

ALDOT

Research & Development Completed Research Projects

Project Number	Project Title	FY Closed	Actual Close Date
931-107R	Review and Evaluation of Concrete Pavement Design Method in Alabama	FY2026	2/13/2026
931-106S	Technical Assistance for Quantifying Emissions from Asphalt Mixtures	FY2025	6/17/2025
931-095	Development of Notional Permit Vehicles for Complex Bridge Ratings in Alabama	FY2026	1/7/2022
931-083	Local Technical Assistance Program (LTAP) Center, Alabama Technology Transfer Program	FY2022	9/30/2022
931-080	GIS-Based Environmental Long-Term Monitoring Web Portal Phase II	FY2025	10/25/2023
931-078	Safety Performance of Pavement Marking Retroreflectivity in Alabama	FY2025	7/30/2025
931-074	Unmanned Aerial Systems for Determining Vegetative Establishment on ALDOT Construction Sites	FY2025	7/30/2025
931-072	Designing and Evaluating Infiltration Swales for Retaining and Infiltrating Roadway Stormwater Runoff	FY2026	7/30/2025
931-071	Development of a Worker Safety Assessment, Risk Identification, and Control Program for ALDOT	FY2025	7/30/2025
931-065	Determining the Average Available Workdays for ALDOT Construction Projects	FY2025	1/23/2024
931-063	Develop a Tool for Sight Distance Analysis Using GIS and LiDAR Data	FY2025	7/30/2025
931-056	Managing the Traffic Impacts of Highway Infrastructure Constructions: A Framework for C	FY2025	7/30/2025
931-055	Development of Traffic Video Analysis Tool for Highway Safety Performance Evaluation	FY2024	4/10/2024
931-054	Geotechnical Health Monitoring and Assessment of Landslides	FY2025	10/25/2024
931-053	Implementation of OMS-Based Scour Prediction and Real-Time Monitoring of Scour Processes for Alabama Bridges	FY2025	6/17/2025
931-052	Evaluation of Alabama Limestone Sources for Use as Pavement Aggregate Base	FY2025	6/17/2025
931-051	Development of Jobsite Cylinder Curing Practices for the Alabama Concrete Industry	FY2024	11/6/2023



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931-050	Research the Application of GeoGIS in Support of ALDOT Geo-Referenced Documents	FY2024	3/8/2024
931-047	Performance Characterization of an Ultra-High Performance Concrete Deck Connection for Alabama Bridges	FY2025	2/27/2025
931-046	Use of Titanium-Alloy Reinforcement to Strengthen Bridges in Alabama - Phase 1: Laboratory Closed Testing and Analytical Investigations	FY2025	10/15/2024
931-045	A Method of Maximum Thickness for Flexible Pavement Design	FY2024	8/27/2024
931-041P	Accelerated Performance Testing on the 2021 NCAT Pavement Test Track with MnROAD Research Partnership	FY2026	2/12/2026
931-037	Impact of Permit Vehicles on Bridges and Pavements in Alabama	FY2024	10/17/2024
931-029	Task 1: Evaluating Detours for Major Construction Projects in the Era of Real-Time Route Guidance (cost \$55,000) & Task 2	FY2023	9/1/2022
931-026	Proactive Traffic Incident Management in Alabama	FY2025	10/15/2024
931-020	Queuing Detection & Warning Systems	FY2026	2/13/2026
931-019	Development of an Ultra-High Performance Concrete H-Pile and It's Connection for Alabama Foundations	FY2025	12/5/2024
931-017	Best Practices for Construction Site Stormwater Treatment Using Flocculants	FY2024	8/15/2024
931-016	Evaluation of ALDOT Erosion Control Practices Using Rainfall Simulation on Various Soil Types and Slope Gradients	FY2024	8/14/2024
931-015	Local Verification of AASHTOWare Pavement ME Design for Flexible Pavement	FY2024	8/27/2024
931-011	I-10 Mobile River Bridge a Macroscopic Study of No-Build Implications	FY2022	8/29/2022
931-006	Predicting Pavement Weather to Support Winter Operations in Alabama	FY2024	1/4/2024
931-005	GIS-based Environmental Long-Term Monitoring Web Portal Phase II	FY2024	10/5/2023



