



Transportation Curriculum Coordination Council (TCCC)

Addressing Challenges in
Construction and Maintenance
Workforce and Quality





Topics of Discussion

- What is the TCCC
- Workforce development challenges
- Accomplishments
- Current activities underway
- Future Opportunities



What is the TCCC?

- The TCCC is a Federal/State/Industry partnership that supports the training of the highway construction personnel.
- The goals of the TCCC are to:
 - Develop and maintain a national curriculum for various transportation disciplines
 - Identify training and certification requirements
 - Coordinate/facilitate training efforts



TCCC Mission

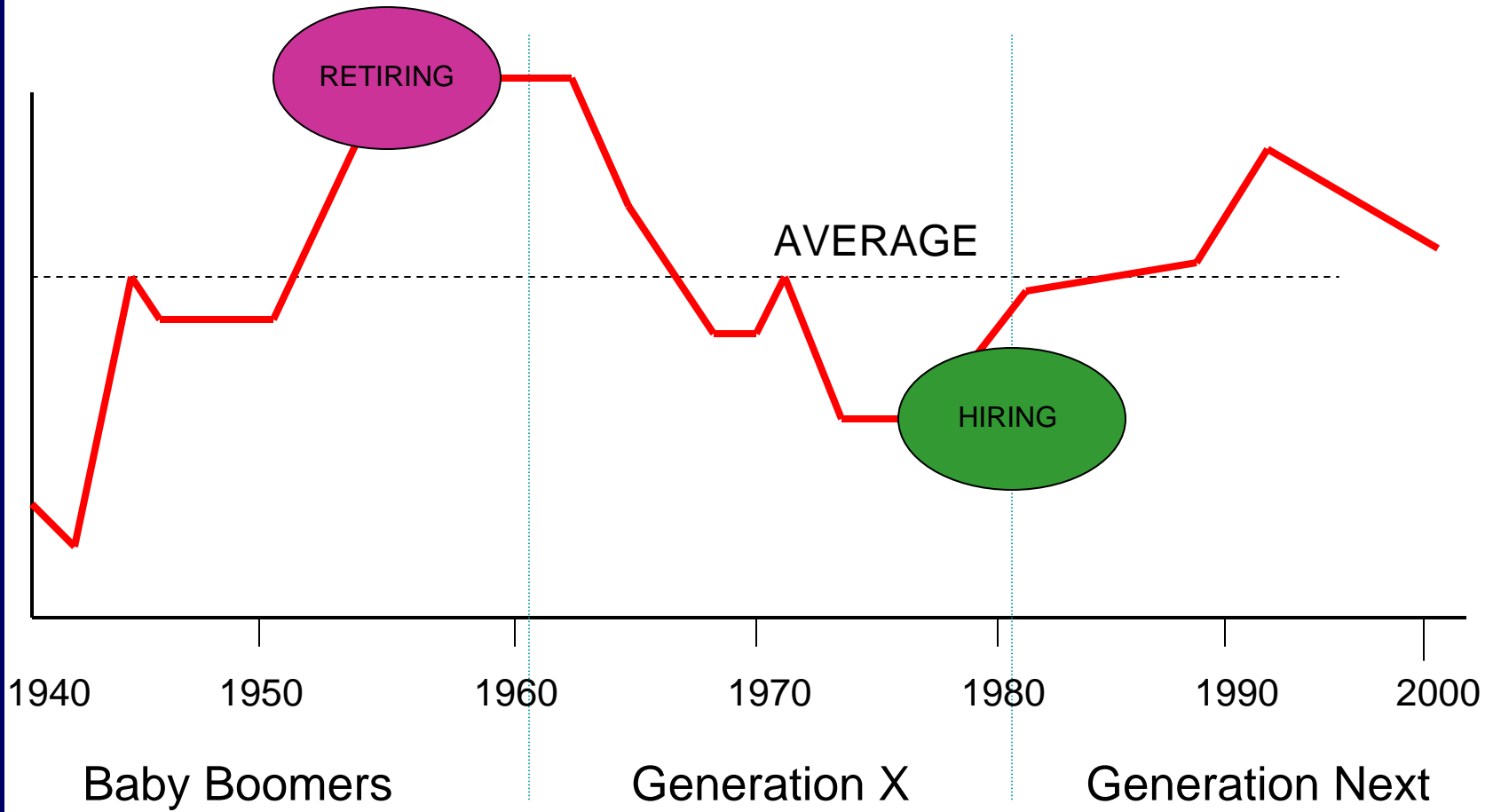
- Coordinate training and certification efforts
- Establish a national core curriculum
- Develop training materials
- Support agency training efforts



Why Do We Need the Transportation Curriculum Coordination Council?



