
- [Construction Manual](#)
- [DRISI Research Manual](#)
- [Encroachment Permits Manual](#)
- [Engineering Manuals](#)
- [Environmental Manuals](#)
- [Highway Design Manual \(HDM\)](#)
- [Local Assistance Procedures Manual \(LAPM\)](#)
- [Maintenance Manual](#)
- [Materials Engineering and Testing Services Manuals](#)
- [Plans Preparation Manual \(PPM\)](#)
- [Project Development Procedures Manual \(PDPM\)](#)
- [Right of Way and Land Surveys Manuals](#)
- [Workplan Standards Guide](#)



Local Assistance Procedures Manual (LAPM)

The Local Assistance Procedures Manual (LAPM) is issued in January of each year, and is updated through [Local Programs Procedures](#) (LPPs). It describes the various procedures required to process Federal and State funded local transportation projects.

Please read our [Disclaimer](#).



Full LAPM	
LAPM 2025	January 2025
Individual Chapters:	Last Update
Chapter 1: Introduction and Overview	January 2025
Chapter 2: Roles and Responsibilities	January 2025
Chapter 3: Project Authorization	January 2025
Chapter 4: Agreements	January 2025
Reference OB #24-04 for policy revisions affecting Chapter 5	
Chapter 5: Invoicing	January 2025

LOCAL ASSISTANCE PROCEDURES MANUAL 2025 (LAPM)





<https://dot.ca.gov/programs/local-assistance/guidelines-and-procedures/local-assistance-procedures-manual-lapm>

LAPM Chapters 16



Chapters 17



 		Travel	Work with Caltrans	Programs	Caltrans
Exhibit 15-F: Deleted Exhibit 15-G: Construction Contract DBE Commitment (F-PDF), EX15G(Word)		Exhibit 15-H: Finance Letter USE Exhibit 15-O			
Chapter 16 Administer Construction Contracts					
Exhibit 16-A: Weekly Statement of Working Days(F-PDF), EX16A(Excel) Exhibit 16-B: Subcontracting Request(F-PDF), EX16B(Word) Exhibit 16-C: Resident and Assistant Engineers Daily Report (F-PDF), EX16C(Word) Exhibit 16-D: Certificate of Proficiency (PDF), EX16D(Word) Exhibit 16-E: Independent Assurance Sampling and Testing (Form MR-0102) (F-PDF), EX16E(Word) Exhibit 16-F: Report of Witness Tests (Form MR-0103) (F-PDF), EX16F(Word) Exhibit 16-G: Corroboration Report (MR-0104) (PDF), EX16G(Word) Exhibit 16-H: Independent Assurance Sampling and Testing Log Summary (Form Mr-0110) (PDF), EX16H(Excel) Exhibit 16-I: Notice of Material to be Used (Form CEM-3101)(F-PDF), EX16I(Excel) Exhibit 16-J: Notice of Materials to be Furnished (Form MR-0608) (PDF), EX16J(Word) Exhibit 16-K: Report of Inspection of Material (Form MR-0029) (PDF), EX16K(Word) Exhibit 16-L: Sample Federal-Aid Advice Invoice (deleted) Exhibit 16-M: Notice of Materials to be Inspected (Form MR-0028)(PDF), EX16M(Word) Exhibit 16-N: Employee Interview: Labor Compliance/EEO (F-PDF) Rev. 7/11/18		Exhibit 16-O: Federal-Aid Highway Construction Contractor's Annual EEO Report(Excel) Exhibit 16-P: Employee Interview: Labor Compliance/EEO (Spanish Form)(PDF), EX16P(Word) Exhibit 16-Q: U.S. Department of Labor Office of Federal Contract Compliance Programs(PDF), EX16Q(Word) Exhibit 16-R: Size, Frequency and Location of Sampling and Testing Tables(PDF), EX16R(Word) Exhibit 16-S: Caltrans Test Method - ASTM Test Method Conversion Chart (PDF), EX16S(Word) Exhibit 16-T: Material Typically Accepted by a Certificate of Compliance (PDF), EX16T(Word) Exhibit 16-UF: Full and Final Potential Claim Record (F-PDF), EX16UF(Word) Exhibit 16-UI: Initial Potential Claim Record (F-PDF), EX16UI(Word) Exhibit 16-US: Supplemental Potential Claim Record(F-PDF), EX16US(Word) Exhibit 16-V: Source Inspection Request to DLAE(F-PDF), EX16V(Word) Exhibit 16-W: Source Inspection Request to TransLab(PDF), EX16W(Word) Exhibit 16-Y: Monthly Progress Payment Item Quantity Calculation Sheet (F-PDF), EX16Y(Word) Exhibit 16-Z1: Monthly DBE Trucking Verification (F-PDF), EX16Z1(Word) Exhibit 16-Z2: Acceptance Testing Results Summary Log(F-PDF), EX16Z2(Excel)			
Chapter 17 Project Completion					
Exhibit 17-A: Cover Letter and Federal Report of Expenditures Checklist (F-PDF), EX17A(Word) Exhibit 17-B: Final Inspection of Federal-Aid Project (FHWA Form 1446C) (F-PDF), EX17B(Word) Exhibit 17-C: Final Inspection Form(F-PDF), EX17C(Word) Exhibit 17-D: Federal-Aid Final Invoice(PDF), EX17D(Word) Exhibit 17-E: Sample Change Order Summary (F-PDF) Revised 3/21/19, EX17E(Word)		Exhibit 17-H: Cover Letter and Final Report of Expenditures Checklist (PE Only) (F-PDF), EX17H(Word) Exhibit 17-I: Cover Letter for Report of Completion of Structures (F-PDF), EX17I(Word) Exhibit 17-J: Report of Completion of Structures on Local Streets and Roads(F-PDF), EX17J(Word) Exhibit 17-K: Sample Report of Completion of Right of Way(PDF), EX17K(Word)			