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931-001	Local Technical Assistance Program (LTAP) Center, Alabama Technology Transfer Program	FY2019	9/30/2019
931-003	Impact of Imperfections, Residual Stresses, Erection Fit-Up and Distortion on Curved Steel Bridge Service Life	FY2025	10/18/2024
930-998	University Transportation (UTC's) Task A: Comparing and Combining Existing and Emerging Data Collection and Modeling Strategies in Support of Signal Control Optimization and Management	FY2022	8/8/2022
930-997	Alabama Connected Vehicle Application	FY2023	10/18/2022
930-994	Structural Pavement Design Advancement in Alabama, Phase I: Software Development and Design Input Assessment	FY2024	9/10/2024
930-990	Strength Assessment of Soil Cement Base: Plastic-Mold Compaction Device and Dynamic Cone Penetrometer Testing	FY2023	9/29/2023
930-989	Characterization of Concrete Creep and Shrinkage of the Birmingham I-59/I-20 Segmental Bridge	FY2024	8/28/2024
930-988	Characterizing Strength Loss in Prairie Clays Along Alabama Highways	FY2023	9/29/2023
930-987	Load Rating for Corrugated Metal Culverts	FY2023	9/29/2023
930-982	GeoGIS 2018 Transition and Support	FY2022	8/8/2022
930-980	Flashing Yellow Arrow Left Turn Phasing by Time-of-Day Development of Design and Operational Guideline	FY2022	8/29/2022
930-979	Incorporating Cracking Parameters Determined from ALDOT-361 Test Procedure into Specifications for Asphalt Mix Design and Production	FY2024	8/14/2024
930-978	Serviceability of Piles Under Compression and Down-drag Forces	FY2022	8/29/2022



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Project Number	Project Title	FY Closed	Actual Close Date
930-976	Transportation Research, Workforce Development, and Technology Transfer Initiatives for Reducing Congestion in Alabama	FY2022	8/29/2022
930-973	Transportation Research, Workforce Development, and Technology Transfer Initiatives for Reducing Congestion in Alabama	FY2022	8/29/2022
930-967	Using ALGO Traffic Data to Improve Traffic Incident Management	FY2022	8/8/2022
930-965	Field Implementation and Evaluation of Low-Cost Countermeasures for Wrong-Way Driving Crashes in Alabama	FY2021	4/6/2021
930-964	Development of Guidance for Unsignalized Intersection Type Configuration on Rural Divided Highways	FY2023	9/9/2023
930-963	In-Service Performance Evaluation (ISPE) of Guardrails and Cable Barriers in Alabama	FY2022	8/29/2022
930-962	Evaluation of ALDOT Erosion Control Practices Using Rainfall Simulation	FY2022	8/5/2022
930-961	Determining Bearing Stress for MSE Retaining Structures	FY2024	10/15/2024
930-959	Pavement Condition Data Quality Assurance	FY2022	3/23/2021
930-958	Comparison of RFIT and GPR NDT Methods for identifying Sub-Surface Damage Detection in Concrete Bridge Decks	FY2021	3/22/2021
930-957	Local Technical Assistance Program (LTAP) Center, Alabama Technology Transfer Program FY 2017	FY2017	9/30/2017
930-956	Evaluation of Non-Destructive Test Methods for Assess the In-Place Condition of Concrete Structures	FY2022	8/29/2022
930-950	Alabama Department of Transportation GIS-Based Plume Data Web Portal	FY2020	3/9/2020
930-948	A Review of Acceptance Scheduled of Payment for Asphalt Pavement for Asphalt Pavement in Alabama	FY2025	12/5/2024