US Birth Rates





Workforce Facts

(continued)

- A 2005 report showed that there are about 950,000 vacant positions in the construction skilled trades area and it is estimated that this could rise to one million within a couple of years.
- A career in the construction industry was rated 498th out of 500 by high school students and their parents



What the TCCC has
accomplished...





TCCC Current Activities

- National training data base
- Training development
- E-Learning



National Training Database

- National Partners/contributors:
 - TCCC, NTTD, LTAP
 - AASHTO, TRB, ITE
- Locating existing training from a wide variety of disciplines within construction and maintenance
- Assist in gap analysis for new course development



Training Products Database

- Complete data on training courses
 - objectives, level, audience, tests, manuals, contacts, etc.
- Review and link to competencies by level
- Maintain online searchable training database
 - more than 50 subject areas



National Transportation Training Resource

Supporting the Training of the Highway Workforce

[Search the NTTR](#) | [About the NTTR](#) | [Competency Matrices](#) | [What's New!](#) | [Contact Us](#) | [Feedback](#) | [FAQs](#)

NTTR Beta - Search for Transportation Training Resources

KEYWORD SEARCH

ADVANCED SEARCH

[Preview Here!](#)

SEARCH BY TCCC TECHNICAL CATEGORY

Select a single term in any one or more dropdowns to return all related resources.

Please select a Technical Category...
Please select a Subject Area...
Please select a Discipline...
Please select a Skill Level...
Please select a Competency...

Login

User Name:

Password:

[Forgot Password?](#) [Register](#)

In the Hot Mix

- NTTR Database Resource Count: **462**
Contributed by 26 organizations
- Advanced Search capability now available.
- Feedback Form is available.

[See More News...](#)

Use the search tools to look for resources. Your search results will appear here.





Completed Web Based Training

- FHWA-NHI-131117
 - Basic Materials for Highway and Structure Construction and Maintenance
- FHWA-NHI-131122
 - Portland Cement Concrete Paving Inspection
- FHWA-NHI-134069
 - Ethics Awareness for the Transportation Industry
- FHWA-NHI-134071
 - Basic Construction and Maintenance Documentation - Improving the Daily Diary
- FHWA-NHI-134072
 - Math Module
- FHWA-NHI-134075*
 - Hardened Concrete Properties – Durability
- FHWA-NHI-134078
 - GPS Technology
- FHWA-NHI-134081
 - Plan Reading
- FHWA-NHI-134084*
 - Fundamentals of Materials Used for Concrete Pavements



Completed Web Based Training

- FHWA-NHI-134085*
 - Incompatibility in Concrete Pavement Systems
- FHWA-NHI-134087*
 - Mix Design Principles
- FHWA-NHI-134095*
 - Early Age Cracking
- FHWA-NHI-134096*
 - Basics of Cement Hydration
- FHWA-NHI-134097*
 - Fresh Properties
- FHWA-NHI-134098*
 - Construction of Concrete Pavements
- FHWA-NHI-134100*
 - QCQA for Concrete Pavements
- FHWA-NHI-134101*
 - Design of Pavement
- FHWA-NHI-134102*
 - Troubleshooting for Concrete Pavements