<https://dot.ca.gov/programs/local-assistance/forms/local-assistance-procedures-manual-forms>

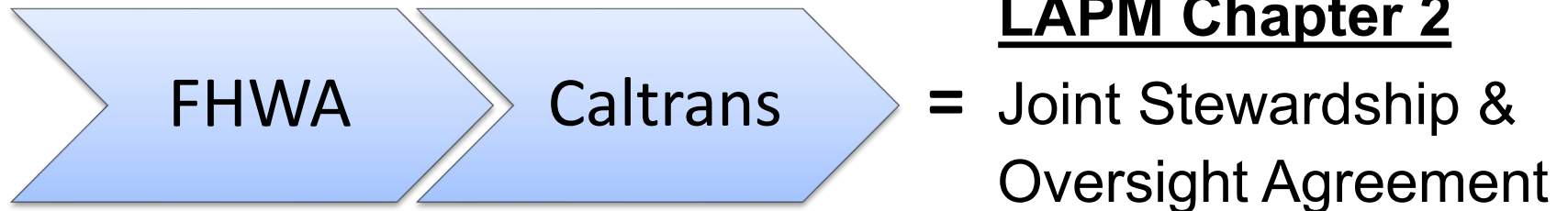
Module 1.1 Handout – Definitions

- **FHWA**
Federal Highway Administration
- **Federal-aid**
FHWA funds
- **Local Agency**
A city, county or other public agency
- **Administering Agency**
Local agency that advertises, awards and administers the contract
- **Construction Engineering (CE)**
Contract administration from advertisement through ribbon cutting and close out

Authority

LAPM Section 4.2 Agreements

Why procedures taught during REA must be followed:



- Plus “Supplemental Agreements” for individual projects

Caltrans District Map & Local Assistance Engineers



California's counties by name, abbreviation and district

County Name	County Abbreviation	District	County Name	County Abbreviation	District
Alameda	ALA	4	Orange	ORA	12
Alpine	ALP	10	Placer	PLA	3
Amador	AMA	10	Plumas	PLU	2
Butte	BUT	3	Riverside	RIV	8
Calaveras	CAL	10	Sacramento	SAC	3
Contra Costa	CC	4	Santa Barbara	SB	5
Colusa	COL	3	San Bernardino	SBD	8
Del Norte	DN	1	San Benito	SBT	5
El Dorado	ED	3	Santa Clara	SCL	4
Fresno	FRE	6	Santa Cruz	SCR	5
Glenn	GLE	3	San Diego	SD	11
Humboldt	HUM	1	San Francisco	SF	4
Imperial	IMP	11	Shasta	SHA	2
Inyo	INY	9	Sierra	SIE	3
Kern	KER	6	Siskiyou	SIS	2
Kings	KIN	6	San Joaquin	SJ	10
Los Angeles	LA	7	San Luis Obispo	SLO	5
Lake	LAK	1	San Mateo	SM	4
Lassen	LAS	2	Solano	SOL	4
Madera	MAD	6	Sonoma	SON	4
Mendocino	MEN	1	Stanislaus	STA	10
Merced	MER	10	Sutter	SUT	3
Mono	MNO	9	Tehama	TEH	2
Modoc	MOD	2	Trinity	TRI	2
Monterey	MON	5	Tulare	TUL	6
Mariposa	MPA	10	Tuolumne	TUO	10
Marin	MRN	4	Ventura	VEN	7
Napa	NAP	4	Yolo	YOL	3
Nevada	NEV	3	Yuba	YUB	3

<https://dot.ca.gov/programs/local-assistance/other-important-issues/local-assistance-contacts>