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930-947	Application for WIM and Permit Data	FY2019	8/7/2019
930-945	Use of Geophysical Methods for Sinkhole Exploration	FY2021	10/21/2020
930-944	GRS-IBS Monitoring and Implementation	FY2022	8/8/2022
930-939	Comprehensive Study on the Behavior of Steel Girder Bridges	FY2026	2/13/2026
930-937R	Dilemma Zone Protection (DZP) Systems: Characterizing Driver Behavior and optimizing DZP Boundaries	FY2022	8/7/2022
930-936	Comprehensive Investigation of Bike Crash Causes, Patterns and Countermeasures in Alabama	FY2019	8/7/2019
930-933	Local Technical Assistance Program (LTAP) Center, Alabama Technology Transfer Program	FY2016	9/30/2016
930-932	Development of a Means to Calculate Project-Specific Liquidated Damages	FY2019	1/24/2019
930-931	Evaluation of Landslides Along Alabama Highways	FY2019	8/28/2019
930-930	Development of Cracking Condition Assessment System for Concrete Bridge Decks Using Image Processing Techniques	FY2025	10/15/2024
930-929	Driven Precast Prestressed Concrete (PPC) Pile Design and Construction Optimization	FY2025	10/15/2024
930-928	Experimental Determination of Braking Force Distribution in Steel Pile Bent Bridges	FY2020	8/19/2020
930-925	Analysis and Potential Solutions to Sediment	FY2019	3/26/2019
930-924	Effects of Pile Embedment Length on the Connection Behavior and Precast Pile Footing	FY2025	10/15/2024
930-923	Application of the Naturalistic Driving Study (NDS) Dataset to Improve Design and Associated Practices	FY2023	10/18/2022



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930-920	Friction and Texture Retention	FY2019	8/28/2019
930-919	GeoGIS Development and Support	FY2024	12/2/2023
930-917R	Verification of WBUZFILE Design Methodology and the Development of LRFD Driven Pile Resistance Factor Calibration for Alabama Soils	FY2020	7/10/2020
930-916	Simplified and Standardized Seismic Designed and Detailing for Alabama Bridges	FY2019	7/8/2019
930-915	Active Work Zone Safety Using Emerging Technologies	FY2019	7/8/2019
930-914	Distracted Driving Translational Research for Injury Prevention (TRIP) Laboratory	FY2019	10/16/2018
930-907	Local Technical Assistance Program (LTAP) Center, Alabama Technology Transfer Program FY 2015	FY2015	9/30/2015
930-900	Measurement of Bridge Deck Layout Prior to Concrete Placement	FY2017	TBD
930-896	Maintenance Activity Data Analysis for Performance Based Budgeting	FY2020	TBD
930-985	Strength Assessment of Soil-Cement Base, Phase 1	FY2020	3/9/2020
930-893	Alabama Statewide Mobility Report 2014	FY2017	10/17/2018
930-891	Plastic Pipe for Highway Construction, Phase 2	FY2019	3/26/2019
930-889	Permit Load Model of a Flat Slab Bridge	FY2017	TBD
930-887	Local Technical Assistance Program (LTAP) Center, Alabama Technology Transfer Program	FY2014	9/30/2014
930-879	End Zone Design for Alabama Deep Pre-Stressed Girders	FY2019	3/26/2019
930-870	WIM-Based Live Load for Alabama Bridges	FY2017	TBD
930-869	Evaluation of Sediment Barriers Using Large-scale Testing Techniques and Small-Scale Performance Evaluations of Geotextiles Used in Silt Fence	FY2020	5/23/2019
930-867	Local Technical Assistance Program (LTAP) Center, Alabama Technology Transfer Program	FY2013	12/31/2013
930-866R	Evaluation of Remediation Strategies for Shrink-Swell Clays in Western Alabama	FY2022	10/15/2024