Development Time in Weeks

Course Number	Course Title	Launch Date	Weeks
FHWA-NHI-131117	Basic Materials for Highway and Structure Construction and Maintenance	4/14/2008	16
FHWA-NHI-131122	Portland Cement Concrete Paving Inspection	4/14/2009	17
FHWA-NHI-134069	Ethics Awareness for the Transportation Industry	4/14/2008	6
FHWA-NHI-134071	Basic Construction and Maintenance Documentation - Improving the Daily Diary	4/14/2008	13
FHWA-NHI-134072	Math Module	6/21/2008	12
FHWA-NHI-134075	Hardened Concrete Properties - Durability	7/8/2008	5
FHWA-NHI-134078	GPS Technology	7/31/2008	5
FHWA-NHI-134081	Plan Reading	10/24/2008	12
FHWA-NHI-134084	Fundamentals of Materials Used for Concrete Pavements	12/18/2008	12
FHWA-NHI-134085	Incompatibility in Concrete Pavement Systems	1/12/2009	5
FHWA-NHI-134087	Mix Design Principles	1/12/2009	4
FHWA-NHI-134095	Early Age Cracking	3/5/2009	8
FHWA-NHI-134096	Basics of Cement Hydration	3/17/2009	6
FHWA-NHI-134097	Fresh Properties	5/21/2009	13
FHWA-NHI-134098	Construction of Concrete Pavements	5/21/2009	9
FHWA-NHI-134100	QCQA for Concrete Pavements	6/3/2009	6
FHWA-NHI-134101	Design of Pavement	6/3/2009	10
FHWA-NHI-134102	Troubleshooting for Concrete Pavements	6/22/2009	8



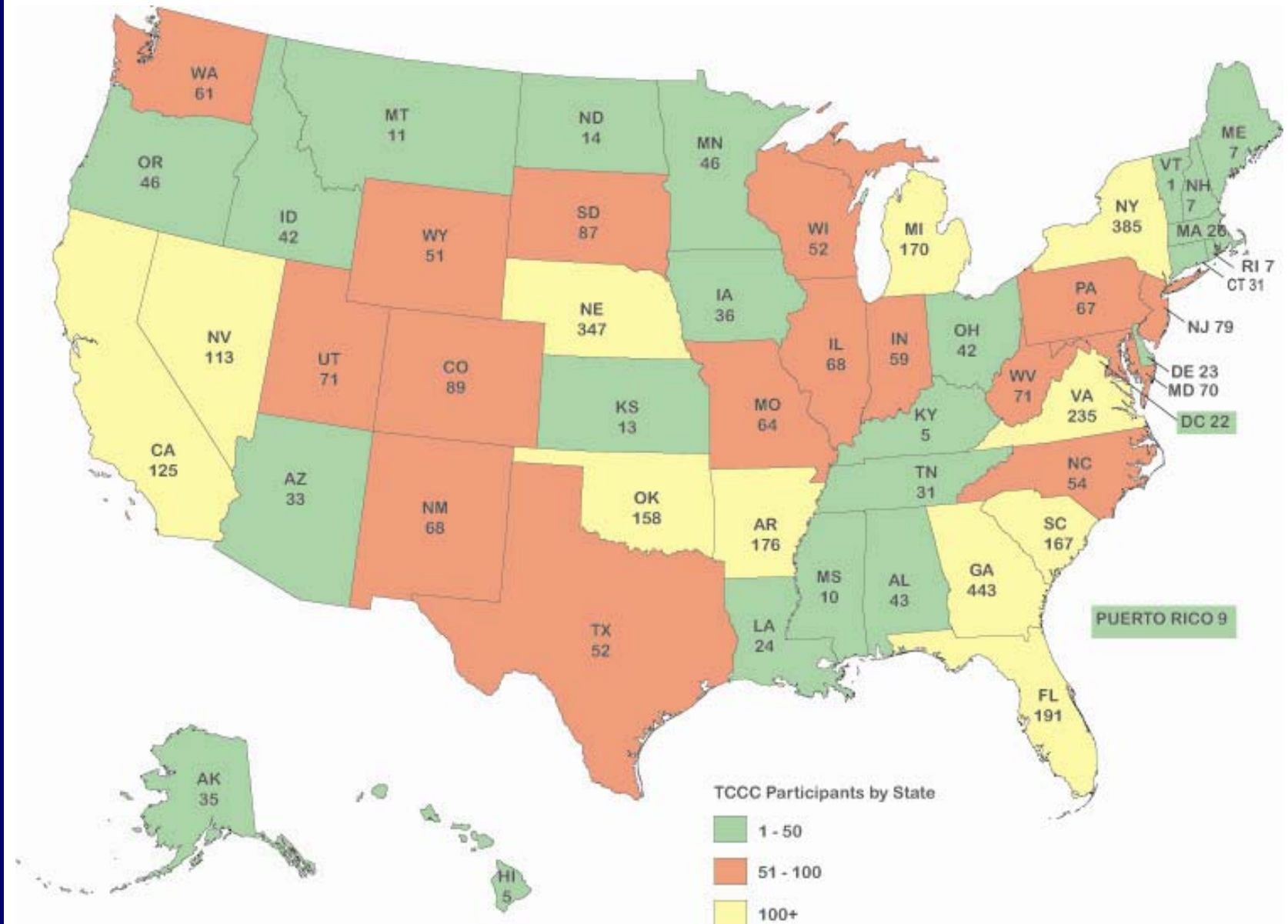
NHI Website Training Numbers – Participants by Fiscal Year