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930-865R	Self-Centering Connections for Traffic Sign Structures	FY2015	12/10/2015
930-863	Evaluation of High-Rate Settling Technology	FY2017	8/12/2019
930-862	Culvert Wing Tab Design Loads	FY2019	8/29/2022
930-861	Comparative Evaluation of Concrete Bridge Deck Sealers	FY2015	10/19/2015
930-860R	Temperature Control Requirements for the Mass Concrete	FY2019	8/8/2019
930-859	Experimental Validation of Analysis Methods	FY2017	7/18/2017
930-858	Load Rating of Bibb Graves Concrete Arch Bridge	FY2014	11/10/2014
930-857	Local Technical Assistance Program (LTAP) Center, Alabama Technology Transfer Program	FY2012	9/10/2012
930-853R	Evaluation of Inlet Protection Practices Using Large-Scale Testing Techniques	FY2017	TBD
930-847	Life Cycle Cost in Alabama Department of Transportation (ALDOT) Infrastructure Projects	FY2013	10/1/2013
930-846	Life Cycle Cost Analysis for Pavement Type Selection	FY2025	12/5/2024
930-845	Alabama Department of Transportation Economic Sustainability	FY2013	5/3/2013
930-839R	Investigation of Pile Setup (Freeze) in Alabama, Implementation into LRFD Driven Pile Design-Addendum: Pile Driving Vibration Monitoring of the Future Mobile River Bridge Project	FY2015	10/10/2015
930-836	Natural Gas Encasement for Highway Crossings	FY2015	12/10/2015
930-833	Evaluation of Origin-Destination Matrix Estimation Techniques to Support Aspects of Traffic Modeling	FY2014	8/4/2014
930-832	Improving Camber Predictions for Pre-stressed Concrete Girders	FY2020	8/18/2020
930-828	Evaluation of In-Place Concrete Strength by Core Testing	FY2017	4/11/2017
930-827	A Study of the Effects of Pavement Widening and Rumble Strips on Two Lane Rural Highways in Alabama	FY2017	4/12/2017
930-826R	Evaluation of ALDOT Ditch Check Practices Using Large-scale Testing Techniques	FY2014	9/29/2014
930-822P	Accelerated Performance Testing for the 2012 NCAT Pavement Test Track	FY2022	TBD



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930-819	Revenue Enhancement Alternatives for the ALDOT	FY2013	4/30/2013
930-818	Local Technical Assistance Program (LTAP) Center, Alabama Technology Transfer Program	FY2011	12/31/2011
930-808	Alabama Department of Transportation : Research and Development 2011 Peer Exchange	FY2012	6/1/2012
930-803	Update of Bridge Design Standards in Alabama for AASHTO LRFD Seismic Design Requirements	FY2014	4/11/2017
930-802	Effectiveness of Silane in Mitigating Alkali-Silica Reaction in the Bibb Graves Bridge	FY2014	7/24/2014
930-799	Implementation of Self-Consolidation Concrete for Pre-Stressed Applications - Phase II: Bridge Construction and In-Place Performance	FY2016	TBD
930-798	GeoGIS Phase III	FY2012	3/14/2012
930-795	Evaluation of an Asphalt Rubber Mixture in Alabama	FY2025	12/5/2024
930-793	Development of Alabama Traffic Factors for Use in Mechanistic-Empirical Pavement Design	FY2015	10/19/2015
930-792	Introduction to Mechanistic-Empirical (M-E) Design Short Course	FY2011	5/19/2011
930-791	Assessing Performance Characteristics of Sediment Control Basins Constructed in Franklin County	FY2014	7/1/2013
930-790	Improvement of Open Graded Friction Course in Alabama	FY2025	12/5/2024
930-776	Stability of Highway Bridges Subject to Scour - Phase IV	FY2013	TBD
930-769	Upgrade of Axially Loaded Pile-Soil Modeling with the Implementation of LRFD Design Procedure	FY2013	3/1/2013
930-768	Methods for Forecasting Freight in Uncertainty	FY2011	TBD
930-766	Development of an Integrated Economic, Land use and Transportation Forecasting Model for the State of Alabama	FY2011	TBD



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930-764R	Field Control and Performance of Asphalt Mixtures Containing Greater Than 25 Percent Reclaimed Asphalt Pavement	FY2019	TBD
930-763P	Superpave Regional Center, Southeastern Region	FY2023	TBD
930-762	Laboratory Testing of Transverse Joints for Pre-Cast Panel Bridge Deck Replacement Systems	FY2017	TBD
930-758	Pavement Condition Model Based on Automated Pavement Distress Surveys	FY2014	7/21/2014
930-754P	Accelerated Performance Testing for the 2009 NCAT Pavement Test Track	FY2019	TBD
930-749	Analysis of Traffic Impacts for Rapid Bridge Deck Replacement Projects	FY2015	TBD
930-745S	FRP Strengthening of Continuous RC Bridge - Letohatchee, Alabama	FY2018	TBD
930-742	Bridge Deficiency Metric Refinement: Long-term Planning for State-and-Locally Owned Bridges	FY2010	7/1/2010
930-741	Evaluation of Public Private Partnership Proposals	FY2010	6/29/2010
930-738	Implementation of Self-Consolidation Concrete for Pre-Stressed Applications - Phase 1: girder Fabrication and Pre-erection Performance	FY2015	10/27/2015
930-734	Bridge Monitoring - Applications for Alabama	FY2010	4/8/2010
930-725	Rapid Bridge Deck Replacement - Phase 3	FY2014	9/30/2014
930-722R	Feasibility Study Guideline for Public Private Partnership Projects: Volumes I and II	FY2011	2/25/2011
930-721	Work Zone Lane Closure Analysis Model	FY2010	TBD
930-718	Plastic Pipe for Highway Construction, Phase 1	FY2013	2/28/2013
930-717	Alabama Warm Mix Asphalt Field Study	FY2010	TBD
930-715	Investigation of Recycled Asphalt Pavement and Recycled Shingle Pavement Characterization Procedure and Development of Specification for Recycled Asphalt Pavement	FY2011	TBD
930-703	Development of Multi-Media Resource and Short Courses for LRFD Design	FY2011	TBD
930-698	Establishing Performance Measures for Alabama's Transportation System	FY2010	TBD



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930-697	Development of a Method to Forecast Freight Demand Arising from the Final Demand Sector and Examination of Federal Data to Analyze Transportation Demand for Local Area Through Trips	FY2010	TBD
930-687	Determination of Hurricane Surge Wave Forces on Bridge Superstructures and Design/Retrofit Options to Mitigate or Sustain These Forces	FY2008	11/7/2008
930-685	Guidance for M-E Pavement Design Implementation	FY2010	3/3/2010
930-682	FAF2 Pilot Project - Utilization of FAF2 Data by State and Local Governmental Agencies	FY2009	3/5/2009
930-674	Stability of Highway Bridges Subject to Scour - Phase III, Part II - Screening Tool Automation	FY2008	TBD
930-674	Stability of Highway Bridges Subject to Scour - Phase III, Part I - "ST" Expansions, Refinements and Tier 2 Screenings	FY2008	11/17/2008
930-671A	Phase 2: Location Tracking of Test Vehicles for Bridge Load Rating	FY2008	10/9/2008
930-670	Development of a Dynamic Traffic Assignment Model to Evaluate Lane Reversals Plans for I-65	FY2010	TBD
930-669	Feasibility of Developing a Pilot Car Training and Certification Program in the State of Alabama	FY2011	TBD
930-661	Bridge Health Monitoring Metrics: Updating the Bridge Deficiency Algorithm	FY2010	3/11/2010
930-657	PVA Fiber Reinforced Shotcrete for Rehabilitation and Preventative Maintenance of Aging Culverts	FY2009	12/11/2009
930-656	Development of a Procedure for Updating Liquidated Damage Rates Used in ALDOT Construction Contracts	FY2008	12/8/2008
930-655	Development of a Test Facility to Evaluate the Optimal Design of BMPs for Managing Environmental Problems at Construction Sites	FY2013	3/14/2013
930-653	Evaluation of Double Drop Beads Pavement Edge Lines	FY2009	11/13/2009