Course Number	Course Title	FY2008	FY2009	Totals
FHWA-NHI-131117	Basic Materials for Highway and Structure Construction and Maintenance	137	390	527
FHWA-NHI-131122	Portland Cement Concrete Paving Inspection		55	55
FHWA-NHI-134069	Ethics Awareness for the Transportation Industry	123	376	499
FHWA-NHI-134071	Basic Construction and Maintenance Documentation - Improving the Daily Diary	138	260	398
FHWA-NHI-134072	Math Module	88	244	332
FHWA-NHI-134075	Hardened Concrete Properties - Durability	39	164	203
FHWA-NHI-134078	GPS Technology	189	279	468
FHWA-NHI-134081	Plan Reading		927	927
FHWA-NHI-134084	Fundamentals of Materials Used for Concrete Pavements		225	225
FHWA-NHI-134085	Incompatibility in Concrete Pavement Systems		128	128
FHWA-NHI-134087	Mix Design Principles		200	200
FHWA-NHI-134095	Early Age Cracking		75	75
FHWA-NHI-134096	Basics of Cement Hydration		58	58
FHWA-NHI-134097	Fresh Properties		11	11
FHWA-NHI-134098	Construction of Concrete Pavements		18	18
FHWA-NHI-134100	QCQA for Concrete Pavements		9	9
FHWA-NHI-134101	Design of Pavement		7	7
FHWA-NHI-134102	Troubleshooting for Concrete Pavements		4	4
Totals		714	3426	4144



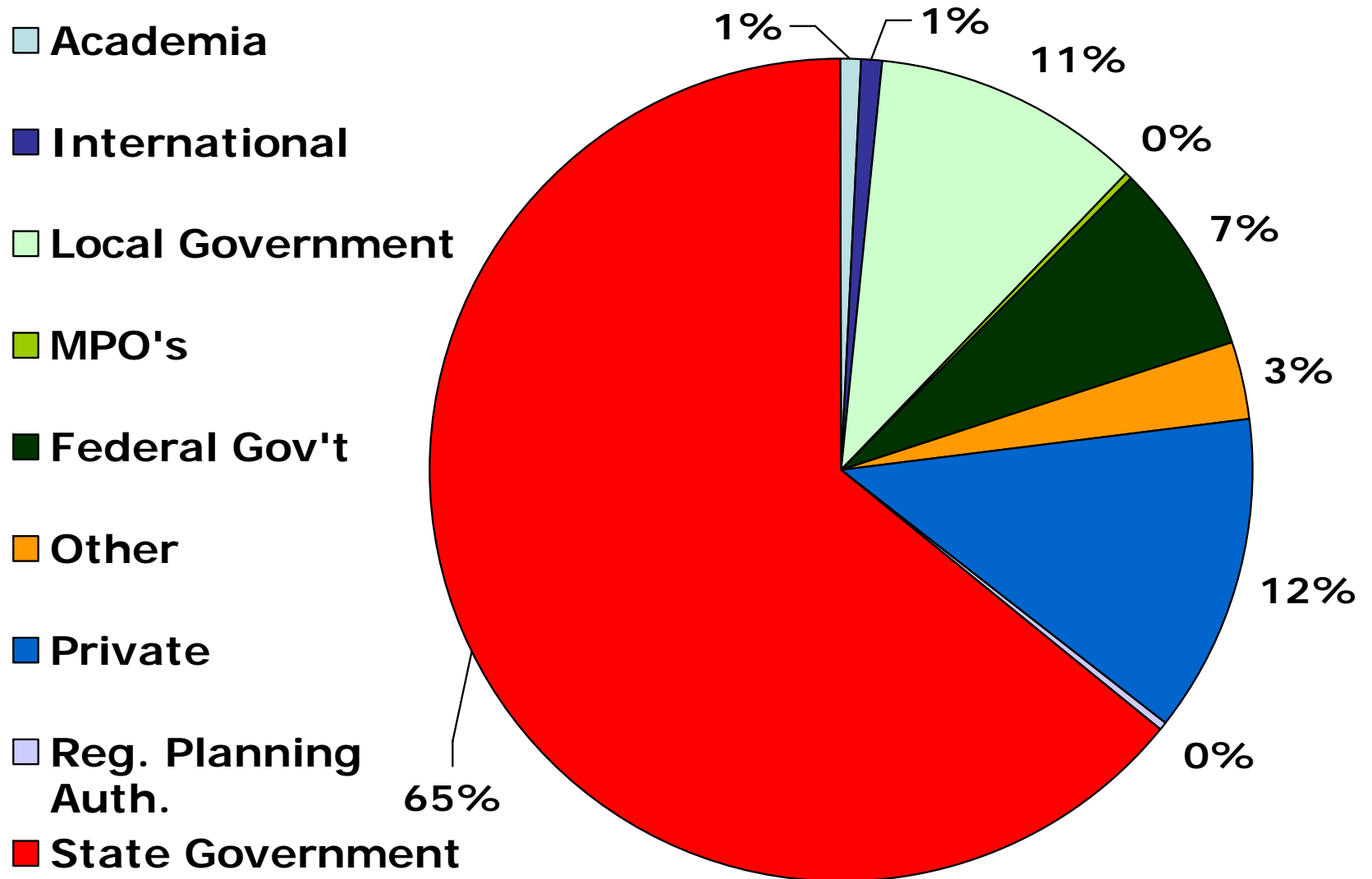


NHI Website Training Numbers – Participants by State





NHI Website Training Numbers – Participants by Industry Type





TCCC Trainings Shared with States

- States we share our TCCC trainings with
 - Iowa
 - Texas
 - Maryland
 - Minnesota
 - Alabama
 - North Dakota
 - South Carolina
- Use with Intranets and LMSs
- Some States make TCCC training required
 - Math Module for Supervisors – Minnesota (357)
 - Ethics Awareness Statewide – Alabama (3,428)



Total Participants Training Numbers

Course Number	NHI	States (Shared)	Total
FHWA-NHI-131117	527	57	584
FHWA-NHI-131122	55	13	68
FHWA-NHI-134069	499	3482	3981
FHWA-NHI-134071	398	98	496
FHWA-NHI-134072	332	399	731
FHWA-NHI-134075	203	19	222
FHWA-NHI-134078	468	38	506
FHWA-NHI-134081	927	45	972
FHWA-NHI-134084	225	23	248
FHWA-NHI-134085	128	17	145
FHWA-NHI-134087	200	16	216
FHWA-NHI-134095	75		75
FHWA-NHI-134096	58		58
FHWA-NHI-134097	11		11
FHWA-NHI-134098	18		18
FHWA-NHI-134100	9		9
FHWA-NHI-134101	7		7
FHWA-NHI-134102	4		4
Totals	4140	4207	8347

*Participant totals only include Iowa, Texas, Minnesota, and Alabama at this time





Evaluation Average Scores

Course Number	Course Title	Score
FHWA-NHI-131117	Basic Materials for Highway and Structure Construction and Maintenance	4.20
FHWA-NHI-131122	Portland Cement Concrete Paving Inspection	
FHWA-NHI-134069	Ethics Awareness for the Transportation Industry	4.17
FHWA-NHI-134071	Basic Construction and Maintenance Documentation - Improving the Daily Diary	4.55
FHWA-NHI-134072	Math Module	4.12
FHWA-NHI-134075	Hardened Concrete Properties - Durability	4.24
FHWA-NHI-134078	GPS Technology	4.37
FHWA-NHI-134081	Plan Reading	3.96
FHWA-NHI-134084	Fundamentals of Materials Used for Concrete Pavements	4.36
FHWA-NHI-134085	Incompatibility in Concrete Pavement Systems	4.37
FHWA-NHI-134087	Mix Design Principles	4.48
FHWA-NHI-134095	Early Age Cracking	4.34
FHWA-NHI-134096	Basics of Cement Hydration	4.08
FHWA-NHI-134097	Fresh Properties	
FHWA-NHI-134098	Construction of Concrete Pavements	
FHWA-NHI-134100	QCQA for Concrete Pavements	
FHWA-NHI-134101	Design of Pavement	4.40
FHWA-NHI-134102	Troubleshooting for Concrete Pavements	