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930-649	Updating the School Bus Standard Vehicle for Load Rating Alabama Bridges	FY2010	6/22/2010
930-648	Internet Based Travel Surveys	FY2009	12/4/2009
930-647	GeoGIS, Phase II	FY2010	3/9/2010
930-645	Evaluation of Cracking on the U.S. 231 Bridge Deck	FY2011	1/1/2011
930-644	Evaluation of Scour Potential of Cohesive Soils	FY2009	12/17/2009
930-637P	Accelerated Performance of the 2006 NCAT Pavement Test Track	FY2012	TBD
930-635	An Evaluation of the Benefits of the Alabama Service and Assistance Patrol	FY2010	3/11/2010
930-634R	Enhancement of the Training Program of the Alabama Department of Transportation	FY2008	2/7/2008
930-631	Stone Skeleton Asphalt: Phases II and III - Field Trial, U.S. 331, Leverage, Alabama	FY2009	9/2/2009
930-622	Development and Presentation of a Roadway and Roadside Design Course	FY2010	TBD
930-615P	Laboratory Refinement and Field Validation of 4.75-mm Superpave Designed Asphalt Mixtures	FY2011	TBD
930-610	Monitoring of Bridge Stability Due to Scour using Remote and Low-Cost Optical Sensors	FY 2009	TBD
930-607B	Development of Cost Effective VARTM Technology	FY2014	9/26/2014
930-607A	Development of Cost Effective VARTM Technology for Repair and Strengthening - Phase 2	FY2006	5/15/2006
930-602	Performance of Self-Consolidating Concrete in Pre-Stressed Girders	FY2017	4/12/2017
930-601	Repaired Pre-Stressed Concrete Bridge Girders Reports (2 reports total)	FY2013	2/27/2013
930-599	Utilization of Automation and Real-Time Testing to Improve QC/QA Procedures for Hot Mix Asphalt	FY2006	4/29/2006
930-598	Pavement Management System Review	FY2010	TBD
930-596	Transportation Network Planning: Data Gathering, Analysis Methodology Development and Visualization	FY2006	TBD
930-595P	National Center for Asphalt Technology Pavement Test Track Study		TBD
930-582	Modeling Support for Alabama MPOs	FY2006	TBD
930-563	Research on Curved Composite Box Girder Bridges	FY1999	TBD



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930-554	Analysis of the 2002 Design Guide for Rigid Pavement Structures	FY2006	TBD
930-547	Evaluation of Bond Strength Between Pavement Layers	FY2014	8/20/2014
930-545	511 Traveler Information Potential Applications in Alabama	FY2006	TBD
930-537	Development of a Non-Solvent Based Test Method for Evaluating Reclaimed Asphalt Pavement Mixtures	FY2014	8/15/2014
930-466	Repair of the Uphapee Creek Bridge with FRP Laminates	FY2008	TBD
930-436	Rapid Rehabilitation/Replacement of Bridge Decks - Phase II	FY2016	TBD
930-431	Retrofit of Sign Structures with Variable Message Sign (VMS) Panels	closed	TBD
930-425	Design of Drilled Shafts in Rock for Lateral Loading	closed	TBD
930-424	Drilled Shaft Foundation Research Lateral Load Tests	closed	TBD
930-419	Evaluation of Flexible Pavement Using LTPP Data	closed	TBD
930-373	High Performance Concrete Bridge Showcase	closed	TBD
930-370P	Southeast Superpave Center	FY2010	2/26/2010
930-341	Rehabilitation of a Reinforced Concrete Bridge Using Fiber Reinforced Plastic (FRP) Laminated	closed	TBD