What Are People Saying

- FHWA-NHI-134085 Presented some methods I was not familiar with that will be helpful in the future.
- FHWA-NHI-134081 For me it was a satisfactory program because it reinforced some of the things I already [knew] and got exposure in other areas I have not had prior experience.
- FHWA-NHI-134078 I am in construction inspection, though I have been on projects with paper plans and electronic data, I have not been on a project where GPS was directly employed in field construction. This course was a good exposure for me.
- FHWA-NHI-134075 It refreshes some concepts I have not used in a while and provided an understanding of new ones. The course was definitely relevant to some aspects of construction inspection.



What Are People Saying

- FHWA-NHI-134087 The course provided an updated knowledge in the subject area presented.
- FHWA-NHI-134095 Course presented a clear understanding early age cracking in concrete.
- FHWA-NHI-134069 I liked the online method. It suited my work schedule.
Course was good for all areas of DOT but especially for Materials and Quality Assurance personnel.
- FHWA-NHI-134071 I think this is as great opportunity for all of us! And it's great to be able to have this material to learn or refresh at a push of a button!



TCCC Marketing Efforts

- Website Marketing
 - New courses area
 - WBT training area
 - About NHI > NHI in the News
- NHI 2009 Catalog
 - Full page descriptions for each training
 - Icons for highlighting WBT and New trainings
 - Full page table of all TCCC trainings
 - NHI Real Solutions insert article
- NHI 2009 Real Solutions Standalone



TCCC Marketing Efforts

- New Course Launch
 - NHI Blueline with marketing messages about other TCCC trainings
 - Email blast with cross marketing of TCCC trainings
- Thank You Emails
 - Continue to send to new participants
 - Quarterly basis
- TCCC Articles
 - NHI Newsletter
 - Public Roads-Training Update
 - Focus
 - FHWA News



What TCCC is doing now...





Training Development In Progress

- FHWA-NHI-131121
 - Construction of PCC Pavements
- FHWA-NHI-131126
 - Concrete Pavement Preservation
- FHWA-NHI-131127
 - Concrete Series (IMCP Manual)
- FHWA-NHI-134074
 - Bolted Connections
- FHWA-NHI-380098
 - Maintenance of Traffic for Technicians
- FHWA-NHI-380099
 - Maintenance of Traffic for Supervisors
- FHWA-NHI-131128
 - Self Consolidating Concrete
- FHWA-NHI-134105
 - Surveying
- FHWA-NHI-134106
 - Pipe Inspection
- FHWA-NHI-380101
 - Safety Orientation



Training Development On Deck

- Geotechnical (August)
- Flagger Training (August)
- Earthwork (September)
- Transportation Project Management (September)
- Clear Road Series (TBD)
- Maintenance Safety (TBD)
- MEPDG (TBD)



Future Opportunities



Marketing Efforts

- NHI Website Single Login Feature
- NHI "Blue Line" sheets
- Executive Summary
- "On the Go" training



Executive Summary

- An Executive Summary is a five minute overview of the training (NOT a training course)
- Consolidate the principal points of a training course and provide an overview
- Preview to an audience who may or may not have time to attend a training session
- Audience should understand the main points and the evidence for those points without having ever seen the course
- <http://fhwa.na3.acrobat.com/n131122es/>



"On the Go" Training

- MP4 Players
- Increased mobility and accessibility
 - Reach a larger audience
 - Provide on-demand training as the participants requires
- Multiple formats
 - Desktop
 - Laptop
 - Portable (phone devices) - Twitter?



Supporting TCCC

How can State Partners Support TCCC:

- Provide financial support to Pooled Fund (TPF – 5(209))
- Volunteer for Technical Panels for Course Development
- Contribute a course to the NTTR that you or your state/organization has developed
- Volunteer on TCCC committees that collect, analyze and develop training resources



For Information

For more information, visit:

www.nhi.fhwa.dot/tccc

Or contact:

**Christopher Newman
FHWA Office of Asset Management
202.366.2023**

christopher.newman@dot.gov





Thank you Jim Sorenson





Thank You

Questions?

